



EPCOR Water Services Inc.
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December 15, 2023

Mr. Chris McMillan
Secretary to the Comptroller of Water Rights
Utility Regulation Section
Water Management Branch
Ministry of Forests, Lands and Natural Resource Operations
PO Box 9340 Stn. Provincial Government
Victoria, BC V8W 9M1

Dear Mr. McMillan:

Re: **EPCOR Water (West) Inc.**
2024-2026 Revenue Requirement and Rates Application

1. EPCOR Water (West) Inc. ("EWW") is pleased to submit its 2024-2026 Revenue Requirement and Rates Application (the "Application") requesting approval of proposed adjustments to its water rates in order to recover EWW's forecast revenue requirement for the 2024-2026 test period.
2. EWW is forecastating a 6.9% annual increase in rates over the last rate application driven by an increase in operating costs. EWW's major capital project over the test period is to install two pressure reducing valve stations as well as watermain upgrades.
3. Furthermore, EWW is requesting approval of an adjustment to its Contribution in Aid of Construction (CIAC) charge consistent with the change in the British Columbia Consumer Price Index.
4. EWW will issue a notice of application to its customers, providing an opportunity for interveners to register in the regulatory proceeding and giving at least 30 days for customers to submit any comments on the Application to the Comptroller's office. At that time, EWW will also have the entire Application posted to our website and a hard copy will be available for review at our office. EWW will send a draft of the notice to the Comptroller's office for review.
5. Please find an electronic version of the Application attached.

6. EWW looks forward to working with the Comptroller's staff and is pleased to assist with processing the Application as efficiently as possible. Please contact me at (780) 412-3516 if you have any questions.

Sincerely,

Santosh Appukuttan
Senior Manager, Regulatory
EPCOR Water Services

Attachments

cc: Elena Oliphant
Chief Financial Advisor, Utility Regulation Section
Water Management Branch
Ministry of Natural Resource Operations



EPCOR Water (West) Inc.
2024-2026 Revenue Requirement
and Rates Application

December 15, 2023

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1.0 OVERVIEW

1.1 Tariffs Applied For

1. Pursuant to sections 58-60, 89 and 90 of the *Utilities Commission Act*¹, EPCOR Water (West) Inc. (“EWW”) hereby submits this Revenue Requirement and Rates Application (the “Application” or “2024-2026 RRA”) for its French Creek water utility (the “Utility”) for the years 2024-2026 (the “2024-2026 test period”), and requests an Order or Orders for the following:

- 1) Approval on a final basis water rates for the 2024-2026 test period set out in Schedule B-1 and summarized in Table 1.1-1 below (collectively “Water Rates”).

Table 1.1-1
Proposed Water Rates
2024-2026
(\$)

	A 2024	B 2025	C 2026
Base Rates (monthly)			
1 Residential	46.23	49.36	52.69
2 Multi-Residential	42.06	44.91	47.94
3 Commercial	40.84	43.60	46.55
Consumption Rates			
Residential			
4 12-75 cubic meters	2.05	2.19	2.34
5 > 75 cubic meters	2.05	2.19	2.34
Multi-Residential			
6 12-75 cubic meters	2.05	2.19	2.34
7 > 75 cubic meters	2.05	2.19	2.34
Commercial			
8 12-75 cubic meters	1.02	1.09	1.16
9 > 75 cubic meters	1.02	1.09	1.16
10 Fire Hydrants (annual)	620.10	662.03	706.79
11 Standpipes (annual)	248.04	264.82	282.72
12 Availability of Service Charge (annual)	388.34	414.60	442.63

EWW is proposing an annual increase of 6.8% before rate riders over the 2024-2026 test period.

¹ *Utilities Commission Act*, RSBC 1996, c 473

- 2) Collection of the 2021-2023 deferral account balances by means of a monthly Rate Rider for the following deferral accounts:
 - the consumption deferral account;
 - the property taxes deferral account;
 - the interest deferral account; and
 - the hearing cost deferral account.
- 3) The proposed monthly Rate Rider and calculations as set out in Financial Schedule 4.0 of the Application.
- 4) Continuation of the consumption deferral account, property tax deferral account, interest deferral account and hearing cost deferral account for the 2024-2026 test period as described in section 8.0 of the Application.
- 5) Approval of the capital structure (60% debt; 40% equity) and the rate of return on equity of 9.75% for the 2024-2026 test period, as described in section 7.0 of the Application.
- 6) Approval for the change in the 2023 Contribution In Aid of Construction (“CIAC”) fee over the 2024-2026 test period for forecast changes in the British Columbia Consumer Price Index (“CPI”) as described in section 9.0 of the Application and set out in Table 1.1-2 below.

Table 1.1-2
Proposed CIAC Fees
2024-2026
 (\$)

	A 2024	B 2025	C 2026
1 CIAC Fees	23,000	23,600	24,000

1.1.1 Rate Structure

2. In its 2021-2023 RRA application, EWW applied for and received approval for reducing the base consumption (i.e., fixed charge) from 15 m³ to 12 m³. Under this rate structure, a fixed charge is applied to monthly consumption between 0 m³ and 12 m³. A variable charge is applied to each cubic meter thereafter. EWW proposes to continue with the current rate structure for the 2024-2026 test period as approved in Order 2581.

1.2 Residential Bill Impact

3. The resulting impact on a residential customer's bill for the 2024-2026 period is shown in Tables 1.2-1, 1.2-2 and 1.2-3 for residential customers with low (10 m³/month), medium (20 m³/month) and high (30 m³/month) consumption. The customer bill includes both the impact of the proposed rate increases as well as the impact of the proposed rate rider for 2024-2026.

4. In each scenario, residential customers will experience a combined bill increase of approximately 15.8% in 2024, followed by 4.6% and 5.1% increases in 2025 and 2026, respectively. This is also true for the multi-residential and commercial customer classes. More than half of the bill increase in 2024 (9%) is attributable to the rate rider refund in 2023 switching to a collection in 2024. The rate rider is for the reconciliation of the deferral accounts. Most of the deferral is related to the water consumption deferral account where the 2021 to 2023 actual metered consumption was lower than forecast. The deferral accounts are discussed in section 8.0.

Table 1.2-1
Monthly Bill for Residential Customer (Minimum 10 m³/month)
2023-2026
(\$/customer/month)

	A	B	C	D
	2023D	2024F	2025F	2026F
Consumption Charge:				
1 Minimum	43.30	46.23	49.36	52.69
2 Additional (per m ³ over)	-	-	-	-
3 Monthly Bill Before Rate Rider	43.30	46.23	49.36	52.69
4 Change (\$)		2.93	3.13	3.34
5 Change (%)		6.8%	6.8%	6.8%
Rate Rider:				
6 Minimum	(1.13)	2.59	1.69	0.98
7 Additional (per m ³ over)	-	-	-	-
8 Total Monthly Bill	42.17	48.82	51.05	53.67
9 Change (\$)		6.65	2.23	2.63
10 Change (%)		15.8%	4.6%	5.1%

Table 1.2-2
Monthly Bill for Residential Customer (Average 20 m³/month)
2023-2026
(\$/customer/month)

	A 2023D	B 2024F	C 2025F	D 2026F
Consumption Charge:				
1 Minimum	43.30	46.23	49.36	52.69
2 Additional (per m ³ over)	15.39	16.43	17.54	18.72
3 Monthly Bill Before Rate Rider	58.69	62.66	66.89	71.42
4 Change (\$)		3.97	4.24	4.52
5 Change (%)		6.8%	6.8%	6.8%
Rate Rider:				
6 Minimum	(1.13)	2.59	1.69	0.98
7 Additional (per m ³ over)	(0.40)	0.96	0.64	0.32
8 Total Monthly Bill	57.16	66.21	69.22	72.72
9 Change (\$)		9.05	3.02	3.49
10 Change (%)		15.8%	4.6%	5.0%

Table 1.2-3
Monthly Bill for Residential Customer (High 30 m³/month)
2023-2026
(\$/customer/month)

	A 2023D	B 2024F	C 2025F	D 2026F
Consumption Charge:				
1 Minimum	43.30	46.23	49.36	52.69
2 Additional (per m ³ over)	34.62	36.96	39.46	42.13
3 Monthly Bill Before Rate Rider	77.92	83.19	88.82	94.82
4 Change (\$)		5.27	5.63	6.01
5 Change (%)		6.8%	6.8%	6.8%
Rate Rider:				
6 Minimum	(1.13)	2.59	1.69	0.98
7 Additional (per m ³ over)	(0.90)	2.16	1.44	0.72
8 Total Monthly Bill	75.89	87.94	91.95	96.52
9 Change (\$)		12.05	4.01	4.58
10 Change (%)		15.9%	4.6%	5.0%

5. Over the past three years, EWW focused on resolving outstanding capital work and continued to provide a safe and reliable water supply at the lowest possible cost to customers with no rate increases over the 2021-2023 term. The capital upgrades provided improvements in the areas of water quality, asset management, reliability and safety and included the following types of projects:

- Annual capital programs including meter replacements and new hydrants
- Billing System Upgrade
- Initial engineering work on the booster pump station
- Well rehabilitation – annual program to rehabilitate one well per year.

6. Operationally, EWW was able to optimize the water treatment plant operations to minimize the chemical requirements where possible.

7. Since taking ownership of the French Creek water utility in 2006, EWW's customers have benefitted from EWW's extensive improvements in the security, reliability, and quality of their water supply and in the level of customer service provided by the Utility. EWW has also undertaken several initiatives in the areas of water quality assurance, safety and security, environmental management, customer service and responsiveness. EWW has made some significant and necessary capital investments including adding a water treatment plant to improve water quality and to comply with the Guidelines for Canadian Drinking Water Quality, developing additional wells to provide a safe and reliable source of water supply to EWW's customers and to replace water supply from French Creek. EWW has also made several upgrades to the rest of the system including water main upgrades, new reservoirs and generators and ongoing capital programs including meter replacement, hydrant installation and residential service upgrades.

1.3 Background

1.3.1 Description of French Creek Water Utility

8. The French Creek water system, is owned and operated by EWW, is comprised of single-family, strata's comprising of single family detached or semi-detached homes, industrial, commercial, institutional, and recreational properties. All residential properties have been classified as single-family equivalent (SFE) with 2,185 active SFE connections in the system. There are also 34 industrial, commercial, and institutional (ICI) active connections in the system. The SFE residences mainly consist of single-family detached dwellings but also include townhouses, duplexes, and trailer parks. The ICI properties are a mix of office buildings, warehouses, schools, seafood processing and market, golf courses, restaurants, and gas stations. The system is fully metered with an average consumption of 19.3 m³ of water per single-family residential customer per month (5-year average for residential customers 2018-2022) in a service area within the Regional District of Nanaimo (the "RDN"). Every water service in the area is metered. Fire protection service is provided to the residents by means of 203 fire hydrants.

9. EWW's distribution system is comprised of two water storage reservoir sites, with a total volume of approximately 4.0 ML, each reservoir site has booster pumps to direct water above the

reservoir sites High Gradient Line (HGL), over 60 km of distribution mains ranging between 100 to 300 mm in diameter and over 500 valves ranging between 100 mm to 300 mm. The Utility is currently supported by four full time and one part time employees - one manager, two full time operators, one part time operator and an administrative assistant.

10. EWW draws water from 18 active wells in two separate aquifers. Both aquifers provide good quality drinking water, but one aquifer has slightly elevated levels of iron and manganese. This requires treatment to comply with the Guidelines for Canadian Drinking Water Quality.

1.3.2 EPCOR Water (West) Inc. and EPCOR Commercial Services Inc.

11. EWW is a corporation incorporated under the British Columbia *Business Corporations Act*.² EWW is a wholly owned subsidiary of EPCOR Water Services Inc. (EWSI). EWSI is a corporation incorporated under the laws of the Province of Alberta and is a wholly owned subsidiary of EPCOR Utilities Inc. (“EUI” or “EPCOR”). EUI is, in turn, wholly owned by the City of Edmonton.

12. In 2023, EPCOR undertook a company-wide reorganization. One of the changes was the management of regional water operations, including French Creek, to EPCOR Commercial Services Inc. (“ECSI”) business unit. Previously, French Creek operations were managed under EWSI. As such, one of the main changes compared to EWW’s last rate application is a change in inter-corporate services provider. ECSI will now manage the French Creek operations and provide the intercorporate services previously provided by EWSI. This is discussed further in section 3.6 of the Application.

13. EPCOR and its predecessors have been designing, building, operating, and financing water and wastewater treatment facilities for more than a century. EPCOR provides quality water and wastewater services to more than 85 communities and industrial sites across Western Canada. EPCOR also builds, owns, and operates water, wastewater, and drainage facilities, working in partnership with governments, municipalities, and industrial clients. For example, ECSI manages water and/or wastewater services in Alberta in Canmore, Kananaskis, Strathmore, Chestermere and Red Deer County. As well, ECSI manages the wastewater treatment plant in Regina.

² *Business Corporations Act*, SBC 2002, c57

14. On an ongoing basis, EWW continues to draw technical support from ECSI and EPCOR. EWW will continue to benefit from ECSI's expertise in water utility operations, maintenance, safety, training, accounting, and customer support services.

1.4 2024-2026 Test Period Costs

15. EWW's Application is based on a three-year forecast test period from January 1, 2024, to December 31, 2026. A three-year test period is consistent with the previous test period approved by the Comptroller in Order 2582. A three-year test period continues to strike a reasonable balance between the risk associated with forecasting the proposed revenue requirement and the efficiencies associated with longer test periods and minimizing regulatory application costs.

16. Table 1.4-1 below summarizes the proposed revenue requirements for EWW for the test years 2024, 2025 and 2026. The actual financial results for 2020 to 2022, the forecast amounts for 2023 (based on year-to-date actuals for 2023 and a forecast for the remaining months) and the amounts approved in Order 2581 for 2021 to 2023 are provided for comparison purposes.

Table 1.4-1
Revenue Requirement 2020-2026
(\$ thousands)

Cost Category	A 2020 D	B 2020 A	C 2021 D	D 2021 A	E 2022 D	F 2022 A	G 2023 D	H 2023 F	I 2024 F	J 2025 F	K 2026 F
1 Operating Costs	1,127	1,136	1,129	1,139	1,147	1,344	1,167	1,228	1,280	1,310	1,343
2 Depreciation Expense	332	318	329	322	347	327	360	349	380	407	430
3 Amortization of CIAC	(177)	(158)	(164)	(158)	(171)	(164)	(173)	(169)	(186)	(201)	(211)
4 Interest Expense	185	174	174	173	178	173	180	174	180	188	195
5 Return on Equity	224	149	215	186	221	(20)	225	76	222	231	240
6 Revenue Requirement before Revenue Offsets	1,691	1,618	1,684	1,663	1,723	1,659	1,759	1,659	1,877	1,935	1,997
7 Less: Revenue Offsets	(23)	(16)	(19)	(20)	(19)	(14)	(19)	(20)	(20)	(20)	(21)
8 Net Revenue Requirement	1,667	1,602	1,665	1,642	1,704	1,645	1,739	1,639	1,857	1,915	1,976

17. As shown in Table 1.4-1, EWW's total revenue requirement for the 2021-2023 period was slightly lower than decision primarily due to lower equity returns because of higher one-time operating expenses in 2022.

18. EWW's expected revenue requirement shown in Table 1.4-1 is \$1.86 million in 2024, \$1.94 million in 2025 and \$1.98 million in 2026. In 2024, EWW is forecasting its revenue requirement to increase by 7.0% over the 2023 Decision amount. This increase is primarily driven by the following factors:

Operating Costs

- Increase in inflation impacting salaries and benefits and intercompany service charges.
- Increase in property taxes reflecting higher assessment values.

Capital Related Costs

- EWW's capital plan for the 2024-2026 test period includes the construction of the two pressure reducing valve stations as described in section 5.2.
- Increase in the cost of new intercompany debt due to prevailing market conditions. The cost of new intercompany debt is 5.29% representing a nearly 40% increase from the 3.79% cost of debt approved in the last application.

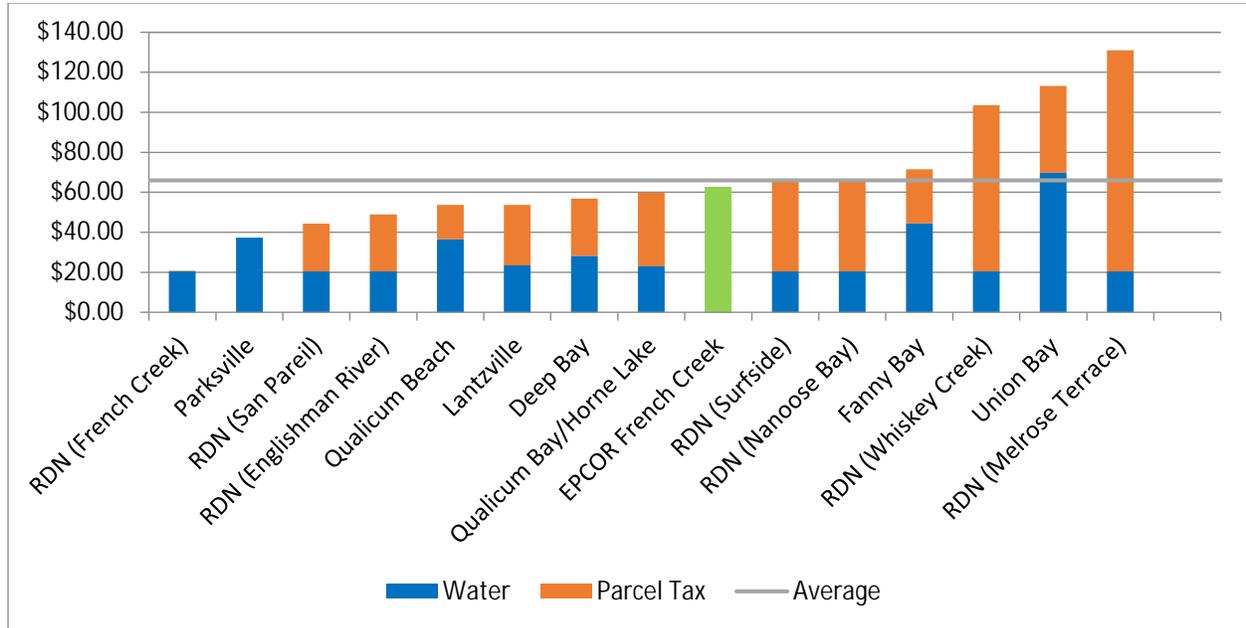
19. Over the 2024 to 2026 period, EWW forecasts its revenue requirement to increase by an average of 3.2% per year which is in line with inflation. Further discussion of these cost drivers is described in the sections that follow.

1.4.1 Comparison of Water Rates

20. The cost of providing water utility services continues to face upward pressures as utilities are required to replace aging infrastructure and invest in capital upgrades to meet regulatory requirements. EWW's proposed water rates for 2024 will increase the monthly bill for a residential customer (based on consumption of 20 m³ per month) by about \$9.05 per month (including the rate riders). The corresponding increases for this same customer in 2025 and 2026 are expected to be between approximately \$3.02 and \$3.49 per month, respectively.

21. Figure 1.4.1-1 shows the comparison between EWW's forecast residential customer monthly bill relative to those of other water service providers in the surrounding area for a customer consuming 20 m³ per month. Water parcel taxes are included in the Figure 1.4.1-1 to show the comparable total cost of water services in surrounding areas. EWW notes that its 2024 water bills with the proposed rates are slightly below the average water bills of neighboring communities. To determine the 2024 rates for the surrounding communities, EWW took the published 2023 rates and escalated them by 2.5%, the BC CPI escalator described in section 3.3.

Figure 1.4.1-1
Monthly Bills for Residential Customers
(Comparison of proposed 2024 rates with neighboring communities' 2023 rates escalated by 2.5%)



Based on consumption of 20 m³/month

Sources:

- Parksville – City of Parksville Current Utility Rates – <http://www.parksville.ca/cms.asp?wpID=276>
- Qualicum Beach – Qualicum Beach Bylaw No. 713 & 493
- Deep Bay – Deep Bay Improvement District Bylaw No. 236 & 240
- RDN Utilities – Regional District of Nanaimo Bylaw No. 1655.10, parcel taxes per RDN 2020-2024 Approved Financial Plan – https://www.rdn.bc.ca/sites/default/files/inline-files/2020-2024%20Financial%20Plan%20-%20Volume%202_2.pdf
- Qualicum Bay Waterworks – <http://qbhlwater.ca.websitematic.ca/water-rates>
- Lantzville – District of Lantzville Bylaw No. 228 & 232
- Fanny Bay – Fanny Bay Waterworks District Bylaw No. 117 & <https://fannybaycommunity.com/wp-content/uploads/2021/01/Bylaw-121-for-metered-water-tolls.pdf>
- Union Bay – Union Bay Improvement District No. 281 & 279

1.5 Water Tariff (Terms and Conditions and Price Schedules)

22. A copy of the proposed Water Tariff is included as Schedule B-1 of the Application and a copy of a black-lined version of the Water Tariff is included as Schedule B-2. EWW is requesting revisions to the price schedules to reflect the proposed rate increases. This is explained in section 10.0 of the Application.

1.6 Comptroller Directions

23. In Order 2581, the Comptroller issued several directions to EWW in relation to its next application. The directions which apply to the Application and the way EWW has responded to these directions is provided in Appendix A.

1.7 Stakeholder Consultation

24. After filing this Application, EWW will notify French Creek residents of the filing. EWW will advertise in the local newspaper and on Facebook, and email a notice about the Application to customers on its billing list and add a notice in its newsletter. EWW will also provide this information on its website.

1.8 Organization of Application

25. This Application includes two main components – Revenue Requirement and Water Tariff. For convenience, this Application is organized under the following main topic headings:

Section	Topic
1	Overview
Part A – Revenue Requirement	
2	System Operations
3	Method and Key Assumptions
4	Operating Costs
5	Capital Programs
6	Capital Additions and Rate Base
7	Return on Rate Base
8	Deferral Accounts
9	Contribution in Aid of Construction
Part B – Water Tariff	
10	Water Tariff

1.9 Notices

26. All notices and communications with respect to this Application should be addressed to the Applicant as follows:

EPCOR Utilities Inc.
2000 – 10423 – 101 St NW
Edmonton, Alberta T5H 0E8
Attention: Santosh Appukuttan
Senior Manager, Regulatory Finance

Telephone: (780) 412-3516
Facsimile: (780) 969-8498
Email: regulatorywater@epcor.com

EPCOR Utilities Inc.
2000 – 10423 – 101 St NW
Edmonton, Alberta T5H 0E8
Attention: Britt Tan
Senior Legal Counsel

Telephone: (780) 412-3988
Facsimile: (780) 441-7118
Email: btan@epcor.com

2.0 SYSTEM OPERATIONS

27. EWW continues to assess the system's condition and performance, to identify upgrades necessary to ensure that the Utility meets leading water utility standards. EWW has successfully completed several system upgrades and operational improvements to improve water quality, enhance system reliability and safety, meet regulatory requirements, and improve customer service. Among other benefits, these improvements have relieved EWW from relying on water supply from the French Creek surface water source, which would have required an additional water treatment plant at high cost to customers. Financial Schedules 2.2 and 2.4 to the Application provide a detailed breakdown of the operating and capital expenditures required to finance these activities for the upcoming three-year test period.

28. Operational initiatives and improvements completed during the 2021-2023 test period to ensure efficiency of EWW's processes and procedures are described in section 2.1. Operational initiatives and improvements planned for the 2024-2026 test period are described in section 2.2. Historical and planned capital upgrades are described in section 5.0

2.1 2021-2023 Completed Operational Programs

29. Over the 2021-2023 period, EWW continued to ensure that operating processes and procedures met EPCOR standards for providing water services to its customers. Operational initiatives accomplished during this period include:

- Continual review and enhancing of operating procedures to realize operational improvements, efficiencies, asset protection and reliability and safety;
- Water Quality Assurance Program:
 - Water quality testing of turbidity, pH, chlorine, iron, manganese and temperature and groundwater sampling and water quality testing (increased frequency and additional parameters beyond regulatory minimums). EWW conducts approximately 5,000 tests per year. The results of EWW's water quality testing are summarized in the annual performance reports, available on its website. Water quality assurance audits are conducted annually by the Quality Assurance group.
 - Annual reporting of water quality and system upgrades to Vancouver Island Health Authority (VIHA) to comply with provincial regulations in an open and transparent process with results reported to customers in an annual performance report posted on EWW's website.
- Completed an evaluation of the performance monitoring data for the water supply wells (WSWs), with the goal of determining if the water supply system is being operated in a sustainable manner given the demand on the system.
 - Compiled well performance data from active WSWs documented from EPCOR's Supervisory Control and Data Acquisition (SCADA) system,
 - Reviewed the available groundwater use, groundwater level and groundwater quality data for the active WSWs to assess pumping responses and changes to the groundwater chemistry, determining if well efficiencies were being affected by deteriorating well conditions or if aquifer conditions are changing, and
 - Provided recommendations for future work and assessments, to improve the operation of the existing WSWs.

- Drilled a test well in an area identified during the Ground Water/System Capacity Study. Unfortunately, the well yielded insufficient supply and warranted no further effort to continue its development.
- Continuous observation of Provincial Observation Well and EPCOR WSW levels to monitor the state of the aquifers and WSW operations.
- EWW as a stakeholder and funding partner, participated in a regional initiative with the Regional District of Nanaimo and their Drinking Water and Watershed Protection members to develop a refined water budget model for the French Creek Water Region to understand water availability and constraints and simulate future scenarios: climate change, increased water demand and changes to land cover. This initiative was not planned in the 2021-2023 test period. However, circumstances and the nature of the study compelled EWW to participate. Funds allocated to Church Road Main Twinning under Island Highway Study and Drew Road Reservoir Seismic Stability Study, planned in the 2021-2023 period were reallocated towards the initiative. The Church Road Main Twinning under Island Highway Study and Drew Road Reservoir Seismic Stability Study have been deferred to the 2024-2026 test period.
- Ongoing monitoring of the distribution system for leakage to ensure immediate identification of system leaks, effective and rapid response to system leak repairs.
- Pilot testing, VIHA approval (permit amendment) and implementation of a pre-treatment amendment of potassium permanganate dosing prior to greensand filtration to improve the water aesthetic by oxidizing sulphides iron and manganese from diverted groundwater.

- Optimization and streamlining of unidirectional flushing (UDF) processes to remove unwanted tastes, odours, discolorations of water and improve chlorine residuals with less water.
- Annual updating of EWW's site-specific Emergency Response Plan;
- Provision of quarterly newsletters, operational updates, and water conservation information to customers (mailed with bills).

30. During 2021-2023, EWW continued to receive administrative, technical, and engineering support from EWSI and EUI. EWW benefits from EWSI's expertise and resources in water utility operations, maintenance, safety, training, accounting, operational audit services and regulatory matters. The benefits of this were realized in 2022 where operator support from EWSI was required to backfill for the lead hand accountabilities in May 2022. Lead hand and senior operator support was provided until a replacement was on boarded in November 2022.

2.2 2024-2026 Operational Plan

31. Similar to the 2021-2023 test period, the EWW Operations Manager will continue to support other commercial water sites operated in BC, resulting in some salary reallocation. The reallocation allows for the addition of a part time operator to augment field operations.

32. EWW will continue with existing operational programs including the quality assurance program and annual quality assurance audits; annual reporting to VIHA on the Utility's operating performance and water quality; well performance monitoring to ensure the sustainability of its water supply; annual UDF program; annual updating of Emergency Response Plans; and quarterly newsletters, operational updates and water conservation information provided to customers.

33. In addition to these continuing operational programs, EWW is planning the following operational initiatives:

- Annual groundwater sampling of each WSW for general chemistry, total and dissolved metals. Biennial sampling for microbiology parameters including E. coli, total coliforms and HPC ("heterotrophic plate count"). This helps confirm changes in well conditions that could lead to declining well efficiency and/or changes in aquifer conditions from contamination.

- Perform step rate pumping test at select wells to assess the well specific capacities and well efficiencies. This will identify which WSWs are underperforming (i.e., the maximum pumping rate is well limited), what well maintenance is required, or which wells should be replaced with newer wells and which older transmission infrastructure should be updated. Underutilized wells could be deactivated.
- Complete constant rate pumping tests at one or more WSW in each well region to assess bulk aquifer transmissivity and storativity. The data from the pumping tests could be analyzed using an analytical groundwater assessment model to help optimize well operations across the Utility.

3.0 METHOD AND KEY ASSUMPTIONS

34. The following is an overview of the methods and key assumptions used in developing EWW's forecast revenue requirement for the 2024-2026 test period.

3.1 Customer Count and Consumption Forecast Process

35. The total consumption volume forecasts are a product of customer count and consumption per customer forecasts. EWW developed a forecast of consumption per customer and customer counts for the purpose of determining its consumption forecast for the 2024-2026 test period. Any variances between the forecast consumption and customer counts and the actual consumption and customer counts are reconciled through the Consumption Deferral Account, as described in section 8.0.

36. EWW's customer count and consumption forecast for the 2024-2026 test period was developed using the historical consumption and customer information for the Utility for the period from 2018 to 2022.

3.1.1 Customer Count Forecast

37. The customer growth forecast was based on recent Census data for the region. The projected annual growth forecast is 1.20%, EWW is forecasting approximately 23 new residential customers for each year in the test period. EWW is forecasting flat growth for commercial customers over the test period, based on current Certificate of Public Convenience and Necessity (CPCN) applications. For 2024 and 2025, EWW is forecasting one additional customer in each year for multi-residential consistent with the customer growth over the last five-year period. EWW's forecast customer count for the 2024-2026 test period is provided in Table 3.1.1-1 below.

The 2020 to 2022 actuals, and 2023 forecast customer counts are provided for comparison purposes.

**Table 3.1.1-1
EWW Customer Count Forecast
2020-2026**

	A 2020A	B 2021A	C 2022A	D 2023F	E 2024F	F 2025F	G 2026F
Residential							
1 Customer Count	1,796	1,816	1,851	1,873	1,895	1,918	1,941
2 Growth		1.11%	1.90%	1.25%	1.20%	1.20%	1.20%
Multi-Residential							
3 Customer Count	268	269	270	270	271	272	272
4 Growth		0.37%	0.37%	0.00%	0.37%	0.37%	0.00%
Commercial							
5 Customer Count	41	42	42	43	42	42	42
6 Growth		2.44%	-0.99%	3.41%	-3.26%	0.00%	0.00%
Fire Hydrants							
7 Count	179	183	187	187	188	189	190
8 Growth		2.23%	2.19%	0.00%	0.53%	0.53%	0.53%
Standpipes							
9 Count	3	3	3	3	3	3	3
10 Growth		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

3.1.2 Consumption per Customer Forecast

38. In its 2021-2023 RRA, EWW used a five-year average as a basis for forecasting consumption per customer. This methodology has resulted in a 4.8% variance in forecast versus actual consumption during that time, resulting in a positive balance (i.e., collection) in the Consumption Deferral Account. EWW will continue to use a five-year average (2018-2022), to calculate forecast consumption per customer in this Application. See Table 3.2.1-1 below for the historical and forecast average consumption per customer.

**Table 3.1.2-1
EWW Average Consumption per Customer
2018-2026
(cubic meters per customer per month)**

	A 2018A	B 2019A	C 2020A	D 2021A	E 2022A	F 2023F	G 2024F	H 2025F	I 2026F	J 2018A to 2022A Average
1 Residential	19.3	19.2	19.0	20.6	18.6	19.3	19.3	19.3	19.3	19.3
2 Multi- Residential	18.8	18.9	18.5	19.6	19.3	19.0	19.0	19.0	19.0	19.0
3 Commercial	103.9	114.2	91.8	93.4	96.5	100.0	100.0	100.0	100.0	100.0

3.1.3 Consumption by Rate Class

39. Water consumption over the 2024-2026 test period was determined based on the customer count forecast and the average consumption per customer. The consumption forecast is shown in Table 3.1.3-1 below.

Table 3.1.3-1
EWW Consumption by Rate Class
2020-2026
(cubic meters)

		A 2020A	B 2021A	C 2022A	D 2023F	E 2024F	F 2025F	G 2026F
1	Residential	409,871	449,172	413,805	434,776	440,000	445,269	450,609
2	Multi-Residential	59,646	63,175	62,568	61,662	61,891	62,119	62,119
3	Commercial	45,161	47,058	48,167	51,578	51,578	51,578	51,578
4	Total Consumption	514,678	559,405	524,540	548,017	553,468	558,967	564,306

3.2 Accounting Policies

40. Since January 1, 2011, EUI has prepared its corporate financial information in accordance with International Financial Reporting Standards (“IFRS”) as required for Canadian publicly accountable enterprises. While EWW has implemented IFRS to support the public external financial reporting requirements of its parent company EUI, there are certain IFRS requirements which are not consistent with the accounting treatment historically applied for ratemaking and rate-regulated reporting requirements (referred to herein as “regulatory accounting”).

41. The most significant difference between IFRS and regulatory accounting relates to property, plant and equipment, deferral accounts and financial statement disclosure. For example, IFRS does not permit the recording of regulatory deferral accounts, but this is accepted practice by rate regulated utilities and their regulators. Consequently, following the implementation of IFRS, EWW now maintains two complete sets of ledgers, one for external IFRS reporting and one for regulatory reporting.

42. EWW prepared its 2024-2026 forecast financial information in accordance with regulatory accounting, which is the previously approved regulatory treatment of assets, liabilities, revenues, and expenses. These accounting standards are consistent with those applied by EUI’s other rate-regulated utilities for purposes of preparing regulatory applications.

3.3 Escalation Factors

43. EWW's forecasts of operating costs and capital costs over the 2024-2026 test period were developed in 2023 dollars. These forecasts were then escalated by applying an appropriate escalation factor depending on the type of cost. To minimize the cost to rate payers, EWW did not retain a consultant to determine escalation factors but instead gathered the underlying data and calculated the escalation factors for the 2024-2026 test period internally. EWW prepared the escalation factors using the same data sources as used and approved from its 2021-2023 Rate Application.

44. Table 3.3-1 below summarizes the escalation factors applied to the forecast amounts.

**Table 3.3-1
Escalation Factors
2024-2026**

Escalation Factors	A 2024	B 2025	C 2026
1 Consumer Price Index ³	2.50%	2.20%	2.00%
2 Power ⁴	1.10%	1.10%	1.10%
3 Wages and Salaries ⁵	3.03%	3.03%	3.03%

45. EWW's proposed escalation factor for wages, salaries and benefit costs is derived from three sources. The Conference Board of Canada (TCBC) forecast of two data series – wages and salaries per employee and average weekly wages and salaries per employee, and the BC Ministry of Finance Budget and Fiscal Plan 2023/24 – 2025/26 (Compensation of Employees/Labour Force).

46. Table 3.3-2 below summarizes the calculation of the proposed escalation factor for wages, salaries, and benefit costs.

³ BC Ministry of Finance Budget and Fiscal Plan 2023/24 - 2025/26

⁴ BC Hydro Fiscal 2023 to Fiscal 2025 Revenue Requirement Application

⁵ BC Budget and Fiscal Plan 2020/21 - 2022/23, page 87 and Conference Board of Canada Wage Forecast

Table 3.3-2
Annual Forecast Changes in Wages, Salaries, and Benefit Costs
2024-2026

Source	A	B	C	D
	2024 F	2025 F	2026 F	2024-2026 Average
1 TCBC Wage and Salaries	2.65%	2.17%	2.11%	2.31%
2 TCBC Avg. Wage and Salaries	2.65%	2.17%	2.11%	2.31%
3 BC Ministry of Finance ⁶	5.20%	4.40%	3.80%	4.47%
4 Average	3.50%	2.92%	2.68%	3.03%

47. The proposed power cost escalation factor is based on BC Hydro’s Fiscal 2023 to Fiscal 2025 Revenue Requirements Application.⁷ On pdf page 58, of the Application, BC Hydro forecasted a bill increase of 1.1% per year over the test period. EWW has used the average of 1.1% bill increase as the proposed power cost escalation factor over the test period.

48. The escalation factor for all other operating costs, including inter-corporate service costs, is based on the forecast Consumer Price Index (CPI) as published in the BC Ministry of Finance Budget and Fiscal Plan 2023/24 – 2025/26.

3.4 Operating Cost Forecasting Process

49. Operating costs for the 2024-2026 test period were forecast with reference to EWW’s 2021 and 2022 actuals and 2023 forecast operating costs. A cost forecast for the 2024 test year was prepared by first using a combination of a “bottom up” approach and a cost trend analysis. The 2024 forecast operating costs were then adjusted, on a cost category by cost category basis, to consider the impacts of forecast capital-related expenditures (i.e., both capital projects and changes in operating activities) that will occur in each of the subsequent test years to arrive at forecast costs for those years. Forecast costs for the 2024-2026 test period were prepared in 2023 dollars. Escalation factors were then applied to determine EWW’s forecast operating expense for each of the future 2024-2026 test years. The escalation factors are described in section 3.3 above.

⁶ British Columbia Ministry of Finance, “Budget and Fiscal Plan 2023/24 – 2025/26,” February 28, 2023”, page 106. (https://www.bcbudget.gov.bc.ca/2023/pdf/2023_budget_and_fiscal_plan.pdf) as accessed on August 22, 2023.

⁷ BC Hydro “Fiscal 2023 to Fiscal 2025 Revenue Requirements Application,” filed August 31, 2021, page 1. (<https://www.bchydro.com/content/dam/BCHydro/customer-portal/documents/corporate/regulatory-planning-documents/regulatory-filings/rra/00-01-2021-08-31-bchydro-f23-f25-rra-ex-b-2-application.pdf>) as accessed on August 22, 2023.

3.5 Capital Planning and Capital Cost Forecasting Process

50. EWW follows a comprehensive set of processes for identifying, evaluating, approving, and executing capital projects.

51. In the 2021-2023 RRA, EWW worked with Stantec Consulting Ltd. (“Stantec”) to prepare the 2020 Master Plan specifically to identify sustaining capital upgrades and improvements to the utility’s infrastructure necessary to meet customer needs. The 2020 Master Plan provided an update of the water system model, current and future supply and demand review and capital plan update including capital project justification and opinion of probable costs. EWW continues to collaborate with Stantec on evaluating and modeling its system. As such, Stantec updated the 2020 Master Plan to support EWW’s capital plan for the 2024-2026 test period.. Recent system modeling that considers raising the systems Hydraulic Grade Line (HGL) for the service area with the Booster Pump Station in operation and the future development of the Wembley and Manse Areas was completed, as such, Stantec has proposed the following revisions to the 2020 Master Plan relevant to this filing are as follows:

- The 2020 Water Master Plan discusses the need for adding pressure zones and reducing pressures in the higher-pressure areas with the addition of Pressure Reducing Valve Stations (PRVs) in select locations. The addition of the booster pump station and raised HGL of the main pressure zone now requires the addition of the two PRV stations. The PRV project like the booster pump station are a result of growth and the respective funding model is 75% developer contributed.

52. Stantec’s revised 2020 Master Plan is included in Appendix C.

53. EWW’s capital planning processes reflect the principle that growth pays for growth. In EWW’s capital program, summarized in Financial Schedule 2.4, projects are classified as “rate-base” if they address the requirements noted above, “contributed” if they are required for expansion of water system capacity, or “partially contributed”, if required for both. The allocation of capital between rate payers and developers has been determined by Stantec in the revised 2020 Master Plan.

54. EWW’s tariff includes a Contribution in Aid of Future Construction, a one-time fee for applicants for service from outside the boundaries of the utility or from subdivision of existing lots. These fees together with accumulated interest are held in trust in the DCTF (“Deferred Capacity Trust Fund”) and are available to pay for future expansion of the water system’s capacity.

55. When a contributed project is completed and placed into service, EWW makes an application for release of funds from the DCTF and, upon approval of the DCTF application, offsets the capital costs of the contributed project with funds accumulated in the DCTF. This process ensures that contributed assets, as well as the portion of partially contributed assets financed through growth, are excluded from the rate base.

56. Through the process described above, EWW first determined the capital projects required for 2024 to 2026 to support ongoing operations, customer growth and regulatory requirements. Capital cost estimates for each project were provided by local contractors. The escalation factors, as described in section 3.3, were applied to the 2023 amounts to arrive at EWW's capital expenditure forecast for 2024 to 2026. A more detailed discussion of the capital additions forecast for the 2024-2026 test period is provided in section 6.0.

3.6 Inter-Corporate Services

57. As a member of the EPCOR group of companies, EWW obtains certain services from EUI referred to as Corporate Service Charges. The forecast corporate cost structure remains the same as the previous rate application.

58. As noted above in section 1.3.2, EPCOR carried out a reorganization in 2023 which resulted in the transfer of management of EWW from EPCOR Water Services Inc. to EPCOR Commercial Services Inc. The services (referred to as inter-corporate service charges) previously provided by EPCOR Water Services Inc. will be provided by EPCOR Commercial Services Inc. These services are necessary to enable EWW to carry on business as the owner and operator of the Utility. This structure allows EWW to focus on its core business of water operations and meeting customer needs while reducing administrative and shared-services costs compared to that of a stand-alone utility. Furthermore, this structure allows EWW to benefit both from the extensive experience and expertise that resides within other members of the EPCOR group and from economies of scale and scope that arise from the EPCOR group's inter-corporate services approach to its business operations.

59. The inter-corporate services are provided pursuant to inter-corporate services agreements between EWW and EUI and EWW and ECSI, copies of which are attached as Appendix E-1 and E-2 to this Application. In return for these services, EWW pays inter-corporate service charges to EUI and ECSI in accordance with the terms of the agreement.

60. The inter-corporate service charges are either directly assigned to EWW or determined based on a logical and appropriate allocation methodology. The allocated inter-corporate service charges are in the form of an annual fee, as shown in Financial Schedule 2.3. The allocated inter-

corporate charges are described in section 4.4 below and are comprised of: (i) the allocated charges to EWW for corporate services provided by EUI; and (ii) the allocated charges to EWW for shared support services provided by ECSI. Direct assigned inter-corporate charges for support services provided by ECSI are included in EWW's operating costs if those costs are incurred solely for the benefit of EWW, rather than being a shared service cost.

61. EWW's forecast inter-corporate service charges are based on the cost forecasts in EUI's and ECSI's respective 2024 forecasts. Further details on the incremental increases for inter-corporate service charges for the 2024-2026 test period are provided in section 4.4 below.

62. The specific services that are provided by EUI and ECSI and the methodologies used to determine the inter-corporate service charges to EWW are described in detail in Appendices E-3 and E-4. EWW notes that there are no changes to the allocation methodology from its last rate application. The only change is a change in service provider from EWSI to ECSI as discussed in section 1.3.2.

3.7 Depreciation and Amortization

63. Utility assets are depreciated over the shorter of the assets' physical, technological, commercial, or legal lives. The depreciation rates used by EWW in each year are provided in Financial Schedule 2.5. There have been no changes to the depreciation and amortization policies since the previous rate application.

3.8 Capital Structure and Cost of Capital

64. For the 2024-2026 test period, EWW has prepared its Application maintaining a capital structure of 60% debt and 40% equity, as approved by the Comptroller in Order 2581 for the 2021-2023 period.⁸ Furthermore, EWW has applied a 100-basis points equity risk premium above the return on equity ("ROE") of 8.75% set by the BC Utilities Commission ("BCUC") for the low-risk benchmark utility (BCUC Order G-129-16).⁹ The BCUC low risk benchmark ROE of 8.75% has not changed. This is consistent with the basis for the ROE approved by the Comptroller for EWW for the years 2021 to 2023 in Order 2581. EWW notes that the BCUC has initiated a "Stage 2" generic cost of capital ("GCOC") proceeding to determine matters related to a benchmark rate of return for regulated utilities.

4.0 OPERATING COSTS

⁸ <https://www.epcor.com/products-services/water/rate-applications/Documents/Order2581.pdf>; PDF page 6

65. Table 4.0-1 below summarizes the forecast operating costs of EWW over the 2024-2026 test period. The 2020 to 2022 actuals, 2023 decision and 2023 forecast amounts are provided for comparison. A breakdown of forecast operating costs over the 2024-2026 test period is provided in Financial Schedule 2.2.

Table 4.0-1
Operating Costs 2020-2026
(\$ thousands)

Cost Category	A	B	C	D	E	F	G	H
	2020A	2021A	2022A	2023D	2023F	2024F	2025F	2026F
1 Salaries and Benefits	549	592	672	602	666	660	680	700
2 Power and Other Utilities	57	66	63	76	76	78	79	80
3 Chemicals	32	35	31	33	33	34	35	36
4 Operations and Maintenance	265	243	363	243	219	252	257	262
5 Property Taxes	41	43	52	47	67	69	70	72
6 Inter-Corporate Service Charges	192	161	163	167	167	187	189	193
7 Total Operating Costs	1,136	1,139	1,344	1,167	1,228	1,280	1,310	1,343
8 Year/year increase						9.7%	2.3%	2.5%
9 Increase from 2023D – 2026F								15.0%

66. The increase in total operating costs from the 2023 Decision to the 2026 Forecast is \$175 thousand. These increases are primarily due to:

- Inflationary increases
- Property tax increases

67. For most of the operating categories, EWW applied the escalators described in section 3.3. Additional changes are explained in the sections that follow. Comparisons between 2020-2022 actual amounts and the 2020-2022 decision amounts are provided in EWW's Water Utility Annual Reports and Actual Results, attached as Appendix H.

4.1 Salaries and Benefits

68. The salaries and benefits cost category are comprised of the salaries and benefits associated with EWW's employees as well as direct ECSI support services and ECSI management oversight costs, less cost recoveries related to operations staff time spent on and directly charged to capital projects. Table 4.1-1 provides a breakdown of the full-time equivalents (FTE) utilized by EWW.

Table 4.1-1
EWW FTE
2020-2026

	A	B	C	D	E	F	G	H
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	2020A	2021A	2022A	2023D	2023F	2024F	2025F	2026F
1 BC Based Staff								
2 Operations Mgr.	0.27	0.45	0.45	0.60	0.47	0.60	0.60	0.60
3 Lead Hand	0.99	0.69	0.67	1.00	1.03	1.00	1.00	1.00
4 Operator	0.98	0.99	1.00	1.00	1.01	1.00	1.00	1.00
5 Admin	1.12	1.08	1.05	1.25	1.09	1.25	1.25	1.25
6 Casual Operator	0.13	0.26	0.24	0.25	0.19	0.25	0.25	0.25
7 BC Based Staff	3.50	3.47	3.42	4.10	3.79	4.10	4.10	4.10
8 Alberta Based Staff								
9 Sr. Mgr. Support	0.07	0.21	0.15	0.22	0.14	0.22	0.22	0.22
10 ECSI Support Services ⁽¹⁾	0.49	0.24	0.67	0.23	0.25	0.23	0.23	0.23
11 Alberta Based Staff	0.56	0.45	0.83	0.45	0.39	0.45	0.45	0.45
12 FTE Before Recoveries	4.06	3.92	4.25	4.55	4.18	4.55	4.55	4.55
13 Less: Capital Recoveries	(0.10)	(0.06)	(0.01)	(0.11)	(0.04)	(0.04)	(0.04)	(0.04)
14 Total FTE	3.96	3.86	4.24	4.44	4.14	4.51	4.51	4.51

(1) ECSI Support Services includes salary costs from ECSI groups including but not limited to SCADA & Controls, Laboratory Services, Quality Assurance, Environmental Management, Maintenance, and Asset Management. These groups are not included in the Inter-Corporate Service Charge, but instead are directly charged to EWW when EWW utilizes the services provided by these groups. For 2020-2022, Support Services were provided by EWSI.

69. Salaries and benefits are increasing by \$58 thousand (9.6%) from the 2023 decision to the 2024 forecast. The increase is primarily due to inflation and lower expected capital recoveries in the 2024 forecast.

70. EWW is not proposing any staff changes over the 2024-2026 test period. The changes made during the 2021 to 2023 test period are continued into the 2024-2026 test period:

- The EWW operations manager position is maintained at 0.6 FTE. Over the test period the EWW operations manager will also continue to support other ECSI sites operating in BC;
- The reduction in the operations manager position made in 2021-2023 allowed EWW to and will continue to provide an additional part time operator (0.25 FTE). This position allows EWW to be more responsive to operational issues, respond quicker to customer concerns, take on some of the on-call responsibility and provide vacation coverage for existing operators; and
- The senior manager support of 0.22 FTE will continue and will primarily come from the Senior Manager Regional Operations, and the Senior Manager Project Development and Delivery positions located in Alberta. The senior manager support will include but is not limited: to Government liaison activities with the Ministry of Forests, Land, Natural Resource Operations & Rural Development, and

the Vancouver Island Health authority; capital project oversight (project management, vendor evaluation, etc.); review and input into operational studies to be completed over the 2024 to 2026 test period; and vacation coverage for the EWW operations manager position.

71. To assist the Comptroller in assessing the reasonableness of its forecast Salaries and Benefits expenses, EWW has prepared Table 4.1-2 – Gross Salaries and Benefits per FTE. This table is a modified version of the table provided to the Comptroller by EWW in the last RRA. This table shows that the Gross Salaries and Benefits per FTE in 2024 is higher (8.4%) than the 2023 Decision as approved by the Comptroller in Order 2581. The increase over the 2023 Decision is attributable to inflationary increases combined with a higher salary costs related to senior manager support costs and lower forecasted capital recoveries. For 2025 and 2026, EWW has applied the salary escalator described in section 3.3.

Table 4.1-2
Gross Salaries and Benefits per FTE
2020-2026
(\$ thousands)

	A	B	C	D	E	F	G	H
	2020A	2021A	2022A	2023D	2023F	2024F	2025F	2026F
1 Salaries & Benefits	549	592	672	602	666	660	680	700
2 Add: Capital Recoveries	15	8	1	16	10	10	10	10
3 Gross Salaries & Benefits	564	600	673	618	676	670	690	710
4 FTE Before Recoveries	4.16	3.92	4.25	4.55	4.18	4.55	4.55	4.55
5 Salaries & Benefits / FTE	136	153	158	136	161	147	152	156
6 Year over Year Increase ⁽¹⁾						8.4%	3.0%	2.9%
7 Average Increase								4.7%

(1) 2024 increase is compared against the 2023 Decision.

4.2 Power and Chemical Costs

72. Increases year-over-year for 2024 to 2026 reflect forecast increase in power rates in accordance with the forecast BC Hydro increase in revenue requirement as described in section 3.3.

73. EWW is forecasting chemical costs to increase at inflation over the 2024-2026 test period.

4.3 Operations and Maintenance

74. Operations and maintenance expenses are comprised of two general cost categories: (i) contractor and consultant costs which include costs associated with services provided by engineering consultants to review and consult on water system requirements; and (ii) other costs

which include materials and supplies (i.e., parts for water main breaks, hydrants, valve and meter repairs and the unidirectional flushing program for water mains), travel, rent, insurance, vehicle costs, computer charges, training, office supplies, telephone expenses and capital overhead recoveries.

75. EWW is forecasting approximately \$76,695, \$78,382, and \$79,950 per year in base contractor and consultant costs, which is lower than actual costs incurred between 2020 and 2022. The base contractor costs include but are not limited to Laboratory Services and Supplies, Treatment and Distribution System Servicing and Repairs and Well Rejuvenation. In addition to the annual base work for contractors and consultants, EWW will continue to retain engineering consulting services to assist in assessing the system for inefficiencies and develop plans to address them. The estimated cost of consulting services described below are included in the Contractor and consultants cost category:

- 1) **Raw Water Supply/Raw Water Conveyance** – Further evaluation of existing wells by step rate pump testing, asset condition assessment and modeling to optimize well operations and evaluate under performing wells, refine well rehabilitation programs or plan for replacing aging underperforming wells with more efficient wells. In addition, a hydraulic assessment of the raw water supply pumps and supply lines to the reservoir sites to ensure that raw water is efficiently delivered to the two reservoir sites.
- 2) **Church Road Main Twinning under Island Highway** – This initiative will entail a geotechnical assessment of the subsurface conditions to evaluate options and costs for the installation of a second water main under the Island Highway along Church Road. For existing customers, the installation of this line will increase the reliability of the water system. On the developer side, the new line will be sized to accommodate future development in the area served by the Church Road Reservoir. EWW has forecast a cost of \$65 thousand to complete this study, with 50% allocated to current customers and 50% allocated to the future customers as part of the Deferred Capacity Trust Fund. The forecast costs of the studies have been spread evenly over the 2024-2026 test period. EWW is forecasting all other operations and maintenance expenses to increase at inflation over the 2024-2026 test period.

4.4 Inter-corporate Service Charges

76. As noted above in section 3.6, inter-corporate service charges are comprised of allocated charges to EWW for corporate services provided by EUI, and allocated charges to EWW for shared

services provided by ECSI. Financial schedule 2.3 lists the services provided by EUI and ECSI. See Appendix E-1 and E-2 for copies of the service level agreements.

77. Generally, the increases in corporate service charges between the 2023 decision and the test period are primarily attributable to increases in inflation.

5.0 CAPITAL PROGRAMS

78. Capital upgrades completed during the 2021-2023 test period are described in section 5.1 and capital upgrades planned for the 2024-2026 test period are described in section 5.2.

5.1 2021-2023 Capital Programs

5.1.1 Overview

79. During 2021-2023, the focus of EWW's capital program was to continue with annual capital replacement programs, complete outstanding well closures, annual well rehabilitation, capital upgrades and improvements to the Utility's infrastructure necessary to meet customer needs.

80. EWW's approved capital expenditures for the 2021-2023 period are summarized in Table 5.1.1-1, below. Actual and forecast capital additions are presented in detail in Financial Schedule 2.4. Actual capital expenditures include amounts related to completed projects noted above, projects expected to be completed by the end of 2023 except for the Booster Pump Station which is expected to be completed in 2024. Table 5.1.1-1 categorizes the capital projects into those funded through ratepayers (rate base projects) and those which are contributed by the DCTF (contributed projects).

Table 5.1.1-1
EWW Capital Expenditures 2021-2023
(\$ thousands)

Cost Category	A	B	C	D	E	F	G	H
	2021D	2021A	2022D	2022A	2023D	2023F	2021D -2023D	2021A -2023F
1 Total Expenditures – Rate Base	569	148	667	214	114	1,025	1,350	1,388
2 Total Capital Expenditures – Contributed	(397)	(9)	(173)	(60)	(53)	(733)	(624)	(802)
3 Net Capital Expenditures	172	139	494	154	60	292	726	585

81. Table 5.1.2-2 below shows the approved projects for the 2021-2023 period and the cost variances.

**Table 5.1.1-2
2021-2023 Projects
Decision to Forecast
(\$ thousands)**

Project	A 2021D- 2023D	B 2021A- 2023F	C Variance (col B-A)
Capital Projects			
1 Existing Wells – Well Rehabilitation Program (Overhauls)	60	82	22
2 Decommissioning Existing Well – Springhill and Oceanside	-	5	5
3 Billing System Upgrade	87	85	(2)
4 Booster Pump Station	483	578	95
5 Drew Road Complex Flow Meter Upgrade	32	32	0
6 Pump House Decommissioning	15	-	(15)
7 Bulk Water Connection to RDN	349	-	(349)
8 New Well to Support Growth	-	349	349
9 Total Capital Projects	1,026	1,131	105
Capital Maintenance Programs			
10 Single Meter Service Connections (contributed)	74	7	(67)
11 Subdivision – Multi-meter installations (contributed)	80	20	(60)
12 Meter Replacement Program	60	70	10
13 Hydrant Replacement Program	110	160	50
14 Total Capital Maintenance Programs	324	257	(67)
15 Total Capital Expenditures	1,350	1,388	38

5.1.2 Capital Projects from 2021-2023

5.1.2.1 Well Rehabilitation

82. The purpose of well rehabilitation is to maintain the integrity of existing wells and to retain the well original performance. The well pumps at: Well No. Drew Road – ID 80104, Well No. AC_S1 – Well ID 22600 and Well No. RW_N2 – ID 22525 were replaced during the 2021-2023 Period. Well No. RW_N2 was also inspected using CCTV in 2023. Additional sampling and step testing of Well No. RWN2 was completed in early 2023.

83. Section 9 of the *Groundwater Protection Regulation*⁹ states that a well must be closed if it has not been used in 10 years. The Lorendun well, Imperial well and Springhill well were closed in 2019 pursuant to this Regulation.

⁹ Groundwater Protection Regulation B.C. Reg 152/2016, June 10, 2016. Retrieved from the Justice Laws website: http://www.bclaws.ca/civix/document/id/complete/statreg/39_2016.

5.1.2.2 Decommissioning Existing Well

84. The closure of the Oceanside well was completed in Q4 2020. Carry over expenses from 2020 were recognized in 2021.

5.1.2.3 Billing System Upgrade

85. EWW's billing platform was upgraded and successfully implemented. The upgraded billing platform included enhancements that improved customer service and operational efficiency. The previous version of billing software was beyond end of life and no longer supported by the vendor. Electronic e-billing was not available for the previous version and pre-authorized payments (PAP) for bill payment had to be manually entered into the billing program/banking website each month.

5.1.2.4 Part of the implementation included Neptune 360, which is a cloud-based data management application that was integrated with the billing application to enable field data to be accessed wirelessly, thus reducing laborious manual data entry and potential transcription errors. Part of the Neptune 360 integration included additional hardware to store meter data captured in the field which is then uploaded upon connection to the network. Booster Pump Station

86. 87. The 2021-2023 capital plan considered the initial concept design and probable cost presented in the 2020 Master Plan, which was estimated to be \$483,000 based on available information at the time. As well, the project was to be funded from 75% rate base and 25% developer. Since the approval of the 2021-2023 RRA, all engineering and design has been completed. The Issued for Tender Drawings and Specifications are complete. Permitting required for the project is in progress and is expected to be completed shortly, once complete the project will be released for tender. Project costing was reassessed during the engineering and design phase. Due to prevailing market conditions with material and construction cost increases, EWW anticipates the total project cost to be significantly higher than the initial estimate of \$483,000. EWW has included \$300,000 in costs for this project in the 2024 capital forecast. EWW notes that the impact to rate payers will be minimal as most of the project is proposed to be funded by the DCTF, as explained below. EWW expects to have greater certainty regarding the total expected project cost once the work is tendered, which is expected to be in Q1, 2024 with construction beginning after that. EWW has been in discussion regarding two (2) large developments in the Wembley and Manse Road Areas, which is in the pressure deficient zone. The two significant developments will benefit from the project. As such, Stantec has recommended a change in funding and that the project be funded 75% by developer and 25% by rate base.

5.1.2.5 Drew Road Complex Flow Meter Upgrade

87. The flow meter upgrade at the Drew Road complex project was completed in mid-November.

5.1.2.6 Pump House Decommissioning

88. The decommissioning work was not completed during the 2021-2023 term and is deferred to a later date.

5.1.2.7 Bulk Water Connection to RDN

89. The possibility of treating raw water provided by the RDN for the redistribution into one of their small systems and purchasing excess raw water from the RDN for treatment and distribution to the EPCOR French Creek System proved unfeasible and agreement was not reached. The project would have also required the construction of a new transmission line to the Drew Road WTP.

90. As noted in the 2021-2023 Rate Application, should the bulk water connection supply fail to be a solution, EWW will explore other options to ensure supply reliability. At present, the possibility of twinning the largest producing well as a backup should the largest producing well go out of service during a max day demand event, is presently being evaluated. Should this option be viable, work to complete the endeavor in 2024 will begin. As such, the offsetting cost is shown on row 8 of Table 5.1.1-2 above.

5.1.2.8 Ongoing Capital Maintenance Programs

91. The Single Meter Service Connections and Subdivision – Multi-meter Installations are both fully contributed programs in which developers pay for new connections. As EWW did not receive as many new connections as forecast, the amounts for these two programs were considerably less than forecast. This is not a program over which EWW has any control, and because all these new connections are fully contributed, this does not affect rates.

92. Water utilities undertake several capital maintenance projects on an annual basis to keep the system operating reliably and efficiently. EWW began its meter replacement program in 2015 and by the end of 2023 would have replaced 789 meters that have reached the end of their 20-year life cycle. A condition assessment and an aging forecast of all meters in the system indicates that the program will be necessary in subsequent filings. The upgrades to the billing application and the integration of Neptune® 360™ mobile meter data management application has improved collected meter reads uploaded to the billing customer data base. Further efficiencies are expected

with the installation of additional smart meters with spread spectrum capabilities or spread spectrum meter interface units that allow drive-by reads and remote data logging will provide more insight to system and customer demand and usage trends. The cost of the program was greater than originally planned as such EWW has revised the 2024-2026 forecast based on this information.

93. An annual hydrant installation program was established in 2011 to improve fire protection in the existing system. In the last test period, EWW planned and installed the remaining 7 additional hydrants. The system is now compliant with the Master Municipal Construction Document (MMDC) Design Guideline Manual for fire protection services.

5.2 2024-2026 Planned Capital Programs

94. EWW's capital plan for the 2024-2026 test period is comprised of the capital projects scheduled for the years 2024, 2025 and 2026, as summarized in Financial Schedule 2.4. EWW's capital plan is supported by the revised 2020 Master Plan. The Master Plan identifies capital upgrades and improvements to the Utility's infrastructure necessary to meet customer needs. The projects included in EWW's 2024-2026 capital plan are summarized below. The total annual forecast capital additions for each year of the 2024-2026 test period are presented in Financial Schedule 2.4 and is discussed in further detail in section 6.0. The capital justifications for new capital projects are included as Appendix D.

95. **Ongoing Capital Maintenance Programs** – All water used by customers must be metered. One of the most important benefits of water metering is the ability to determine actual customer usage and revenue based on actual consumption. Metering consumption is also an important element of water conservation programs. Informing consumers of usage increases awareness and therefore reduces maintenance and operational costs in the treatment of water. Decreasing the demand for water also decreases energy infrastructure costs to pump and move the water. Every year, funds are allocated for the replacement of existing meters. Meters are replaced for a variety of reasons including, the replacement of end of life, burst, damaged, or defective meters. All meters will be changed out to Radio Frequency (RF) meters for the safety of EPCOR employees (dangerous dog and customer sites) during meter reading. In addition to the safety element, RF enabled meters provide leak history/diagnostics, proactive leak notification, provides consumption data, improves meter reading accuracy, better consumption analysis, forecasting, usage data capture and billing workflow efficiencies.

96. EWW plans to replace over 613 meters (or 103 meters a year) over the 2024-2026 and 2027-2029 periods. In addition, 150 Meter Interface Units (MIU's) will be installed to recently exchanged compatible meters which provides the previously installed meter with spread spectrum and data logging capabilities. The MIU is a single radio frequency unit that can transmit meter

reading data using any reading method – mobile or fixed network over the next two years through the Meter Replacement program. These will augment the 35 MIU's and 85 radio frequency smart meter that were installed in 2023.

97. **Supply Balance** – EWW's objective is to provide safe and reliable utility service at a reasonable cost. If capacity is overbuilt, or built out too far in advance of growth, costs to customers (including both ratepayers and developers) increase. On the other hand, when excess capacity in the system is limited, the likelihood of impeding growth rises.

98. Growth from new development in French Creek has proven challenging to forecast with accuracy. Meanwhile, it is not cost effective to add small amounts of supply over time. For example, drilling larger wells provides better value than drilling smaller wells.

99. Finally, there are timing issues. EWW's experience is that it can take two years or longer to drill new wells. As a result, projects delayed until the 2024-2026 RRA period would likely not be completed until early 2025. This creates the potential for growth to be delayed due to supply limitations if growth is significantly higher than anticipated over the period.

100. Based on forecast customer growth and current well capacity EWW expects to have sufficient capacity to service new customers until 2030.

101. Because EWW anticipates that the current level of supply will be sufficient for several more years, there is the opportunity to explore innovative and collaborative solutions with the objective of achieving value for customers. If a viable solution to add more supply or augment supply by improving or re-drilling an existing well, then EWW will advise the Comptroller in advance.

102. These costs would be a result of growth and would be allocated to the Deferred Capacity Trust Fund ("DCTF"), so there is no impact on rates. The costs will only be recovered through the DCTF if the assets are placed into service.

103. For clarity, such costs will only be incurred if EWW determines either:

- 1) Additional supply is required within the 2024-2026 test period to accommodate higher than expected growth; or
- 2) EWW has been successful at negotiating an agreement to obtain cost effective supply to support future growth and must proceed in an expedient manner to secure the opportunity.

104. **Well Rehabilitation** – The well rehabilitation program will fully rehabilitate three wells over the rate period. Typical rehabilitation includes removal of the pump, replacing instrumentation, video inspection, motor inspection, mechanical cleaning of the casing and screen to remove deposits, and re-development of the screen to remove fines and precipitates trapped behind the screen.

105. **GIS System Implementation** – Currently French Creek assets are not spatially or digitally mapped for use. A PDF version of the system drawing is refreshed on an annual basis via an outside consultant. The system drawings are missing key information such as valves, meters, etc. This PDF model is supplemented by the Meter Registry (Excel based) and CAD drawings to fill in information gaps. The system consists of vertical Assets: (18 raw water wells, 2 reservoir sites (one with water treatment, one just straight disinfection)) and Linear Assets: (200 hydrants 800 valves, 2,400 connections, each metered (approximately 2,200 meters in service))

106. When responding to operational issues, using the current manual tools to locate assets and their details is time-consuming and is not available electronically in the field to crews. The data available in the PDF is static for a full year until it gets manually updated annually. The GIS System will: (i) better support Service Requests for utility locates for digging in and around EWW assets; (ii) improve operational repair processes to find valves in the system; and (iii) mobilize resources to fix leaks. This initiative is planned to begin towards the end of the 2024-2026 test period and is expected to continue into the 2027-2029 period.

107. **Watermain Upgrades – 100mm to 200mm Lundine Lane (2024)** - The system updated water model for fire flow while under MDD conditions indicated a number of deficient areas throughout the system where fire flow is less than what is required by the Water Supply for Public Fire Protection – A guide for recommended practice, published by the Fire Underwriters Survey, nor adheres to the guideline referenced in the Master Municipal Construction Document (MMCD) Design Guideline Manual. To meet or exceed these requirements in the deficient areas, that are, the existing main diameters need to be increased. In addition, several mains in service are 100 mm in diameter, MMCD design guidelines recommend mains be 200 mm unless looped with lengths less than 500 m in residential subdivisions can be reduced to 150 mm so that the MMCD Design Guidelines can be met.

108. The project will replace 200 m of existing 100 mm with 200 mm PVC main. There is also a section of transmission (raw water supply) that reduces from 150 mm to 100 mm address and is known to reduce flow from Well No. TWn1, by increasing this segment will increase the wells yield. If the 200 mm Main replacement is implemented using open cut and the two lines are in a common trench, then the transmission line will also be sized up to reduce the line losses in this

section. The deficiencies are broken down into a series of projects and will continue into subsequent filings in a phased manner. The project will be 50% contributed by developers and 50% by rate base.

109. **Water Main Upgrades 150-200mm Ackerman Rd Development (2025)** – The project will progressively address the deficiencies that are identified in the French Creek Water System Master Plan Update 2020 and discussed above. The project will be 50% contributed by developers and 50% by rate base.

110. **Water Main Upgrades 100-150mm Single Family Deficient Fire Flow (2024-2026)** - The project will opportunistically and progressively address the deficiencies that are identified in the French Creek Water System Master Plan Update 2020 and discussed above. The deficiencies are broken down into a series of projects and will continue in subsequent filings in a phased manner. The project will be 50% contributed by developers and 50% by rate base.

111. **Church Road Radio Modem Upgrades (2024)** – Several of the SCADA Pack and Zlinx RF Modems that provide remote communication to the Church Road Reservoir are obsolete and no longer supported by the manufacturer. The project entails completing a radio path study, installing a new antenna/mast and replacing obsolete ZlinkRT/SCADAPack units at well sites HC7, HC9, Bosa, Spring Hill, R8 and HC9.

112. **Drew Road Filter PLC Replacement (2024)** – The Drew Road Filter Plant is controlled using an Allen Bradley CompactLogix L32E. As of December 20, 2020, Rockwell Automation announced that the CompactLogix 750KB Ethernet Controller was discontinued and is no longer available for sale. The device and IO are near end of life and should be replaced to ensure service reliability. The project entails replacing the controller and IO with a supported version and enabling remote access for internal Programmable Logic Controller (PLC).

113. **Pressure Reducing Valve (PRV) (2024-2025)** – Further evaluation of the system model with the addition of the booster pumps and raised Hydraulic Grid Line (HGL) of the main pressure zone will require the addition of PRVs to decrease pressures in the higher-pressure areas. The latest model determined that two (2) pressure reducing valve stations are required to alleviate significant PHD and MDD high pressure deficiencies in the system and over pressure management. Almost half of the system exceeds the maximum allowable pressure. MMCD design guidelines require over pressure management where such deficiencies exist. Two (2) PRV stations will be installed to loop the upper pressure system to the lower pressure system to establish a pressure boundary. The eventual locations will be finalized once modeling is completed. This improvement will result in reduced leakage, mitigate stress on pipes and bends and reduce repair/maintenance costs on

older weaker sections of distribution piping. The project is proposed to be 75% supported through the DCTF and the remaining 25% through rate base.

114. **Chlorine Analyzer Replacements (2024-2025)** – The Church and Drew reservoir sites employ online analyzers to control chemical dosing, monitor and report water quality parameters to VIHA. They are also employed to enable operational decisions and collect data for optimization trending analyses. The analyzers in service at both the Church Road and Drew Road reservoir sites are near end of life, no longer supported by the manufacturer and spare parts are in limited supply or not available.

115. The intent is to replace the in-service analyzers and add an additional analyzer at Drew Rd to monitor water within the distribution system resulting in improvements in process monitoring and control, advances in technology for improving operational efficiency, prevent unforeseen failures due to instrument degradation, safety improvements resulting from incident root cause analyses, or updates to regulatory requirements that may arise.

116. **Unplanned Lifecycle Replacements** – Over the 2024-2026 period, there may be opportunities to replace rather than repair assets that are near end of life or require unusually more frequent repair and maintenance. The intent would be to offset operating costs with the capital expenditure. These instances would be evaluated on a case-by-case basis.

6.0 CAPITAL EXPENDITURES AND RATE BASE

6.1 Capital Expenditures

117. This section describes in further detail EWW’s capital projects planned for the 2024-2026 test period and the corresponding annual forecast capital expenditures, summarized in Table 6.1-1 below. Capital expenditures for 2021– 2023 is provided for comparison. A detailed summary of EWW’s annual capital expenditures is provided in Financial Schedule 2.4.

Table 6.1-1
EWW Capital Expenditures
2021-2026
(\$ thousands)

Project		A 2021- 2023D	B 2024F	C 2025F	D 2026F	E 2024- 2026F
Capital Expenditures						
1	Existing Wells-- Well Rehabilitation Program (Overhauls)	60	29	30	31	91
2	New Well to Support Growth (Well ID aCs1) – 71% Rate base	-	-	-	-	-
3	Unplanned Lifecycle Replacements	-	-	-	30	30
4	GIS System Implementation	-	-	-	72	72
5	Decommissioning Existing Well – Springhill and Oceanside	-	-	-	-	-
6	Billing System Upgrade	87	-	-	-	-
7	Drew Road Complex Flow Meter Upgrade	32	-	-	-	-
8	Booster Pump Station – 75% Rate base**	362	75	-	-	225
9	Water Main Upgrades 100-150mm Single Family Deficient Fire Flow – 50% Rate base	-	12	114	111	237
10	Water Main Upgrades 150-200mm Ackerman Rd Development – 50% Rate Base	-	-	23	-	23
11	Water Main Upgrades-- 100m to 200m Lundine Lane – 50% Rate Base	-	-	-	55	55
12	Church Road Radio Modem Upgrades (2024)	-	35	-	-	35
13	Drew Road Filter PLC Replacement (2024)	-	36	-	-	36
14	Pressure Reducing Valve (2024-2025)	-	119	136	-	255
15	Chlorine Analyzer Replacements (2024-2025)	-	20	31	-	52
16	Pump House Decommissioning	15	-	-	-	-
17	Meter Replacement Program	60	115	118	122	355
18	Hydrant Replacement Program	110	-	-	-	-
19	Total Expenditures – Rate Base	726	441	453	421	1,316
Contributions						
20	Pressure Reducing Valve	-	356	408	-	764
21	Water Main Upgrades 100-150mm Single Family Deficient Fire Flow – 50% Rate Base	-	12	114	111	237
22	Water Main Upgrades 150-200mm Ackerman Rd Development – 50% Rate Base	-	-	23	-	23
23	Water Main Upgrades - 100m to 200m Lundine Lane – 50% Rate Base	-	-	-	55	55
24	Booster Pump Station – 25% Contributed **	121	225	-	-	225
25	Bulk Water Connection to RDN – 100% Contributed	349	-	-	-	-
26	Single Meter Service Connections – 100% Contributed	74	29	30	31	90
27	Subdivision – Multi-meter Installations – 100% Contributed	80	22	22	23	67
28	Total Capital Expenditures – Contributed	624	644	598	220	1,461
29	Total Capital Expenditures	1,350	1,085	1,051	641	2,777

** In the 2021-2023 RRA, Booster Pump Station capital funding reflects 75% rate base and 25% contribution.

For 2024-2026, Booster Pump Station capital funding reflects 25% rate base and 75% contribution.

118. The total forecast for capital expenditures is \$2,777 thousand for the 2024-2026 test period of which \$1,461 thousand is comprised of contributions and \$1,316 is for rate base expenditures. As described in section 5.0, EWW's capital upgrades are required to address system reliability risks, regulatory requirements, system growth, asset protection and cost control, and ongoing capital maintenance requirements.

119. Capital additions planned for the 2024-2026 test period are summarized in Table 6.1-2 below. Capital additions for 2021 to 2023 period is provided for comparison. EWW's capital plan for 2024-2026 averages \$439 thousand per year which is a combination of ongoing capital maintenance, and system reliability projects as discussed in section 5.2. This is an increase from the average capital additions over the 2021-2023 period of \$242 thousand per year.

Table 6.1-2
EWW Capital Additions
2021-2026
(\$ thousands)

Cost Category	A 2021-2023F	B 2024F	C 2025F	D 2026F	E 2024-2026F
1 Source of Supply	436	29	30	61	121
2 Water Treatment Plant	-	56	31	-	87
3 Pumping Plant	578	300	-	-	300
4 General Plant	-	35	-	-	35
5 Transmission & Distribution Plant	289	664	989	508	2,161
6 Software	85	-	-	72	72
7 Capital Additions	1,388	1,085	1,051	641	2,776
8 CIAC	(802)	(644)	(598)	(220)	(1,461)
9 Capital Additions, net CIAC	585	441	453	421	1,316

6.2 Depreciation

120. EWW's depreciation expense is summarized in Table 6.2-1 below. The detailed calculation of EWW's depreciation expense is provided in Financial Schedule 2.5. EWW's utility assets continue to be depreciated over the shortest of the assets' physical, technological, commercial, or legal lives.

Table 6.2-1
Depreciation
2020-2026
(\$ thousands)

Cost Category	A 2020A	B 2021A	C 2022A	D 2023F	E 2024F	F 2025F	G 2026F
1 Depreciation	318	322	327	349	380	407	430
2 CIAC Amortization	(158)	(158)	(164)	(169)	(186)	(201)	(211)
3 Net Depreciation	160	164	163	181	195	206	219

6.3 Working Capital

121. Forecast working capital requirements are based on the expected timing of EWW's cash flows and represent 40 days of operating expenses. This is a slight change from 45 days of

operating expenses that was used in EWW's last rate application. As noted in the 2021-2023 Revenue Requirement and Rates Application, EWW has prepared a lead lag study in preparation of this Application. The lead lag study is attached as Appendix F. A summary of EWW's working capital allowance is provided in Table 6.3-1 below. The detailed calculation of EWW's working capital is shown in Financial Schedule 2.6.

Table 6.3-1
Working Capital Allowance
2020-2026
(\$ thousands)

Cost Category	A 2020A	B 2021A	C 2022A	D 2023F	E 2024F	F 2025F	G 2026F
1 Total Operating Expenses	1,136	1,139	1,344	1,228	1,280	1,310	1,343
2 Less: Intercorporate Service Charges	(192)	(161)	(163)	(167)	(188)	(189)	(193)
3 Less: Property Taxes	(41)	(43)	(52)	(67)	(69)	(70)	(72)
4 Total Eligible Expenses	903	936	1,129	994	1,024	1,051	1,078
5 Total Working Capital Allowance (Line 4 x 40/365)	111	115	139	123	112	115	118

6.4 Rate Base

122. EWW's net rate base is summarized in the Table 6.4-1 below. The detailed calculation of EWW's net rate base is provided in Financial Schedule 2.6.

Table 6.4-1
Net Rate Base
2020 - 2026
(\$ thousands)

Cost Category	A 2020A	B 2021A	C 2022A	D 2023F	E 2024F	F 2025F	G 2026F
1 Mid-Year Gross Property, Plant & Equipment	13,199	13,353	13,476	14,094	15,204	16,272	17,118
2 Less: Mid-Year Accumulated Depreciation	(2,414)	(2,734)	(3,055)	(3,391)	(3,756)	(4,149)	(4,568)
3 Mid-Year Net Property, Plant & Equipment	10,785	10,619	10,421	10,703	11,448	12,123	12,550
4 Add: Working Capital Allowance	111	115	139	123	112	115	118
5 Mid-Year Rate Base	10,896	10,734	10,560	10,825	11,560	12,238	12,669
6 Less: Mid-Year CIAC, Net of Accumulated Amortization	(5,407)	(5,285)	(5,115)	(5,333)	(5,880)	(6,307)	(6,510)
7 Net Rate Base	5,489	5,449	5,445	5,492	5,681	5,931	6,159

123. EWW's net rate base is forecast to increase by \$667 thousand over the 2024 -2026 test period driven by the capital projects as discussed in section 5.2

7.0 RETURN ON RATE BASE

7.1 Capital Structure

124. For the 2024-2026 test period, EWW is proposing no change to the capital structure approved by the BC Comptroller in Decision 2581. EWW proposes the common equity ratio to remain at 40% and an equity risk premium of 1% (100 basis points) above the return on equity (“ROE”) of 8.75% adopted by the BC Utilities Commission (“BCUC”) for the low-risk benchmark utility, FortisBC Energy Inc. in Order G-129-16.¹⁰ EWW notes that the low-risk benchmark has not changed since its last approved application.

125. EWW reflects new debt issuances through deemed inter-company loans from its parent company, EUI. The cost of debt for this inter-company loan is described in section 7.2.

126. To maintain its capital structure at 60% debt and 40% equity and to meet its capital expenditure needs, EWW requires an increase of \$400 thousand in deemed intercompany debt over the 2024-2026 test period. EWW’s debt schedule is provided in Financial Schedule 2.7.

7.2 Cost of Debt

127. EWW reflects new debt issuances from EUI through deemed inter-company loans. The cost of inter-company debt for EWW is determined to be equal to the long-term cost of debt applicable to its parent company, EUI (rated A(low) by DBRS and A- by Standard & Poor’s) plus an EWW risk premium (based on a BBB rated company) and a transaction premium. The cost of inter-company debt and use of the BBB rating to determine EWW’s risk premium was approved as part of Order 2528. The weighted average cost of debt is summarized in Table 7.2-1 below.

Table 7.2-1
Average Cost of Debt
2020-2026

	A 2020A	B 2021A	C 2022A	D 2023D	E 2023F	F 2024F	G 2025F	H 2026F
1 Average Cost of Debt	5.27%	5.28%	5.28%	5.20%	5.29%	5.29%	5.29%	5.29%

128. The cost of debt in the table above reflects the average of the cost of debt for prior years’ debt issuances and a forecast cost of debt for new issues of inter-company debt based on published long term bond yields and spreads as of July 17, 2023. On this basis, EWW forecasts cost of new

¹⁰ BCUC Order G-129-16. FortisBC Energy Inc. Application for its Common Equity Component and Return on Equity for 2016, August 10, 2016. (<http://www.ordersdecisions.bcuc.com/bcuc/decisions/en/item/169142/index.do>), as accessed on July 16, 2020.

debt issues of 5.46% for 2023, and 5.29% for 2024-2026. These forecasts are based on the following:

- 30-year Government of Canada (“GOC”) bond benchmark yield of 3.27% in 2023, 3.10%, in 2024-2026; plus
- EUI’s cost of a new 30-year debt issue spread of 1.56% above GOC bond yields;
- A risk premium for EWW of 0.58% over EUI cost of debt; plus
- A transaction cost of 0.05%.

129. The EWW risk premium of 0.58% represents the spread between the cost of a new 30-year debt issue of EUI and the cost of the same issue to a BBB rated company.

130. As discussed in section 8.3 below, EWW proposes to continue the interest expense deferral account for the 2024-2026 test period to reflect the differences between forecast and actual interest rates.

7.3 Weighted Average Cost of Capital

131. Based on the above, EWW’s forecast weighted average cost of capital reflected in this Application is 7.07% for 2024 to 2026. This translates into a forecast return on rate base of \$402 thousand, \$419 thousand, and \$436 thousand for 2024, 2025 and 2026 respectively, as shown in Table 7.3-1 below.

Table 7.3-1
Return on Mid-Year Rate Base
2020-2026
(\$ thousands)

	A 2020A	B 2021A	C 2022A	D 2023D	E 2023F	F 2024F	G 2025F	H 2026F
1 Debt	173	173	173	180	174	180	188	195
2 Equity	149	187	(20)	225	76	222	231	240
3 Total	322	358	153	405	250	402	419	436

132. Further details of EWW’s forecast weighted average cost of capital and return on rate base are provided in Financial Schedule 2.6.

8.0 DEFERRAL ACCOUNTS AND 2021-2023 RATE RIDER

133. An overview of each of the deferral account balances for 2021-2023 is provided in section 8.1. Section 8.2 summarizes the forecast balances in the deferral accounts as of December 31, 2023, and provides an explanation of the amounts proposed to be collected through a rate rider

from customers during the 2024-2026 test period. Section 8.3 includes a discussion of the deferral accounts in place for the 2024-2026 test period.

8.1 Deferral Account Balances for 2021-2023

134. Order 2581 approved four deferral accounts for the 2021-2023 test period:

- Consumption deferral account.
- Property taxes deferral account.
- Interest expense deferral account; and
- Hearing cost deferral account

135. The calculation of each deferral account balance for the years 2021, 2022 and 2023 is shown in Financial Schedules 3.1 and 3.2 and a summary is shown in Table 8.1-1.

Table 8.1-1
Deferral Account Balances and Disposition through 2021-2026 Rate Rider
(\$ thousands)

Deferral Account Balances and Disposition	A 2021A	B 2022A	C 2023F	D 2024F	E 2025F	F 2026F
1 Deferral Accounts Balance, Beginning of Year	(268)	(91)	78	192	100	38
Current Year Deferrals						
2 Consumption	52	93	73	-	-	-
3 Property Taxes	(2)	6	21	-	-	-
4 Interest	(1)	(5)	(5)	-	-	-
5 Hearing Costs	4	-	-	-	-	-
6 Current Year Deferrals	52	95	89	-	-	-
7 Current Year Carrying Charges	(13)	(10)	(5)	8	3	1
8 Amounts Refunded (Recovered) from Rate Rider	137	84	31	(100)	(66)	(39)
9 Deferral Accounts Balance, End of Year	(91)	78	192	100	38	0
10 Carrying Charges Balance, Beginning of Year	-	-	-			
Current Year Carrying Charges						
11 Mid-Year Deferral Account Balance	(180)	(91)	78	192	100	38
12 Weighted Average Cost of Debt	5.28%	5.28%	5.29%	5.29%	5.29%	5.29%
13 Current Year Carrying Charges	(9)	(0)	7	8	3	1
14 Amounts to be Refunded through (Recovered from) Rate Rider	9	0	(7)	(8)	(3)	(1)
15 Carrying Charges Balance, End of Year	-	-	-	-	-	-

136. For the 2021-2023 test period, the differences in the deferral account balances result in a forecast net collection from customers of \$192 thousand on December 31, 2023 (line 9 of Table 8.1-1). This balance is primarily driven by lower than forecast consumption, resulting in a net collection in the Consumption Deferral Account, combined with higher than forecast interest rates and property taxes resulting in a net collection in the Interest Rate Deferral Account and Property

Tax Deferral Account, respectively. The 2021-2023 deferral account balances are provided in EWW's 2021 and 2022 Results, which are attached as Appendices F. Each of the deferral accounts as well as the requirement for an additional rate rider adjustment is explained below.

Consumption Deferral Account

137. A consumption deferral account was continued for the 2021-2023 test period to record the difference in revenues based on forecast consumption volumes approved by the Comptroller in Order 2581 and revenue based on actual consumption volumes. During 2021 to 2023, EWW's actual consumption volumes were lower, for all years, than the amounts approved in Order 2581.

Property Taxes Deferral Account

138. EWW continued its property taxes deferral account for the 2021-2023 test period to record the difference between forecast property taxes approved by the Comptroller in Order 2581 and actual property taxes. During 2021-2023, EWW's actual property taxes were higher than the amounts approved in Order 2581.

Interest Deferral Account

139. EWW continued its interest deferral account for the 2021-2023 test period to record the difference between forecast interest expenses approved by the Comptroller in Order 2581 and actual interest expenses on external and deemed inter-company debt. During 2021 to 2023, EWW's actual interest charges were higher than the amounts approved in Order 2581.

Hearing Cost Deferral Account

140. EWW established a hearing cost deferral account to record expenses incurred in relation to the 2021-2023 Revenue Requirement and Rates Application. EWW incurred a bit of hearing costs in 2020 and 2021..

8.2 Disposition of Charges through 2024 Rate Rider

141. For the 2024-2026 test period, EWW proposes that the total net balance of \$192 thousand in the four deferral accounts, on December 31, 2023, including applicable carrying costs, be collected from customers through a rate rider for the years 2024 through 2026. EWW has adopted standard utility practices whereby it excludes deferral accounts from the revenue requirement and utilizes a rate rider for recovery or refund of balances. Carrying costs are applied based on EWW's cost of debt. The disposition of the deferral account balances is presented on line 8 of Table 8.1-1. Associated carrying costs are shown on line 13 of Table 8.1-1.

142. In determining the appropriate period in which to discharge the deferral account balances, EWW considered the following objectives: (i) recover operating costs as close as possible to the period in which they are incurred; (ii) provide for relatively stable rates; and (iii) minimize the risk and cost to the utility of carrying deferral accounts. In this Application, EWW proposes to recover 49% of the deferral balance in 2024, 32% of the deferral balance in 2025, and 19% of the deferral balance in 2026. This spreading of the recovery provides a balance between recovering costs as close as possible to the period in which they are incurred, while maintaining relatively stable rates.

143. Financial Schedule 4.0 provides the calculation of the proposed rate rider effective January 1, 2024, to December 31, 2026, for each rate class.

8.3 Deferral Accounts for the 2024-2026 Test Period

144. In this Application, EWW proposes to continue the four previously approved deferral accounts for the 2024-2026 test period: (i) consumption deferral account; (ii) property taxes deferral account; (iii) interest expense deferral account; and (iv) hearing cost deferral account. EWW proposes to continue to calculate and include carrying costs in its deferral account balances for the 2024-2026 test period. More specifically:

- i) The consumption deferral account will record the difference in revenues associated with variances in customer counts as well variances in consumption volumes, to recognize variances in both the base and more than base revenue amounts.
- ii) The property taxes deferral account will record the difference in property taxes between the forecast property taxes and the actual property taxes for each year.
- iii) The interest expense deferral account will record the difference in interest expense between the forecast interest charges and the actual interest charges incurred. The actual interest charges are determined based on the interest rate for EWW at its BBB rating at the date of issuance. This actual interest rate is equal to the sum of the 30-year Government of Canada rate plus the risk premium for EUI plus the risk premium for EWW (relative to EUI) plus a transaction premium (0.05%). The justification for this interest rate calculation is explained in section 7.2.
- iv) The hearing cost deferral account will record the expenses incurred in relation to a written or oral proceeding for this Application. These expenses include legal fees, stakeholder consultation and other expenses incurred by EWW or the Comptroller as well as any intervener costs that may be approved by the Comptroller for recovery in relation to the regulatory proceeding.

9.0 Contribution In Aid of Construction (CIAC)

9.1 Tariffs Applied For

147. In Order No. 2576, the Comptroller stated that:

“EWW is to include a reevaluation of the DCTF balances in its 2024 RRA with recommendations for further adjustments to the CIAC rates going forward. These recommendations are to include results to date, future growth expectations and analysis of future supply costs to determine if any revision should be made to the CIAC charge after 2026.”

148. This section of the Application is submitted in response to the above direction.

149. In accordance with Schedule B of its Water Tariff No. 6 (effective January 1, 2023), EWW currently collects Contributions in Aid of Future Construction (CIAC) upon receiving an application for an extension of service. CIAC charges are one-time charges collected from developers or new customers to cover the costs incurred by the utility to provide water service to additional units which utilize or may utilize waterworks capacity in the future.

150. CIAC funds are deposited into EWW’s Deferred Capacity Trust Fund (DCTF), and withdrawals are made to fund projects for future expansion of source capacity upon written authorization of the Comptroller of Water Rights (the “Comptroller”).

151. EWW is requesting approval to adjust the CIAC charge over the 2024-2026 test period consistent with the forecasted British Columbia Consumer Price Index (CPI), for 2024 to 2026. This methodology was last approved by the Comptroller in Order 2576. Table 9.1-1 shows the proposed CIAC amounts for 2024 to 2026. The calculation is also included in Table 1 of Appendix G.

**Table 9.1-1
Calculation of CIAC Charge**

	A	B	C
Year	BC CPI⁽¹⁾	CIAC Charge (Inflated) (\$)	Rate Charged ⁽²⁾ (\$)
1 2023	2.0%	22,483	22,500
2 2024	2.5%	23,045	23,000
3 2025	2.2%	23,552	23,600
4 2026	2.0%	24,023	24,000

Note 1: BC Ministry of Finance Budget and Fiscal Plan 2023/24 – 2025/26, page 106.

Note 2: Rounded to the nearest hundred.

152. A fixed CIAC charge also creates inequity between developers adding to the system in different years. For example, a \$19,000 contribution made in 2015 is significantly more expensive than a \$19,000 contribution made in 2020. Developers' construction costs, like EWW's infrastructure costs, are ever-increasing to keep up with inflation. Thus, an inflation adjusted CIAC charge is fair to developers and EWW.

153. A copy of Schedule B with the proposed CIAC charges is included in EWW's Water Tariff No. 7 attached to this Application.

154. Section 9.2 below contains a summary of prior decisions, historical DCTF balances and growth trends.

155. Section 9.3 provides the status of the developer-funded capital projects approved by the Comptroller in prior RRA decisions that have been placed into service or are forecast to be placed into service, as well as upcoming developer-funded capital projects.

156. Section 9.4 provides a forecast of future DCTF withdrawals and contributions, as well as analysis of future supply vs. demand.

157. Section 9.5 describes the unit rate calculation.

158. Section 9.6 establishes the process for implementing the changes reflected in this Application.

159. Section 9.7 describes the compliance filing process for the DCTF going forward.

9.2 Background

160. In Order No. 2221, the Comptroller approved a CIAC charge of \$6,700, effective March 1, 2010. This charge was determined based on a forecast of developer-contributed capital projects for the 2009-2011 period divided by the number of units forecast to be served by those projects.

161. In Order No. 2221, the Comptroller also approved EWW's forecast 2011 closing balance of \$245,000 in the DCTF. The forecast closing balance in the trust account on December 31, 2011, was \$245 thousand, while the actual closing balance was \$1,107 thousand. In 2010 – 2011, EWW received 127 developer lot contributions. EWW received only 109 lot contributions at the CIAC charge of \$6,700 with the remainder received at a lower CIAC rate. In recognition of the lower

level of developer funding (\$820 thousand), signifying lower than forecast growth, EWW sought only \$1,015 thousand in costs related to a new reservoir (Project ID 870996) and a growth study.

162. In Order No. 2315 and subsequent Order No. 2327, the Comptroller approved a CIAC charge of \$8,500, effective April 15, 2012. This charge was determined based on a forecast of 50 developer lot contributions each year for the period 2012 – 2019 to recover: \$2,861 thousand from new developer-related capital projects; interest costs for shortfalls in the DCTF; and shortfalls from developer-related capital projects that continue to be constructed.

163. In Order No. 2440, the Comptroller approved a CIAC charge of \$19,000, effective September 1, 2015. The charge was determined based on a forecast of zero residential-equivalent developer lot contributions each year in 2016 and 2017, and 14 lot contributions each year for the period 2015-2019 to recover: \$1,055 thousand for the then-current deficit in the DCTF, \$1,790 thousand for future capital projects and \$2,095 in financing costs.

164. In 2015, EWW forecast 84 developer lot contributions for the period 2015-2019 but has received only 66 contributions for the same period. Over the 2015-2019 period, EWW had forecast \$1,715 thousand in new developer-related capital projects and has placed \$2,196 thousand in compliance with Orders 2420 and 2519.

165. In Order No. 2576, the Deputy Comptroller approved a CIAC charge of \$21,600 in 2021, \$22,000 in 2022 and \$22,500 in 2023. In the 2020 CIAC application, EWW forecasted to receive 60 lot deposits over the 2020-2022 period. EWW has received 80 developer lot contributions over the same period. Of the 80 developer lot deposits, 60 are related to a multi-family residential unit. EWW did not receive any deposits in 2023 due to a moratorium on new connections which has since been settled.

9.3 Past and Current Projects

166. In Table 2 of Appendix G, EWW has provided detailed information on the timing of the recognition of amounts receivable from the Future Capacity Receivable based on: a) capital project expenditures incurred through 2022; and b) developer-contributed capital projects forecast to be included in EWW's 2024-2026 test period. Rows 1 to 10 of Table 2 provide the capital expenditures by project by year. Actual capital expenditures are provided for the period 2008 to 2022 and forecast expenditures are provided for the period 2023 to 2026. Rows 11 to 20 of Table 2 show the anticipated year in which the project or portion thereof goes into service and becomes an amount eligible for collection from the DCTF.

167. The following provides a brief update on outstanding deferred capacity capital projects.

168. In July 2019, EWW submitted an application (Reference No. 7614) to withdraw the developer funded costs incurred on the TWs1 Well, ACs1 Well, and the Lundine Lane Upgrades project (\$2,504 thousand). These project costs are summarized below:

Table 9.3-1
DCTF Projects
(\$ thousands)

	Projects	A Contribution Split	B Actual Project Cost	C Total Contributions (col A x col B)
1	Church Road S test Well (TWs1)	100%	1,619	1,619
2	Springhill Road Additional Capacity Well (ACs1)	29%	1,149	333
3	Lundine Land Upgrades	100%	552	552
4	Total			2,504

169. At the time of the DCTF withdrawal application, the release of \$2,504 thousand would have resulted in a negative balance in EWW's DCTF trust fund account. As such, only \$800 thousand was approved to be released to maintain a positive balance in the trust account. There is \$1,704 thousand remaining to be withdrawn for the above projects. Additionally, the Drew Road Pump Station Upgrade (9% Developer Funded) was completed in 2018 and an application to withdraw the \$13 thousand in developer funded project costs has not been submitted at this time. Table 9.3-2 below summarizes the outstanding developer costs.

Table 9.3-2
DCTF Projects
(\$ thousands)

Projects	A Contributions
1 Church Road S test Well (TWs1)	1,619
2 Springhill Road Additional Capacity Well (ACs1)	333
3 Lundine Land Upgrades	552
4 Project Total	2,504
5 Less: Approved Withdrawal Amount	800
6 Add: Drew Road Pump Station Upgrade	13
7 Total Project Costs Remaining	1,718

170. As noted in section 5.1.2.4, the installation of a Booster Pump Station on Church Road is currently in development. Permitting is required for the project and once complete, the project will be released for tender. EWW expects the costs of the project to exceed the initial estimate of \$483,000. This project is primarily intended to address existing low-pressure issues for existing customers in the Wembley and Manse Road area, but it will also be sized to accommodate some additional development in this area. As such, the project is proposed to be 75% developer funded and 25% rate base funded.

9.4 Forecast 2024-2027 DCTF

171. The number of customers serviced by EWW is expected to steadily increase as the population of French Creek grows. Based on historic lot development and population growth rates EWW is forecasting an annual growth rate of 1.2% or the equivalent of 23 residential lots per year. This forecast is consistent with the increase in the number of lots experienced historically.

172. As noted above in section 3 and 5, EWW will rely on the revised 2020 French Creek Water System Master Plan (see Appendix C) for its capital plan during the 2024-2026 test period. Over the 2024- 2026 test period, EWW intends to complete \$1,304 thousand of deferred capacity related capital projects and studies. As identified in section 5.2 and Table 3 of Appendix G, this work includes:

- Booster Pump Station (\$300 thousand)
- Construction of two pressure reducing valve stations (\$764 thousand),
- Water Main Upgrades:
 - 100-150mm Single Family Deficient Fire Flow (\$237 thousand)
 - 150-200mm Ackerman Rd Development (\$23 thousand)
 - 100m to 200m Lundine Lane (\$55 thousand)

173. Based on current wells in service, EWW's system has total well capacity of 55.6 L/s. In discussion with the BC Water Utility Regulation Section, EWW has used the 2021 MDD of 45.9 L/s for assessing water system capacity and future developments. Based on the forecast customer growth over the 2024-2026 test period, EWW forecasts it will have an average of 6.5 L/s of excess well capacity which will allow EWW to support approximately 300 additional residential lots. Based on forecast customer growth and current well capacity, EWW will have sufficient capacity to service new customers until 2030 if no additional capacity is added to the system.

174. Table 2 of Appendix G provides the actual balance of the DCTF from 2014 to 2022 and a forecast of the balance from 2023 to 2029. As of December 31, 2022, the trust account has a balance of \$1,601 thousand.

175. Rows 1 to 12 of Appendix G provide the balance and flow of funds through the trust account. While rows 13 to 25 provide the net balance of the fund after considering comptroller approved release of funds, assets placed into service, and any potential return calculated on the receivable balance.

176. In line with the demand forecast, EWW has forecast the receipt of approximately 23 lot deposits per year, at the annual CIAC charge calculated in column E of Table 1. Forecast Comptroller release of funds (row 5) is calculated to include 50% of the current year deposits received plus 50% of the prior year deposits received, and any interest that has accrued in the trust account except in 2024. In 2024, EWW plans to withdraw funds for the completed projects shown in Table 9.3-2. This calculation accounts for a delay between EWW receiving a CIAC deposit and approval of the lot's corresponding Certificate of Public Convenience and Necessity (CPCN) application.

177. In Order No. 2440 (in respect of EWW's August 31, 2015, application to adjust its CIAC charge), the Comptroller directed EWW to fund any short-term shortfalls in the DCTF based on its WACC rate "until the balance returns to a more modest level and is projected to return to zero in a reasonable period of time. This WACC financing cost will continue from September 1, 2015, until December 31, 2020, when it is the expectation of the Deputy Comptroller that financing charge equivalent to EWW's average cost of intercompany loans in each year will apply."

178. As of 2019 with the submission of the application to release funds for TWs1 Well, ACs1 Well, and the Lundine Lane Upgrades project, EWW began calculating a return on the Future Capacity Receivable balance. The return for 2020 has been calculated using EWW's approved WACC rate of 7.12%. Going forward EWW will calculate the return on the receivable using the average cost of intercompany loans approved in future RRA decisions. A rate of 5.28% has been used for 2021 and 2022 and 5.29% has been used for 2023 and the 2024-2026 test period as a place holder in the current forecast. The return on receivable is calculated on the mid-year receivable balance.

179. Based on the above, EWW has forecasted the DCTF to return to a positive balance in early 2029 (Table 3 of Appendix G). This is slightly delayed from the estimate in its 2020 CIAC

Application due to the planned capital projects as discussed in section 5.0 above. In EWW's 2020 CIAC Application, EWW forecasted the DCTF would return to a positive balance in mid-2026.

9.5 Unit Rate Calculation

180. EWW proposes the following definitions for "unit" are proposed for Water Tariff No 7:

- Residential Single Family – 1 unit = 1 dwelling unit
 - 10 Residential Single-Family home = 10 dwelling units = 10 units
- Residential Multi-Family – 1 unit = 1 dwelling unit
 - 1 building with 15 units = 15 dwelling units
- Commercial – 1 unit = (Current Master Plan Residential MDD/# of approved residential CPCN connections from Current Master Plan).
 - Commercial Development MDD / (Current Master Plan Residential MDD/# of approved residential CPCN connections from Current Master Plan), rounded up to the next whole number.
 - Must be greater than or equal to Current Master Plan Commercial MDD/# of approved Commercial CPCN connections from Current Master Plan).
 - Development MDD = 0.25L/s
 - $0.25 / 0.02106 \text{ L/s} = 11.9 \text{ units}$, rounded up to 12 units.

181. EWW notes that the value of 0.02106 L/s is based on the recent recommendation of the Water Utility Regulation Section ("WURS") in its review of French Creek's Water System Demand.

9.6 Path Forward

182. To clarify the process for managing the DCTF fund while it is in a receivable position (i.e., negative balance), EWW is proposing the following:

- In Q1 2024, EWW plans to apply for approval to withdraw additional funds for the Church Road S Test Well (TWs1), Springhill Road Additional Capacity Well (ACs1), and Lundine Lane Upgrades projects. These projects were only partially funded from the DCTF as noted in section 9.3. EWW will continue calculating a return on the DCTF balance in 2023 at EWW's average cost of intercompany loans in accordance with the Comptroller's direction;

- From January 2024 onwards, EWW will calculate the return on the DCTF balance using its average cost of intercompany loans approved in future RRA decisions;
- When EWW completes a capital project to be funded by the DCTF, EWW will submit a “DCTF Addition Application” to the Comptroller, which will request approval to add the project to the DCTF. In the DCTF Addition Application EWW will identify the date that the capital project was placed into service, and EWW will add the capital project to the DCTF on the date the asset is placed into service;
- As EWW receives CIAC deposits from developers, EWW will continue to deposit the funds received in the trust account;
- While the DCTF is in a receivable balance, EWW will submit an annual “Release of Funds” to the Comptroller requesting permission to withdraw the CIAC deposits for any lots that have been approved through a CPCN application, plus any interest that has accrued in the trust account;
- EWW will continue to earn a return on the DCTF balance until the annual “Release of Funds” is approved. EWW does not have access to funds while in the trust account and will continue to earn a return until EWW has approval to withdraw funds. Delays in approval of “Release of Funds” will result in increased carrying costs to developers; and
- In future RRA applications, and as proposed herein, EWW will seek approval for a CIAC rate adjusted for CPI for the years included in the RRA.

9.7 DCTF Compliance Reporting

183. As part of its annual compliance reporting, EWW will continue to report to the Comptroller the balances, withdrawals, deposits and carrying costs in the DCTF.

*PART B – WATER TARIFF***10.0 WATER TARIFF**

184. The proposed Water Tariff for EWW is attached as Schedule B-1. EWW requests approval of the following changes to the Water Tariff:

- (i) Changes to the Price Schedules as noted in section 10.1 below.

145. A black-lined version of the Water Tariff noting all the proposed changes is attached as Schedule B-2.

10.1 Price Schedules

146. EWW has revised its Price Schedules to reflect the following:

- (i) Changes to reflect the proposed increases in the Water Rates as noted in section 1.2 of the Application.

EPCOR WATER (WEST) INC.

#10-D 1343 Alberni Highway

Pine Tree Centre

Parksville, BC V9P 2B9

WATER RATES 2024

METERED RATES

Residential Units – Monthly Charge

First 12 cubic meters plus.....	\$46.23
Rate rider.....	\$2.59
For each cubic meter between 12 and 75 cubic meters	\$2.05 per cubic meter
Rate rider.....	\$0.12 per cubic meter
For each cubic meter over 75 cubic meters	\$2.05 per cubic meter
Rate rider.....	\$0.12 per cubic meter

Multi-Residential Units – Monthly Charge per Unit

First 12 cubic meters plus.....	\$42.06
Rate rider.....	\$2.36
For each cubic meter between 12 and 75 cubic meters	\$2.05 per cubic meter
Rate rider.....	\$0.12 per cubic meter
For each cubic meter over 75 cubic meters	\$2.05 per cubic meter
Rate rider.....	\$0.12 per cubic meter

Commercial Units – Monthly Charge

First 12 cubic meters plus.....	\$40.84
Rate rider.....	\$2.29
For each cubic meter between 12 and 75 cubic meters	\$1.02 per cubic meter
Rate rider.....	\$0.06 per cubic meter
For each cubic meter over 75 cubic meters	\$1.02 per cubic meter
Rate rider.....	\$0.06 per cubic meter

NON-METERED RATES

Residential, Multi-Residential & Commercial Service – Monthly Charge

Monthly Flat Rate Charge - Residential	\$46.23
Monthly Flat Rate Charge - Multi-Residential.....	\$42.06
Monthly Flat Rate Charge - Commercial	\$40.84

WATER SERVICE CONNECTION CHARGES

Connection Charge	At Cost
Connection of Customer’s Service Pipe to Existing Curb Stop	At Cost

CONTRIBUTION IN AID OF FUTURE CONSTRUCTION

For each unit qualifying as Authorized Premises	\$23,000
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FIRE HYDRANT AND STANDPIPE RATES

Hydrants, per hydrant, per annum	\$620.10
Rate rider, per hydrant, per annum.....	\$34.77
Standpipes, per standpipe, per annum	\$248.04
Rate rider, per standpipe, per annum.....	\$13.91

AVAILABILITY OF SERVICE CHARGE PER RENT CHARGE AGREEMENTS

Annual Charge	\$388.34 per annum
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Effective Date:

In accordance with Water Tariff accepted for filing by the Comptroller of Water Rights

EPCOR WATER (WEST) INC.

#10-D 1343 Alberni Highway

Pine Tree Centre

Parksville, BC V9P 2B9

WATER RATES 2025

METERED RATES

Residential Units – Monthly Charge

First 12 cubic meters plus.....	\$49.36
Rate rider.....	\$1.69
For each cubic meter between 12 and 75 cubic meters	\$2.19 per cubic meter
Rate rider.....	\$0.08 per cubic meter
For each cubic meter over 75 cubic meters	\$2.19 per cubic meter
Rate rider.....	\$0.08 per cubic meter

Multi-Residential Units – Monthly Charge per Unit

First 12 cubic meters plus.....	\$44.91
Rate rider.....	\$1.54
For each cubic meter between 12 and 75 cubic meters	\$2.19 per cubic meter
Rate rider.....	\$0.08 per cubic meter
For each cubic meter over 75 cubic meters	\$2.19 per cubic meter
Rate rider.....	\$0.08 per cubic meter

Commercial Units – Monthly Charge

First 12 cubic meters plus.....	\$43.60
Rate rider.....	\$1.50
For each cubic meter between 12 and 75 cubic meters	\$1.09 per cubic meter
Rate rider.....	\$0.04 per cubic meter
For each cubic meter over 75 cubic meters	\$1.09 per cubic meter
Rate rider.....	\$0.04 per cubic meter

NON-METERED RATES

Residential, Multi-Residential & Commercial Service – Monthly Charge

Monthly Flat Rate Charge - Residential	\$49.36
Monthly Flat Rate Charge - Multi-Residential.....	\$44.91
Monthly Flat Rate Charge - Commercial	\$43.60

WATER SERVICE CONNECTION CHARGES

Connection Charge	At Cost
Connection of Customer’s Service Pipe to Existing Curb Stop	At Cost

CONTRIBUTION IN AID OF FUTURE CONSTRUCTION

For each unit qualifying as Authorized Premises	\$23,600
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FIRE HYDRANT AND STANDPIPE RATES

Hydrants, per hydrant, per annum	\$662.03
Rate rider, per hydrant, per annum.....	\$22.72
Standpipes, per standpipe, per annum	\$264.82
Rate rider, per standpipe, per annum.....	\$9.09

AVAILABILITY OF SERVICE CHARGE PER RENT CHARGE AGREEMENTS

Annual Charge	\$414.60 per annum
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Effective Date:

In accordance with Water Tariff accepted for filing by the Comptroller of Water Rights

EPCOR WATER (WEST) INC.

#10-D 1343 Alberni Highway

Pine Tree Centre

Parksville, BC V9P 2B9

WATER RATES 2026

METERED RATES

Residential Units – Monthly Charge

First 12 cubic meters plus.....	\$52.69
Rate rider.....	\$0.98
For each cubic meter between 12 and 75 cubic meters	\$2.34 per cubic meter
Rate rider.....	\$0.04 per cubic meter
For each cubic meter over 75 cubic meters	\$2.34 per cubic meter
Rate rider.....	\$0.04 per cubic meter

Multi-Residential Units – Monthly Charge per Unit

First 12 cubic meters plus.....	\$47.94
Rate rider.....	\$0.89
For each cubic meter between 12 and 75 cubic meters	\$2.34 per cubic meter
Rate rider.....	\$0.04 per cubic meter
For each cubic meter over 75 cubic meters	\$2.34 per cubic meter
Rate rider.....	\$0.04 per cubic meter

Commercial Units – Monthly Charge

First 12 cubic meters plus.....	\$46.55
Rate rider.....	\$0.87
For each cubic meter between 12 and 75 cubic meters	\$1.16 per cubic meter
Rate rider.....	\$0.02 per cubic meter
For each cubic meter over 75 cubic meters	\$1.16 per cubic meter
Rate rider.....	\$0.02 per cubic meter

NON-METERED RATES

Residential, Multi-Residential & Commercial Service – Monthly Charge

Monthly Flat Rate Charge - Residential	\$52.69
Monthly Flat Rate Charge - Multi-Residential.....	\$47.94
Monthly Flat Rate Charge - Commercial	\$46.55

WATER SERVICE CONNECTION CHARGES

Connection Charge	At Cost
Connection of Customer’s Service Pipe to Existing Curb Stop	At Cost

CONTRIBUTION IN AID OF FUTURE CONSTRUCTION

For each unit qualifying as Authorized Premises	\$24,000
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FIRE HYDRANT AND STANDPIPE RATES

Hydrants, per hydrant, per annum	\$706.79
Rate rider, per hydrant, per annum.....	\$13.17
Standpipes, per standpipe, per annum	\$282.72
Rate rider, per standpipe, per annum.....	\$5.27

AVAILABILITY OF SERVICE CHARGE PER RENT CHARGE AGREEMENTS

Annual Charge	\$442.63 per annum
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Effective Date:

In accordance with Water Tariff accepted for filing by the Comptroller of Water Rights

WATER UTILITY ACT
WATER TARIFF NO. 7
RATES AND TERMS AND CONDITIONS
For
WATER SERVICE
Near
PARKSVILLE, BRITISH COLUMBIA
By
EPCOR WATER (WEST) INC.
10-D 1343 Alberni Highway
Parksville, British Columbia
V9P 2B9

Contact Person(s)

Eric Taylor, Service Manager
EPCOR Water (West) Inc.

This Tariff is available for public inspection between the hours of
8:30 am and 4:30 pm on business days at:

#10-D 1343 Alberni Highway
Pine Tree Centre
Parksville, British Columbia

Accepted for Filing by the
Comptroller of Water Rights

Effective: [●]

Secretary to the Comptroller

Copies of this Tariff may be purchased at the above address at a cost of \$9.50 per copy or may
be viewed online at no charge at www.epcor.com/frenchcreek

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DEFINITIONS

In this Tariff the following definitions shall apply:

- (a) “Authorized Premises” means Premises which are entitled to, and authorized for, service in accordance with the Certificates of Public Convenience and Necessity for the Utility.
- (b) “Complex” means a structure, including an apartment or condominium, that contains more than one Unit and includes mobile home parks, campgrounds, recreation centres, golf courses, cemeteries, hospitals, and farms.
- (c) "Comptroller" means the Comptroller of Water Rights under the *Water Act*, RSBC 1996, chapter 483 and includes any Person designated in writing by the minister as acting, deputy or assistant comptroller.
- (d) "Customer" means any Person who is the owner or lessee of an Authorized Premises and whose application for Water Service has been accepted by the Utility and includes any other Person who has been or is a user of Water Services supplied by the Utility and may include a developer, contractor or other Person depending on the context.
- (e) “Force Majeure” means events or circumstances not reasonably within the control of the Utility, including acts of God, strikes, lockouts or other industrial disturbances, acts of the Queen’s enemies, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, tsunami, fires, storms, floods, high water, washouts, inclement weather, orders or acts of civil or military authorities, orders or acts of public health authorities, civil disturbances, explosions, breakdowns or accidents of equipment, mechanical breakdowns, intervention of federal, provincial or local governments or any of their respective agencies or boards, the order or direction of any court, and any other cause, whether of the kind enumerated herein or otherwise, provided that lack of funds shall not constitute a circumstance not reasonably within the control of the Utility.
- (f) “Person” includes a corporation and the heirs, executors, administrators or other legal representatives of a person.
- (g) “Plumbing Code” means the British Columbia Plumbing Code, as in effect from time to time.
- (h) “Premises” means land and any buildings and other structures thereon.
- (i) “Rates” means the prices to be paid by a Customer for Water Service provided to the Customer, as prescribed in the Schedules attached to this Tariff.
- (j) “Single Family Residential Equivalent” means and includes a single family dwelling unit intended for the use or occupancy by one or more individuals as a non-profit household, and includes a townhouse and side- by- side duplex up to 3 bedrooms per unit.

- (k) “Unit” means a unit of accommodation occupied, or to be occupied, separately by a Customer and, without restricting the generality of the foregoing, includes the separate units of accommodation in all dwellings.
- (l) “Utility” means EPCOR Water (West) Inc.
- (m) “Waterworks” means the waterworks of the Utility, including without limitation the plant, pipes, equipment, apparatus, appliances, fixtures, property and facilities employed to provide, or in connection with providing, the supply of water to the property line of Customers’ Premises.
- (n) "Water Service" or “Water Services” includes, but is not limited to, the supply of water provided by the Utility to the Customer and the plant, pipes, equipment, apparatus, appliances, fixtures, property and facilities employed to provide, or in connection with providing, such supply to the property line of the Customer’s Premises, and may also include meter-reading and billing.

TERMS AND CONDITIONS

A. Connection of Water Service

1. Application for New Water Service Connections

Applications for new Water Service shall be made at the office of the Utility by the owner or lessee of the Premises for which Water Service is required, or by a duly authorized agent thereof.

All applicant(s) must use the form provided by the Utility and must truthfully disclose:

- (a) the full name of the applicant(s);
- (b) the full name and current address of the Premises owner;
- (c) a detailed description of the intended water use, as determined and evaluated by the Utility or its authorized agent in its sole discretion; and
- (d) the legal description and street address of the Premises to be supplied.

Where the applicant is not the owner of the Premises for which the Water Service is requested, written authorization from the owner of the property for the installation of a new Water Service connection must be provided.

The application must bear the legal signature of each applicant before it shall be considered by the Utility.

2. Service Connection Applications

The Utility shall determine the terms and conditions under which a new Water Service connection shall be provided. The Utility reserves the right to refuse the application if the terms and conditions are not met.

3. Security Deposit Requirement

As a condition precedent to the granting or renewal of Water Service, the Utility may require an applicant, either for Water Service or for a renewal of Water Service, to enter into a written agreement with and/or provide monetary or other security to the Utility, not to exceed the estimated charges for providing Water Service for two billing periods.

4. Water Service Connection to Mains

Water Service connections will be made only to Premises fronting on a gazetted road or highway along which a water distribution main is in place.

5. Water Service Connection Location

If a Premises abuts on two separate streets or roads, the Water Service connection shall be made from the street or road that any building faces or will face when constructed or from the street or road used for the building's municipal address.

If a building has not been constructed on, and a municipal address has not been established for, a Premises, the property line having the shortest length adjacent to a street or road will be the location in which a Water Service connection is provided.

Water Service connections will not be permitted into a panhandle access to a lot, if the lot also has a frontage on another gazetted road.

6. Customer's Pipes and Fixtures

The Customer is responsible for the installation and maintenance of the Customer's waterworks, including pipes and fixtures, within the boundaries of the Premises being serviced from the Customer side of the meter, including the service connection to the meter, unless the Utility and the Customer otherwise agree in writing. All service connection materials (including all service pipes and other fixtures) installed within the Customer's Premises must comply with the Plumbing Code. The Customer's waterworks remain the sole responsibility of the Customer.

No service pipes or fixtures on the Premises shall be covered until they have been inspected and approved by the municipal plumbing or building inspector or other appropriate authority and the Utility shall not turn on the water until it is satisfied that they have been inspected and approved.

7. Installation of Pressure Regulating Devices

At the expense of the Customer, pressure regulating devices shall be installed pursuant to the Plumbing Code in order to reduce the pressure of the Water Service within the Customer's Premises and to protect the waterworks of the Customer.

8. Size of Distribution Main for Service Connection

The minimum permissible size or diameter of all new water distribution mains shall be one hundred fifty (150) millimeters (six (6) inches) except within a cul-de-sac or other dead end termination where future extensions are precluded, where a one hundred (100) millimeters (four (4) inch) diameter pipe may be used. Where a fire hydrant is located on such a branch the portion of the pipe supplying the hydrant shall be a minimum 6" diameter.

9. Metering of New Water Service Connections

All new Water Service connections must be metered.

10. Size of Supply Pipe to Property

The minimum size of pipe that may be used to serve any one Premises shall be nineteen (19) millimeters (three quarters (0.75) of one inch) nominal diameter.

11. Depth of Service Pipes on Property

All waterworks within the boundaries of the Premises to be serviced must be situated below the maximum depth of frost penetration and, in any event, below ground surface at a minimum depth of sixty (60) centimeters (two (2) feet).

12. Connection Policy for Individual Units and Complexes

- (a) Each Unit on a Premises with a single structure that contains four (4) or fewer Units must have a separate metered Water Service connection.
- (b) Complexes may have either a single metered Water Service connection to serve the entire Complex, or at the request of the owner(s) and with the agreement of the Utility, more than one metered Water Service connection.

13. Water Service Connection Where No Main Exists

If an application is made for Water Service connection for a Premises and no water distribution main fronts the Premises, the Water Main Extension Rules set out in Section F of these Terms and Conditions will apply.

14. Applicable Charges and Payment for a New Water Service Connection

At the time an application is approved for Water Service to a Premises:

- (a) that fronts on a gazetted road or highway in which a water distribution main is in place;
- (b) from which the Water Service connection will be made; and
- (c) which has not previously been connected for Water Service;

the applicable charge prescribed in Schedule A of this Tariff shall apply and the charge must be paid in full by the Customer or an agent or representative thereof, prior to the commencement of any work by the Utility. In those cases where the Water Service connection will be provided at cost, the provisions of Subsections 17 and 18 of this Section A will apply.

15. Additional Costs and Expenditures for a Water Service Connection

The specific connection charges prescribed in Schedule A of this Tariff are for a maximum length of twenty (20) meters (sixty six (66) feet) of service pipe and, where necessary, for crossing a paved roadway not more than seven (7) meters (twenty three (23) feet) wide, but do not include the cost of boring under a paved area or replacing pavement if it is necessary to cut an open ditch through the paved area.

The Customer shall pay all additional costs for boring under pavement, or attempts to bore under pavement, for cutting and repairing pavement where it is deemed necessary by the Utility and for drilling and blasting rock where these procedures are required during the installation of the Water Service line.

16. Responsibility for Costs

In those cases where the Utility provides work or service to the Customer not covered by a specific charge or fee prescribed in Schedule A or another Schedule of this Tariff, the Customer shall pay any and all costs of the work or service as determined by the Utility as provided in Section 2 of Schedule H of this Tariff.

17. Payment Procedure for Costs and Expenditures

Where Schedule A of this Tariff provides that a Water Service connection will be provided at the Utility's cost, the Utility shall provide the Customer with a written estimate of the total cost of the connection, which shall include any and all connection and application charges. Upon receipt of such estimate, and prior to the commencement of any work, the Customer shall make an advance payment to the Utility of the full amount estimated.

18. Reconciliation of Advance Payment and Actual Costs for Connections

The Utility shall provide the Customer with a detailed calculation of the actual total cost of the Water Service connection.

Where the total cost of the Water Service connection, including the applicable connection and application charges, is less than the advance payment deposited with the Utility, the Utility will refund the difference, without interest, to the Customer.

Where the total cost of the Water Service connection, including the applicable connection and application charge, exceeds the advance payment deposited with the Utility, the Utility will bill the Customer for the difference and the Customer will pay the invoice immediately upon receipt. The Utility will not be required to turn on the Water Service until the invoice is paid in full.

19. Misrepresentation

Any misrepresentation on the part of the Customer shall be considered sufficient grounds for refusal to provide Water Service, or if the Water Service has already been connected, sufficient grounds to discontinue all Water Service without notice.

If Water Service is disconnected, no Water Service shall be reconnected without provision of a security deposit in an amount as determined by the Utility, not to exceed the estimated charges for providing Water Service for two billing periods. The security deposit will be held by the Utility until such time as the Customer no longer requires Water Service. A service charge as prescribed in Schedule H of this Tariff must also be paid before Water Service will be reconnected.

20. Rejection of Water Service Connection Application

The Utility shall have the right to decline an application for the installation of a Water Service connection where the Regional District of Nanaimo, British Columbia or another approving authority will not permit the cutting of pavement and solid or blast rock or other impediment, in the opinion of the Utility, makes boring impractical and/or impossible.

21. Renovation of Premises

If the renovation of Premises with an existing Water Service connection involves significant change to water use on the Premises, then the Utility may require a new Water Service connection to be provided and the applicable costs charged to the Customer as provided in Section 2 of Schedule H of this Tariff.

22. Ownership of Waterworks Assets

The Waterworks, and the plant, pipes, equipment, apparatus, appliances, fixtures, property and facilities and all of the other assets comprising the Waterworks of every nature and kind (whether constructed at the Customer's expense or the Utility's expense) shall be and remain the property of the Utility.

B. Water Meters

1. Supply, Installation and Maintenance of Water Meters

Except as otherwise provided in this Subsection 1 of this Section B, the Utility shall, at the cost of the Customer, supply, install and maintain the water meter in accordance with industry standards, American Waterworks Association (AWWA) specifications and these Terms and Conditions.

The Utility reserves the right to require that a project developer supply and install the water meter(s) for the project. The water meter requirements are as follows:

- (a) the requirements of Subsection 12 of Section A will apply;
- (b) the brand of water meter must be approved by the Utility;
- (c) the water meters are to register in cubic meter and be supplied with a remote readout or touch read pad as prescribed by the Utility;
- (d) the remote readout or touch read pad must be accessible by the meter reader; and
- (e) the water meter shall become and remain the property of the Utility.

2. Location of Water Meter

The water meter shall be set and placed approximately thirty (30) centimeters (twelve (12) inches) outside the property line of the Premises to which Water Service is to be delivered, not within the driveway and at the finished grade elevation, provided that the Utility can make exceptions as is deemed necessary. The Utility reserves the right to specify where the water meter must be installed.

3. Water Meter Connections

Unless expressly agreed otherwise, the Utility shall install the water meter and appurtenances to the Utility's Waterworks. Installation of water meters by the Utility will be in accordance with the Plumbing Code and manufacturer's requirements.

4. Defective or Inaccurate Water Meters

In cases where a water meter either fails to register or does not properly indicate the flow of water, the provisions for estimating water consumption under Subsection 8 of Section D will apply.

5. Willful Interference with a Water Meter

No Person, who is not an authorized agent or employee of the Utility, shall make any connections with, tamper with, or willfully alter, or cause to be altered, any of the Utility's Waterworks within any street or land or within the Utility's rights-of-way or property or any water meter placed upon any service pipe or connection therewith, within

or without any house, building, or other place or structure, so as to lessen or alter the amount and/or flow of water registered, unless specifically authorized by the Utility for that particular purpose and occasion.

6. Damage to Water Meter

If a water meter is lost, damaged or destroyed, the Customer shall pay for the cost of meter replacement or meter removal, repair or reinstallation.

C. Integrity of Waterworks System

1. Cross-Connections Creating a Potential Hazard for Contamination

The Customer shall not permit the waterworks on the Customer's Premises to be connected to any source of water other than that of the Utility or to any potential source of contamination. In any event, the Customer shall notify the Utility without delay of any contamination that is discovered.

In addition to any other requirements of the Utility, if a mechanism to prevent back-flow is necessary to comply with the Plumbing Code to inhibit the entry of contaminants into the Utility's Waterworks, it shall be installed at the Customer's expense and must be of a design approved by the Utility.

2. Maintenance of Back-flow Prevention Devices

Any device installed for the purpose of controlling back-flow shall become the responsibility of the Customer, who must ensure that the device remains in proper working order.

3. Annual Testing of Back-flow Prevention Devices

Any Customer for whom a back-flow prevention device is installed, shall ensure it is tested and in working order at the time of installation, and tested at least once per annum (every 12 months) by a certified tester of such mechanisms, pursuant to the Plumbing Code. If the back-flow prevention device does not pass inspection, it must be repaired or replaced within seven (7) days and be re-inspected at the Customer's expense.

All test results, including descriptions of any repairs, must be reported on a Back-flow Prevention Test Report Form obtained from the Utility. The form provides information for registration and maintenance in the Back-flow Prevention Cross Connection Control Data Base program used by the Utility to track and monitor annual testing of the devices. No other test report forms will be accepted by the Utility. The completed test report forms shall be returned to the Utility within 30 days after the inspection is completed.

4. Contamination of the Waterworks System

Where, in the opinion of the Utility, any condition is found to exist which is contaminating or may contaminate the Waterworks, the Utility, at its discretion, may take one or more of the following actions:

- (a) give notice to the Customer requiring correction of the fault within a specified time period;
- (b) require installation of a back-flow prevention device on any pipe, at the Customer's expense;
- (c) discontinue any Water Service until such time that the condition is corrected;
- (d) perform emergency repairs, maintenance or operations that the Utility deems necessary at the Customer's expense.

5. Responsibility for Correcting Contamination

Should the Customer responsible for the Premises fail to comply with any notice given pursuant to this Tariff concerning potential contamination, the Utility may suspend or discontinue all Water Service provided by the Utility to the Premises which are contaminating or may, in the sole opinion of the Utility, contaminate the Waterworks.

6. Provision for Back-flow Prevention for Lawn and/or Garden Sprinklers

Each and every lawn and/or garden sprinkler installation must be protected with an approved back-flow prevention device, with the minimum being the double check valve assembly, to prevent water from siphoning back into the Utility's Waterworks.

7. Misuse of Water Supply

No Person shall sell or dispose of any water supplied to a Premises for which a Water Service connection has been provided, or permit same to be carried away or used, or use water supplied to the Premises, or allow it to be used on a Premises, other than the property for which the Water Service connection has been provided.

8. Work to be Done by the Utility

No Person, who is not an agent or employee of the Utility, shall make any connections or alterations to, or tamper with, any of the Utility's Waterworks or any water meter belonging to the Utility or turn on or off any Utility stop valve or gate valve, without written authorization from the Utility.

9. Repairs to Leaking or Defective Pipes and Fixtures

All Customers, at their own risk and expense, shall maintain their service connection pipes and other fixtures in good working order and shall protect them from frost and other damage.

If it becomes evident to the Utility that there are leaky or defective service pipes and fixtures with a Water Service connection located on any Customer Premises, the Utility shall notify the Customer of them within a reasonable time, provided that the Utility will have no responsibility to identify leaky or defective pipes and fixtures and no liability for any failure to notify, or delay in notifying the Customer of any such leaky or defective pipes and fixtures.

If the necessary repairs or alterations have not been made by the Customer within two (2) business days after notice has been given or when, in the opinion of the Utility, the condition of the pipes or fixtures is such as to cause serious waste of water or damage to property, then, without further notice, the water supply shall be cut off by shutting the stop valve or by detaching the service pipe from the main. The Water Service shall not be turned on again until such repairs or alterations have been made to the satisfaction of the Utility and all costs and service charges associated with the cut off of the water supply have been paid by the Customer. The Utility will charge the Customer for costs associated with cutting off the water supply and a service charge for reconnection after disconnection, as specified in Sections 1 and 2 of Schedule H of this Tariff.

No Person whose water supply is disconnected pursuant to this Subsection shall have any claim whatsoever against the Utility for discontinuance of the water supply.

10. Approval of Service Pipes and Fixtures

No service pipes and/or fixtures shall be covered until they have been inspected and approved by the municipal plumbing or building inspector or other appropriate authority and the Utility shall not turn on the water until it is satisfied that they have been inspected and approved in accordance with the Plumbing Code.

11. Interruptions in and Refusal of Water Service

The Utility shall have the right at all times to temporarily shut off the water supply to any Premises in order to make such repairs, renewals, alterations and extensions to the Utility's Waterworks as shall, in the opinion of the Utility, be deemed necessary. Whenever possible, the Utility will give reasonable advance notice to the Customer of the shut off.

The Utility reserves the right to refuse to install, or to permit the installation of, a Water Service connection should weather or other conditions, in the opinion of the Utility, make such an undertaking impractical.

12. Call Out Work Restrictions

The Utility shall not be required to perform any work on pipes or fixtures that are not the property of the Utility.

13. Call Out Charge Liability

The Customer is responsible for the satisfactory operation of the Waterworks, including pipes and fixtures, within the boundary of the Premises being serviced.

If the Utility is called out on the basis of a Customer complaint relating to interrupted or diminished service, leaks or low water pressure and it is subsequently found that the fault is not in the Utility's Waterworks, then the Utility shall charge the Customer for the costs incurred by the Utility to respond to the initial Customer complaint as provided in Section 2 of Schedule H. The Customer shall pay the call out charge upon receipt of the bill for the charge. If the call out charge is not paid before the Customer's next regular water billing is processed, it shall be added to the Customer's next water billing.

If it is determined that the interrupted or diminished service, leak or low water pressure is caused by a fault which exists in the Utility's Waterworks, no charge for the call out and/or subsequent repair of the faulty pipes or fixtures shall be levied by the Utility to the Customer.

14. Frozen Pipes and Fixtures

The Customer is responsible for clearing any frozen pipelines or fixtures located on or within the boundary of the Premises receiving Water Service.

If the Utility is requested by a Customer to clear a frozen connection or meter service and it is found that the affected pipeline or fixture is not located within the Utility's Waterworks, then the Utility will charge the Customer the costs incurred by the Utility associated with examining and/or clearing any pipelines or fixtures as provide in Section 2 of Schedule H of this Tariff. The Customer shall pay the charge upon receipt of the bill for the charge. If the charge is not paid before the next regular water billing is processed, it will be added to the Customer's next water billing.

If a frozen connection or meter service is found to exist within the Utility's Waterworks, then no charge for thawing the Waterworks shall be levied by the Utility to the Customer.

The Utility may, as it deems necessary during very cold spells in the winter, require that the Customer leave a faucet running very slowly so as to prevent the Water Service line from freezing. In these cases, the Utility will adjust the water bill of the Customer to reflect the applicable charge for base consumption.

15. Maintenance of Hydrants/Standpipes

In accordance with a certain service agreement with the Regional District of Nanaimo, British Columbia, the Utility provides maintenance of the hydrants and standpipes within the Utility's licensed area. The Utility will inspect, test, maintain and operate each hydrant and standpipe on an annual basis.

The Utility will inspect and service fire hydrants in accordance with the service agreement.

D. Service Issues

1. Change in Customers

- (a) If a Person, who is not a Customer of the Utility, becomes the owner or lessee of the Premises to which Water Service is provided, the owner or lessee, as applicable, must apply for a transfer of the Water Service and become a Customer of the Utility.
- (b) When there is a change in the Person who is the Customer, through a change in ownership of the Premises to which Water Service is provided or a change in the leasing of the Premises, Water Service to the Premises may be disconnected as provided in Subsection 7 of Section I of these Terms and Conditions if all outstanding water bills for Water Service provided to the Premises prior to such change have not been paid when due.

2. Alternate Water Billing

If the Customer is the owner of the Premises to which Water Service is provided, is leasing the Premises to a lessee, and requests that the water bill be sent to the lessee, the Customer shall be required to complete an authorization form using the form provided by the Utility. The authorization form will authorize the Utility to send the water bill in the name of the Customer to the lessee and will require the following information:

- (a) the legal description of the Premises; and
- (b) the current municipal address, including postal code, and telephone number of the Customer.

The authorization form must also bear the legal signature of the Customer before the Utility will consider it.

Notwithstanding that the water bill is sent to the lessee, the Customer will remain responsible for payment of the bill. If the lessee vacates the Premises leaving an outstanding water bill or for any other reason does not pay a water bill when it becomes due, the owner of the Premises shall be responsible to pay the balance owing on the water bill. If the water bill is not paid when due, Water Service to the Premises may be discontinued as provided in Subsection 7 of Section I of these Terms and Conditions.

3. Reasonable Access to Premises

(a) Easements and Rights-of-Way

At the request of the Utility, a Customer shall grant or cause to be granted to the Utility, without cost to the Utility, such easements or rights-of-way over, upon or under property owned or controlled by the Customer as the Utility reasonably requires for the construction, installation, maintenance, repair and operation of the Waterworks required for Water Service to the Customer and the performance of all other obligations required

for Water Service to the Customer and the performance of all other obligations required to be performed by the Utility under this Agreement.

(b) Right of Entry

- i. The Utility's employees, duly authorized representatives and agents shall have the right to enter a Customer's Premises at all reasonable times, or at any time during an event of Force Majeure, for the purposes of making connections or disconnections, reading meters, inspecting Waterworks and appurtenances, inspecting for back-flow prevention devices and/or possible cross-connections, or documenting or checking on the use, waste, or misuse of water and for any other purpose incidental to the provision of Water Services. A Customer shall not prevent or hinder the Utility's entry to the Customer's Premises for any such purpose. Without limiting the generality of the foregoing, the Utility has the right to enter a Customer's Premises at any reasonable hour to:
 - (1) install, inspect, test, repair or remove Waterworks;
 - (2) perform necessary maintenance to the Waterworks;
 - (3) investigate or respond to a Customer complaint or inquiry; or
 - (4) conduct an unannounced inspection where the Utility has reasonable grounds to believe that theft of Water Services or interference with the Waterworks has occurred or is occurring.
- ii. The Utility shall make reasonable efforts to notify the Customer in advance of entering a Customer's Premises or to notify any other person who is at the Customer's Premises and appears to have authority to permit entry, except:
 - (1) in cases of emergency;
 - (2) where entry is permitted by order of a court or other authority having jurisdiction;
 - (3) where otherwise legally empowered to enter; or
 - (4) where the purpose of the entry is in accordance with Section D, subsection 3(b)(i)(4) of these Terms and Conditions.
- iii. When a Customer who has requested a service call or who has been given advance notice of a required service will not permit the Utility to provide the service during normal business hours of the Utility, the Customer shall be required to pay applicable charges (plus labour overtime charges for any service provided after regular working hours) as provided in Schedule H of this Tariff to provide the service.

4. Interruptions in Service

The Utility shall have the right at all times to suspend or terminate the supply of water to any Premises without any advance notice, in order to effect emergency repairs, replacements, alterations, or extensions to the Waterworks as the Utility deems necessary. However, for interruptions in excess of 48 hours, a proportionate rebate will be allowed to Customers served on flat rates.

5. Pressure, Supply and Quality

The Utility does not guarantee pressure or continuous supply of water, nor does it accept responsibility at any time for the maintenance of pressure on its lines or for increases or decreases in pressure. The Utility shall not be liable for any damage caused by a discontinuance or interruption in the water supply including for the purpose of repairing, renewing, altering, extending, maintaining, or cleaning the Waterworks or for the connection of a water distribution main extension. The Utility reserves the right at any and all times, without notice, to change operating Water Service for the purpose of making repairs, extensions, alterations or improvements, or for any other reason, and to increase or reduce pressure at any time. Neither the Utility, its directors, officers, employees or agents shall incur any liability of any kind whatsoever by reason of the cessation in whole or in part of water pressure or water supply, or changes in operating pressures, or by reason of the water containing sediments, deposits or other foreign matter including contaminants. Customers depending on a continuous and uninterrupted supply of water or having processes or equipment that require particularly clear or pure water shall provide such emergency storage, over-size piping, pumps, tanks, filters, pressure regulators, check valves, additional service pipes or other means for a continuous and adequate supply of water suitable to their requirements.

6. Locking Mechanisms

If a Customer has violated a provision of this Tariff, or is indebted to the Utility for water supply or other services rendered, the Utility may, in addition to discontinuing the water supply to the Premises in question, physically place a locking mechanism on the Waterworks within the Premises or on the Waterworks immediately outside the property line of the Premises.

The locking mechanism shall not be removed until charges for the removal and all other charges and fees accrued by the Customer have been paid in full. No Person whose water supply is discontinued pursuant to this Tariff shall have any claim against the Utility for discontinuance of the water supply.

7. Access to Water Meters

If the water meter is located on private property, as a condition of service, the Customer shall provide access for installing and maintaining the meter and appurtenances and for meter reading.

Where in the opinion of the Utility, a meter is located on the Customer's Premises or its accessory is situated in an unsafe area, or where its location creates a dangerous situation to a meter reader, the meter or accessory shall be deemed to be an inaccessible meter. The Utility may clear the area or shut off Water Service as appropriate if the meter or accessory remains inaccessible for meter reading and maintenance for a period that exceeds two (2) months. The reconnection fee prescribed in Schedule H of this Tariff will apply.

8. Policy and Procedures for Estimating Water Consumption

If for any reason the Utility is required to estimate the water consumption for a Premises to which Water Service is provided for any given period, the Utility shall adhere to the following procedure:

- (a) the estimate shall be based on the water consumption history and the intended water use by the Customer; or
- (b) if no sufficient history exists on which to base an estimate, the estimate shall be calculated on the basis of an average of the water consumption for similar Premises in the same area.

9. Charges for Alterations to Waterworks System

- (a) Subject to the approval of the Utility, a Customer who desires that the Utility remove, relocate or change the Utility's Waterworks system, including service pipes, meters, valves, chambers, hydrants, fittings and/or appurtenances, shall be required to pay any and all costs related to the removal, relocation or change. A deposit, based on the Utility's written estimates for cost of the work, will be paid to the Utility in advance of commencing the work.
- (b) The Utility shall provide the Customer with a detailed calculation of actual total cost for the alterations to the Waterworks requested by the Customer.

Where the total cost of the alterations is less than the advance payment deposited with the Utility, the Utility will refund the difference, without interest, to the Customer.

Where the total cost of the alterations exceeds the advance payment deposited with the Utility, the Utility will bill the Customer for the difference and the Customer will pay the bill immediately upon receipt. Failure to pay the Utility immediately upon receipt of the bill shall be sufficient grounds for the Utility not to provide Water Service.

E. Compliance

1. Penalties for Failure to Comply with Tariff

Where any Customer fails to comply with the Terms and Conditions contained in this Tariff, the Utility, after giving written notice of three (3) business days, may undertake any lawful action or actions it deems necessary to enforce compliance. Any costs incurred by such action or actions shall be recovered from the Customer as a service charge under this Tariff regardless of whether or not it is specifically included in this Tariff.

2. Willful Interference with Waterworks

No Customer or any other Person, who is not an authorized agent or employee of the Utility, shall make any connections with, tamper with, or willfully alter, or cause to be altered, any of the Utility's Waterworks within any street or land or within the Utility's rights-of-way or property or any water meter placed upon any service pipe or connection therewith, within or without any house, building, or other place or structure, so as to lessen or alter the amount and/or flow of water registered, unless specifically authorized by the Utility for that particular purpose and occasion.

At the discretion of the Utility, such interference may result in immediate termination of Water Service. No Water Service so terminated shall be reconnected without both payment of the charges prescribed in Schedule H of this Tariff and approval of the Utility.

F. Water Main Extension Rules

1. Application for Extensions

All applications for extensions of existing Water Service distribution works shall be made in writing to the Utility by the owner of the Premises to which the application refers and to which Water Service is desired or a duly authorized agent of the owner. The Utility shall determine the terms and conditions of obtaining service.

Each application for extension of service requires an amendment to the Utility's Certificate of Public Convenience & Necessity (CPCN) to include the lot(s) within its authorized service area. In response to each application, the Utility will detail the terms and conditions of service, including all rates and charges applicable. Prior to issuance of an amended CPCN, confirmation is required that either a deposit into the Utility's Deferred Capacity Trust Fund under Schedule B of this Tariff has been made or that additional works have been constructed and contributed to the Utility by the applicant as required by the Comptroller of Water Rights.

Once the amended CPCN is issued, and while lot(s) are not receiving service, availability of service charges under Schedule G of this Tariff will be applicable.

2. Information on Proposed Developments

An applicant(s) who has applied for an extension of a main to serve a proposed development shall be required to provide the Utility with the following information in respect of the development:

- (a) the legal description and municipal address of the proposed development;
- (b) one set of drawings of the proposed development identifying the height of the proposed structure and the number of suites for both residential and commercial use;
- (c) the anticipated fire flow requirements and water requirements for the proposed development;
- (d) a contact name, telephone number, and/or fax number should the Utility require any additional information pertaining to the development;
- (e) the scheduling of the construction and the anticipated time line for completion of the development; and
- (f) advance notice if a temporary water supply will required under Section G of these Terms and Conditions for construction purposes.

3. Right to Refuse Extensions

The Utility reserves the right to refuse to make a water main extension should weather or other conditions, in the opinion of the Utility, make such undertaking impractical.

The Utility will not be required to make extensions where road grades have not been brought to those established by public authority.

4. Ownership of Extensions to Waterworks System

All extensions to the Waterworks system that may be installed (whether paid for by the Utility or by the applicant(s) or the Customer, as applicable) shall be the sole property of the Utility.

5. Extensions within Road Rights-of-Way or Utility's Easement or Property

All extensions of water mains shall be located along a gazetted road or highway within the right-of-way for the road or highway or in an easement held in the name of the Utility or on property solely owned by the Utility.

6. Construction and Design of Extensions

The size, type, quality of materials for a water main extension and their location will be specified by the Utility and the actual construction will be done by the Utility or by a construction agency acceptable to the Utility.

7. Connection of Extensions to Mains

The Utility or its authorized representative or agent shall make all connections of an extension of the water main to existing live water mains. The applicant(s) shall pay the cost of making all such connections prior to the Utility making the connection.

8. Advance Requirements

- (a) An applicant(s) who has applied for an extension of a water main to serve a subdivision or housing project shall be required to advance to the Utility, before construction is commenced, by way of a cash deposit, the estimated cost of the Waterworks to be installed including, without limitation,
- (i) the estimated cost of any upgrade in size or capacity of any part of the existing Waterworks; and
 - (ii) the estimated cost of installation of the main required to serve such project, including necessary valves, fittings and fire hydrants.
- (b) If pipelines to a subdivision do not exist, the estimate cost of the extension shall be based upon a pipeline of sufficient diameter to supply the entire subdivision in accordance with requirements for fire flows.
- (c) In determining the physical length of the water main extension necessary to render service to any point, the distance from such point to the nearest distribution main, with the required capacity and flow requirements to satisfy the requirements of the proposed service, the "Suitable Main" shall be considered along lines of proper construction and

common practice in the location of public waterworks, with due consideration being given to the general layout of the Utility's Waterworks system. The length of the extension shall be measured along such lines of proper construction and common practice from the Suitable Main to the middle of the furthest property to be serviced.

- (d) Where a water main extension must comply with a law, statute, bylaw, ordinance, regulation, specification or order of a public authority, the estimated cost of the extension shall be based upon the Waterworks required to comply therewith.

9. Advances by Original Applicants

- (a) When more than one applicant is involved and an advance is required for a water main extension, then the amount of the advance shall be divided equally or as otherwise agreed among the applicants and made known to the Utility.
- (b) Any adjustments to differences between the estimated cost and the actual cost of any main extension made shall be completed within ninety (90) days after the actual cost of the installation has been ascertained by the Utility and after the installed works have been disinfected and pressure tested to the satisfaction of the Utility.
- (c) The Utility shall maintain, at all times during installation of the water main extension and for a period of ninety (90) days following both the completion of construction and the initial approval by the Utility, a minimum of fifteen percent (15%) of the total deposit made by the applicant(s) so as to allow sufficient time for all contractors and suppliers to submit bills and for satisfactory performance of the installation to be proven.
- (d) Upon completion of the construction and installation of the water main extension, the Utility shall ascertain the actual cost of the construction and installation.
- (e) If the actual cost is less than the amount of the advance received from the applicant(s), the remaining portion of the advance will be refundable to the applicant(s) in accordance with Subsection 9(f) of this Section F, without interest.

If the actual cost exceeds the amount of the advance received from the applicant(s), the Utility shall bill the applicant(s) for the difference and the applicant(s) shall pay the bill immediately upon receipt. Failure to pay the Utility immediately upon receipt of the bill shall be sufficient grounds not to provide Water Service.

- (f) At the end of the ninety (90) day period, provided that all suppliers and contractors have then submitted their bills and the installation has then proven to be satisfactory, the Utility shall return any refundable portion of the advance to the applicant(s) and the Utility will accept no further responsibility for any costs in connection with the development.

10. Advances by Customers Connecting to Water Main Extension

An extension charge equal to a pro-rata share of the original cost of the water main extension shall be collected by the Utility from each Customer who makes an application

for a Water Service connection to the original main extension within five (5) years. The extension charge collected above shall be refunded equally, or as agreed otherwise, to the Customers who already have advances deposited with the Utility as a result of connection to the extension, so that in the result all Customers will have paid their pro-rated share or as otherwise agreed by them and made known to the Utility.

11. Application of Advances

Advances required from an applicant(s) in payment for water main extensions will be held by the Utility without interest. Refunds will be made in accordance with Subsection 10 and this Subsection 11 and no Person will have refunded an amount in excess of the amount of the advance received by the Utility. Refunds will be paid to the current registered owners of the properties on account of which the advances were received.

Any amount not used by the Utility for construction of the extension and not refunded at the end of five years from the date the advance was received by the Utility from the original applicant or applicants will be retained by the Utility and transferred to the Deferred Capacity Trust Fund account. Thereafter additional customers will be connected without being required to pay the extension charge.

G. Temporary Water Service

Any contractor, developer or other Person (“Temporary Customer”) who requires temporary Water Service for the purposes of construction or expansion of a development or for another reason must make an application to the Utility and, if the application is approved, may acquire water from a standpipe or hydrant as designated by the Utility subject to the following conditions:

1. Connections to Fire Hydrants or Standpipes

- (a) All connections to the fire hydrant or standpipe must be fitted with a back-flow prevention device, and an independent shut off valve to regulate the flow. The back-flow prevention device must be approved by the Utility and shall either be provided by the party requiring the service, or rented from the Utility at a daily rate prescribed by the Utility. If the device is rented from the Utility, the party requiring the device shall be responsible for the costs associated with the proper installation, maintenance and disconnection of the device and also for any damage to the device.
- (b) If the fire hydrant or standpipe is required by the Parksville or Qualicum Beach Fire Protection Districts for an emergency situation, including an event of Force Majeure, the Temporary Customer must remove any connections to a hydrant or standpipe without delay.
- (c) All tanker trucks, street sweepers, and water sprinkler trucks, etc. must be fitted with a back-flow prevention device approved by the Utility and permission to use the fire hydrant must be obtained from the Utility before hooking up to a fire hydrant for the purpose of taking on water.

2. Connections to Temporary Service Pipe

- (a) The Temporary Customer shall keep a record of the amount of water consumed when connected to a temporary service pipe and shall advise the Utility promptly when the Water Service is no longer required and report to the Utility the amount of water consumed. The Utility will provide a water meter for the purpose of recording the consumption, however, the Temporary Customer will be responsible to cover the cost of any damage to said device.
- (b) The Utility shall issue a bill for water consumed by the Temporary Customer based on Rates as prescribed in the applicable Schedules of this Tariff. The bill shall be payable immediately upon receipt.

H. Disconnection of Water Service

1. Disconnection for Non-Payment

The Utility may withhold or disconnect the supply of water from any Customer who is already indebted to or in dispute with the Utility for Water Service or any other service provided by the Utility.

2. At Customer Request

No water rate shall be charged with respect to Water Service to any property that has been disconnected for a period of one (1) month or more and where;

- (a) the Water Service connection to the property remains unused; and
- (b) the Water Service has been turned off at the request of the Customer.

Any Customer who wishes to discontinue Water Service for a period of one (1) month or more shall give to the Utility at least seven (7) days written notice of the discontinuance. If the Customer fails to give the required written notice, the Customer shall continue to be responsible for payment for Water Service.

3. Unauthorized Service

Where a Water Service connection has been made or Water Service has been turned on without proper authorization from the Utility, the Utility may remove the water meter unless and until the applicable charges, as prescribed in Schedule H of this Tariff, have been paid in advance to the Utility by, or on behalf of, the Customer to defray the costs of the removal and replacement of the said water meter. The charges shall be in addition to any other charges outstanding against the Premises or required to be paid in order to receive Water Service pursuant to these Terms and Conditions.

4. Non-Compliance

The Utility may discontinue Water Service to any Customer for non-compliance with these Terms and Conditions. Where Water Service is discontinued for non-compliance with these Terms and Conditions, the Utility shall not permit a reconnection for any Customer until proof of compliance with these Terms and Conditions is demonstrated and both the service charge prescribed in Schedule H of this Tariff for reconnection after disconnection and a security deposit in an amount equal to two times the highest bill in the previous three billing periods, or twelve months, whichever is greater, is paid by way of cash deposit, certified cheque or satisfactory letter of credit to the Utility.

5. Resumption of Water Service

If Water Service is turned off or disconnected, Water Service will not be turned on or reconnected until all outstanding charges and fees for services rendered have been paid in full to the Utility as per this Tariff.

6. Charges for Service Resumption

Where any applicable charges and fees have been paid according to the requirements of this Tariff, and a Customer first becomes connected to a service by the turn of a valve in an existing service pipe, or when a Customer becomes reconnected after service has been shut off either for non-payment, non-compliance with these Terms and Conditions or at the request of the Customer, the service charge for any such turn on or reconnection of Water Service shall be as prescribed in Schedule H of this Tariff.

I. Payment for Services Rendered

1. Calculation of Water Charges

All water charges are calculated in accordance with the applicable rates prescribed in the Schedules attached to this Tariff.

2. Bill and Payment

All water bills will be issued by the Utility to Customers at time intervals determined by the Utility and shall be due and payable at the Utility office or at any duly authorized collecting agency within 10 days from the issue date of the water bill.

3. Meter Reading

Water bills will be based on meter reads with meter reading schedules as determined by the Utility.

4. Dishonored Cheques

When, for any reason whatsoever, a cheque issued to the Utility in payment of a bill is dishonored, the Customer shall be required to immediately pay a service charge as prescribed in Schedule H of this Tariff, related bank charges and any outstanding amounts owed to the Utility.

5. Payment Calculation if Meters Malfunction

In cases where a meter for the Water Service to a Premises is found not to register, or appears to have registered incorrectly, for billing purposes the Utility shall compute the water charges for the property based on the procedures for estimating water consumption set out in Section D, Subsection 8.

6. Appeal of Calculation of Water Charges

Any Customer obtaining water from the Utility's Waterworks may formally register a complaint with the Utility regarding the amount of any water bill, no later than thirty (30) days from the issue date of the bill.

7. Policy Regarding Bill Collection

In the case of non-payment by a Customer of charges after the same have become due and payable, the following procedures will be followed by the Utility:

- (a) When a bill issued for Water Service provided to a Premises becomes one (1) month overdue, the Water Service to the Premises in respect of which the bill is due and payable may be disconnected upon fifteen (15) days written notice. A disconnection notice mailed to the last known postal address of the Customer shall be deemed good and sufficient notice and the notice will be deemed to have been given on the date that it is mailed.

- (b) If payment is not received at the Utility office during normal working hours within fifteen (15) days after the disconnection notice is given, the Utility may disconnect the Water Service in respect of which the disconnection notice has been given without any further notice to the Customer or any other Person.
- (c) If the Water Service is discontinued as the result of non-payment, the Utility shall not reconnect the Water Service, except upon payment of the whole amount due and payable together with service charges as prescribed in Schedule H of this Tariff for the expense of disconnecting and reconnecting the Water Service.

8. Change of Billing Address Information

All Customers must, at all times, inform the Utility of any and all changes to any billing address, including changes to telephone numbers or fax numbers.

9. Additional Charges for Delinquent Bill Collection

All additional charges incurred in the collection of a delinquent water bill must be paid to the Utility in full prior to the reconnection of Water Service. Such additional charges shall include, but are not limited to, charges incurred through the use of any collection agencies or other methods employed in retrieving delinquent payments.

10. Lost Bills

If a Customer loses a bill or does not receive a bill, the Customer must contact the Utility to determine the amount owing. Loss of a bill or the failure to receive a bill does not release a Customer from the obligation to pay the amount owing to the Utility. The late payment charges under Subsection 11 of this Section I will apply if the bill is not paid by its due date.

11. Late Payment Charge

At the discretion of the Utility, if a Customer does not pay a bill in full by the due date as specified in the bill, the Customer will be liable to pay to the Utility, in addition to the amount of the bill, a late payment charge equal to interest at 2.0% of the outstanding amount of the bill, compounded monthly, will apply. Should the bill remain outstanding after the due date, the Utility may commence collection action.

J. General

1. Disagreement in the Application of Terms and Conditions of Water Service

In case of disagreement regarding the application of these Terms and Conditions, or in circumstances where such application of these Terms and Conditions appears impracticable or unjust to either party, the Utility, or the applicant(s) or the Customer may refer the matter to the Comptroller of Water Rights for a ruling.

2. Limitation on Liability

Notwithstanding anything to the contrary contained in these Terms and Conditions, neither the Utility nor the Customer shall be liable to the other party for any damage, cost, expense, injury loss or other liability of an indirect, special or consequential nature suffered by the other party or claimed by any third party against the other party, howsoever arising. Without limiting the generality of the foregoing, damage, injury or loss of an indirect, special or consequential nature shall include loss of revenue, loss of profits, loss of production, loss of earnings, loss of contract, cost of capital and loss of the use of any facilities or property or any other similar damage or loss whatsoever.

3. Force Majeure

(a) Force Majeure Relief

If an event or circumstance of Force Majeure occurs that adversely affects the Utility's ability to provide a service connection or Water Service, the Utility's obligations and responsibilities under these Terms and Conditions, and under any agreement relating to service connections or provision of Water Services, so far as they are affected by the event of Force Majeure or the consequences thereof, shall be suspended until such Force Majeure event or the consequences thereof are remedied for such period thereafter as may reasonably be required to restore the service connection or Water Services. All charges for consumption, including the applicable charge for base consumption, in all customer classes will continue to be payable during the period in which the Utility claims relief by reason of Force Majeure.

(b) Notice

The Utility shall where practicable give notice of an event of Force Majeure to Customers affected and shall, where practicable, give notice to Customers affected when the Force Majeure event ceases to prevent performance of the Utility's obligations.

(c) Obligation to Remedy

The Utility shall promptly remedy the cause and effect of the Force Majeure event insofar as it is reasonable to do so.

(d) **Strikes and Lockouts**

Notwithstanding any other provision of these Terms and Conditions, the settlement of any strike, lockout or other industrial disturbance shall be wholly at the discretion of the Utility, and the Utility may settle such strike, lockout or industrial disturbance at such time and on such terms and conditions as it may deem appropriate. No failure or delay in settling such strike, lockout or industrial disturbance shall constitute a cause or event within the control of the Utility or deprive the Utility of the benefits of this section.

4. **Restrictions on Use of Water**

The Utility may restrict or prohibit the use of water for gardening, sprinkling, air conditioning, the filling of swimming pools or other purposes when, in its opinion, such action is necessary to conserve the water supply or to maintain water pressure. The Customer shall comply with all such restrictions and prohibitions.

5. **Water Meter Testing**

When any Customer whose Water Service is metered makes a complaint that their account is, in the Customer's opinion, excessive, the Utility will make an inspection for leaks at the meter box. If the Utility finds no leaks and, should the Customer continue to feel that the Customer is being charged for excessive consumption, the Customer can make a request in writing to have the water meter tested for accuracy.

Upon receipt of the request and payment of the fee, the Utility will remove the meter and send it to the manufacturer or its agent for testing. The complainant will in due course receive a copy of the report from the manufacturer or agent. Where the test shows an error in registering the quantity of water passing through the meter of over five percent (5%) in favor of the Utility, a new water meter will be installed.

However, if the test shows an accurate measurement of water or an error in favour of the Customer, the Utility will bill the Customer for all applicable costs pertaining to the test request and, in the case of an error in favour of the Customer, the Customer's account for Water Service will be adjusted accordingly.

Schedule A – Water Service Connection

Applicability: To all applications for Water Service from an existing water distribution main.

Rates:

- (a) Connection Charge..... At Cost

The Connection Charge recovers the cost incurred by the Utility, not otherwise recovered, of installing a service connection from the water main to a curb stop and, if required, a meter at the property line of the Customer’s Premises or in the building. Cost includes any administrative overhead incurred.

- (b) Connection of Customer’s Service Pipe to an Existing Curb Stop At Cost

Where, at a time prior to a Customer’s application for service, a service connection has been installed at no cost to the Utility or at a cost otherwise recovered by the Utility, then upon connection of the service pipe, the rate shown in (b) shall be paid upon application for service.

Schedule B – Contribution in Aid of Future Construction

Applicability: Where as a result of Premises becoming qualified as Authorized Premises and a greater number of units require or may require service from the Utility, thus utilizing Waterworks capacity presently or in the future. Then upon application for an extension of service, in addition to the water service connection charge and any main extension costs, the charges shown below shall be paid.

Monies collected are to be deposited to the Utility’s Deferred Capacity Trust Fund and may only be released with the written authorization of the Comptroller of Water Rights.

Rates:	<u>Charge</u>
Effective January 1, 2024	
For each unit qualifying as Authorized Premises	\$23,000*
Effective January 1, 2025	
For each unit qualifying as Authorized Premises	\$23,600*
Effective January 1, 2026	
For each unit qualifying as Authorized Premises	\$24,000*

Note: 1 SFE = 0.02106 L/s

* Charge is based on the number of Residential Single Family equivalent units as describe below:

- Residential Single Family means a building containing a semi-detached or detached building on a lot. Each Unit will qualify for the charge identified above.
- Residential Multi Family means a building containing four or more dwelling Units on a Lot. The development will qualify for using the same calculation described below for commercial.
- Commercial: The number of units = Development Max Day Demand/0.02106 L/s, rounded up to the next whole number.

Schedule C – Intentionally Omitted

Schedule D – Metered Rates - 2024

Applicability: To all Customers with water meters

Rates:	Monthly Charge
Residential Units	
First 12 cubic meters plus	\$46.23
For each cubic meter between 12 and 75 cubic meters	\$ 2.05
For each cubic meter over 75 cubic meters	\$ 2.05
Multi-Residential Units (per unit)	
First 12 cubic meters plus	\$42.06
For each cubic meter between 12 and 75 cubic meters	\$ 2.05
For each cubic meter over 75 cubic meters	\$ 2.05
Commercial Units	
First 12 cubic meters plus	\$40.84
For each cubic meter between 12 and 75 cubic meters	\$ 1.02
For each cubic meter over 75 cubic meters	\$ 1.02

Schedule D – Metered Rates - 2025

Applicability: To all Customers with water meters

Rates:	Monthly Charge
Residential Units	
First 12 cubic meters plus	\$49.36
For each cubic meter between 12 and 75 cubic meters	\$ 2.19
For each cubic meter over 75 cubic meters	\$ 2.19
Multi-Residential Units (per unit)	
First 12 cubic meters plus	\$44.91
For each cubic meter between 12 and 75 cubic meters	\$ 2.19
For each cubic meter over 75 cubic meters	\$ 2.19
Commercial Units	
First 12 cubic meters plus	\$43.60
For each cubic meter between 12 and 75 cubic meters	\$ 1.09
For each cubic meter over 75 cubic meters	\$ 1.09

Schedule D – Metered Rates - 2026

Applicability: To all Customers with water meters

Rates:	Monthly Charge
Residential Units	
First 12 cubic meters plus	\$52.69
For each cubic meter between 12 and 75 cubic meters	\$ 2.34
For each cubic meter over 75 cubic meters	\$ 2.34
Multi-Residential Units (per unit)	
First 12 cubic meters plus	\$47.94
For each cubic meter between 12 and 75 cubic meters	\$ 2.34
For each cubic meter over 75 cubic meters	\$ 2.34
Commercial Units	
First 12 cubic meters plus	\$46.55
For each cubic meter between 12 and 75 cubic meters	\$ 1.16
For each cubic meter over 75 cubic meters	\$ 1.16

Schedule E – Fire Hydrant & Standpipe Rates - 2024

Applicability: Within that portion of the Utility’s authorized service area in the Parksville or Qualicum Beach Fire Protection District or other recognized local fire protection authority

Rates:	<u>Charge</u>
Hydrants	\$620.10 / hydrant / year
Standpipes	\$248.04 / standpipe / year

Schedule E – Fire Hydrant & Standpipe Rates - 2025

Applicability: Within that portion of the Utility’s authorized service area in the Parksville or Qualicum Beach Fire Protection District or other recognized local fire protection authority

Rates:	<u>Charge</u>
Hydrants	\$662.03 / hydrant / year
Standpipes	\$264.82 / standpipe / year

Schedule E – Fire Hydrant & Standpipe Rates - 2026

Applicability: Within that portion of the Utility’s authorized service area in the Parksville or Qualicum Beach Fire Protection District or other recognized local fire protection authority

Rates:	<u>Charge</u>
Hydrants	\$706.79 / hydrant / year
Standpipes	\$282.72 / standpipe / year

Schedule F – Intentionally Omitted

Schedule G – Availability of Service Charge per Rent Charge Agreements - 2024

Applicability: To owners of the legal subdivision with Rent Charge Agreements eligible to be registered on title. The Rent Charge becomes effective and due and payable on the first day of the month following CPCN issuance and acceptance of certified as-built drawings (i.e., when lot or lots are eligible for subdivision registration).

Availability: All owners of the lots to which this Rent Charge is applicable shall pay the rate during the period they are not users of water service.

Rate: \$ 388.34 per annum, per residential services lot

Notes:

1. For other than residential services lots, the Rent Charge shall be calculated on a Single Family Residential Equivalent basis.
2. Once a customer has received approval to connect to the Utility's waterworks, has passed inspection and has been accepted by the Utility as a customer, this Rent Charge will no longer apply to the portion of the property connected to the Utility's waterworks. A pro-rated refund of the Rent Charge will be credited to the customer's account, if applicable. If service is temporarily shut-off (e.g., seasonal use), the customer shall pay a minimum of the Rent Charge payable on a pro-rated basis while disconnected or a greater amount if specified in another rate schedule(s) of the Tariff.
3. For the purposes of this Schedule, townhouses and side-by-side duplexes are equivalent to one (1) single family residential premises.
4. Any arrears of Rent Charges shall bear interest from the due date until payment at a rate of 18% per annum accruing daily, and shall be a charge upon the Lands or Future Lot or Lots in question in the same manner as the Rent Charge charged on the Lands.

Schedule G – Availability of Service Charge per Rent Charge Agreements - 2025

Applicability: To owners of the legal subdivision with Rent Charge Agreements eligible to be registered on title. The Rent Charge becomes effective and due and payable on the first day of the month following CPCN issuance and acceptance of certified as-built drawings (i.e., when lot or lots are eligible for subdivision registration).

Availability: All owners of the lots to which this Rent Charge is applicable shall pay the rate during the period they are not users of water service.

Rate: \$ 414.60 per annum, per residential services lot

Notes:

1. For other than residential services lots, the Rent Charge shall be calculated on a Single Family Residential Equivalent basis.
2. Once a customer has received approval to connect to the Utility's waterworks, has passed inspection and has been accepted by the Utility as a customer, this Rent Charge will no longer apply to the portion of the property connected to the Utility's waterworks. A pro-rated refund of the Rent Charge will be credited to the customer's account, if applicable. If service is temporarily shut-off (e.g., seasonal use), the customer shall pay a minimum of the Rent Charge payable on a pro-rated basis while disconnected or a greater amount if specified in another rate schedule(s) of the Tariff.
3. For the purposes of this Schedule, townhouses and side-by-side duplexes are equivalent to one (1) single family residential premises.
4. Any arrears of Rent Charges shall bear interest from the due date until payment at a rate of 18% per annum accruing daily, and shall be a charge upon the Lands or Future Lot or Lots in question in the same manner as the Rent Charge charged on the Lands.

Schedule G – Availability of Service Charge per Rent Charge Agreements - 2026

Applicability: To owners of the legal subdivision with Rent Charge Agreements eligible to be registered on title. The Rent Charge becomes effective and due and payable on the first day of the month following CPCN issuance and acceptance of certified as-built drawings (i.e., when lot or lots are eligible for subdivision registration).

Availability: All owners of the lots to which this Rent Charge is applicable shall pay the rate during the period they are not users of water service.

Rate: \$ 442.63 per annum, per residential services lot

Notes:

1. For other than residential services lots, the Rent Charge shall be calculated on a Single Family Residential Equivalent basis.
2. Once a customer has received approval to connect to the Utility's waterworks, has passed inspection and has been accepted by the Utility as a customer, this Rent Charge will no longer apply to the portion of the property connected to the Utility's waterworks. A pro-rated refund of the Rent Charge will be credited to the customer's account, if applicable. If service is temporarily shut-off (e.g., seasonal use), the customer shall pay a minimum of the Rent Charge payable on a pro-rated basis while disconnected or a greater amount if specified in another rate schedule(s) of the Tariff.
3. For the purposes of this Schedule, townhouses and side-by-side duplexes are equivalent to one (1) single family residential premises.
4. Any arrears of Rent Charges shall bear interest from the due date until payment at a rate of 18% per annum accruing daily, and shall be a charge upon the Lands or Future Lot or Lots in question in the same manner as the Rent Charge charged on the Lands.

Schedule H – Miscellaneous Service Charges

This Schedule sets out the charges and fees prescribed for the following work or services rendered by the Utility.

1. Service Charges and Fees for Specified Services

<u>Description of Work or Service</u>	<u>Amount</u>
Reconnection after disconnection at customer’s request	\$ 50.00
Reconnection after disconnection	\$ 50.00
Dishonored Cheques	\$ 25.00
Application for Water Service	\$ 25.00
Service Shut-Off Charge.....	\$ 30.00
Vacuum Breaker Installation Fee.....	\$ 75.00
Restriction of Water Use - Violation Charge.....	\$100.00
Willful Interference with a Water Meter	\$100.00
Illegal Connection Fee	\$500.00
Illegal Use of a Fire Hydrant	\$500.00*

*plus applicable repair costs

2. Charges for Other Work and Services

The Utility will charge the Customer for any work or service provided, for which a charge or fee is not specifically prescribed, the Utility’s costs of providing such work or service. Such costs will include repayment of all monies expended by the Utility for gross wages and salaries, administrative costs, employee fringe benefits, and materials, as calculated by the Utility. The costs will also include any expenditure for equipment rentals at rates paid by the Utility or set by the Utility for its own equipment, as well as any other costs that may reasonably arise in providing the service. Labor charges for service call outs after regular working hours will be at the Utility’s overtime rates.

Temporary water supply will be charged rates in accordance with Schedule D of this Tariff.

Schedule I – Rate Rider for Metered Rates - 2024

Applicability: To all Customers with water meters

Rates:	Monthly Charge
Residential Units	
First 12 cubic meters plus	\$2.59
For each cubic meter between 12 and 75 cubic meters	\$0.12
For each cubic meter over 75 cubic meters	\$0.12
Multi-Residential Units (per unit)	
First 12 cubic meters plus	\$2.36
For each cubic meter between 12 and 75 cubic meters	\$0.12
For each cubic meter over 75 cubic meters	\$0.12
Commercial Units	
First 12 cubic meters plus	\$2.29
For each cubic meter between 12 and 75 cubic meters	\$0.06
For each cubic meter over 75 cubic meters	\$0.06

Schedule I – Rate Rider for Metered Rates - 2025

Applicability: To all Customers with water meters

Rates:	Monthly Charge
Residential Units	
First 12 cubic meters plus	\$1.69
For each cubic meter between 12 and 75 cubic meters	\$0.08
For each cubic meter over 75 cubic meters	\$0.08
Multi-Residential Units (per unit)	
First 12 cubic meters plus	\$1.54
For each cubic meter between 12 and 75 cubic meters	\$0.08
For each cubic meter over 75 cubic meters	\$0.08
Commercial Units	
First 12 cubic meters plus	\$1.50
For each cubic meter between 12 and 75 cubic meters	\$0.04
For each cubic meter over 75 cubic meters	\$0.04

Schedule I – Rate Rider for Metered Rates - 2026

Applicability: To all Customers with water meters

Rates:	Monthly Charge
Residential Units	
First 12 cubic meters plus	\$0.98
For each cubic meter between 12 and 75 cubic meters	\$0.04
For each cubic meter over 75 cubic meters	\$0.04
Multi-Residential Units (per unit)	
First 12 cubic meters plus	\$0.89
For each cubic meter between 12 and 75 cubic meters	\$0.04
For each cubic meter over 75 cubic meters	\$0.04
Commercial Units	
First 12 cubic meters plus	\$0.87
For each cubic meter between 12 and 75 cubic meters	\$0.02
For each cubic meter over 75 cubic meters	\$0.02

Schedule J – Rate Rider for Fire Hydrant & Standpipe Rates – 2024

Applicability: Within that portion of the Utility’s authorized service area in the Parksville or Qualicum Beach Fire Protection District or other recognized local fire protection authority

Rates:	<u>Charge</u>
Hydrants	\$34.77 / hydrant / year
Standpipes	\$13.91 / standpipe / year

Schedule J – Rate Rider for Fire Hydrant & Standpipe Rates – 2025

Applicability: Within that portion of the Utility’s authorized service area in the Parksville or Qualicum Beach Fire Protection District or other recognized local fire protection authority

Rates:	<u>Charge</u>
Hydrants	\$22.72 / hydrant / year
Standpipes	\$9.09 / standpipe / year

Schedule J – Rate Rider for Fire Hydrant & Standpipe Rates – 2026

Applicability: Within that portion of the Utility’s authorized service area in the Parksville or Qualicum Beach Fire Protection District or other recognized local fire protection authority

Rates:	<u>Charge</u>
Hydrants	\$13.17 / hydrant / year
Standpipes	\$5.27 / standpipe / year

WATER UTILITY ACT
WATER TARIFF NO. 67
RATES AND TERMS AND CONDITIONS
For
WATER SERVICE
Near
PARKSVILLE, BRITISH COLUMBIA
By
EPCOR WATER (WEST) INC.
10-D 1343 Alberni Highway
Parksville, British Columbia
V9P 2B9

Contact Person(s)

Eric Taylor, Service Manager
EPCOR Water (West) Inc.

This Tariff is available for public inspection between the hours of
8:30 am and 4:30 pm on business days at:

#10-D 1343 Alberni Highway
Pine Tree Centre
Parksville, British Columbia

Accepted for Filing by the
Comptroller of Water Rights

Effective: [●]

Secretary to the Comptroller

Copies of this Tariff may be purchased at the above address at a cost of \$9.50 per copy or may
be viewed online at no charge at www.epcor.com/frenchcreek

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Style Definition: TOC 2: Space Before: 0 pt

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DEFINITIONS

In this Tariff the following definitions shall apply:

- (a) "Authorized Premises" means Premises which are entitled to, and authorized for, service in accordance with the Certificates of Public Convenience and Necessity for the Utility.
- (b) "Complex" means a structure, including an apartment or condominium, that contains more than one Unit and includes mobile home parks, campgrounds, recreation centres, golf courses, cemeteries, hospitals, and farms.
- (c) "Comptroller" means the Comptroller of Water Rights under the *Water Act*, RSBC 1996, chapter 483 and includes any Person designated in writing by the minister as acting, deputy or assistant comptroller.
- (d) "Customer" means any Person who is the owner or lessee of an Authorized Premises and whose application for Water Service has been accepted by the Utility and includes any other Person who has been or is a user of Water Services supplied by the Utility and may include a developer, contractor or other Person depending on the context.
- (e) "Force Majeure" means events or circumstances not reasonably within the control of the Utility, including acts of God, strikes, lockouts or other industrial disturbances, acts of the Queen's enemies, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, tsunami, fires, storms, floods, high water, washouts, inclement weather, orders or acts of civil or military authorities, orders or acts of public health authorities, civil disturbances, explosions, breakdowns or accidents of equipment, mechanical breakdowns, intervention of federal, provincial or local governments or any of their respective agencies or boards, the order or direction of any court, and any other cause, whether of the kind enumerated herein or otherwise, provided that lack of funds shall not constitute a circumstance not reasonably within the control of the Utility.
- (f) "Person" includes a corporation and the heirs, executors, administrators or other legal representatives of a person.
- (g) "Plumbing Code" means the British Columbia Plumbing Code, as in effect from time to time.
- (h) "Premises" means land and any buildings and other structures thereon.
- (i) "Rates" means the prices to be paid by a Customer for Water Service provided to the Customer, as prescribed in the Schedules attached to this Tariff.
- (j) "Single Family Residential Equivalent" means and includes a single family dwelling unit intended for the use or occupancy by one or more individuals as a non-profit household, and includes a townhouse and side- by- side duplex up to 3 bedrooms per unit.

- (k) "Unit" means a unit of accommodation occupied, or to be occupied, separately by a Customer and, without restricting the generality of the foregoing, includes the separate units of accommodation in all dwellings.
- (l) "Utility" means EPCOR Water (West) Inc.
- (m) "Waterworks" means the waterworks of the Utility, including without limitation the plant, pipes, equipment, apparatus, appliances, fixtures, property and facilities employed to provide, or in connection with providing, the supply of water to the property line of Customers' Premises.
- (n) "Water Service" or "Water Services" includes, but is not limited to, the supply of water provided by the Utility to the Customer and the plant, pipes, equipment, apparatus, appliances, fixtures, property and facilities employed to provide, or in connection with providing, such supply to the property line of the Customer's Premises, and may also include meter-reading and billing.

TERMS AND CONDITIONS

A. Connection of Water Service

1. Application for New Water Service Connections

Applications for new Water Service shall be made at the office of the Utility by the owner or lessee of the Premises for which Water Service is required, or by a duly authorized agent thereof.

All applicant(s) must use the form provided by the Utility and must truthfully disclose:

- (a) the full name of the applicant(s);
- (b) the full name and current address of the Premises owner;
- (c) a detailed description of the intended water use, as determined and evaluated by the Utility or its authorized agent in its sole discretion; and
- (d) the legal description and street address of the Premises to be supplied.

Where the applicant is not the owner of the Premises for which the Water Service is requested, written authorization from the owner of the property for the installation of a new Water Service connection must be provided.

The application must bear the legal signature of each applicant before it shall be considered by the Utility.

2. Service Connection Applications

The Utility shall determine the terms and conditions under which a new Water Service connection shall be provided. The Utility reserves the right to refuse the application if the terms and conditions are not met.

3. Security Deposit Requirement

As a condition precedent to the granting or renewal of Water Service, the Utility may require an applicant, either for Water Service or for a renewal of Water Service, to enter into a written agreement with and/or provide monetary or other security to the Utility, not to exceed the estimated charges for providing Water Service for two billing periods.

4. Water Service Connection to Mains

Water Service connections will be made only to Premises fronting on a gazetted road or highway along which a water distribution main is in place.

5. Water Service Connection Location

If a Premises abuts on two separate streets or roads, the Water Service connection shall be made from the street or road that any building faces or will face when constructed or from the street or road used for the building's municipal address.

If a building has not been constructed on, and a municipal address has not been established for, a Premises, the property line having the shortest length adjacent to a street or road will be the location in which a Water Service connection is provided.

Water Service connections will not be permitted into a panhandle access to a lot, if the lot also has a frontage on another gazetted road.

6. Customer's Pipes and Fixtures

The Customer is responsible for the installation and maintenance of the Customer's waterworks, including pipes and fixtures, within the boundaries of the Premises being serviced from the Customer side of the meter, including the service connection to the meter, unless the Utility and the Customer otherwise agree in writing. All service connection materials (including all service pipes and other fixtures) installed within the Customer's Premises must comply with the Plumbing Code. The Customer's waterworks remain the sole responsibility of the Customer.

No service pipes or fixtures on the Premises shall be covered until they have been inspected and approved by the municipal plumbing or building inspector or other appropriate authority and the Utility shall not turn on the water until it is satisfied that they have been inspected and approved.

7. Installation of Pressure Regulating Devices

At the expense of the Customer, pressure regulating devices shall be installed pursuant to the Plumbing Code in order to reduce the pressure of the Water Service within the Customer's Premises and to protect the waterworks of the Customer.

8. Size of Distribution Main for Service Connection

The minimum permissible size or diameter of all new water distribution mains shall be one hundred fifty (150) millimeters (six (6) inches) except within a cul-de-sac or other dead end termination where future extensions are precluded, where a one hundred (100) millimeters (four (4) inch) diameter pipe may be used. Where a fire hydrant is located on such a branch the portion of the pipe supplying the hydrant shall be a minimum 6" diameter.

9. Metering of New Water Service Connections

All new Water Service connections must be metered.

10. Size of Supply Pipe to Property

The minimum size of pipe that may be used to serve any one Premises shall be nineteen (19) millimeters (three quarters (0.75) of one inch) nominal diameter.

11. Depth of Service Pipes on Property

All waterworks within the boundaries of the Premises to be serviced must be situated below the maximum depth of frost penetration and, in any event, below ground surface at a minimum depth of sixty (60) centimeters (two (2) feet).

12. Connection Policy for Individual Units and Complexes

- (a) Each Unit on a Premises with a single structure that contains four (4) or fewer Units must have a separate metered Water Service connection.
- (b) Complexes may have either a single metered Water Service connection to serve the entire Complex, or at the request of the owner(s) and with the agreement of the Utility, more than one metered Water Service connection.

13. Water Service Connection Where No Main Exists

If an application is made for Water Service connection for a Premises and no water distribution main fronts the Premises, the Water Main Extension Rules set out in Section F of these Terms and Conditions will apply.

14. Applicable Charges and Payment for a New Water Service Connection

At the time an application is approved for Water Service to a Premises:

- (a) that fronts on a gazetted road or highway in which a water distribution main is in place;
- (b) from which the Water Service connection will be made; and
- (c) which has not previously been connected for Water Service;

the applicable charge prescribed in Schedule A of this Tariff shall apply and the charge must be paid in full by the Customer or an agent or representative thereof, prior to the commencement of any work by the Utility. In those cases where the Water Service connection will be provided at cost, the provisions of Subsections 17 and 18 of this Section A will apply.

15. Additional Costs and Expenditures for a Water Service Connection

The specific connection charges prescribed in Schedule A of this Tariff are for a maximum length of twenty (20) meters (sixty six (66) feet) of service pipe and, where necessary, for crossing a paved roadway not more than seven (7) meters (twenty three

(23) feet) wide, but do not include the cost of boring under a paved area or replacing pavement if it is necessary to cut an open ditch through the paved area.

The Customer shall pay all additional costs for boring under pavement, or attempts to bore under pavement, for cutting and repairing pavement where it is deemed necessary by the Utility and for drilling and blasting rock where these procedures are required during the installation of the Water Service line.

16. Responsibility for Costs

In those cases where the Utility provides work or service to the Customer not covered by a specific charge or fee prescribed in Schedule A or another Schedule of this Tariff, the Customer shall pay any and all costs of the work or service as determined by the Utility as provided in Section 2 of Schedule H of this Tariff.

17. Payment Procedure for Costs and Expenditures

Where Schedule A of this Tariff provides that a Water Service connection will be provided at the Utility's cost, the Utility shall provide the Customer with a written estimate of the total cost of the connection, which shall include any and all connection and application charges. Upon receipt of such estimate, and prior to the commencement of any work, the Customer shall make an advance payment to the Utility of the full amount estimated.

18. Reconciliation of Advance Payment and Actual Costs for Connections

The Utility shall provide the Customer with a detailed calculation of the actual total cost of the Water Service connection.

Where the total cost of the Water Service connection, including the applicable connection and application charges, is less than the advance payment deposited with the Utility, the Utility will refund the difference, without interest, to the Customer.

Where the total cost of the Water Service connection, including the applicable connection and application charge, exceeds the advance payment deposited with the Utility, the Utility will bill the Customer for the difference and the Customer will pay the invoice immediately upon receipt. The Utility will not be required to turn on the Water Service until the invoice is paid in full.

19. Misrepresentation

Any misrepresentation on the part of the Customer shall be considered sufficient grounds for refusal to provide Water Service, or if the Water Service has already been connected, sufficient grounds to discontinue all Water Service without notice.

If Water Service is disconnected, no Water Service shall be reconnected without provision of a security deposit in an amount as determined by the Utility, not to exceed

the estimated charges for providing Water Service for two billing periods. The security deposit will be held by the Utility until such time as the Customer no longer requires Water Service. A service charge as prescribed in Schedule H of this Tariff must also be paid before Water Service will be reconnected.

20. Rejection of Water Service Connection Application

The Utility shall have the right to decline an application for the installation of a Water Service connection where the Regional District of Nanaimo, British Columbia or another approving authority will not permit the cutting of pavement and solid or blast rock or other impediment, in the opinion of the Utility, makes boring impractical and/or impossible.

21. Renovation of Premises

If the renovation of Premises with an existing Water Service connection involves significant change to water use on the Premises, then the Utility may require a new Water Service connection to be provided and the applicable costs charged to the Customer as provided in Section 2 of Schedule H of this Tariff.

22. Ownership of Waterworks Assets

The Waterworks, and the plant, pipes, equipment, apparatus, appliances, fixtures, property and facilities and all of the other assets comprising the Waterworks of every nature and kind (whether constructed at the Customer's expense or the Utility's expense) shall be and remain the property of the Utility.

B. Water Meters

1. Supply, Installation and Maintenance of Water Meters

Except as otherwise provided in this Subsection 1 of this Section B, the Utility shall, at the cost of the Customer, supply, install and maintain the water meter in accordance with industry standards, American Waterworks Association (AWWA) specifications and these Terms and Conditions.

The Utility reserves the right to require that a project developer supply and install the water meter(s) for the project. The water meter requirements are as follows:

- (a) the requirements of Subsection 12 of Section A will apply;
- (b) the brand of water meter must be approved by the Utility;
- (c) the water meters are to register in cubic meter and be supplied with a remote readout or touch read pad as prescribed by the Utility;
- (d) the remote readout or touch read pad must be accessible by the meter reader; and
- (e) the water meter shall become and remain the property of the Utility.

2. Location of Water Meter

The water meter shall be set and placed approximately thirty (30) centimeters (twelve (12) inches) outside the property line of the Premises to which Water Service is to be delivered, not within the driveway and at the finished grade elevation, provided that the Utility can make exceptions as is deemed necessary. The Utility reserves the right to specify where the water meter must be installed.

3. Water Meter Connections

Unless expressly agreed otherwise, the Utility shall install the water meter and appurtenances to the Utility's Waterworks. Installation of water meters by the Utility will be in accordance with the Plumbing Code and manufacturer's requirements.

4. Defective or Inaccurate Water Meters

In cases where a water meter either fails to register or does not properly indicate the flow of water, the provisions for estimating water consumption under Subsection 8 of Section D will apply.

5. Willful Interference with a Water Meter

No Person, who is not an authorized agent or employee of the Utility, shall make any connections with, tamper with, or willfully alter, or cause to be altered, any of the Utility's Waterworks within any street or land or within the Utility's rights-of-way or

property or any water meter placed upon any service pipe or connection therewith, within or without any house, building, or other place or structure, so as to lessen or alter the amount and/or flow of water registered, unless specifically authorized by the Utility for that particular purpose and occasion.

6. Damage to Water Meter

If a water meter is lost, damaged or destroyed, the Customer shall pay for the cost of meter replacement or meter removal, repair or reinstallation.

C. Integrity of Waterworks System

1. Cross-Connections Creating a Potential Hazard for Contamination

The Customer shall not permit the waterworks on the Customer's Premises to be connected to any source of water other than that of the Utility or to any potential source of contamination. In any event, the Customer shall notify the Utility without delay of any contamination that is discovered.

In addition to any other requirements of the Utility, if a mechanism to prevent back-flow is necessary to comply with the Plumbing Code to inhibit the entry of contaminants into the Utility's Waterworks, it shall be installed at the Customer's expense and must be of a design approved by the Utility.

2. Maintenance of Back-flow Prevention Devices

Any device installed for the purpose of controlling back-flow shall become the responsibility of the Customer, who must ensure that the device remains in proper working order.

3. Annual Testing of Back-flow Prevention Devices

Any Customer for whom a back-flow prevention device is installed, shall ensure it is tested and in working order at the time of installation, and tested at least once per annum (every 12 months) by a certified tester of such mechanisms, pursuant to the Plumbing Code. If the back-flow prevention device does not pass inspection, it must be repaired or replaced within seven (7) days and be re-inspected at the Customer's expense.

All test results, including descriptions of any repairs, must be reported on a Back-flow Prevention Test Report Form obtained from the Utility. The form provides information for registration and maintenance in the Back-flow Prevention Cross Connection Control Data Base program used by the Utility to track and monitor annual testing of the devices. No other test report forms will be accepted by the Utility. The completed test report forms shall be returned to the Utility within 30 days after the inspection is completed.

4. Contamination of the Waterworks System

Where, in the opinion of the Utility, any condition is found to exist which is contaminating or may contaminate the Waterworks, the Utility, at its discretion, may take one or more of the following actions:

- (a) give notice to the Customer requiring correction of the fault within a specified time period;
- (b) require installation of a back-flow prevention device on any pipe, at the Customer's expense;
- (c) discontinue any Water Service until such time that the condition is corrected;
- (d) perform emergency repairs, maintenance or operations that the Utility deems necessary at the Customer's expense.

5. Responsibility for Correcting Contamination

Should the Customer responsible for the Premises fail to comply with any notice given pursuant to this Tariff concerning potential contamination, the Utility may suspend or discontinue all Water Service provided by the Utility to the Premises which are contaminating or may, in the sole opinion of the Utility, contaminate the Waterworks.

6. Provision for Back-flow Prevention for Lawn and/or Garden Sprinklers

Each and every lawn and/or garden sprinkler installation must be protected with an approved back-flow prevention device, with the minimum being the double check valve assembly, to prevent water from siphoning back into the Utility's Waterworks.

7. Misuse of Water Supply

No Person shall sell or dispose of any water supplied to a Premises for which a Water Service connection has been provided, or permit same to be carried away or used, or use water supplied to the Premises, or allow it to be used on a Premises, other than the property for which the Water Service connection has been provided.

8. Work to be Done by the Utility

No Person, who is not an agent or employee of the Utility, shall make any connections or alterations to, or tamper with, any of the Utility's Waterworks or any water meter belonging to the Utility or turn on or off any Utility stop valve or gate valve, without written authorization from the Utility.

9. Repairs to Leaking or Defective Pipes and Fixtures

All Customers, at their own risk and expense, shall maintain their service connection pipes and other fixtures in good working order and shall protect them from frost and other damage.

If it becomes evident to the Utility that there are leaky or defective service pipes and fixtures with a Water Service connection located on any Customer Premises, the Utility shall notify the Customer of them within a reasonable time, provided that the Utility will have no responsibility to identify leaky or defective pipes and fixtures and no liability for any failure to notify, or delay in notifying the Customer of any such leaky or defective pipes and fixtures.

If the necessary repairs or alterations have not been made by the Customer within two (2) business days after notice has been given or when, in the opinion of the Utility, the condition of the pipes or fixtures is such as to cause serious waste of water or damage to property, then, without further notice, the water supply shall be cut off by shutting the stop valve or by detaching the service pipe from the main. The Water Service shall not be turned on again until such repairs or alterations have been made to the satisfaction of the Utility and all costs and service charges associated with the cut off of the water supply have been paid by the Customer. The Utility will charge the Customer for costs associated with cutting off the water supply and a service charge for reconnection after disconnection, as specified in Sections 1 and 2 of Schedule H of this Tariff.

No Person whose water supply is disconnected pursuant to this Subsection shall have any claim whatsoever against the Utility for discontinuance of the water supply.

10. Approval of Service Pipes and Fixtures

No service pipes and/or fixtures shall be covered until they have been inspected and approved by the municipal plumbing or building inspector or other appropriate authority and the Utility shall not turn on the water until it is satisfied that they have been inspected and approved in accordance with the Plumbing Code.

11. Interruptions in and Refusal of Water Service

The Utility shall have the right at all times to temporarily shut off the water supply to any Premises in order to make such repairs, renewals, alterations and extensions to the Utility's Waterworks as shall, in the opinion of the Utility, be deemed necessary. Whenever possible, the Utility will give reasonable advance notice to the Customer of the shut off.

The Utility reserves the right to refuse to install, or to permit the installation of, a Water Service connection should weather or other conditions, in the opinion of the Utility, make such an undertaking impractical.

12. Call Out Work Restrictions

The Utility shall not be required to perform any work on pipes or fixtures that are not the property of the Utility.

13. Call Out Charge Liability

The Customer is responsible for the satisfactory operation of the Waterworks, including pipes and fixtures, within the boundary of the Premises being serviced.

If the Utility is called out on the basis of a Customer complaint relating to interrupted or diminished service, leaks or low water pressure and it is subsequently found that the fault is not in the Utility's Waterworks, then the Utility shall charge the Customer for the costs incurred by the Utility to respond to the initial Customer complaint as provided in Section 2 of Schedule H. The Customer shall pay the call out charge upon receipt of the bill for the charge. If the call out charge is not paid before the Customer's next regular water billing is processed, it shall be added to the Customer's next water billing.

If it is determined that the interrupted or diminished service, leak or low water pressure is caused by a fault which exists in the Utility's Waterworks, no charge for the call out and/or subsequent repair of the faulty pipes or fixtures shall be levied by the Utility to the Customer.

14. Frozen Pipes and Fixtures

The Customer is responsible for clearing any frozen pipelines or fixtures located on or within the boundary of the Premises receiving Water Service.

If the Utility is requested by a Customer to clear a frozen connection or meter service and it is found that the affected pipeline or fixture is not located within the Utility's Waterworks, then the Utility will charge the Customer the costs incurred by the Utility associated with examining and/or clearing any pipelines or fixtures as provide in Section 2 of Schedule H of this Tariff. The Customer shall pay the charge upon receipt of the bill for the charge. If the charge is not paid before the next regular water billing is processed, it will be added to the Customer's next water billing.

If a frozen connection or meter service is found to exist within the Utility's Waterworks, then no charge for thawing the Waterworks shall be levied by the Utility to the Customer.

The Utility may, as it deems necessary during very cold spells in the winter, require that the Customer leave a faucet running very slowly so as to prevent the Water Service line from freezing. In these cases, the Utility will adjust the water bill of the Customer to reflect the applicable charge for base consumption.

15. Maintenance of Hydrants/Standpipes

In accordance with a certain service agreement with the Regional District of Nanaimo, British Columbia, the Utility provides maintenance of the hydrants and standpipes within the Utility's licensed area. The Utility will inspect, test, maintain and operate each hydrant and standpipe on an annual basis.

The Utility will inspect and service fire hydrants in accordance with the service agreement.

D. Service Issues

1. Change in Customers

- (a) If a Person, who is not a Customer of the Utility, becomes the owner or lessee of the Premises to which Water Service is provided, the owner or lessee, as applicable, must apply for a transfer of the Water Service and become a Customer of the Utility.
- (b) When there is a change in the Person who is the Customer, through a change in ownership of the Premises to which Water Service is provided or a change in the leasing of the Premises, Water Service to the Premises may be disconnected as provided in Subsection 7 of Section I of these Terms and Conditions if all outstanding water bills for Water Service provided to the Premises prior to such change have not been paid when due.

2. Alternate Water Billing

If the Customer is the owner of the Premises to which Water Service is provided, is leasing the Premises to a lessee, and requests that the water bill be sent to the lessee, the Customer shall be required to complete an authorization form using the form provided by the Utility. The authorization form will authorize the Utility to send the water bill in the name of the Customer to the lessee and will require the following information:

- (a) the legal description of the Premises; and
- (b) the current municipal address, including postal code, and telephone number of the Customer.

The authorization form must also bear the legal signature of the Customer before the Utility will consider it.

Notwithstanding that the water bill is sent to the lessee, the Customer will remain responsible for payment of the bill. If the lessee vacates the Premises leaving an outstanding water bill or for any other reason does not pay a water bill when it becomes due, the owner of the Premises shall be responsible to pay the balance owing on the water bill. If the water bill is not paid when due, Water Service to the Premises may be discontinued as provided in Subsection 7 of Section I of these Terms and Conditions.

3. Reasonable Access to Premises

(a) Easements and Rights-of-Way

At the request of the Utility, a Customer shall grant or cause to be granted to the Utility, without cost to the Utility, such easements or rights-of-way over, upon or under property owned or controlled by the Customer as the Utility reasonably requires for the construction, installation, maintenance, repair and operation of the Waterworks required for Water Service to the Customer and the performance of all other obligations required

for Water Service to the Customer and the performance of all other obligations required to be performed by the Utility under this Agreement.

(b) Right of Entry

- i. The Utility's employees, duly authorized representatives and agents shall have the right to enter a Customer's Premises at all reasonable times, or at any time during an event of Force Majeure, for the purposes of making connections or disconnections, reading meters, inspecting Waterworks and appurtenances, inspecting for back-flow prevention devices and/or possible cross-connections, or documenting or checking on the use, waste, or misuse of water and for any other purpose incidental to the provision of Water Services. A Customer shall not prevent or hinder the Utility's entry to the Customer's Premises for any such purpose. Without limiting the generality of the foregoing, the Utility has the right to enter a Customer's Premises at any reasonable hour to:
 - (1) install, inspect, test, repair or remove Waterworks;
 - (2) perform necessary maintenance to the Waterworks;
 - (3) investigate or respond to a Customer complaint or inquiry; or
 - (4) conduct an unannounced inspection where the Utility has reasonable grounds to believe that theft of Water Services or interference with the Waterworks has occurred or is occurring.
- ii. The Utility shall make reasonable efforts to notify the Customer in advance of entering a Customer's Premises or to notify any other person who is at the Customer's Premises and appears to have authority to permit entry, except:
 - (1) in cases of emergency;
 - (2) where entry is permitted by order of a court or other authority having jurisdiction;
 - (3) where otherwise legally empowered to enter; or
 - (4) where the purpose of the entry is in accordance with Section D, subsection 3(b)(i)(4) of these Terms and Conditions.
- iii. When a Customer who has requested a service call or who has been given advance notice of a required service will not permit the Utility to provide the service during normal business hours of the Utility, the Customer shall be required to pay applicable charges (plus labour overtime charges for

any service provided after regular working hours) as provided in Schedule H of this Tariff to provide the service.

4. Interruptions in Service

The Utility shall have the right at all times to suspend or terminate the supply of water to any Premises without any advance notice, in order to effect emergency repairs, replacements, alterations, or extensions to the Waterworks as the Utility deems necessary. However, for interruptions in excess of 48 hours, a proportionate rebate will be allowed to Customers served on flat rates.

5. Pressure, Supply and Quality

The Utility does not guarantee pressure or continuous supply of water, nor does it accept responsibility at any time for the maintenance of pressure on its lines or for increases or decreases in pressure. The Utility shall not be liable for any damage caused by a discontinuance or interruption in the water supply including for the purpose of repairing, renewing, altering, extending, maintaining, or cleaning the Waterworks or for the connection of a water distribution main extension. The Utility reserves the right at any and all times, without notice, to change operating Water Service for the purpose of making repairs, extensions, alterations or improvements, or for any other reason, and to increase or reduce pressure at any time. Neither the Utility, its directors, officers, employees or agents shall incur any liability of any kind whatsoever by reason of the cessation in whole or in part of water pressure or water supply, or changes in operating pressures, or by reason of the water containing sediments, deposits or other foreign matter including contaminants. Customers depending on a continuous and uninterrupted supply of water or having processes or equipment that require particularly clear or pure water shall provide such emergency storage, over-size piping, pumps, tanks, filters, pressure regulators, check valves, additional service pipes or other means for a continuous and adequate supply of water suitable to their requirements.

6. Locking Mechanisms

If a Customer has violated a provision of this Tariff, or is indebted to the Utility for water supply or other services rendered, the Utility may, in addition to discontinuing the water supply to the Premises in question, physically place a locking mechanism on the Waterworks within the Premises or on the Waterworks immediately outside the property line of the Premises.

The locking mechanism shall not be removed until charges for the removal and all other charges and fees accrued by the Customer have been paid in full. No Person whose water supply is discontinued pursuant to this Tariff shall have any claim against the Utility for discontinuance of the water supply.

7. Access to Water Meters

If the water meter is located on private property, as a condition of service, the Customer shall provide access for installing and maintaining the meter and appurtenances and for meter reading.

Where in the opinion of the Utility, a meter is located on the Customer's Premises or its accessory is situated in an unsafe area, or where its location creates a dangerous situation to a meter reader, the meter or accessory shall be deemed to be an inaccessible meter. The Utility may clear the area or shut off Water Service as appropriate if the meter or accessory remains inaccessible for meter reading and maintenance for a period that exceeds two (2) months. The reconnection fee prescribed in Schedule H of this Tariff will apply.

8. Policy and Procedures for Estimating Water Consumption

If for any reason the Utility is required to estimate the water consumption for a Premises to which Water Service is provided for any given period, the Utility shall adhere to the following procedure:

- (a) the estimate shall be based on the water consumption history and the intended water use by the Customer; or
- (b) if no sufficient history exists on which to base an estimate, the estimate shall be calculated on the basis of an average of the water consumption for similar Premises in the same area.

9. Charges for Alterations to Waterworks System

- (a) Subject to the approval of the Utility, a Customer who desires that the Utility remove, relocate or change the Utility's Waterworks system, including service pipes, meters, valves, chambers, hydrants, fittings and/or appurtenances, shall be required to pay any and all costs related to the removal, relocation or change. A deposit, based on the Utility's written estimates for cost of the work, will be paid to the Utility in advance of commencing the work.
- (b) The Utility shall provide the Customer with a detailed calculation of actual total cost for the alterations to the Waterworks requested by the Customer.

Where the total cost of the alterations is less than the advance payment deposited with the Utility, the Utility will refund the difference, without interest, to the Customer.

Where the total cost of the alterations exceeds the advance payment deposited with the Utility, the Utility will bill the Customer for the difference and the Customer will pay the bill immediately upon receipt. Failure to pay the Utility immediately upon receipt of the bill shall be sufficient grounds for the Utility not to provide Water Service.

E. Compliance

1. Penalties for Failure to Comply with Tariff

Where any Customer fails to comply with the Terms and Conditions contained in this Tariff, the Utility, after giving written notice of three (3) business days, may undertake any lawful action or actions it deems necessary to enforce compliance. Any costs incurred by such action or actions shall be recovered from the Customer as a service charge under this Tariff regardless of whether or not it is specifically included in this Tariff.

2. Willful Interference with Waterworks

No Customer or any other Person, who is not an authorized agent or employee of the Utility, shall make any connections with, tamper with, or willfully alter, or cause to be altered, any of the Utility's Waterworks within any street or land or within the Utility's rights-of-way or property or any water meter placed upon any service pipe or connection therewith, within or without any house, building, or other place or structure, so as to lessen or alter the amount and/or flow of water registered, unless specifically authorized by the Utility for that particular purpose and occasion.

At the discretion of the Utility, such interference may result in immediate termination of Water Service. No Water Service so terminated shall be reconnected without both payment of the charges prescribed in Schedule H of this Tariff and approval of the Utility.

F. Water Main Extension Rules

1. Application for Extensions

All applications for extensions of existing Water Service distribution works shall be made in writing to the Utility by the owner of the Premises to which the application refers and to which Water Service is desired or a duly authorized agent of the owner. The Utility shall determine the terms and conditions of obtaining service.

Each application for extension of service requires an amendment to the Utility's Certificate of Public Convenience & Necessity (CPCN) to include the lot(s) within its authorized service area. In response to each application, the Utility will detail the terms and conditions of service, including all rates and charges applicable. Prior to issuance of an amended CPCN, confirmation is required that either a deposit into the Utility's Deferred Capacity Trust Fund under Schedule B of this Tariff has been made or that additional works have been constructed and contributed to the Utility by the applicant as required by the Comptroller of Water Rights.

Once the amended CPCN is issued, and while lot(s) are not receiving service, availability of service charges under Schedule G of this Tariff will be applicable.

2. Information on Proposed Developments

An applicant(s) who has applied for an extension of a main to serve a proposed development shall be required to provide the Utility with the following information in respect of the development:

- (a) the legal description and municipal address of the proposed development;
- (b) one set of drawings of the proposed development identifying the height of the proposed structure and the number of suites for both residential and commercial use;
- (c) the anticipated fire flow requirements and water requirements for the proposed development;
- (d) a contact name, telephone number, and/or fax number should the Utility require any additional information pertaining to the development;
- (e) the scheduling of the construction and the anticipated time line for completion of the development; and
- (f) advance notice if a temporary water supply will required under Section G of these Terms and Conditions for construction purposes.

3. Right to Refuse Extensions

The Utility reserves the right to refuse to make a water main extension should weather or other conditions, in the opinion of the Utility, make such undertaking impractical.

The Utility will not be required to make extensions where road grades have not been brought to those established by public authority.

4. Ownership of Extensions to Waterworks System

All extensions to the Waterworks system that may be installed (whether paid for by the Utility or by the applicant(s) or the Customer, as applicable) shall be the sole property of the Utility.

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5. Extensions within Road Rights-of-Way or Utility's Easement or Property

All extensions of water mains shall be located along a gazetted road or highway within the right-of-way for the road or highway or in an easement held in the name of the Utility or on property solely owned by the Utility.

6. Construction and Design of Extensions

The size, type, quality of materials for a water main extension and their location will be specified by the Utility and the actual construction will be done by the Utility or by a construction agency acceptable to the Utility.

7. Connection of Extensions to Mains

The Utility or its authorized representative or agent shall make all connections of an extension of the water main to existing live water mains. The applicant(s) shall pay the cost of making all such connections prior to the Utility making the connection.

8. Advance Requirements

(a) An applicant(s) who has applied for an extension of a water main to serve a subdivision or housing project shall be required to advance to the Utility, before construction is commenced, by way of a cash deposit, the estimated cost of the Waterworks to be installed including, without limitation,

- (i) the estimated cost of any upgrade in size or capacity of any part of the existing Waterworks; and
- (ii) the estimated cost of installation of the main required to serve such project, including necessary valves, fittings and fire hydrants.

- (b) If pipelines to a subdivision do not exist, the estimate cost of the extension shall be based upon a pipeline of sufficient diameter to supply the entire subdivision in accordance with requirements for fire flows.
- (c) In determining the physical length of the water main extension necessary to render service to any point, the distance from such point to the nearest distribution main, with the required capacity and flow requirements to satisfy the requirements of the proposed service, the "Suitable Main" shall be considered along lines of proper construction and common practice in the location of public waterworks, with due consideration being given to the general layout of the Utility's Waterworks system. The length of the extension shall be measured along such lines of proper construction and common practice from the Suitable Main to the middle of the furthest property to be serviced.
- (d) Where a water main extension must comply with a law, statute, bylaw, ordinance, regulation, specification or order of a public authority, the estimated cost of the extension shall be based upon the Waterworks required to comply therewith.

9. Advances by Original Applicants

- (a) When more than one applicant is involved and an advance is required for a water main extension, then the amount of the advance shall be divided equally or as otherwise agreed among the applicants and made known to the Utility.
- (b) Any adjustments to differences between the estimated cost and the actual cost of any main extension made shall be completed within ninety (90) days after the actual cost of the installation has been ascertained by the Utility and after the installed works have been disinfected and pressure tested to the satisfaction of the Utility.
- (c) The Utility shall maintain, at all times during installation of the water main extension and for a period of ninety (90) days following both the completion of construction and the initial approval by the Utility, a minimum of fifteen percent (15%) of the total deposit made by the applicant(s) so as to allow sufficient time for all contractors and suppliers to submit bills and for satisfactory performance of the installation to be proven.
- (d) Upon completion of the construction and installation of the water main extension, the Utility shall ascertain the actual cost of the construction and installation.
- (e) If the actual cost is less than the amount of the advance received from the applicant(s), the remaining portion of the advance will be refundable to the applicant(s) in accordance with Subsection 9(f) of this Section F, without interest.

If the actual cost exceeds the amount of the advance received from the applicant(s), the Utility shall bill the applicant(s) for the difference and the applicant(s) shall pay the bill immediately upon receipt. Failure to pay the Utility immediately upon receipt of the bill shall be sufficient grounds not to provide Water Service.

- (f) At the end of the ninety (90) day period, provided that all suppliers and contractors have then submitted their bills and the installation has then proven to be satisfactory, the Utility shall return any refundable portion of the advance to the applicant(s) and the Utility will accept no further responsibility for any costs in connection with the development.

10. Advances by Customers Connecting to Water Main Extension

An extension charge equal to a pro-rata share of the original cost of the water main extension shall be collected by the Utility from each Customer who makes an application for a Water Service connection to the original main extension within five (5) years. The extension charge collected above shall be refunded equally, or as agreed otherwise, to the Customers who already have advances deposited with the Utility as a result of connection to the extension, so that in the result all Customers will have paid their pro-rated share or as otherwise agreed by them and made known to the Utility.

11. Application of Advances

Advances required from an applicant(s) in payment for water main extensions will be held by the Utility without interest. Refunds will be made in accordance with Subsection 10 and this Subsection 11 and no Person will have refunded an amount in excess of the amount of the advance received by the Utility. Refunds will be paid to the current registered owners of the properties on account of which the advances were received.

Any amount not used by the Utility for construction of the extension and not refunded at the end of five years from the date the advance was received by the Utility from the original applicant or applicants will be retained by the Utility and transferred to the Deferred Capacity Trust Fund account. Thereafter additional customers will be connected without being required to pay the extension charge.

G. Temporary Water Service

Any contractor, developer or other Person (“Temporary Customer”) who requires temporary Water Service for the purposes of construction or expansion of a development or for another reason must make an application to the Utility and, if the application is approved, may acquire water from a standpipe or hydrant as designated by the Utility subject to the following conditions:

1. Connections to Fire Hydrants or Standpipes

- (a) All connections to the fire hydrant or standpipe must be fitted with a back-flow prevention device, and an independent shut off valve to regulate the flow. The back-flow prevention device must be approved by the Utility and shall either be provided by the party requiring the service, or rented from the Utility at a daily rate prescribed by the Utility. If the device is rented from the Utility, the party requiring the device shall be responsible for the costs associated with the proper installation, maintenance and disconnection of the device and also for any damage to the device.
- (b) If the fire hydrant or standpipe is required by the Parksville or Qualicum Beach Fire Protection Districts for an emergency situation, including an event of Force Majeure, the Temporary Customer must remove any connections to a hydrant or standpipe without delay.
- (c) All tanker trucks, street sweepers, and water sprinkler trucks, etc. must be fitted with a back-flow prevention device approved by the Utility and permission to use the fire hydrant must be obtained from the Utility before hooking up to a fire hydrant for the purpose of taking on water.

2. Connections to Temporary Service Pipe

- (a) The Temporary Customer shall keep a record of the amount of water consumed when connected to a temporary service pipe and shall advise the Utility promptly when the Water Service is no longer required and report to the Utility the amount of water consumed. The Utility will provide a water meter for the purpose of recording the consumption, however, the Temporary Customer will be responsible to cover the cost of any damage to said device.
- (b) The Utility shall issue a bill for water consumed by the Temporary Customer based on Rates as prescribed in the applicable Schedules of this Tariff. The bill shall be payable immediately upon receipt.

H. Disconnection of Water Service

1. Disconnection for Non-Payment

The Utility may withhold or disconnect the supply of water from any Customer who is already indebted to or in dispute with the Utility for Water Service or any other service provided by the Utility.

2. At Customer Request

No water rate shall be charged with respect to Water Service to any property that has been disconnected for a period of one (1) month or more and where;

- (a) the Water Service connection to the property remains unused; and
- (b) the Water Service has been turned off at the request of the Customer.

Any Customer who wishes to discontinue Water Service for a period of one (1) month or more shall give to the Utility at least seven (7) days written notice of the discontinuance. If the Customer fails to give the required written notice, the Customer shall continue to be responsible for payment for Water Service.

3. Unauthorized Service

Where a Water Service connection has been made or Water Service has been turned on without proper authorization from the Utility, the Utility may remove the water meter unless and until the applicable charges, as prescribed in Schedule H of this Tariff, have been paid in advance to the Utility by, or on behalf of, the Customer to defray the costs of the removal and replacement of the said water meter. The charges shall be in addition to any other charges outstanding against the Premises or required to be paid in order to receive Water Service pursuant to these Terms and Conditions.

4. Non-Compliance

The Utility may discontinue Water Service to any Customer for non-compliance with these Terms and Conditions. Where Water Service is discontinued for non-compliance with these Terms and Conditions, the Utility shall not permit a reconnection for any Customer until proof of compliance with these Terms and Conditions is demonstrated and both the service charge prescribed in Schedule H of this Tariff for reconnection after disconnection and a security deposit in an amount equal to two times the highest bill in the previous three billing periods, or twelve months, whichever is greater, is paid by way of cash deposit, certified cheque or satisfactory letter of credit to the Utility.

5. Resumption of Water Service

If Water Service is turned off or disconnected, Water Service will not be turned on or reconnected until all outstanding charges and fees for services rendered have been paid in full to the Utility as per this Tariff.

6. Charges for Service Resumption

Where any applicable charges and fees have been paid according to the requirements of this Tariff, and a Customer first becomes connected to a service by the turn of a valve in an existing service pipe, or when a Customer becomes reconnected after service has been shut off either for non-payment, non-compliance with these Terms and Conditions or at the request of the Customer, the service charge for any such turn on or reconnection of Water Service shall be as prescribed in Schedule H of this Tariff.

I. Payment for Services Rendered

1. Calculation of Water Charges

All water charges are calculated in accordance with the applicable rates prescribed in the Schedules attached to this Tariff.

2. Bill and Payment

All water bills will be issued by the Utility to Customers at time intervals determined by the Utility and shall be due and payable at the Utility office or at any duly authorized collecting agency within 10 days from the issue date of the water bill.

3. Meter Reading

Water bills will be based on meter reads with meter reading schedules as determined by the Utility.

4. Dishonored Cheques

When, for any reason whatsoever, a cheque issued to the Utility in payment of a bill is dishonored, the Customer shall be required to immediately pay a service charge as prescribed in Schedule H of this Tariff, related bank charges and any outstanding amounts owed to the Utility.

5. Payment Calculation if Meters Malfunction

In cases where a meter for the Water Service to a Premises is found not to register, or appears to have registered incorrectly, for billing purposes the Utility shall compute the water charges for the property based on the procedures for estimating water consumption set out in Section D, Subsection 8.

6. Appeal of Calculation of Water Charges

Any Customer obtaining water from the Utility's Waterworks may formally register a complaint with the Utility regarding the amount of any water bill, no later than thirty (30) days from the issue date of the bill.

7. Policy Regarding Bill Collection

In the case of non-payment by a Customer of charges after the same have become due and payable, the following procedures will be followed by the Utility:

- (a) When a bill issued for Water Service provided to a Premises becomes one (1) month overdue, the Water Service to the Premises in respect of which the bill is due and payable may be disconnected upon fifteen (15) days written notice. A disconnection notice mailed to the last known postal address of the Customer shall be deemed good and sufficient notice and the notice will be deemed to have been given on the date that it is mailed.

- (b) If payment is not received at the Utility office during normal working hours within fifteen (15) days after the disconnection notice is given, the Utility may disconnect the Water Service in respect of which the disconnection notice has been given without any further notice to the Customer or any other Person.
- (c) If the Water Service is discontinued as the result of non-payment, the Utility shall not reconnect the Water Service, except upon payment of the whole amount due and payable together with service charges as prescribed in Schedule H of this Tariff for the expense of disconnecting and reconnecting the Water Service.

8. Change of Billing Address Information

All Customers must, at all times, inform the Utility of any and all changes to any billing address, including changes to telephone numbers or fax numbers.

9. Additional Charges for Delinquent Bill Collection

All additional charges incurred in the collection of a delinquent water bill must be paid to the Utility in full prior to the reconnection of Water Service. Such additional charges shall include, but are not limited to, charges incurred through the use of any collection agencies or other methods employed in retrieving delinquent payments.

10. Lost Bills

If a Customer loses a bill or does not receive a bill, the Customer must contact the Utility to determine the amount owing. Loss of a bill or the failure to receive a bill does not release a Customer from the obligation to pay the amount owing to the Utility. The late payment charges under Subsection 11 of this Section I will apply if the bill is not paid by its due date.

11. Late Payment Charge

At the discretion of the Utility, if a Customer does not pay a bill in full by the due date as specified in the bill, the Customer will be liable to pay to the Utility, in addition to the amount of the bill, a late payment charge equal to interest at 2.0% of the outstanding amount of the bill, compounded monthly, will apply. Should the bill remain outstanding after the due date, the Utility may commence collection action.

J. General

1. Disagreement in the Application of Terms and Conditions of Water Service

In case of disagreement regarding the application of these Terms and Conditions, or in circumstances where such application of these Terms and Conditions appears impracticable or unjust to either party, the Utility, or the applicant(s) or the Customer may refer the matter to the Comptroller of Water Rights for a ruling.

2. Limitation on Liability

Notwithstanding anything to the contrary contained in these Terms and Conditions, neither the Utility nor the Customer shall be liable to the other party for any damage, cost, expense, injury loss or other liability of an indirect, special or consequential nature suffered by the other party or claimed by any third party against the other party, howsoever arising. Without limiting the generality of the foregoing, damage, injury or loss of an indirect, special or consequential nature shall include loss of revenue, loss of profits, loss of production, loss of earnings, loss of contract, cost of capital and loss of the use of any facilities or property or any other similar damage or loss whatsoever.

3. Force Majeure

(a) Force Majeure Relief

If an event or circumstance of Force Majeure occurs that adversely affects the Utility's ability to provide a service connection or Water Service, the Utility's obligations and responsibilities under these Terms and Conditions, and under any agreement relating to service connections or provision of Water Services, so far as they are affected by the event of Force Majeure or the consequences thereof, shall be suspended until such Force Majeure event or the consequences thereof are remedied for such period thereafter as may reasonably be required to restore the service connection or Water Services. All charges for consumption, including the applicable charge for base consumption, in all customer classes will continue to be payable during the period in which the Utility claims relief by reason of Force Majeure.

(b) Notice

The Utility shall where practicable give notice of an event of Force Majeure to Customers affected and shall, where practicable, give notice to Customers affected when the Force Majeure event ceases to prevent performance of the Utility's obligations.

(c) Obligation to Remedy

The Utility shall promptly remedy the cause and effect of the Force Majeure event insofar as it is reasonable to do so.

(d) **Strikes and Lockouts**

Notwithstanding any other provision of these Terms and Conditions, the settlement of any strike, lockout or other industrial disturbance shall be wholly at the discretion of the Utility, and the Utility may settle such strike, lockout or industrial disturbance at such time and on such terms and conditions as it may deem appropriate. No failure or delay in settling such strike, lockout or industrial disturbance shall constitute a cause or event within the control of the Utility or deprive the Utility of the benefits of this section.

4. **Restrictions on Use of Water**

The Utility may restrict or prohibit the use of water for gardening, sprinkling, air conditioning, the filling of swimming pools or other purposes when, in its opinion, such action is necessary to conserve the water supply or to maintain water pressure. The Customer shall comply with all such restrictions and prohibitions.

5. **Water Meter Testing**

When any Customer whose Water Service is metered makes a complaint that their account is, in the Customer's opinion, excessive, the Utility will make an inspection for leaks at the meter box. If the Utility finds no leaks and, should the Customer continue to feel that the Customer is being charged for excessive consumption, the Customer can make a request in writing to have the water meter tested for accuracy.

Upon receipt of the request and payment of the fee, the Utility will remove the meter and send it to the manufacturer or its agent for testing. The complainant will in due course receive a copy of the report from the manufacturer or agent. Where the test shows an error in registering the quantity of water passing through the meter of over five percent (5%) in favor of the Utility, a new water meter will be installed.

However, if the test shows an accurate measurement of water or an error in favour of the Customer, the Utility will bill the Customer for all applicable costs pertaining to the test request and, in the case of an error in favour of the Customer, the Customer's account for Water Service will be adjusted accordingly.

Schedule A – Water Service Connection

Applicability: To all applications for Water Service from an existing water distribution main.

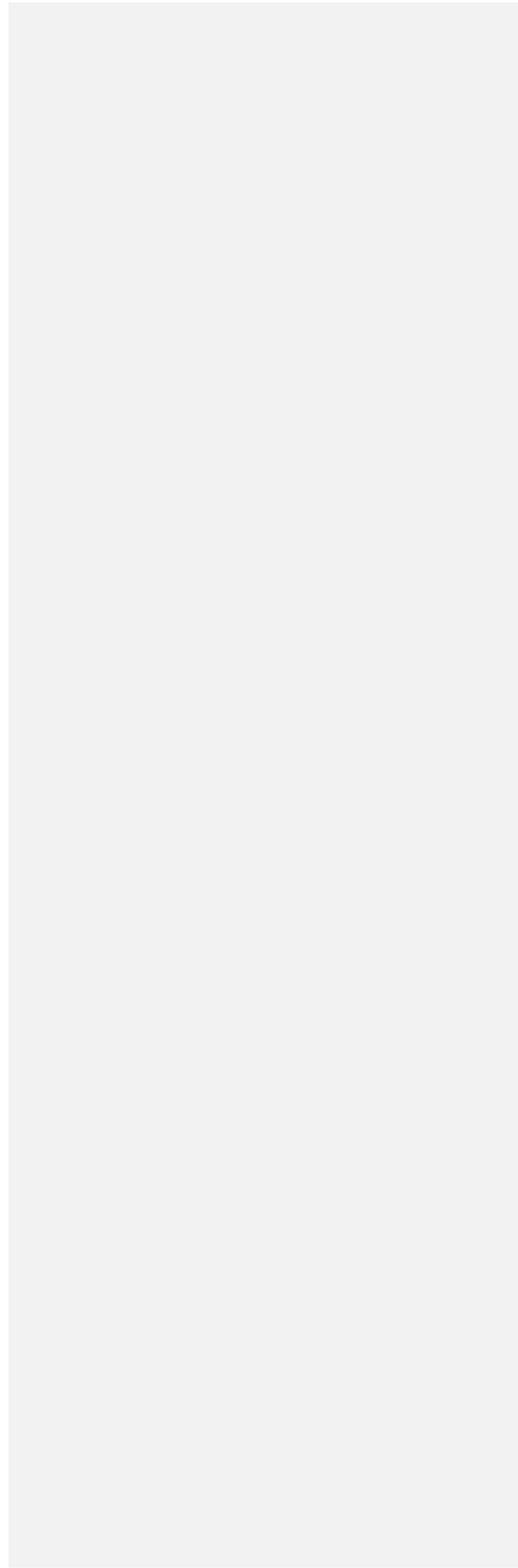
Rates:

- (a) Connection Charge..... At Cost

The Connection Charge recovers the cost incurred by the Utility, not otherwise recovered, of installing a service connection from the water main to a curb stop and, if required, a meter at the property line of the Customer’s Premises or in the building. Cost includes any administrative overhead incurred.

- (b) Connection of Customer’s Service Pipe to an Existing Curb Stop At Cost

Where, at a time prior to a Customer’s application for service, a service connection has been installed at no cost to the Utility or at a cost otherwise recovered by the Utility, then upon connection of the service pipe, the rate shown in (b) shall be paid upon application for service.



Schedule B – Contribution in Aid of Future Construction

Applicability: Where as a result of Premises becoming qualified as Authorized Premises and a greater number of units require or may require service from the Utility, thus utilizing Waterworks capacity presently or in the future. Then upon application for an extension of service, in addition to the water service connection charge and any main extension costs, the charges shown below shall be paid.

Monies collected are to be deposited to the Utility’s Deferred Capacity Trust Fund and may only be released with the written authorization of the Comptroller of Water Rights.

Rates:	Charge
Effective January 1, 2021-2024 For each unit qualifying as Authorized Premises	\$21,60023,000*
Effective January 1, 2022-2025 For each unit qualifying as Authorized Premises	\$22,00023,600*
Effective January 1, 2023-2026 For each unit qualifying as Authorized Premises	\$22,50024,000*

Note: 1 SFE = 0.02106 L/s

* Charge is based on the number of Residential Single Family equivalent units as describe below:

- Residential Single Family – ~~1 unit = 1~~ dwelling unit (0.01865 L/s) means a building containing a semi-detached or detached building on a lot. Each Unit will qualify for the charge identified above.
- Residential Multi-Family – ~~1 unit = 1~~ means a building containing four or more dwelling ~~unit~~Units on a Lot. The development will qualify for using the same calculation described below for commercial.
- Commercial –: The number of units = Development Max Day Demand/0.0186502106 L/s, rounded up to the next whole number.

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**Schedule –C – ~~Residential, Multi-Residential & Commercial Service Flat Rates –~~
~~2024~~ Intentionally Omitted**

Applicability: ~~Within the authorized service area of the Utility~~

Rates:	Monthly Flat Rate Charge
Residential Units	\$43.30
Multi-Residential Units (per unit)	\$39.40
Commercial Units	\$38.25

Water Tariff No. 7
Effective: January 1, 2026
Page 41 of 56

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Schedule ~~C~~ Residential, Multi-Residential & Commercial Service Flat Rates – 2022

Applicability: ~~Within the authorized service area of the Utility~~

Rates:	Monthly Flat Rate Charge
Residential Units	\$43.30
Multi-Residential Units (per unit)	\$39.40
Commercial Units	\$38.25

Schedule C — Residential, Multi-Residential & Commercial Service Flat Rates — 2023

Applicability: Within the authorized service area of the Utility

Rates:	Monthly Flat Rate Charge
Residential Units	\$43.30
Multi-Residential Units (per unit)	\$39.40
Commercial Units	\$38.25

Schedule D – Metered Rates - 2021-2024

Applicability: To all Customers with water meters

Rates:	Monthly Charge
Residential Units	
First 12 cubic meters plus	<u>\$43.304</u>
For each cubic meter between 12 and 75 cubic meters	<u>6.23</u>
For each cubic meter over 75 cubic meters	\$
	<u>1,922.05</u>
	\$
	<u>1,922.05</u>
Multi-Residential Units (per unit)	
First 12 cubic meters plus	<u>\$39.404</u>
For each cubic meter between 12 and 75 cubic meters	<u>2.06</u>
For each cubic meter over 75 cubic meters	\$
	<u>1,922.05</u>
	\$
	<u>1,922.05</u>
Commercial Units	
First 12 cubic meters plus	<u>\$38.254</u>
For each cubic meter between 12 and 75 cubic meters	<u>0.84</u>
For each cubic meter over 75 cubic meters	\$
	<u>0,961.02</u>
	\$
	<u>0,961.02</u>

Schedule -D – Metered Rates - 20222025

Applicability: To all Customers with water meters

Rates:	Monthly Charge
Residential Units	
First 12 cubic meters plus	<u>\$43.304</u>
For each cubic meter between 12 and 75 cubic meters	<u>9.36</u>
For each cubic meter over 75 cubic meters	\$ <u>1,922.19</u>
	\$ <u>1,922.19</u>
Multi-Residential Units (per unit)	
First 12 cubic meters plus	<u>\$39.404</u>
For each cubic meter between 12 and 75 cubic meters	<u>4.91</u>
For each cubic meter over 75 cubic meters	\$ <u>1,922.19</u>
	\$ <u>1,922.19</u>
Commercial Units	
First 12 cubic meters plus	<u>\$38.254</u>
For each cubic meter between 12 and 75 cubic meters	<u>3.60</u>
For each cubic meter over 75 cubic meters	\$ <u>0,961.09</u>
	\$ <u>0,961.09</u>

Schedule -D – Metered Rates - ~~2023~~2026

Applicability: To all Customers with water meters

Rates:	Monthly Charge
Residential Units	
First 12 cubic meters plus	\$43.305
For each cubic meter between 12 and 75 cubic meters	2.69
For each cubic meter over 75 cubic meters	\$ 1,922.34
	\$ 1,922.34
Multi-Residential Units (per unit)	
First 12 cubic meters plus	\$39.404
For each cubic meter between 12 and 75 cubic meters	7.94
For each cubic meter over 75 cubic meters	\$ 1,922.34
	\$ 1,922.34
Commercial Units	
First 12 cubic meters plus	\$38.254
For each cubic meter between 12 and 75 cubic meters	6.55
For each cubic meter over 75 cubic meters	\$ 0,961.16
	\$ 0,961.16

Water Tariff No. 67
Effective: January 1,
20212024
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Schedule -E – Fire Hydrant & Standpipe Rates - 20212024

Applicability: Within that portion of the Utility’s authorized service area in the Parksville or Qualicum Beach Fire Protection District or other recognized local fire protection authority

Rates:	<u>Charge</u>
Hydrants	\$580.82 <u>620.10</u> / hydrant / year
Standpipes	\$232.33 <u>248.04</u> / standpipe / year

Water Tariff No. 67
Effective: January 1,
20222025
Page 48 of 56

Schedule -E – Fire Hydrant & Standpipe Rates - 20222025

Applicability: Within that portion of the Utility’s authorized service area in the Parksville or Qualicum Beach Fire Protection District or other recognized local fire protection authority

Rates:	<u>Charge</u>
Hydrants	\$580.82 <u>662.03</u> / hydrant / year
Standpipes	\$232.33 <u>264.82</u> / standpipe / year

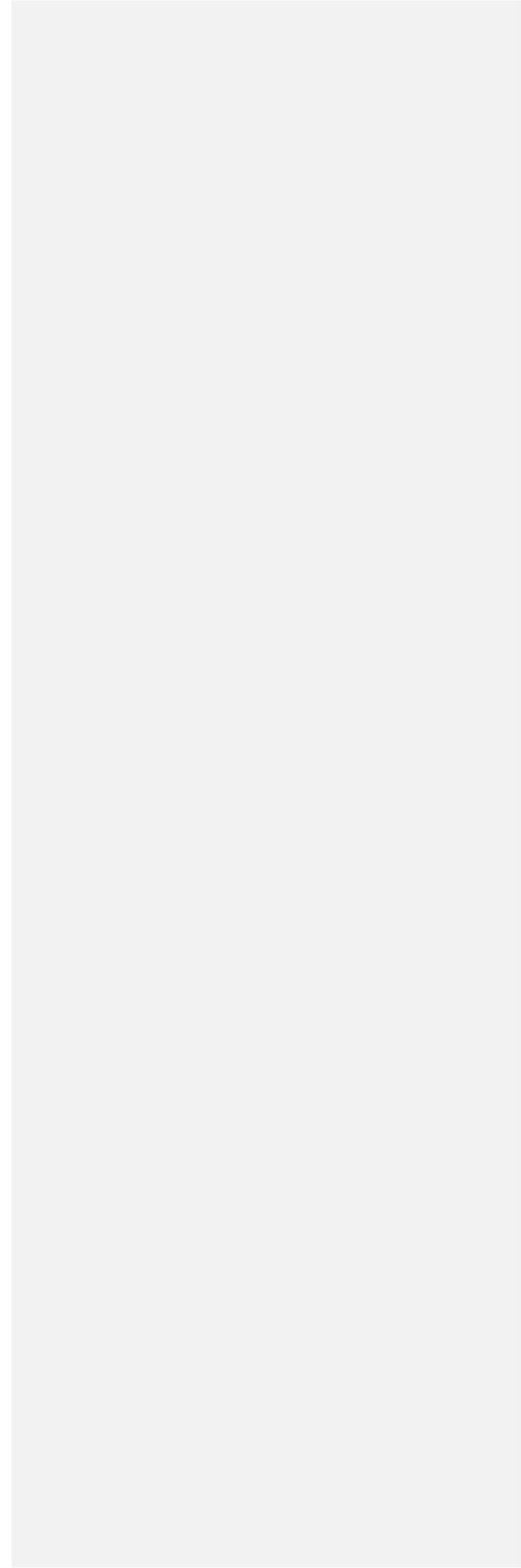
Water Tariff No. 67
Effective: January 1,
2023~~2026~~
Page 49 of 56

Schedule -E – Fire Hydrant & Standpipe Rates - 2023~~2026~~

Applicability: Within that portion of the Utility’s authorized service area in the Parksville or Qualicum Beach Fire Protection District or other recognized local fire protection authority

Rates:	<u>Charge</u>
Hydrants	\$580.82 <u>706.79</u> / hydrant / year
Standpipes	\$232.33 <u>282.72</u> / standpipe / year

Schedule F – Intentionally Omitted



Schedule G – Availability of Service Charge per Rent Charge Agreements - ~~2021~~2024

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Applicability: To owners of the legal subdivision with Rent Charge Agreements eligible to be registered on title. The Rent Charge becomes effective and due and payable on the first day of the month following CPCN issuance and acceptance of certified as-built drawings (i.e., when lot or lots are eligible for subdivision registration).

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Availability: All owners of the lots to which this Rent Charge is applicable shall pay the rate during the period they are not users of water service.

Rate: \$ 388.34 per annum, per residential services lot

Notes:

1. For other than residential services lots, the Rent Charge shall be calculated on a Single-Family Residential Equivalent basis.

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2. Once a customer has received approval to connect to the Utility's waterworks, has passed inspection and has been accepted by the Utility as a customer, this Rent Charge will no longer apply to the portion of the property connected to the Utility's waterworks. A pro-rated refund of the Rent Charge will be credited to the customer's account, if applicable. If service is temporarily shut-off (e.g., seasonal use), the customer shall pay a minimum of the Rent Charge payable on a pro-rated basis while disconnected or a greater amount if specified in another rate schedule(s) of the Tariff.

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3. For the purposes of this Schedule, townhouses and side-by-side duplexes are equivalent to one (1) single family residential premises.

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4. Any arrears of Rent Charges shall bear interest from the due date until payment at a rate of 18% per annum accruing daily, and shall be a charge upon the Lands or Future Lot or Lots in question in the same manner as the Rent Charge charged on the Lands.

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Schedule G – Availability of Service Charge per Rent Charge Agreements - 2025

Applicability: To owners of the legal subdivision with Rent Charge Agreements eligible to be registered on title. The Rent Charge becomes effective and due and payable on the first day of the month following CPCN issuance and acceptance of certified as-built drawings (i.e., when lot or lots are eligible for subdivision registration).

Availability: All owners of the lots to which this Rent Charge is applicable shall pay the rate during the period they are not users of water service.

363.74Rate: \$ 414.60 per annum, per residential services lot

Notes:

1. For other than residential services lots, the Rent Charge shall be calculated on a Single Family Residential Equivalent basis.
2. Once a customer has received approval to connect to the Utility's waterworks, has passed inspection and has been accepted by the Utility as a customer, this Rent Charge will no longer apply to the portion of the property connected to the Utility's waterworks. A pro-rated refund of the Rent Charge will be credited to the customer's account, if applicable. If service is temporarily shut-off (e.g., seasonal use), the customer shall pay a minimum of the Rent Charge payable on a pro-rated basis while disconnected or a greater amount if specified in another rate schedule(s) of the Tariff.
3. For the purposes of this Schedule, townhouses and side-by-side duplexes are equivalent to one (1) single family residential premises.
4. Any arrears of Rent Charges shall bear interest from the due date until payment at a rate of 18% per annum accruing daily, and shall be a charge upon the Lands or Future Lot or Lots in question in the same manner as the Rent Charge charged on the Lands.

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Schedule G – Availability of Service Charge per Rent Charge Agreements - ~~2022~~2026

~~Applicability: To owners of the legal subdivision with Rent Charge Agreements eligible to be registered on title. The Rent Charge becomes effective and due and payable on the first day of the month following CPCN issuance and acceptance of certified as-built drawings (i.e., when lot or lots are eligible for subdivision registration).~~

~~Availability: All owners of the lots to which this Rent Charge is applicable shall pay the rate during the period they are not users of water service.~~

~~Rate: \$ 363.74 per annum, per residential services lot~~

Notes:

- ~~1. For other than residential services lots, the Rent Charge shall be calculated on a Single-Family Residential Equivalent basis.~~
- ~~2. Once a customer has received approval to connect to the Utility's waterworks, has passed inspection and has been accepted by the Utility as a customer, this Rent Charge will no longer apply to the portion of the property connected to the Utility's waterworks. A pro-rated refund of the Rent Charge will be credited to the customer's account, if applicable. If service is temporarily shut off (e.g., seasonal use), the customer shall pay a minimum of the Rent Charge payable on a pro-rated basis while disconnected or a greater amount if specified in another rate schedule(s) of the Tariff.~~
- ~~3. For the purposes of this Schedule, townhouses and side-by-side duplexes are equivalent to one (1) single family residential premises.~~
- ~~4. Any arrears of Rent Charges shall bear interest from the due date until payment at a rate of 18% per annum accruing daily, and shall be a charge upon the Lands or Future Lot or Lots in question in the same manner as the Rent Charge charged on the Lands.~~

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Schedule G – Availability of Service Charge per Rent Charge Agreements – 2023

Applicability: To owners of the legal subdivision with Rent Charge Agreements eligible to be registered on title. The Rent Charge becomes effective and due and payable on the first day of the month following CPCN issuance and acceptance of certified as-built drawings (i.e., when lot or lots are eligible for subdivision registration).

Availability: All owners of the lots to which this Rent Charge is applicable shall pay the rate during the period they are not users of water service.

Rate: \$ 363.74442.63 per annum, per residential services lot

Notes:

1. For other than residential services lots, the Rent Charge shall be calculated on a Single Family Residential Equivalent basis.
2. Once a customer has received approval to connect to the Utility's waterworks, has passed inspection and has been accepted by the Utility as a customer, this Rent Charge will no longer apply to the portion of the property connected to the Utility's waterworks. A pro-rated refund of the Rent Charge will be credited to the customer's account, if applicable. If service is temporarily shut-off (e.g., seasonal use), the customer shall pay a minimum of the Rent Charge payable on a pro-rated basis while disconnected or a greater amount if specified in another rate schedule(s) of the Tariff.
3. For the purposes of this Schedule, townhouses and side-by-side duplexes are equivalent to one (1) single family residential premises.
4. Any arrears of Rent Charges shall bear interest from the due date until payment at a rate of 18% per annum accruing daily, and shall be a charge upon the Lands or Future Lot or Lots in question in the same manner as the Rent Charge charged on the Lands.

Schedule H – Miscellaneous Service Charges

This Schedule sets out the charges and fees prescribed for the following work or services rendered by the Utility.

1. Service Charges and Fees for Specified Services

<u>Description of Work or Service</u>	<u>Amount</u>
Reconnection after disconnection at customer’s request	\$ 50.00
Reconnection after disconnection	\$ 50.00
Dishonored Cheques	\$ 25.00
Application for Water Service	\$ 25.00
Service Shut-Off Charge.....	\$ 30.00
Vacuum Breaker Installation Fee.....	\$ 75.00
Restriction of Water Use - Violation Charge.....	\$100.00
Willful Interference with a Water Meter	\$100.00
Illegal Connection Fee	\$500.00
Illegal Use of a Fire Hydrant	\$500.00*

*plus applicable repair costs

2. Charges for Other Work and Services

The Utility will charge the Customer for any work or service provided, for which a charge or fee is not specifically prescribed, the Utility’s costs of providing such work or service. Such costs will include repayment of all monies expended by the Utility for gross wages and salaries, administrative costs, employee fringe benefits, and materials, as calculated by the Utility. The costs will also include any expenditure for equipment rentals at rates paid by the Utility or set by the Utility for its own equipment, as well as any other costs that may reasonably arise in providing the service. Labor charges for service call outs after regular working hours will be at the Utility’s overtime rates.

Temporary water supply will be charged rates in accordance with Schedule D of this Tariff.

Schedule I – Rate Rider for Metered Rates - ~~2021~~2024

Applicability: To all Customers with water meters

Rates:	Monthly Charge
Residential Units	
First 12 cubic meters plus	(\$3.48)
For each cubic meter between 12 and 75 cubic meters	(\$2.59)
For each cubic meter over 75 cubic meters	\$0.15 12
	(\$0.15)
	<u>12</u>
Multi-Residential Units (per unit)	
First 12 cubic meters plus	(\$3.17)
For each cubic meter between 12 and 75 cubic meters	(\$2.36)
For each cubic meter over 75 cubic meters	\$0.15 12
	(\$0.15)
	<u>12</u>
Commercial Units	
First 12 cubic meters plus	(\$3.07)
For each cubic meter between 12 and 75 cubic meters	(\$2.29)
For each cubic meter over 75 cubic meters	\$0.08 06
	(\$0.08)
	<u>06</u>

Schedule I – Rate Rider for Metered Rates - 2022

Applicability: To all Customers with water meters

Rates:

	Monthly Charge
Residential Units	
First 12 cubic meters plus	(\$2.35)
For each cubic meter between 12 and 75 cubic meters	(\$1.69)
For each cubic meter over 75 cubic meters	\$0.10)08
	(\$0.10)
	<u>08</u>
Multi-Residential Units (per unit)	
First 12 cubic meters plus	(\$2.14)
For each cubic meter between 12 and 75 cubic meters	(\$1.54)
For each cubic meter over 75 cubic meters	\$0.10)08
	(\$0.10)
	<u>08</u>
Commercial Units	
First 12 cubic meters plus	(\$2.07)
For each cubic meter between 12 and 75 cubic meters	(\$1.50)
For each cubic meter over 75 cubic meters	\$0.05)04
	(\$0.05)
	<u>04</u>

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Schedule I – Rate Rider for Metered Rates - ~~2023~~2026

Applicability: To all Customers with water meters

Rates:

	Monthly Charge	
Residential Units		
First 12 cubic meters plus	(\$1.13)	
For each cubic meter between 12 and 75 cubic meters	(\$0.05)	Formatted: Tab stops: 1.08", Left,Leader: ---
For each cubic meter over 75 cubic meters	98	
	(\$0.05)	
	04	
	\$0.04	Formatted: Highlight
Multi-Residential Units (per unit)		
First 12 cubic meters plus	(\$1.03)	
For each cubic meter between 12 and 75 cubic meters	(\$0.05)	Formatted: Tab stops: 1.08", Left,Leader: ---
For each cubic meter over 75 cubic meters	89	
	(\$0.05)	
	04	
	\$0.04	Formatted: Highlight
Commercial Units		
First 12 cubic meters plus	(\$1.00)	
For each cubic meter between 12 and 75 cubic meters	(\$0.02)	
For each cubic meter over 75 cubic meters	87	Formatted: Tab stops: 1.08", Left,Leader: ---
	(\$0.02)	
	\$0.02	Formatted: Highlight

Water Tariff No. 67
Effective: January 1,
20212024
Page 59 of 5654

Schedule J – Rate Rider for Fire Hydrant & Standpipe Rates ~~2021~~ 2024

Applicability: Within that portion of the Utility’s authorized service area in the Parksville or Qualicum Beach Fire Protection District or other recognized local fire protection authority

Rates:	<u>Charge</u>
Hydrants	(\$46.67) <u>\$34.77</u> / hydrant / year
Standpipes	(\$18.67) <u>\$13.91</u> / standpipe / year

Water Tariff No. 67
Effective: January 1,
20222025
Page 60 of 5654

Schedule J – Rate Rider for Fire Hydrant & Standpipe Rates ~~2022~~ 2025

Applicability: Within that portion of the Utility’s authorized service area in the Parksville or Qualicum Beach Fire Protection District or other recognized local fire protection authority

Rates:	<u>Charge</u>
Hydrants	(\$31.49) <u>\$22.72</u> / hydrant / year
Standpipes	(\$12.59) <u>\$9.09</u> / standpipe / year

Water Tariff No. 67
Effective: January 1,
~~2023~~2026
Page 61 of ~~56~~54

Schedule J – Rate Rider for Fire Hydrant & Standpipe Rates ~~–2023–~~ 2026

Applicability: Within that portion of the Utility’s authorized service area in the Parksville or Qualicum Beach Fire Protection District or other recognized local fire protection authority

Rates:	<u>Charge</u>
Hydrants	(\$15.16) <u>\$13.17</u> / hydrant / year
Standpipes	(\$6.06) <u>\$5.27</u> / standpipe / year

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APPENDIX A**COMPTROLLER DIRECTIONS****1.0 COMPTROLLER DIRECTIONS**

1. The Comptroller of Water Rights (the “Comptroller”) issued a number of Directions to EPCOR Water (West) Inc. (“EWW”) in Order No. 2581, in respect of EWW’s 2021-2023 Revenue Requirements Application. The Directions which apply to this Application and the manner in which EWW has responded to these Directions is provided below.

1.1 Rate Structure

2. In Order No. 2581, EWW was directed as follows:

“EWW is directed to undertake detailed analyses of the benefits of further conservation measures, to share those results with CAP, and to include proposals in its next RRA filing for 2024-2026 rates.”

3. As directed, EWW looked at customer bill impacts if base consumption was further reduced to 11 m³ and 10 m³ from the current 12 m³ per month. EWW reviewed residential consumption from 2021 and 2022 and found that generally, lowering the base consumption by one cubic meter would increase customer bills by approximately 2.3%.

4. As indicated in section 1.1.1, EWW is not proposing any rate structure changes in this Application. EWW would like to review a few more years of consumption data to assess whether lowering the base consumption from 15 m³ to 12 m³ impacted conservation efforts in the last rate application. Furthermore, EWW notes that Stage 4 watering restrictions in place in 2021 and 2023, due to drought conditions could impact consumption patterns. As such, EWW considers a few more years of consumption data will allow for more meaningful analysis.

5. Furthermore, this Application is proposing an increase to customer rates from the approved 2023 rates. Given the increasing cost pressures faced by customers as result of inflation and other economic conditions, EWW considers that it is not an appropriate time to introduce further cost pressures to ratepayers such as a rate structure change. However, EWW will continue to monitor customer consumption and will raise any proposed conservation measures to the French Creek community in future rate applications.

1.2 Return on Rate Base

6. In Order No. 2581, EWW was directed as follows:

“It is recognized that the BCUC has not reset its benchmark ROE for five years and intends to review it in 2021. EWW is directed to reflect any changes to the BCUC Benchmark ROE for 2022 or 2023 into its calculation EWW’s approved ROE for those years and to advise the Comptroller’s office.”

7. EWW confirms that there have been no changes to the British Columbia Utilities Commission (“BCUC”) Benchmark ROE since the approval of its 2021-2023 rate application. EWW notes that as of September 5, 2023, the BCUC has initiated a “Stage 2” generic cost of capital (“GCOC”) proceeding to determine matters related to a benchmark rate of return for regulated utilities. The proceeding is currently ongoing.

1.3 Lead Lag Study

8. In EWW’s 2021-2023 Revenue Requirement and Rates Application, EWW proposed it would conduct a lead lag study as part of its 2024-2026 Revenue Requirement and Rates Application. The Deputy Controller accepted EWW’s proposal as part of Order 2581. The lead lag study is included as Appendix F to this Application.

1.4 Salaries and Wages

9. In Order No. 2519, EWW was directed as follows:

“... EWW is directed to report on the actual time spent by Alberta Senior Managers in support of EWW in its next RRA.”

10. As directed, EWW has provided detailed analysis of the Alberta Senior Managers time in section 4.1 of the application.

1.5 Deferred Capacity Trust Fund (DCTF)

11. In Order No. 2576, EWW was directed as follows:

“EWW is to include a reevaluation of the DCTF balances in its 2024 RRA with recommendations for further adjustments to the CIAC rates going forward. Those recommendations are to include results to date, future growth expectations and analysis of future supply costs to determine if any revisions should be made to the CIAC charge after 2026.”

12. As directed, EWW has provided comments related to the DCTF in section 9.0 of the Application. Section 9.0 includes the current and forecast of the DCTF balance. Additionally, EWW has included a DCTF forecast in Appendix G. EWW is proposing to adjust the CIAC

charge for the 2024 to 2026 test period by an amount consistent with the rate of inflation forecast. This methodology was previously approved by the BC Comptroller's Office in Order 2576 respecting EWW's 2020 CIAC Application. See Table A below for a summary of the proposed CIAC charges.

Table A
Calculation of CIAC Charge

		A	B	C
	Year	BC CPI⁽¹⁾	CIAC Charge (Inflated) (\$)	Rate Charged ⁽²⁾ (\$)
1	2023	2.0%	22,483	22,500
2	2024	2.5%	23,045	23,000
3	2025	2.2%	23,552	23,600
4	2026	2.0%	24,023	24,000

Note 1: BC Ministry of Finance Budget and Fiscal Plan 2023/24 – 2025/26, page 106

Note 2: Rounded to the nearest hundred.



**French Creek Water System
Master Plan Update 2020 –
Revision 1**

French Creek, British Columbia

Prepared for:

EPCOR Water West

Prepared by:

Stantec Consulting Ltd.
400 - 655 Tyee Road
Victoria BC V9A 6X5
P: (250) 388-9161

Project Number: 111720007



FRENCH CREEK WATER SYSTEM MASTER PLAN UPDATE 2020 – REVISION 1

This document entitled French Creek Water System Master Plan Update 2020 – Revision 1 was prepared by Stantec Consulting Ltd. ("Stantec") for the account of EPCOR (the "Client"). Any reliance on this document by any third party is strictly prohibited. The material in it reflects Stantec's professional judgment in light of the scope, schedule and other limitations stated in the document and in the contract between Stantec and the Client. The opinions in the document are based on conditions and information existing at the time the document was published and do not take into account any subsequent changes. In preparing the document, Stantec did not verify information supplied to it by others. Any use which a third party makes of this document is the responsibility of such third party. Such third party agrees that Stantec shall not be responsible for costs or damages of any kind, if any, suffered by it or any other third party as a result of decisions made or actions taken based on this document.



Prepared by _____
(signature)
Bryan Kinrade, P.Eng



Prepared by _____
(signature)
Jon Bell, P.Eng.



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Executive Summary

Stantec Consulting Ltd. (Stantec) was retained by EPCOR Water (West) Inc. (EPCOR) to provide the French Creek 2020 Water System Master Plan Update. This Revision 1 update, completed in 2023, is an interim update to the 2020 Master Plan that incorporates the booster pump station detailed design, Waterlines Resources Inc. water supply investigation and Stantec water system demands and design standards review. This interim update also includes the recommendations provided by the Ministry of Water, Lands and Resource Stewardships Water Utility Regulation Section of the Water Management Branch after a review of the EPCOR French Creek – Water System Demands and Design Standards. This report intends to provide a basis for EPCOR French Creek to review the various options for upgrading the water system for both domestic and fire supplies as a result of future potential development based on the RDN's official community plan and existing zoning. The scope of the master plan includes:

- Review of OCP projections
- Review of the latest French Creek Master Plan Update
- Required system upgrades for planned developments
- Required system upgrade for current developments
- Existing water system model review
- Service and bulk meter data review
- Capital plan update, list developed with EPCOR
- Recommended improvements and conceptual capital cost.

The community of French Creek is located within the Regional District of Nanaimo's (RDN) Electoral Area "G". French Creek is centered between the Town of Qualicum Beach to the West, the City of Parksville to the South East, and the Strait of Georgia to the North. In May 2006, the French Creek water system assets of Breakwater Enterprises Ltd were transferred to EPCOR. EPCOR continues to operate and manage all aspects of the water system.

In addition to the above, we further assess the water system using demand projections for the 3-year, 10-year, and 20-year outlooks including increased density potential for any undeveloped property zoned for either multifamily or commercial developments. Within the French Creek existing water system industrial zoning is limited, Springhill Road and the Church Road area contain industrial zoned development potential which carries a fire flow of 225L/s under MMCD guidelines.

The number of customers serviced by EPCOR is expected to steadily increase as the population of French Creek grows. Based on the 2021 Census 7.7% growth rate over the last 5 years, the projected annual growth rate is approximately 1.2%.



Population Projections

Year	Growth Rate	Population
2023 Existing	1.2%	5026
2026 (3 Year)		5209
2033 (10 Year)		5663
2043 (20 Year)		6380

In order to develop an appropriate Maximum Daily Demand (MDD) flow we referenced the historical data between the years 2009 and 2022. The following data was collected by and provided by EPCOR.

Summary of Historic MDD

Year	MDD		Date
	MLD	L/s	Month - Day
2009	3.8	44.4	Jul-02
2010	3.7	42.3	Aug-12
2011	3.4	39.0	Aug-04
2012	3.6	41.8	Aug-05
2013	4.0	45.9	Jul-26
2014	3.5	40.6	Jul-17
2015	3.7	42.9	Jul-03
2016 ¹	3.2	37.1	Jul-29
2017	3.4	39.4	Aug-04
2018	3.6	41.8	Aug-10
2019	3.4	39.4	Aug-14
2020	3.2	37.2	Jul-19
2021	4.0	45.9	Jun-27
2022	3.5	40.3	Jul-29
2023	3.5	40.7	Jul-02

The projected MDD was calculated with the assumption that the demand would increase at the same rate as the population - 1.2% growth rate.

MDD Forecast Using 2023 Data Year	MDD's (L/s)	PHD (1.5 X MDD)
2023 (3 Year)	45.9	68.9
2026 (3 Year)	47.2	70.8
2033 (10 Year)	50.6	75.9
2043 (20 Year)	55.3	83.0



Using this information, we then developed projections for the 3-year, 10-year, and 20-year outlooks. The water system was analyzed using the active Bentley WaterCAD model updated to 2019 conditions and using the future projection scenarios. A new scenario could be developed to include the latest 2023 system demands and MDD values, though the new values are only slightly higher than the 2019 conditions and wouldn't have much effect on the model results.

The first 3-year outlook involved detailed review of fire flow, hydrant replacement programs, domestic water pressure improvements, water storage, supply wells, and known development assessments. Stantec's analysis of the system follows MMCD design guidelines and good engineering practice. The following list of improvements were developed in conjunction with EPCOR's input.



FRENCH CREEK WATER SYSTEM MASTER PLAN UPDATE 2020 – REVISION 1

French Creek Water System 2023 - 2026 Opinion of Probable Cost				
Limits of Commission:				
Whereas any opinions of probable cost prepared by Stantec Consulting Ltd. ("the Engineer") will be based on incomplete or preliminary information, and will also be based on factors over which the Engineer has no control, the Engineer does not guarantee the accuracy of these opinions of probable cost and shall have no liability where the probable costs are exceeded.				
Description	Units	Quantity	Rate (\$)	Amount (\$)
Projects Established with EPCOR				
Meter Replacement	Lump Sum	1	355,000	355,000
Well Rehabilitated (1 well per year)	Each	3	30,000	90,000
Decommission / Demolish the French Creek Pump House	Lump Sum	1	25,000	25,000
Well performance evaluation and optimization Study	Lump Sum	1	50,000	50,000
Church Road Complex: Radio modem upgrade work on Church Road wells	Lump Sum	1	35,000	35,000
Church Road Main Twinning under Island Highway Study	Lump Sum	1	30,000	30,000
Drew Road Complex: Reservoir Study (scoping/ design study on capacity and seismic stability study)	Lump Sum	1	50,000	50,000
Chlorine Analyzer Replacements	Lump Sum	5	10,400	52,000
Drew Road Complex PLC Replacement	Lump Sum	1	36,000	36,000
GIS System Implementation	Lump Sum	1	72,000	72,000
Projects Established as a Result of our Analysis to Improve Serviceability				
Booster Pump on Church Road* *	Lump Sum	1	600,00	600,000
Pressure Reducing Valves (Including bypass and isolation valves)	Each	2	400,000	800,000
			Sub-Total	2,234,000
			40% Contingency	893,600
			Total	3,127,600

The mid-term 10-year assessment goal was to review required improvements to the water system for the established growth potential for domestic flows and improve the fire supply to the various deficient areas determined under the existing system analysis.

Such items as new hydrants are considered complete with any new distribution piping or new services to be constructed to MMCD design standards.

Additional items unrelated to recommended upgrades for increasing pressure and supply, we developed this list with input from EPCOR.



FRENCH CREEK WATER SYSTEM MASTER PLAN UPDATE 2020 – REVISION 1

French Creek Water System 2026 - 2033 Evaluation Opinion of Probable Cost				
Limits of Commission:				
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Description	Units	Quantity	Rate (\$)	Amount (\$)
Projects Established with EPCOR				
R8 Well Treatment	Lump Sum	1	250,000	250,000
Close Auxiliary French Creek Well (Has not been used since 1997 is a liability risk. Removal of pump and old shack and filling in dug well)	Lump Sum	1	25,000	25,000
Leak detection study	Lump Sum	1	30,000	30,000
Church Road watermain exposed near Morningstar Creek (pipe bursting)	Lump Sum	1	100,000	100,000
System AC watermain replacement program	Meter		TBD	
Projects Established as a Result of our Analysis to Improve Serviceability				
Upgrade 100mm Watermain to 200mm: Lundine Lane*	Meter	200	450	90,000
Upgrade 150mm Watermain to 200mm: Ackerman Road Development*	Meter	60	450	27,000
Upgrade 200mm Watermain to 250mm: Old Island Highway	Meter	300	500	150,000
Install 400mm Watermain: Church Road Twinning	Meter	3580	700	2,506,000
Upgrade 200mm Watermain to 250mm: Riley Road	Meter	410	500	205,000
Upgrading 100mm Watermain to 150mm: Single Family Deficient Fire Flow*	Meter	2400	400	960,000
			Sub -Total	4,343,000
			40% Contingency	1,737,200
			Total	6,080,200

*Improvements to be completed during the 2024-2026 RRA Test Period.



The 20-year assessment includes suggested improvements for the remaining deficient serviceability issues and ultimate fire flow for the industrial areas serviced by the Church Road upper pressure zone. Further development of supply wells and capacity are not specifically quantified in each assessment but is a known issue throughout with EPCOR’s direct involvement required when exploring new capacity sources.

French Creek Water System 2043 Evaluation Opinion of Probable Cost				
Limits of Commission:				
Whereas any opinions of probable cost prepared by Stantec Consulting Ltd. (“the Engineer”) will be based on incomplete or preliminary information, and will also be based on factors over which the Engineer has no control, the Engineer does not guarantee the accuracy of these opinions of probable cost and shall have no liability where the probable costs are exceeded.				
Description	Units	Quantity	Rate (\$)	Amount (\$)
Projects Established with EPCOR				
Groundwater Exploration (Exploratory Boreholes). Electrical Resistivity tomography (EMT) to map a portion of the aquifer and drilling boreholes.	Lump Sum	1	149,000	149,000
Re-drill wells	Each	9	250,000	2,250,000
Projects Established as a Result of our Analysis to Improve Serviceability				
Church Road Complex: Reservoir Expansion (adding panels to existing reservoir)	Lump Sum	1	337,500	337,500
Church Road Complex Fire Pump	Lump Sum	1	450,000	450,000
Sub -Total				3,186,500
40% Contingency				1,274,600
Total				4,461,100



Abbreviations

AAD	Average Annual Demand
AC	Asbestos Cement
ADD	Average Daily Demand
BDD	Base Day Demand
CI	Cast Iron Water Main
CPCN	Certificate of Public Convenience and Necessity
DI	Ductile Iron Water Main
EPCOR	EPCOR Water (West) Inc.
HGL	Hydraulic Grade Line
ICI	Industrial, Commercial and Institutional
KWL	Kerr Wood Leidal Consulting Engineers
MDD	Max Day Demand (2 x ADD)
MMCD	Master Municipal Construction Document
OPC	Official Community Plan
PHD	Peak Hour Demand (1.5 x MDD)
PRV	Pressure Reducing Valve
RDN	Regional District of Nanaimo
Stantec	Stantec Consulting Ltd.
TDH	Total Dynamic Head
VFD	Variable Frequency Drive
WTP	Water Treatment Plant



1.0 INTRODUCTION

Stantec Consulting Ltd. (Stantec) has been retained by EPCOR Water (West) Inc. (EPCOR) to provide the French Creek 2020 Water System Master Plan Update.

The community of French Creek is located within the Regional District of Nanaimo's (RDN) Electoral Area "G". French Creek is centered between the Town of Qualicum Beach to the West, the City of Parksville to the South East, and the Strait of Georgia to the North. In May 2006, the French Creek water system assets of Breakwater Enterprises Ltd were transferred to EPCOR. EPCOR continues to manage and operate and manage all aspects of the water system.

1.1 SCOPE OF WORK

This report intends to provide a basis for EPCOR French Creek to review the various options for upgrading the water system for both domestic and fire supplies as a result of future potential development based on the RDN's official community plan and existing zoning. The scope of the master plan includes:

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In addition to the above, we further assess the water system using demand projections for the 3-year, 10-year, and 20-year outlooks including increased density potential for any undeveloped property zoned for either multifamily or commercial developments. Within the French Creek existing water system industrial zoning is limited, Springhill Road and the Church Road area contain industrial zoned development potential which carries a fire flow of 225L/s under MMCD guidelines.



2.0 POPULATION AND GROWTH RATE ASSESSMENT

2.1 SYSTEM AND CUSTOMER DEMOGRAPHICS

The French Creek water system mainly consists of single-family detached dwellings, but also services a mix of ICI properties. Based on the population size and a population density of over 400 people per square kilometer, Statistics Canada classifies most of the French Creek area as an “Urban” area. Figure 1 shows the Census Program Data map of the French Creek area with coloured areas of population density above and below 400 people per square kilometer. Areas below 400 are considered rural areas in Statistics Canada’s analysis of Canada’s rural areas.

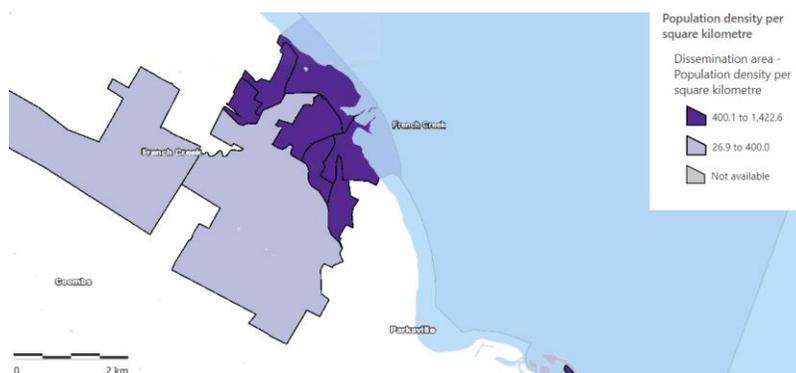


Figure 1 – French Creek Area Population Density, Statistics Canada 2021 Census

The 2021 Statistics Canada Census data for the French Creek Area, which includes the Electoral Areas of Nanaimo Area G and Area E, show an average household size of 2.2 persons with over 90% of dwellings being SF detached, semi-detached, row house and duplex. If the multi-family dwellings (apartments and moveable dwellings with a minimum of one occupant) are removed from the data, the average SFE dwelling household size increases to 2.3. Also, the 2021 Census data for the French Creek (unincorporated Place) Census area can be used for household and dwelling characteristics representative of a more rural area. The French Creek Census data shows a total of 500 occupied dwellings, with 480 being single-detached and semi-detached/row-house, which is 96% of all dwellings in the area. Based on this latest Census data for the region, an average household size in this region is estimated to be 2.3 persons/SFE dwelling.

2.2 GROWTH RATE CALCULATION

Based on a total of 2,185 active residential SFE connections, and a 2.3 person per connection estimate, we can estimate the 2023 population of the community of French Creek to be approximately 5,026 persons. The data used for the number of connections and establishing the per connection estimate is provided by EPCOR. Refer to the following table for the system’s estimated population and per capita demand over the last four (4) years.



Table 2-1 2019 Estimated Population and Per Capita Demand Unit Rates (1)

Year	Number of Active SFE ²	Estimated Population ¹	ADD (lpcd)	MDD (lpcd)
2019	2131	4901	341	682
2020	2146	4936	311	652
2021	2181	5016	319	791
2022	2185	5026	317	693
4 Year Average			322	704
1. Based on 2021 Regional Census Data of 2.3 people/SFE				
2. EPCOR FC System 2022 Consumption Records				

The “Area G” Official Community Plan (OCP), adopted as Bylaw 1540 in 2008 (2), identified several areas for growth including French Creek, Harbour Centre and Wembley Centre. In order to accurately represent the community’s growth rate, we used historical data provided by EPCOR.

The number of customers serviced by EPCOR is expected to steadily increase as the population of French Creek grows. The number of customers serviced by EPCOR is expected to steadily increase as the population of French Creek grows. From the 2021 Census for the region, it was found that there was a 7.7% growth rate over the last 5 years. Using the growth rate over the last 5 years, the projected annual growth rate is approximately 1.2%. The following growth equation is used in the development of Table 2-2 Population Projections.

Population growth formula: $P = P_0(1 + r)^t$

- P = Total Population
- P₀ = Starting Population
- r = % Rate Growth
- t = Time in years



Table 2-2 Population Projections

Year	Growth Rate	Population
2023 Existing	1.2%	5026
2026 (3 Year)		5209
2033 (10 Year)		5663
2043 (20 Year)		6380

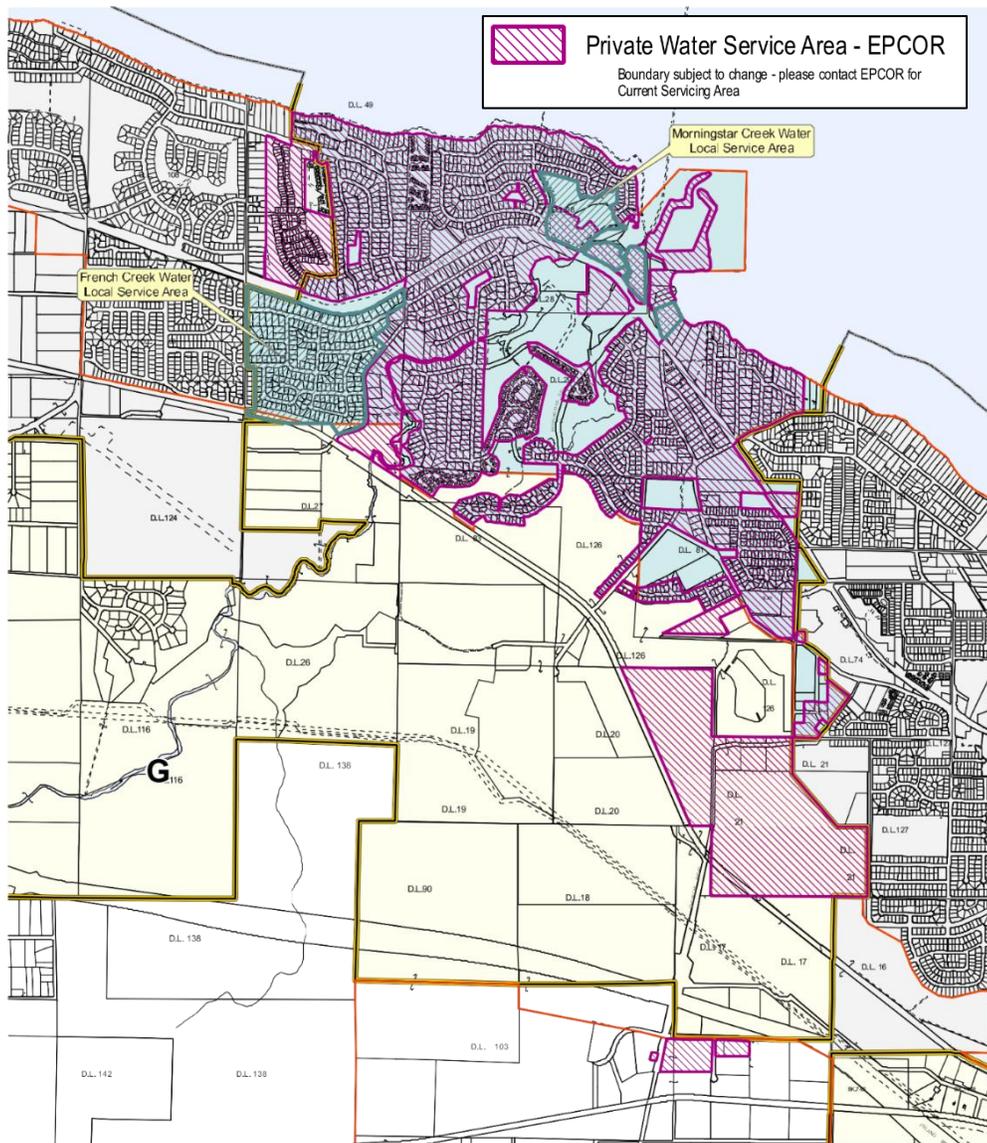


Figure 2-2 “Area G”: French Creek Water Service Area (2)



3.0 WATER SYSTEM DESIGN CRITERIA

The conceptual design parameters used in this report were based upon a combination of the design guidelines of the MMCD – Design Guideline Manuals (3), Fire Underwriters Survey (FUS) and actual consumption data collected within the past 10 years. The parameter used for the basis of our evaluation is established as follows.

3.1 PER CAPITA DEMAND

Per capita demand is a way to look at a community’s maximum daily demand and average daily demand by making the values relative to the community’s population. In this way, it is useful to compare the water use of different communities. To find the per capita demand, the total annual water consumption for each year was used, along with the estimated population using the 2021 Census data. Table 2-1 shows the ADD and MDD per capita consumption from 2019-2022.

After review of the historical demands and recent Census data that Stantec and EPCOR have provided, the BC Water Utility Branch have recommended to use the highest recorded MDD of 791 lpcd in determining the current system MDD and for future service connections. The dwelling occupancy person per unit (ppu) values of 2.3 ppu for detached SFE dwellings and 1.4 ppu for multifamily dwellings should be used in determining the total water demand from future connections and developments. Refer to the report titled “EPCOR French Creek – Water System Demands and Design Standards Review” for further information on the water system demands and development of the system’s design standards.

3.2 FIRE FLOW

When establishing fire flow for a development, MMCD Design Guidelines 2014 section 2.5 provides the following as a model; however, MMCD also identifies the use of the Fire Underwriters Survey in order to better refine the actual fire flow requirement. Each development is analyzed on a case by case basis to ensure adequate fire flows are provided.

Land Use Type	MMCD Design Guideline	Required Duration	Storage Volume
Single Family Residential minimum fire flow	60 L/s	1.4 hr	0.3 ML
Apartments, Townhouses	90 L/s	1.9 hr	0.6 ML
Institutional	150 L/s	2.0 hr	1.1 ML
Commercial	150 L/s	2.0 hr	1.1 ML
Industrial	225 L/s	2.0 hr	2.3 ML

3.3 HYDRANTS

Based on the MMCD Design Guidelines 2014 section 2.15 Hydrants



Residential Areas
Not more than 150m apart
Not more than 90m from a building

Additional fire hydrants may be required where fire flows exceed 90 L/s.

3.4 WATER PRESSURE

Based on the MMCD Design Guidelines 2014 section 2.7 Water Pressure, the following parameters were used within each of our assessments.

Design Parameter	MMCD Design Guideline
Maximum allowable system pressure	850 kPa (123 psi)
Maximum service connection pressure	515 kPa (75 psi)
Minimum pressure at Peak Hour Demand (PHD)	300 kPa (43 psi)
Minimum pressure in system during fire flow and Maximum Day Demand (MDD)	150 kPa (21 psi)

3.5 HYDRAULIC DESIGN

Based on the MMCD Design Guidelines 2014 section 2.8 Hydraulic Design, we reviewed the system for any exceedance of the following parameters.

Design Parameter	MMCD Design Guideline
Maximum allowable design velocity under peak hour flow conditions	2.0 m/s
Maximum design velocity under maximum daily demand plus fire flow	3.5 m/s

3.6 CAPACITY

3.6.1 Reservoir Capacity

Based on the MMCD Design Guidelines 2014 section 2.23.2 Capacity, reservoirs should be designed to suit the particular operating circumstances. Reservoir capacity is calculated by the following formula:

$$\text{Total Storage Volume} = A + B + C$$

A = Fire Storage

B = Equalization Storage (25% of Maximum Day Demand)

C = Emergency Storage (25% of A + B)

3.6.2 Well Capacity

Based on the MMCD Design Guidelines 2014 section 2.24.2 Capacity, the supply capacity for a water system must exceed the Maximum Daily Demand (MDD) to avoid water shortages during peak demands typically during summer months. In rating the supply capacity, it is normal practice to exclude the largest well



to provide a level of safety to deal with maintenance emergencies that may occur, this is defined as firm capacity.

4.0 EXISTING WATER SYSTEM (2019)

4.1 WATER SYSTEM DESCRIPTION

The French Creek water system, that is owned and operated by EPCOR, mainly comprises of single family residential with approximately 1834 single family residence connections, 300 multi-family unit connections, and 40 commercial connections. There are three pressure zones in the French Creek water system; the Main Pressure Zone, Church Road Booster Zone, and Mercer Point Reduced Pressure Zone. System pressurization is provided by both gravity and pumping from two reservoir sites.

The major supply facilities in the existing French Creek System include:

- 18 groundwater wells
- Drew Road Complex
 - Drew Road Water Treatment Plant (WTP)
 - Drew Road Reservoirs
 - Drew Road Pump Station
- Church Road Complex
 - Church Road Reservoirs
 - Church Road Pump Station

4.1.1 Main Pressure Zone (HGL = 79m)

Most of the water system users, approximately 96%, are located within the main pressure zone including all the groundwater supply wells. Two production sites deliver treated water to the main pressure zone, by gravity at Church Road and by pumping at Drew Road.

The Church Road site contains approximately 66% of the total storage capacity of the French Creek water system and 62% of the groundwater supply. Further specific details of storage volumes and groundwater supply can be found in chapters 4.6 and 4.7. Both domestic and fire supplies are delivered to the main pressure zone through a 300mm diameter transmission pipe travelling down Church Road to Wembley Road.

Drew Road treats and pumps both domestic and fire supplies to the main pressure zone through a 200mm diameter supply main. Drew Road's supply consists of the remaining 38% of the systems groundwater and 33% of the system storage. The pumping system uses up to three pumps to increase pressures throughout the lower main pressure zone areas.

4.1.2 Church Road Booster Zone (HGL = 168m)

The Church Road Booster Zone is located south of the Church Road Complex up to the Alberni Highway. The isolated upper pressure zone is supplied by a pump station at the Church Road reservoir which provides



both domestic and fire protection. Using the same source and storage supply as described in the chapter above, treated water is pumped from the reservoirs by two booster pumps and balanced by a pressure tank. Fire protection to the upper zone is provided by a direct drive engine, horizontal fire pump which draws water directly from the existing reservoirs.

4.1.3 Mercer Point Zone (HGL = 68m)

Embedded in the main pressure zone is the Mercer Point reduced pressure zone. This small privately owned and operated system is pressure reduced at the property line of the development. This small system is located in the North East area of the main pressure zone. EPCOR's responsibility for the Mercer Point Zone ends at the Water Meter / Fire Valve at the property line.





WATERMAIN DIAMETER (mm)

- 50Ø
- 75Ø
- 100Ø
- 150Ø
- 200Ø
- 250Ø
- 300Ø

LUNDINE LANE WELL (TWN1)
 OCEANSIDE REPLACEMENT WELL (RWN2)

R8-2 WELL

RAVENSBOURNE WELL #1

DREW ROAD WELL #1

DREW ROAD COMPLEX

- WATER TREATMENT PLANT
- RESERVOIRS (1300 m3 TOTAL)
- PUMP STATION
 - 2 - 15HP BOOSTER PUMPS
 - 1 - 25HP FIRE PUMP

MORNINGSTAR CREEK CROSSING

TWS1 WELL

ACS1 WELL

SPRING HILL REPLACEMENT WELL (RWS1)

SPRING HILL WELL #2A

HILLS OF COLUMBIA WELL #6

HILLS OF COLUMBIA WELL #11

HILLS OF COLUMBIA WELL #7

CHURCH ROAD COMPLEX

- RESERVOIRS (2654 m3 TOTAL)
- PUMP STATION
 - 2 - 5HP BOOSTER PUMPS
 - 1 - FIRE PUMP
- CHURCH ROAD WELL #1
- CHURCH ROAD WELL #2
- CHURCH ROAD WELL #3
- CHURCH ROAD WELL #4

BOSA WELL #1

HILLS OF COLUMBIA WELL #9

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**EXISTING WATER SYSTEM
 (2019)**

4.2 HISTORIC DATA

The following chapters contains the historical data used to establish our base MDD rate of 45.9 L/s. This is explained further in chapter 4.2.3.

4.2.1 Metered Water Usage Data

The data provided in the table below shows a summary of the monthly source flow totals for the metered water usage extracted from the Utilities Billing Database. The following data used in our assessments is collected and provided by EPCOR.

Table 4-1 Monthly Source Flow Totals (1)

Billing Period	Single Family		Multi-Family*		Commercial		Total	
	# of Meters	Usage (ML)	# of Meters	Usage (ML)	# of Meters	Usage (ML)	# of Meters	Usage (ML)
2017								
Jan 1- Mar 31	1,803	55	248	6	24	9	2,075	71
April 1- June 30	1,932	100	250	12	47	10	2,229	121
July 1-Sept 30	1,891	190	250	29	47	22	2,188	241
Oct 1- Dec 31	1,851	65	249	7	37	6	2,137	79
2017 Total		410		54		48		512
2018								
Jan 1- Mar 31	1,785	59	249	5	35	9	2,069	73
April 1- June 30	1,874	112	250	16	47	12	2,171	140
July 1-Sept 30	1,877	178	250	27	47	22	2,174	227
Oct 1- Dec 31	1,916	61	250	8	47	7	2,213	76
2018 Total		410		56		50		516
2019								
Jan 1- Mar 31	1,825	59	248	6	35	7	2,108	72
April 1- June 30	1,878	133	250	19	49	20	2,177	171
July 1-Sept 30	1,894	163	269	27	49	22	2,212	212
Oct 1- Dec 31	1,870	58	270	6	36	7	2,176	72
2019 Total		413		58		56		527
Current System								
Current System	1608		506		43			
Current CPCN Approved	1834		300		40			

*Multi Family refers to an account type and not a dwelling with multiple families. The units presented represent single family units.



4.2.2 Existing Demand Summary

The existing demands for the current year 2022 are summarized in the table below. The table provides an overview of the latest recorded base demand and seasonal demand for each type of customer. The base day demand (BDD) is the average demand over the winter months (January, February and March) which corresponds to the metered billing period with the seasonal demand including irrigation use. The following data dissects how the MDD values are established and expanded further in chapter 4.2.2. The information is collected and provided by EPCOR.

Table 4-2 Year 2022 Demand Summary (1)

		Single Family Equivalent (SFE)	Industrial, Commercial and Institutional (ICI)	Total	Notes
	Number of Active Units	2,185	34	2,219	EPCOR Billing Records
Base Demand	Base Demand (ML)	74,166	9,284	83,450	Jan 1- March 31, 2022 meter usage
	Base Demand Rate (L/s)	9.54	1.19	10.7	
	Population			5026	Population Estimate is based on 2.3 capita per SFE
	Base Demand Rate (lpcd)	185			Jan 1- March 31, 2022 meter usage divided by population
Seasonal Demand	Estimated Irrigation Area (ha)	119	4.20	137	Based on 50% of 0.11ha lot area for SFE and 0.20ha lot area for ICI
	Seasonal Demand (L/s)	18.0	1.5	19.5	July 1st - September 30th, 2022 meter usage with base demand subtracted
Max Day	Max Day Consumption (L/s)	27.5	2.69	30.2	Base Demand plus Seasonal Demand
	MDD (L/s)	40.3			2022 Billing Records



4.2.3 Historical MDD Data

The following historical data is for all recorded years in the system from 2009 to 2022. The MDD represents the base demand and seasonal demand as defined in the previous section. The information is collected by and provided by EPCOR.

Table 4-3 Summary of Historic MDD (1)

Year	MDD		Date
	MLD	L/s	Month - Day
2009	3.8	44.4	Jul-02
2010	3.7	42.3	Aug-12
2011	3.4	39.0	Aug-04
2012	3.6	41.8	Aug-05
2013	4.0	45.9	Jul-26
2014	3.5	40.6	Jul-17
2015	3.7	42.9	Jul-03
2016 ¹	3.2	37.1	Jul-29
2017	3.4	39.4	Aug-04
2018	3.6	41.8	Aug-10
2019	3.4	38.7	Aug-14
2020	3.2	37.2	Jul-19
2021 ²	4.0	45.9	Jun-27
2022	3.5	40.3	Jul-29
2023	3.5	40.7	Jul-02

1. The number of days each week customers could water during watering restrictions changed from two days per week to every other day. This resulted in a decreased in the MDD, as water use was spread out throughout the week.
2. Recorded during the 2021 Western North America heat wave event.

The highest value recorded over the last 14 years is 45.9 and represents an accurate worst case MDD consumption. This is value now being used as the current system MDD.



4.3 WATER MODEL (2019)

The following provides a synopsis of the water model’s development since 2002 with Table 4-5 providing a detailed summary of the modifications Stantec completed on their active model.

Year	Notes
2002	Developed by Koers & Associates Engineering Ltd.
2008	Updated by KWL
2011	Updated by Stantec (WaterCAD model updated and used in the analysis for this report)
2014	Updated by KWL version 10.2.2.6 (file corrupt and unusable)
2019	Reverted to 2011 model because of corrupt and unusable file provided from KWL. Updated by Stantec version 10.02.02.06

Table 4-4 Water Model Updates (2019)

Drawing Number or Source	Updates
	Updated volume of Church Road Reservoirs to 2,654 m3
	Updated volume of Drew Road Reservoirs to 1,300 m3
	Changed pipe with "Ductile Iron" material type to material type "Unknown" with C Factor of 110
175-008	Nodes pipes adjusted to match current EPCOR French Creek Distribution System Plan
(4)	Add background layers from CAD provided by EPCOR
	Removed obsolete model scenario
1176-152-01	Size and material for watermain along Reid Road adjusted to 150mm diameter per EPCOR correspondence
L-722-02-02-07	No Change EPCOR unable to locate drawing: Confirmation of 200mm main on Wembley Rd between Crystal Court and Ackerman Rd to 250mm main requested.
L-722-02-02-07	No Change EPCOR unable to locate drawing: Confirmation of 200mm dia main and hydrant on Rd A and additional hydrant on Wembley Rd.
L-845-01-07-05	Added 200mm dia main and 2 hydrants on Wally's Way
120-03-2	38 Lot Subdivision: water model updated
120-03-12	Added 150 mm dia main and 3 hydrants on Road 1, Lowrys Rd, and Road 2
120-03-12	Changed material type of existing water main on Arrowsmith Way, Yellowbrick Road, and Lowery Rd from Ductile Iron to PVC
120-04-1 to 120-04-18	54 Lot Subdivision, 1032 Lowery
L-772-03-04-05	Added 200mm dia main and 3 hydrants on Sanika Close and Neden Way
120-02-1	Added 200mm dia main, 150mm dia main and 2 hydrants on Prospect Point Dr and Road 1
120-02-W1	20 Lot Subdivision: water model updated
190-02-1	No Change EPCOR unable to locate drawing: Confirmation of 50mm dia main on Wright Rd east of Ocean Pl.



FRENCH CREEK WATER SYSTEM MASTER PLAN UPDATE 2020 – REVISION 1

Drawing Number or Source	Updates
218-01-1	EPCOR unable to locate drawing: Added 1 hydrant at 770 Woodland Dr from google maps.
206-01-1	Added 1 hydrant at north east side of intersection of Johnstone Rd and Old Island Highway
(4)	Added 150mm dia main and 1 hydrant on Emerald City Way per CAD provided by EPCOR
(4)	Added 150mm dia main, 100mm dia main and 5 hydrants for Lakes Blvd development per CAD provided by EPCOR
(4)	Revised alignment of 200mm dia main at the intersection of the Old Island Hwy and Columbia Dr per CAD provided by EPCOR
(4)	Added hydrant at the east end of Cavin Rd per CAD provided by EPCOR
	Updated diameters of pipe on Meadow Dr/ White Pine Way to 150mm diameter
(5)	Added Demands for: COOP (2.0 L/s) RDN Transfer Station (1.9 L/s) School District 69 Maintenance Building (4.0 L/s) Mechanical Shop (0.1 L/s)
	Updated diameter of Church Road Reservoir per information in 2011 Stantec Report /total volume at Church Rd is 2654 m3)
(6)	Updated Church Road Complex piping based off record drawings
	Revised well capacities per 'Model Bases Calculations' spreadsheet provided by EPCOR
269-01-1	504 Church Road: water model updated
257-01-2	745 Drew Road: water model updated
1176-152-01	808 Wembley: 150mm diameter PVC pipe confirmed
272-01-1	828 Reid Road: water model updated
1010-001-C02	833 Reid Road: water model updated
60848-01-D1	852 Woodland Drive: water model updated
263-01-1	853 Miller: water model updated
190-02-1A	863 Cavin Road: water model updated
3701-001-C02	1031 Robertson Place: water model updated
120-04-2	1032 Lowrys: water model updated
60931-01-D1	1316 Woodland Drive: water model updated
3517-C01	1371 Lundine Lane: water model updated
0292-01-01-B	1497 Mason Trail: water model updated
126-03-1 to 126-03-17	Esslinger Ackerman 20 Unit: water model updated
254-06-1	Lot H Johnstone Road: water model updated
39-010-2	Sumar Lane: water model updated
	Oceanside Well #2 not active and removed from model
	R8-2 Well added to model, but closed due to no flow per 'Model Bases Calculations'
	Springhill #2A Well added to model, but closed due to no flow per 'Model Bases Calculations'



FRENCH CREEK WATER SYSTEM MASTER PLAN UPDATE 2020 – REVISION 1

Drawing Number or Source	Updates
	EPCOR unable to provide surface information: Fire Hydrant elevations updated based off Google Earth Pro elevation profile creation tool
	EPCOR unable to provide surface information: Node elevations updated based off Google Earth Pro elevation profile creation tool
1649-01	Drew Road Bypass and Pump Station Upgrade added to water model
3703-001-C01	2 lots (Lots 4 and 5, Remainder Lot B DL 81 Plan 44150): water model updated
	Pipe diameters adjusted to reflect ND
	Church Road Pump Curves: water model updated Pump 5HP = 4.39 L/s (pump head 51.1 m) Pump 5HP = 4.39 L/s (pump head 51.1 m) Fire Pump = 155 L/s (pump head 50.73 m)
	Drew Road Pump Curves: water model updated 2x15 HP: Aurora pump model 344 size 2x2.5x7A with 5.75-inch diameter impeller 1x25 HP: Goulds 25 HP pump Model#: 3756 S with size 2.5 X 3 - 7 impeller diameter 7.063
	Pump Curves for well pumps created based off elevations from Google Earth Pro and flows provided from EPCOR per 'Model Bases Calculations'
	Created pressure zones in water model
	Assigned zones to nodes in water model
	PRV added for Mercer Point Zone. The valve station includes a single 150mm diameter PRV set to 80 psi
	Added MDD Existing scenario in water model
	Added MDD New Development scenario in water model
	Added Fire Flow scenario in water model
	Added PHD scenario in water model
	Added ACS1 well to model
	Added TWS1 well to model



4.4 FIRE FLOW (2020)

Using the active updated water model, we evaluated the fire flow potential throughout the system while under MDD and found several deficient areas. Fire flow water modeling results indicate that there are fire flow deficiencies for each of the exiting user types (Single Family less than 60 L/s, Multi-Family less than 90 L/s, Commercial less than 150 L/s and Industrial less than 225 L/s). Specific to the Single family fire flow requirement of 60 L/s, the following table in conjunction with figure 4-2 highlight these areas.

Table 4-5 Deficient Areas Less Than 60L/s

Item	Location	Description	Item	Location	Description
1	Neden Way	<ul style="list-style-type: none"> Dead End 200mm Pipe 	13	Rockland Place	<ul style="list-style-type: none"> Dead End
2	Mallard Road and Black Brant Road	<ul style="list-style-type: none"> Dead End 100mm Pipe 	14	Crocus Corner	<ul style="list-style-type: none"> Dead End 100mm Pipe
3	Manse Road	<ul style="list-style-type: none"> Dead End 	15	River Crescent	<ul style="list-style-type: none"> Dead End 100mm Pipe
4	Admiral Tyron Boulevard	<ul style="list-style-type: none"> 100mm Pipe 	16	Fishermans Circle	<ul style="list-style-type: none"> Dead End 100mm Pipe
5	Marine Circle	<ul style="list-style-type: none"> Dead End 100mm Pipe 	17	Pepper Place	<ul style="list-style-type: none"> Dead End 100mm Pipe
6	Windward Way, Oceanside Drive and Leeward Way		18	Old Island Highway	<ul style="list-style-type: none"> 100mm Pipe
7	Marina	<ul style="list-style-type: none"> Dead End 100mm Pipe 	19	Breakwater Road and Glenhole Crescent	<ul style="list-style-type: none"> 100mm Pipe
8	Lee Road	<ul style="list-style-type: none"> Dead End 	20	Cavin Road	<ul style="list-style-type: none"> Dead End 100mm Pipe
9	Mason Trail	<ul style="list-style-type: none"> Dead End 100mm Pipe 	21	Lowrys Road	<ul style="list-style-type: none"> Dead End
10	Pacific Crescent	<ul style="list-style-type: none"> Dead End 100mm Pipe 	22	Eagle Tree Close	<ul style="list-style-type: none"> Dead End 100mm Pipe
11	Wallys Way	<ul style="list-style-type: none"> Dead End 	23	Roberton Boulevard	<ul style="list-style-type: none"> Dead End
12	Miller Road	<ul style="list-style-type: none"> Dead End 100mm Pipe 	24	Windridge Place	<ul style="list-style-type: none"> Dead End

Continuing to reference figure 4-2, each of the Multi-family areas shaded in light green, the Commercial areas shaded in blue, and the Industrial areas, adjacent to the Church Road reservoir, are all fire flow deficient. The figure also identifies how much fire flow is available to each area node while under MDD. The available fire flows within the Main Pressure Zone range from 90 to 120L/s adjacent to the deficient areas.

In order to meet or exceed the minimum fire flow parameters within these deficient areas, the recommended improvements are developed and summarized within Chapter 7 under the 10-year system assessment.



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WATERMAIN DIAMETER (mm)

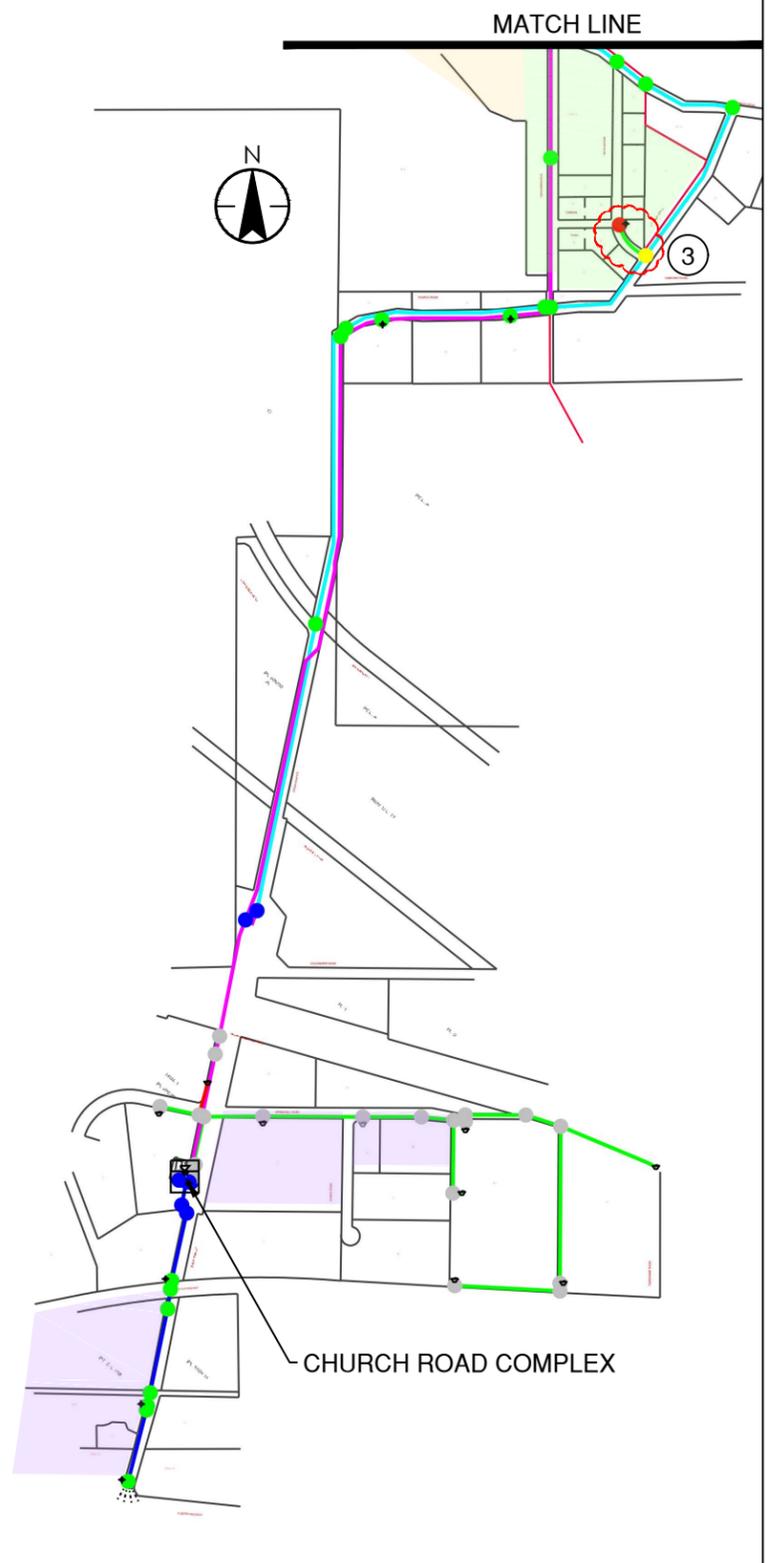
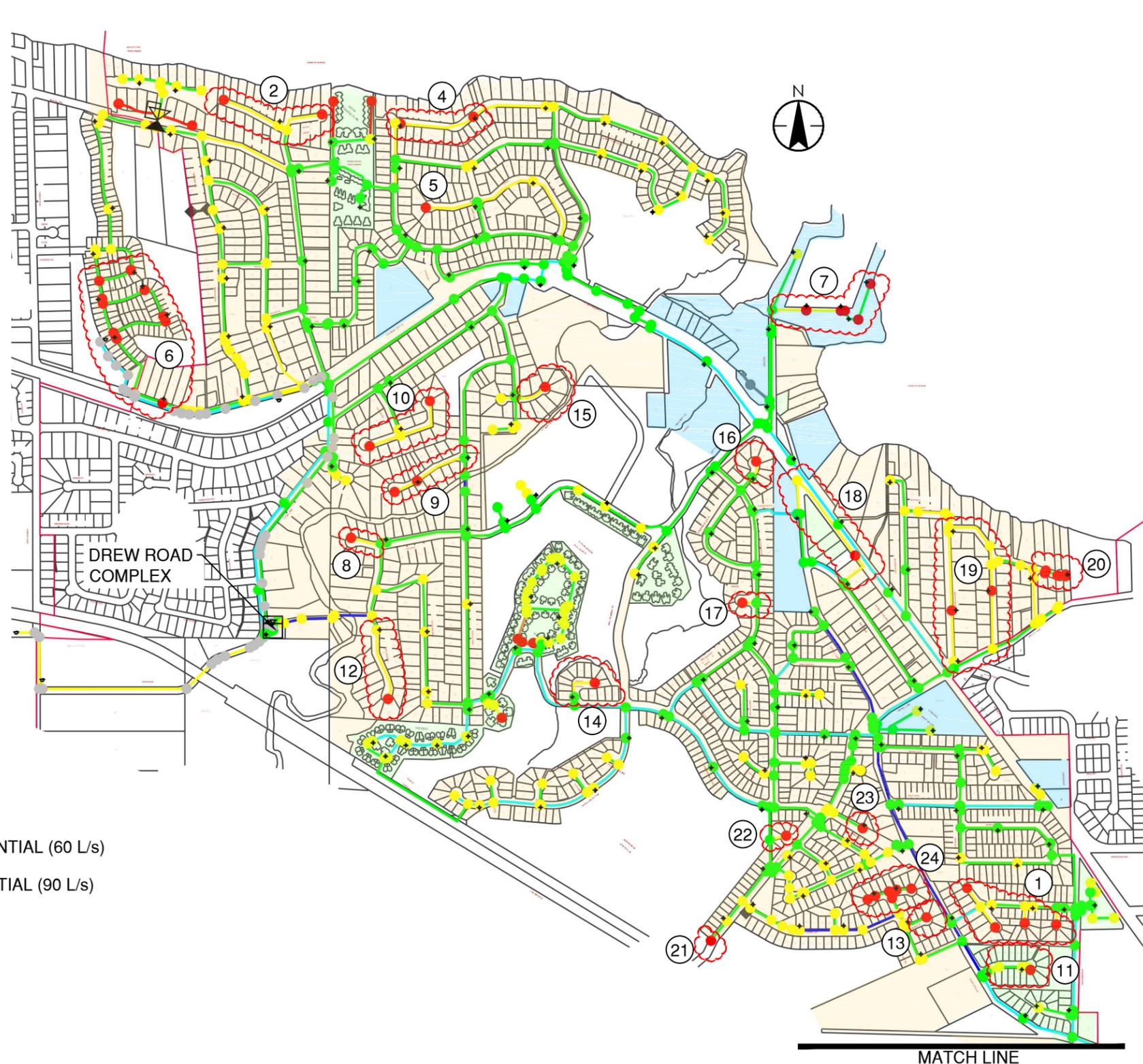
- 500
- 750
- 1000
- 1500
- 2000
- 2500
- 3000

FIRE FLOW AVAILABLE (L/S)

- <60
- 60 - 89
- 90 - 149
- 150 - 224
- > 225

ZONES

- SINGLE FAMILY RESIDENTIAL (60 L/s)
- MULTI-FAMILY RESIDENTIAL (90 L/s)
- COMMERCIAL (150L/s)
- INDUSTRIAL (225 L/s)



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AVAILABLE FIRE FLOW
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4.5 WATER PRESSURE AND MDD

4.5.1 Water Pressure

The following figures show the pressure during a PHD and MDD event for the existing system. Modeling indicates that there are existing PHD and MDD pressure deficiencies (less than 43 psi) as well as many areas exceeding the maximum allowable pressure (greater than 75 psi). Each of the deficient areas are circled in red and labeled highlighting the extent of the deficient area.

In order to correct the minimum pressure areas, we have provided recommendations within the following Chapter 5 which identify the use of localized booster pumping. Over pressure management is developed within the 20-year plan in Chapter 7, this includes the introduction of a new lower pressure zone using large pressure reducing valves and closing specific line valves.

4.5.2 MDD and PHD Forecast Using the Established Growth Rate and Historical MDD

The highest value recorded MDD over the last 14 years is 45.9, which occurred in 2013 and 2021, and represents an accurate worst case MDD consumption. This is value now being used as the current system MDD. The projected MDD was calculated with the assumption that the demand would increase at the same rate as the population. Refer to section 2.2 for the population projections and how the growth rate is established as 1.2%.

Table 4-6 below summarizes the resulting flow demand using the established MDD and growth rate projections for each of our study periods. Supplementing the MDD calculation is the PHD calculation which is found to be 1.5 X MDD, this standard is a derivative of the MMCD Design Guidelines 2014 section 2.3.

Table 4-6 MDD Forecast Using 2023 Data

Year	MDD's (L/s)	PHD (1.5 X MDD)
2023 (3 Year)	45.9	68.9
2026 (3 Year)	47.2	70.8
2033 (10 Year)	50.6	75.9
2043 (20 Year)	55.3	83.0

Supplementing the data above is EPCOR's peak instantaneous flow measured at <95L/s which occurs during dry summer months when residences are allowed to irrigate every other day. The instantaneous demand flow is reported to occur sporadically throughout the months of July and August only during irrigation days.



WATERMAIN DIAMETER (mm)

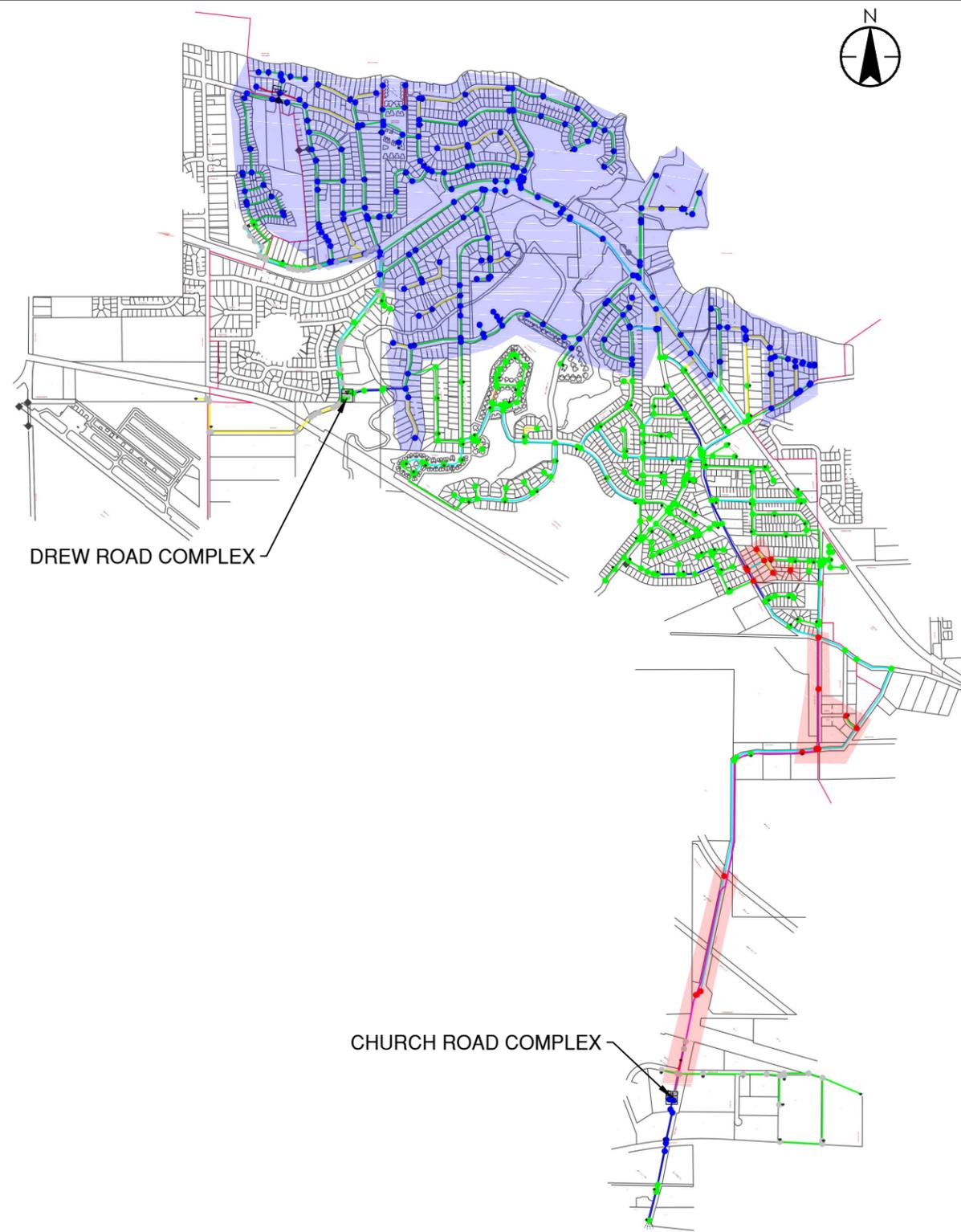
- 50Ø
- 75Ø
- 100Ø
- 150Ø
- 200Ø
- 250Ø
- 300Ø

PEAK HOUR PRESSURE (PSI)

- <43
- 43.1 - 75.0
- 75.1 - 123
- > 123

ZONES

- HIGH PRESSURE AREA (OVER 75 PSI)
- LOW PRESSURE AREA (UNDER 43 PSI)



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FLOW DEMANDED: 63.3 L/S

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Figure No.
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Title
**PEAK HOUR DEMAND
(2020)**

WATERMAIN DIAMETER (mm)

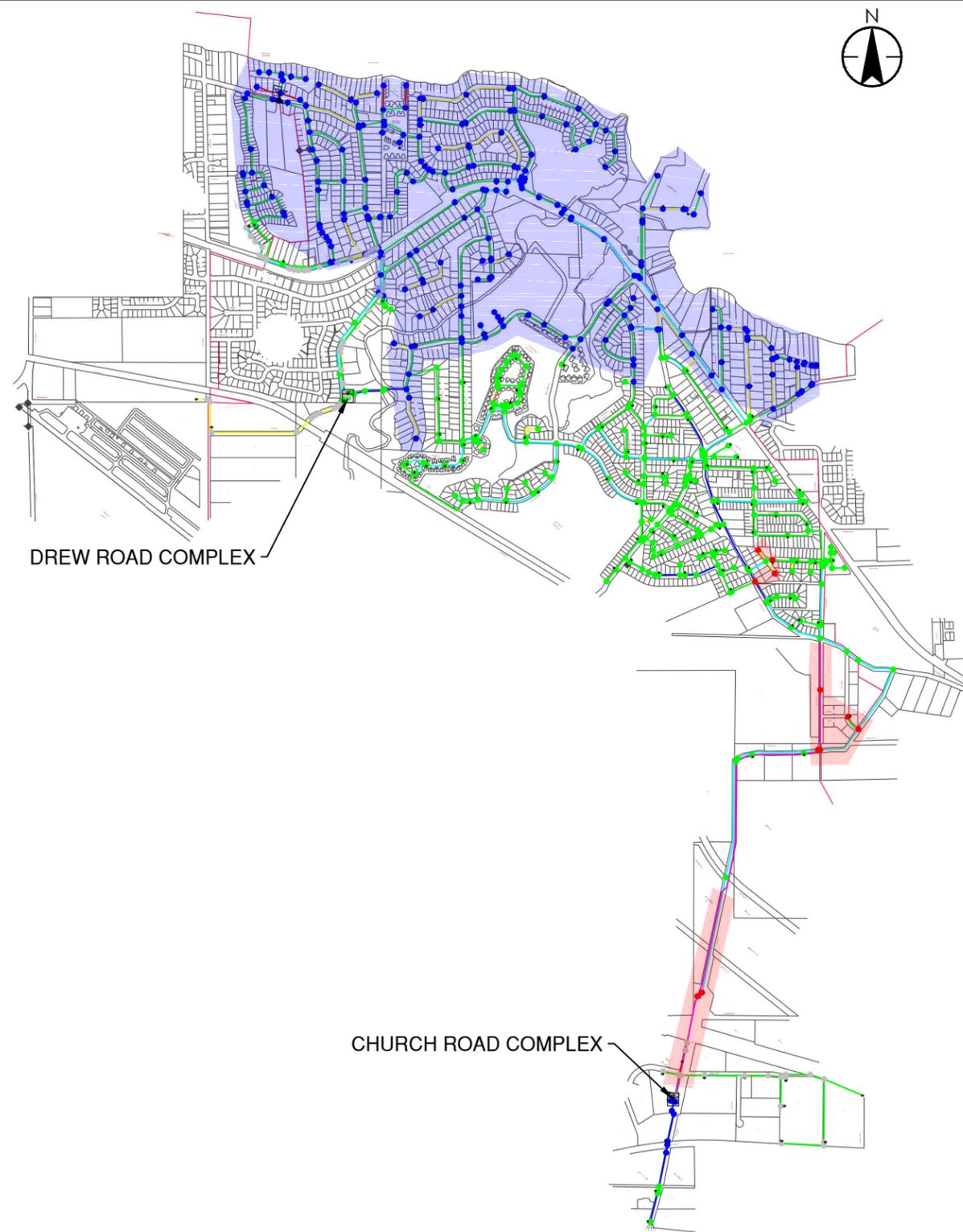
- 50Ø
- 75Ø
- 100Ø
- 150Ø
- 200Ø
- 250Ø
- 300Ø

PEAK HOUR PRESSURE (PSI)

- <43
- 43.1 - 75.0
- 75.1 - 123
- > 123

ZONES

- HIGH PRESSURE AREA (OVER 75 PSI)
- LOW PRESSURE AREA (UNDER 43 PSI)



FLOW DEMANDED: 42.2 L/S

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Figure No.
4 - 4

Title
**MAX DAY DEMAND
(2020)**

4.6 STORAGE CAPACITY (2023)

Required storage capacity has been calculated according to MMCD design criteria as a guideline, as described in the Water System Design Criteria section. The MDD used in the calculations is referenced from Table 2-2. An assessment of the condition of the existing reservoirs is outside the scope of this report.

Table 4-7 Storage Assessment (2023)

Storage Capacity (2023)			
	Flow (L/s)	Duration (hrs)	Storage Required (m ³)
A. Required Fire Flow	150	2.0	$\frac{150 L}{1 s} \times \frac{1 m^3}{1000 L} \times \frac{3600 s}{1 hr} \times 2.0 hr$ = 1080
B. Maximum Daily Demand (Equalization Storage 25% MDD)	45.9	24	$\frac{42.2 L}{1 s} \times \frac{1 m^3}{1000 L} \times \frac{3600 s}{1 hr} \times 24.0 hr \times 25\%$ = 992
C. Emergency Storage (Storage 25% of A +B)	-	-	$(1080 m^3 + 992 m^3) \times 25\%$ = 518
Total Required Storage (A + B + C)	-	-	$1080 m^3 + 912 m^3 + 498 m^3$ = 2590
Available Storage Capacity (2023)			
Church Road Reservoirs	2654 m ³		
Drew Road Reservoirs	1300 m ³		
Total Available Storage	3954 m ³		
Deficiency (Total Available – Total Required)	$3954 m^3 - 2590 m^3 = 1364 m^3$ No Deficiency		

Given our findings above, the existing system does not need additional capacity to meet the emergency, fire, and balance storage requirement.

4.7 WELL CAPACITY (2023)

The French Creek water system is currently supplied by 18 groundwater wells. With the exception Well R8-2, all the wells pump to either the Drew Road Reservoirs or the Church Road Reservoirs with well R8-2 pumping directly to the distribution system.

The following analysis is based from the MMCD Design Guidelines 2014 section 2.24.2 - Capacity. The supply capacity for a water system must exceed the MDD to avoid water shortages during peak demands typically during summer months.

The following table represents the supply from the wells vs. the MDD calculations. Well status and flow data are provided by EPCOR and represents typical summer flow field conditions.

Table 4-8 Groundwater Wells (2023)



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North Wells	Well ID	Peak Operating Rate (14 Day Max)* (L/s)	Notes
Lundine Lane Well (TWN1)	22514	1.5	
Oceanside Replacement Well (RWN2)	22525	13	RWN2 is planned to be twinned in 2024 with source water approval by 2026. The twinned well is intended to provide redundancy in the event of RWN2 is out of service during a MDD or high demand event.
Drew Rd Well #1	13803	4.0	
Ravensbourne Well	13804	5.5	
R8-2 Well	13808	3.0	Would be turned on when approaching MDD with largest well (RWN2) out of service. Groundwater well feeds directly into water main after addition of chlorine
South Wells	Well ID		
Church Road Well #1	13791	2.0	
Church Road Well #2	13792	2.0	
Church Road Well #3	13793	3.8	
Church Road Well #4	13794	1.5	
Springhill Replacement Well (RWS1)	22580	7.4	
Springhill #2A Well	13796	1.5	Would be turned on when approaching MDD with largest well (RWN2) out of service
Hills of Columbia Well #6A	13797	2.0	
Hills of Columbia Well #7	13798	2.1	
Hills of Columbia Well #9	13800	2.2	
Bosa Well	13799	4.0	
Hills of Columbia Well #11	13801	3.2	
ACS1	22600	8.3	Status: Recently approved and online
TWS1	22550	1.6	Status: Will be online shortly
Closed Wells			
Imperial Well	-	-	Decommissioned 2019
Lornedun Well	-	-	Decommissioned 2019
Total Capacity (All Wells)		68.6	
Capacity with the largest well out of service		55.6	



*Table A3 Summary of the Ground Water License Application Volumes and Peak Operating Rates for Active Water Supply Wells - Waterline Resources Inc. Report: Water Supply Investigation – EPCOR French Creek Utility, Parksville, BC, dated August 21, 2023.

Table 4-9 Groundwater Wells Capacity

Year	MDD	Supply Capacity of Groundwater Wells – MDD = Flow Difference
2023	[45.9 L/s] Actual Consumption based of field data	55.6 – 45.9 = 9.7 L/s
The following assumptions were made when calculating the well capacity: <ul style="list-style-type: none"> • MDD demand is derived from using actual field consumption data provided by EPCOR and distributed into the active existing water model. 		

The above calculation identifies the existing system, when referencing MMCD firm capacity calculations, to be in surplus by 9.7 L/s. As the surplus capacity is in close proximity to the total available supply, exploring new supply sources is recommended and further expanded in chapter 5.



5.0 THREE YEAR ASSESSMENT (2026)

The 3-year assessment identifies immediate known projects through collaboration with EPCOR. The projects are a continuation of existing programs in place, assessments to further determine condition or ability of existing infrastructure, and continuation of system improvement programs.

The analysis includes recommendations for fire flow, hydrant replacement programs, domestic water pressure improvements, storage, well, and know development assessments. Finally, each of the recommended projects and their associated opinion of probable cost is listed in section 5.8.

Each analysis section (if applicable) references the 2026 MDD and PHD flow rates as generated above in Table 2-2.

5.1 FIRE FLOW (2026)

The immediate 3-year outlook recommends the system continue to operate under its existing fire flow plus MDD condition including know deficiencies. The following Chapter 6 provides our recommendations for improving the deficient Multi-family and Commercial fire flow areas to meet or exceed MMCD design parameters. The 20-year plan provides recommendations for providing minimum fire flow for the zoned Industrial areas near the Church Road reservoir and Springhill Road.

5.2 HYDRANTS (2026)

Hydrant spacing throughout the system was reviewed in a previous Stantec report for compliance to MMCD design guidelines which state maximum hydrant spacing is 150m with a maximum distance from a building of 90m of hose laying length (unobstructed distance). The 2011 Stantec report indicated that 47 additional hydrants were required. Since then, additional hydrants have been installed as new developments or redevelopment occurred. There are still areas that do not meet the design criteria for hydrant spacing.

To improve fire protection in the existing system, an annual hydrant installation program was established. Currently four fire hydrants are scheduled to be installed in 2020. Beyond 2020, two fire hydrants will be installed annually. The current list of fire hydrants to be installed are listed on the following page.



Table 5-1 Locations Requiring Fire Hydrant Installations

Fire Hydrants		
Location	Pipe Diameter (mm)	Required Hydrants
559 - 575 Johnstone Road	150	1
790 Barclay Crescent South	150	1
839 Woodland Drive	150	1
1212 Lee Road	150	1
1327 Lee Road West	150	1
Riley Road (923 Kasba Circle Back Side)	150	1
1373 - 1383 Pintail Drive	100	1
1576 Admiral Tryon	100	1
1518 Sunrise Drive	150	1

As of the writing of this 2023 update, all the above hydrants have been installed and this system deficiency has now been addressed.

5.3 DOMESTIC WATER PRESSURE (2026)

Building on the PHD analysis of the existing system, the Wembley area is a known deficient area during MDD and PHD scenarios. In order to increase service pressures within the immediate area we recommend a domestic booster station is constructed on Church Road. This station will boost the immediate area when the pressure falls below minimum criteria using a series of smaller continuous duty jockey pumps. It was determined that the existing Church Road reservoir stie would be the best spot for adding the booster pumps. The pumps would provide the MDD and PHD flows, while the outflow from the reservoirs would bypass the pumps to provide fire flows.

Most of the water system customers, approximately 96%, are located within the main pressure zone, including all groundwater supply wells. The water model shows PHD pressures as low as 36.6 psi in some areas and as high as 105.5 psi in others. The highest recorded Church Road reservoir outflow taken from June 27, 2021 is approximately 70 L/s. This peak flow from Church Road was used to size the booster pumps to be added at the reservoir pump station. Modeling of the maximum flows show the lowest pressures are 34 psi at Ackerman Road and Cannon Road. The model was then modified to include the Church Road booster pumps with an increased HGL of the main pressure zone to 88 m. The pump addition raised the low-pressure areas up to approximately 50 psi during PHD. The high-pressure areas with the revised HGL set at 88 m were verified during lower consumption periods. The pressure was found to increase to 117.5 psi for the area around the R8-2 compared to actual pressure of 104 psi with the original 79 m HGL. The other area checked for high pressures was on Dalmatian Drive next to the pebble Beach Development. The model showed an increase in pressure from 108.7 psi to 122.0 psi for this area with the boosted HGL. The following figure shows the pressure changes seen in the model with the increased HGL.



WATERMAIN DIAMETER (mm)

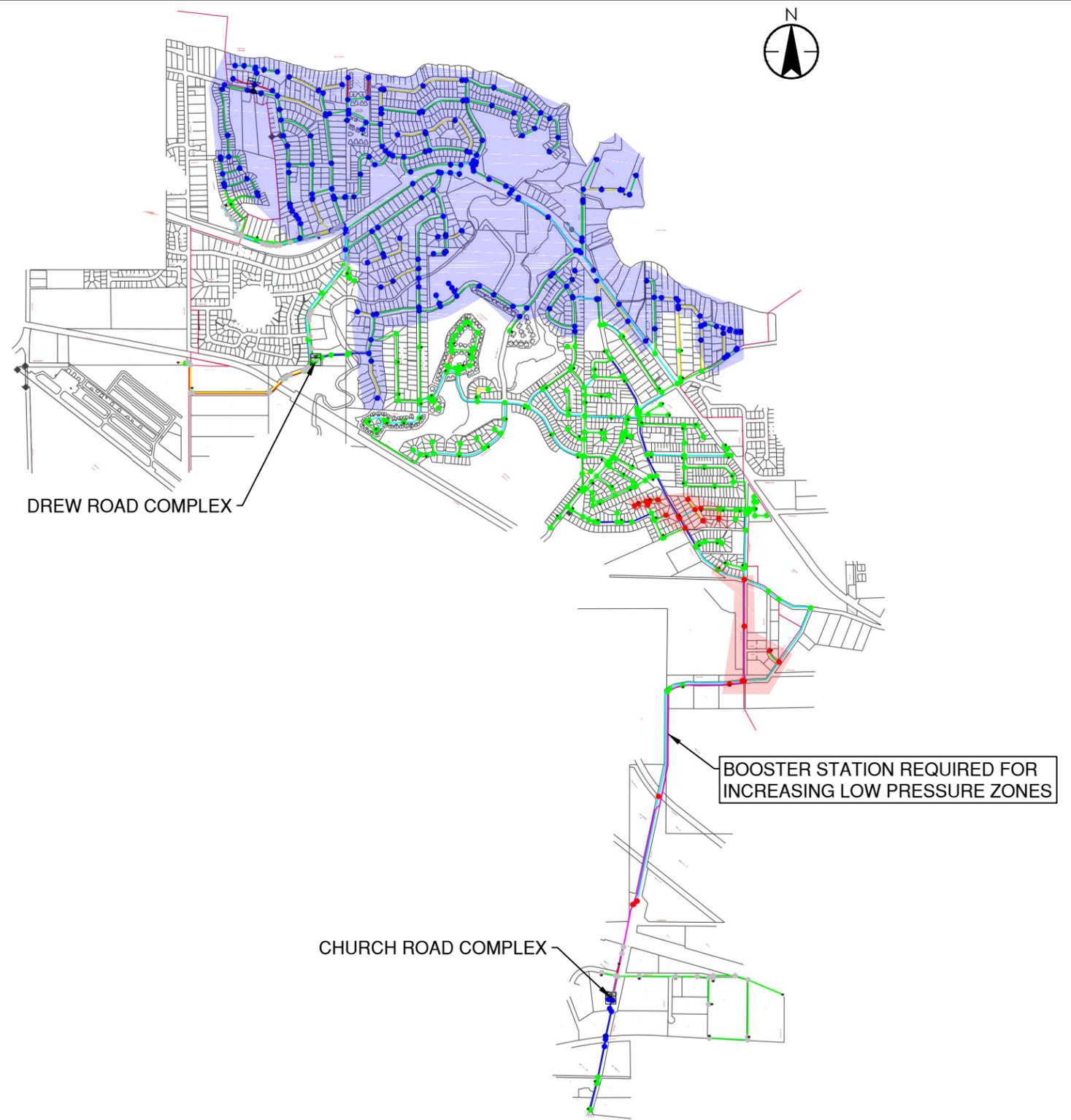
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- 250Ø
- 300Ø

PEAK HOUR PRESSURE (PSI)

- <43
- 43.1 - 75.0
- 75.1 - 123
- > 123

ZONES

- HIGH PRESSURE AREA (OVER 75 PSI)
- LOW PRESSURE AREA (UNDER 43 PSI)



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FLOW DEMANDED: 65.6 L/S

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5 - 1

Title
**PEAK HOUR DEMAND
(2023)**

5.4 STORAGE CAPACITY (2026)

The MDD used in the calculations is referenced from Table 2-2. An assessment of the condition of the existing reservoirs is outside the scope of this report.

Table 5-2 Storage Assessment (2026)

Storage Capacity (2023 - Projected) (For Projected Data Refer to section 2.2 Growth Rate Calculation)			
	Flow (L/s)	Duration (hrs)	Storage Required (m³)
A. Required Fire Flow	150	2.0	= 1080
B. Maximum Daily Demand (Equalization Storage 25% MDD)	47.2	24	= 1020
C. Emergency Storage (Storage 25% of A +B)	-	-	= 525
Total Required Storage (A + B + C)	-	-	= 2625
Available Storage Capacity (2023)			
Church Road Reservoirs	2654 m ³		
Drew Road Reservoirs	1300 m ³		
Total Available Storage	3954 m ³		
Deficiency (Total Available – Total Required)	3954 m ³ – 2625 m ³ = 1424 m³ No Deficiency		

Given our findings above, the system does not need additional capacity to meet the emergency, fire, and balance storage requirement for the 3-year outlook.

5.5 WELL CAPACITY (2023)

The following table represents the known supply from the wells and the extrapolated 2023 MDD value.

Table 5-3 Groundwater Wells Capacity

Year	MDD	Supply Capacity of Groundwater Wells – MDD = Flow Difference
2026	[47.2 L/s] Projected Consumption (For Projected Data Refer to section 2.2 Growth Rate Calculation)	55.6 – 47.2 = 8.4 L/s
The following assumptions were made when calculating the well capacity: <ul style="list-style-type: none"> Existing Supply Capacity of Ground Water Wells [55.6 L/s] calculated in section 4.7 Well Capacity MDD demand is derived with the assumption that the demand would increase at the same rate as the population. 		

As noted in section 4.7 and the above calculation identifies the system to be in surplus, when referencing MMCD firm capacity calculations. As the surplus capacity is in close proximity to the total available supply, exploring new supply sources is required. EPCOR is currently investigating potential for a bulk water



connection with the RDN. The potential additional supply capacity as a result of this connection is yet to be determined.

5.6 ACTIVE METER REPLACEMENT (2020)

There are 2,212 water meters in the EPCOR French Creek Water System according to the 2019 meter records provided by EPCOR. An annual meter replacement program is currently in progress where approximately 50 - 100 touch read meters are replaced each year. EPCOR staff have indicated that in approximately two years the meter replacement program will be complete and transition to a meter replacement for faulty meters only.

Meters have continued to function as they age; however, wear over time will cause them to under record resulting in loss of revenue. The optimum replacement age is dependent on local factors such as water chemistry, soil conditions and usage. According to the AWWA M6 "Water Meters - Selection, Installation, Testing, and Maintenance" manual, a water supplier should develop a meter replacement program based on testing of a representative sample of residential meters that establishes an accuracy versus age relationship. After the existing meter replacement plan is completed It is recommended to follow the industry standard, which is to replace meters on a 20-year cycle as well as replacing faulty meters as they appear.

5.7 POTENTIAL DEVELOPMENTS (2026)

Shown below is a list of the development applications within the next three years. These added capacity request and fire flow requirements are evaluated on a case by case scenario. Understanding extra capacity of the existing system is limited, these developments may be required to explore additional source capacity as part of their development application.



Table 5-4 Lot Count and Water System Demands (2023)

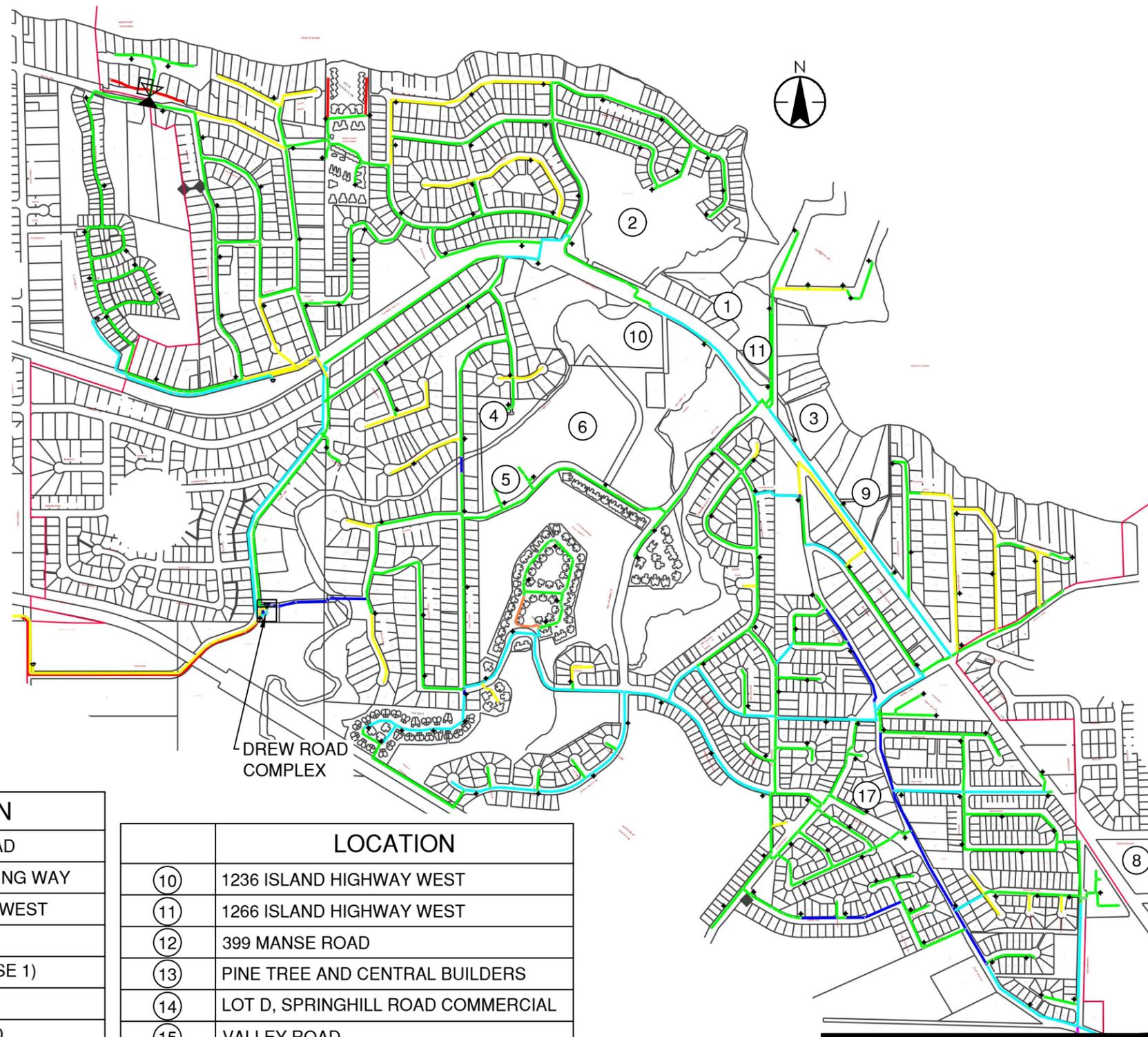
Location	Number of Units	MDD (L/s)	Notes
2023 Existing	2185	45.9	
2023 Approved CPCN SFE Connections	75	1.3	
		47.2	
1025 and 1035 Lee Road	166	-	Future
Columbia Drive/ Viking Way	80	-	Future
Lot G, Wembley Road	86	-	Future
1025 and 1035 Island Highway	51	-	Future
1236 Island Highway West	56	-	Future
1266 Island Highway West	33	-	Future
399 Manse Road – Multi Res	200	-	Future
Lot D, Springhill Road Commercial	-	-	Future
Valley Road	-	-	Future
Church Road Commercial	-	-	Future

The above identifies potential future demand of at least 12.6 L/s, with the existing system identified as in a surplus to 9.3 L/s, these assumed applications may be required to source additional well supply in order to meet their added capacity request.

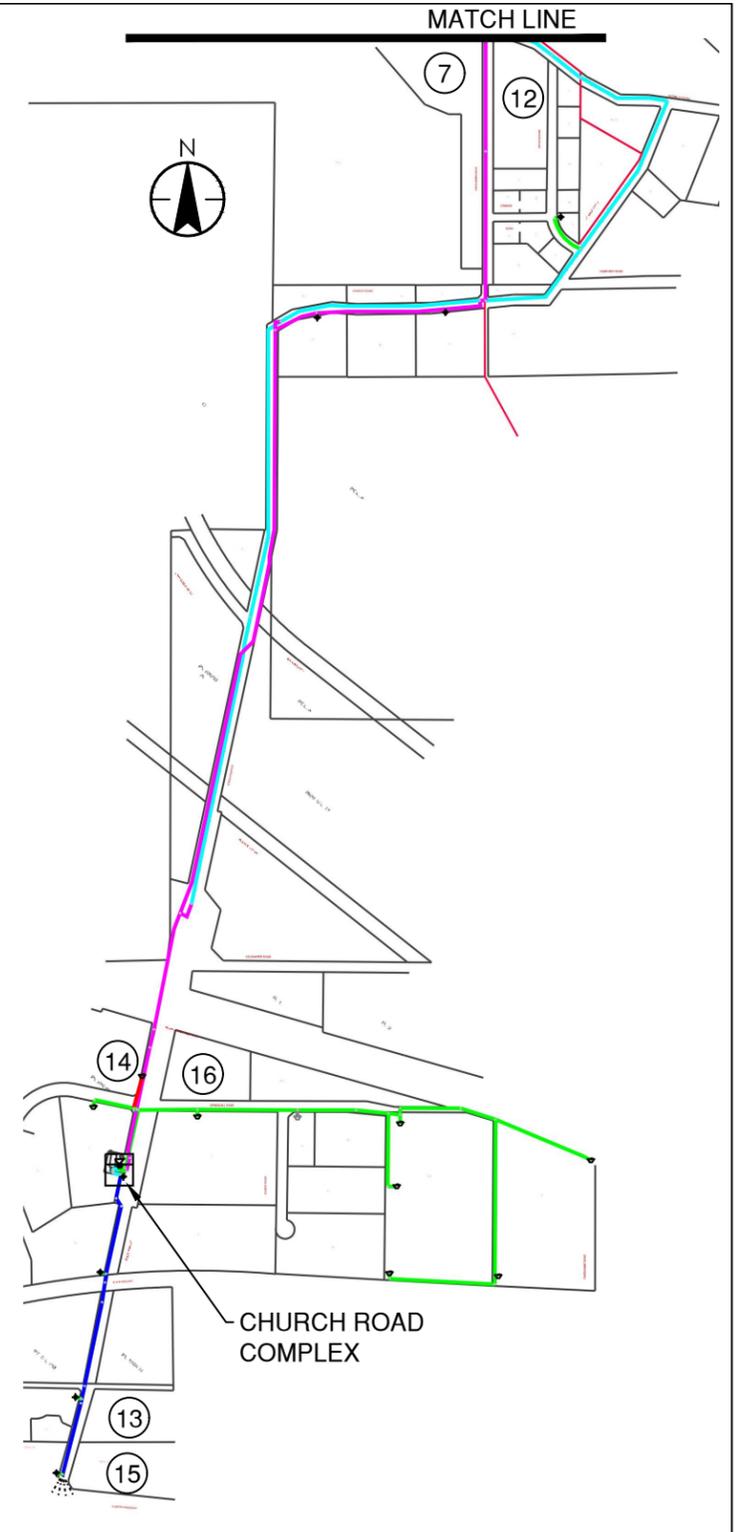


WATERMAIN DIAMETER (mm)

- 500
- 750
- 1000
- 1500
- 2000
- 2500
- 3000



DREW ROAD COMPLEX



CHURCH ROAD COMPLEX

LOCATION	
①	1025 AND 1035 LEE ROAD
②	COLUMBIA DRIVE / VIKING WAY
③	1055 ISLAND HIGHWAY WEST
④	LOT C, IMPERIAL DRIVE
⑤	LOT A, LEE ROAD (PHASE 1)
⑥	LOT A, LEE ROAD
⑦	LOT G, WEMBLEY ROAD
⑧	846 ISLAND HIGHWAY
⑨	1025 AND 1035 ISLAND HIGHWAY

LOCATION	
⑩	1236 ISLAND HIGHWAY WEST
⑪	1266 ISLAND HIGHWAY WEST
⑫	399 MANSE ROAD
⑬	PINE TREE AND CENTRAL BUILDERS
⑭	LOT D, SPRINGHILL ROAD COMMERCIAL
⑮	VALLEY ROAD
⑯	CHURCH ROAD COMMERCIAL
⑰	SHAVER

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Figure No. **5 - 2**

Title
**DEVELOPMENTS
(2023)**

5.8 RECOMMENDED PROJECTS AND CONCEPTUAL OPINION OF PROBABLE COST (2026)

Given each analysis above we provide the following list of improvements and conceptual cost. For the listed items unrelated to the recommended serviceability upgrades, these were developed in conjunction with EPCOR for known required projects.

The final column within the opinion of probable cost labeled “Breakout” is intended to provide EPCOR with an understanding of how the improvement could be paid by either a developer or if the improvement is rate based.

How each payee is determined is based on if the improvement corrects an existing deficient condition or is required to facilitate a development. If the improvement is a combination of new development and rate based funding, we have provided our recommendation accordingly.

French Creek Water System 2023 - 2026 Opinion of Probable Cost
Items Not Included in Cost Estimate
<ol style="list-style-type: none"> 1. Engineering design and further assessments 2. Geotechnical investigations 3. Environmental Impact studies and mitigation 4. Archeological encounters and mitigation 5. Owners Administration 6. Topographic Surveys
General Notes
<ol style="list-style-type: none"> 1. Pipe lengths are estimated between pump and connection point 2. Opinion of probable costs are based on preliminary information only and conceptual evaluations and are subject to wide variation in quantity and cost 3. Costs are in 2020 Dollars
Limits of Commission:
Whereas any opinions of probable cost prepared by Stantec Consulting Ltd. ("the Engineer") will be based on incomplete or preliminary information, and will also be based on factors over which the Engineer has no control, the Engineer does not guarantee the accuracy of these opinions of probable cost and shall have no liability where the probable costs are exceeded.



FRENCH CREEK WATER SYSTEM MASTER PLAN UPDATE 2020 – REVISION 1

French Creek Water System 2023 - 2026 Opinion of Probable Cost					
Description	Units	Quantity	Rate (\$)	Amount (\$)	Breakout ¹
Projects Established with EPCOR					
Meter Replacement – Advanced Meter Reading Program (Replacing End of Life Meters with Smart Meters)	Lump Sum	1	355,000	355,000	RB = 100%
Well Rehabilitated (1 well per year)	Each	3	30,000	90,000	RB = 100%
Decommission / Demolish the French Creek Pump House	Lump Sum	1	25,000	25,000	RB = 100%
Well performance evaluation and optimization Study	Lump Sum	1	50,000	50,000	RB = 100%
Church Road Complex: Radio modem upgrade work on Church Road wells	Lump Sum	1	35,000	35,000	RB = 50% ² D = 50%
Church Road Main Twinning under Island Highway Study	Lump Sum	1	30,000	30,000	RB = 100%
Drew Road Complex: Reservoir Study (scoping/ design study on capacity and seismic stability study)	Lump Sum	1	50,000	50,000	RB = 50% ³ D = 50%
Chlorine Analyzer Replacements	Lump Sum	5	10,400	52,000	RB = 100%
Drew Road Complex PLC Replacement	Lump Sum	1	36,000	36,000	D = 100%
GIS System Implementation*	Lump Sum	1	72,000	72,000	RB = 100%
Upgrade 150mm Watermain to 200mm: Ackerman Road Development	Meter	60	450	27,000	RB = 50% D = 50%
Upgrade 100mm Watermain to 200mm: Lundine Lane	Meter	200	450	90,000	RB = 50% D = 50%
Upgrading 100mm Watermain to 150mm: Single Family Deficient Fire Flow*	Meter	2400	400	960,000	RB = 50% D = 50%
Projects Established as a Result of our Analysis to Improve Serviceability					
Booster Pump on Church Road	Lump Sum	1	600,000	600,000	RB = 25% D = 75% ⁴
Pressure Reducing Valves (Including bypass and isolation valves)	Each	2	400,000	800,000	RB = 25% D = 75% ³
				Sub-Total	3,272,000
				40% Contingency	1,308,800
				Total	4,580,800

*Project will be conducted in phases and will continue through the 2027-2029 test period.



- 1 Within the breakout column D = development funded and RB = rate based funded as a percentage.
- 2 The developer could benefit from this study by locating additional potential supply.
- 3 The system is known to be deficient in both fire flow and pressure with this improvement eliminating the reduced fire flow. The developer could benefit from this study and project as this would improve fire flow to the main pressure zone which the development could increase density.
- 4 The system is known to be deficient during elevated use domestic demand scenarios but the number of existing rate payers that will benefit from the Booster Pump system and elevated pressures is small. Based on communication with the landowners, there is significant development potential in the Wembley – Manse with approximately 200 multifamily units and 100 single family homes in the development planning/permitting process. These new and proposed developments show that the developers will benefit the most with the increase in pressures within the system.

6.0 TEN YEAR ASSESSMENT (2033)

The mid-term 10-year assessment goal is to review required improvements to the water system for the established growth potential for domestic flows as summarized in Table 2-2 and improve the fire supply to the various deficient areas determined under the existing system analysis.

Such items as new hydrants and metering programs are considered complete with any new distribution piping or new services to be constructed to MMCD design standards.

Additional items unrelated to recommend upgrades for increasing pressure and supply, we developed this list with input from EPCOR.

6.1 FIRE FLOW (2033)

In order to upgrade the system to meet MMCD specified fire flow and minimum pressure requirements to the Multi-family and Commercial deficient areas noted in Section 4.4, we propose twinning the Church Road transmission main and include a series of pipe loops or specific pipe diameter increases. These suggested improvements are as follows and shown schematically in the following figure:

Item	Type	Proposed Diameter (mm)	Description	Length (m)
1	Upgrade 100mm Watermain*	200	Lundine Lane (Transmission Pipe)	200
2	Upgrade 200mm Watermain	250	Riley Road	410
3	Upgrade 150mm Watermain*	200	Ackerman Road Development	60
4	Upgrade 200mm Watermain	250	Old Island Highway	300
5	Install Watermain	400	Church Road Twinning	3580



FRENCH CREEK WATER SYSTEM MASTER PLAN UPDATE 2020 – REVISION 1

6	Upgrade 100mm and 150mm Watermain	250	Wembley Road	400
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*Improvements 1 and 3 sre planned to be completed during the 2024-2026 period.

When evaluating the fire flow potential including the upgrades above and using the 2033 MDD we find the Multi-family areas shown in light green requiring 90 L/s and Commercial areas shown in blue requiring 150 L/s is now achievable including meeting minimum pressures. The following two figures provide the suggested upgrades and the resulting fire flow when including the upgrades.

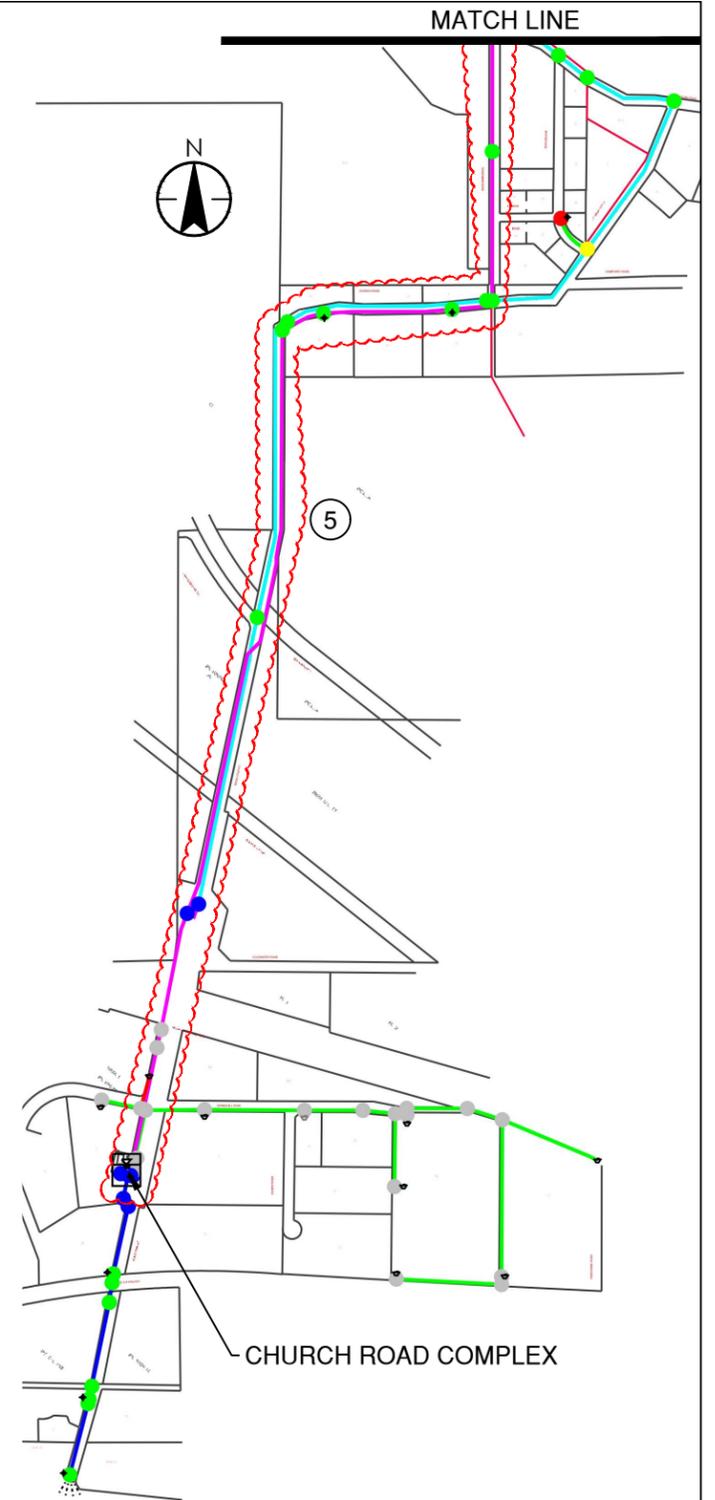
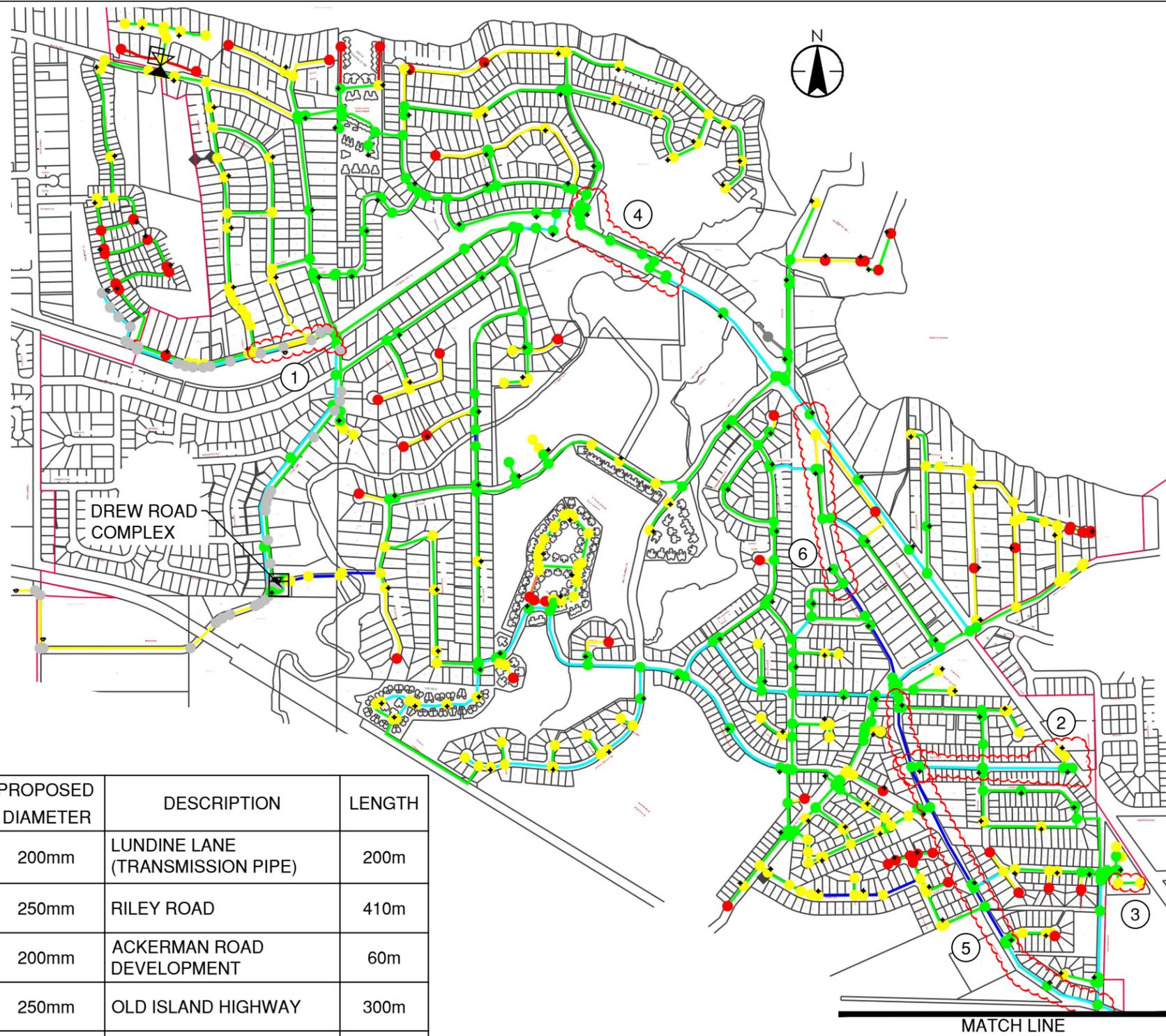
Each of the Single family deficient areas listed in Section 4.4 and Figure 4-2 includes dead ends and undersized piping. For each of these areas it is recommended an upgrade program is established however it is not as important as the system upgrades for the Multi-family and Commercial fire flow demands. Quantification of this upgrade is included as a total quantity of pipe for all 24 locations.

Industrial fire flows of 225 L/s within the Church Road / Springhill Road areas is evaluated within Chapter 7 under the 20-year plan.



WATERMAIN DIAMETER (mm)

- 50Ø
- 75Ø
- 100Ø
- 150Ø
- 200Ø
- 250Ø
- 300Ø



ITEM	TYPE	PROPOSED DIAMETER	DESCRIPTION	LENGTH
①	UPGRADE 100mm WATERMAIN	200mm	LUNDINE LANE (TRANSMISSION PIPE)	200m
②	UPGRADE 200mm WATERMAIN	250mm	RILEY ROAD	410m
③	UPGRADE 150mm WATERMAIN	200mm	ACKERMAN ROAD DEVELOPMENT	60m
④	UPGRADE 200mm WATERMAIN	250mm	OLD ISLAND HIGHWAY	300m
⑤	INSTALL WATERMAIN	400mm	CHURCH ROAD TWINNING	3580m
⑥	UPGRADE 100mm and 150mm WATERMAIN	250mm	WEMBLEY ROAD	400m

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Figure No.
6 - 1

Title

**UPGRADE AND INSTALL WATER MAIN
 (2030)**

ZONES

- SINGLE FAMILY RESIDENTIAL (60 L/s)
- MULTI-FAMILY RESIDENTIAL (90 L/s)
- COMMERCIAL (150L/s)
- INDUSTRIAL (225 L/s)

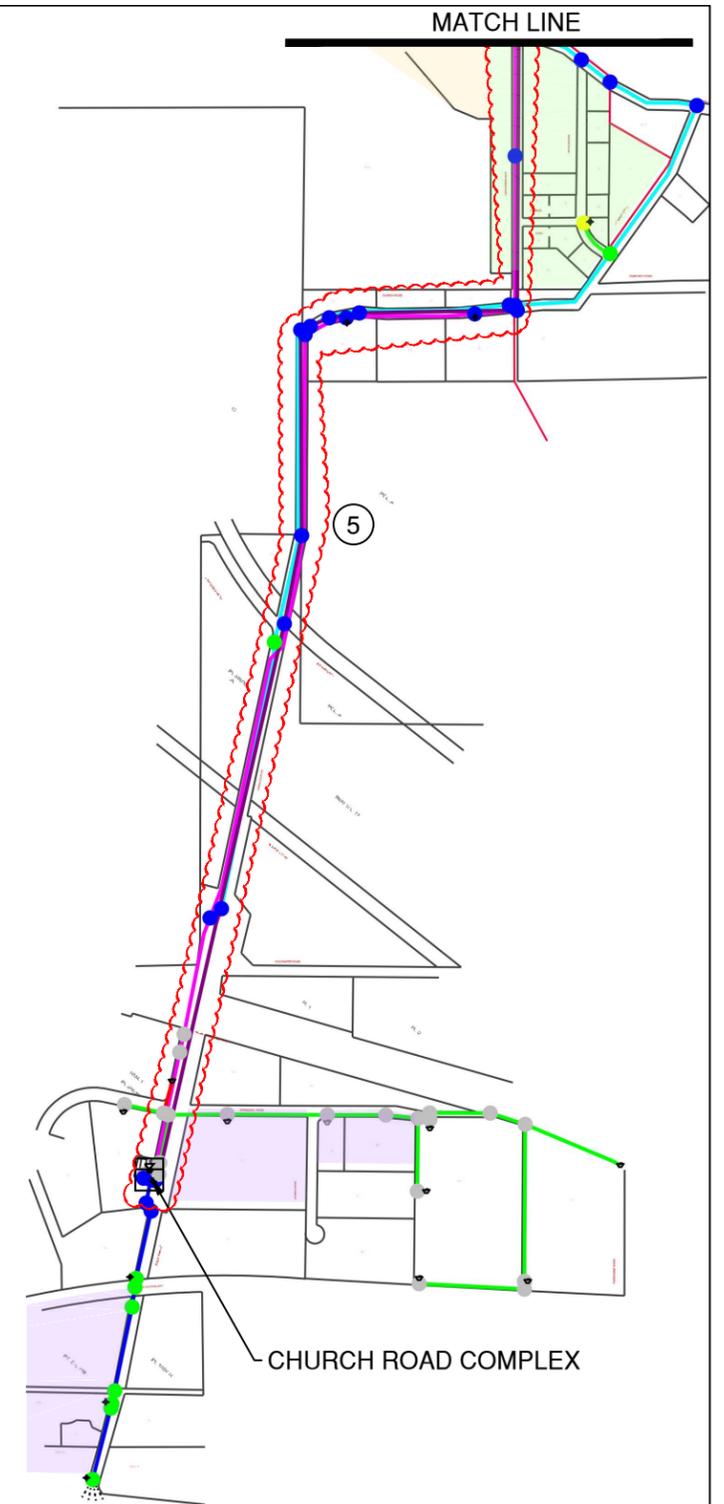
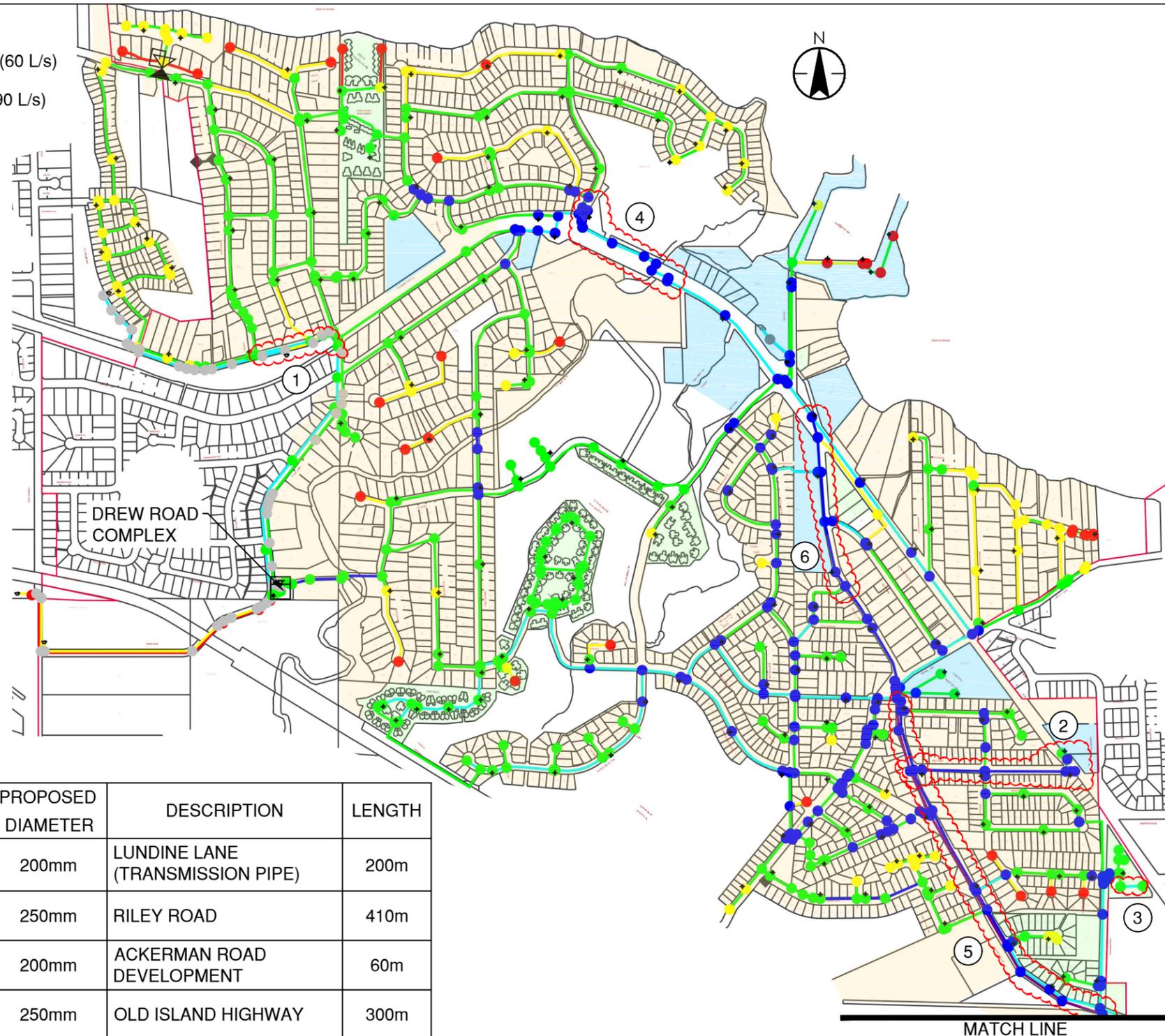
WATERMAIN DIAMETER (mm)

- 500
- 750
- 1000
- 1500
- 2000
- 2500
- 3000

FIRE FLOW AVAILABLE (L/S)

- <60
- 60 - 89
- 90 - 149
- 150 - 224
- > 225

ITEM	TYPE	PROPOSED DIAMETER	DESCRIPTION	LENGTH
①	UPGRADE 100mm WATERMAIN	200mm	LUNDINE LANE (TRANSMISSION PIPE)	200m
②	UPGRADE 200mm WATERMAIN	250mm	RILEY ROAD	410m
③	UPGRADE 150mm WATERMAIN	200mm	ACKERMAN ROAD DEVELOPMENT	60m
④	UPGRADE 200mm WATERMAIN	250mm	OLD ISLAND HIGHWAY	300m
⑤	INSTALL WATERMAIN	400mm	CHURCH ROAD TWINNING	3580m
⑥	UPGRADE 100mm and 150mm WATERMAIN	250mm	WEMBLEY ROAD	400m



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Figure No.
 6 - 2

Title

FIRE FLOW WITH UPGRADED PIPES
 (2030)

Of the 6 improvements detailed within the figures and the above table, the most beneficial or important upgrades involve upsizing of the transmission main from Church Road reservoir to the core area of the water system. Improvements 5 - Church Road Twinning, 6 – Wembley Road, and 4 – Old Island Highway are interconnected and would prove as the most benefit to the system in transmitting the required fire flow to the deficient areas. The remaining secondary improvements including 1 – Lundine Lane, 2 – Riley Road, and 3 – Ackerman Road would use the supply water from the primary improvements to mitigate that local areas fire serviceability issue.

6.2 DOMESTIC WATER PRESSURE (2033)

When evaluating the minimum pressure for the 10-year design flows for both MDD and PHD scenarios, we find the system would not be able to provide the specified flow within minimum pressure requirements. The evaluation includes using the suggested Church Road Booster Station quoted in Chapter 5. To increase the flows to meet the future 2033 MDD and PHD flows, an additional (fourth) booster pump can be added to the initial three pump lineup at the Church Road Pump Station.

Over pressure management continues to be an issue with the suggested improvements provided in the subsequent 20-year plan in Chapter 7.

6.3 STORAGE CAPACITY (2033)

The MDD used in the calculations is referenced from Table 2-2. An assessment of the condition of the existing reservoirs is outside the scope of this report.

Table 6-1 Storage Assessment (2033)

Storage Capacity (2033 - Projected) (For Projected Data Refer to section 2.2 Growth Rate Calculation)			
	Flow (L/s)	Duration (hrs)	Storage Required (m³)
A. Required Fire Flow	150	2.0	= 1080
B. Maximum Daily Demand (Equalization Storage 25% MDD)	46.6	24	= 1093
C. Emergency Storage (Storage 25% of A +B)	-	-	= 543
Total Required Storage (A + B + C)	-	-	= 2716
Available Storage Capacity (2023)			
Church Road Reservoirs	2654 m ³		
Drew Road Reservoirs	1300 m ³		
Total Available Storage	3954 m ³		
Deficiency (Total Available – Total Required)	3954 m ³ – 2716 m ³ = 1238 m³ No Deficiency		

Given our findings above, the system does not need additional capacity to meet the emergency, fire, and balance storage requirement for the 10-year outlook.



6.4 WELL CAPACITY (2033)

The following table represents the known supply from the wells and the extrapolated 2030 MDD value.

Table 6-2 Groundwater Wells Capacity

Year	MDD	Supply Capacity of Groundwater Wells – MDD = Flow Difference
2033	[50.6 L/s] Projected Consumption (For Projected Data Refer to section 2.2 Growth Rate Calculation)	55.6 – 50.6 = 5.0 L/s
The following assumptions were made when calculating the well capacity: <ul style="list-style-type: none"> Existing Supply Capacity of Ground Water Wells [55.6 L/s] calculated in section 4.7 Well Capacity MDD demand is derived with the assumption that the demand would increase at the same rate as the population. 		

6.5 RECOMMENDED PROJECTS AND CONCEPTUAL OPINION OF PROBABLE COST (2033)

Given each analysis above we provide the following list of improvements and conceptual cost. For the listed items unrelated to the recommended fire flow upgrades, these were developed in conjunction with EPCOR for known required projects.

One notable project is the AC watermain replacement program, this scope is mentioned below however a specific list and quantity is required from EPCOR.

French Creek Water System 2033 Opinion of Probable Cost	
Items Not Included in Cost Estimate	
<ol style="list-style-type: none"> Engineering design and further assessments Geotechnical investigations Environmental Impact studies and mitigation Archeological encounters and mitigation Owners Administration Topographic Surveys 	
General Notes	
<ol style="list-style-type: none"> Pipe lengths are estimated between pump and connection point Opinion of probable costs are based on preliminary information only and conceptual evaluations and are subject to wide variation in quantity and cost Costs are in 2020 Dollars 	



FRENCH CREEK WATER SYSTEM MASTER PLAN UPDATE 2020 – REVISION 1

Limits of Commission:					
Whereas any opinions of probable cost prepared by Stantec Consulting Ltd. (“the Engineer”) will be based on incomplete or preliminary information, and will also be based on factors over which the Engineer has no control, the Engineer does not guarantee the accuracy of these opinions of probable cost and shall have no liability where the probable costs are exceeded.					
Description	Units	Quantity	Rate (\$)	Amount (\$)	Breakout¹
Projects Established with EPCOR					
R8 Well Treatment	Lump Sum	1	250,000	250,000	RB = 100%
Close Auxiliary French Creek Well (Has not been used since 1997 is a liability risk. Removal of pump and old shack and filling in dug well)	Lump Sum	1	25,000	25,000	RB = 100%
Leak detection study	Lump Sum	1	30,000	30,000	RB = 100%
Church Road watermain exposed near Morningstar Creek (pipe bursting)	Lump Sum	1	100,000	100,000	RB = 50% ² D = 50%
System AC watermain replacement program	Meter	TBD			RB = 100%
Projects Established as a Result of our Analysis to Improve Serviceability					
Upgrade 200mm Watermain to 250mm: Old Island Highway	Meter	300	500	150,000	RB = 50% ² D = 50%
Install 400mm Watermain: Church Road Twinning	Meter	3580	700	2,506,000	RB = 50% ² D = 50%
Upgrade 200mm Watermain to 250mm: Riley Road	Meter	410	500	205,000	RB = 50% ² D = 50%
Sub -Total				3,266,000	
40% Contingency				1,306,400	
Total				4,572,400	

- 1 Within the breakout column D = development funded and RB = rate based funded as a percentage.
- 2 The rate based user and developer would equally benefit from each of these improvements as this improves a deficient system and also allows for increased density / development.
- 3 Pressure reducing valve stations, along with isolation valves, will be required to create another pressure zone in the system once the new Church Road pressure boosting pumps are operational. The new increased HGL of the system will create unwarranted pressures at lower elevations in the system. Since the increase in pressure is required for new development in the Wembley – Manse area, the percentage of developer funding for this cost should be the same as the Church Road booster pumps.

7.0 TWENTY YEAR ASSESSMENT (2043)

The 20-year assessment includes suggested improvements for the remaining deficient serviceability issues and ultimate fire flow for the industrial areas serviced by the Church Road upper pressure zone. Further



development of supply wells and capacity are not specifically quantified in each assessment but is a known issue throughout with EPCOR's direct involvement required when exploring new capacity sources.

7.1 FIRE FLOW (2043)

The industrial zones located along Springhill Road and surrounding the Church Road Reservoir will be serviced by the pumped Church Road Reservoir site. The required fire flow stated by MMCD is 225 L/s which exceeds the ability of the existing Church Road diesel driven fire pump. Necessary upgrades would include a new pumping system and transmission main to the requested industrial developed site with a minimum 300mm diameter pipe.

7.2 DOMESTIC WATER PRESSURE (2043)

When evaluating the minimum pressure for the 20-year design flows for both MDD and PHD scenarios, we find the system is able to provide the specified flow within minimum pressure requirements. The evaluation includes using the suggested Church Road Booster Station quoted in Chapter 5, and an additional pump added to the lineup as stated in Chapter 6.

Over pressure management is suggested within the long term plan, the following figure suggests the green area contain pressure reducing valves to establish a pressure range from 43 psi to 75 psi without the use of single pressure reduction. We recommend two PRV's are installed looping the upper water system to the lower system and closing strategic line valves to establish the pressure boundary.

Benefits of introducing system pressure management include reduced leakage, mitigating stress on pipes and bends, and reducing maintenance costs on older weaker sections of distribution piping.



WATERMAIN DIAMETER (mm)

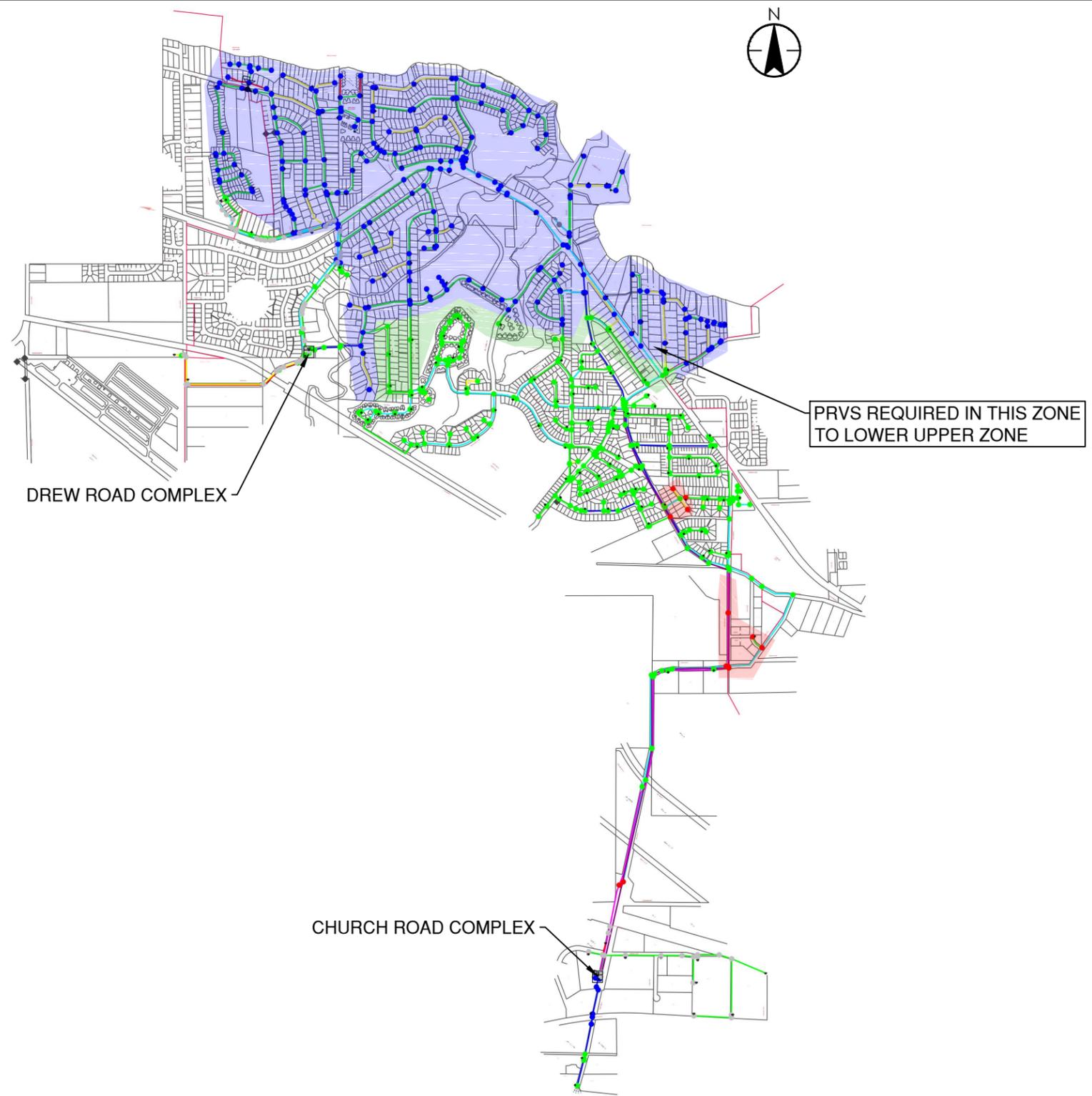
- 50Ø
- 75Ø
- 100Ø
- 150Ø
- 200Ø
- 250Ø
- 300Ø

PEAK HOUR PRESSURE (PSI)

- <43
- 43.1 - 75.0
- 75.1 - 123
- > 123

ZONES

- HIGH PRESSURE AREA (OVER 75 PSI)
- LOW PRESSURE AREA (UNDER 43 PSI)
- PRV REQUIRED ZONE



FLOW DEMANDED: 76.4 L/S

JANUARY 11/2007

C:\A0208-PPPS\SI\work\psd117\work\1172007\hsk_016_wsk_model_update\0main\gpl\existing_water_system.dwg Feb 11, 20 OFF720ERLUD

ORIGINAL SHEET - ISO A3



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EPCOR WATER SERVICES
FRENCH BEACH WATER SYSTEM
MASTER PLAN UPDATE

Figure No. **7 - 1**

Title
**PEAK HOUR DEMAND
(2040)**

7.3 STORAGE CAPACITY (2043)

Table 7-1 Storage Assessment (2043)

Storage Capacity (2043 - Projected) (For Projected Data Refer to section 2.2 Growth Rate Calculation)			
	Flow (L/s)	Duration (hrs)	Storage Required (m³)
A. Required Fire Flow (Industrial Development)	225	2.0	= 1620
B. Maximum Daily Demand (Equalization Storage 25% MDD)	55.3	24	= 1203
C. Emergency Storage (Storage 25% of A +B)	-	-	= 706
Total Required Storage (A + B + C)	-	-	= 3529
Available Storage Capacity (2023)			
Church Road Reservoirs	2654 m ³		
Drew Road Reservoirs	1300 m ³		
Total Available Storage	3954 m ³		
Deficiency (Total Available – Total Required)	3954 m ³ – 3529 m ³ = 425 m ³ Deficient Storage		

Based on the above analysis using 2043 MDD design flows, we recommend the existing Church Road reservoir is upgraded to its ultimate capacity of 1,400 cubic meters of storage.

7.4 WELL CAPACITY (2043)

The following table represents the known supply from the wells and the extrapolated 2040 MDD value.

Table 7-2 Groundwater Wells Capacity

Year	MDD	Supply Capacity of Groundwater Wells – MDD = Flow Difference
2043	[55.3 L/s] Projected Consumption (For Projected Data Refer to section 2.2 Growth Rate Calculation)	55.6 – 55.3 = 0.3 L/s
The following assumptions were made when calculating the well capacity: <ul style="list-style-type: none"> Existing Supply Capacity of Ground Water Wells [56.5 L/s] calculated in section 4.7 Well Capacity MDD demand is derived with the assumption that the demand would increase at the same rate as the population. 		

The above carries the known capacity issue through to the 2043 outlook. Additional source and capacity exploration are required to accommodate the prescribed 1.2% growth rate.



7.5 RECOMMENDED PROJECTS AND CONCEPTUAL OPINION OF PROBABLE COST (2043)

We recommend the following long term improvements given our analysis above to meet industrial fire flows, storage, and correct known pressure management deficiencies.

French Creek Water System Long Term 2043 Opinion of Probable Costs
Items Not Included in Cost Estimate
<ol style="list-style-type: none"> 1. Engineering design and further assessments 2. Geotechnical investigations 3. Environmental Impact studies and mitigation 4. Archeological encounters and mitigation 5. Owners Administration Topographic Surveys
General Notes
<ol style="list-style-type: none"> 1. Pipe lengths are estimated between pump and connection point 2. Opinion of probable costs are based on preliminary information only and conceptual evaluations and are subject to wide variation in quantity and cost Costs are in 2020 Dollars
Limits of Commission:
Whereas any opinions of probable cost prepared by Stantec Consulting Ltd. ("the Engineer") will be based on incomplete or preliminary information, and will also be based on factors over which the Engineer has no control, the Engineer does not guarantee the accuracy of these opinions of probable cost and shall have no liability where the probable costs are exceeded.



FRENCH CREEK WATER SYSTEM MASTER PLAN UPDATE 2020 – REVISION 1

French Creek Water System Long Term 2043 Opinion of Probable Cost					
Description	Units	Quantity	Rate (\$)	Amount (\$)	Breakout¹
Projects Established with EPCOR					
Groundwater Exploration (Exploratory Boreholes). Electrical Resistivity tomography (EMT) to map a portion of the aquifer and drilling boreholes.	Lump Sum	1	149,000	149,000	RB = 50% ² D = 50%
Re-drill wells ³	Each	9	250,000	2,250,000	RB = 50% ² D = 50%
Projects Established as a Result of our Analysis to Improve Serviceability					
Church Road Complex: Reservoir Expansion (adding panels to existing reservoir)	Lump Sum	1	337,500	337,500	D = 100%
Church Road Complex Fire Pump	Lump Sum	1	450,000	450,000	D = 100%
Sub -Total				3,186,500	
40% Contingency				1,274,600	
Total				4,461,100	

- 1 Within the breakout column D = development funded and RB = rate based funded as a percentage.
- 2 The rate based user and developer would equally benefit from exploration of new supply sources given the expiration of existing wells and the introduction of additional supply for development.
- 3 Re-drilling of wells does not include every existing supply well within the system as EPCOR will and continue to focus on well rehabilitation including general maintenance to sustain extraction rates.



8.0 REFERENCES

1. **EPCOR French Creek Water Inc.** *Model Basis Calculations.xls*. 2019.
2. **RDN.** *A Bylaw to Establish the Electoral Area 'G' Official Community Plan. BYLAW No. 1540.*
3. **MMCD.** *Design Guidelines*. 2014.
4. **EPCOR.** *17508SITE.dwg*. French Creek : EPCOR, April 2018. Existing Water System Plan. 175-008.
5. **Stantec.** *French Creek Updated Pinetree Centre Domestic and Central Builders Domestic Water Connection Assessment*. March 14, 2019.
6. —. *Church Road Pump Station New Reservoir - Phase 3*. April 8, 2011.
7. **Ker Wood Leidal Association Ltd.** *French Creek 2014 Master Plan Update*. Burnaby : KWL, December 8, 2014.
8. **Stantec.** *EPCOR French Creek Growth Assessment Study*. October 2011.
9. **Stantec.** *EPCOR French Creek Water System Demands and Design Standards Review*. June 2023
10. **Waterline Resources Inc.** *EPCOR French Creek Water Supply Investigaion*. August 2023



Project Name:	FC-Subdivision Construction Coordination (2024-2026)		
Project Number:	1009991	Capitalization Criteria:	Creation/Acquisition
Project Initiator:	Vicki Campbell	Enterprise Project Driver :	2. Growth/Customer Requirements
Project Manager:	Eric Taylor	Primary BU:	89
Project Sponsor(s):	Christian Madsen	Filing/Regulatory Reference:	2024-2026 RRA

FUNDING BY YEAR				
	2024	2025	2026	TOTAL
Capital Expenditure (\$)	21,767	22,217	22,677	66,661
External Contribution (\$)	(21,767)	(22,217)	(22,677)	(66,661)
TOTAL	-	-	-	-

Project Description / Summary:	<p>This project includes development review, engineering review, system upgrades arising from the proposed development and construction inspections. This project also requires administrative work for development of water service agreements with developers, obtaining regulatory approvals (Certificate of Public Convenience and Necessity) and construction certificate from VIHA. Additional engineering reviews will also be required for impacts on the overall system.</p> <p>This project is expected to accommodate new service connections in 2024. All costs for this project are 100% developer funded.</p>
Timeline for Project Completion:	This program is ongoing, with final completion expected by December 31, 2024.
Consequences of NOT doing the project:	This ongoing endeavour facilitates growth, should the project not proceed, growth of the Utility in French Creek will not occur.
Risk Executive Summary:	HSE risk is typical for this type of construction project and well managed by EPCOR's existing processes and procedures. There is minimal regulatory, reputation and financial risk.

Project Name:	FC-Water Service Connections (2024-2026)		
Project Number:	1009992	Capitalization Criteria:	Creation/Acquisition
Project Initiator:	Vicki Campbell	Enterprise Project Driver :	2. Growth/Customer Requirements
Project Manager:	Eric Taylor	Primary BU:	89
Project Sponsor(s):	Christian Madsen	Filing/Regulatory Reference:	2024-2026 RRA

FUNDING BY YEAR				
	2024	2025	2026	TOTAL
Capital Expenditure (\$)	29,397	30,062	30,741	90,200
External Contribution (\$)	(29,397)	(30,062)	(30,741)	(90,200)
TOTAL	-	-	-	-

Project Description / Summary:	<p>All new water service connections in French Creek are installed by EPCOR or EPCOR’s contractor at the customer’s expense (Contribution in Aid of Future Construction - CIAC). According to the terms of the Water Tariff governing rates and conditions for water service in French Creek, all new water service connections must meet the following criteria:</p> <p>Comply with EPCOR’s Water Tariff Terms and Conditions for provision of a new service connection. Be installed with a water meter that registers in cubic meters and is supplied with a remote readout or touch read pad that is accessible to the meter reader. Be connected to a premise fronting a road or highway that is serviced with a water distribution main, become and remain the property of the Utility.</p> <p>All costs for this project are 100% developer funded.</p>
Timeline for Project Completion:	This program is ongoing. Work will be completed over the course of the year with assets in service by December 31, 2024.
Consequences of NOT doing the project:	This ongoing endeavour facilitates growth, should the project not proceed, growth of the Utility will not occur.
Risk Executive Summary:	HSE risk is typical for this type of construction project and well managed by EPCOR’s existing processes and procedures. Minimal regulatory, reputation and financial risk.

Project Name:	FC-Well Rehabilitation (2024-2026)		
Project Number:	1009993	Capitalization Criteria:	Extension
Project Initiator:	Vicki Campbell	Enterprise Project Driver :	3. Reliability or Life Cycle Replacement
Project Manager:	Eric Taylor	Primary BU:	89
Project Sponsor(s):	Christian Madsen	Filing/Regulatory Reference:	2024-2026 RRA

FUNDING BY YEAR				
	2024	2025	2026	TOTAL
Capital Expenditure (\$)	29,102	30,459	31,308	90,868
External Contribution (\$)	-	-	-	-
TOTAL	29,102	30,459	31,308	90,868

Project Description / Summary:	Typical rehabilitation includes removal of the pump, video inspection of the screened interval, motor inspection, mechanical cleaning of the casing and screen to remove deposits, re-development of the screen to remove fines and precipitates trapped behind the screen using surge and bail techniques and or replacing components that are obsolete such as metering, electrical, communications and the like. General recommendations are to rehabilitate wells every 5-10 years.
Timeline for Project Completion:	This program rehabilitates one well each calendar year. Work will be completed between January – December 2024.
Consequences of NOT doing the project:	Well capacity degrades over time. Lack of routine / scheduled redevelopment may result in permanent losses in capacity and the need for drilling new wells to compensate for lost capacity
Risk Executive Summary:	HSE risk is typical for this type of construction project and well managed by EPCOR's existing processes and procedures. Minimal regulatory, reputation and financial risk.



EPCOR - Capital Project Justification Sheet (CPJS)

Project Name:	FC-Church Road Radio Modem Upgrades (2024)		
Project Number:)	1017147	Capitalization Criteria:	Improvement
Project Initiator:	Vicki Campbell	Enterprise Project Driver :	3. Reliability or Life Cycle Replacement
Project Manager:	Eric Taylor	Primary BU:	89
Project Sponsor(s):	Christian Madsen	Filing/Regulatory Reference:	2024-2026 RRA

FUNDING BY YEAR				
	2024	2025	2026	TOTAL
Capital Expenditure (\$)	35,432	-	-	35,432
External Contribution (\$)	-	-	-	-
TOTAL	35,432	-	-	35,432

Project Description / Summary:	A number of the SCADA Pack and Zlinx RF Modems that provide remote communication to the Church Road Reservoir are obsolete, no longer supported by the manufacturer and the polling rates are unreliable. The project entails completing a radio path study, a new antenna/mast, replace obsolete ZlinkRT/SCADAPack units at well sites HC7, HC9, Bosa, Spring Hill, R8 and HC9.
Timeline for Project Completion:	December 31, 2024
Consequences of NOT doing the project:	These systems are at high risk as replacement parts are not available for purchase, and old software may require unsupported operating systems which are a cyber security risk. Communication loss to a remote well site would reduce/challenge supply capacity and result in unplanned operational challenges.
Risk Executive Summary:	HSE risk is typical for this type of construction project and well managed by EPCOR's existing processes and procedures. Minimal regulatory, reputation and financial risk.



EPCOR - Capital Project Justification Sheet (CPJS)

Project Name:	FC-Drew Road Filter PLC Replacement (2025)		
Project Number:	1017148	Capitalization Criteria:	Improvement
Project Initiator:	Vicki Campbell	Enterprise Project Driver :	3. Reliability or Life Cycle Replacement
Project Manager(s):	Eric Taylor	Primary BU:	89
Project Sponsor(s):	Christian Madsen	Filing/Regulatory Reference:	2024-2026 RRA

FUNDING BY YEAR				
	2024	2025	2026	TOTAL
Capital Expenditure (\$)	35,621	-	-	35,621
External Contribution (\$)	-	-	-	-
TOTAL	35,621	-	-	35,621

Project Description / Summary:	The Drew Road Filter Plant is controlled using an Allen Bradley CompactLogix L32E. As of December 20, 2020, Rockwell Automation announced that the CompactLogix 750KB Enet Controller was discontinued and no longer available for sale. The project entails replacing the controller and IO with a supported version and provide remote access for internal PLC (Programmable logic controller) support from an EPCOR specialist
Timeline for Project Completion:	December 31, 2024
Consequences of NOT doing the project:	The controller and distributed IO is no longer supported and replacement of the controller or IO is not available. The unit is at end of life, should the controller fail the system would loose close to half of its distribution supply.
Risk Executive Summary:	HSE risk is typical for this type of construction project and well managed by EPCOR's existing processes and procedures. Minimal regulatory, reputation and financial risk.

Project Name:	FC-Pressure Reducing Valve (2024-2025)		
Project Number:)	1017149	Capitalization Criteria:	Improvement
Project Initiator:	Vicki Campbell	Enterprise Project Driver :	3. Reliability or Life Cycle Replacement
Project Manager:	Eric Taylor	Primary BU:	89
Project Sponsor(s):	Christian Madsen	Filing/Regulatory Reference:	2024-2026 RRA

FUNDING BY YEAR				
	2024	2025	2026	TOTAL
Capital Expenditure (\$)	474,032	544,464	-	1,018,496
External Contribution (\$)	(237,016)	(272,232)	-	(509,248)
TOTAL	237,016	272,232	-	509,248

Project Description / Summary:	Design, tender, construct, project manage and commission two (2) pressure reducing valve stations that are required to alleviate significant PHD and MDD high pressure deficiencies in the system that require over pressure management. Almost half of the system exceeds the maximum allowable pressure. MMCD design guidelines require over pressure management where such deficiencies exist. Two (2) PRV stations will be installed to loop the upper pressure system to the lower pressure system to establish a pressure boundary. This improvement will result in reduced leakage, mitigate stress on pipes and bends and reduce repair/maintenance costs on older weaker sections of distribution piping. The project is expected to be partially supported through the DCTF.
Timeline for Project Completion:	December 31, 2025
Consequences of NOT doing the project:	Without pressure management the system will continue to experience non revenue water losses through leakage in the system and line breaks. The system may experience numerous line breaks during high demand periods resulting in unplanned repair costs.
Risk Executive Summary:	HSE risk is typical for this type of construction project and well managed by EPCOR's existing processes and procedures. Minimal regulatory, reputation and financial risk.

Project Name:	FC - Watermain Upgrades - 100mm to 150mm Single Family Deficient Fire Flow		
Project Number:	1017152	Capitalization Criteria:	Improvement
Project Initiator:	Vicki Campbell	Enterprise Project Driver :	3. Reliability or Life Cycle Replacement
Project Manager:	Eric Taylor	Primary BU:	89
Project Sponsor(s):	Christian Madsen	Filing/Regulatory Reference:	2024-2026 RRA

FUNDING BY YEAR				
	2024	2025	2026	TOTAL
Capital Expenditure (\$)	23,657	227,787	227,779	474,223
External Contribution (\$)	(11,829)	(113,894)	(111,390)	(237,112)
TOTAL	11,829	113,894	111,390	237,112

Project Description / Summary:	The system updated water model for fire flow while under MDD conditions resulted in a number of deficient areas throughout the system where fire flow were less than 60L/s as required per the Water Supply for Public Fire Protection – A guide for recommended practice, published by the Fire Underwriters Survey, nor does it meet the guideline referenced in the Master Municipal Construction Document (MMCD) Design Guideline Manual. In order to meet or exceed these requirements in the deficient areas, the existing main diameters need to be increased. The project will progressively address the deficiencies within the program. The project will be partially contributed.
Timeline for Project Completion:	December 31, 2024
Consequences of NOT doing the project:	These areas will remain deficient and non compliant with current design guidelines. This could impact EPCOR's reputation and is a liability.
Risk Executive Summary:	HSE risk is typical for this type of construction project and well managed by EPCOR's existing processes and procedures. Minimal regulatory, reputation and financial risk.



EPCOR - Capital Project Justification Sheet (CPJS)

Project Name:	FC-Meter Replacement Program (2024-2026)		
Project Number:	1017153	Capitalization Criteria:	Improvement
Project Initiator:	Vicki Campbell	Enterprise Project Driver :	3. Reliability or Life Cycle Replacement
Project Manager:	Eric Taylor	Primary BU:	89
Project Sponsor(s):	Christian Madsen	Filing/Regulatory Reference:	2024-2026 RRA

FUNDING BY YEAR				
	2024	2025	2026	TOTAL
Capital Expenditure (\$)	115,237	118,375	121,594	355,206
External Contribution (\$)	-	-	-	-
TOTAL	115,237	118,375	121,594	355,206

Project Description / Summary:	There are 263 meters that were put in service in 1996, Meters within the French Creek System require ongoing replacement due to the age (over 20 years) of the meters that were part of the system when it was purchased in 2006 and partially due to upgrading (new meters will have RF (Radiofrequency) read capability and newer touch read meters will be augmented with compatible RF read devices.)
Timeline for Project Completion:	The program is ongoing with the intent of retiring meters that are at end of life or are not reading accurately.
Consequences of NOT doing the project:	End of life meters may not provide accurate reading of water consumption and may be more susceptible to leaking resulting in inaccurate billing and revenue losses. Without adequate water meters, water usage cannot be accurately determined and billing cannot be accurately completed.
Risk Executive Summary:	HSE risk is typical for this type of construction project and well managed by EPCOR's existing processes and procedures. Minimal regulatory, reputation and financial risk.

Project Name:	FC-Chlorine Analyzer Replacement Program (2024-2025)		
Project Number:	1017217	Capitalization Criteria:	Improvement
Project Initiator:	Vicki Campbell	Enterprise Project Driver :	3. Reliability or Life Cycle Replacement
Project Manager:	Eric Taylor	Primary BU:	89
Project Sponsor(s):	Christian Madsen	Filing/Regulatory Reference:	2024-2026 RRA

FUNDING BY YEAR				
	2024	2025	2026	TOTAL
Capital Expenditure (\$)	20,353	31,372	-	51,724
External Contribution (\$)	-	-	-	-
TOTAL	20,353	31,372	-	51,724

Project Description / Summary:	<p>Both reservoir sites employ online analyzers to control chemical dosing, monitor and report water quality parameters to VIHA. They are also employed to enable operational decisions and collect data for optimization trending analyses. The analyzers in service at both the Church Road and Drew Road reservoir sites are near end of life, no longer supported by the manufacturer and spare parts are in limited supply or not available.</p> <p>The intent is to replace the in-service analyzers and add an additional analyzer at Drew Rd to monitor water within the distribution system resulting in improvements that ensure reliable process monitoring and control, employs advances in technology for improving operational efficiency, prevent unforeseen failures due to instrument degradation, safety improvements resulting from incident root cause analyses, or updates to regulatory requirements that may arise.</p>
Timeline for Project Completion:	December 31, 2025
Consequences of NOT doing the project:	<p>Unexpected failure of an analyzers due to operation past end-of-life could result in manual sampling by operations and be a reportable event to VIHA under the Permit to Operate.</p> <p>An unexpected failure of an analyzer could result in unmonitored process conditions (leading to poor water quality, environmental consequences), unmonitored chemical systems, and could lead to chemical releases and potential exposure to an employee/the public.</p> <p>Should the above arise the lead time for replacement under emergency conditions could be months.</p>
Risk Executive Summary:	HSE risk is typical for this type of construction project and well managed by EPCOR's existing processes and procedures. Minimal regulatory, reputation and financial risk.

SERVICE LEVEL AGREEMENT

THIS AGREEMENT made effective as of January 1, 2024 (the “**Effective Date**”).

BETWEEN:

EPCOR Utilities Inc., a corporation formed under the laws of the Province of Alberta, (hereinafter referred to as the “**Service Provider**” or “**EUI**”)

- and -

EPCOR WATER (WEST) INC., a corporation incorporated under the laws of the Province of British Columbia (hereinafter referred to as the “**Service Receiver**” or “**EWV**”)

WHEREAS the Service Receiver has requested the Service Provider to provide, and the Service Provider is willing to provide the Contract Services (as hereinafter defined) to the Service Receiver upon the terms and conditions set forth in this Agreement.

NOW THEREFORE THIS AGREEMENT EVIDENCES that in consideration of the mutual covenants and agreements contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties do hereby covenant and agree as follows:

ARTICLE 1
INTERPRETATION

1.1 Definitions

In this Agreement, including all recitals, schedules and attachments hereto, unless otherwise indicated or the context otherwise requires, the following words and expressions shall have the following meanings:

“**Affiliate**” in relation to any Person shall mean any other Person directly or indirectly controlling, controlled by or under direct or indirect common control with, such Person and, for the purpose of this definition, a Person shall be deemed to control another Person if such Person possesses, directly or indirectly, the power to direct or cause the direction of the management and policies of such other Person, whether through the ownership of voting securities, by contract or otherwise;

“**Agreement**” means this agreement and all schedules and addenda attached hereto;

“**Business**” means the water utility business carried on by the Service Receiver;

“**Business Day**” means any day except a Saturday, Sunday or statutory holiday in the Province of British Columbia and/or in the Province of Alberta;

“**Contract Services**” means, collectively, the services more particularly described in Schedule “A” to this Agreement;

“**Force Majeure**” shall have the meaning ascribed to that term in Section 7.2;

“**Indemnified Party**” shall have the meaning ascribed to that term in Section 4.1 and includes the Party’s respective affiliates, officers, agents, employees and permitted successors and assigns;

“**Indemnifying Party**” shall have the meaning ascribed to that term in Section 4.1;

“**Information**” shall have the meaning ascribed to that term in Section 6.1;

“**Party**” or “**Parties**” means a Party or Parties to this Agreement;

“**Person**” means an individual, corporation, partnership, joint venture, association, trust or unincorporated organization; and

“**Term**” shall have the meaning ascribed to that term in Section 5.1.

1.2 Number and Gender

Words used herein importing the singular number only shall include the plural and vice versa and words importing the use of any gender shall include all genders.

1.3 References

References to the words “Article” and “Section” herein shall, unless the contrary be expressly stated, refer to an Article or Section of this Agreement, and references to “hereof”, “herein”, “hereby”, “hereunder” and “this Agreement” refer to the whole of this Agreement including the Schedules and Addendum attached hereto.

1.4 Amendments to Agreements and Law

References herein to any agreement or document shall be deemed to be a reference to such agreement or document as varied, amended, modified, supplemented, or replaced from time to time. Any specific reference herein to any enactment of law shall be deemed to be such enactment as the same may be amended or re-enacted from time to time and every statute that may be substituted therefore and, in any such event reference to such enactment shall be read as referring to such enactment as so amended, re-enacted or the statute substituted therefore, as the case may be.

1.5 Headings

The division of this Agreement into Articles, Sections and other subdivisions, the provision of a table of contents and the insertion of headings are for convenience of reference only and are not to be used in construing or interpreting this Agreement or any portion thereof.

1.6 Governing Law

This Agreement shall be governed by and interpreted in accordance with the laws of the Province of Alberta and the federal laws of Canada applicable therein.

1.7 Severability

Each provision of this Agreement is intended to be severable and, if any provision is determined by a court of competent jurisdiction to be illegal or invalid or unenforceable for any reason whatsoever, such provision shall be severed from this Agreement and will not affect the legality or validity or enforceability of the remainder of this Agreement or any other provision hereof.

1.8 Next Business Day

In the event that any date on which any action is required to be taken hereunder by any of the Parties hereto is not a Business Day, such action shall be required to be taken on the next succeeding day which is a Business Day.

1.9 Entire Agreement

This Agreement including the annexed Schedules constitutes the entire agreement among the Parties relating to the matters set forth herein and in the Schedules and shall supersede and cancel any and all pre-existing agreements and understandings among the Parties relating thereto. Any and all prior contemporaneous negotiations, prior memoranda of understanding or position, and preliminary drafts and prior versions of this Agreement or the Schedules, whether signed or unsigned, shall not be used to construe the terms or affect the validity or interpretation of this Agreement or the Schedules.

1.10 Schedules

The following Schedules are attached to and form part of this Agreement:

- Schedule “A” – Contract Services for Services Rendered January 01, 2024 – December 31, 2026
- Schedule “B” – Basis of Payment for Contract Services for Services Rendered January 01, 2024 – December 31, 2026

If there is any conflict between the body of this Agreement and the attached Schedules, the body

of this Agreement shall prevail.

ARTICLE 2

CONTRACT SERVICES

2.1 Contract Services

Commencing on the Effective Date, the Service Provider shall provide to the Service Receiver the Contract Services more particularly described in Schedule "A" in accordance with this Agreement.

2.2 Warranty

The Service Provider represents and warrants that it is capable of providing the Contract Services as required by this Agreement. The Service Provider further represents and warrants that the Contract Services provided by the Service Provider pursuant to this Agreement will be performed with reasonable skill, care, and diligence and in accordance with generally accepted, utility operating standards and practices.

2.3 Laws and Regulation

The Service Provider shall comply with all laws and regulations governing the Service Receiver and the Service Provider which are applicable to the performance of the Contract Services at the place or places at which the Contract Services are performed.

ARTICLE 3

PAYMENT

3.1 Compensation

As full consideration for performance of the Contract Services, the Service Receiver shall pay the Service Provider the compensation ("**Compensation**") provided in Schedule "B" at the times and in the manner provided in Section 3.2. All fees payable to the Service Provider are exclusive of the federal goods and services tax and, if applicable, provincial sales taxes and harmonized sales tax but are inclusive of all other taxes, customs, duties, excise taxes and non-resident withholding taxes (if applicable).

3.2 Invoicing and Payment

The Service Provider shall invoice the Service Receiver each month, no later than the thirtieth (30th) calendar day of the following month. The appropriate manager within the Service Receiver shall review, and if appropriate, approve and forward the invoice to Accounts Payable within thirty (30) days of receipt. Accounts payable shall enter the invoice into Oracle and each invoice shall be paid on the next available payment run.

3.3 Method of Payment

The Service Receiver will pay each invoice in full, in Canadian funds. Direct charges shall be handled in accordance with the Service Receiver's standard accounting policies and practices.

3.4 Invoice or Charge Errors

If an error is found in any invoice or record of direct charge, the Party identifying the error shall immediately advise the other Party. Any adjustment necessary to correct such error shall be made as soon as practical or, in the case of an error in a direct charge, in accordance with the Service Receiver's standard accounting policies and practices.

3.5 Records

The Service Provider shall maintain complete and accurate books, records, and accounts of and supporting documents for all work performed and items billed for Contract Services. The Service Provider shall ensure that the books, records, accounts, and documents are not destroyed without the Service Receiver's written authorization for a period of seven (7) years after the termination or expiration of this Agreement. The Service Provider shall, on demand, make available to the Service Receiver or its respective duly authorized representatives for inspection, reproduction, and audit or any other reasonable purposes, every such book, record, account, and document.

3.6 Invoice or Charge Disputes

In the event that the Service Receiver disputes in good faith any part of a monthly invoice or direct charge, such dispute shall be resolved, in accordance with the provisions of Article 8. If, after following the provisions of Article 8, it is determined that the invoice ought to be paid by the Service Receiver, the Service Receiver shall pay to the Service Provider the amount owing under the disputed invoice within fifteen (15) days of the date of such final determination.

3.7 Responsibility for Costs in Connection with Changes in Law or Regulation

The Service Provider will notify the Service Receiver of any changes to applicable laws and regulations that may impact the performance or cost of the Contract Services. If the changes to the applicable laws or regulations increase the Service Provider's costs in performing the Contract Services, the Service Receiver and Service Provider will amend this Agreement to reflect those increased costs, and the Service Receiver will be responsible for such increased costs.

ARTICLE 4 INDEMNITIES AND LIMITATION OF LIABILITY

4.1 Indemnity

Each Party (the “**Indemnifying Party**”) shall indemnify, defend and save harmless the other Party (the “**Indemnified Party**”) from and against any and all losses, claims, damages, liabilities or expenses (including legal expenses on a solicitor and his own client basis) suffered or incurred by the Indemnified Party as a result of, arising out of, or in connection with, the gross negligence or willful misconduct of the Indemnifying Party in the performance, purported performance, or non-performance of this Agreement, or the Indemnifying Party’s breach of this Agreement, except to the extent caused by the gross negligence or willful misconduct of the Indemnified Party or to the extent that any such act or omission was done or omitted pursuant to the specific instructions of the Indemnified Party.

4.2 Limitation of Liability for Consequential Damages

Notwithstanding anything to the contrary contained in this Agreement, neither Party will be liable to the other Party for any damage, cost, expense, injury, loss or other liability of an indirect, special or consequential nature suffered by the other Party or claimed by any third party against the other Party which arises due to such Party's failure to perform its obligations under this Agreement or for any other reason (including negligence on its part or on the part of any person for whose acts it is responsible), howsoever and when-so-ever caused, and whether arising in contract, negligence or other tort liability, strict liability or otherwise. Without limiting the generality of the foregoing, damage, injury or loss of an indirect or consequential nature shall include loss of revenue, loss of profits, loss of production, loss of earnings, loss of contract, cost of purchased or replacement capacity and energy, cost of capital and loss of the use of any facilities or property owned, operated, leased or used by the other Party or a third party.

ARTICLE 5 TERM

5.1 Term

This Agreement shall commence on the Effective Date and shall continue in full force until December 31, 2026 unless terminated in accordance with Section 10.1 or otherwise agreed to by the Parties in writing (the “**Term**”).

ARTICLE 6 CONFIDENTIALITY

6.1 Confidentiality

Subject to Section 6.2, each Party shall keep confidential and shall not:

- (a) use, except for the purpose of performing its obligations or exercising its rights under this Agreement; or
- (b) disclose, except as contemplated or permitted in this Agreement;

any confidential information, trade secret or confidential financial, technical, scientific, business or other confidential or proprietary information or document of the other Party or

its Affiliates received by it or any of its Affiliates in the course of, or as a result of, the relationship established between the Parties pursuant to this Agreement (herein referred to collectively as the “**Information**”).

6.2 Exceptions

A Party shall be entitled to disclose any Information to the extent:

- (a) such Information is or becomes generally known to the public other than through a breach of this Agreement or any other obligation of confidentiality between the Parties;
- (b) such Information is lawfully obtained by that Party from a third party or parties without breach of this Agreement or any other obligation of confidentiality between the Parties, as shown by documentation sufficient to establish the third party as the source of such Information and to the knowledge of the disclosing Party, without such disclosure constituting a breach by such third party or parties of an obligation of confidentiality;
- (c) such Information is comprised of technical Information and was known to the disclosing Party prior to receipt thereof from the other Party, as shown by documentation sufficient to establish such knowledge;
- (d) such Information was developed by the receiving Party independently of the disclosures made by the disclosing Party under this Agreement;
- (e) such disclosure is required in connection with any regulatory, legal or administrative proceeding; provided that where circumstances permit prior to disclosure, the disclosing Party shall notify the other Party in writing of such proposed disclosure and at the other Party's request (and expense) apply for appropriate court or other orders to preserve the confidentiality of such Information;
- (f) that such disclosure is required by law or by order of any governmental body having competent authority; provided that where the circumstances permit prior to disclosure (other than any disclosure required by applicable securities laws) the disclosing Party shall notify the other Party in writing of any such proposed disclosure and shall at the other Party's request (and expense) apply for appropriate court or other orders to preserve the confidentiality of such Information; and
- (g) the other Party shall have provided its prior written approval for such disclosure by the disclosing Party.

ARTICLE 7
FORCE MAJEURE

7.1 Relief from Obligations

Subject to Section 7.3, if by reason of Force Majeure either Party to this Agreement is unable, wholly or partially, to perform or comply with its covenants and obligations hereunder, then the Party so affected by Force Majeure shall be relieved of liability and shall suffer no prejudice for failing to perform or comply during the continuance and to the extent of the inability so caused from and after the happening of the event of Force Majeure; provided that the Party invoking Force Majeure gives to the other Party prompt notice, written or oral (but if oral, promptly confirmed in writing) of such inability and reasonably full particulars of the cause thereof. If notice is not promptly given then the Party suffering the Force Majeure shall only be relieved from such performance or compliance from and after the giving of such notice. The Party invoking Force Majeure shall use all reasonable efforts to remedy the situation and remove, so far as possible and with reasonable dispatch, the cause of its inability to perform or comply; provided, however, that settlement of strikes, lockouts and other industrial disturbances shall be wholly within the discretion of the Party involved. The Party invoking Force Majeure shall give prompt notice of the cessation of the event of Force Majeure. Nothing in this Article 7 shall relieve a Party of its obligations to make payments when due hereunder.

7.2 Force Majeure

For the purposes of this Agreement, force majeure (“**Force Majeure**”) shall mean any event beyond the reasonable control of the Party invoking Force Majeure, including therein but without restricting the generality thereof:

- (a) lightning, storms, earthquakes, landslides, floods, washouts, and other Acts of God;
- (b) fires, explosions, ruptures, breakage of or accidents to pipelines, plants, machinery, equipment or storage facilities;
- (c) strikes, lockouts, or other labour disturbances;
- (d) civil disturbances, sabotage, war, blockades, insurrections, vandalism, riots, epidemics;
- (e) acts of terrorism;
- (f) arrests and restraints by governments or governmental agencies;
- (g) the order of any court;
- (h) inability to obtain or curtailment of supplies of feed stocks or of electric power, water, fuel or other necessary utilities or services to operate any facilities or of any materials or equipment; or

- (i) inability to obtain or revocation or amendment of any permit, authorization or approval of any governmental authority required to perform or comply with any obligation under this Agreement, unless the revocation or modification of any such necessary permit, authorization or approval was caused by the violation of the terms thereof or consented to by the party holding the same.

7.3 Exclusions from Relief

No Party shall be entitled to the benefits of the provisions of this Article 7 under any of the following circumstances:

- (a) if the failure to perform or comply with any of the covenants or obligations herein imposed upon it was caused by arrest or restraint by governments or governmental agencies or the order of any court and such arrest, restraint or order was the result of a breach by the Party claiming suspension of the term of a permit, license, certificate or other authorization granted by a governmental or regulatory body having jurisdiction or of any applicable laws, regulations or orders;
- (b) if the failure to perform or comply with any of the covenants or obligations herein imposed upon it was caused by the Party invoking Force Majeure having failed to use all reasonable efforts to remedy the situation and remove, so far as possible and with reasonable dispatch, the cause of its inability to perform or comply with such covenants or obligations; or
- (c) if the failure to perform or comply with any of the covenants or obligations herein imposed upon it was caused by lack of funds or other financial cause for whatever reason.

ARTICLE 8 DISPUTE RESOLUTION

8.1 Dispute Resolution

In the event of any dispute arising between the Parties as to the interpretation, application, operation or alleged violation of this Agreement or any of the provisions (collectively, “Disputes”), in the first instance the Dispute will be settled by the Parties at the operational level.

If a Dispute is not resolved within a reasonable period of time from notification, then, within a reasonable time following written notice from one Party to the other, a senior officer or representative will be appointed by each Party and will meet to attempt to resolve the Dispute and will record any resolution in writing which will be final and binding.

In the event any Dispute is not settled by the senior officers within a reasonable time then either Party will be entitled to give to the other Party notice of such Dispute and to request arbitration by a single arbitrator if a single arbitrator can be mutually agreed upon by the Parties

within 15 calendar days of such notice. If the Parties cannot agree on a single arbitrator within the 15 calendar day period then each Party will select one person to act as arbitrator and the two persons so appointed as arbitrators will select a third arbitrator. Provided that, if either of the Parties fail to select an arbitrator within 30 calendar days of the date of the receipt of notice of such Dispute then an arbitrator to represent the Party that has failed to select an arbitrator may, upon petition of the Party not in default, be appointed by a Justice of the Court of Queen's Bench of Alberta. Except as provided, the provisions of the Arbitration Act (Alberta) will apply. The costs of any arbitration will be borne equally by the Parties unless otherwise ordered by the arbitrator(s). The arbitration will be conducted in English and take place in a location in Alberta, Canada.

The Service Provider will continue to carry out the Contract Services during any arbitration proceedings and the Service Receiver will continue to make payments for undisputed Contract Services in accordance with this Agreement. The decision of the arbitrator(s) will be final and binding upon the Parties.

ARTICLE 9

NOTICE AND REPRESENTATIVES

9.1 Representatives of the Parties

Each Party will designate a primary representative for the purposes of this Agreement, who will have technical, administrative, operational and decision making authority and who will receive all kinds of communications related to the performance of the Agreement. The Parties may substitute their representatives at any time by giving notice. The Parties representatives are:

The Service Provider:

Senior Vice President & Chief Financial Officer
Suite 2000, 10423 101 Street NW
Edmonton, Alberta
T5H 0E8

The Service Receiver:

Director, Commercial Operations
#10 – D 1343 Alberni Highway, Pine Tree Centre
Parksville, British Columbia
V9P 2B9

9.2 Notice

Any notice, consent, request or other communication to be given in connection with this Agreement shall be in writing and shall be given by:

- (a) personal delivery or registered mail, postage prepaid, to the following address for the recipient addressed to the recipient as follows:

To Service Provider:
2000 – 10423 101 Street NW
Edmonton, AB T5H 0E8

To Service Receiver:
EPCOR Water (West) Inc.
#10 – D 1343 Alberni Highway, Pine Tree Centre
Parksville, British Columbia
V9P 2B9

or to such other address, email address or individual for notice as may then have been designated by the respective Party pursuant to Section 9.3. Any communication given to a Party as aforesaid shall be deemed to have been given at the time and upon the date of the receipt at the address of such Party.

9.3 Change of Address

Any Party may, from time to time, change its address, email address or individual for notice by a notice given to the other Party in accordance with Section 9.2.

ARTICLE 10 GENERAL

10.1 Termination

- (a) During the Term, a Party shall have the right to terminate this Agreement at any time and for any reason by giving sixty (60) days' written notice to the other Party.
- (b) The Parties by mutual written agreement may terminate this Agreement at any time

10.2 Time of Essence

Time shall be of the essence in this Agreement and of all of its terms.

10.3 Further Assurance

The Parties shall with reasonable diligence perform all acts, execute and deliver all documents and instruments, do all such things and provide all such reasonable assurances as may be necessary or desirable to give effect to the provisions of this Agreement.

10.4 Amendments or Waiver

This Agreement may not be amended except by written instrument signed by all of the Parties hereto. No indulgence or forbearance by any Party hereunder shall be deemed to constitute a waiver of its rights to insist on performance in full and in a timely manner of all covenants of each of the other Parties hereunder and any such waiver, in order to be binding upon a Party, must be express and in writing and signed by such Party, and then such waiver shall be effective only in the specific instance and for the purpose for which it is given. No waiver of any term, condition or covenant by any Party shall be deemed to be a waiver by such Party of its rights to require full and timely compliance with the same term, condition or covenant thereafter, or with any other term, covenant or condition of this Agreement at any time.

10.5 No Discharge on Termination

Any provision of this Agreement under which an obligation of one Party hereto has accrued but has not been discharged shall not be affected by termination of this Agreement, nor shall the Party liable to perform be discharged as a result of any such termination, nor shall termination prejudice any right of one Party against the other in respect of anything done or omitted hereunder prior to such termination or in respect of any right to damages or other remedies.

10.6 Enurement

This Agreement shall enure to the benefit of and be binding upon the Service Provider and the Service Receiver and their respective successors and permitted assigns.

10.7 Assignment

This Agreement shall be assignable by either Party as necessary in connection with any bona fide financings, financing leases, reorganizations and mergers, but this Agreement shall not otherwise be assigned by either Party without the prior written consent of the other Party, which consent each of the Parties covenants not to unreasonably withhold. Notwithstanding any permitted assignment, the assignor shall continue to remain liable for the performance of obligations under this Agreement unless such assignor is released therefrom by instrument in writing signed by the other Party.

10.8 Counterparts

This Agreement may be executed in one or more counterparts and may be delivered by email in portable document format (PDF), each of which shall be deemed to be an original but all of which when taken together shall constitute one and the same agreement.

[Remainder of page intentionally left blank. Signature page to follow.]

IN WITNESS WHEREOF this Agreement has been duly executed by the Parties hereto by the signatures of their respective officers duly authorized in that behalf effective as of the day and year first above written.

EPCOR Utilities Inc.

Per: 

Tony Scozzafava
Senior Vice President and CFO

Dated: November 16, 2023

EPCOR WATER (WEST) INC.

Per: 

Christian Madsen
Director, Commercial Operations

Dated: November 16, 2023

SCHEDULE A
Contract Services for Services Rendered
January 01, 2024 – December 31, 2026

EUI Providing Services to EWW

A. Contract Services to EWW

The Contract Services to EWW shall consist of the following services on an "as available basis" and provision of the following assets:

Allocated Corporate Services

1. Supply Chain Management

The Supply Chain Management department provides services necessary to carry on the Business, including, without limitation, in the areas of:

- Mailroom — operating the mailroom function at Edmonton EPCOR locations;
- Disaster Recovery Planning Facilities – operating and maintaining back-up facilities for IT infrastructure;
- Procurement — sourcing goods and services strategically in support of operational and capital activities; developing strategic vendor partnerships, overseeing policy and process, ensuring legislative compliance, and managing the administration of vendor data and contract terms and conditions on behalf of corporate departments that support EWW;
- Real Estate — maintaining and operating EUI facilities; and
- SCM Corporate Services — space rent associated with EPCOR’s Corporate Services departments and business units that are located in EPCOR Tower.

2. Corporate Finance Services

The Corporate Finance Services department provides services necessary to carry on the Business, including, without limitation, in the areas of:

- Corporate Finance — this category is comprised of the following:
 - Corporate Accounting — providing accounting support related to regulatory filings, financial transactions, financial budgeting for Shared Service Units and developing and maintaining corporate accounting policies, procedures, and internal controls;
 - Consolidated Reporting and Analysis — preparing internal consolidated financial statements and analysis, developing internal controls over financial reporting and managing annual and quarterly budget processes for all of EPCOR; and
 - Audit Fees.

- Accounts Payable — processing vendor transactions for payment; and
- Accounts Receivable — processing customer invoices not related to customers invoiced by EWW and the Customer Information System.

3. Information Services

The Information Services department provides services necessary to carry on the Business, including, without limitation, in the areas of:

- Major Capital Projects — planning, architecture and project delivery services for implementation of major applications and installation of major computer hardware devices;
- Application Services — user support services related to shared and business unit specific system applications; and
- Infrastructure Operations — managing the operation and maintenance of information technology infrastructure, including IT security planning and services, governance and oversight for policies and procedures such as disaster recovery and pandemic planning.

4. Audit and Risk Management

The Audit and Risk Management department provides services necessary to carry on the Business, including, without limitation, the following services:

- Internal Audit — Provides assurance and advisory services to independently examine, evaluate and report on the adequacy, effectiveness and efficiency of the internal controls framework across EUI's operations, facilitating operational risk assessments across EUI, and developing and maintaining an Enterprise Risk Management (“ERM”) framework and risk management process standard for all EUI business units;
- Risk Management — provides insurance and enterprise risk management services for EUI business units and subsidiaries;
- Center of Excellence — providing leadership, best practices, research, support and training for the Oracle Financial suite of products as well as the Adaptive budgeting and forecasting tool, standardizing EPCOR processes and procedures across the company, and develop and provide finance specific training and support for the ERP system across the company; and
- Organizational Project Management — provides a standardized approach for project management in order to oversee the requirements for standardized systems, processes and practices, and ensure cross-functional efficiencies.

5. Treasury

The Treasury department provides services necessary to carry on the Business, including, without limitation, in the areas of:

- Treasurer - Corporate Finance — performing services associated with raising capital to finance business units and other subsidiaries' capital expenditures and working capital; managing the strategic planning process and developing EUI's corporate strategy;
- Treasury Operations — providing banking and cash management services to EUI business units and subsidiaries; and
- Taxation Services — providing tax-related support to EUI, business units and subsidiaries such as preparing and filing tax returns and remittances related to GST, income, linear, business and property taxes.

6. Human Resources

The Human Resources department provides services necessary to carry on the Business, including, without limitation, in the areas of:

- Total Rewards — planning, design and administration of EUI's compensation, pension and savings plans and employee benefits; managing the Human Resources Information System; Payroll processing – managing payroll services; Labour relations – planning and execution of collective bargaining for all of EUI's unions across the enterprise, and includes support for managers on the dispute resolution processes;
- Human Resources Consulting — providing recruitment services, succession planning, and advice concerning employee performance management on behalf of corporate departments that support EWW;
- Talent Development — administration and management of learning and professional development programs for all EPCOR employees and support to corporate departments that support EWW in respect to recruitment, succession planning, and training tools; and
- Learning and Development — provide the processes, programs, systems, and structures to ensure that each business unit is able to meet its training requirements.

7. Board

The Board provides oversight necessary to carry on the Business, including, without limitation, the following services:

- Establishing corporate strategic objectives and direction;
- Maintaining and enforcing articles and corporate bylaws;
- Electing and appointing corporate officers;
- Delegating special authorities to management;
- Reviewing and approving corporate policies;
- Providing direction and oversight to safeguard and maintain the long-term value of corporate assets;

- Reviewing and approving significant financial matters;
- Participation in strategic planning; and
- Monitoring compliance with corporate policies and procedures.

8. Executive and Executive Assistants

Executive and Executive Assistants provide services and support necessary to carry on the Business, including, without limitation, the following services:

- Preparing and implementing overall corporate goals and direction;
- Reviewing and recommending operating and capital budgets, and any financing requirements for the Business;
- Developing corporate-level strategy and plans for Board of Directors for approval;
- Carrying out the special authorities delegated by the Board of Directors;
- Establishing and recommending corporate policies and adequate control frameworks; and
- Corporate Secretarial Services — providing support for Board, Committee and Shareholder material submissions.

9. Legal Services

The Legal Services department provides services necessary to carry on the Business, including, without limitation, in the areas of:

- Legal Services — managing and providing advice and support for corporate, business and regulatory affairs;
- Governance Oversight — providing advice on corporate governance matters and preparing corporate documentation to ensure compliance with legislation;
- Compliance — providing administration and oversight in the areas of ethics, privacy, the Code of Conduct Regulation, and the EPCOR Inter-Affiliate Code of Conduct for EUI and its business units and subsidiaries' activities; and
- Records Management — developing, implementing and overseeing internal document retention policies and practices.

10. Health, Safety, Security & Environment

The Health, Safety, Security & Environment department provides services necessary to carry on the Business, including, without limitation, the following services:

- Maintenance and ongoing implementation of the Integrated Health, Safety and Environment Management System which conforms to ISO 14001 (Environment) and OHSAS 18001 (Health and Safety) requirements and is implemented across all business units within EPCOR;

- Trend analysis, evaluation, and reporting for the EPCOR group to assist business units in ensuring that regulatory monitoring and reporting requirements are met; and
- Security — providing continuous threat and risk analysis of all security related threats and vulnerabilities, developing and refining corporate security strategy and managing the administration of security contracts and maintenance of security systems.

11. Public & Government Affairs

The Public & Government Affairs department provides services necessary to carry on the Business, including, without limitation, in the areas of:

- Corporate Communications — managing external and internal employee communications, which include corporate profile development and media relations, reporting of quarterly and annual financial results, major employee learning events and corporate announcements, customer, stakeholder and public safety communications online and through social media, communications support to Corporate Services departments, company-wide employee health and safety and communications for learning and development;
- Government Relations — liaising with various levels of government and providing counsel to EPCOR businesses on the impact of current or contemplated government policies or legislation; and
- Community Relations — fostering EPCOR’s reputation and relationship objectives with stakeholders, including development of such items as brand design, school education programs and promotion of public safety awareness.

12. Incentive Compensation

This category includes incentive compensation paid to corporate employees based on individual performance ratings when EUI’s overall annual corporate targets are realized.

13. Asset Usage Fee

Asset usage fees related to assets owned by EUI that are used in providing corporate Services to EPCOR business units. The categories of assets for which corporate asset usage fees are charged include the following:

- Leasehold Assets;
- Human Resources Information System;
- Information Systems Infrastructure;
- Financial Systems;
- Furniture and Fixtures;
- Vehicles; and

- Customer Information System.

Direct Assigned Corporate Services

1. Information Systems Application Support

This category includes costs for the Director Application Services and Major Capital Projects including business analysis, planning and architect, and project delivery.

2. Information Services Desktops, Printers and Network Support

This category includes IT services EUI provides to EWW, and includes the following:

- Intel Servers — licensing and support costs related to the operations of Intel servers;
- Unix Servers — licensing and support costs related to the operations of Unix servers;
- Storage — licensing and support costs related to the operations of storage and backup;
- User Devices — licensing and support costs related to the operations of printers, desktop/laptops and thin clients;
- Network — licensing, support cost and network data line costs related to the operations of EPCORs network; and
- Employee Services — licensing and outsourcing costs related to Service Desk Services, licensing costs related to Oracle e-business suite, remote access and video conferencing.

SCHEDULE B
**Basis of Payment for Contract Services for Services Rendered January 1, 2024 –
 December 31, 2026**

A1. The annual Compensation payable by the Service Receiver to the Service Provider for the Term shall be as follows:

Services Provided	2024	2025	2026
A1. Corporate Services provided including Asset Usage Fees and Direct Charges	\$125,950	\$128,589	\$131,161

B. Method of Payment and True Up

The Service Provider will charge the Service Receiver a monthly contract price (calculated as 1/12th of the annual Compensation) for ongoing services provided under Schedule A. At the end of the year, the Service Provider will true up the charged amount with the actual costs.

SERVICE LEVEL AGREEMENT

THIS AGREEMENT made effective as of January 1, 2024 (the “**Effective Date**”).

BETWEEN:

EPCOR Commercial Services Inc., a corporation formed under the laws of the Province of Alberta, (hereinafter referred to as the “**Service Provider**” or “**ECSP**”)

- and -

EPCOR WATER (WEST) INC., a corporation incorporated under the laws of the Province of British Columbia (hereinafter referred to as the “**Service Receiver**” or “**EWV**”)

WHEREAS the Service Receiver has requested the Service Provider to provide, and the Service Provider is willing to provide the Contract Services (as hereinafter defined) to the Service Receiver upon the terms and conditions set forth in this Agreement.

NOW THEREFORE THIS AGREEMENT EVIDENCES that in consideration of the mutual covenants and agreements contained in this Agreement and for other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Parties do hereby covenant and agree as follows:

ARTICLE 1
INTERPRETATION

1.1 Definitions

In this Agreement, including all recitals, schedules and attachments hereto, unless otherwise indicated or the context otherwise requires, the following words and expressions shall have the following meanings:

“**Affiliate**” in relation to any Person shall mean any other Person directly or indirectly controlling, controlled by or under direct or indirect common control with, such Person and, for the purpose of this definition, a Person shall be deemed to control another Person if such Person possesses, directly or indirectly, the power to direct or cause the direction of the management and policies of such other Person, whether through the ownership of voting securities, by contract or otherwise;

“**Agreement**” means this agreement and all schedules and addenda attached hereto;

“**Business**” means the water utility business carried on by the Service Receiver;

“**Business Day**” means any day except a Saturday, Sunday or statutory holiday in the Province of Alberta and/or the Province of British Columbia;

“**Contract Services**” means, collectively, the services more particularly described in Schedule “A” to this Agreement;

“**Force Majeure**” shall have the meaning ascribed to that term in Section 7.2;

“**Indemnified Party**” shall have the meaning ascribed to that term in Section 4.1 and includes the Party’s respective affiliates, officers, agents, employees and permitted successors and assigns;

“**Indemnifying Party**” shall have the meaning ascribed to that term in Section 4.1;

“**Information**” shall have the meaning ascribed to that term in Section 6.1;

“**Party**” or “**Parties**” means a Party or Parties to this Agreement;

“**Person**” means an individual, corporation, partnership, joint venture, association, trust or unincorporated organization; and

“**Term**” shall have the meaning ascribed to that term in Section 5.1.

1.2 Number and Gender

Words used herein importing the singular number only shall include the plural and vice versa and words importing the use of any gender shall include all genders.

1.3 References

References to the words “Article” and “Section” herein shall, unless the contrary be expressly stated, refer to an Article or Section of this Agreement, and references to “hereof”, “herein”, “hereby”, “hereunder” and “this Agreement” refer to the whole of this Agreement including the Schedules and Addendum attached hereto.

1.4 Amendments to Agreements and Law

References herein to any agreement or document shall be deemed to be a reference to such agreement or document as varied, amended, modified, supplemented, or replaced from time to time. Any specific reference herein to any enactment of law shall be deemed to be such enactment as the same may be amended or re-enacted from time to time and every statute that may be substituted therefore and, in any such event reference to such enactment shall be read as referring to such enactment as so amended, re-enacted or the statute substituted therefore, as the case may be.

1.5 Headings

The division of this Agreement into Articles, Sections and other subdivisions, the provision of a table of contents and the insertion of headings are for convenience of reference only and are not to be used in construing or interpreting this Agreement or any portion thereof.

1.6 Governing Law

This Agreement shall be governed by and interpreted in accordance with the laws of the Province of Alberta and the federal laws of Canada applicable therein.

1.7 Severability

Each provision of this Agreement is intended to be severable and, if any provision is determined by a court of competent jurisdiction to be illegal or invalid or unenforceable for any reason whatsoever, such provision shall be severed from this Agreement and will not affect the legality or validity or enforceability of the remainder of this Agreement or any other provision hereof.

1.8 Next Business Day

In the event that any date on which any action is required to be taken hereunder by any of the Parties hereto is not a Business Day, such action shall be required to be taken on the next succeeding day which is a Business Day.

1.9 Entire Agreement

This Agreement including the annexed Schedules constitutes the entire agreement among the Parties relating to the matters set forth herein and in the Schedules and shall supersede and cancel any and all pre-existing agreements and understandings among the Parties relating thereto. Any and all prior contemporaneous negotiations, prior memoranda of understanding or position, and preliminary drafts and prior versions of this Agreement or the Schedules, whether signed or unsigned, shall not be used to construe the terms or affect the validity or interpretation of this Agreement or the Schedules.

1.10 Schedules

The following Schedules are attached to and form part of this Agreement:

- Schedule “A” – Contract Services for Services Rendered January 01, 2024 – December 31, 2026
- Schedule “B” – Basis of Payment for Contract Services for Services Rendered January 01, 2024 – December 31, 2026

If there is any conflict between the body of this Agreement and the attached Schedules, the body

of this Agreement shall prevail.

ARTICLE 2

CONTRACT SERVICES

2.1 Contract Services

Commencing on the Effective Date, the Service Provider shall provide, or cause an Affiliate or Affiliates of the Service Receiver to provide the Contract Services more particularly described in Schedule "A" in accordance with this Agreement.

2.2 Warranty

The Service Provider represents and warrants that it is capable of providing, or causing an Affiliate or Affiliates of the Service Provider to provide, as the case may be, the Contract Services as required by this Agreement. The Service Provider further represents and warrants that the Contract Services provided by the Service Provider pursuant to this Agreement will be performed with reasonable skill, care, and diligence and in accordance with generally accepted, utility operating standards and practices.

2.3 Laws and Regulation

The Service Provider shall comply with all laws and regulations governing the Service Receiver and the Service Provider which are applicable to the performance of the Contract Services at the place or places at which the Contract Services are performed.

ARTICLE 3

PAYMENT

3.1 Compensation

As full consideration for performance of the Contract Services whether by the Service Provider or an Affiliate or Affiliates of the Service Provider, the Service Receiver shall pay the Service Provider the compensation (“**Compensation**”) provided in Schedule “B” at the times and in the manner provided in Section 3.2. All fees payable to the Service Provider are exclusive of the federal goods and services tax and, if applicable, provincial sales taxes and harmonized sales tax but are inclusive of all other taxes, customs, duties, excise taxes and non-resident withholding taxes (if applicable).

3.2 Invoicing and Payment

The Service Provider shall invoice the Service Receiver each month, no later than the thirtieth (30th) calendar day of the following month. The appropriate manager within the Service Receiver shall review, and if appropriate, approve and forward the invoice to Accounts Payable within thirty (30) days of receipt. Accounts payable shall enter the invoice into Oracle and each

invoice shall be paid on the next available payment run.

3.3 Method of Payment

Each invoice shall be paid in full in Canadian funds from the Service Receiver to the Service provider.

3.4 Invoice or Charge Errors

If an error is found in any invoice or record of direct charge, the Party identifying the error shall immediately advise the other Party. Any adjustment necessary to correct such error shall be made as soon as practical or, in the case of an error in a direct charge, in accordance with the Service Receiver's standard accounting policies and practices.

3.5 Records

The Service Provider shall maintain complete and accurate books, records, and accounts of and supporting documents for all work performed and items billed for Contract Services. The Service Provider shall ensure that the books, records, accounts, and documents are not destroyed without the Service Receiver's written authorization for a period of seven (7) years after the termination or expiration of this Agreement. The Service Provider shall, on demand, make available to the Service Receiver or its respective duly authorized representatives for inspection, reproduction, and audit or any other reasonable purposes, every such book, record, account, and document.

3.6 Invoice or Charge Disputes

In the event that the Service Receiver disputes in good faith any part of a monthly invoice, such dispute shall be resolved, in accordance with the provisions of Article 8. If, after following the provisions of Article 8, it is determined that the invoice ought to be paid by the Service Receiver, the Service Receiver shall pay to the Service Provider the amount owing under the disputed invoice within fifteen (15) days of the date of such final determination.

3.7 Responsibility for Costs in Connection with Changes in Law or Regulation

The Service Provider will notify the Service Receiver of any changes to applicable laws and regulations that may impact the performance or cost of the Contract Services. If the changes to the applicable laws or regulations increase the Service Provider's costs in performing the Contract Services, the Service Receiver and Service Provider will amend this Agreement to reflect those increased costs, and the Service Receiver will be responsible for such increased costs.

ARTICLE 4

INDEMNITIES AND LIMITATION OF LIABILITY

4.1 Indemnity

Each Party (the “**Indemnifying Party**”) shall indemnify, defend and save harmless the other Party (the “**Indemnified Party**”) from and against any and all losses, claims, damages, liabilities or expenses (including legal expenses on a solicitor and his own client basis) suffered or incurred by the Indemnified Party as a result of, arising out of, or in connection with, the gross negligence or willful misconduct of the Indemnifying Party in the performance, purported performance, or non-performance of this Agreement, or the Indemnifying Party’s breach of this Agreement, except to the extent caused by the gross negligence or willful misconduct of the Indemnified Party or to the extent that any such act or omission was done or omitted pursuant to the specific instructions of the Indemnified Party.

4.2 Limitation of Liability for Consequential Damages

Notwithstanding anything to the contrary contained in this Agreement, neither Party will be liable to the other Party for any damage, cost, expense, injury, loss or other liability of an indirect, special or consequential nature suffered by the other Party or claimed by any third party against the other Party which arises due to such Party's failure to perform its obligations under this Agreement or for any other reason (including negligence on its part or on the part of any person for whose acts it is responsible), howsoever and when-so-ever caused, and whether arising in contract, negligence or other tort liability, strict liability or otherwise. Without limiting the generality of the foregoing, damage, injury or loss of an indirect or consequential nature shall include loss of revenue, loss of profits, loss of production, loss of earnings, loss of contract, cost of purchased or replacement capacity and energy, cost of capital and loss of the use of any facilities or property owned, operated, leased or used by the other Party or a third party.

ARTICLE 5 TERM

5.1 Term

This Agreement shall commence on the Effective Date and shall continue in full force until December 31, 2026 unless terminated in accordance with Section 10.1 or otherwise agreed to by the Parties in writing (the “**Term**”).

ARTICLE 6 CONFIDENTIALITY

6.1 Confidentiality

Subject to Section 6.2, each Party shall keep confidential and shall not:

- (a) use, except for the purpose of performing its obligations or exercising its rights under this Agreement; or
- (b) disclose, except as contemplated or permitted in this Agreement;

any confidential information, trade secret or confidential financial, technical, scientific,

business or other confidential or proprietary information or document of the other Party or its Affiliates received by it or any of its Affiliates in the course of, or as a result of, the relationship established between the Parties pursuant to this Agreement (herein referred to collectively as the “**Information**”).

6.2 Exceptions

A Party shall be entitled to disclose any Information to the extent:

- (a) such Information is or becomes generally known to the public other than through a breach of this Agreement or any other obligation of confidentiality between the Parties;
- (b) such Information is lawfully obtained by that Party from a third party or parties without breach of this Agreement or any other obligation of confidentiality between the Parties, as shown by documentation sufficient to establish the third party as the source of such Information and to the knowledge of the disclosing Party, without such disclosure constituting a breach by such third party or parties of an obligation of confidentiality;
- (c) such Information is comprised of technical Information and was known to the disclosing Party prior to receipt thereof from the other Party, as shown by documentation sufficient to establish such knowledge;
- (d) such Information was developed by the receiving Party independently of the disclosures made by the disclosing Party under this Agreement;
- (e) such disclosure is required in connection with any regulatory, legal or administrative proceeding; provided that where circumstances permit prior to disclosure, the disclosing Party shall notify the other Party in writing of such proposed disclosure and at the other Party's request (and expense) apply for appropriate court or other orders to preserve the confidentiality of such Information;
- (f) that such disclosure is required by law or by order of any governmental body having competent authority; provided that where the circumstances permit prior to disclosure (other than any disclosure required by applicable securities laws) the disclosing Party shall notify the other Party in writing of any such proposed disclosure and shall at the other Party's request (and expense) apply for appropriate court or other orders to preserve the confidentiality of such Information; and
- (g) the other Party shall have provided its prior written approval for such disclosure by the disclosing Party.

ARTICLE 7
FORCE MAJEURE

7.1 Relief from Obligations

Subject to Section 7.3, if by reason of Force Majeure either Party to this Agreement is unable, wholly or partially, to perform or comply with its covenants and obligations hereunder, then the Party so affected by Force Majeure shall be relieved of liability and shall suffer no prejudice for failing to perform or comply during the continuance and to the extent of the inability so caused from and after the happening of the event of Force Majeure; provided that the Party invoking Force Majeure gives to the other Party prompt notice, written or oral (but if oral, promptly confirmed in writing) of such inability and reasonably full particulars of the cause thereof. If notice is not promptly given then the Party suffering the Force Majeure shall only be relieved from such performance or compliance from and after the giving of such notice. The Party invoking Force Majeure shall use all reasonable efforts to remedy the situation and remove, so far as possible and with reasonable dispatch, the cause of its inability to perform or comply; provided, however, that settlement of strikes, lockouts and other industrial disturbances shall be wholly within the discretion of the Party involved. The Party invoking Force Majeure shall give prompt notice of the cessation of the event of Force Majeure. Nothing in this Article 7 shall relieve a Party of its obligations to make payments when due hereunder.

7.2 Force Majeure

For the purposes of this Agreement, force majeure (“**Force Majeure**”) shall mean any event beyond the reasonable control of the Party invoking Force Majeure, including therein but without restricting the generality thereof:

- (a) lightning, storms, earthquakes, landslides, floods, washouts, and other Acts of God;
- (b) fires, explosions, ruptures, breakage of or accidents to pipelines, plants, machinery, equipment or storage facilities;
- (c) strikes, lockouts, or other labour disturbances;
- (d) civil disturbances, sabotage, war, blockades, insurrections, vandalism, riots, epidemics;
- (e) acts of terrorism;
- (f) arrests and restraints by governments or governmental agencies;
- (g) the order of any court;
- (h) inability to obtain or curtailment of supplies of feed stocks or of electric power, water, fuel or other necessary utilities or services to operate any facilities or of any materials or equipment; or

- (i) inability to obtain or revocation or amendment of any permit, authorization or approval of any governmental authority required to perform or comply with any obligation under this Agreement, unless the revocation or modification of any such necessary permit, authorization or approval was caused by the violation of the terms thereof or consented to by the party holding the same.

7.3 Exclusions from Relief

No Party shall be entitled to the benefits of the provisions of this Article 7 under any of the following circumstances:

- (a) if the failure to perform or comply with any of the covenants or obligations herein imposed upon it was caused by arrest or restraint by governments or governmental agencies or the order of any court and such arrest, restraint or order was the result of a breach by the Party claiming suspension of the term of a permit, license, certificate or other authorization granted by a governmental or regulatory body having jurisdiction or of any applicable laws, regulations or orders;
- (b) if the failure to perform or comply with any of the covenants or obligations herein imposed upon it was caused by the Party invoking Force Majeure having failed to use all reasonable efforts to remedy the situation and remove, so far as possible and with reasonable dispatch, the cause of its inability to perform or comply with such covenants or obligations; or
- (c) if the failure to perform or comply with any of the covenants or obligations herein imposed upon it was caused by lack of funds or other financial cause for whatever reason.

ARTICLE 8 DISPUTE RESOLUTION

8.1 Dispute Resolution

In the event of any dispute arising between the Parties as to the interpretation, application, operation or alleged violation of this Agreement or any of the provisions (collectively, “Disputes”), in the first instance the Dispute will be settled by the Parties at the operational level.

If a Dispute is not resolved within a reasonable period of time from notification, then, within a reasonable time following written notice from one Party to the other, a senior officer or representative will be appointed by each Party and will meet to attempt to resolve the Dispute and will record any resolution in writing which will be final and binding.

In the event any Dispute is not settled by the senior officers within a reasonable time then either Party will be entitled to give to the other Party notice of such Dispute and to request arbitration by a single arbitrator if a single arbitrator can be mutually agreed upon by the Parties

within 15 calendar days of such notice. If the Parties cannot agree on a single arbitrator within the 15 calendar day period then each Party will select one person to act as arbitrator and the two persons so appointed as arbitrators will select a third arbitrator. Provided that, if either of the Parties fail to select an arbitrator within 30 calendar days of the date of the receipt of notice of such Dispute then an arbitrator to represent the Party that has failed to select an arbitrator may, upon petition of the Party not in default, be appointed by a Justice of the Court of Queen's Bench of Alberta. Except as provided, the provisions of the Arbitration Act (Alberta) will apply. The costs of any arbitration will be borne equally by the Parties unless otherwise ordered by the arbitrator(s). The arbitration will be conducted in English and take place in a location in Alberta, Canada.

The Service Provider will continue to carry out the Contract Services during any arbitration proceedings and the Service Receiver will continue to make payments for undisputed Contract Services in accordance with this Agreement. The decision of the arbitrator(s) will be final and binding upon the Parties.

ARTICLE 9

NOTICE AND REPRESENTATIVES

9.1 Representatives of the Parties

Each Party will designate a primary representative for the purposes of this Agreement, who will have technical, administrative, operational and decision making authority and who will receive all kinds of communications related to the performance of the Agreement. The Parties may substitute their representatives at any time by giving notice. The Parties representatives are:

The Service Provider:

Senior Vice President North American Commercial Services
Suite 2000, 10423 101 Street NW
Edmonton, Alberta
T5H 0E8

The Service Receiver:

Director, Commercial Operations
#10 – D 1343 Alberni Highway, Pine Tree Centre
Parksville, British Columbia
V9P 2B9

9.2 Notice

Any notice, consent, request or other communication to be given in connection with this Agreement shall be in writing and shall be given by:

- (a) personal delivery or registered mail, postage prepaid, to the following address for the recipient addressed to the recipient as follows:

To Service Provider:

EPCOR Commercial Services Inc.
2000 – 10423 101 Street NW
Edmonton, AB T5H 0E8

To Service Receiver:

EPCOR Water (West) Inc.
#10 – D 1343 Alberni Highway, Pine Tree Centre
Parksville, British Columbia
V9P 2B9

or to such other address, email address or individual for notice as may then have been designated by the respective Party pursuant to Section 9.3. Any communication given to a Party as aforesaid shall be deemed to have been given at the time and upon the date of the receipt at the address of such Party.

9.3 Change of Address

Any Party may, from time to time, change its address or individual for notice by a notice given to the other Party in accordance with Section 9.2.

**ARTICLE 10
GENERAL**

10.1 Termination

- (a) During the Term, a Party shall have the right to terminate this Agreement at any time and for any reason by giving sixty (60) days' written notice to the other Party.
- (b) The Parties by mutual written agreement may terminate this Agreement at any time.

10.2 Time of Essence

Time shall be of the essence in this Agreement and of all of its terms.

10.3 Further Assurance

The Parties shall with reasonable diligence perform all acts, execute and deliver all documents and instruments, do all such things and provide all such reasonable assurances as may be necessary or desirable to give effect to the provisions of this Agreement.

10.4 Amendments or Waiver

This Agreement may not be amended except by written instrument signed by all of the Parties hereto. No indulgence or forbearance by any Party hereunder shall be deemed to constitute a waiver of its rights to insist on performance in full and in a timely manner of all covenants of each of the other Parties hereunder and any such waiver, in order to be binding upon a Party, must be express and in writing and signed by such Party, and then such waiver shall be effective only in the specific instance and for the purpose for which it is given. No waiver of any term, condition or covenant by any Party shall be deemed to be a waiver by such Party of its rights to require full and timely compliance with the same term, condition or covenant thereafter, or with any other term, covenant or condition of this Agreement at any time.

10.5 No Discharge on Termination

Any provision of this Agreement under which an obligation of one Party hereto has accrued but has not been discharged shall not be affected by termination of this Agreement, nor shall the Party liable to perform be discharged as a result of any such termination, nor shall termination prejudice any right of one Party against the other in respect of anything done or omitted hereunder prior to such termination or in respect of any right to damages or other remedies.

10.6 Enurement

This Agreement shall enure to the benefit of and be binding upon the Service Provider and the Service Receiver and their respective successors and permitted assigns.

10.7 Assignment

This Agreement shall be assignable by either Party as necessary in connection with any bona fide financings, financing leases, reorganizations and mergers, but this Agreement shall not otherwise be assigned by either Party without the prior written consent of the other Party, which consent each of the Parties covenants not to unreasonably withhold. Notwithstanding any permitted assignment, the assignor shall continue to remain liable for the performance of obligations under this Agreement unless such assignor is released therefrom by instrument in writing signed by the other Party.

10.8 Counterparts

This Agreement may be executed in one or more counterparts and may be delivered by email in portable document format (PDF), each of which shall be deemed to be an original but all of which when taken together shall constitute one and the same agreement.

[Remainder of page intentionally left blank. Signature page to follow.]

IN WITNESS WHEREOF this Agreement has been duly executed by the Parties hereto by the signatures of their respective officers duly authorized in that behalf effective as of the day and year first above written.

EPCOR Commercial Services Inc.

Per:  _____

Joe Gysel
Senior Vice President, North American
Commercial Services
November 16, 2023

EPCOR WATER (WEST) INC.

Per:  _____

Christian Madsen
Director, Commercial Operations
November 16, 2023

SCHEDULE A

Contract Services for Services Rendered January 01, 2024 – December 31, 2026

A1. SERVICES PROVIDED BY THE SERVICE PROVIDER (ECSI) ON AN ALLOCATED BASIS

1. Financial Services / Business Unit Controller group

All financial services necessary to carry on the Business including, without limitation, the following functions:

- (a) Financial oversight.
- (b) Administration of the financial reporting services.
- (c) Asset accounting administration.
- (d) Budget administration and development and maintenance of corporate accounting policies and procedures.
- (e) Financial support for regulatory applications.
- (f) Manage capital governance process
- (g) Manage long term planning

2. Operational Health and Safety / Business Unit Health, Safety and Environment group

All operational health and safety services necessary to carry on the Business including, without limitation, the following functions:

- (a) Ensuring that existing Health and Safety practices and procedures are well designed and in compliance with legislation and compatible with Service Provider Safety Management Policies.
- (b) Business services including internal loss management, safety and training and related support staff.
- (c) Health, Safety and Environment Audit and Inspections.
- (d) Environmental Issues Management.
- (e) Health, Safety, Environment and Training, Legal Compliance and Reporting.

All safety program services necessary to carry on the Business including, without limitation, the following functions:

- (a) Implement and ensure maintenance of EPCOR based safety program.
- (b) Provide necessary support during incidents and investigative support.
- (c) Access to all safety training.
- (c) Review, track, and provide corrective action of safety performance within the water utility.

Lab Quality Assurance Program:

- a) Site Evaluations twice per year (site visit) – one initial evaluation and then follow-up site evaluations.
- b) Lab SOPs and Lab Calibration Procedures – development, document control, review, and updating as required.
- c) Trending – set up of control charts annually, and review on a routine basis.
- d) Lab Equipment Calibration Documentation twice per year with Audit report
- e) Monthly and annual regulator report review. Troubleshooting (onsite lab methods and third-party lab results): instrument, QC, regulatory exceedances, AEPA electronic reporting, etc.).
- f) Review of the third-party lab data, and sending out reminders for regulatory sampling for third-party labs.

3. Public & Government Affairs / Business Unit Operations Communications group

All public and government affairs services necessary to carry on the Business including, without limitation, the following functions:

- (a) Stakeholder relations and public consultation services.
- (b) Internal communications (related to business unit matters).
- (c) External communications (includes coordination of business' unit considerations such as public safety notices, performance reports, public addresses and presentations, print collateral, operational issues management, etc.).

4. Human Resources / Business Unit Human Resources group

All human resources functions necessary to carry on the Business including, without limitation, the following functions:

- (a) Human resources management.
- (b) Abilities management.
- (d) Recruiting.

5. Learning and Development/Technical Training group

All learning and development/technical training functions necessary to carry on the Business including, without limitation, the following functions:

- a) Monitor compliance to legislated Health and Safety training.
- b) Monitor compliance to EPCOR, French Creek, and position specific mandated training.
- c) Facilitate and coordinate the delivery of Learning and Development programs, courses and services.
- d) Sourcing and vetting of local approved training providers.
- e) Administration and reporting of training records.
- f) Developing and delivering specific training as required.
- g) Support the development of standard operating procedures and other controlled documents.
- h) Maintain CEU Tracker, and provide support to operators for AEP certifications.
- i) Attend quarterly meetings with operations managers.

6. Supply Chain Management group

All supply chain management functions necessary to carry on the Business including, without limitation, the following functions:

Procurement:

- a) Lead the entire procurement process for capital projects at French Creek. Including the preparation of contract documents (RFP, RFI, RFQ), supplier evaluation, award of contract, contract negotiations, contract execution and debrief process.

- b) Setting up Purchase Orders and requisitions and reconciling with contract documents and processes
- c) Set up and manage Master Service Agreements and amendments with consultants and contractors.
- d) Assist with cross border customs and procurement.
- e) Ensuring compliance with Trade agreements and EPCOR policies.
- f) Chemical sourcing and procurement.
 - Chemical supplier relationships
 - Shipping/transport logistics
 - Alliances
- g) Assist and support with procurement inquiries, training, guidance and governance.

Warehousing:

- a) Obtain quotes and product information for materials, supplies and PPE.
- b) Order requests and shipping.
- c) Logistics support for lab supplies and samples.

7. Regulatory group

All regulatory functions necessary to carry on the Business including, without limitation, the following functions:

- a) Developing and filing French Creek regulatory applications
- b) Liaise with French Creek regulators

8. Asset Management

All asset management functions necessary to carry on the Business including, without limitation, the following functions:

- a) Provide IVARA support to French Creek. This includes assistance with scheduling and documentation for preventative and corrective maintenance.

- b) Training Lead Hands on IVARA, as well as other personnel as required.
- c) Develop and maintain French Creek site Asset Management Plans as required.
- d) Assist in development of asset management summary reports; support annual reports and management plans.
- e) Develop and maintain the SharePoint Asset Information Library for French Creek.
- f) Facilitate asset Condition and Criticality Assessments and reliability program reviews.
- g) Develop, update, and maintain five and ten year capital replacement Plans as required.
- h) Assist Project Managers with capital planning for clients.
- i) Update asset status, re-life assets, and adjust reliability programs as requested.
- j) Attend French Creek asset management meetings (one per month).

9. Control and Automation Engineering

All control and automation engineering functions necessary to carry on the Business including, without limitation, the following functions:

- 1) Operational Support
 - a. Perform and manage scheduled control system backups (Including historian data) on and/or offsite
 - b. Ensure current Malware protection and security patching for all control systems
 - c. Asset management plans and recommendations for controls assets
 - d. Implementation of system upgrades and asset management plans
 - e. Control system communication and networking support
 - f. Troubleshooting operational issues related to instrumentation, networks, PLCs, programming, etc.
 - g. Maintaining and repairing all SCADA infrastructure as required
 - h. Annual review of services and requirements with site management
 - i. Participate in management of change process as required

2) Project Support

- a. Design and review of new and modified control systems in all relevant projects at French Creek
- b. HMI software and hardware implementation in the field
- c. Network design including firewalls and internet communication
- d. Develop and maintain Control Narratives/ Philosophies
- e. Develop and maintain Control System standards
- f. Collaborate with project managers and contractors and consultants on project specific deliverables

3) Operational Technology Cybersecurity

- a. Cyber monitoring of the control system networks
- b. Completion of requirements as mandated by EPCOR's Cybersecurity Governance Council
- c. Completion of yearly Cybersecurity Capability Maturity Model assessment
- d. Annual client reports on cybersecurity for each site

4) ISAT audit support

- a. Provide standards and information for corporate audits
- b. Respond to audit findings

5) Control System Software support

- a. Review, negotiate and implement licensing agreements with HMI and other controls vendors as required.

SCHEDULE B
Basis of Payment for Contract Services for Services Rendered
January 1, 2024 – December 31, 2026

A1. The annual Compensation payable by the Service Receiver to the Service Provider for the Term shall be as follows:

Services Provided	2024	2025	2026
A1. Shared Services provided by the service provider and Affiliates	\$61,877	\$60,363	\$61,571

B. Method of Payment and True Up

The Service Provider will charge the Service Receiver a monthly contract price (calculated as 1/12th of the annual Compensation) for ongoing services provided under Schedule A. At the end of the year, the Service Provider will true up the charged amount with the allocated costs.

1.0 CORPORATE SERVICE COSTS

1.1 Overview

1. EPCOR Water West Inc. (“EWW”) obtains corporate service from its parent corporation, EPCOR Utilities Inc. (“EUI” or “EPCOR”). Corporate services are comprised of activities that are centrally managed within the EPCOR group due to their nature and/or for the purpose of realizing economies and greater effectiveness. The amounts paid by EWW in respect of these services include Corporate Service Charges. The Corporate Service Charges are determined on a cost recovery basis in accordance with EPCOR’s Inter-Affiliate Code of Conduct and are reflected in a Service Agreement between the parties.

2. This section describes the corporate services received from EUI and the allocation process used by EUI to EWW. The process used to develop the forecast and allocation of Corporate Service Charges is described in Section 1.2 below.

3. For some functional categories, such as Human Resources, Supply Chain and Public and Government Affairs, services are provided from both EUI and EPCOR Commercial Services Inc. (“ECSI”). In these instances, the services provided by EUI tend to be limited to governance, oversight, and broad policy considerations, while the services provided by ECSI are more tactical and are specifically driven by the business needs of ECSI.

1.2 Corporate Services Departments

4. The organization of the Corporate Services departments remains largely the same as in EWW’s 2021-2023 RRA Application, with the exception of:

- The restructuring of Supply Chain Management in October 2020
- The creation of a centralized Accounts Receivable function in 2021
- The creation of an Organizational Project Management function in 2020
- The transfer of Security from Supply Chain Management to Health, Safety and Environment in April 2022.

5. There are 12 Corporate Services departments providing services to EUI and its subsidiaries through a shared services model. This model is appropriate because of the governance nature of the services and/or the substantial economies of scale inherent in delivering the services through a shared services model. The Corporate Services departments and services include:

- Supply Chain Management

- Human Resources
- Information Services
- Corporate Finance Services
- Executive and Executive Assistants
- Treasury
- Board
- Audit and Risk Management
- Public and Government Affairs
- Legal Services
- Health, Safety, Security and Environment
- Incentive Compensation

1.3 Corporate Cost Forecast and Allocation Process

6. The Forecast Corporate Services Costs are based on EUI's 2024 budget. Consistent with previous years, EUI used a "bottom up" approach to budget expenditures based on the best available information with respect to historical workloads and expected work activity and cost levels. EUI also continued to allocate Corporate Services costs to the EPCOR business units using the following six step process:

- i) Categorize Corporate Services costs as either directly assignable or allocable.
- ii) Assign directly assignable costs to the appropriate business unit.
- iii) Review/develop/modify/refine allocation methods for allocable costs.
- iv) Apply allocation methods to allocable costs.
- v) Conduct a final review for reasonableness.

Step 1 – Categorize Corporate Service costs as either directly assignable or allocable.

7. The first step was to review each Corporate Service cost and categorize it into one of two defined groups:

- Directly assignable costs
- Allocable costs

8. Directly assignable costs are costs that are directly associated with a particular business unit's activity or operation. The relevant Corporate Services department and business unit work together to determine the quantum of directly assigned costs, if any, related to the Corporate Service in question.

9. Allocable costs are those costs that provide benefits to EUI business units but by their nature cannot be directly assigned and are charged to business units using appropriate cost allocators. These costs are allocated among EPCOR business units using cost allocators that reflect the factor or factors that drive the cost of providing the Corporate Service to each business unit.

10. Directly assignable Corporate Services costs include the following:

- Certain information system operating costs that can be directly attributable to the business units (e.g., support costs for business unit specific applications and databases; server costs and licensing fees that relate to business unit specific applications; and desktop support costs for desktops that are used by the business unit).

Step 2 - Assign directly assignable costs to Business Units

11. Once the directly assignable costs are identified and determined, they are charged directly to each Business Unit. Directly assignable costs are included in the budgets of the business units, and are not included in the budgets of the respective Corporate Services departments (i.e., they are removed from the Corporate Services departments' "cost pools", with the remaining costs forming the pool of allocable costs for each department).

Step 3 - Review/develop/modify/refine allocation methods for allocable costs

12. EPCOR's cost allocation process is designed to ensure that the allocation of Corporate Services costs among business units is appropriate, fair and reasonable, cost-effective, predictable, reflects the benefit received by function (i.e., cost causation), and is consistent with the transfer pricing principles in EPCOR's Inter-Affiliate Code of Conduct.

13. If EUI determines that an individual allocator or allocation method should be revised, then business unit executives become involved to provide input and to test the validity of potential revisions. Input is also solicited from the business units relating to the data which forms the basis for the allocators, which is then input into the corporate allocation model along with the EUI budget.

14. EUI's approach to determining its allocation methods is as follows:

15. The costs associated with a Corporate Services department, except for the Treasury department, are allocated on one of two bases: (i) using a single "functional cost causation allocator", or (ii) using a "composite cost causation allocator". The allocation methods used for Treasury costs are different and are outlined in Table D-3-1, below.

16. A functional cost causation allocator has been used where the costs can be logically allocated using an identified cost causation driver, such as headcount. The composite cost causation allocator has been used where the costs cannot be allocated using a particular functional cost causation allocator. The latter types of costs tend to be related to Corporate Services that are of a governance nature, and it is appropriate that these types of costs be allocated based on a combination of the business unit's share of EPCOR's group revenues, assets, and headcount.

17. The allocation methods applicable to EUI's allocable Corporate Service costs in EUI's 2024 Budget are summarized in Table D-3-1 below.

**Table D-3-1
Cost Allocators 2024**

Department and Function	A Allocators
Supply Chain Management	
1 Mailroom	Functional Cost Causation - Headcount
2 Disaster Recovery Planning	Functional Cost Causation - Direct IS Costs
3 Procurement	Functional Cost Causation - SCM Embedded Headcount
4 Real Estate	Composite - EUI Revenue, Assets, Headcount
5 SCM Corporate	Composite - EUI Revenue, Assets, Headcount
Human Resources	
6 Total Rewards	Functional Cost Causation - Headcount
7 Human Resources Consulting	Functional Cost Causation - Headcount
8 Talent Management	Functional Cost Causation - Headcount
9 Learning and Development	Functional Cost Causation - Headcount
Information Services	
10 Major Capital Projects	Functional Cost Causation - Headcount
11 Application Services	Functional Cost Causation - Headcount
12 Infrastructure Operations	Functional Cost Causation - Direct IS Costs
Corporate Finance Services	
13 Corporate Finance	Composite - EUI Revenue, Assets, Headcount
14 Accounts Payable	Functional Cost Causation - Number of Invoices
15 Accounts Receivable	Functional Cost Causation – Number of AR invoices
16 Management Development Program	Composite - EUI Revenue, Assets, Headcount
Executive and Executive Assistants	
17 All Costs	Composite - EUI Revenue, Assets, Headcount
Treasury	
18 Treasurer - Corporate Finance	40% PP&E, 30% CapEx, 30% Acquisitions
19 Treasury Operations	50% of (NI + Depreciation), 50% Debt
20 Taxation	Composite – EUI Revenue, Assets, Headcount
Board	
21 All Costs	Composite - EUI Revenue, Assets, Headcount
Audit and Risk Management	
22 Internal Audit	Composite - EUI Revenue, Assets, Headcount
23 Organizational Project Management	Functional Cost Causation – PP&E
24 Centre of Excellence	Composite - EUI Revenue, Assets, Headcount
25 Risk Management	Functional Cost Causation - PP&E
Public and Government Affairs	
26 Corporate Communications	Functional Cost Causation - Net Income
27 Government Relations	Composite - EUI Revenue, Assets, Headcount
28 Community Relations	Functional Cost Causation - Net Income
Legal Services	
29 All Costs	Composite - EUI Revenue, Assets, Headcount
Health, Safety, Security and Environment	
30 Health, Safety and Environment	Functional Cost Causation – Headcount
31 Security	Functional Cost Causation - Headcount
Incentive Compensation	
32 All Costs	Average Corporate Cost Allocation

Step 4 – Apply allocation methods to allocable costs

18. Once the allocation methods were determined, they were applied against EUI’s final budgeted Corporate Services costs to arrive at the amounts charged to each business unit.

Step 5 – Final review of Corporate Service Charges for reasonableness

19. The resulting Corporate Services charges were carefully reviewed by EWW and EUI management to confirm that the process set out above was properly applied, and that the resulting charges were reasonable.

1.4 Direct Assigned Corporate Costs

20. Certain costs are directly assigned from EUI to its business units. These direct assigned costs include information services (“IS”) application support, IS infrastructure support (i.e., desktops, servers, network, databases, printers, etc.), corporate security, and Athletes Move Safe training program and mental health training program.

APPENDIX E-4**EPCOR COMMERCIAL SERVICES INC.
SHARED AND DIRECT SERVICE CHARGES
ALLOCATION METHODOLOGY****1.0 OVERVIEW**

1. As a member of the EPCOR group of companies, EPCOR Water (West) Inc. (“EWW”) obtains certain services from EPCOR Commercial Services Inc. (“ECSI”) to enable EWW to carry on business as the owner and operator of the French Creek water utility. These services allow EWW to benefit both from the extensive experience and expertise that resides within ECSI and from economies of scale and scope that arise from the EPCOR group’s inter-corporate services approach to its business operations.

2. The services provided by ECSI, many of which specifically relate to technical aspects of the water utility business, include: (1) Shared Services, which are financial, administrative and other services that are allocated to EWW through an annual fee, as shown in Financial Schedule 2.3; and (2) Direct Services, which are management and technical services provided by ECSI, and directly charged to EWW based on direct labour costs, material costs and other expenses directly related to a specific job.

3. All of these services are provided pursuant to an inter-corporate services agreement between EWW and ECSI, a pro-forma copy of which is attached as Appendix E-2 to this Application. In return for these services, EWW pays inter-corporate service charges to ECSI in accordance with the terms of the agreement.

4. Appendix E-3 describes the services and associated costs related to services that are provided from EUI to EWW. These services are provided by functional groups that are part of the EUI corporate group while Shared and Direct Services are provided by functional groups from within ECSI. For some functional categories, such as Human Resources, Supply Chain and Public and Government Affairs, services are provided from both EUI and ECSI. In these instances, the services provided by EUI tend to be limited to governance, oversight and broad policy considerations, while the services provided by ECSI are more tactical and are specifically driven by the business needs of EWW.

5. The specific shared services that ECSI provides to EWW, including the methodologies used to determine the inter-corporate service charges, are described below.

2.0 SHARED SERVICES PROVIDED BY ECSI

6. Sections 2.1 to 2.9 below sets out the allocated Shared Services provided by ECSI to EWW.

2.1 Financial Services / Business Unit Controller group

7. All financial services necessary to carry on the Business including, without limitation, the following functions:

- a) Financial oversight.
- b) Administration of the financial reporting services.
- c) (Asset accounting administration.
- d) Budget administration and development and maintenance of corporate accounting policies and procedures.
- e) Financial support for regulatory applications.
- f) Manage capital governance process
- g) Manage long term planning

2.2 Operational Health and Safety / Business Unit Health, Safety and Environment group

8. All operational health and safety services necessary to carry on the Business including, without limitation, the following functions:

- a) Ensuring that existing Health and Safety practices and procedures are well designed and in compliance with legislation and compatible with Service Provider Safety Management Policies.
- b) Business services including internal loss management, safety and training and related support staff.
- c) Health, Safety and Environment Audit and Inspections.

- d) Environmental Issues Management.
 - e) Health, Safety, Environment and Training, Legal Compliance and Reporting.
9. All safety program services necessary to carry on the Business including, without limitation, the following functions:
- a) Implement and ensure maintenance of EPCOR based safety program.
 - b) Provide necessary support during incidents and investigative support.
 - c) Access to all safety training.
 - d) Review, track, and provide corrective action of safety performance within the water utility.

Lab Quality Assurance Program:

- a) Site Evaluations twice per year (site visit) – one initial evaluation and then follow-up site evaluations.
- b) Lab SOPs and Lab Calibration Procedures – development, document control, review, and updating as required.
- c) Trending – set up of control charts annually, and review on a routine basis.
- d) Lab Equipment Calibration Documentation twice per year with Audit report
- e) Monthly and annual regulator report review. Troubleshooting (onsite lab methods and third-party lab results): instrument, QC, regulatory exceedances, AEPA electronic reporting, etc.).
- f) Review of the third-party lab data, and sending out reminders for regulatory sampling for third-party labs.

2.3 Public & Government Affairs / Business Unit Operations Communications group

10. All public and government affairs services necessary to carry on the Business including, without limitation, the following functions:

- a) Stakeholder relations and public consultation services.
- b) Internal communications (related to business unit matters).
- c) External communications (includes coordination of business' unit considerations such as public safety notices, performance reports, public addresses and presentations, print collateral, operational issues management, etc.).

2.4 Human Resources / Business Unit Human Resources group

11. All human resources functions necessary to carry on the Business including, without limitation, the following functions:

- a) Human resources management.
- b) Abilities management.
- c) Recruiting.

2.5 Learning and Development/Technical Training group

12. All learning and development/technical training functions necessary to carry on the Business including, without limitation, the following functions:

- a) Monitor compliance to legislated Health and Safety training.
- b) Monitor compliance to EPCOR, French Creek, and position specific mandated training.
- c) Facilitate and coordinate the delivery of Learning and Development programs, courses and services.
- d) Sourcing and vetting of local approved training providers.
- e) Administration and reporting of training records.
- f) Developing and delivering specific training as required.
- g) Support the development of standard operating procedures and other controlled documents.

- h) Maintain CEU Tracker, and provide support to operators for AEP certifications.
- i) Attend quarterly meetings with operations managers.

2.6 Supply Chain Management group

13. All supply chain management functions necessary to carry on the Business including, without limitation, the following functions:

- Procurement:
 - a) Lead the entire procurement process for capital projects at French Creek. Including the preparation of contract documents (RFP, RFI, RFQ), supplier evaluation, award of contract, contract negotiations, contract execution and debrief process.
 - b) Setting up Purchase Orders and requisitions and reconciling with contract documents and processes
 - c) Set up and manage Master Service Agreements and amendments with consultants and contractors.
 - d) Assist with cross border customs and procurement.
 - e) Ensuring compliance with Trade agreements and EPCOR policies.
 - f) Chemical sourcing and procurement.
 - Chemical supplier relationships
 - Shipping/transport logistics
 - Alliances
 - g) Assist and support with procurement inquiries, training, guidance and governance.
- Warehousing:
 - a) Obtain quotes and product information for materials, supplies and PPE.
 - b) Order requests and shipping.
 - c) Logistics support for lab supplies and samples.

2.7 Regulatory group

14. All regulatory functions necessary to carry on the Business including, without limitation, the following functions:

- a) Developing and filing French Creek regulatory applications.
- b) Liaise with French Creek regulators.

3.0 SHARED SERVICES ALLOCATION

15. The allocation methodologies have been designed to ensure that the allocation of ECSI's shared service costs are fair and reasonable, cost-effective, predictable and reflect the benefit received by function or cost causation.

Table F-2-1
Allocation of ECSI Financial and Administrative Costs
Cost Allocators

	A Responsibility Centre and Function	B Allocator
1	Controller	Composite – ECSI Revenue, Assets, Headcount
2	Regulatory	Functional Cost Causation – ECSI Regulated Assets
3	Health, Safety and Environment	Functional Cost Causation – ECSI Headcount
4	Supply Chain Management	Composite - ECSI Revenue, Assets, Headcount
5	Operations Communications	Composite – ECSI Revenue, Assets, Headcount
6	Technical Training	Functional Cost Causation – ECSI Headcount
7	Human Resources	Functional Cost Causation – ECSI Headcount

4.0 DIRECT SERVICES PROVIDED BY ECSI

16. Direct Services, which generally relate to management and technical functions, are charged to EWW through direct charges (included in ECSI's operating and maintenance and general and administrative operating costs in Financial Schedule 2.2). These services are described below.

17. The services listed below are reflected in the Contract Services in the pro-forma inter-organizational services agreement between EWW and ECSI. These services are directly charged to EWW based on direct labour costs, material costs and other expenses directly related to a specific job.

4.1 Asset Management Services

18. All asset management functions necessary to carry on the Business including, without limitation, the following functions:

- a) Provide IVARA support to French Creek. This includes assistance with scheduling and documentation for preventative and corrective maintenance.
- b) Training Lead Hands on IVARA, as well as other personnel as required.
- c) Develop and maintain French Creek site Asset Management Plans as required.
- d) Assist in development of asset management summary reports; support annual reports and management plans.
- e) Develop and maintain the SharePoint Asset Information Library for French Creek.
- f) Facilitate asset Condition and Criticality Assessments and reliability program reviews.
- g) Develop, update, and maintain five and ten year capital replacement Plans as required.
- h) Assist Project Managers with capital planning for clients.
- i) Update asset status, re-life assets, and adjust reliability programs as requested.
- j) Attend French Creek asset management meetings (one per month).

Control and Automation Engineering

19. All control and automation engineering functions necessary to carry on the Business including, without limitation, the following functions:

- Operational Support
 - a. Perform and manage scheduled control system backups (Including historian data) on and/or offsite

- b. Ensure current Malware protection and security patching for all control systems
 - c. Asset management plans and recommendations for controls assets
 - d. Implementation of system upgrades and asset management plans
 - e. Control system communication and networking support
 - f. Troubleshooting operational issues related to instrumentation, networks, PLCs, programming, etc.
 - g. Maintaining and repairing all SCADA infrastructure as required
 - h. Annual review of services and requirements with site management
 - i. Participate in management of change process as required
- Project Support
 - j. Design and review of new and modified control systems in all relevant projects at French Creek
 - k. HMI software and hardware implementation in the field
 - l. Network design including firewalls and internet communication
 - m. Develop and maintain Control Narratives/ Philosophies
 - n. Develop and maintain Control System standards
 - o. Collaborate with project managers and contractors and consultants on project specific deliverables
- Operational Technology Cybersecurity
 - p. Cyber monitoring of the control system networks
 - q. Completion of requirements as mandated by EPCOR's Cybersecurity Governance Council
 - r. Completion of yearly Cybersecurity Capability Maturity Model assessment
 - s. Annual client reports on cybersecurity for each site
- ISAT audit support
 - t. Provide standards and information for corporate audits
 - u. Respond to audit findings

- Control System Software support
 - v. Review, negotiate and implement licensing agreements with HMI and other controls vendors as required.

4.2 Operational Audits and Due Diligence Work

20. Operational Audits and Due Diligence work involves monitoring of specific operational performance measures and tracking systems, audits of water quality and asset reviews and checks. Specific functions include:

- Introduce specific operational performance measures and tracking system.
- Regular water quality audits and Quality Assurance and Quality Control due diligence.
- Asset reviews and checks.
- Ensure implementation of all water operations programs and procedures.
- Review of monthly and annual reports and tracking of specific outcome measures.
- Annual water loss audits to monitor water use and identify any concerns with leakage.

APPENDIX F

LEAD-LAG STUDY

1.0 INTRODUCTION

1. This lead-lag study has been undertaken to support the necessary working capital allowance for EPCOR Water West (EWW) for the 2024 to 2026 rate filing with the British Columbia Comptroller of Water Rights. A lead-lag study recognizes the timing differences between EWW's provision of a service and payment, (revenue lag), and the timing differences between when an expense is incurred and subsequently paid, (expense lag). The net lag for an expense category is the difference between the associated revenue lag and the expense lag.

2. Lags are derived from analysis of each revenue and expenses stream and are broken down into their individual components in order to more precisely determine the total lag. EWW's revenues are derived from fixed and metered charges for residential, multi-residential, commercial, and other sources. Since revenue cycles and the lead periods for each are not significantly different, they are considered together. Operating expenses are broken down into labour, salary and benefits, incentives, general expenses, property taxes, and parent charges. An overall operating expense lag is then calculated on a weighted average and netted against the appropriate revenues. Net lags are also calculated for GST and individual capital expenses including debt interest, retained earnings, dividends, and depreciation.

3. The working capital ratio (net lag/365) is then applied against the corresponding expense amount to determine the portion of necessary working capital related to each component.

4. Lags are made up of two general components: consumption and payment.

- Consumption lag is the lag between when a service is provided or good consumed and the end of a consumption period. For example, if a service is billed on a weekly basis, the consumption period is a week and the consumption lag would vary between zero and seven days, depending on when the service was provided. As it is generally assumed that consumption occurs evenly over the consumption period, the mid-point of a consumption period is used to determine the consumption lag. In a weekly consumption period, the consumption lag would be 3.5 days (7/2) or in a monthly consumption period with 30 days the consumption lag would be 15 days (30/2).
- Payment lag is the time between the end of the consumption period and the receipt of cash. The payment lag sometimes includes a processing lag, which is time

required to receive, process, and issue the order to proceed, however this is not always considered separately from the payment lag. The payment lag is also measured in days and is the length between the last day of the consumption period and payment issue.

5. The lead-lag methodology used in this report is consistent with EPCOR Water Services Inc 2022-2026 PBR Application.

2.0 EXECUTIVE SUMMARY

6. The overall impact of the lead-lag study using 2022, 2021, and 2020 actual financial results are shown in Table 2.0-1

Table 2.0-1
Summary of Necessary Working Capital
(**\$**)

	A	B	C	D	E	F	G	H	I
	2022			2021			2020		
	Actual	Ratio	Working Capital	Actual	Ratio	Working Capital	Actual	Ratio	Working Capital
1 Operating Expense, net of revenue offsets	1,329,628	5.7%	76,422	1,119,143	13.5%	150,689	1,120,057	9.8%	109,604
2 Depreciation	159,854	17.8%	28,447	164,481	25.3%	41,677	160,936	21.4%	34,467
3 Retained Earnings	82,637	17.8%	14,706	334,459	25.3%	84,746	148,519	21.4%	31,807
4 Interest Expense	45,814	0.9%	434	54,076	8.5%	4,591	61,910	4.6%	2,828
5 GST collection	-	5.3%	-	-	5.3%	-	-	8.9%	-
6 GST Input Tax Credit	18,389	1.8%	323	20,542	1.8%	361	25,399	1.8%	452
7 Necessary Working Capital			120,332			282,064			179,158

7. The ratios used to determine EWW's necessary working capital requirements reflect the revenue and expense lags as shown in Tables 2.0-2 to 2.0-4.

Table 2.0-2
Summary of Lags and Working Capital Ratio - 2022
(**days**)

	A	B	C	D
	Revenue	Expense	Net	Ratio
1 Water Service	65.0	44.0	21.0	5.7%
2 Fire Protection	65.0	44.0	21.0	5.7%

3	GST Collection	65.0	45.6	19.3	5.3%
4	GST Input Tax Credit	66.6	60.2	6.4	1.8%
Capital Expenses					
5	Debt Interest	65.0	61.5	3.5	0.9%
6	Retained Earnings	65.0	-	65.0	17.8%
7	Depreciation	65.0	-	65.0	17.8%

Table 2.0-3
Summary of Lags and Working Capital Ratio - 2021
(days)

	A	B	C	D	
	Revenue	Expense	Net	Ratio	
1	Water Service	92.5	43.3	49.1	13.5%
2	Fire Protection	92.5	43.3	49.1	13.5%
3	GST Collection	92.5	45.6	46.9	12.8%
4	GST Input Tax Credit	66.6	60.2	6.4	1.8%
Capital Expenses					
5	Debt Interest	92.5	61.5	31.0	8.5%
6	Retained Earnings	92.5	-	92.5	25.3%
7	Depreciation	92.5	-	92.5	25.3%

Table 2.0-4
Summary of Lags and Working Capital Ratio – 2020
(days)

	A	B	C	D	
	Revenue	Expense	Net	Ratio	
1	Water Service	78.2	42.5	35.7	9.8%
2	Fire Protection	78.2	42.5	35.7	9.8%
3	GST Collection	78.2	45.8	32.4	8.9%
4	GST Input Tax Credit	66.8	60.3	6.5	1.8%
Capital Expenses					
5	Debt Interest	78.2	61.5	16.7	4.6%
6	Retained Earnings	78.2	-	78.2	21.4%
7	Depreciation	78.2	-	78.2	21.4%

8. Working capital lags between 2020 and 2022 have fluctuated on the revenue side which is attributable to changes in customer payment lag (accounts receivable balance). Changes in expense

lags are primarily attributable to changes in the proportion of other operating expenses which have a larger lag than the other expense categories.

3.0 REVENUE

9. The revenue lag is the measure of time from consumption or provision of a service by EWW to the receipt of payment from the customer. All EWW’s revenue streams, including water service, fire protection, and other revenues derived from water connections, service charges and various miscellaneous revenues, are subject to the same billing and payment cycles. Therefore, since these revenues are all billed in the same manner and are based on the same payment and consumption schedules, the lag period is similar for each revenue function and will not be considered separately for purposes of this report.

10. The revenue lag calculation considers several key components. Each has been broken down for clarity in understanding.

3.1 Average Consumption Period Lag

11. To determine the average lag for each consumption period, an average consumption period between meter readings must be determined. Each site is billed once per quarter, or 4 times per year. Given 365 days in 1 year, the average consumption period billed is calculated to be 91.25 days (365 divided by 4). EWW has used the mid-point of the average consumption period billed as the consumption period lag. (91.25 days divided by 2 = 45.63 days).

3.2 Average Invoice Lag

12. EWW issues customer invoices 4 days after meter reading is performed.

3.3 Customer Payment Lags

13. Payment is due from the customer by the 30th day of the month in which the bill is issued. Analysis of year end accounts receivable showed collections lags of 15.3 days in 2022, 42.9 days in 2021, and 28.4 days in 2020.

14. The overall revenue lags for EWW revenues are summarized in Table 3.3-1.

**Table 3.3-1
Revenue Lag Summary
(days)**

	A	B	C
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	2022	2021	2020
1 Consumption period mid-point	45.63	45.63	45.75
2 Invoicing lag	4.00	4.00	4.00
3 Customer payment	15.33	42.86	28.42
4 Total	64.96	92.49	78.17

15. As most expense lags are netted against these revenue corresponding working capital ratios and requirements, revenue lags determination of EWW's overall working capital requirement.

4.0 EXPENSES

16. EWW examined operating expenses by breaking them down into the categories of labour, salary and benefits, incentive, property taxes, franchise fees, parent charges (inter-company allocations) and general operating expenses. The total operating expense lag is calculated by taking the weighted average of these components on a yearly basis.

4.1 Labour, Salary and Benefits

17. Labour expense is comprised of salary and benefits, including remittances to CRA, Sun Life and other employee benefit and withholding categories. The total labour and benefits lag is calculated using the weighted average of all expenses types (incentive is calculated separately). Contractor fees are included in general operating expense as they are paid through the general accounts payable cheque runs.

18. The individual labour and benefit lag for EWW was essentially unchanged between 2020 and 2022, which is as expected.

19. Components of the labour lag other than salaries, overtime and wages are based on lag times and weightings calculated by EUI's Payroll department for EPCOR as a whole. These weighting reflect the fact that these payments are processed centrally for all EPCOR subsidiaries, so the lag times will not differ between the various EPCOR subsidiaries, including EWW. In addition, the weighting of categories within labour and benefits is comparable between areas.

4.2 Incentive Payments

20. Employee incentives are categorized separately from other operating costs as they have a longer payment lag of approximately 290 days compared to 60 days for other operating costs and an average of 15 days for other labour costs. Employee incentives are paid annually in the second pay period of April for the previous fiscal year, resulting in a consumption lag of 182 days and a

payment lag of 108 days in 2020, 106 days in 2021, and 104 days in 2022. Total lags for incentives were 289 days in 2020, 286.5 days in 2021 and 2022.

4.3 Property Taxes

21. Property taxes are due June 30 for the current fiscal year, halfway through the consumption period. Accordingly, the property tax lead is 1 day for 2020 and 1.5 days for 2021 to 2022. Total weighted lead for property taxes are 0.0 days 2020, 0.0 days in 2021, and 0.1 days in 2022.

4.4 Parent Charges

22. EPCOR Corporate or “Parent” charges are categorized separately from other operating costs such as material costs and contractor costs as they have a shorter payment lag. Parent charges are allocated from corporate on a monthly basis therefore the lag is the average monthly consumption period of 15.0 days compared to 60 days for other operating costs.

4.5 General Operating Expenses

23. A majority of EPCOR’s general operating expenses are paid within 45 days of receiving the invoice; therefore, assuming expenses are incurred evenly over a month, the average consumption period is approximately 15 days. Assuming all expenses incurred in the month are paid at the end of the next month, the total lag for general operating expenses is 60.3 days in 2020, and 60.2 days in each of 2021 and 2022.

24. Net lags for revenues and expenses are summarized in Tables 4.6-1 to 4.6-3.

Table 4.6-1
Net Lag(Lead) for Revenues and Expenses – 2022
(days)

	A	B	C	D
	Amount	Percentage	Lag Days	Weighted Days
1 Revenue	1,647,626	100%	65.0	65.0
2 NET REVENUE LAG				65.0
EXPENDITURES				
3 Labour, salaries & benefits	319,303	24%	14.9	3.5
4 Incentive	26	0%	286.5	0.0
5 Other operating expenses	877,662	65%	60.2	39.3
6 Parent charges	94,600	7%	15.0	1.1
7 Property tax	52,078	4%	1.5	0.1
8 Subtotal	1,343,669	100%		

9	NET EXPENSE LAG	44.0
10	Net Lag (Lead) for Receipts & Payments 2022	21.0

Table 4.6-2
Net Lag(Lead) for Revenues and Expenses – 2021
(days)

	A	B	C	D	
	Amount	Percentage	Lag Days	Weighted Days	
1	Revenue	1,752,404	100%	92.5	92.5
2	NET REVENUE LAG				92.5
	EXPENDITURES				
3	Labour, salaries & benefits	465,239	41%	14.9	6.1
4	Incentive	38,984	3%	286.5	9.8
5	Other operating expenses	493,876	43%	60.2	26.1
6	Parent charges	98,507	9%	15.0	1.3
7	Property tax	42,650	4%	1.5	0.1
8	Subtotal	1,139,256	100%		
9	NET EXPENSE LAG				43.3
10	Net Lag (Lead) for Receipts & Payments 2022				49.1

Table 4.6-3
Net Lag(Lead) for Revenues and Expenses – 2020
(days)

	A	B	C	D	
	Amount	Percentage	Lag Days	Weighted Days	
1	Revenue	1,840,316	100%	78.2	78.2
2	NET REVENUE LAG				78.2
	EXPENDITURES				
3	Labour, salaries & benefits	356,949	31%	15.0	4.7
4	Incentive	10,997	1%	289.0	2.8
5	Other operating expenses	635,522	56%	60.3	33.7
6	Parent charges	91,544	8%	15.0	1.2
7	Property tax	41,177	4%	1.0	0.0
8	Subtotal	1,136,188	100%		
9	NET EXPENSE LAG				42.5
10	Net Lag (Lead) for Receipts & Payments 2022				35.7

25. Overall, for EWW, the net lags for receipts and payments are 35.7 days in 2020, 49.1 days in 2021, and 21.0 days in 2022. The changes in net lag times between 2020 and 2022 are primarily due to changes in customer payment lag each year. These values are based on actual costs for each year. The working capital ratios of 9.8% in 2020, 13.5 % in 2021, and 5.7% in 2022 are calculated from the expense net lags (35.7/365, 49.1/365, and 21.0/365) and then applied to the overall operating expenses to provide the appropriate necessary working capital for this component (see Table 2.0-1).

5.0 GST

26. GST is not applicable to water sales. Accordingly, EWW is always in a refund position with the CRA. GST returns are filed monthly (usually on the last business day of the following month). Per discussions with EPCOR tax group, input credits are normally received from the CRA within 2-4 weeks of filing. Calculation of the GST remittance lag is shown in Appendix 5.

Table 5.0-1
GST Impact on Working Capital
(\$)

	A	B	C	D
		2022	2021	2020
REVENUE				
1 Net Receipts applicable to GST		-	-	-
2 GST rate		5.00%	5.00%	5.00%
3 GST collected	(a)	-	-	-
4 Day factor - revenue lag		65.0	92.5	78.2
5 Day factor - GST Remittance		45.6	45.6	45.8
6 Net	(b)	19.33	46.86	32.42
7 Impact on Working Capital	(a)*(b)/365	-	-	-
EXPENDITURES				
8 Other operating costs		250,567	275,956	299,830
9 Capital expenditures excluding labour		117,218	134,884	208,151
10 Net costs applicable to GST		367,785	410,840	507,981
11 GST rate		5.00%	5.00%	5.00%
12 GST remitted	(d)	18,389	20,542	25,399
13 Day factor - GST refund lag		66.6	66.6	66.8
14 Day factor - GST applicable expense lag		60.2	60.2	60.3
15 Net	(e)	6.42	6.42	6.50
16 Impact on Working Capital	(d)*(e)/365	323	361	451
17 Net GST impact on Working Capital		65	93	78

27. GST collected by EWW is based on analysis of 2020-2022 revenues, with input tax credits based on total operating expenses less labour, salaries, benefits and incentives, property taxes, and other non-GST eligible expenses plus capital expenditures excluding labour components.

28. The day factor on GST applicable expenses is based on lead-lag days for general operating expenses, since capital expenditures (excluding labour) are assumed to be on the same payment schedule as all other operating costs.

29. As shown in Table 5.0-1, the impact of GST on working capital is negligible; resulting in an increase to necessary working capital of \$78 in 2020, \$93 in 2021, and \$65 in 2022.

6.0 CAPITAL EXPENSES

30. Capital expenses include four categories: interest, retained earnings, and depreciation. Table 6.0-1 provides the capital expense lags for 2020 to 2022.

**Table 6.0-1
Capital Expense Lags for 2020, 2021, and 2022**

	A	B	C	D	E	F
Expense	2022		2021		2020	
	Lag Days	Expense	Lag Days	Expense	Lag Days	Expense
1 Interest	61.5	45,814	61.5	54,076	61.5	61,910
2 Retained Earnings	-	82,637	-	334,459	-	148,519
3 Depreciation	-	159,854	-	164,481	-	160,936

6.1 Retained Earnings and Depreciation

31. Consistent with accepted practice for lead-lag studies, retained earnings and depreciation both have expense lags equivalent to zero days.

6.2 Interest on Long Term Debt

32. EWW pays interest on inter-company long term debt issued by EPCOR Utilities Inc. (EUI). The inter-company notes are paid twice a year, on June 1 and December 1 each calendar year. All interest is paid on a semi-annual basis. The midpoint of the consumption period for long term interest is 182.5 days, or July 2.

33. Table 6.2-1 shows the calculation of long term debt lag (lead) days. The interest expense lag was 62 days in each of 2020, 2021, and 2022. Due to identical payment days for each year the lag does not change from year to year.

Table 6.2-1
Long Term Debt Lag(Lead) 2020, 2021, and 2022

Description	A	B	C	D	E F G			H I J			K	L
	Year	Interest Rate	Face Value	Interest Expense	Payment Dates			Payment Lags(Leads)			Weight	Weighted Total Lag
					First	Second	Mid-Year	First	Second	Average		
1 IC-EUI-89-0019	2020	5.38%	1,115,305	61,910.5	1-Jun-20	1-Dec-20	1-Jul-20	(30)	153	62	100%	62
2 IC-EUI-89-0019	2021	5.38%	967,744	54,075.7	1-Jun-21	1-Dec-21	1-Jul-21	(30)	153	62	100%	62
3 IC-EUI-89-0019	2022	5.38%	812,136	45,813.6	1-Jun-22	1-Dec-22	1-Jul-22	(30)	153	62	100%	62

7.0 STUDY RESULTS

34. For the 2024-2026 rate filing EWW is proposing the lead lag ratios and days provided in Table 7.0-1 (columns D and E).

**Table 7.0-1
Summary of 2020-2022
Lead Lag Ratios**

	A	B	C	D	E
	2022	2021	2020	Average	Lead/(Lag) Days
1 Net operating expenses	5.7%	13.5%	9.8%	9.7%	35.3
2 Depreciation	17.8%	25.3%	21.4%	21.5%	78.5
3 Retained Earnings	17.8%	25.3%	21.4%	21.5%	78.5
4 Interest Expense	0.9%	8.5%	4.6%	4.7%	17.0
5 GST Collection	5.3%	5.3%	8.9%	6.5%	23.7
6 GST Input Tax Credit	1.8%	1.8%	1.8%	1.8%	6.4
7 Average					39.9

7.1 Appendix 1: Salary, Overtime and Wage Lag details

**Table A1-1
Salary Lag
Year Ending December 31, 2022
(days)**

	A	B	C	D	E	F	G	H	I
	Period Start	Mid Period	Period End	Processing	Payment Date	Consumption Lag	Processing Lag	Payment Lag	Total Lag
1	19-Dec-21	25-Dec-21	1-Jan-22	3-Jan-22	7-Jan-22	7.00	2.00	4.00	13.00
2	2-Jan-22	8-Jan-22	15-Jan-22	17-Jan-22	21-Jan-22	7.00	2.00	4.00	13.00
3	16-Jan-22	22-Jan-22	29-Jan-22	31-Jan-22	4-Feb-22	7.00	2.00	4.00	13.00
4	30-Jan-22	5-Feb-22	12-Feb-22	14-Feb-22	18-Feb-22	7.00	2.00	4.00	13.00
5	13-Feb-22	19-Feb-22	26-Feb-22	28-Feb-22	4-Mar-22	7.00	2.00	4.00	13.00
6	27-Feb-22	5-Mar-22	12-Mar-22	14-Mar-22	18-Mar-22	7.00	2.00	4.00	13.00
7	13-Mar-22	19-Mar-22	26-Mar-22	28-Mar-22	1-Apr-22	7.00	2.00	4.00	13.00
8	27-Mar-22	2-Apr-22	9-Apr-22	11-Apr-22	14-Apr-22	7.00	2.00	3.00	12.00
9	10-Apr-22	16-Apr-22	23-Apr-22	25-Apr-22	29-Apr-22	7.00	2.00	4.00	13.00
10	24-Apr-22	30-Apr-22	7-May-22	9-May-22	13-May-22	7.00	2.00	4.00	13.00
11	8-May-22	14-May-22	21-May-22	23-May-22	27-May-22	7.00	2.00	4.00	13.00
12	22-May-22	28-May-22	4-Jun-22	6-Jun-22	10-Jun-22	7.00	2.00	4.00	13.00
13	5-Jun-22	11-Jun-22	18-Jun-22	20-Jun-22	24-Jun-22	7.00	2.00	4.00	13.00
14	19-Jun-22	25-Jun-22	2-Jul-22	4-Jul-22	8-Jul-22	7.00	2.00	4.00	13.00
15	3-Jul-22	9-Jul-22	16-Jul-22	18-Jul-22	22-Jul-22	7.00	2.00	4.00	13.00
16	17-Jul-22	23-Jul-22	30-Jul-22	1-Aug-22	5-Aug-22	7.00	2.00	4.00	13.00
17	31-Jul-22	6-Aug-22	13-Aug-22	15-Aug-22	19-Aug-22	7.00	2.00	4.00	13.00
18	14-Aug-22	20-Aug-22	27-Aug-22	29-Aug-22	2-Sep-22	7.00	2.00	4.00	13.00
19	28-Aug-22	3-Sep-22	10-Sep-22	12-Sep-22	16-Sep-22	7.00	2.00	4.00	13.00
20	11-Sep-22	17-Sep-22	24-Sep-22	26-Sep-22	29-Sep-22	7.00	2.00	3.00	12.00
21	25-Sep-22	1-Oct-22	8-Oct-22	10-Oct-22	14-Oct-22	7.00	2.00	4.00	13.00
22	9-Oct-22	15-Oct-22	22-Oct-22	24-Oct-22	28-Oct-22	7.00	2.00	4.00	13.00
23	23-Oct-22	29-Oct-22	5-Nov-22	7-Nov-22	10-Nov-22	7.00	2.00	3.00	12.00
24	6-Nov-22	12-Nov-22	19-Nov-22	21-Nov-22	25-Nov-22	7.00	2.00	4.00	13.00
25	20-Nov-22	26-Nov-22	3-Dec-22	5-Dec-22	9-Dec-22	7.00	2.00	4.00	13.00
26	4-Dec-22	10-Dec-22	17-Dec-22	19-Dec-22	23-Dec-22	7.00	2.00	4.00	13.00
27	18-Dec-22	24-Dec-22	31-Dec-22	2-Jan-23	6-Jan-23	7.00	2.00	4.00	13.00
28	Average Salary Lag					7.00	2.00	3.89	12.89

Table A1-2
Salary Lag
Year Ending December 31, 2021
(days)

	A	B	C	D	E	F	G	H	I
	Period Start				Payment	Consumption	Processing		
	Date	Mid Period	Period End	Processing	Date	Lag	Lag	Payment Lag	Total Lag
1	20-Dec-20	26-Dec-20	2-Jan-21	4-Jan-21	8-Jan-21	7.00	2.00	4.00	13.00
2	3-Jan-21	9-Jan-21	16-Jan-21	18-Jan-21	22-Jan-21	7.00	2.00	4.00	13.00
3	17-Jan-21	23-Jan-21	30-Jan-21	1-Feb-21	5-Feb-21	7.00	2.00	4.00	13.00
4	31-Jan-21	6-Feb-21	13-Feb-21	15-Feb-21	19-Feb-21	7.00	2.00	4.00	13.00
5	14-Feb-21	20-Feb-21	27-Feb-21	1-Mar-21	5-Mar-21	7.00	2.00	4.00	13.00
6	28-Feb-21	6-Mar-21	13-Mar-21	15-Mar-21	19-Mar-21	7.00	2.00	4.00	13.00
7	14-Mar-21	20-Mar-21	27-Mar-21	29-Mar-21	1-Apr-21	7.00	2.00	3.00	12.00
8	28-Mar-21	3-Apr-21	10-Apr-21	12-Apr-21	16-Apr-21	7.00	2.00	4.00	13.00
9	11-Apr-21	17-Apr-21	24-Apr-21	26-Apr-21	30-Apr-21	7.00	2.00	4.00	13.00
10	25-Apr-21	1-May-21	8-May-21	10-May-21	14-May-21	7.00	2.00	4.00	13.00
11	9-May-21	15-May-21	22-May-21	24-May-21	28-May-21	7.00	2.00	4.00	13.00
12	23-May-21	29-May-21	5-Jun-21	7-Jun-21	11-Jun-21	7.00	2.00	4.00	13.00
13	6-Jun-21	12-Jun-21	19-Jun-21	21-Jun-21	25-Jun-21	7.00	2.00	4.00	13.00
14	20-Jun-21	26-Jun-21	3-Jul-21	5-Jul-21	9-Jul-21	7.00	2.00	4.00	13.00
15	4-Jul-21	10-Jul-21	17-Jul-21	19-Jul-21	23-Jul-21	7.00	2.00	4.00	13.00
16	18-Jul-21	24-Jul-21	31-Jul-21	2-Aug-21	6-Aug-21	7.00	2.00	4.00	13.00
17	1-Aug-21	7-Aug-21	14-Aug-21	16-Aug-21	20-Aug-21	7.00	2.00	4.00	13.00
18	15-Aug-21	21-Aug-21	28-Aug-21	30-Aug-21	3-Sep-21	7.00	2.00	4.00	13.00
19	29-Aug-21	4-Sep-21	11-Sep-21	13-Sep-21	17-Sep-21	7.00	2.00	4.00	13.00
20	12-Sep-21	18-Sep-21	25-Sep-21	27-Sep-21	1-Oct-21	7.00	2.00	4.00	13.00
21	26-Sep-21	2-Oct-21	9-Oct-21	11-Oct-21	15-Oct-21	7.00	2.00	4.00	13.00
22	10-Oct-21	16-Oct-21	23-Oct-21	25-Oct-21	29-Oct-21	7.00	2.00	4.00	13.00
23	24-Oct-21	30-Oct-21	6-Nov-21	8-Nov-21	12-Nov-21	7.00	2.00	4.00	13.00
24	7-Nov-21	13-Nov-21	20-Nov-21	22-Nov-21	26-Nov-21	7.00	2.00	4.00	13.00
25	21-Nov-21	27-Nov-21	4-Dec-21	6-Dec-21	10-Dec-21	7.00	2.00	4.00	13.00
26	5-Dec-21	11-Dec-21	18-Dec-21	20-Dec-21	24-Dec-21	7.00	2.00	4.00	13.00
27	Average Salary Lag					7.00	2.00	3.96	12.96

Table A1-3
Salary Lag
Year Ending December 31, 2021
(days)

	A	B	C	D	E	F	G	H	I
	Period Start				Payment	Consumption	Processing		
	Date	Mid Period	Period End	Processing	Date	Lag	Lag	Payment Lag	Total Lag
1	22-Dec-19	28-Dec-19	4-Jan-20	6-Jan-20	10-Jan-20	7.00	2.00	4.00	13.00
2	5-Jan-20	11-Jan-20	18-Jan-20	20-Jan-20	24-Jan-20	7.00	2.00	4.00	13.00
3	19-Jan-20	25-Jan-20	1-Feb-20	3-Feb-20	7-Feb-20	7.00	2.00	4.00	13.00
4	2-Feb-20	8-Feb-20	15-Feb-20	17-Feb-20	21-Feb-20	7.00	2.00	4.00	13.00
5	16-Feb-20	22-Feb-20	29-Feb-20	2-Mar-20	6-Mar-20	7.00	2.00	4.00	13.00
6	1-Mar-20	7-Mar-20	14-Mar-20	16-Mar-20	20-Mar-20	7.00	2.00	4.00	13.00
7	15-Mar-20	21-Mar-20	28-Mar-20	30-Mar-20	3-Apr-20	7.00	2.00	4.00	13.00
8	29-Mar-20	4-Apr-20	11-Apr-20	13-Apr-20	17-Apr-20	7.00	2.00	4.00	13.00
9	12-Apr-20	18-Apr-20	25-Apr-20	27-Apr-20	1-May-20	7.00	2.00	4.00	13.00
10	26-Apr-20	2-May-20	9-May-20	11-May-20	15-May-20	7.00	2.00	4.00	13.00
11	10-May-20	16-May-20	23-May-20	25-May-20	29-May-20	7.00	2.00	4.00	13.00
12	24-May-20	30-May-20	6-Jun-20	8-Jun-20	12-Jun-20	7.00	2.00	4.00	13.00
13	7-Jun-20	13-Jun-20	20-Jun-20	22-Jun-20	26-Jun-20	7.00	2.00	4.00	13.00
14	21-Jun-20	27-Jun-20	4-Jul-20	6-Jul-20	10-Jul-20	7.00	2.00	4.00	13.00
15	5-Jul-20	11-Jul-20	18-Jul-20	20-Jul-20	24-Jul-20	7.00	2.00	4.00	13.00
16	19-Jul-20	25-Jul-20	1-Aug-20	3-Aug-20	7-Aug-20	7.00	2.00	4.00	13.00
17	2-Aug-20	8-Aug-20	15-Aug-20	17-Aug-20	21-Aug-20	7.00	2.00	4.00	13.00
18	16-Aug-20	22-Aug-20	29-Aug-20	31-Aug-20	4-Sep-20	7.00	2.00	4.00	13.00
19	30-Aug-20	5-Sep-20	12-Sep-20	14-Sep-20	18-Sep-20	7.00	2.00	4.00	13.00
20	13-Sep-20	19-Sep-20	26-Sep-20	28-Sep-20	2-Oct-20	7.00	2.00	4.00	13.00
21	27-Sep-20	3-Oct-20	10-Oct-20	12-Oct-20	16-Oct-20	7.00	2.00	4.00	13.00
22	11-Oct-20	17-Oct-20	24-Oct-20	26-Oct-20	30-Oct-20	7.00	2.00	4.00	13.00
23	25-Oct-20	31-Oct-20	7-Nov-20	9-Nov-20	13-Nov-20	7.00	2.00	4.00	13.00
24	8-Nov-20	14-Nov-20	21-Nov-20	23-Nov-20	27-Nov-20	7.00	2.00	4.00	13.00
25	22-Nov-20	28-Nov-20	5-Dec-20	7-Dec-20	11-Dec-20	7.00	2.00	4.00	13.00
26	6-Dec-20	12-Dec-20	19-Dec-20	21-Dec-20	24-Dec-20	7.00	2.00	3.00	12.00
27	Average Salary Lag					7.00	2.00	3.96	12.96

7.2 Appendix 2: Labour and Benefit Summary Lag details

Table A2-1
Salary and Benefit Lag
Year ending December 31, 2022
(days)

Component	A	B	C	D	E	F	G
	Period Midpoint	Processing Lag	Payment Lag	Total	Actual Payroll	Weight	Weighted Days
1 Salaries, Overtime & Wages	7.0	2.0	3.9	12.9	279,661	78.65%	10.15
2 CRA	7.0	6.0	7.6	20.6	13,280	3.73%	0.77
3 Sun Life Benefits	7.0	6.0	3.0	16.0	19,825	5.58%	0.89
4 Sun Life Savings Plan	7.0	6.0	3.0	16.0	15,885	4.47%	0.71
5 Local Authorities Pension	7.0	6.0	15.0	28.0	2,568	0.72%	0.20
6 Employee Savings Plan	7.0	6.0	3.0	16.0	11,515	3.24%	0.52
7 Wellness Personal Spending Account	15.0	-	15.0	30.0	829	0.23%	0.07
8 Health Services			45.6	45.6	8,651	2.43%	1.11
9 WCB			45.6	45.6	3,352	0.94%	0.43
10 Average Withholding Lag					355,564	100.00%	14.85

Table A2-2
Salary and Benefit Lag
Year ending December 31, 2021
(days)

Component	A	B	C	D	E	F	G
	Period Midpoint	Processing Lag	Payment Lag	Total	Actual Payroll	Weight	Weighted Days
1 Salaries, Overtime & Wages	7.0	2.0	4.0	13.0	339,761	80.12%	10.42
2 CRA	7.0	6.0	7.6	20.6	15,351	3.62%	0.75
3 Sun Life Benefits	7.0	6.0	3.0	16.0	21,590	5.09%	0.81
4 Sun Life Savings Plan	7.0	6.0	3.0	16.0	16,884	3.98%	0.64
5 Local Authorities Pension	7.0	6.0	15.0	28.0	2,623	0.62%	0.17
6 Employee Savings Plan	7.0	6.0	3.0	16.0	12,017	2.83%	0.45
7 Wellness Personal Spending Account	15.0	-	15.0	30.0	1,380	0.33%	0.10
8 Health Services			45.6	45.6	9,751	2.30%	1.05
9 WCB			45.6	45.6	4,702	1.11%	0.51
10 Average Withholding Lag					424,059	100.00%	14.89

Table A2-3
Salary and Benefit Lag
Year ending December 31, 2020
(days)

	A	B	C	D	E	F	G
Component	Period Midpoint	Processing Lag	Payment Lag	Total	Actual Payroll	Weight	Weighted Days
1 Salaries, Overtime & Wages	7.0	2.0	4.0	13.0	255,153	77.79%	10.11
2 CRA	7.0	6.0	7.6	20.6	13,464	4.10%	0.85
3 Sun Life Benefits	7.0	6.0	3.0	16.0	22,398	6.83%	1.09
4 Sun Life Savings Plan	7.0	6.0	3.0	16.0	12,182	3.71%	0.59
5 Local Authorities Pension	7.0	6.0	15.0	28.0	3,376	1.03%	0.29
6 Employee Savings Plan	7.0	6.0	3.0	16.0	9,642	2.94%	0.47
7 Wellness Personal Spending Account	15.0	-	15.0	30.0	1,050	0.32%	0.10
8 Health Services			45.6	45.6	6,485	1.98%	0.90
9 WCB			45.6	45.6	4,253	1.30%	0.59
10 Average Withholding Lag					328,002	100.00%	14.99

7.3 Appendix 3: General Expense Lag details

Table A3-1
Other Operating Expense Lag
Years ending December 31, 2021 and 2022
(days)

	A Period Start Date	B Mid Period	C Period End	D Payment Date	F Consumption Lag Days	G Payment Lag Days	H Total Lag Days
1	1-Jan	16-Jan	31-Jan	17-Mar	15.5	45.0	60.5
2	1-Feb	14-Feb	28-Feb	14-Apr	14.0	45.0	59.0
3	1-Mar	16-Mar	31-Mar	15-May	15.5	45.0	60.5
4	1-Apr	15-Apr	30-Apr	14-Jun	15.0	45.0	60.0
5	1-May	16-May	31-May	15-Jul	15.5	45.0	60.5
6	1-Jun	15-Jun	30-Jun	14-Aug	15.0	45.0	60.0
7	1-Jul	16-Jul	31-Jul	14-Sep	15.5	45.0	60.5
8	1-Aug	16-Aug	31-Aug	15-Oct	15.5	45.0	60.5
9	1-Sep	15-Sep	30-Sep	14-Nov	15.0	45.0	60.0
10	1-Oct	16-Oct	31-Oct	15-Dec	15.5	45.0	60.5
11	1-Nov	15-Nov	30-Nov	14-Jan	15.0	45.0	60.0
12	1-Dec	16-Dec	31-Dec	14-Feb	15.5	45.0	60.5
13	Total Operating Expense Remittance Lag				15.2	45.0	60.2

Table A3-2
Other Operating Expense Lag
Year ending December 31, 2020
(days)

	A Period Start Date	B Mid Period	C Period End	D Payment Date	F Consumption Lag Days	G Payment Lag Days	H Total Lag Days
1	1-Jan	16-Jan	31-Jan	16-Mar	15.5	45.0	60.5
2	1-Feb	15-Feb	29-Feb	14-Apr	14.5	45.0	59.5
3	1-Mar	16-Mar	31-Mar	15-May	15.5	45.0	60.5
4	1-Apr	15-Apr	30-Apr	14-Jun	15.0	45.0	60.0
5	1-May	16-May	31-May	15-Jul	15.5	45.0	60.5
6	1-Jun	15-Jun	30-Jun	14-Aug	15.0	45.0	60.0
7	1-Jul	16-Jul	31-Jul	14-Sep	15.5	45.0	60.5
8	1-Aug	16-Aug	31-Aug	15-Oct	15.5	45.0	60.5
9	1-Sep	15-Sep	30-Sep	14-Nov	15.0	45.0	60.0
10	1-Oct	16-Oct	31-Oct	15-Dec	15.5	45.0	60.5
11	1-Nov	15-Nov	30-Nov	14-Jan	15.0	45.0	60.0
12	1-Dec	16-Dec	31-Dec	14-Feb	15.5	45.0	60.5
13	Total Operating Expense Remittance Lag				15.3	45.0	60.3

7.4 Appendix 4: GST Lag calculations

Table A4-1
GST Lag
Years ending December 31, 2021 and 2022
(days)

	A	B	C	D	E	F	G	H	I
	Period Start				Consumption	Remittance			
	Date	Mid Period	Period End	Filing Date	Lag	Lag	GST Filing Lag	Payment Lag	Total Lag
1	1-Jan	16-Jan	31-Jan	28-Feb	15.5	28.0	43.5	64.5	108.0
2	1-Feb	14-Feb	28-Feb	31-Mar	14.0	31.0	45.0	66.0	111.0
3	1-Mar	16-Mar	31-Mar	30-Apr	15.5	30.0	45.5	66.5	112.0
4	1-Apr	15-Apr	30-Apr	31-May	15.0	31.0	46.0	67.0	113.0
5	1-May	16-May	31-May	30-Jun	15.5	30.0	45.5	66.5	112.0
6	1-Jun	15-Jun	30-Jun	31-Jul	15.0	31.0	46.0	67.0	113.0
7	1-Jul	16-Jul	31-Jul	31-Aug	15.5	31.0	46.5	67.5	114.0
8	1-Aug	16-Aug	31-Aug	30-Sep	15.5	30.0	45.5	66.5	112.0
9	1-Sep	15-Sep	30-Sep	31-Oct	15.0	31.0	46.0	67.0	113.0
10	1-Oct	16-Oct	31-Oct	30-Nov	15.5	30.0	45.5	66.5	112.0
11	1-Nov	15-Nov	30-Nov	31-Dec	15.0	31.0	46.0	67.0	113.0
12	1-Dec	16-Dec	31-Dec	31-Jan	15.5	31.0	46.5	67.5	114.0
13	Total GST Lag						45.6	66.6	112.3

Table A4-2
GST Lag
Year ending December 31, 2020
(days)

	A	B	C	D	E	F	G	H	I
	Period Start				Consumption	Remittance			
	Date	Mid Period	Period End	Filing Date	Lag	Lag	GST Filing Lag	Payment Lag	Total Lag
1	1-Jan	16-Jan	31-Jan	29-Feb	15.5	29.0	44.5	65.5	110.0
2	1-Feb	15-Feb	29-Feb	31-Mar	14.5	31.0	45.5	66.5	112.0
3	1-Mar	16-Mar	31-Mar	30-Apr	15.5	30.0	45.5	66.5	112.0
4	1-Apr	15-Apr	30-Apr	31-May	15.0	31.0	46.0	67.0	113.0
5	1-May	16-May	31-May	30-Jun	15.5	30.0	45.5	66.5	112.0
6	1-Jun	15-Jun	30-Jun	31-Jul	15.0	31.0	46.0	67.0	113.0
7	1-Jul	16-Jul	31-Jul	31-Aug	15.5	31.0	46.5	67.5	114.0
8	1-Aug	16-Aug	31-Aug	30-Sep	15.5	30.0	45.5	66.5	112.0
9	1-Sep	15-Sep	30-Sep	31-Oct	15.0	31.0	46.0	67.0	113.0
10	1-Oct	16-Oct	31-Oct	30-Nov	15.5	30.0	45.5	66.5	112.0
11	1-Nov	15-Nov	30-Nov	31-Dec	15.0	31.0	46.0	67.0	113.0
12	1-Dec	16-Dec	31-Dec	31-Jan	15.5	31.0	46.5	67.5	114.0
13	Total GST Lag						45.8	66.8	112.5

Table 1
Calculation of CIAC Charge

	A	B	C	D	E
	Year	BC CPI	Increase ⁽¹⁾	CIAC Charge (Inflated) (\$)	Rate Charged ⁽²⁾ (\$)
1	2015	120.2		19,000	19,000
2	2016	122.4	1.8%	19,348	19,000
3	2017	125.0	2.1%	19,759	19,000
4	2018	128.4	2.7%	20,296	19,000
5	2019	131.4	2.3%	20,770	19,000
6	2020		2.0%	21,186	21,200
7	2021		2.0%	21,610	21,600
8	2022		2.0%	22,042	22,000
9	2023		2.0%	22,483	22,500
10	2024		2.5%	23,045	23,000
11	2025		2.2%	23,552	23,600
12	2026		2.0%	24,023	24,000

¹ 2016-2019 increase based on actual changes to BC CPI.
 2020-2023 based on "BC Budget and Fiscal Plan 2020/21 - 2022/23" dated February 18, 2020.
 Source used for CPI forecast in past EWW Revenue Requirement and Rates Applications.

² Rounded to the nearest hundred.

Table 2
Deferred Capacity Trust Fund Balances
2010 Actuals to 2030 Forecast
(\$)

A	Developer / RateBase	E	F	G	H	I	J	K	L	M	N	O	O	R
		2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast	2027 Forecast	2028 Forecast	2029 Forecast
Trust Account Balance														
1	Trust Account Opening Balance	821,501	938,738	209,889	783,579	77,423	1,611,807	1,645,843	1,649,957	831,234	272,494	276,886	282,448	288,112
2	Deposits Received ⁽¹⁾	6	2	24	6	71	3	-	23	21	23	23	23	
3	Total Deposits/Refunds	114,000	38,000	456,000	120,600	1,534,000	88,800	-	529,000	542,800	552,000	563,500	575,000	
Cash Withdrawals														
4	Growth/Study Studies	-	-	-	-	-	-	-	-	-	-	-	-	
5	Controller Release of Funds Approvals ⁽²⁾	-	-	-	800,000	-	77,823	-	1,649,957	803,124	548,404	558,436	569,948	
6	Landline Lane (TWs1)	100% / 0% -	466,844	-	-	-	-	-	-	-	-	-	-	
7	Spring Hill Road No. 2A (RWs1)	29% / 21% -	229,588	-	-	-	-	-	-	-	-	-	-	
8	Total Withdrawals	-	696,432	-	800,000	-	77,823	-	1,649,957	803,124	548,404	558,436	569,948	
9	Trust Account Balance before Interest	935,501	266,566	745,889	783,579	1,611,823	1,622,784	1,645,843	529,000	271,400	276,000	282,750	287,500	
10	Interest Earned within Trust Account	3,337	9,543	7,730	3,241	384	23,089	4,113	-	1,004	699	699	712	
11	Trust Account Ending Balance	938,738	289,849	753,679	77,423	1,611,807	1,645,843	1,649,957	531,724	273,494	276,696	282,448	288,212	
Contribution in Aid of Future Construction Charge														
12 ⁽³⁾		\$ 19,000	\$ 19,000	\$ 19,000	\$ 21,200	\$ 21,600	\$ 22,000	\$ 22,500	\$ 23,000	\$ 23,600	\$ 24,000	\$ 24,500	\$ 25,000	

¹ 2014-2019 actual deposits received, 2020-2027 forecast based on growth projection provided in section 2.1 of the "French Creek Water System Master Plan Update 2020".

² 2020-2026 Release of funds equals opening trust account balance plus 50% of current year deposits. Accounts for delay between receiving deposit and approval of CPCN application.

³ CIAC charge as calculated in Table 1.

A	DCTF Balance	E	F	G	H	I	J	K	L	M	N	O	O	Q
		2017 Actual	2018 Actual	2019 Actual	2020 Actual	2021 Actual	2022 Actual	2023 Forecast	2024 Forecast	2025 Forecast	2026 Forecast	2027 Forecast	2028 Forecast	2029 Forecast
13 Future Capacity Receivable Balance														
14	Costs available for collection from DCTF:	1,248,103	1,248,103	2,517,774	2,517,774	1,868,472	1,967,057	1,991,086	2,096,372	1,945,740	1,667,244	1,492,255	997,965	465,720
15	Growth/Supply Studies ⁽⁴⁾	-	-	-	-	26,250	-	-	32,500	-	-	-	-	-
16	Growth Assets Placed into Service ⁽⁵⁾	-	1,966,103	-	-	26,250	-	-	1,362,708	431,652	292,030	-	-	
17	New Receivables	-	-	-	-	-	-	-	1,959,208	431,652	292,030	-	-	
18 Cash Withdrawals:														
19	Growth/Supply Studies	-	-	-	-	26,250	-	-	-	-	-	-	-	
20	Controller Release of Funds Approvals	-	696,432	-	800,000	-	77,823	-	1,649,957	803,124	548,404	558,436	569,948	
21	Total Withdrawals	-	696,432	-	800,000	26,250	77,823	-	1,649,957	803,124	548,404	558,436	569,948	
22	FCR Balance before WACC	1,248,103	2,517,774	2,517,774	1,717,774	1,868,472	1,899,234	1,991,086	1,841,623	1,374,738	1,410,809	933,819	428,017	
23	Return on Net Receivables ⁽⁶⁾	-	-	-	150,697	98,585	101,822	102,786	108,118	93,666	81,386	60,166	37,703	
24	FCR Ending Balance	1,248,103	2,517,774	2,517,774	1,868,472	1,967,057	1,991,086	2,096,372	1,945,740	1,667,244	1,492,255	997,965	465,720	
25	Net DCTF / (FCR) Balance	(309,365)	(2,227,925)	(1,764,195)	(1,791,049)	(855,256)	(945,243)	(446,415)	(1,414,071)	(1,394,040)	(1,215,569)	(715,571)	(177,208)	

⁴ Includes Ground Water (2021) and Church Road Main Twinning (2024) studies as identified in section 5.8 of the "French Creek Water System Master Plan Update 2020".

⁵ Growth Assets Placed into Service - See Table 3, line 20.

⁶ Return calculated using EWW forecast WACC, and the mid-year FCR balance.

⁷ In July 2019 EWW submitted a release of fund for the Church Road S Test Well (TWs1), Springhill Road Additional Capacity Well (ACs1), and Landline Lane Upgrade projects. EWW will begin calculating a return on the receivable balance starting in 2020.

Table 3
Summary of Developer Funded Portion of Project Expenditures and In-Service Additions
2008 Actual to 2026 Forecast
(\$)

The following table shows:

- i) Line 1-10 - Project Expenditures by year for 2008-2019 actuals (columns C to I) and 2020-2024 forecast (columns J to N)
- ii) Line 1-20 - In-Service Additions projects are assumed to be recoverable from the DCTF in the year that assets are placed into service.

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	R
Developer	2008-2013	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Forecast	Forecast	Forecast	Forecast	Total
Project Expenditures																
1 87096 New Reservoir	100%	1,065,353	-	-	-	-	-	-	-	-	-	-	-	-	-	1,065,353
2 87097 New Wells to Support Growth (TW1 & TW1)	100%	1,399,168	124,507	272,763	27,145	2,750	-	-	-	-	-	-	-	-	-	2,089,020
3 07097 New Wells to Support Growth (AC1)	29%	152,776	45,799	66,666	(803)	-	-	-	-	-	-	-	-	-	-	333,190
4 87098 Existing Wells - Well Rehabilitation (Springhill - RW1)	29%	155,094	-	-	-	-	-	-	-	-	-	-	-	-	-	229,588
5 21096 Dene Rd WTP Upgrades (New Filter)	100%	222,892	-	-	-	-	-	-	-	-	-	-	-	-	-	222,892
6 21099 Landline Lane Upgrades	100%	439,489	-	-	-	-	-	-	-	-	-	-	-	-	-	551,672
7 100102 Dene Road Pump Station Upgrades	9%	-	10,447	1,671	-	-	-	-	-	-	-	-	-	-	-	13,487
8 Booster Pump on Church Road ⁽¹⁾	75%	-	-	-	-	-	-	-	54,434	-	378,750	225,000	-	-	-	658,184
9 Pressure Reducing Valve (2024-2025)	75%	-	-	-	-	-	-	-	-	-	355,524	408,348	-	-	-	763,872
10 Water Main Upgrades 100-150mm Single Family Deficient Fire Flow	50%	-	-	-	-	-	-	-	-	-	11,829	113,894	111,390	-	-	237,112
11 Water Main Upgrades 150-200mm Ackerman Rd Development	50%	-	-	-	-	-	-	-	-	-	-	23,214	-	-	-	23,214
12 Watermain Upgrades - 100m to 200m Landline Lane	50%	-	-	-	-	-	-	-	-	-	-	-	-	54,918	-	54,918
13 Bulk Water Connection to RDN Alternative ⁽²⁾	100%	-	-	-	-	-	-	-	-	-	349,000	-	-	-	-	349,000
14 Total Project Expenditures		3,434,772	180,714	341,899	26,341	2,750	-	54,434	727,750	892,853	545,455	166,308	6,591,500			
In-Service Additions																
15 87096 New Reservoir		(1,065,353)	-	-	-	-	-	-	-	-	-	-	-	-	-	(1,065,353)
16 87097 New Wells to Support Growth (TW1 & TW1)		-	-	(1,619,426)	-	-	-	-	-	-	-	-	-	-	-	(2,089,020)
17 07097 New Wells to Support Growth (AC1)		-	-	(333,190)	-	-	-	-	-	-	-	-	-	-	-	(333,190)
18 87098 Existing Wells - Well Rehabilitation (Springhill - RW1)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	(229,588)
19 21096 Dene Rd WTP Upgrades (New Filter)		(222,892)	-	-	-	-	-	-	-	-	-	-	-	-	-	(222,892)
20 21099 Landline Lane Upgrades		-	-	-	-	-	-	-	-	-	-	-	-	-	-	(551,672)
21 100102 Dene Road Pump Station Upgrades		-	-	(13,487)	-	-	-	-	-	-	-	-	-	-	-	(13,487)
22 Booster Pump on Church Road	75%	-	-	-	-	-	-	-	-	-	(658,184)	-	-	-	-	(658,184)
23 Pressure Reducing Valve (2024-2025)	75%	-	-	-	-	-	-	-	-	-	(355,524)	(408,348)	-	-	-	(763,872)
24 Water Main Upgrades 100-150mm Single Family Deficient Fire Flow	50%	-	-	-	-	-	-	-	-	-	-	-	(237,112)	-	-	(237,112)
25 Water Main Upgrades 150-200mm Ackerman Rd Development	50%	-	-	-	-	-	-	-	-	-	-	-	(23,214)	-	-	(23,214)
26 Watermain Upgrades - 100m to 200m Landline Lane	50%	-	-	-	-	-	-	-	-	-	-	-	(54,918)	-	-	(54,918)
27 Bulk Water Line Connection to RDN Alternative	100%	-	-	-	-	-	-	-	-	-	(349,000)	-	-	-	-	(349,000)
18 Growth Assets Placed Into Service		(1,288,245)	-	(1,966,103)	-	-	-	-	-	(1,362,708)	(431,562)	(292,030)	(6,588,759)			

⁽¹⁾ 2020-2021 Project expenditures provided in section 5.8 of the "Friesch Creek Water System Master Plan Update 2020". Project expenditures include inflation and contingency.

Table 4
Forecast Growth, Demand, and Capacity

A	B 2021 Actual	C 2022 Actual	D 2023 Actual	E 2024 Forecast	F 2025 Forecast	G 2026 Forecast	H 2027 Forecast	I 2028 Forecast	J 2029 Forecast	K 2030 Forecast	L 2031 Forecast	M 2032 Forecast	N 2033 Forecast	O 2034 Forecast
1 Metered Units														
2 Residential Dwellings	2,181	2,185	2,185	2,245	2,268	2,291	2,314	2,337	2,360	2,383	2,406	2,429	2,452	2,475
3 Multi-Family														
4 Commercial	32	32	32	32	32	33	33	33	33	33	33	33	33	33
5 Irrigation	16	16	16	16	16	16	16	16	16	16	16	16	16	16
6 New Connection MDD Contribution		0.084	-	1.263	0.484	0.484	0.484	0.484	0.484	0.484	0.484	0.484	0.484	0.484
7 Connected System MDD ⁽²⁾	45.9	45.98	45.98	47.25	47.73	48.22	48.70	49.18	49.67	50.15	50.64	51.12	51.61	52.09
8 Parcel Lots	35	31	44	45										
9 SFE Equivalent Parcel Lots	35	31	44	44	44	44	44	44	44	44	44	44	44	44
10 Multi-Family	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11 Commercial	-	-	-	1	1	1	1	1	1	1	1	1	1	1
12 Parcel Lot Committed Capacity (L/s)	0.737	0.653	0.926	0.926	0.926	0.926	0.926	0.926	0.926	0.926	0.926	0.926	0.926	0.926
13 New Connections/CPCN Approval ⁽¹⁾	3	13	60	23										
14 Committed Capacity of future connection	0.063	0.274	1.263	0.484	0.484	0.484	0.484	0.484	0.484	0.484	0.484	0.484	0.484	0.484
15 System connected MDD - June 2021 - 45.9 L/s														
16 Maximum Day Demand (L/s) ⁽²⁾	46.7	46.9	48.2	48.7	49.1	49.6	50.1	50.6	51.1	51.6	52.0	52.5	53.0	53.5
17 Supply Capacity (L/s) ⁽³⁾	55.6	55.6	55.6	55.6	55.6	55.6	55.6	55.6	55.6	55.6	55.6	55.6	55.6	55.6
18 Total Capacity (L/s) ⁽³⁾	8.9	8.7	7.4	6.9	6.5	6.0	5.5	5.0	4.5	4.0	3.6	3.1	2.6	2.1
19 Available Capacity (L/s)	8.9	8.7	7.4	6.9	6.5	6.0	5.5	5.0	4.5	4.0	3.6	3.1	2.6	2.1
20 Number of Supportable Lots	423	413	353	330	307	284	261	238	215	192	169	146	123	100

0.021057

¹ Forecast approved CPCN Applications, assumes 23 complete applications are submitted and approved in the year, with the exception of 2024 which captures prior years backlog.

System MDD - EPCOR French Creek-Water System Demands and Design Standards Review", dated September June 05, 2023 & Water Utility Regulation Section ,Water Management Branch, October 04,

² 2023 Email recommending the 2021 MDD of 45.9 L/s be used for assessing existing water system capacity and future development of the system.

Average household size of 2.3 persons/SFE dwelling

Residential per capita water demand 791 lpcd*

*Includes indoor, irrigation, and non-revenue water demands.

³ Well Capacity - Waterline Resources Inc. Report No. 2987-21-001, Water Supply Investigation, EPCOR Water Utility, Parksville, BC, dated August 21, 2023

Real Condition Max Flow														
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2031	2031	2031
North Wells														
Lundine Lane Well (TWN1)	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Oceanside Replacement Well (RWN)	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00
Oceanside Backup (Twin) Replacement Well (RWN2)*							13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00
Drew Rd Well #1	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Ravensbourne Well	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50	5.50
R8-2 Well	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
South Wells														
Church Road Well #1	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Church Road Well #2	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Church Road Well #3	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80
Church Road Well #4	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Springhill Replacement Well (RWS)	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40	7.40
Springhill #2A Well	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Hills of Columbia Well #6A	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Hills of Columbia Well #7	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10	2.10
Hills of Columbia Well #9	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20	2.20
Bosa Well	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20	3.20
Hills of Columbia Well #11	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
ACS1	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30	8.30
TWS1	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
Total Capacity (All Wells)	68.60	68.60	68.60	68.60	68.60	68.60	68.60	68.60	68.60	68.60	68.60	68.60	68.60	68.60
Total Supply Available**	55.60	55.60	55.60	55.60	55.60	55.60	68.60	68.60	68.60	68.60	68.60	68.60	68.60	68.60

* Assumes redundant/back up Well for RWh2 - Is installed in 2024 and VIHA source water approval granted at the end of 2026. Back up well provides redundancy should RWh2 go out of service during a MDD event.
 ** Largest well excluded to provide a level of safety to deal with maintenance emergencies that may occur, this is defined as firm capacity.

Typical Summer Operating Well Diversion (OWD)														
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
North Wells														
Lundine Lane Well (TWN1)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Oceanside Well #2														
Oceanside Replacement Well (RWN)	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00	13.00
Oceanside Redundant Replacement Well (RWN2)														
Drew Rd Well #1	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Ravensbourne Well	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50	4.50
R8-2 Well	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50
South Wells														
Church Road Well #1	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Church Road Well #2	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Church Road Well #3	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70	2.70
Church Road Well #4	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Spring Hill Road #1														
Springhill Replacement Well (RWS)	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20
Springhill #2A Well	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hills of Columbia Well #6A	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40	1.40
Hills of Columbia Well #7	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Hills of Columbia Well #9	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Bosa Well	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Hills of Columbia Well #11	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00	3.00
ACS1	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30	7.30
TWS1	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60	1.60
Operating Capacity above 70% Available	54.70	54.70	54.70	54.70	54.70	54.70	54.70	54.70	54.70	54.70	54.70	54.70	54.70	54.70

EPCOR WATER (WEST) INC.
- FRENCH CREEK OPERATIONS -
2022 RESULTS

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2022
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**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2022
CUSTOMER COUNT AND CONSUMPTION FORECAST
FINANCIAL SCHEDULE 1.1**

CUSTOMER COUNT	2022	2022
	Filing	Actual
1 Metered Units	2,156	2,162
2 Domestic Units	1,845	1,851
3 Condominium Units	268	270
4 Commercial Units	43	42
5 Fire Protection		
6 Hydrants	183	187
7 Standpipes	3	3

MONTHLY CONSUMPTION PER CUSTOMER (m3 per Customer per month)	2022	2022
	Filing	Actual
1 Domestic Units	19.3	18.6
2 Condominium Units	18.4	19.3
3 Commercial Units	102.6	95.6

CONSUMPTION (m3)	2022	2022
	Filing	Actual
1 Domestic Units	427,655	413,805
2 First 12 cubic metres plus	223,920	257,693
3 For each cubic metre between 12 and 75 cubic metres	190,215	139,512
4 For each cubic metre over 75 cubic metres	13,520	16,600
5 Condominium Units	59,086	62,568
6 First 12 cubic metres plus	31,409	34,622
7 For each cubic metre between 12 and 75 cubic metres	24,769	23,485
8 For each cubic metre over 75 cubic metres	2,908	4,461
9 Commercial Units	52,933	48,167
10 First 12 cubic metres plus	5,223	6,460
11 For each cubic metre between 12 and 75 cubic metres	13,144	13,107
12 For each cubic metre over 75 cubic metres	34,566	28,600
13 Total Consumption	539,673	524,540

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2022
OTHER REVENUE FORECAST
FINANCIAL SCHEDULE 1.2**

OTHER REVENUE ACTUALS & FORECAST	2022	2022
	Filing	Actual
1 Late payment fees and collection charges	1,977	1,373
2 Connection and service fees	3,794	3,900
3 Miscellaneous revenue	13,590	8,768
4 Total Revenue Offsets	19,361	14,041
5 Return recognized on DCTF receivable balance	-	66,541
6 Total Other Revenues	19,361	80,582

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2022
REVENUE FORECAST
FINANCIAL SCHEDULE 1.3**

RATE SCHEDULE	2022	2022
	Filing	Actual
	\$	\$
1 METERED RATES		
2 Domestic Units - Monthly Charge		
3 First 12 cubic metres plus	43.30	43.30
4 For each cubic metre between 12 and 75 cubic metres	1.92	1.92
5 For each cubic metre over 75 cubic metres	1.92	1.92
6 Condominium Units - Monthly Charge per Unit		
7 First 12 cubic metres plus	39.40	39.40
8 For each cubic metre between 12 and 75 cubic metres	1.92	1.92
9 For each cubic metre over 75 cubic metres	1.92	1.92
10 Commercial Units - Monthly Charge		
11 First 12 cubic metres plus	38.25	38.25
12 For each cubic metre between 12 and 75 cubic metres	0.96	0.96
13 For each cubic metre over 75 cubic metres	0.96	0.96
14 NON-METERED RATES		
15 Domestic Units	43.30	43.30
16 Condominium Units	39.40	39.40
17 Commercial Units	28.25	28.25
18 WATER SERVICE CONNECTION CHARGES		
19 Connection Charge	at cost	at cost
20 Connection of Customer's Service Pipe to Existing Curb Stop	at cost	at cost
21 CONTRIBUTION IN AID OF FUTURE CONSTRUCTION		
22 For each unit qualifying as Authorized Premises	22,000	22,000
23 FIRE HYDRANT AND STANDPIPE RATES		
24 Hydrants	580.82	580.82
25 Standpipes	232.33	232.33
26 AVAILABILITY OF SERVICE CHARGE PER RENT CHARGE AGREEMENTS		
27 Annual Charge	363.74	363.74

REVENUE FORECAST	2022	2022
	Filing	Actual
	\$	\$
1 METERED RATES		
2 Domestic Units	1,350,313	1,348,713
3 First 12 cubic metres plus	958,467	978,610
4 For each cubic metre between 12 and 75 cubic metres	365,844	330,749
5 For each cubic metre over 75 cubic metres	26,003	39,355
6 Condominium Units	179,935	186,928
7 First 12 cubic metres plus	126,703	126,666
8 For each cubic metre between 12 and 75 cubic metres	47,639	50,643
9 For each cubic metre over 75 cubic metres	5,593	9,620
10 Commercial Units	65,382	63,163
11 First 12 cubic metres plus	19,739	21,274
12 For each cubic metre between 12 and 75 cubic metres	12,574	13,164
13 For each cubic metre over 75 cubic metres	33,069	28,725
14 TOTAL METERED REVENUE	1,595,630	1,598,804
15 FIRE PROTECTION	106,988	64,776
16 Hydrants	106,291	64,117
17 Standpipes	697	659
18 TARIFF REVENUE	1,702,617	1,663,580
19 OTHER REVENUE	19,361	80,582
20 TOTAL REVENUE	1,721,978	1,744,163

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2022
OPERATING COSTS
FINANCIAL SCHEDULE 2.2**

OPERATING COSTS	2022	2022
	Filing	Actual
	\$	\$
1 Salaries & Benefits	592,619	672,342
2 Salaries	310,043	253,551
3 Benefits	79,832	65,778
4 Salary transfers	202,743	353,013
5 Power & Other Utilities	75,375	63,351
6 Chemicals	32,640	30,507
7 Operations	238,377	362,687
8 Contractors and consultants	82,846	141,371
9 Travel	18,718	55,523
10 Rent	33,456	34,818
11 Telecommunications	21,420	16,648
12 Insurance	11,897	16,868
13 Vehicle costs	14,994	8,515
14 Materials and supplies	33,456	32,109
15 Advertising	2,243	4,572
16 Office	20,677	25,758
17 Other	6,159	25,955
18 Capital overhead	(7,489)	550
19 Property Taxes	45,605	52,078
20 Subtotal	984,616	1,180,965
21 Inter-Corporate Service Charges	162,704	162,704
22 Total Operating Costs	1,147,320	1,343,669

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2022
CAPITAL EXPENDITURES
FINANCIAL SCHEDULE 2.4**

Project Name		2022 Filing \$	2022 Actual \$
1	Source of Supply		
2	Bulk Water Connection to RDN	-	-
3	Existing Wells - Well Rehabilitation Program (Overhauls)	19,799	11,915
4	Well Decommissioning		
5	Transmission & Distribution Plant		
6	Single Meter Service Connections	24,846	3,338
7	Subdivision – Multi-meter Installations	27,679	2,604
8	Meter Replacement Program	30,072	26,295
9	Hydrant Installation Program	34,321	7,500
10	Drew Road Complex Flow Meter Upgrade	31,575	4,737
11	Booster Pump Station	483,288	72,578
12	Pump House Decommissioning	15,362	
13	Software		
14	Billing Software Upgrades		85,490
15	Capital Expenditures before CIAC	666,942	214,458
16	Contributions in Aid of Construction (CIAC)	(173,347)	(23,980)
17	Total Expenditures, net of CIAC	493,594	190,478

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2022
RATE BASE AND RETURN ON RATE BASE
FINANCIAL SCHEDULE 2.6**

RATE BASE AND RETURN ON RATE BASE		2022	2022
		Filing	Actual
		\$	\$
1	Mid-Year Net Rate Base		
2	Mid-Year Plant-In-Service, net		
3	PP&E, at cost		
4	Opening	13,908,637	13,426,675
5	Closing	14,575,578	13,525,488
6	Mid-Year	14,242,108	13,476,081
7	Accumulated Depreciation		
8	Opening	(2,900,996)	(2,895,106)
9	Closing	(3,248,309)	(3,215,894)
10	Mid-Year	(3,074,653)	(3,055,500)
11	Mid-Year PP&E, net	11,167,455	10,420,581
12	Mid-Year CIAC, net		
13	CIAC, gross		
14	Opening	(6,769,429)	(6,375,161)
15	Closing	(6,942,777)	(6,339,482)
16	Mid-Year	(6,856,103)	(6,357,321)
17	Accumulated Amortization		
18	Opening	1,166,482	1,161,363
19	Closing	1,337,171	1,324,184
20	Mid-Year	1,251,827	1,242,774
21	Mid-Year CIAC, net	(5,604,276)	(5,114,547)
22	Working Capital Allowance		
23	Operating costs	1,147,320	1,343,669
24	Less: Intercompany Service Charges	(162,704)	(162,704)
25	Less: Municipal Taxes	(45,605)	(52,078)
26	Total Eligible Expenses	939,011	1,128,887
27	Working Capital Allowance (45 days / 365 days)	115,768	139,178
28	Mid-Year Net Rate Base	5,678,947	5,445,212
29	Return on Rate Base		
30	Deemed Capital Structure		
31	Debt	60.00%	60.00%
32	Equity	40.00%	40.00%
33	Cost Rate		
34	Weighted Average Cost of Debt	5.22%	5.28%
35	Equity	9.75%	-0.91%
36	Weighted Average Cost of Capital		
37	Debt	3.13%	3.17%
38	Equity	3.90%	-0.36%
39	Weighted Average Cost of Capital	7.03%	2.81%
40	Return on Rate Base		
41	Debt	177,846	172,617
42	Equity	221,479	(19,717)
43	Total Return on Rate Base	399,325	152,900

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2022
DEBT AND INTEREST EXPENSE
FINANCIAL SCHEDULE 2.7**

DEBT AND INTEREST EXPENSE	2022	2022
	Filing	Actual
	\$	\$
1 Deemed Mid-Year Inter-Company Debt		
2 Mid-Year Rate Base	5,678,947	5,445,212
3 Deemed Debt Component of Mid-Year Rate Base	60.00%	60.00%
4 Mid-Year Deemed Inter-Company Debt	3,407,368	3,267,127
5 Deemed Inter-Company Interest Expense		
6 Deemed Inter-company Debt		
7 Current Year	3,407,368	3,267,127
8 Prior Year	3,309,278	3,269,057
9 Deemed Inter-Company Debt Issues	98,090	(1,930)
10 Cost of New Intercompany Debt	3.79%	5.24%
11 Interest on Deemed Inter-Company Debt		
12 Pre-2018 Debt	152,985	152,985
13 Interest on 2018 Debt	11,711	11,711
14 Interest on 2019 Debt	9,151	9,151
15 Interest on 2020 Debt	117	(286)
16 Interest on 2021 Debt	164	(842)
17 Interest on 2022 Debt	3,718	(101)
18 Deemed Inter-Company Interest Expense	177,846	172,617
19 Weighted Average Cost of Debt	5.22%	5.28%

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2022
REVENUE REQUIREMENT
FINANCIAL SCHEDULE 2.8**

REVENUE REQUIREMENT	2022	2022
	Filing	Actual
	\$	\$
1 Operating Costs		
2 Salaries & Benefits	592,619	672,342
3 Power & Other Utilities	75,375	63,351
4 Chemicals	32,640	30,507
5 Operations and Maintenance	238,377	362,687
6 Property taxes	45,605	52,078
7 Inter-Corporate Service Charges	162,704	162,704
8 Total Operating Costs	1,147,320	1,343,669
9 Depreciation	347,312	326,887
10 Amortization of Contributions	(170,689)	(164,386)
11 Interest Expense	177,846	172,617
12 Equity Return	221,479	(19,717)
13 Revenue Requirement before Revenue Offsets	1,723,268	1,659,071
14 Revenue Offsets	(19,361)	(14,041)
15 Revenue Requirement	1,703,907	1,645,029

16 Depreciation		
17 Depreciation Expense	347,312	325,322
18 Cancelled Projects	-	-
19 Loss (Gain) on Disposal	-	1,565
20 Total Depreciation	347,312	326,887

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2022
DEFERRAL ACCOUNT
FINANCIAL SCHEDULE 3.0**

DEFERRAL ACCOUNTS	A	B	C
	2022 Filing \$	2022 Actual \$	2022 Deferral \$
1 Consumption Deferral			
2 Base Consumption (monthly charge per unit)	1,104,908	1,126,550	(21,641)
3 Domestic Units	958,467	978,610	(20,143)
4 Condominium Units	126,703	126,666	37
5 Commercial Units	19,739	21,274	(1,535)
6 Water Consumption in Excess of Base (charge per cubic metre)	490,721	472,255	18,467
7 Domestic Units	391,846	370,103	21,743
8 Condominium Units	53,232	60,262	(7,031)
9 Commercial Units	45,643	41,889	3,754
10 Consumption Deferral	1,595,630	1,598,804	(3,175)
11 Property Tax Deferral	45,605	52,078	6,473
12 Interest Expense Deferral	177,846	172,617	(5,228)
13 Hearing Cost Deferral	-	-	-
14 Total Deferral Amount			(1,930)

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2022
NET INCOME
FINANCIAL SCHEDULE 5.0**

NET INCOME	2022	2022
	Filing	Actual
	\$	\$
1 Revenue		
2 Water service	1,595,630	1,598,804
3 Fire protection	106,988	64,776
4 Other revenue	19,361	80,582
	1,721,978	1,744,163
5 Deferral Accounts	-	(1,930)
6 Carrying Charges on Deferral Balance	-	(18,186)
7 Total Forecast Revenue	1,721,978	1,724,047
8 Operating Costs	1,147,320	1,343,669
9 Depreciation and amortization	176,623	160,936
10 Interest Expense	177,846	172,617
11 Total Expenses	1,501,789	1,677,223
12 Net Income	220,190	46,824
13 Less: Return recognized on DCTF receivable balance	-	(66,541)
14 Net Income from Operations	220,190	(19,717)
15 Equity Component of Rate Base	2,271,579	2,178,085
16 Effective Rate of Return	9.69%	-0.91%

EPCOR WATER (WEST) INC.
- FRENCH CREEK OPERATIONS -
2020 RESULTS

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2020
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Financial Schedule 5.0	Net Income

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2020
CUSTOMER COUNT AND CONSUMPTION FORECAST
FINANCIAL SCHEDULE 1.1**

CUSTOMER COUNT	2020	2020
	Filing	Actual
1 Metered Units	2,063	2,105
2 Domestic Units	1,775	1,796
3 Condominium Units	248	268
4 Commercial Units	40	41
5 Fire Protection		
6 Hydrants	172	179
7 Standpipes	10	3

MONTHLY CONSUMPTION PER CUSTOMER (m3 per Customer per month)	2020	2020
	Filing	Actual
1 Domestic Units	19.2	19.0
2 Condominium Units	18.1	18.5
3 Commercial Units	95.3	91.8

CONSUMPTION (m3)	2020	2020
	Filing	Actual
1 Domestic Units	408,267	409,871
2 First 15 cubic metres plus	247,864	258,534
3 For each cubic metre between 15 and 75 cubic metres	148,325	143,209
4 For each cubic metre over 75 cubic metres	12,078	8,128
5 Condominium Units	53,731	59,646
6 First 15 cubic metres plus	33,161	36,886
7 For each cubic metre between 15 and 75 cubic metres	18,641	20,002
8 For each cubic metre over 75 cubic metres	1,930	2,758
9 Commercial Units	45,749	45,161
10 First 15 cubic metres plus	5,246	6,064
11 For each cubic metre between 15 and 75 cubic metres	10,007	12,172
12 For each cubic metre over 75 cubic metres	30,495	26,925
13 Total Consumption	507,747	514,678

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
 FOR YEAR ENDED DECEMBER 31, 2020
 OTHER REVENUE FORECAST
 FINANCIAL SCHEDULE 1.2**

OTHER REVENUE ACTUALS & FORECAST	2020	2020
	Filing	Actual
1 Late payment fees and collection charges	2,210	2,130
2 Connection and service fees	6,408	4,725
3 Miscellaneous revenue	14,630	9,277
4 Total Revenue Offsets	23,248	16,131
5 Return recognized on DCTF receivable balance	-	149,720
6 Total Other Revenues	23,248	165,851

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2020
REVENUE FORECAST
FINANCIAL SCHEDULE 1.3**

REVENUE FORECAST		2020	2020
		Filing	Actual
		\$	\$
1	METERED RATES		
2	Domestic Units	1,295,384	1,329,026
3	First 15 cubic metres plus	986,292	1,035,952
4	For each cubic metre between 15 and 75 cubic metres	285,818	277,334
5	For each cubic metre over 75 cubic metres	23,274	15,740
6	Condominium Units	165,322	180,752
7	First 15 cubic metres plus	125,684	136,825
8	For each cubic metre between 15 and 75 cubic metres	35,920	38,604
9	For each cubic metre over 75 cubic metres	3,719	5,323
10	Commercial Units	58,382	59,658
11	First 15 cubic metres plus	19,363	22,213
12	For each cubic metre between 15 and 75 cubic metres	9,641	11,658
13	For each cubic metre over 75 cubic metres	29,379	25,788
14	TOTAL METERED REVENUE	1,519,088	1,569,437
15	FIRE PROTECTION	102,580	105,028
16	Hydrants	100,249	104,328
17	Standpipes	2,331	699
18	TARIFF REVENUE	1,621,668	1,674,465
19	OTHER REVENUE	23,248	165,851
20	TOTAL REVENUE	1,644,916	1,840,316

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2020
OPERATING COSTS
FINANCIAL SCHEDULE 2.2**

OPERATING COSTS	2020	2020
	Filing	Actual
	\$	\$
1 Salaries & Benefits	542,128	549,130
2 Salaries	425,281	290,373
3 Benefits	100,531	77,573
4 Salary transfers	16,316	181,184
5 Power & Other Utilities	92,312	56,732
6 Chemicals	44,945	31,608
7 Operations	212,250	265,342
8 BCUC D&O 2519, page 10	(20,000)	-
9 Contractors and consultants	59,602	95,332
10 Travel	24,025	7,836
11 Rent	32,086	31,750
12 Telecommunications	25,369	17,443
13 Insurance	29,275	19,191
14 Vehicle costs	10,770	8,277
15 Materials and supplies	24,907	43,247
16 Advertising	4,249	3,370
17 Office	20,463	31,818
18 Other	8,278	14,432
19 Capital overhead	(6,774)	(7,356)
20 Property Taxes	43,510	41,177
21 Subtotal	935,144	943,988
22 Inter-Corporate Service Charges	192,200	192,200
23 Total Operating Costs	1,127,344	1,136,188

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2020
CAPITAL EXPENDITURES
FINANCIAL SCHEDULE 2.4**

	Project Name	2020 Filing \$	2020 Actual \$
	Source of Supply Church Road South Test Well and Monitoring Well (TWN1 and TWs1) Completion and tie-in to system (870997) Existing Wells - Well Rehabilitation Program (Overhauls) Standby Generator - Oceanside #2 (RWn2) Well Decommissioning Water Treatment Plant Computer Hardware Transmission & Distribution Plant Single Meter Service Connections Subdivision – Multi-meter Installations Meter Replacement Program Hydrant Installation Program	- 31,396 - - - 6,070 41,861 47,094 62,792	2,750 - 27,630 15,721 4,315 217 38,261 53,252 17,578
	Capital Expenditures before CIAC	189,212	159,724
	Contributions in Aid of Construction (CIAC)	(47,931)	(56,666)
	Total Expenditures, net of CIAC	141,281	103,058

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2020
RATE BASE AND RETURN ON RATE BASE
FINANCIAL SCHEDULE 2.6**

RATE BASE AND RETURN ON RATE BASE		2020	2020
		Filing	Actual
		\$	\$
1	Mid-Year Net Rate Base		
2	Mid-Year Plant-In-Service, net		
3	PP&E, at cost		
4	Opening	13,379,578	13,118,280
5	Closing	13,568,791	13,278,854
6	Mid-Year	13,474,184	13,198,567
7	Accumulated Depreciation		
8	Opening	(2,274,925)	(2,254,770)
9	Closing	(2,607,109)	(2,573,022)
10	Mid-Year	(2,441,017)	(2,413,896)
11	Mid-Year PP&E, net	11,033,167	10,784,671
12	Mid-Year CIAC, net		
13	CIAC, gross		
14	Opening	(6,353,218)	(6,303,448)
15	Closing	(6,401,149)	(6,360,114)
16	Mid-Year	(6,377,184)	(6,331,781)
17	Accumulated Amortization		
18	Opening	884,484	845,362
19	Closing	1,061,777	1,003,760
20	Mid-Year	973,131	924,561
21	Mid-Year CIAC, net	(5,404,053)	(5,407,220)
22	Working Capital Allowance		
23	Operating costs	1,127,344	1,136,188
24	Less: Intercompany Service Charges	(192,200)	(192,200)
25	Less: Municipal Taxes	(43,510)	(41,177)
26	Total Eligible Expenses	891,635	902,812
27	Working Capital Allowance (45 days / 365 days)	109,928	111,306
28	Mid-Year Net Rate Base	5,739,042	5,488,757
29	Return on Rate Base		
30	Deemed Capital Structure		
31	Debt	60.00%	60.00%
32	Equity	40.00%	40.00%
33	Cost Rate		
34	Weighted Average Cost of Debt	5.36%	5.27%
35	Equity	9.75%	6.76%
36	Weighted Average Cost of Capital		
37	Debt	3.22%	3.16%
38	Equity	3.90%	2.71%
39	Weighted Average Cost of Capital	7.12%	5.87%
40	Return on Rate Base		
41	Debt	184,510	173,561
42	Equity	223,823	148,518
43	Total Return on Rate Base	408,333	322,079

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2020
DEBT AND INTEREST EXPENSE
FINANCIAL SCHEDULE 2.7**

DEBT AND INTEREST EXPENSE	2020	2020
	Filing	Actual
	\$	\$
1 Deemed Mid-Year Inter-Company Debt		
2 Mid-Year Rate Base	5,739,042	5,488,757
3 Deemed Debt Component of Mid-Year Rate Base	60.00%	60.00%
4 Mid-Year Deemed Inter-Company Debt	3,443,425	3,293,254
5 Deemed Inter-Company Interest Expense		
6 Deemed Inter-company Debt		
7 Current Year	3,443,425	3,293,254
8 Prior Year	3,433,826	3,301,668
9 Deemed Inter-Company Debt Issues	9,599	(8,414)
10 Cost of New Intercompany Debt	4.87%	3.40%
11 Interest on Deemed Inter-Company Debt		
12 Pre-2015 Debt	143,661	143,661
13 Interest on 2015 Debt	(2,349)	(2,349)
14 Interest on 2016 Debt	4,536	4,536
15 Interest on 2017 Debt	7,138	7,138
16 Interest on 2018 Debt	15,520	11,711
17 Interest on 2019 Debt	15,538	9,151
18 Interest on 2020 Debt	467	(286)
18 Deemed Inter-Company Interest Expense	184,510	173,561
19 Weighted Average Cost of Debt	5.36%	5.27%

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2020
REVENUE REQUIREMENT
FINANCIAL SCHEDULE 2.8**

REVENUE REQUIREMENT	2020	2020
	Filing	Actual
	\$	\$
1 Operating Costs		
2 Salaries & Benefits	542,128	549,130
3 Power & Other Utilities	92,312	56,732
4 Chemicals	44,945	31,608
5 Operations and Maintenance	212,250	265,342
6 Property taxes	43,510	41,177
7 Inter-Corporate Service Charges	192,200	192,200
8 Total Operating Costs	1,127,344	1,136,188
9 Depreciation	332,184	318,252
10 Amortization of Contributions	(177,293)	(158,398)
11 Interest Expense	184,511	173,561
12 Equity Return	223,823	148,518
13 Revenue Requirement before Revenue Offsets	1,690,569	1,618,121
14 Revenue Offsets	(23,248)	(16,131)
15 Revenue Requirement	1,667,320	1,601,989

16 Depreciation		
17 Depreciation Expense	332,184	318,252
18 Cancelled Projects	-	-
19 Loss (Gain) on Disposal	-	-
20 Total Depreciation	332,184	318,252

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2020
DEFERRAL ACCOUNT
FINANCIAL SCHEDULE 3.0**

DEFERRAL ACCOUNTS	A	B	C
	2020 Filing \$	2020 Actual \$	2020 Deferral \$
1 Consumption Deferral			
2 Base Consumption (monthly charge per unit)	1,131,338	1,194,990	(63,652)
3 Domestic Units	986,292	1,035,952	(49,660)
4 Condominium Units	125,684	136,825	(11,142)
5 Commercial Units	19,363	22,213	(2,850)
6 Water Consumption in Excess of Base (charge per cubic metre)	387,750	374,447	13,303
7 Domestic Units	309,092	293,074	16,017
8 Condominium Units	39,639	43,927	(4,288)
9 Commercial Units	39,020	37,446	1,574
10 Consumption Deferral	1,519,088	1,569,437	(50,348)
11 Property Tax Deferral	43,510	41,177	(2,333)
12 Interest Expense Deferral	184,510	173,561	(10,950)
13 Hearing Cost Deferral	-	2,755	2,755
14 Total Deferral Amount			(60,876)

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2020
NET INCOME
FINANCIAL SCHEDULE 5.0**

NET INCOME	2020	2020
	Filing	Actual
	\$	\$
1 Revenue		
2 Water service	1,519,088	1,569,437
3 Fire protection	102,580	105,028
4 Other revenue	23,248	165,851
	1,644,916	1,840,316
5 Deferral Accounts	-	(60,876)
6 Carrying Charges on Deferral Balance	-	(11,599)
7 Total Forecast Revenue	1,644,916	1,767,841
8 Operating Costs	1,127,344	1,136,188
9 Depreciation and amortization	154,891	159,854
10 Interest Expense	184,511	173,561
11 Total Expenses	1,466,746	1,469,603
12 Net Income	178,170	298,238
13 Less: Return recognized on DCTF receivable balance	-	(149,720)
14 Net Income from Operations	178,170	148,518
15 Equity Component of Rate Base	2,295,617	2,195,503
16 Effective Rate of Return	7.76%	6.76%

EPCOR WATER (WEST) INC.
- FRENCH CREEK OPERATIONS -
2021 RESULTS

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2021
FINANCIAL SCHEDULES
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**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2021
CUSTOMER COUNT AND CONSUMPTION FORECAST
FINANCIAL SCHEDULE 1.1**

CUSTOMER COUNT	2021	2021
	Filing	Actual
1 Metered Units	2,139	2,127
2 Domestic Units	1,828	1,816
3 Condominium Units	268	269
4 Commercial Units	43	42
5 Fire Protection		
6 Hydrants	181	183
7 Standpipes	3	3

MONTHLY CONSUMPTION PER CUSTOMER (m3 per Customer per month)	2021	2021
	Filing	Actual
1 Domestic Units	19.3	20.6
2 Condominium Units	18.4	19.6
3 Commercial Units	102.6	93.4

CONSUMPTION (m3)	2021	2021
	Filing	Actual
1 Domestic Units	423,829	449,172
2 First 12 cubic metres plus	221,917	266,222
3 For each cubic metre between 12 and 75 cubic metres	188,513	170,350
4 For each cubic metre over 75 cubic metres	13,399	12,600
5 Condominium Units	59,086	63,175
6 First 12 cubic metres plus	31,409	36,665
7 For each cubic metre between 12 and 75 cubic metres	24,769	22,029
8 For each cubic metre over 75 cubic metres	2,908	4,481
9 Commercial Units	52,933	47,058
10 First 12 cubic metres plus	5,223	6,228
11 For each cubic metre between 12 and 75 cubic metres	13,144	12,303
12 For each cubic metre over 75 cubic metres	34,566	28,527
13 Total Consumption	535,848	559,405

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
 FOR YEAR ENDED DECEMBER 31, 2021
 OTHER REVENUE FORECAST
 FINANCIAL SCHEDULE 1.2**

OTHER REVENUE ACTUALS & FORECAST	2021	2021
	Filing	Actual
1 Late payment fees and collection charges	1,938	1,976
2 Connection and service fees	3,719	3,950
3 Miscellaneous revenue	13,590	14,187
4 Total Revenue Offsets	19,248	20,113
5 Return recognized on DCTF receivable balance	-	130,819
6 Total Other Revenues	19,248	150,932

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2021
REVENUE FORECAST
FINANCIAL SCHEDULE 1.3**

REVENUE FORECAST	2021	2021
	Filing	Actual
	\$	\$
1 METERED RATES		
2 Domestic Units	1,338,234	1,400,196
3 First 12 cubic metres plus	949,893	982,820
4 For each cubic metre between 12 and 75 cubic metres	362,571	388,631
5 For each cubic metre over 75 cubic metres	25,770	28,745
6 Condominium Units	179,935	189,902
7 First 12 cubic metres plus	126,703	127,656
8 For each cubic metre between 12 and 75 cubic metres	47,639	51,725
9 For each cubic metre over 75 cubic metres	5,593	10,522
10 Commercial Units	65,382	62,639
11 First 12 cubic metres plus	19,739	21,087
12 For each cubic metre between 12 and 75 cubic metres	12,574	12,520
13 For each cubic metre over 75 cubic metres	33,069	29,031
14 TOTAL METERED REVENUE	1,583,551	1,652,737
15 FIRE PROTECTION	105,826	69,440
16 Hydrants	105,129	68,740
17 Standpipes	697	699
18 TARIFF REVENUE	1,689,377	1,722,176
19 OTHER REVENUE	19,248	150,932
20 TOTAL REVENUE	1,708,624	1,873,109

EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS FOR YEAR ENDED DECEMBER 31, 2021 OPERATING COSTS FINANCIAL SCHEDULE 2.2		
OPERATING COSTS	2021	2021
	Filing	Actual
	\$	\$
1 Salaries & Benefits	583,286	592,278
2 Salaries	305,161	379,904
3 Benefits	78,575	88,055
4 Salary transfers	199,550	124,319
5 Power & Other Utilities	75,000	66,204
6 Chemicals	32,000	34,727
7 Operations	233,703	237,974
8 Contractors and consultants	81,221	95,445
9 Travel	18,351	3,218
10 Rent	32,800	31,833
11 Telecommunications	21,000	15,386
12 Insurance	11,664	17,609
13 Vehicle costs	14,700	13,515
14 Materials and supplies	32,800	29,445
15 Advertising	2,199	1,069
16 Office	20,272	23,906
17 Other	6,038	10,057
18 Capital overhead	(7,342)	(3,508)
19 Property Taxes	44,711	42,650
20 Subtotal	968,700	973,833
21 Inter-Corporate Service Charges	160,536	160,536
22 Total Operating Costs	1,129,236	1,134,369

EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS FOR YEAR ENDED DECEMBER 31, 2021 CAPITAL EXPENDITURES FINANCIAL SCHEDULE 2.4			
Project Name		2021 Filing \$	2021 Actual \$
1	Source of Supply		
2	Bulk Water Connection to RDN	349,140	-
3	Existing Wells - Well Rehabilitation Program (Overhauls)	-	15,116
4	Well Decommissioning	19,318	4,887
5	Transmission & Distribution Plant		
6	Single Meter Service Connections	22,521	84
7	Subdivision – Multi-meter Installations	25,320	15,011
8	Meter Replacement Program	30,056	33,034
9	Hydrant Installation Program	35,704	79,687
10	Software		
11	Software	86,553	-
12	Capital Expenditures before CIAC	568,612	147,820
13	Contributions in Aid of Construction (CIAC)	(396,980)	(15,048)
14	Total Expenditures, net of CIAC	171,632	132,773

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2021
RATE BASE AND RETURN ON RATE BASE
FINANCIAL SCHEDULE 2.6**

RATE BASE AND RETURN ON RATE BASE	2021	2021
	Filing	Actual
	\$	\$
1 Mid-Year Net Rate Base		
2 Mid-Year Plant-In-Service, net		
3 PP&E, at cost		
4 Opening	13,340,026	13,278,855
5 Closing	13,908,637	13,426,675
6 Mid-Year	13,624,331	13,352,765
7 Accumulated Depreciation		
8 Opening	(2,572,028)	(2,573,022)
9 Closing	(2,900,996)	(2,895,106)
10 Mid-Year	(2,736,512)	(2,734,064)
11 Mid-Year PP&E, net	10,887,819	10,618,701
12 Mid-Year CIAC, net		
13 CIAC, gross		
14 Opening	(6,372,449)	(6,360,113)
15 Closing	(6,769,429)	(6,375,161)
16 Mid-Year	(6,570,939)	(6,367,637)
17 Accumulated Amortization		
18 Opening	1,002,853	1,003,760
19 Closing	1,166,482	1,161,363
20 Mid-Year	1,084,667	1,082,562
21 Mid-Year CIAC, net	(5,486,272)	(5,285,075)
22 Working Capital Allowance		
23 Operating costs	1,129,236	1,134,369
24 Less: Intercompany Service Charges	(160,536)	(160,536)
25 Less: Municipal Taxes	(44,711)	(42,650)
26 Total Eligible Expenses	923,989	931,183
27 Working Capital Allowance (45 days / 365 days)	113,916	114,803
28 Mid-Year Net Rate Base	5,515,463	5,448,429
29 Return on Rate Base		
30 Deemed Capital Structure		
31 Debt	60.00%	60.00%
32 Equity	40.00%	40.00%
33 Cost Rate		
34 Weighted Average Cost of Debt	5.26%	5.28%
35 Equity	9.75%	8.54%
36 Weighted Average Cost of Capital		
37 Debt	3.16%	3.17%
38 Equity	3.90%	3.42%
39 Weighted Average Cost of Capital	7.06%	6.59%
40 Return on Rate Base		
41 Debt	174,128	172,719
42 Equity	215,103	186,082
43 Total Return on Rate Base	389,231	358,801

EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS FOR YEAR ENDED DECEMBER 31, 2021 DEBT AND INTEREST EXPENSE FINANCIAL SCHEDULE 2.7		
DEBT AND INTEREST EXPENSE	2021 Filing \$	2021 Actual \$
1 Deemed Mid-Year Inter-Company Debt		
2 Mid-Year Rate Base	5,515,463	5,448,429
3 Deemed Debt Component of Mid-Year Rate Base	60.00%	60.00%
4 Mid-Year Deemed Inter-Company Debt	3,309,278	3,269,057
5 Deemed Inter-Company Interest Expense		
6 Deemed Inter-company Debt		
7 Current Year	3,309,278	3,269,057
8 Prior Year	3,304,941	3,293,254
9 Deemed Inter-Company Debt Issues	4,337	(24,197)
10 Cost of New Intercompany Debt	3.79%	3.48%
11 Interest on Deemed Inter-Company Debt		
12 Pre-2018 Debt	152,985	152,985
13 Interest on 2018 Debt	11,711	11,711
14 Interest on 2019 Debt	9,151	9,151
15 Interest on 2020 Debt	117	(286)
16 Interest on 2021 Debt	164	(842)
17 Deemed Inter-Company Interest Expense	174,128	172,719
18 Weighted Average Cost of Debt	5.26%	5.28%

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2021
REVENUE REQUIREMENT
FINANCIAL SCHEDULE 2.8**

REVENUE REQUIREMENT	2021	2021
	Filing	Actual
	\$	\$
1 Operating Costs		
2 Salaries & Benefits	583,286	592,278
3 Power & Other Utilities	75,000	66,204
4 Chemicals	32,000	34,727
5 Operations and Maintenance	233,703	237,974
6 Property taxes	44,711	42,650
7 Inter-Corporate Service Charges	160,536	160,536
8 Total Operating Costs	1,129,236	1,134,369
9 Depreciation	328,968	322,084
10 Amortization of Contributions	(163,630)	(157,603)
11 Interest Expense	174,128	172,719
12 Equity Return	215,103	186,082
13 Revenue Requirement before Revenue Offset	1,683,806	1,657,650
14 Revenue Offsets	(19,248)	(20,113)
15 Revenue Requirement	1,664,558	1,637,537
16 Depreciation		
17 Depreciation Expense	328,968	322,084
18 Cancelled Projects	-	-
19 Loss (Gain) on Disposal	-	-
20 Total Depreciation	328,968	322,084

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2021
DEFERRAL ACCOUNT
FINANCIAL SCHEDULE 3.0**

DEFERRAL ACCOUNTS	2021	2021	2021
	Filing	Actual	Deferral
	\$	\$	\$
1 Consumption Deferral			
2 Base Consumption (monthly charge per unit)	1,096,335	1,131,562	(35,228)
3 Domestic Units	949,893	982,820	(32,927)
4 Condominium Units	126,703	127,656	(953)
5 Commercial Units	19,739	21,087	(1,348)
6 Water Consumption in Excess of Base (charge per cubic metre)	487,216	521,174	(33,958)
7 Domestic Units	388,341	417,376	(29,035)
8 Condominium Units	53,232	62,246	(9,015)
9 Commercial Units	45,643	41,552	4,091
10 Consumption Deferral	1,583,551	1,652,737	(69,186)
11 Property Tax Deferral	44,711	42,650	(2,061)
12 Interest Expense Deferral	174,128	172,719	(1,410)
13 Hearing Cost Deferral	-	3,797	3,797
14 Total Deferral Amount			(68,860)

**EPCOR WATER (WEST) INC. - FRENCH CREEK OPERATIONS
FOR YEAR ENDED DECEMBER 31, 2021
NET INCOME
FINANCIAL SCHEDULE 5.0**

NET INCOME	2021	2021
	Filing	Actual
	\$	\$
1 Revenue		
2 Water service	1,583,551	1,652,737
3 Fire protection	105,826	69,440
4 Other revenue	19,248	150,932
	1,708,624	1,873,109
5 Deferral Accounts	-	(68,860)
6 Carrying Charges on Deferral Balance	-	(15,779)
7 Total Forecast Revenue	1,708,624	1,788,469
8 Operating Costs	1,129,236	1,134,369
9 Depreciation and amortization	165,338	164,481
10 Interest Expense	174,128	172,719
11 Total Expenses	1,468,703	1,471,568
12 Net Income	239,922	316,901
13 Less: Return recognized on DCTF receivable balance	-	(130,819)
14 Net Income from Operations	239,922	186,082
15 Equity Component of Rate Base	2,206,185	2,179,372
16 Effective Rate of Return	10.87%	8.54%