REGULAR MEETING OF THE BOARD OF DIRECTORS
OF THE CAPITAL REGION SOUTHWEST WATER SERVICES COMMISSION
TO BE HELD THURSDAY, MAY 28, 2026
MARQUIS ROOM, BEST WESTERN P**REMIER** DENHAM INN **& SUITES**,
5207 - 50 AVENUE, LEDUC, AB T9E 6V3
DINNER: 5:00 P.M., MEETING: 5:30 P.M.

1. ***CALL TO ORDER***

2. ***ADOPTION OF AGENDA***

3. ***APPROVAL OF MINUTES***

* A. Minutes of the March 19, 2026 Regular Meeting *(pages 2 - 18)*

4. ***PUBLIC COMMENTARY***

5. ***REPORTS OF OFFICERS***

* A. Manager's Report *(pages 19 - 24)*
* B. Treasurer's Report *(pages 25 - 31)*

6. ***UNFINISHED BUSINESS***

* A. Water Master Plan *(pages 32 - 33)*

7. ***NEW BUSINESS***

8. ***CLOSED SESSION***

9. ***NEXT MEETING***

The next Regular Board meeting is scheduled for September 17, 2026, to be held at the Leduc Golf Club.

10. ***ADJOURNMENT***

* Items attached to agenda
** Verbal agenda item
*** Items to be circulated

MINUTES OF THE CAPITAL REGION SOUTHWEST WATER SERVICES COMMISSION, REGULAR MEETING, HELD ON THURSDAY, MARCH 19, 2026 DINNER AT 5:30 P.M., MEETING AT 6:00 P.M., LEDUC GOLF COURSE 5725 BLACK GOLD DR, LEDUC, AB T9E 8C4

1. CALL TO ORDER

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

PRESENT:	Mayor Krista Gardner	Town of Calmar
	Councillor Jaime McKeag-Reber	Town of Calmar
	Mayor Lars Hansen	City of Leduc
	Councillor Jill Spinks (alt.)	City of Leduc
	Mayor Lisa Vanderkwaak	City of Beaumont
	Councillor Anthony Kohlsmith	City of Beaumont
	Deputy Mayor Ron These	Village of Hay Lakes
	Councillor Paul Patterson	Village of Hay Lakes
	Councillor Dal Virdi	Leduc County
	Councillor Kelly-Lynn Lewis (alt.)	Leduc County
	Councillor Doug Lyseng	Camrose County
	Councillor Jordon Banack	Camrose County
	Mayor Doug Peel	Town of Millet
	Councillor Susie Petrisor (alt.)	Town of Millet
ALSO PRESENT:	Councillor Lana Broker	City of Camrose
	Kristofer Johnson, G.M., Infrastructure	City of Camrose
	Roger Steele, Manager	EIA
	Des Mryglod, Director, Eng., Utilities & Transit	Leduc County
	Shawn Olson, Commission Manager	City of Leduc
	Rick Sereda, Operations Manager	City of Leduc
	Gerard Del Rosario, Commission Treasurer	City of Leduc
	Elie Tymchyshyn, Accountant	City of Leduc
	Melanie White, Project Manager	City of Leduc
	Katherine O'Dwyer, Administrative Assistant	City of Leduc
	Blair Martin, Manager, Infrastructure & Main.	City of Leduc
	Chris Parfitt, Project Manager	Associated Engineering
WITH REGRETS:	Councillor Laura Tillack	City of Leduc
	Councillor Bonnie Thomas	Leduc County
	Councillor Mathew Starky	Town of Millet
	Mark D'aoust, Operations Technician	City of Leduc
	Chelsey Iles, Manager, Capital Projects	City of Leduc
	Shannon Bremner, Recording Secretary	City of Leduc

2. ADOPTION OF AGENDA

Shawn Olson brought forward an emergent addition to the agenda, to be discussed in Closed Session: Regional Water/Wastewater Assessment Initiative (RWWAI) Update. (ATIA s.28 & 29)

14-26 **Motion:** It was **Moved** by Councillor Kelly-Lynn Lewis that the agenda for the March 19, 2026, Capital Region Southwest Water Services regular meeting be approved as amended.

Motion Carried Unanimously

3. APPROVAL OF MINUTES

A. Minutes of the January 22, 2026 Regular Meeting

15-26 **Motion:** It was **Moved** by Councillor Paul Patterson that the meeting minutes of the January 22, 2026 regular meeting of the Capital Region Southwest Water Services Commission be approved as circulated.

Motion Carried Unanimously

4. PUBLIC COMMENTARY

There was no public commentary.

5. REPORTS OF OFFICERS

A. Manager's Report

Nisku Booster Station

The Commission continues to own and operate the Booster Station, supplying water to member municipalities while the Contractor continues to address deficiencies. Most notably, an issue with cavitation in a pressure reducing valve (PRV) needs to be resolved in order to achieve Total Performance. The two-year warranty period will begin once all deficiencies are resolved and Total Performance is achieved.

The project team is in negotiations with Maple Reinders on the claim from their sub-contractor (Inline). The claim is for outstanding expenses related to the directional drill of the project. Administration will provide an update once both parties have agreed to next steps.

Municipal Developments

Administration received 5 notifications of subdivision developments/extensions (3 from City of Beaumont, 2 from City of Leduc), 1 Neighborhood Structure Plan (City of Beaumont), and 1 Notice of Bylaw Hearing (City of Beaumont). Administration had no concerns with the documents provided and no comments were provided back to the members.

Water Master Plan and Feasibility Study

Associated Engineering (AE) has completed the water modeling portion of the Master Plan and has progressed to investigating future upgrades, complete with cost estimates. The report is underway and a draft report is expected to be presented at the May Board meeting. Prior to the draft report being completed, Administration is seeking direction from the Board on the desired methodology for future rate setting. That discussion will occur in closed session later in this meeting.

Board Members attended the second session of the Strategic Update at the January 22, 2026 Board meeting, led by consultant Strategic Steps. A draft of the Board's strategic goals was presented for discussion and the resulting document will be included in the draft Master Plan presented in May.

Water modeling is complete for the Camrose-Wetaskiwin Feasibility Study which is being completed in conjunction with the Water Master Plan. Associated Engineering is investigating potential alignments for a future water line to serve the City of Camrose, County of Wetaskiwin and City of Wetaskiwin. Consultation is being scheduled to discuss the options with EPCOR as well as the municipalities involved. As part of the Feasibility Study, we will also be investigating advocacy at the request of the City of Camrose. It is anticipated that the draft of the Feasibility Study will be ready in June, with the opportunity to complete a Water for Life application by the November deadline if desired.

City of Beaumont Line Extension to St. Vital Reservoir

Beaumont Administration submitted a timeline for the work taking place in order to perform the necessary repairs on their Main Reservoir. The steps include:

1. Electrical upgrades at the Main Reservoir pumphouse – complete
2. Mechanical upgrades at St. Vital are underway – expected completion Summer 2026
3. Feeder line construction from Main to St. Vital – construction in Summer / Fall 2026
4. Pump and power upgrades at St. Vital – to follow item 3
5. Mechanical/structural upgrades at Main Reservoir – Fall 2027 to Winter 2028

Item 5 is when St. Vital would be acting as a standalone pumphouse for Beaumont. EPCOR has indicated that they can supply enough flow for average day demand at St. Vital for a short, temporary period but cannot achieve peak day demand. For this reason, the upgrades at the Main Reservoir must take place in off-peak season during the Fall and Winter.

Administration continues to work with Beaumont on these plans and to communicate these plans with EPCOR as timelines change.

Beaumont Second Feed Line

Administration received a draft 5-Year forecast letter from Associated Engineering regarding the future second feed line to the City of Beaumont (attached). Historically, EPCOR has responded that they will increase pressure at the Blackmud Booster Station to meet the increasing water demands at Beaumont, thus delaying EPCOR's requirement to construct a second feed line to their boundary. The current letter notifies EPCOR that CRSWSC water modeling shows that by 2031, if pressure is increased to meet demands to Beaumont, the flow velocity will exceed the allowable range in Commission pipes.

The draft letter was shared with Beaumont administration, as per the request from Beaumont's Board Directors, for review and comments prior to sending it to EPCOR. Administration received a response letter from Beaumont (attached) emphasizing the importance to begin planning for the second feed line immediately. Administration responded to Beaumont with some clarifications and a request to meet to discuss any current planning gaps that may be beneficial to address (letter attached). The 5-Year forecast letter will be sent to EPCOR later in March for consideration in their upcoming annual water modeling. The CRSWSC Administration intends to meet with EPCOR to further discuss the 5-year forecast as it relates to the second feed line, once Beaumont and Administration meet to identify any potential planning gaps.

Board Policy Updates

The Policy Review Sub-Committee met on February 23 to review two Board policies that were due for review in 2026: (1) Procurement, and (2) Remuneration and Expenses. The new Privacy and Access Management policy was also reviewed, to be adopted to reflect changes in legislation in which the Access to Information Act (ATIA) and Protection of Privacy Act (POPA) have replaced the Freedom of Information and Protection of Privacy Act (FOIP). These three policies and the proposed revisions will be discussed under New Business. Administration would like to thank Mayor Lisa Vanderkwaak, Councillor Paul Patterson and Councillor Mathew Starky for their participation in the Policy Review Sub-Committee.

Regional Water Customer Group (RWCG)

The next Regional Water Customer Group meeting is scheduled for May 7, 2026.

Regional Water/Wastewater Assessment Initiative (RWWAI)

An RWWAI Regional Commission Forum meeting will take place in Edmonton on March 12, 2026. Chair Krista Gardner and Mayor Doug Peel attended, along with Kyle van Steenoven on behalf of the CRSWSC Administration team. The RWWAI is a grant-funded initiative conducting a province-wide review of operational, financial, and governance models in regional water/wastewater entities, identifying strengths, gaps, and opportunities for collaboration. A verbal update on findings presented at the Forum was provided at the March 19, 2026 Board meeting in Closed Session.

Town of Millet Donation Request

The Town of Millet submitted a request to the CRSWSC for a door prize donation for their upcoming Annual Staff and Council appreciation celebration. Requests are currently handled on an exception basis and as such, the Commission provided a previous promotional item and a $25 gift card. As the policy for remuneration and expenses is currently up for review, it is suggested that the Board consider adding a section with parameters for requests from member municipalities for gifts or donations, or for participation in member's corporate functions (e.g. charity golf tournaments). This will be discussed later in the meeting during the policy review.

ARROW Utilities New Sanitary Line

Administration continues to work with ARROW Utilities regarding their upcoming construction project to install a new 900 mm diameter PVC sanitary pipe next to the CRSWSC feed line to Beaumont. The CRSWSC water line is within the ARROW Utilities right-of-way and thus a typical crossing/proximity agreement is not possible.

The new sanitary line is expected to be installed 8-9 metres north of the water line and is approximately 7 metres deep. An open cut excavation of this depth is likely to come within 1-2 metres of the Commission water line. ARROW plans to use locations on the south side of the water line as lay down areas which will require several crossing points over the water line during construction.

Typical requirements for work around this water supply line include a constructability report, vibration monitoring plan and full-time supervision of the work within 10 metres of the water line. ARROW is hesitant to perform these precautionary measures as it is their right-of-way, so additional costs for monitoring may need to be borne by the Commission.

Administration is working with ARROW Utilities on notification requirements so that the Commission can adequately protect its assets during construction.

Planned Shutdown at Blackmud Booster Station

EPCOR notified the CRSWSC that they have scheduled maintenance work on the Blackmud Booster Station tentatively for March 26, 2026. The Commission will be unable to fill our reservoirs during this time and anticipate a 10-hour full outage for the CRSWSC.

Administration met with EPCOR on February 11, 2026 to discuss the possibility of maintaining partial flows during the maintenance work and it was agreed to perform a test run of the system in mid-March. Both parties are optimistic that partial flows can be maintained which will benefit the members with a smaller reservoir. Flow to larger users, such as the City of Leduc, will be fully closed as these systems are better able to tolerate the outage. This will also provide us with a chance to see how our system would react in a real-world emergency situation. The Commission operations team will communicate with Member's operations teams throughout.

Calmar Line Repair

Associated Engineering (AE) is working on the detailed design of a repair on the Calmar feed line piping after a small leak was detected inside the reservoir building in late 2025. The leak has been temporarily repaired with a pipe clamp; however, Administration is working with AE to begin the RFQ process to hire a contractor to perform the permanent repair in Spring 2026.

The pinhole leak is believed to be caused by cavitation in the line, and there are concerns that the remaining section of pipe within the building and extending down underground below the building may be in similar condition. For this reason, the permanent repair will include replacement of a section of pipe outside of the building and leading up into the building through the side wall. The new pipe will be installed next to the existing line so the old line can remain operational throughout most of the installation. This minimizes water outages and reduces the chance of needing to use the emergency bypass option. Water outages will be limited to the final connections. The CRSWSC operations team will coordinate with the Calmar operations team throughout the construction.

The wall will have to go through asbestos abatement before the contractor can drill the access hole. A high-level quote was received for $3,000 to complete the work once the Commission has set a timeframe for the rest of the work.

Arc Flash Study and Emergency Planning

PACE Technologies was contracted to perform arc flash studies at both the Telford and Highway 21 Booster Stations for a cost of $6,000. The studies were completed on February 3, 2026 which included placement of the required

signage. The electrical arc flash study and the installation of specific warning signage are part of electrical safety standards and occupational health and safety requirements. The standard is that the arc flash study is completed every 5 years or when changes are made to the electrical system.

Related electrical protection includes lightning rods that have been procured and are being installed at all Commission facilities with towers this Spring.

Telford Booster Station Pump Repairs

The Commission is currently awaiting parts to repair pump 101 which was taken out of service to replace mechanical seals. Parts are expected to be 10+ weeks out unless they can be manufactured locally. Administration is investigating purchasing an additional pump and motor for the Telford Booster Station since both pumps are the same size. This would provide redundancy and allow for a working pump and motor to be available in the event of an emergency. Currently at Highway 21 there are redundant motors stocked for all the pumps.

Commission Facility Locates

Commission operators completed 11 Utility Safety Partner locates as of March 2026, as compared to 22 as of March 2025.

Management and Operations Agreement

Chair Gardner issued a letter to the City of Leduc on February 10, 2026 advising that the CRSWSC Board of Directors approved the extension of the existing Management and Operations Agreement with the City of Leduc (attached). The contract has been extended to December 31, 2027 as per motion number 12-26 at the January 22, 2026 Board meeting. Administration wishes to reiterate its appreciation for the Board's continued trust and support.

Professional Development Opportunities

A total of 11 primary Board members and 4 members of Administration plan to attend the WEFTEC (Water Environment Federation) conference September 26 – 30, 2026 in New Orleans, Louisiana. A group hotel booking has been secured at a significantly reduced rate to save on costs.

While not a CRSWSC expense, the City of Leduc funded multiple members of Administration to attend the Alberta Water & Wastewater Operators Association (AWWOA) Annual Operators Seminar. This adds additional value to the Commission through enhanced training of the Management and Operations team.

Professional development opportunities were attached to the agenda package.

16-26 **Motion:** It was **Moved** by Councillor Jaime McKeag-Reber that the Capital Region Southwest Water Services Commission Board of Directors receives as information the Manager's Report as presented by Shawn Olson, Commission Manager.

Motion Carried Unanimously

B. Treasurer's Report

2025 Financial Update

The financial reports have been prepared up to February 28, 2026. At this stage in the fiscal year, approximately 17% of the annual budget would normally be expended or earned. The Commission remains within expected parameters, with total revenues at 16% and total expenditures at 15% of budget. Management expenses are under budget at 6% of the budget spent, while Operating expenses stand at 15% of the budget spent.

Water sales and purchases

- Water sales and purchases are marginally under budget by 15%.
- A line loss of 3.60% has been recorded to date.

Revenue Variances

- Interest revenue is above budget at 101%, attributed to conservative budgeting of interest.

Expenditure Variances

Management:

- Management contract expenditures align with budget expectations of 17% spent.
- Audit fees currently reflect a temporary variance of -45% due to the reversal of the 2025 audit fee accrual.
- Honorariums (12%) and mileage (15%) are slightly under budget. These budgets were increased to account for annual policy reviews and directly correlate to the number of Board members attending these reviews.
- A few line items such as debenture payments, legal fees, and other professional fees, remain unutilized at this time as no related expenses have been incurred or timing of those expenses has not yet occurred.

Operating:

- Operating contract is consistent with the budget at 17% spent.
- Seminars and Conference expenditures are currently at 0%. With the anticipated attendance at WEFTEC, we expect to utilize the majority of this budget.
- Power and Gas are slightly below budget at 12% and 14%, respectively.
- Engineering fees are under budget at 8% as focus remains on the close out of the Booster Station.

- Insurance premiums were paid in full at the beginning of the year and came in slightly higher than expected. We will adjust the 2027 Budget in the Fall to reflect this new base.
- Easement Leases are currently at 69% of budget, reflecting the full annual member fee payment made in January.
- Materials and Supplies expenditures are at 40% due to the procurement of AGM materials.
- Infrastructure Maintenance, Cathodic Protection and Computer & Comm. Maintenance, Supplies, Licenses are below budget due to the timing of scheduled work.

Capital Expenditures

Capital expenditure stands at 1 percent of the budget, due to timing of planned capital initiatives.

- 2017.002 Air Release Manhole Rehab (26%)
- 2021.001 Nisku Booster Station & Beaumont Piping Upgrades (.05%)
- 2024.002 Scada Upgrade (0%)
- 2025.001 Water Master Plan & Strategic Plan (6%)
- 2025.002 Emergency Planning (0%)
- 2025.003 Camrose Feasibility Study (11%)
- 2026.001 Calmar Line Repair (5%)
- 2026.002 Arc Flash Study (0%)

2025 Audit

The Commission Auditors, MNP LLP, continue to conduct the 2025 year-end audit. The final audited financial statements and accompanying findings will be presented to the Board at the Annual General Meeting (AGM) on April 16, 2026.

2025 T4A's

T4A's were uploaded to the CRA on February 25, 2026. If you have yet to receive your T4A, please reach out to Administration to ensure we have your correct information.

Statement of Operations to February 28, 2026

	Actual 2026	Budget 2026	Variance	Budget % Spent
Revenue				
Water Sales	1,868,993	12,261,383	10,392,390	15%
Water Flat Rate Debenture Proceeds	15,650	93,903	78,253	17%
Interest Earned	50,367	50,000	(367)	101%
Miscellaneous Revene		-	-	0%
Capital Prov Gov't Grants				
Total Revenue	**1,935,011**	**12,405,286**	**10,470,275**	**16%**
Expenses				
Management Expenses				
Management Contract	25,500	153,000	127,500	17%
Debenture payments	-	93,903	93,903	0%
Legal Fees	-	10,000	10,000	0%
Other Professional Fees	-	10,500	10,500	0%
Honorarium	2,000	16,200	14,200	12%
Audit Fees	8,063	18,000	26,063	-45%
Office Supplies	65	2,000	1,935	3%
Mileage	602	4,000	3,398	15%
Bank Charges & Interest	73	500	427	15%
Total Management Expenses	**20,177**	**308,103**	**287,926**	**7%**
Operating Expenses				
Water Purchases	1,114,298	7,264,713	6,150,415	15%
Operating Contract	62,833	377,000	314,167	17%
Seminars & Conferences	-	110,700	110,700	0%
Power	23,225	200,000	176,775	12%
Engineering Fees	2,910	35,000	32,090	8%
Instrumentation & Mechanical	3,945	45,000	41,055	9%
Insurance	55,824	45,000	- 10,824	124%
Infrastructure Maintenance	452	117,000	116,548	0%
Regular & Annual Meeting Expenses	5,820	26,000	20,180	22%
Cathodic Protection	-	6,000	6,000	0%
Materials & Supplies	7,123	18,000	10,877	40%
Computer & Comm. Maintenance, Supplies, Licenses	1,353	30,500	29,147	4%
Easement Leases	2,079	3,000	921	69%
Gas	1,834	13,000	11,166	14%
Telephone	1,464	7,500	6,036	20%
Total Operating Expenses	**1,283,160**	**8,298,413**	**7,015,253**	**15%**
Total Expenses	**1,303,337**	**8,606,516**	**7,303,179**	**15%**
Net of Revenue over Expenses	**631,674**	**3,798,770**	**3,167,096**	**17%**
Net Interfund Transfers				
Drawn from Accumulated Surplus	-	-	-	0%
Transfer to Operating Reserves	-	- 169,449	- 169,449	100%
Transfer from Operating Reserves	-	85,000	85,000	100%
Transfer to Capital Reserves	-	- 3,714,321	- 3,714,321	100%
Total Interfund Transfers	**-**	**- 3,798,770**	**- 3,798,770**	
Net Surplus (Deficit)	**631,674**	**-**	**- 631,674**	

Statement of Financial Position as at February 28, 2026

Financial Assets

Bank	$	4,413,962
Accounts Receivable	$	1,836,710
Accrued Receivables	$	30,480
Investment Interest Receivable	$	37,807
GST Receivable	$	9,624
Short Term Investments	$	8,048,106
Inventory	$	19,422
Total Financial Assets	**$**	**14,396,111**

Liabilities

Trade Accounts Payable	$	586,436
Accrued Accounts Payable	$	337,380
Accrued Interest on Debentures	$	1,085
Deferred Revenue - Gov't Grant	$	-
Debenture 4000845 - 2010	$	502,195
Debenture 4002395 - 2018	$	60,315
Total Liabilities	**$**	**1,487,411**
Net-Financial Assets	**$**	**12,908,700**

Non-Financial Assets

Land	$	334,685
Machinery & Equipment	$	405,377
Accum. Depreciation - Mach & Equip	$	(397,943)
Engineering Structures	$	46,455,495
Work in Progress - Buildings	$	-
Work in Progress - Equipment	$	189,569
Work in Progress - Eng Structure	$	257,825
Accum. Depreciation - Eng Stru	$	(6,357,364)
Work in Progress - Nisku Booster Station	$	1,802
Total Non-Financial Assets	**$**	**40,889,445**

Accumulated Surplus

Rate Stabilization Op Reserve	$	170,165		
Emergency & Operations - Op Res	$	200,000		
General Reserves - Op Reserve	$	1,203,846		
Equipment - Cap Reserve	$	1,768,342		
Future Water Capacity - Cap Reserve	$	6,763,343		
Total Reserves for Future Use			$	10,105,696
Unrestricted Surplus			$	2,781,290
Investment - remeasurement gains/losses				
Equity in Fixed Assets			$	40,279,484
Current Earnings (Net surplus (deficit) + add back debenture principle)			$	631,674
Total Accumulated Surplus			**$**	**53,798,144**

2025 Capital Summary to February 28, 2026

2017.002 Air Release Manhole Rehab	
2026 Budget	18,700
2026 Expenditures	(4,825)
Budget Remaining	**13,875**
2021.001 Nisku Booster Station & Beaumont Piping Upgrade	
2026 Budget	3,675,755
2026 Expenditures	(1,802)
Budget Remaining	**3,673,953**
2024.002 SCADA upgrade	
2026 Budget	51,250
2026 Expenditures	-
Budget Remaining	**51,250**
2025.001 Water Master Plan & Strategic Plan	
2026 Budget	132,520
2026 Expenditures	(8,029)
	124,491
2025.002 Emergency Planning	
2026 Budget	120,000
2026 Expenditures	-
	120,000
2025.003 Camrose Feasibility Study	
2026 Budget	219,520
2026 Expenditures	(23,270)
	196,250
2026.001 Calmar Line Repair	
2026 Budget	200,000
2026 Expenditures	(9,520)
	190,480
2026.002 Arc Flash Study	
2026 Budget	10,000
2026 Expenditures	-
	10,000
2025 Total Capital Budget	**4,427,745**
2025 Total Capital Expenditu	**(47,445)**
Budget Remaining	**4,380,300**
Budget Spent	**1%**

17-26 **Motion:** It was **Moved** by Mayor Lisa Vanderkwaak that the Capital Region Southwest Water Services Commission Board of Directors receive the Treasurer's Report as information as presented by Gerard Del Rosario, Treasurer.

Motion Carried Unanimously

6. UNFINISHED BUSINESS

There was no unfinished business.

7. NEW BUSINESS

The Policy Review Sub-Committee met on February 23, 2026 to review two Board policies that are due for review in 2026: (1) Procurement, and (2) Remuneration and Expenses. A new Privacy and Access Management policy was also reviewed. Participants of the Sub-Committee included Mayor Lisa Vanderkwaak, Councillor Paul Patterson, Councillor Mathew Starky, Shawn Olson, Shannon Bremner, Gerard Del Rosario and Melanie White.

A. Policy 3 – Procurement

The Policy Review Sub-Committee recommended that the following changes are made to Policy 3 – Procurement:

1) Policy Objective – A minor clarification to add "with the intention to" ... provide the best value for the Commission's needs.

2) Definitions – Minor language changes to standardize the definition of the Commission Managers Host Municipality, to be consistent with the Privacy and Access Management policy.

3) Responsibilities and Authorities – The Committee recommended adding "on or before" the review date specified and added clarification that policies must be reviewed and approved at a maximum of every 5 years, as review typically occurs between the 4 – 5 year period. This revision is recommended for all policies that were reviewed.

The revised draft policy was attached for review, with track changes enabled for easy reference of the proposed changes.

18-26 **Motion:** It was **Moved** by Councillor Paul Patterson that the Capital Region Southwest Water Services Commission Board of Directors approve Policy 3 – Procurement as amended and circulated

Motion Carried Unanimously

B. Policy 4 – Remuneration and Expenses

The Policy Review Sub-Committee recommended that the following changes are made to Policy 4 – Remuneration and Expenses:

1) Policy Objective – A minor correction to improve readability.

2) Policy – Removal of the word “legitimate” due to redundancy.

3) Responsibilities and Authorities – The Committee recommended adding “on or before” the review date specified and added clarification that policies must be reviewed and approved at a maximum of every 5 years, as review typically occurs between the 4 – 5 year period. This revision is recommended for all policies that were reviewed.

4) Responsibilities and Authorities – Clarification added regarding reimbursement of expenses. Detailed receipts must be provided itemizing expenses; a credit card or debit slip on its own is not acceptable.

5) Honoraria –

- 1 a) It is recommended to standardize honoraria to be based on 4 hours of time at the Alberta Municipalities rate. Current practice is to compensate Board members for 4 hours for Commission related activities, regardless of the time worked on an individual day. Standardization assists with Commission budgeting and simplifies the expense claim process.

- 1 c) The Commission now issues a T4A instead of a T4.

- 1 d) Clarification was added that alternate Board members who may attend Commission meetings are compensated for attendance, in addition to the two primary appointed Board members.

6) Air Travel – The language in 5 b) and c) contradicted each other; 5 b) likely should have been removed in the previous policy review. It is recommended to remove 5 b) and add clarification that the Commission encourages reasonable seat selection but will reimburse for seat upgrades due to mitigating circumstances (e.g. medical circumstances).

7) Taxi – It is recommended to add ride share and micromobility, to encompass new methods of travel such as Ubers and e-scooters.

8) Meal Allowances – Rather than specify rates in the policy, it is recommended to use the Canada Revenue Agency meal allowance rates as a guide.

9) Gratuities – All references to tipping and gratuities under other sections were consolidated under the gratuities section for ease of reference. Tipping is limited to 18%; however, automatic gratuities for large parties will be reimbursed as per previous practice.

10) Hosting/Business Meals – Minor language corrections and an addition to refer to the Canada Revenue Agency meal allowance rates as guidance for expenses.

11) Member Municipality Relations – This is a new recommended addition to provide parameters for requests from member municipalities for gifts or donations, or for participation in member's corporate functions (e.g. member events or member requests for donations).

The revised draft policy was attached for review, with track changes enabled for easy reference of the proposed changes.

19-26 **Motion:** It was **Moved** by Councillor Jordon Banack that the Capital Region Southwest Water Services Commission Board of Directors approve Policy 4 – Remuneration and Expenses as amended and circulated.

Motion Carried Unanimously

C. <u>Policy 8 – Privacy and Access Management</u>

The new proposed Privacy and Access Management policy was attached, to be adopted to reflect changes in legislation in which the Access to Information Act (ATIA) and Protection of Privacy Act (POPA) have replaced the Freedom of Information and Protection of Privacy Act (FOIP).

Before adopting the Policy 8 – Privacy and Access Management, the Board needs to repeal the existing FOIP Bylaw 8-99 that is still active, but is no longer applicable since the Freedom of Information and Protection of Privacy Act (FOIP) was repealed. Administration recommends adopting this policy to comply with ATIA and POPA legislation rather than a Bylaw, as a Bylaw is not required and a policy is easier to update as required.

Public bodies must have privacy management programs in place prior to June 1, 2026. Adoption of this policy is the first step towards compliance. Once adopted, Commission Administration will develop a Personal Information Bank and a Security Classification System to comply with legislation, which will be regularly reviewed and updated as required. The City of Leduc will also provide the necessary training to Commission Administration staff.

20-26 **Motion:** It was **Moved** by Councillor Mayor Doug Peel that the Capital Region Southwest Water Services Commission Board of Directors repeal FOIP Bylaw No. 8-99, which was adopted in November 1999 to comply with the Freedom of Information and Protection of Privacy Act.

21-26 **Motion:** It was **Moved** by Mayor Lisa Vanderkwaak that the Capital Region Southwest Water Services Commission Board of Directors approve Policy 8 – Privacy and Access Management as circulated.

Motion Carried Unanimously

8. CLOSED SESSION

A. Regional Water/Wastewater Assessment Initiative (RWWAI) Update (ATIA s.28 & 29)

Chris Parfitt, Roger Steele, Des Mryglod, Kristofer Johnson and Lana Broker left the meeting at 6:32 p.m. to allow for a private Board discussion.

22-26 **Motion:** It was **Moved** by Councillor Paul Patterson that the Capital Region Southwest Water Services Commission Board of Directors move into Closed Session at 6:32 p.m. to discuss the Regional Water/Wastewater Assessment Initiative (RWWAI) Update. *(ATIA s.28 & 29) &* the Master Plan Rate Discussion. *(ATIA s.28 & 29)*

Motion Carried Unanimously

B. Master Plan Rate Discussion (ATIA s.28 & 29)

Chris Parfitt returned to the meeting at 6:50 p.m.

23-26 **Motion:** It was **Moved** by Councillor Jill Spinks that the Capital Region Southwest Water Services Commission Board of Directors return to Open Session at 7:17 p.m.

Motion Carried Unanimously

24-26 **Motion:** It was **Moved** by Mayor Lars Hansen that the Capital Region Southwest Water Services Commission Board of Directors direct Administration to incorporate rate methodology option 3 into the Water Master Plan Update.

Motion Carried Unanimously

25-26 **Motion:** It was **Moved** by Councillor Kelly-Lynn Lewis that the Capital Region Southwest Water Services Commission Board of Directors direct Administration to send the letter in response to the Regional Water/Wastewater Assessment Initiative.

Motion Carried Unanimously

9. NEXT MEETING

The Annual General Meeting is scheduled for April 16, 2026, to be held at the Leduc Golf Club. Formal invitations were distributed for this event.

The next Regular Board meeting is scheduled for May 21, 2026, to be held at the Leduc Golf Club.

10. ADJOURNMENT

26-26 **Motion:** It was **Moved** by Councillor Jaime McKeag-Reber to adjourn the meeting at 7:18 p.m.

Motion Carried Unanimously

_____
CHAIR

_____
MANAGER

5A Manager's Report
CAPITAL REGION SOUTHWEST WATER SERVICES COMMISSION

Report Name: **Manager's Report – May 28, 2026**

Recommendation:

1) It is recommended that the CRSWSC Board of Directors receive this report as information.

Nisku Booster Station

Ongoing negotiations with Maple Reinders and their subcontractor (Inline) to wrap up completion of the project have come to an impasse. The Commission received an official Notice of Escalation from Maple Reinders on March 30. In general terms, the issue is that Maple's subcontractor, Inline, believes they are entitled to extra compensation for work that did not conform to the contract and did not follow notice requirements. Administration engaged Reynolds Mirth Richards & Farmer LLP (RMRF) to provide legal counsel and opened an insurance claim with Alberta Municipalities to cover the legal expenses incurred. The Commission's insurance agreed to pay 80% of the legal fees, including any expert services required to support the claim.

Summary of events:

- On March 30, CRSWSC received official Notice of Escalation from Maple Reinders.
- On April 15, CRSWSC sent official Notice of Default for additional outstanding deficiencies and failure to achieve Total Completion to Maple Reinders. A Notice of Claim was also sent for additional engineering fees incurred due to the delays.
- On April 15, RMRF responded to Maple Reinders Notice of Escalation on behalf of CRSWSC, agreeing to proceed with mediation.
- On April 17 and April 28, Maple Reinders acknowledged the CRSWSC's Notice of Default and Notice of Claim, requesting an extension to the response deadline to allow time for them to coordinate with their subcontractors, which was accepted.

The legal team, alongside the CRSWSC Administration, is working on procuring a mediator and setting the mediation date.

The Nisku Booster Station remains operational during the legal process. Administration will provide an update at the next Board meeting.

Municipal Developments

Administration received 5 subdivision development/extension notifications (4 from the City of Beaumont and 1 from the Town of Calmar), as well as 1 Neighborhood Structure Plan from the City of Leduc. No concerns were identified, and no comments were provided in response.

Feasibility Study

Administration and Associated Engineering (AE) met with EPCOR on April 23, 2026 to discuss the potential demand increase to supply the City of Camrose, City of Wetaskiwin and Wetaskiwin County as part of the Feasibility Study (meeting minutes attached). It was determined at this meeting that EPCOR cannot supply the water required through the future 50th street connection to Beaumont through the anticipated second feed line. The large increase in demand means that the new line to Camrose and Wetaskiwin would likely need to tie in north of the Anthony Henday Drive in Edmonton, as the current water supply to the perimeter of Edmonton would not be adequate. AE will take this into consideration when completing the Feasibility Study and will work closely with EPCOR in determining the most logical connection point and alignment.

It is anticipated that the draft of the Feasibility Study will be ready in June, with the opportunity to complete a Water for Life grant application by the November deadline if desired. Results from the Feasibility Study will be shared at the September 17, 2026 Board meeting.

City of Beaumont Line Extension to St. Vital Reservoir

At the meeting with EPCOR on April 23, Administration also discussed the ongoing water needs in Beaumont (see attached meeting minutes). EPCOR indicated they cannot maintain higher pressures long term and indicated they intend to lower the pressure at the Blackmud Booster Station in Spring 2028, at the latest. After Spring 2028 it will be impossible for the City of Beaumont to complete system upgrades, utilizing St. Vital in the interim, without a new Booster Station. EPCOR has indicated that they need a formal letter requesting increased pressure with specific timelines to facilitate review and approval. A letter was sent to Beaumont to summarize the discussion with EPCOR (see attached).

Beaumont Administration continues to work through the steps needed to perform the necessary repairs at their main reservoir. It should be noted that while a conditional approval was provided for the work on July 9, 2025, there are outstanding requirements that need to be submitted to receive full approval. The conditional approval is attached for reference.

The CRSWSC Administration will continue to work with Beaumont on these plans and to communicate with EPCOR.

Beaumont Second Feed Line

In the April 23 meeting with EPCOR, the 5-year forecast as it relates to the second feed line was discussed. EPCOR disclosed the design and construction of a second feed line along 50th street is anticipated to be in the 2032 - 2035 budget cycle. This information was included in the letter to Beaumont (attached).

EPCOR reiterated that the new Beaumont feed line will not increase system pressures and will not be able to supply St. Vital reservoir. The Commission's intent was to provide redundancy if the existing 400mm line goes down, but EPCOR stated that full redundancy is not immediately achievable with the second feed line. EPCOR's intent of the second feed line is to supplement the existing 400mm line once it is at capacity to maintain minimum pressure to the Beaumont reservoir, but EPCOR cannot guarantee the second feed line will provide average day demand on its own. It should be noted that this is an elevated level of service when compared to most commission members in the Regional Water Customers Group, where service is provided through single feed lines to reservoirs with 2 days of storage to allow time for emergency repairs. In this manner, the second feed line does provide a level of additional supply for emergency response which is **in alignment with the strategic priority of emergency preparedness.**

Regional Water Customer Group (RWCG)

The RWCG met on May 7, 2026 and discussed a range of topics.

1. EPCOR advised that the 2027 water rate is likely to increase due to inflation in operating and maintenance costs, including a significant increase in power costs and flood protection work. More details will be provided in the financial report.

2. The Regional Water/Wastewater Assessment Initiative (RWWAI) was discussed and the consensus was that most members (EPCOR, Strathcona County, St. Albert and Sturgeon County) were not aware of the project until the CRSWSC copied them on correspondence to the Ministers. The group agreed to share information as more details became available.

3. A RWCG webpage is being created and should be active shortly. Once live, the webpage link will be added to the CRSWSC website to ensure the messaging for water demand management is consistent. A screenshot of the webpage content is attached for reference.

Regional Water/Wastewater Assessment Initiative (RWWAI)

The Commission received a response letter from Grant Hunter, Minister of Environment and Protected Areas (AEPA), acknowledging the letter the Commission previously sent regarding potential changes to the structure of water commissions and how rates are established (see attached). Minister Hunter stated that the first phase of the RWWAI is nearly complete, but a decision on how to proceed has not been made yet.

The correspondence with the Minister regarding this initiative **aligns with the strategic priority of Commission governance; maintaining role clarity and long-term planning.**

ARROW Utilities New Sanitary Line

Administration continues to work with ARROW Utilities regarding their proposed construction of a new sanitary main within the shared utility right-of-way containing the CRSWSC feed line to Beaumont. Given the proximity of the proposed work to critical CRSWSC infrastructure and the importance of coordinated planning and construction, Administration has engaged Brownlee LLP to draft a formal letter emphasizing the need for collaborative engagement and risk mitigation between the two parties. The letter will be circulated to the Board once it is complete.

Administration will continue to monitor the situation and will report back to the Board as discussions progress or if any material risks to the Commission are identified. The work planned by ARROW Utilities is planned for construction in 2027 and 2028.

ATIA / POPA Legislative Requirements

Following the recent adoption of Policy 8 – Privacy and Access Management, Administration is generating the Personal Information Banks and Security Classification System to ensure the Commission is compliant with the Access to Information Act (ATIA) and Protection of Privacy Act (POPA) by the June 11, 2026 deadline.

Planned Shutdown at Blackmud Booster Station

EPCOR successfully completed scheduled maintenance at the Blackmud Booster Station on April 16, 2026. The work proceeded as planned and required a full outage of the Blackmud Booster Station for approximately 10 hours to the CRSWSC system.

Partial system flows were maintained during the outage to reduce impacts to members with smaller reservoir storage. Larger systems, including the City of Leduc, were fully isolated for the duration of the work.

The maintenance was completed successfully and without issue, system performance met expectations, and no adverse impacts were experienced. Commission operations staff coordinated throughout the outage and maintained communication with member operations teams.

Calmar Line Repair

Associated Engineering (AE), in collaboration with Administration, completed and issued the permanent repair Request for Quotes to seven qualified contractors. Following a competitive evaluation, the contract was awarded to Nikiforuk Construction Ltd., the lowest compliant bidder, for a contract value of $265,000 (excluding GST). This exceeds the budget of $200,000 approved at the January 2026 Board Meeting (Motion 07-26). No additional funding request is required at this time, as the variance will be accommodated with other capital project savings.

Construction is scheduled to begin in late May 2026, with completion anticipated in July 2026. Throughout construction, CRSWSC Administration will coordinate with Calmar Administration to ensure knowledge and awareness of potential impacts of the project.

Emergency Planning

Planned electrical protection, including lightning rods, have been procured and are being installed at all Commission facilities with towers this Spring / Summer. Due to ground conditions and site access, Hay Lakes and New Sarepta will be completed during the Summer when the ground has dried out and can accommodate the heavy equipment.

Telford Booster Station Pump Repairs

Repairs to Pump 101 at the Telford Booster Station have been successfully completed, and the pump has been returned to service. Maintenance on Pump 102 is underway to complete preventative mechanical seal work, which was planned to coincide with the completion of work on Pump 101. An additional third set of seal components has been ordered and is being retained as emergency backup inventory.

Administration is also continuing to evaluate the purchase of an additional pump and motor for the Telford Booster Station. As both pumps are the same size, this would improve redundancy and ensure rapid response capability in the event of a future failure. This practice is already employed at other stations like Highway 21.

These efforts support the strategic priority of emergency preparedness.

Commission Facility Locates

Commission operators completed 74 Utility Safety Partner locates as of May 11, 2026, as compared to 163 as of June 2025.

Professional Development Opportunities

Professional development opportunities are listed in Attachment vi.

Attachments

i. April 23, 2026 EPCOR Meeting Minutes *(pages 34 - 37)*
ii. 2026.05.14 Beaumont Second Feed Line – EPCOR Supply Pressure *(pages 38 - 40)*
iii. 2025.07.09 City of Beaumont's Connection Request – Conditional Acceptance *(pages 41 - 43)*
iv. Screenshot of RWCG Webpage Content re: Water Demand Management *(page 44)*
v. 2026.04.22 Response Letter from AEPA re: RWWAI *(pages 45 - 46)*
vi. Professional Development Opportunities *(pages 47 - 48)*

5B Treasurer's Report
CAPITAL REGION SOUTHWEST WATER SERVICES COMMISSION

Report Name: **Treasurer's Report – May 28, 2026**

Recommendation:

1) It is recommended that the CRSWSC Board of Directors receive this report as information.

2) It is recommended that the CRSWSC Board of Directors approve a transfer from Accumulated Surplus to the Future Water Capacity Reserve in the amount of $1.9M.

2026 Financial Update

The financial reports have been prepared up to April 30, 2026. At this stage in the year, approximately 33% of the annual budget would normally be expended or earned. The Commission is on track with respect to budget, with total revenues of 32% earned and total expenditures of 31% incurred. Management expenses are under budget at 22% of the budget spent, while Operating expenses are on budget with 32% of the budget spent.

Water Sales and Purchases

- Water sales and purchases are on budget with 32% of the budget spent.
- A line loss of 3.38% has been recorded to date.

Revenue Variances

- Interest revenue is above budget at 164%; attributed to conservative budgeting of interest.

Expenditure Variances – Management

- Management contract expenditures align with budget expectations with 33% spent.
- Debenture payments remain unutilized as they are paid in June and December.
- We have not incurred any Legal fees to date.
- Audit fees currently reflect 5% of the budget being spent; fees will be booked in Q4 during the interim audit of the Commission's financials.
- Honorariums (51%) and mileage (50%) are over budget. Alternate attendance has been encouraged this year, to build knowledge of the Commission's operations amongst the newly appointed members. **This is a direct link to member education, which is one of the Board's strategic priorities.**

Expenditure Variances – Operations

- Operating contract is consistent with the budget at 33% spent.
- Seminars & Conferences are presently under budget (3%) but will incur additional costs as registrations and travel for WEFTEC get expensed. We are expecting to use the entirety of this budget, which further contributes to the overall education of both the Board and Administration.
- Power and Gas are slightly below budget at 22% and 26%, respectively. Our new rates for power will begin in July.
- Engineering fees are under budget at 12% as the primary focus remains on the close out of the Booster Station.
- Insurance premiums were paid in full at the beginning of the year and came in slightly higher than expected. We will adjust the 2027 Budget in the Fall to reflect this new base.
- Easement Leases are currently at 69% of budget, reflecting the full annual member fee payment made in January.
- Materials and Supplies expenditures are at 62% due to the procurement of AGM materials.
- Infrastructure Maintenance is over budget at 46% due to repairs done to the pump at Telford Booster Station (~$27K).
- Cathodic Protection and Computer & Comm. Maintenance, Supplies, Licenses are below budget due to the timing of scheduled work.
- Instrumentation & Mechanical is currently over budget at 49% due to a HACH invoice for the region's annual calibrations being paid in full. Costs will be recovered through billbacks to each respective municipality/COOP.

Capital Expenditures

Capital expenditure stands at 3% of the budget, due to timing of planned capital initiatives.

Addressed in Manager's Report:

- 2021.001 Nisku Booster Station & Beaumont Piping Upgrades (0.3%)
- 2025.001 Water Master Plan & Strategic Plan (16%)
- 2025.003 Camrose Feasibility Study (35%)
- 2026.001 Calmar Line Repair (9%)

2017.002 Air Release Manhole Rehab (26%):

- Project was completed in 2025; the remaining funds were carried forward to purchase a replacement core for a new Air Release Valve that failed. The remaining budget will be used for Air Release replacement parts.

2024.002 Scada Upgrade (0%):

- Project is ongoing, but no invoices have been billed to date.

2025.002 Emergency Planning (4.69%):

- Budget will be spent on lightning rods and grounding cables. Administration is working with the contractor to address issues that have surfaced since the initial planning phase.

2026.002 Arc Flash Study (0%):

- Project has been completed; we are waiting to be invoiced.

Unrestricted Surplus

As of the 2025 Financial Statements, the Commission's unrestricted surplus totals $3.1M. The Commission currently does not have a clause in its reserve policy that provisions the transfer of this surplus into a capital reserve. The total unrestricted surplus in the last 5 years is $1.9M. Administration is requesting the Board to allow for the transfer of this lump sum ($1.9M) into the Future Water Capacity Capital Reserve which will further strengthen the Commission's reserve balances. The reserve policy is due for revision in 2027, and at that time, Administration will bring forward options for transferring potential surpluses to the Commission's capital reserves.

Regional Water Customers Group (RWCG)

At the May 7, 2026 RWCG meeting it was confirmed by Strathcona County that the 2023 settlement which was executed in 2025, has been paid out. The total of this settlement was ~$281K and has been deposited into the balancing fund.

As of the 2025 Year End, the balance in the balancing fund totals ~$6.9M with a max fund balance of ~$5.1M. The RWCG is projecting a balance owing to EPCOR of ~$2.9M for the 2024 settlement (to be settled this year) as well as a balance owing of ~$1.1M for the 2025 settlement (will be settled in 2027), which would bring the balancing fund into the allowable threshold.

5B Treasurer's Report
CAPITAL REGION SOUTHWEST WATER SERVICES COMMISSION

Statement of Operations to April 30, 2026

	Actual 2026	Budget 2026	Variance	Budget % Spent
Revenue				
Water Sales	3,867,157	12,261,383	8,394,226	32%
Water Flat Rate Debenture Proceeds	31,301	93,903	62,602	33%
Interest Earned	81,861	50,000	(31,861)	164%
Miscellaneous Revene	-	-	-	0%
Capital Prov Gov't Grants	23,270	-	(23,270)	
Total Revenue	**4,003,588**	**12,405,286**	**8,401,698**	**32%**
Expenses				
Management Expenses				
Management Contract	51,000	153,000	102,000	33%
Debenture payments	-	93,903	93,903	0%
Legal Fees	-	10,000	10,000	0%
Other Professional Fees	3,910	10,500	6,590	37%
Honorarium	8,240	16,200	7,960	51%
Audit Fees	863	18,000	17,138	5%
Office Supplies	747	2,000	1,253	37%
Mileage	2,001	4,000	1,999	50%
Bank Charges & Interest	121	500	379	24%
Total Management Expenses	**66,882**	**308,103**	**241,221**	**22%**
Operating Expenses				
Water Purchases	2,300,303	7,264,713	4,964,410	32%
Operating Contract	125,667	377,000	251,333	33%
Seminars & Conferences	3,872	124,400	120,528	3%
Power	44,107	200,000	155,893	22%
Engineering Fees	4,037	35,000	30,964	12%
Instrumentation & Mechanical	22,231	45,000	22,769	49%
Insurance	55,824	45,000	- 10,824	124%
Infrastructure Maintenance	54,073	117,000	62,927	46%
Regular & Annual Meeting Expenses	15,866	26,000	10,134	61%
Cathodic Protection	-	6,000	6,000	0%
Materials & Supplies	11,220	18,000	6,780	62%
Computer & Comm. Maintenance, Supplies, Licenses	2,513	30,500	27,988	8%
Easement Leases	2,079	3,000	921	69%
Gas	3,346	13,000	9,654	26%
Telephone	2,036	7,500	5,464	27%
Total Operating Expenses	**2,647,174**	**8,312,113**	**5,664,939**	**32%**
Total Expenses	**2,714,055**	**8,620,216**	**5,906,161**	**31%**
Net of Revenue over Expenses	**1,289,533**	**3,785,070**	**2,495,537**	**34%**
Net Interfund Transfers				
Drawn from Accumulated Surplus	-	-	-	0%
Transfer to Operating Reserves	- -	169,449 -	169,449	100%
Transfer from Operating Reserves	-	98,700	98,700	100%
Transfer to Capital Reserves	- -	3,714,321 -	3,714,321	100%
Total Interfund Transfers	**- -**	**3,785,070 -**	**3,785,070**	
Net Surplus (Deficit)	**1,289,533**	**- -**	**1,289,533**	

5B Treasurer's Report
CAPITAL REGION SOUTHWEST WATER SERVICES COMMISSION

Statement of Financial Position as at April 30, 2026

Financial Assets

Bank	$	3,968,632
Accounts Receivable	$	3,015,363
Accrued Receivables	$	-
Investment Interest Receivable	$	37,807
GST Receivable	$	15,040
Short Term Investments	$	8,060,930
Inventory	$	19,422
Total Financial Assets	**$**	**15,117,195**

Liabilities

Trade Accounts Payable	$	739,696
Accrued Accounts Payable	$	337,380
Accrued Interest on Debentures	$	1,085
Deferred Revenue - Gov't Grant	$	-
Debenture 4000845 - 2010	$	502,195
Debenture 4002395 - 2018	$	60,315
Total Liabilities	**$**	**1,640,672**
Net-Financial Assets	**$**	**13,476,523**

Non-Financial Assets

Land	$	334,685
Machinery & Equipment	$	405,377
Accum. Depreciation - Mach & Equip	$	(397,943)
Engineering Structures	$	46,455,495
Work in Progress - Buildings	$	-
Work in Progress - Equipment	$	269,922
Work in Progress - Eng Structure	$	257,825
Accum. Depreciation - Eng Stru	$	(6,357,364)
Work in Progress - Nisku Booster Station	$	11,483
Total Non-Financial Assets	**$**	**40,979,480**

Accumulated Surplus

Rate Stabilization Op Reserve	$	170,165		
Emergency & Operations - Op Res	$	200,000		
General Reserves - Op Reserve	$	1,203,846		
Equipment - Cap Reserve	$	1,768,342		
Future Water Capacity - Cap Reserve	$	6,763,343		
Total Reserves for Future Use			$	10,105,696
Unrestricted Surplus			$	2,781,290
Investment - remeasurement gains/losses				
Equity in Fixed Assets			$	40,279,484
Current Earnings (Net surplus (deficit) + add back debenture principle)			$	1,289,533
Total Accumulated Surplus			**$**	**54,456,003**

5B Treasurer's Report
CAPITAL REGION SOUTHWEST WATER SERVICES COMMISSION

2026 Capital Summary to April 30, 2026

2017.002 Air Release Manhole Rehab	
2026 Budget	18,700
2026 Expenditures	(4,825)
Budget Remaining	**13,875**
2021.001 Nisku Booster Station & Beaumont Piping Upgrade	
2026 Budget	3,675,755
2026 Expenditures	(11,471)
Budget Remaining	**3,664,284**
2024.002 SCADA upgrade	
2026 Budget	51,250
2026 Expenditures	-
Budget Remaining	**51,250**
2025.001 Water Master Plan & Strategic Plan	
2026 Budget	132,520
2026 Expenditures	(21,383)
	111,137
2025.002 Emergency Planning	
2026 Budget	120,000
2026 Expenditures	(5,634)
	114,366
2025.003 Camrose Feasibility Study	
2026 Budget	219,520
2026 Expenditures	(77,020)
	142,500
2026.001 Calmar Line Repair	
2026 Budget	200,000
2026 Expenditures	(17,136)
	182,864
2026.002 Arc Flash Study	
2026 Budget	10,000
2026 Expenditures	-
	10,000
2025 Total Capital Budget	**4,427,745**
2025 Total Capital Expenditu	**(137,468)**
Budget Remaining	**4,290,277**
Budget Spent	**3%**

Attachments

i. 2026 Recap of Water Sales to Purchases *(page 49)*
ii. 2026 Customer Sales Detailed Report $ *(page 50)*
iii. 2026 Customer Sales Detailed Report M^3 *(page 51)*
iv. 2023 RWCG Settlement Agreement *(pages 52 - 121)*

6A Water Master Plan
CAPITAL REGION SOUTHWEST WATER SERVICES COMMISSION

Report Name: **Water Master Plan**

Recommendations:

1) It is recommended that the CRSWSC Board of Directors approve the draft Water Master Plan Update as circulated and direct Administration to finalize the Water Master Plan.

2) It is recommended that the CRSWSC Board of Directors approve Policy 9 – Large Demand User and Infrastructure Upgrade Policy as circulated.

Background:

In January 2025, Administration began the process to complete a Water Master Plan Update in accordance with CRSWSC Bylaw 01/2021. According to the Bylaw, a review and update of the Water Master Plan must be completed every 5 years, beginning on the date the previous Master Plan was adopted. The previous Master Plan Update was adopted in 2020.

According to the Bylaw, the goal of the Water Master Plan is:

1. To assess the Commission's existing assets and projected maintenance and asset acquisition requirements;

2. To set out a written forecast of the quantity of water which the Commission reasonably expects to purchase during the next five calendar years, and;

3. To provide engineering and other information supporting the forecast including, without limitation, information regarding the forecast population, business and industrial growth of the Members.

Completion of the Water Master Plan also incorporated an update to the Commission's strategic priorities.

The 2026 Water Master Plan Update was completed by Associated Engineering (AE), who will present the Master Plan update to the Board at the May 28, 2026 Board meeting.

While preparing the Master Plan, it became apparent that a further policy is needed to address future large demand customers or large demand increases for current members. Policy 9 – Large Demand User and Infrastructure Upgrade Policy was drafted in conjunction with the Master Plan and is also attached for review (Appendix D of Master Plan attachment).

Board members are asked to review the draft Water Master Plan update and proposed Policy 9 – Large Demand User and Infrastructure Upgrade Policy for discussion and adoption at the May 28, 2026 Board meeting. Members and their administration teams are welcome to reach out to CRSWSC Administration with any questions.

Once finalized, the Water Master Plan Update will be uploaded to the CRSWSC website, and a letter will be distributed to all member municipalities with a website link to the Master Plan.

Alternative Recommendations:

1) It is recommended that the CRSWSC Board of Directors approve the Water Master Plan Update with the following changes: _____.

2) It is recommended that the CRSWSC Board of Directors direct Administration to revise the Water Master Plan Update and bring it back for review at the next Board Meeting.

3) It is recommended that the CRSWSC Board of Directors approve Policy 9 – Large Demand User and Infrastructure Upgrade Policy with the following changes: _____.

4) It is recommended that the CRSWSC Board of Directors direct Administration to revise Policy 9 – Large Demand User and Infrastructure Upgrade Policy and bring it back for review at the next Board Meeting.

Attachments

i. CRSWSC 2026 Water Master Plan Update – DRAFT including CRSWSC Policy 9 – Large Demand User and Infrastructure Upgrade Policy DRAFT (Appendix D) *(pages 122 - 230)*

Associated Engineering | GLOBAL PERSPECTIVE. LOCAL FOCUS.

RECORD OF MEETING

Date:	April 23, 2026	**Reference/Project No.:**	2025-3300
Time:	11:00 am	**Location:**	Commission Office
Client:	CRSWSC	**Project Name:**	CRSWSC Beaumont 2nd Feed Line / Camrose & Wetaskiwin Feasibility Study
Subject:	Supply Planning with EPCOR		

Attendees:	Chris Parfitt (AE)	Melanie White (CRSWSC)	Filip Dundur (EPCOR)
	Emma Knapik (AE)	Shaun Olson (CRSWSC)	Hannah Samek (EPCOR)
	Kyle Van Steenoven (CRSWSC)	Rick Sereda (CRSWSC)	Braun Moller (EPCOR)
	Chishimba Chiinda (CRSWSC)	Chelsey Ilies (CRSWSC)	
	Mark D'aoust (CRSWSC)	Shannon Bremner (CRSWSC)	

Distribution: Those Present

This Record of Meeting is considered to be complete and correct. Please advise the writer within one week of any errors or omissions, otherwise this Record of Meeting will be considered to be an accurate record of the discussions.

Bolded items are clarifications provided by EPCOR during their post-meeting review of the minutes.

EPCOR indicated that the meeting minutes should be interpreted as discussion items only. EPCOR will formally respond to the provided CRSWSC Model Upgrade - Second Feed Line to Beaumont as they have in previous years.

1 INTRODUCTIONS

- Round table with Commission, AE, and EPCOR.
- The Commission noted that it is responsible for forwarding Member questions to EPCOR for input and clarification, and that such questions do not necessarily reflect positions of the Commission. The Commission also expressed its commitment to working collaboratively with both EPCOR and its Members to identify solutions that serve all parties.

2 PURPOSE

- EPCOR had reviewed the Beaumont 2nd Feed Line letter sent to them in January 2026 and wanted to meet to go over the letter and clarify the following items:
  - Clarity regarding the additional meter vault
  - Details regarding the assumptions regarding the capacity of the second feed
  - Clarify the comments regarding discharge pressure from Blackmud Creek booster station
  - Clarify the comments regarding Discovery Park reservoir

- AE and the Commission also wanted to review the following additional items with EPCOR:
  - Camrose/Wetaskiwin Feasibility Study – Demands and possible supply from EPCOR
  - Nisku Booster Station – Cathodic Protection and lowering the HGL from EPCOR

3 BEAUMONT 2ND FEED LINE

- Existing 400mm line will be continued to be used with the new line to supply Beaumont.
- EPCOR says they currently don't have capacity to supply more than the average day demand to Beaumont from the tertiary zone.
    - **Tertiary pressure zone includes Discovery Park and Blackmud Booster station as well.**
    - **EPCOR has not analyzed nor intended for the second supply to provide Beaumont with average day demand on its own. The understanding is the secondary feed is to support Beaumont once the primary supply point is at capacity to maintain the minimum pressure to the Beaumont reservoir. As discussed in the meeting, there will be some capacity to support Beaumont with an outage of the 400mm, but there is no guarantee this will be average day demand.**
- AE says it was the intent that if the C303 line goes down that the 2nd feed line would ideally fully feed Beaumont.
    - **Although this may be the intent, EPCOR stated that this is not the expectation of the secondary feed once installed.**
- EPCOR said that eventually they will complete some upgrades within the Tertiary Zone that will allow the 2nd feed to supply the peak day demand. EPCOR could not confirm the timelines for the upgrades.
    - **EPCOR will perform improvements to the system which can improve capacity of the secondary line over time. It is expected the existing 400mm will always be the primary supply and the secondary line along 50 street will be support.**
- EPCOR proposes 450mm line down 50 St to Beaumont from tertiary pressure zone. AE is recommending a 525mm to Beaumont so that the pipelines can support the ultimate demand. This can be reviewed during detailed design.
- No booster station is being considered upstream of the Beaumont 2nd feed line.
- Upstream development (line to 50th St) is required prior to the construction of the line to Beaumont.
- EPCOR anticipates that normal growth will extend a 450 mm water main to the intersection of 50 Street and 41 Avenue SW. The secondary supply project would then extend this connection to the City of Beaumont boundary.
- As part of the Blackmud Booster Station purchase agreement, EPCOR was to supply a meter vault. EPCOR would want clarity about the purpose of a new meter vault. As a new meter vault is accounted for in the agreement, EPCOR is willing to put one in, if there is one required.
- There are currently EPCOR meters at Nisku Booster Station and at the Beaumont Main Reservoir. The new meter vault location and purpose will need to be reviewed. Maybe the Commission doesn't need it. The Commission to discuss the necessity of the additional meter vault.
- EPCOR does their capital planning in 4-year intervals. Current intervals are 2028-2031 and 2032-2035.
- EPCOR is reviewing building new reservoir south of Henday planned for 2031 which will increase capacity for pumping. 752-754 HGL in tertiary zone currently
- 2028-31 budget cycle does not include 2nd feed line, planned in the 2032-35 timeline for EPCOR to build 2nd feed line. The Commission asked if it was possible to have the 2nd feed line schedule for as early as possible in EPCOR's next planning phase (2032 if possible).
- Commission could do some of the preliminary work/design work on their side ahead of 2032, to hopefully streamline the process for EPCOR

- The 1.5 m/s maximum velocity criteria is a CRSWSC standard. This is not an EPCOR trigger for upgrades. While EPCOR applies similar design criteria, system upgrades are not initiated based on velocity; upgrades are triggered based on the ability to meet required pressure and volume demands.
- The EPCOR confirmed that the new feed line to Beaumont will not increase pressure and therefore will not be able to feed the St. Vital. The Commission will be providing water to the same point it currently does.

4 DISCOVERY PARK

- Discovery Park isn't using as much water as anticipated so are flushing huge amounts weekly to ensure water quality. It takes 2 full days with 1-2 person crew each week flushing discovery park – it costs EPCOR and wastes a lot of water waiting to lower pressure.
- EPCOR want to lower the pressure and make permanent modifications at Discovery Park asap once the Nisku Booster Station in turned over which means if Beaumont takes too long to do work EPCOR won't be able to accommodate. They can only hold off so long as it is very costly flushing while waiting.
- Looking to bring Blackmud Creek Booster Station pressures down as soon as possible but is willing to hold until March 2028. After that it will come down to 754 m, due to water quality issues at Discovery Park.
- EPCOR would need to know when Beaumont will start and finish construction activities to understand how long they will need to maintain the higher pressures.
    - **The current agreement is for EPCOR to reduce pressure from the Blackmud Booster Station once the Nisku Booster station is fully commissioned. There have been no other formal request or timelines for extending this trigger. These meeting minutes should not be used in place of formal requests and acceptance.**
- EPCOR plans to modify Discovery Park to recirculate the water in the reservoir to help with chlorine residuals. Once these modifications are complete, it would be difficult to get the higher pressure to Beaumont due to possible damage of existing customers fixtures.
- Commission to request that Beaumont provide an updated construction schedule so that EPCOR can plan for what needs to be provided (currently plan Fall 2027 to April 2028).
- EPCOR to confirm if they can provide the pressure Beaumont needs for fall 2027 to April 2028.

5 CATHODIC PROTECTION

- As part of the Nisku Booster Station project, isolation kits were to be installed on the 750mm gave valve, just south of the Discovery Park feed, to isolate the Commission CP system from EPCOR's. These do not appear to have been installed. AE and the Commission are currently reviewing this issue.
- EPCOR would like the Commission to investigate how the two systems are reacting to each other and confirm how the pipes (both EPCOR owned and Commission owned) are being protected.
- SOP/response plan for cathodic protection will need to be developed for EPCOR and the Commission

6 CAMROSE & WETASKIWIN SUPPLY

- As EPCOR can only provide average day demands to Beaumont it is unlikely to be able to supply to Camrose/Wetaskiwin without major upgrades within the Tertiary Zone. EPCOR doesn't have the pumping capacity to get the flows currently. Getting an additional 200 L/s to the edge of Edmonton is the main issue.
- Application to Water for Life could include works to upsize or improve the EPCOR-owned upstream works that would be required to supply the Camrose/Wetaskiwin.
- AE to prepare a memo to EPCOR with the demand projections and proposed pipe sizing for EPCOR to review and provide preliminary feedback of where in the city the supply line would need to tie in to provide the demands. AE to prepare and include the costs and plans for this in the feasibility study. Most likely it has to be up north of Henday to tie in.
- Water for Life funding will account for what's needed to convey water from the water source, so the additional length could also be funded.
- Costing comparison to WTP upgrades should account for water source, which is the limiting factor for Camrose/Wetaskiwin. It is possible to mix water sources between water basins but only if treated. Treated water is all that can be sent across water basin boundaries.
- Camrose water source is drying up, and could go into water restriction this year, like last year.
- EPCOR says they can't do big upgrades at Edmonton costs to feed Camrose/Wetaskiwin but would be open for more discussion if they were able to be part of the Water for Life grant.
- Timeline for the Water for Life Grant:
    - Apply for detailed design in November 2026. Approval spring of 2027
    - Design takes place 2027-2029
    - November 2029 applies for construction funding. Approval spring of 2030
    - Construction starts 2030, approx. 4 yr timeline, fully commissioned by fall 2033 best case scenario.

Capital Region Southwest Water Services Commission
C/O City of Leduc
#1 Alexandra Park
Leduc, AB T9E 4C4
Phone: (780) 980-7177 Fax: (780) 980-7127

May 14, 2026 Reference/Project No.: 2025-3197

Aaron Lewicki, P.Eng.
Director, Infrastructure

City of Beaumont
Beaumont Administration Office
5600 - 49 Street
Beaumont, AB T4X 1A1

Sent by email: aaron.lewicki@beaumont.ab.ca

Subject: Beaumont Second Feed Line - EPCOR Supply Pressure

Dear Aaron,

As Beaumont is aware, the Commission, together with Associated Engineering, have been in discussions with EPCOR regarding the proposed second feed line to Beaumont. On April 23, 2026, all three parties met in person to further review the waterline requirements and to clarify expectations with respect to the supply pressures EPCOR would be required to maintain during Beaumont's planned system upgrades.

During the meeting, EPCOR provided additional information regarding their current operations at Discovery Park. Discovery Park is presently experiencing lower-than-anticipated water demand, resulting in the need for regular flushing to maintain water quality. As a result, EPCOR identified a strong operational need to reduce system pressures at Discovery Park as soon as practicable to mitigate both operational costs and water quality risks. It is important to note that it is EPCOR's prerogative to reduce pressure as long as they achieve minimum contractual pressures and flow requirements at the Commission's existing air gaps.

EPCOR advised that the tertiary pressure zone does not currently have sufficient capacity to reliably supply more than Beaumont's average day demand, and that the secondary feed is intended to supplement the existing 400 mm supply, rather than function as a standalone source. Associated Engineering noted that it had originally been intended for the second feed to fully supply Beaumont during an outage of the C303 transmission main; however, EPCOR clarified that this is not the expected function of the system, at least immediately after implementation. While some level of service could be maintained during an outage, EPCOR indicated there is no guarantee that average day demand could be met. It is anticipated that the existing 400 mm main will remain the primary supply, with the secondary connection

providing supplemental capacity, although future upgrades within the tertiary zone may improve performance over time.

EPCOR indicated that normal system growth is expected to extend a 450 mm water main to the intersection of 50 Street and 41 Avenue SW, with the second feed line extending from this point to the Beaumont boundary once upstream development is complete. EPCOR also confirmed that no upstream booster station is currently being considered as part of the secondary feed.

EPCOR outlined that capital planning is completed in four-year cycles, with current planning windows of 2028–2031 and 2032–2035. The second feed line is not currently included in the 2028–2031 cycle and is anticipated for consideration in the 2032–2035 timeframe. The Commission has requested that EPCOR consider advancing the timing of this project as early as possible within the next cycle. EPCOR also noted that a new reservoir south of Anthony Henday Drive is being considered for approximately 2031, which would increase pumping capacity in the tertiary zone.

Beaumont's plan to utilize a temporary connection to St. Vital during upgrades to the Main Pumphouse header, pumps, and reservoir was also reviewed. EPCOR advised they may be willing to temporarily maintain the current higher-than-normal pressures to support Beaumont during the upgrade period through to approximately spring 2028; however, this is not sustainable long term. Any requirements beyond that timeframe would need to be supported through independent boosting by Beaumont. EPCOR has requested confirmation of Beaumont's construction schedule to support planning for the duration of these temporary operating conditions. This requires formal approval by EPCOR.

With respect to metering and temporary connection requirements during the temporary use of the St. Vital Reservoir, as discussed in previous correspondence, EPCOR has advised the following:

- EPCOR will not permit the installation of a third-party meter upstream of their existing main meter for the temporary configuration. An EPCOR-owned meter will be required at St. Vital for use during the period when the existing meter is bypassed.

- EPCOR has determined that an 8" meter, which can handle flows of up to 2,774 GPM, will need to be installed at St. Vital Reservoir.

- For meters 150 mm (6 inches) and larger, a standard electrical plug-in connection will be required.

To support ongoing coordination with EPCOR, the Commission requests that Beaumont provide the following information:

- A detailed construction schedule for the upgrades to the St. Vital Reservoir and Main Pumphouse facilities.

- An official request letter confirming Beaumont's requirement for higher supply pressures to be maintained until completion of the upgrades, including dates for the higher supply pressure.

- A complete list of questions, including any relevant drawings or supporting details, for submission to EPCOR through the Commission.

Given the potential commissioning of the waterline to St. Vital as early as September, Beaumont is encouraged to also proceed with obtaining full approval from the Commission for the temporary connection. To help avoid delays to the project, the Commission strongly recommends that the following information be submitted:

- Any outstanding items identified in the conditional approval on the New Connection Request that received conditional Board approval on July 9, 2025.

- If revisions have been made to the construction drawings submitted on April 22, 2025, these should be submitted for review.

Once the above information has been received, the Commission will compile and forward the necessary materials to EPCOR and complete any required internal reviews to ensure that approvals do not delay the overall project.

Should you have any questions or require further clarification, please do not hesitate to contact us.

Sincerely,

Chelsey Iles
Manager, Capital Projects and Development
Capital Region Southwest Water Services Commission

Cc: Charles Conroy, Project Manager, City of Beaumont
Shawn Olson, Commission Manager, CRSWSC
Rick Sereda, Commission Operations Manager, CRSWSC

July 9, 2025
Reference/Project No.:

Charles Conroy, C.E.T.
Project Manager
City of Beaumont

Re: CITY OF BEAUMONT'S CONNECTION REQUEST
CONDITIONAL ACCEPTANCE

Dear Charles:

Please accept this letter as formal notification of the Capital Region Southwest Water Services Commission's (CRSWSC) conditional approval of the City of Beaumont's request to connect a proposed waterline extension to St. Vital.

The CRSWSC Board has reviewed the request and granted conditional approval, subject to the following terms:

1. **Construction Compliance:**
   The waterline to St. Vital must be constructed in accordance with the most recent drawings submitted to the CRSWSC on April 22, 2025. Any deviations from these plans must be reviewed and approved by the CRSWSC.

2. **Water Supply Agreement:**
   All information required under Section 4.2 of the Water Supply Agreement must be submitted and approved.

3. **Temporary Connection Management:**
   The City agrees to physically remove the spool piece within the proposed manhole when not in use. This temporary connection is only to be used during modifications to the Main Reservoir as part of the waterline extension and future upgrades.

4. **Hydrant Installation Restriction:**
   No hydrant directly connected to the proposed waterline may be installed until ownership of the waterline is transferred to the City and it is no longer a CRSWSC asset.

5. **Asset Ownership and Access:**
   The waterline will remain a CRSWSC asset while it functions as a transmission line supplying the St. Vital Reservoir and until all planned upgrades are completed. The CRSWSC retains the right to access all infrastructure along this line, up to and including the air gap at St. Vital.

6. **Maintenance Responsibility:**
   All maintenance and repairs will be the responsibility of the City.

7. **Water Pressure and Scheduling:**
   EPCOR has agreed to maintain current pressure levels sufficient to meet the City's average day demand (ADD) based on current plans. However, EPCOR cannot guarantee pressure for higher flows. The City must provide a detailed schedule for both the waterline installation and Main Reservoir upgrades, including anticipated usage times and durations, to allow coordination with EPCOR.

8. **Metering Agreement:**
   EPCOR has approved the installation of a temporary meter at the St. Vital Reservoir. The meter will be both supplied and installed by EPCOR. Coordination with EPCOR will be required to determine the appropriate meter size, schedule the installation, and ensure the setup is properly integrated within the reservoir to facilitate efficient and effective installation.

9. **Risk of Inadequate Pressure:**
   Should water pressure at the St. Vital Reservoir prove insufficient during construction, the City bears full responsibility for ensuring water supply to its residents at its own cost. The CRSWSC assumes no liability for any consequences arising from inadequate pressure or supply.

10. **Future Demand Planning:**
    The City is required to clarify its long-term strategy for meeting future peak day water demands.

Should you have any questions or require further clarification, please do not hesitate to contact me directly.

Yours truly,

Shawn Olson, P.Eng. CLGM
CRSWSC, Commission Manger

CP

Regional Water Customer Group

Water restriction

There are no current water restrictions throughout the Regional Water Customers Group.

Last modified: March 25, 2026, 9:45 a.m.

Strathcona County works collaboratively with its regional water partners to manage water resources, ensuring we all have the water supply we need. In the 1970s the Regional Water Customers Group was formed. The RWGC is a voluntary and informal association of rural and urban municipalities, water service commissions and other water utility systems that purchase water from EPCOR.

The RWCG includes

- Capital Region Southwest Water Services Commission
- Capital Region Parkland Water Services Commission
- Capital Region Northeast Water Services Commission
- City of St. Albert
- Town of Morinville
- Sturgeon County
- Strathcona County

Water restrictions

Water restrictions occur for various reasons. Sometimes they are planned and allow for advance notification to residents. At other times, they are unexpected. There are times when RWCG members are required to temporarily reduce their non-essential water use, such as:

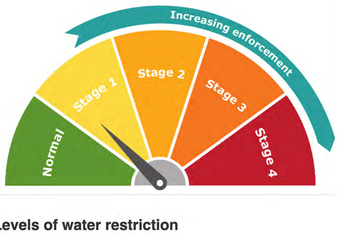
- during periods of hot, dry weather
- when demand for water exceeds available supply
- if there is construction on water pipes and facilities
- if there is planned construction on a major water system component
- if there is an unexpected water emergency (i.e. water line break)
- there is a water quality emergency

Before a water restriction is implemented local municipalities have already reduced their own water use by by stopping activities such as:

- hydrant flushing
- sewer flushing, street cleaning
- fire fighting training
- fleet vehicle washing (including buses)
- outdoor rink flooding.

Who has to follow water restrictions?

Water restrictions apply to all customers, including residents, businesses and municipal operations. If we all do our part and follow the restrictions we can reduce the strain on our water system.



Levels of water restriction

There are four stages of water restrictions, based on the severity of the water shortage. What water use is permitted at each stage is listed below.

Stage 1

Municipal operations begin water conservation. Residents and commercial companies asked to reduce their non-essential use.

Stage 2

Residents and commercial companies required to reduce all non-essential water use, and limit outdoor water. Ban on municipal operations.

- Outdoor Watering (lawns, gardens, trees) is limited to 1/2 hour max 1 day a week outside of peak hours
- No washing cars, houses, or sidewalks
- No filling pools, hot tubs or private outdoor rinks
- No sprinklers or water toys
- No water use for construction
- Only run full loads in the dishwasher or laundry

Stage 3

Residents and commercial companies restricted to essential water use only; drinking, cooking and firefighting, and outdoor water use is prohibited. Ban on municipal operations.

- No lawn watering
- Limited watering for vegetable gardens and new sod
- No washing cars, houses, or sidewalks
- No filling pools, hot tubs or private outdoor rinks
- No sprinklers or water toys
- No water use for construction
- Try to postpone dishes and laundry until after the restriction is lifted or only run full loads

Stage 4

Residents and commercial companies restricted to essential water use only; drinking, cooking, and firefighting. Restrictions to be enforced. Ban on municipal operations.

- No outdoor watering
- Washing cars, houses, sidewalks is prohibited
- Filling pools, hot tubs or private outdoor rinks is prohibited
- Sprinklers and water toys are prohibited
- Water use for construction is prohibited
- Postpone dishes and laundry until after the restriction is lifted

Chart of water restiction levels

Enforcement

Water restrictions are governed and enforced under each municipalities' Bylaws.

Last updated: Wednesday, March 25, 2026
Page ID: 52549

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ALBERTA

ENVIRONMENT AND PROTECTED AREAS

Office of the Minister

APR 2 2 2026

Her Worship Krista Gardner
Chair, Capital Region Southwest Water Services Commission
Mayor, Town of Calmar
c/o Shawn Olson, General Manager, Infrastructure & Planning
City of Leduc
1 Alexandra Park
Leduc AB T9E 4C4
crswsc@leduc.ca

Dear Mayor Gardner:

Thank you for your letter to the Honourable Devin Dreeshen, Minister of Transportation and Economic Corridors (TEC), the Honourable Dan Williams, Minister of Municipal Affairs, and myself, sharing your perspectives on the Regional Water and Wastewater Assessment Initiative and for participating in the March 12, 2026, Regional Commission Forum. I also appreciate you providing details on the governance, planning, and financial practices of the Capital Region Southwest Water Services Commission (CRSWSC).

I appreciate CRSWSC's commitment to long-term infrastructure planning and maintenance, with regular review and management and that this work is supported by a full cost-recovery rate structure, with any surplus managed to maintain affordability. Planning for future needs, including emergencies and service disruptions, is essential to ensuring reliable service in the capital region.

I am also pleased to learn CRSWSC will undertake a regional water feasibility study with funding from Transportation and Economic Corridors through the Water for Life program. We encourage continued sharing of knowledge and experience among regional water commissions to support effective management of regional water infrastructure.

Environment and Protected Areas will consider CRSWSC's recommendations to further engage experts should the government consider changes to provincial oversight of municipal water systems. The first phase of the Regional Water and Wastewater Assessment Initiative is nearing completion, and no decisions have been made on next steps.

204 Legislature Building, 10800 - 97 Avenue NW, Edmonton, Alberta T5K 2B6 Canada Telephone 780-427-2391

Classification: Protected A

I appreciate CRSWSC's commitment to safe and sustainable drinking water and municipal wastewater services and to achieving our Water for Life strategy goals.

Thank you again for writing.

Sincerely,

Grant Hunter
Minister of Environment and Protected Areas

cc: Honourable Devin Dreeshen
Minister of Transportation and Economic Corridors

Honourable Dan Williams
Minister of Municipal Affairs

Classification: Protected A

Professional Development Opportunities
CAPITAL REGION SOUTHWEST WATER SERVICES COMMISSION

AWWA Annual Conference & Expo (ACE)
Location: Washington, D.C.
Dates: June 21 – 24, 2026

Website: https://ace.awwa.org/

Early Bird Deadline: April 24, 2026

The American Water Works Association (AWWA) Annual Conference and Exposition (ACE) is the largest water industry conference in North America, bringing together water professionals, utilities, regulators, and vendors from around the world. The conference focuses on drinking water and utility management and offers technical sessions, workshops, and an extensive trade show covering operations, asset management, safety, regulatory compliance, and emerging technologies.

Attendance supports professional development through exposure to industry best practices, regulatory updates, peer networking, and hands-on learning opportunities relevant to water system operations and management.

WCW26 Conference and Exhibition
Location: Regina, Saskatchewan
Dates: September 15 – 18, 2026

Website: https://www.wcwwa.ca/page/AnnualConf

Early Bird Deadline: August 14, 2026

The WCW26 Annual Conference offers valuable professional development focused on innovation, sustainability, and best practices in the water and wastewater industry. It provides opportunities to learn about emerging technologies, regulatory updates, and operational improvements while connecting with municipal and industry peers. Attendance supports continued growth and alignment with evolving standards in utility operations.

WEFTEC 99th Annual Technical Exhibition & Conference
Location: New Orleans, Louisiana
Dates: September 26 – September 30, 2026

Website: WEFTEC Conference

Early Bird Deadline: June 28, 2026

The WEFTEC Conference brings together water professionals from around the globe to explore cutting-edge water quality education, engage with industry-leading experts, and learn about the latest technology, trends, and proven solutions.

Professional Development Opportunities
CAPITAL REGION SOUTHWEST WATER SERVICES COMMISSION

AWWOA 2026 Water Week Conference

Location: Edmonton, Alberta
Dates: October 27 – 30, 2026

Website: https://www.awwoa.ca/events/water-week

Early Bird Deadline: October 22, 2026

The technical program will feature three days of presentations highlighting the future goals, challenges, and expectations of the water and wastewater industry. The tradeshow is Thursday only, and costs $100+GST for members and non-members.

Capital Region Southwest Water Services Commission

	2026 Recap of Quantity of Water Sales to Purchases - M^3				2025 Recap of Quantity of Water Sales to Purchases - M^3			
	Commission Sales	**Commission Purchases**	**Commission Variance**	**%**	**Commission Sales**	**Commission Purchases**	**Commission Variance**	**%**
January	560,429	582,085	(21,656)	96.28%	557,610	582,303	(24,693)	95.76%
Februrary	513,705	532,215	(18,510)	96.52%	501,698	515,050	(13,352)	97.41%
March	536,808	555,699	(18,891)	96.60%	501,736	518,512	(16,776)	96.76%
April	611,562	630,309	(18,747)	97.03%	601,207	618,309	(17,102)	97.23%
May					622,419	639,224	(16,805)	97.37%
June					612,886	631,428	(18,542)	97.06%
July					701,151	719,228	(18,077)	97.49%
August					590,345	611,952	(21,607)	96.47%
September					617,329	631,876	(14,547)	97.70%
October					666,133	687,792	(21,659)	96.85%
November					525,323	544,253	(18,930)	96.52%
December					610,066	629,082	(19,016)	96.98%
Total To Date	**2,222,504**	**2,300,308**	**(77,804)**	**96.62%**	**7,107,903**	**7,329,009**	**(221,106)**	**96.98%**

Capital Regional Southwest Water Services Commission
2026 Recap of Water Sales by Customer
January 1, 2026 to Dec 31, 2026
Sales $

Revenue

Date	City of Leduc $	EIA $	Leduc County $	Leduc County Flat Rates[1] $	City of Beaumont $	Town of Calmar $	Village of Hay Lakes $	Village of Hay Lakes Flat Rate[2]	Camrose County/ Armena	Camrose County Flat Rate[3]	Town of Millet $	Total $
31-Jan-26	$449,310	$59,844	$155,293	$3,873	$240,066	$33,709	$5,180	$2,786	$7,386	$1,166	$24,358	$982,972
28-Feb-26	$414,529	$50,470	$147,611	$3,873	$215,610	$31,765	$4,952	$2,786	$6,749	$1,166	$22,159	$901,672
31-Mar-26	$428,068	$55,388	$153,997	$3,873	$231,655	$30,607	$4,613	$2,786	$6,156	$1,166	$23,563	$941,871
30-Apr-26	$495,521	$65,323	$169,890	$3,873	$261,397	$34,475	$5,338	$2,786	$6,706	$1,166	$25,468	$1,071,943
31-May-26				$3,873				$2,786		$1,166		$7,825
30-Jun-26				$3,873				$2,786		$1,166		$7,825
31-Jul-26				$3,873				$2,786		$1,166		$7,825
31-Aug-26				$3,873				$2,786		$1,166		$7,825
30-Sep-26				$3,873				$2,786		$1,166		$7,825
31-Oct-26				$3,873				$2,786		$1,166		$7,825
30-Nov-26				$3,873				$2,786		$1,166		$7,825
31-Dec-26				$3,873				$2,786		$1,166		$7,825
	$1,787,427	**$231,025**	**$626,792**	**$46,477**	**$948,728**	**$130,556**	**$20,083**	**$33,431**	**$26,998**	**$13,992**	**$95,549**	**$3,961,058**

Regular Sales	$ 3,867,157
Flat Rate Sales	$ 93,901
Total Sales	$ 3,961,058

	Debenture 1	Debenture 2	Total
[1]Leduc County Monthly Flat Rates Includes:			
Leduc County Line #2	$ 779	$ 285	$ 1,064
Leduc County/ Formerly New Serepta	$ 2,057	$ 753	$ 2,809
	$ 2,836	$ 1,038	$ 3,873
[2]Village of Hay Lakes Monthly Flat Rates Includ	$ 2,039	$ 746	$ 2,786
[3]Camrose County Monthly Flat Rates Includes:	$ 854	$ 312	$ 1,166
Total Monthly Payment on Debentures	**$ 5,729**	**$ 2,097**	**$ 7,825**

Capital Regional Southwest Water Services Commission
2026 Recap of Water Sales by Customer
January 1, 2026 to Dec 31, 2026
Volume - M^3

Date	City of Leduc M^3	EIA M^3	Leduc County M^3	City of Beaumont M^3	Town of Calmar M^3	Village of Hay Lakes M^3	Camrose County/Armena M^3	Town of Millet M^3	Monthly Total M^3
31-Jan-26	258,224	34,393	89,249	137,969	19,373	2,977	4,245	13,999	560,429
28-Feb-26	238,235	29,006	84,834	123,914	18,256	2,846	3,879	12,735	513,705
31-Mar-26	246,016	31,832	88,504	133,135	17,590	2,651	3,538	13,542	536,808
30-Apr-26	284,782	37,542	97,638	150,228	19,813	3,068	3,854	14,637	611,562
31-May-26									-
30-Jun-26									-
31-Jul-26									-
31-Aug-26									-
30-Sep-26									-
31-Oct-26									-
30-Nov-26									-
31-Dec-26									-
Total Volume	**1,027,257**	**132,773**	**360,225**	**545,246**	**75,032**	**11,542**	**15,516**	**54,913**	**2,222,504**
2026 Budgeted Sales at 97% Recovery Rate	3,261,542	457,048	1,079,039	1,732,335	227,950	39,154	63,281	186,423	7,046,772
2026 Actual Sales % of Budget	31.5%	29.1%	33.4%	31.5%	32.9%	29.5%	24.5%	29.5%	31.5%

FINAL SETTLEMENT AGREEMENT

THIS FINAL SETTLEMENT AGREEMENT made this 27th day of October, 2025.

BETWEEN:

The Regional Water Customers Group (on behalf of Strathcona County, the City of St. Albert, the Town of Morinville, the Capital Region Northeast Water Services Commission, the Capital Region Parkland Water Services Commission, the Capital Region Southwest Water Services Commission, and Sturgeon County
(hereinafter referred to as the "RWCG" or a "Party")

-and-

EPCOR Water Services Inc.
(hereinafter referred to as "EWSI" or a "Party")

Whereas:

A. The RWCG is an association of wholesale water customers comprised of the City of St. Albert, the Capital Region Parkland Water Services Commission, the Capital Region Northeast Water Services Commission, the Capital Region Southwest Water Services Commission, Strathcona County, Sturgeon County, and the Town of Morinville;

B. EWSI provides wholesale water services to the RWCG, the Department of National Defense 3rd Canadian Division Support Base Edmonton (“DND”) and Enoch Community Development Corporation (“Enoch”), pursuant to water supply agreements with each RWCG member, DND and Enoch which provide for rates to be calculated on a cost of service basis;

C. The Parties and the City of Edmonton agreed upon the allocation and methodology related to the determination of the cost of service, the terms of which agreement are reflected in the 2012 Cost of Service Memorandum of Understanding dated October 10, 2014 (“COS Memorandum”);

D. In the Final Settlement Agreement for 2012 to 2014, dated December 2015, the Parties further agreed that the methodologies and underlying assumptions in the 2012, 2013 and 2014 cost models will be used to determine costs and rates for the years 2015 to 2019;

E. The RWCG filed an application with the Alberta Utilities Commission (Proceeding 28639) seeking an Order directing EWSI to explain it calculation of the water rates for 2023 and confirming that 2023 rates have been set in accordance with the terms of the Water Supply Agreement, effective May 12, 2018, between EWSI and each member of the RWCG;

F. With the exception of any cost implications that may arise in relation to changes to the treatment of the kīsikāw pīsim solar farm under the Cost of Service Methodology, which shall be handled in the manner set out in paragraph 2 of this Final Settlement Agreement, the Parties have agreed upon the revenue requirements related to the services provided by EWSI to the RWCG for the year 2023. The terms of the agreement are contained herein (the "Final Settlement Agreement"). The revenue requirement is as reflected in the cost model for the year 2023, and is attached as Appendix "A" to this Final Settlement Agreement.

NOW THEREFORE the Parties, in consideration of the mutual covenants contained in this Final Settlement Agreement, agree as follows:

1. The final settlement agreement between the Parties, dated August 26, 2024, with respect to the rates charged by EWSI to the RWCG for water service during the year 2022 (the "2022 Agreement"), settled rates subject to "any cost implications for 2022 that may arise from any changes to the treatment of the kīsikāw pīsim solar farm under the Cost of Service Methodology" (paragraph 1 of the 2022 Agreement). In that respect, Parties agreed to deal with any cost implications through an adjustment in a final settlement agreement between the Parties concerning 2023.

   Changes to the treatment of the kīsikāw pīsim solar farm under the Cost of Service Methodology remain outstanding at this time such that an adjustment to 2022 cannot be dealt with in this Final Settlement Agreement. Accordingly, the Parties agree that any cost implications for 2022 that may arise from any changes to the treatment of the kīsikāw pīsim solar farm under the Cost of Service Methodology will instead be dealt with in a final settlement agreement between the Parties concerning 2024.

2. Subject to any cost implications for 2023 that may arise from any changes to the treatment of the kīsikāw pīsim solar farm under the Cost of Service Methodology, which the Parties have agreed will be dealt with through an adjustment in a final settlement agreement between the Parties concerning 2024, the Parties agree that:

   a. the revenue requirement shown in the cost model for the year 2023 attached as Appendix "A" is the correct and agreed upon revenue requirement;

   b. the revenue requirement for 2023 of $35,315,856 will be settled at the rate derived within the cost model ($0.9480).

   c. interest on amounts owing pursuant to this Final Settlement Agreement shall be payable in the sum and amount as set out in Appendix "B", attached.

3. The Parties agree that except as set out in the immediately preceding paragraph of this Final Settlement Agreement, and Appendix "B" attached, and as described in paragraph 4 herein, there shall not be any other interest charge or penalty for late payment of amounts owing as at December 31, 2024 for water service provided by EWSI to the RWCG or its members for the year 2023.

4. The Parties acknowledge that there is an Overpayment, including interest calculated to December 31, 2024, in the amount of $281,436 (the "Overpayment") in respect of wholesale water services provided by EWSI for the year 2023. RWCG and EWSI agree that EWSI will refund the Overpayment to the RWCG members by way of a lump sum payment to Strathcona County for the purpose of deposit into the RWCG Balancing Fund.

5. Each member's portion of the Overpayment is set out in Appendix "B". Execution of the Final Settlement Agreement constitutes an acknowledgement of each member's portion of the Overpayment. For greater certainty, the following list sets each member's portion of the Overpayment:

   (i) City of St. Albert: $43,252;

   (ii) Capital Region Parkland Water Services Commission: $47,530;

   (iii) Capital Region Northeast Water Services Commission: $46,359;

   (iv) Capital Region Southwest Water Services Commission: $51,835;

   (v) Strathcona County: $79,155;

   (vi) Sturgeon County: $3,155; and

   (vii) Town of Morinville: $10,150;

   In addition to refunding the Overpayment, as set out above, EWSI will also refund the following amounts to other wholesale customers:

   (viii) DND shall be refunded $1,959; and

   (ix) Enoch Community Development Corporation shall be refunded $1,783.

   The Parties acknowledge that DND and Enoch are not parties to this Final Settlement Agreement. EWSI will make its own arrangements with each of these former members of the RWCG for the respective refunds.

6. Subject to the adjustment noted in paragraph 2, the Parties agree that this Final Settlement Agreement represents a full and final settlement of all issues and disputes with respect to the rates charged by EWSI to the RWCG for water service during the year 2023, and further, that subject to paragraphs 2, 4 and 5, when the amount of the Overpayment is refunded by EWSI to the RWCG, the Parties acknowledge and agree that such amount is in full and final satisfaction of any and all costs, debts, sums of money or claims of any type or kind whatsoever, in any way arising from or related to the provision of wholesale water service by EWSI to each member of the RWCG, as set out in paragraph 5, for the year 2023.

7. Except as provided within paragraph 1 regarding 2022, this Final Settlement Agreement shall only apply to the year 2023.

8. The Parties agree that where applicable, the methodologies and underlying assumptions in the 2023 cost model will be used to determine costs and rates for the year 2024.

9. The Parties agree that the allocation and methodology in the 2012 Cost of Service Memorandum of Understanding shall apply effective January 1, 2015 and shall remain in effect for the earlier of five years or until EWSI makes a major operational change that has a material effect on the cost of service. For greater clarity, the Parties agree that the allocation and methodology in the 2012 Cost of Service Memorandum of Understanding supersedes the directions arising from AUC decisions 2011-281, 2012-102 and 2012-208 and the subsequent agreements made related to the rates for 2008-2011.

10. The Parties agree that the RWCG shall withdraw its application filed with the Alberta Utilities Commission in Proceeding 28639 on or before December 31, 2025.

11. This Final Settlement Agreement shall not be interpreted or construed as to constitute approval of the costs, allocations and methodologies contained in the November 2024 cost model save as expressly agreed herein.

12. This Final Settlement Agreement shall enure to the benefit of and be binding upon the Parties and their respective successors and permitted assigns.

13. This Final Settlement Agreement, including its Appendices, constitutes the entire agreement between the Parties pertaining to this subject matter, and supersedes all prior agreements, understandings, negotiations and discussions, whether oral or written, of the Parties; and there are no warranties, representations, conditions, acknowledgements or other agreements whether direct or collateral, express or implied, that form part of this Final Settlement Agreement except as specifically set forth herein.

14. No change or modification of this Final Settlement Agreement shall be valid or effective against a party unless it is in writing and signed by the duly authorized representative of that party.

15. A waiver by or on behalf of a Party of a breach of any term of this Final Settlement Agreement shall not be binding upon that Party unless it is in writing and executed by its duly authorized representative, and such a waiver shall not release the Party in breach from strict compliance with that or any other term in any other instance.

16. This Final Settlement Agreement shall be governed by the laws of the Province of Alberta and the parties agree to exclusively attorn to the courts of the Province of Alberta to resolve any disputes that may arise under or pursuant to this Final Settlement Agreement, save and except where the matter is required to be resolved by the AUC.

17. Except as expressly agreed to in this Final Settlement Agreement, the terms and parameters in this Final Settlement Agreement do not form a precedent

or otherwise bind any party as to positions they may take or proposals they may advance in future proceedings, and does not preclude or prejudice the rights of Parties to pursue any issues of concern to them in any proceeding in respect of 2024 or future years.

18. This Final Settlement Agreement may be executed by the Parties in counterpart, and may be delivered by fax or email, and when so executed shall be deemed to be an original and when taken together shall constitute one and the same agreement binding upon each of the parties.

IN WITNESS WHEREOF the parties have executed this Final Settlement Agreement effective on the date above written notwithstanding the actual date or dates of execution.

STRATHCONA COUNTY

Per: Jacqueline Roblin
Jacqueline Roblin (Mar 2, 2026 11:56:05 MST)

Per: Kevin Cole
Kevin Cole (Mar 2, 2026 11:40:39 MST)

_____
Witness

CITY OF ST. ALBERT

Per: _____

_____
Witness

TOWN OF MORINVILLE

Per: _____

_____
Witness

STURGEON COUNTY

Per: _____

_____
Witness

or otherwise bind any party as to positions they may take or proposals they may advance in future proceedings, and does not preclude or prejudice the rights of Parties to pursue any issues of concern to them in any proceeding in respect of 2024 or future years.

18. This Final Settlement Agreement may be executed by the Parties in counterpart, and may be delivered by fax or email, and when so executed shall be deemed to be an original and when taken together shall constitute one and the same agreement binding upon each of the parties.

IN WITNESS WHEREOF the parties have executed this Final Settlement Agreement effective on the date above written notwithstanding the actual date or dates of execution.

STRATHCONA COUNTY

_____ Per: _____
Witness

CITY OF ST. ALBERT

Brian Brost
Manager of Utilities

_____ Per: _____
Witness

TOWN OF MORINVILLE

_____ Per: _____
Witness

STURGEON COUNTY

_____ Per: _____
Witness

or otherwise bind any party as to positions they may take or proposals they may advance in future proceedings, and does not preclude or prejudice the rights of Parties to pursue any issues of concern to them in any proceeding in respect of 2024 or future years.

18. This Final Settlement Agreement may be executed by the Parties in counterpart, and may be delivered by fax or email, and when so executed shall be deemed to be an original and when taken together shall constitute one and the same agreement binding upon each of the parties.

IN WITNESS WHEREOF the parties have executed this Final Settlement Agreement effective on the date above written notwithstanding the actual date or dates of execution.

STRATHCONA COUNTY

_____
Witness

Per: _____

CITY OF ST. ALBERT

_____
Witness

Per: _____

TOWN OF MORINVILLE

Witness

Per:

STURGEON COUNTY

_____
Witness

Per: _____

or otherwise bind any party as to positions they may take or proposals they may advance in future proceedings, and does not preclude or prejudice the rights of Parties to pursue any issues of concern to them in any proceeding in respect of 2024 or future years.

18. This Final Settlement Agreement may be executed by the Parties in counterpart, and may be delivered by fax or email, and when so executed shall be deemed to be an original and when taken together shall constitute one and the same agreement binding upon each of the parties.

IN WITNESS WHEREOF the parties have executed this Final Settlement Agreement effective on the date above written notwithstanding the actual date or dates of execution.

STRATHCONA COUNTY

_____ Per: _____
Witness

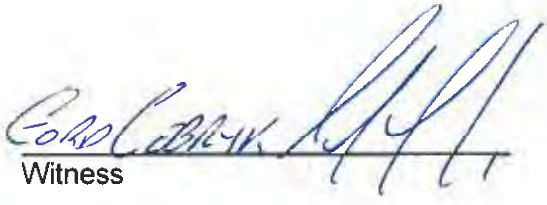
CITY OF ST. ALBERT

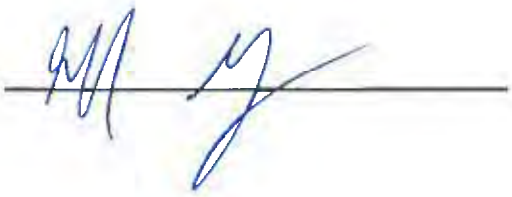
_____ Per: _____
Witness

TOWN OF MORINVILLE

_____ Per: _____
Witness

STURGEON COUNTY


Witness

Per: 

CAPITAL REGION NORTHEAST WATER SERVICES COMMISSION

Witness

Per: _____

CAPITAL REGION PARKLAND WATER SERVICES COMMISSION

_____
Witness

Per: _____

CAPITAL REGION SOUTHWEST WATER SERVICES COMMISSION

_____
Witness

Per: _____

EPCOR WATER SERVICES INC.

_____
Witness

Per: _____

CAPITAL REGION NORTHEAST WATER SERVICES COMMISSION

_____
Witness

Per: _____

CAPITAL REGION PARKLAND WATER SERVICES COMMISSION

_____
Witness

Per: _____ Amir Khan Commission Manager

CAPITAL REGION SOUTHWEST WATER SERVICES COMMISSION

_____
Witness

Per: _____

EPCOR WATER SERVICES INC.

_____
Witness

Per: _____
SVP Sustainability, General Counsel

CAPITAL REGION NORTHEAST WATER SERVICES COMMISSION

_____
Witness

Per: _____

CAPITAL REGION PARKLAND WATER SERVICES COMMISSION

_____
Witness

Per: _____

CAPITAL REGION SOUTHWEST WATER SERVICES COMMISSION

_____
Witness
Kirsten Anderson, City of Leduc

Per: _____
Shawn Olsen, Commission Manager

EPCOR WATER SERVICES INC.

_____
Witness

Per: _____

Appendix A

CAPITAL INPUTS

SECTION 1 CAPITAL INPUTS PER ACCOUNTING RECORDS

Section 1.1 Property, Plant & Equipment - Continuity Schedule

As at December 31, 2023	Plant in Service				Accumulated Depreciation/Amortization				Net Book Value		
	Opening Balance	Capital Additions	Retirements	Closing Balance	Opening Balance	Expense	Disposals/ Retirements	Closing Balance			
Property, Plant & Equipment (PP&E)											
Water Treatment Plant	699,377,464	31,603,050	(738,227)	730,242,286	252,531,242	20,761,243	(750,387)	272,542,098	457,700,188	-	-
Reservoirs & Pumphouses	99,178,794	1,379,531	(106,856)	100,451,470	36,485,421	2,455,045	(106,856)	38,833,610	61,617,859	-	-
Distribution Mains	1,138,928,987	58,158,384	(93,846)	1,196,993,525	206,105,563	14,785,070	(93,846)	220,796,786	976,196,739	-	-
Transmission Mains	417,231,467	41,918,895	(96,489)	459,053,873	90,484,678	5,973,299	(96,489)	96,361,489	362,692,384	-	-
Hydrants	145,965,363	9,306,530	(147,147)	155,124,746	33,186,152	3,111,631	(147,147)	36,150,635	118,974,111	-	-
Meters	71,325,035	5,910,436	(437,227)	76,798,245	27,681,792	3,838,090	(437,227)	31,082,654	45,715,590	-	-
Services	319,278,918	22,964,177	(84,580)	342,158,514	90,839,451	5,994,149	(84,580)	96,749,019	245,409,495	-	-
General Plant - includes software	75,428,992	7,956,895	(1,921,251)	81,464,636	31,166,570	4,763,194	(1,882,154)	34,047,610	47,417,026	-	-
Land & Land Rights	12,523,795	121	-	12,523,916	-	-	-	-	12,523,916	-	-
Total PP&E excluding PNIU + CWIP	**2,979,238,817**	**179,198,018**	**(3,625,623)**	**3,154,811,211**	**768,480,867**	**61,681,721**	**(3,598,687)**	**826,563,902**	**2,328,247,310**	-	-
Plant Not In Use	1,750,365	-	-	1,750,365	-	-	-	-	1,750,365	-	-
Construction Work in Progress (CWIP)	48,110,985	(6,560,845)	-	41,550,139	-	-	-	-	41,550,139	-	-
Total PP&E	**3,029,100,167**	**172,637,173**	**(3,625,623)**	**3,198,111,716**	**768,480,867**	**61,681,721**	**(3,598,687)**	**826,563,902**	**2,371,547,814**	-	-
Contributions in Aid of Construction (CIAC)											
Water Treatment Plant	18,246,713	2,546,667	-	20,793,380	710,599	1,554,639	-	2,265,237	18,528,143	-	-
Reservoirs & Pumphouses	484,820	-	-	484,820	463,583	6,725	-	470,308	14,512	-	-
Distribution Mains	515,254,456	28,683,509	(33,451)	543,904,515	115,020,569	5,918,388	(33,451)	120,905,507	422,999,008	-	-
Transmission Mains	80,831,282	627,370	-	81,458,652	15,425,293	1,019,780	-	16,445,073	65,013,578	-	-
Hydrants	76,881,945	4,424,375	(8,673)	81,297,647	24,087,053	1,646,225	(8,673)	25,724,605	55,573,042	-	-
Meters	-	-	-	-	-	-	-	-	-	-	-
Services	208,017,377	12,938,039	(1,082)	220,954,334	59,985,893	4,043,260	(1,082)	64,028,071	156,926,263	-	-
General Plant	1,932,774	-	-	1,932,774	135,625	93,590	-	229,215	1,703,558	-	-
Land & Land Rights	-	-	-	-	-	-	-	-	-	-	-
Software & Other Intangibles		-	-	-	-	-	-	-	-	-	-
Total CIAC	**901,649,367**	**49,219,960**	**(43,206)**	**950,826,121**	**215,828,616**	**14,282,607**	**(43,206)**	**230,068,017**	**720,758,105**	-	-
				-							
PP&E, net of CiAC	**2,127,450,799**	**123,417,213**	**(3,582,418)**	**2,247,285,594**	**552,652,251**	**47,399,115**	**(3,555,481)**	**596,495,885**	**1,650,789,710**		
Decommissioning Reserve									-		

Section 1.1.1 ~~PP&E - Customer Specific Inputs~~

~~Regional~~	~~Plant in Service~~				~~Accumulated Depreciation/Amortization~~				~~Net Book Value~~
	~~Opening Balance~~	~~Capital Additions~~	~~Retirements~~	~~Closing Balance~~	~~Opening Balance~~	~~Expense~~	~~Disposals/ Retirements~~	~~Closing Balance~~	
~~Meters - Regional~~									-

SECTION 2 ALLOCATORS AND OTHER INPUTS

Section 2.1 Water Mains by Pipe Size - Accounting Records

Plant in Service and Accumulated Depreciation (excluding CIAC)

2004 - 2007 Decision

Pipe Size (mm)	Distribution Mains			Transmission Mains					TOTAL
	50-250	300	Subtotal	350	400	450	500-1500	Subtotal	
PLANT IN SERVICE									
Opening Balance									
Cast Iron Main Replacement (CiMR)	126,656,806	15,770,315	**142,427,121**	-	-	-	-	**-**	**142,427,121**
Water Mains excluding CIMR	718,187,387	278,135,936	**996,323,323**	22,143,269	30,268,239	117,692,120	247,306,233	**417,409,861**	**1,413,733,184**
Total	844,844,193	293,906,251	**1,138,750,444**	22,143,269	30,268,239	117,692,120	247,306,233	**417,409,861**	**1,556,160,305**
Additions									
CIMR	-	-	-					**-**	**-**
Water Mains excluding CIMR	36,955,525	21,202,859	**58,158,384**	596,213	798,938	5,397,932	35,125,812	**41,918,895**	**100,077,279**
Total	36,955,525	21,202,859	**58,158,384**	596,213	798,938	5,397,932	35,125,812	**41,918,895**	**100,077,279**
Retirements/Adjustments									
CIMR	(924)		**(924)**					**-**	**(924)**
Water Mains excluding CIMR	(78,348)	(14,574)	**(92,922)**	(33,771)	(1,173)	(20,422)	(41,123)	**(96,489)**	**(189,411)**
Total	(79,272)	(14,574)	**(93,846)**	(33,771)	(1,173)	(20,422)	(41,123)	**(96,489)**	**(190,335)**
Ending Balance									
CIMR	126,655,882	15,770,315	**142,426,197**	-	-	-	-	**-**	**142,426,197**
Water Mains excluding CIMR	755,064,564	299,324,221	**1,054,388,785**	22,705,710	31,066,004	123,069,630	282,390,922	**459,232,267**	**1,513,621,051**
Total	**881,720,446**	**315,094,536**	**1,196,814,982**	**22,705,710**	**31,066,004**	**123,069,630**	**282,390,922**	**459,232,267**	**1,656,047,249**
			178,543					**(178,394)**	**150**
			-						

Pipe Size (mm)	Distribution Mains			Transmission Mains					TOTAL
	50-250	300	Subtotal	350	400	450	500-1500	Subtotal	
ACCUMULATED DEPRECIATION									

Opening Balance									
CIMR	39,559,574	4,697,384	**44,256,958**	-	-	-	-	-	**44,256,958**
Water Mains excluding CIMR	116,300,721	45,549,479	**161,850,200**	3,470,827	4,050,039	20,675,667	62,286,687	**90,483,220**	**252,333,420**
Total	155,860,294	50,246,863	**206,107,157**	3,470,827	4,050,039	20,675,667	62,286,687	**90,483,220**	**296,590,378**
Additions									
CIMR	1,444,292	179,782	**1,624,074**	-	-	-	-	-	**1,624,074**
Water Mains excluding CIMR	9,500,414	3,660,581	**13,160,996**	286,231	383,327	1,481,238	3,822,503	**5,973,299**	**19,134,295**
Total	10,944,706	3,840,363	**14,785,070**	286,231	383,327	1,481,238	3,822,503	**5,973,299**	**20,758,369**
Retirements/Adjustments									
CIMR	(924)		**(924)**	-	-	-	-	-	**(924)**
Water Mains excluding CIMR	(78,348)	(14,574)	**(92,922)**	(33,771)	(1,173)	(20,422)	(41,123)	**(96,489)**	**(189,411)**
Total	(79,272)	(14,574)	**(93,846)**	(33,771)	(1,173)	(20,422)	(41,123)	**(96,489)**	**(190,335)**
Ending Balance									
CIMR	41,002,942	4,877,166	45,880,108	-	-	-	-	-	**45,880,108**
Water Mains excluding CIMR	125,722,787	49,195,486	174,918,273	3,723,287	4,432,193	22,136,483	66,068,068	**96,360,031**	**271,278,304**
Total	**166,725,729**	**54,072,652**	**220,798,381**	**3,723,287**	**4,432,193**	**22,136,483**	**66,068,068**	**96,360,031**	**317,158,412**
NET BOOK VALUE	**714,994,717**	**261,021,884**	**976,016,601**	**18,982,423**	**26,633,811**	**100,933,147**	**216,322,854**	**362,872,236**	**1,338,888,837**
			1,595				-	1,458	137

Section 2.2 **Distribution of Distribution and Transmission Mains - Case II Hydraulic Modeling**

Pipe Size (mm)	50-250	300	350	400	450	500-1500
Distribution Mains, excluding CiMR[1]	100.00%	64.00%	34.00%	23.00%	32.00%	0.00%
Transmission Mains[1]	0.00%	36.00%	66.00%	77.00%	68.00%	100.00%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

[1] *For accounting purposes, Distribution Mains are classified as pipes sizes 300mm and less and Transmission Mains are classified as pipe sizes over 300mm.*
For cost model purposes, Distribution, excluding CIMR and Transmission Mains are classified applying Case II Hydraulic Modeling method. CiMR are classified as Distribution Mains as directed by AUC 2011-281.

Section 2.3 **~~Distribution of Water Treatment Plants~~**

~~Lowlift Pumps~~	~~89%~~
~~Highlift Pumps~~	~~11%~~
~~Total~~	~~100%~~

Section 2.4 **Distribution of Land & Land Rights**

Plant in Service	Net Book Value	% Distribution of Land & Rights	$ Distribution of Land & Rights	Net Plant
Water Treatment Plant	452,273,205	4.4%	554,960	452,828,165
Reservoirs & Pumphouses	62,155,617	41.5%	5,197,729	67,353,346
Distribution Mains	911,592,454	0.0%	-	911,592,454
Transmission Mains	387,636,928	4.1%	516,633	388,153,561
Hydrants	115,876,661	0.0%	-	115,876,661
Meters	44,679,417	0.0%	-	44,679,417
Meters - Regional	-	0.0%	-	-
Services	236,924,482	0.0%	-	236,924,482
General Plant - includes software	45,839,724	49.9%	6,254,534	52,094,258
Land & Land Rights	12,523,855	-100.0%	- 12,523,855	-
-	-	0.0%		-
	2,269,502,343	0.0%	-	2,269,502,343

SECTION 3 **REPORT - FUNCTIONALIZATION OF DISTRIBUTION AND TRANSMISSION MAINS (excluding CIAC)**

Section 3.1 **Case II Hydraulic Modeling**

Pipe Size (mm)	50-250	300	350	400	450	500-1500
DISTRIBUTION	100.00%	64.00%	34.00%	23.00%	32.00%	0.00%
TRANSMISSION	0.00%	36.00%	66.00%	77.00%	68.00%	100.00%

Section 3.2 **PLANT IN SERVICE**

							TOTAL
Opening Balance	**844,844,193**	**293,906,251**	**22,143,269**	**30,268,239**	**117,692,120**	**247,306,233**	**1,556,160,305**
CIMR	126,656,806	15,770,315	-	-	-	-	142,427,121
DISTRIBUTION - excluding CIMR	718,187,387	178,006,999	7,528,712	6,961,695	37,661,478	-	948,346,271
TOTAL DISTRIBUTION	844,844,193	193,777,314	7,528,712	6,961,695	37,661,478	-	1,090,773,392
TRANSMISSION	-	100,128,937	14,614,558	23,306,544	80,030,641	247,306,233	465,386,913
Additions	**36,955,525**	**21,202,859**	**596,213**	**798,938**	**5,397,932**	**35,125,812**	**100,077,279**
CIMR	-	-	-	-	-	-	-
DISTRIBUTION - excluding CIMR	36,955,525	13,569,830	202,712	183,756	1,727,338	-	52,639,161
TOTAL DISTRIBUTION	36,955,525	13,569,830	202,712	183,756	1,727,338	-	52,639,161
TRANSMISSION	-	7,633,029	393,500	615,182	3,670,594	35,125,812	47,438,118
Retirements/Adjustments	**(79,272)**	**(14,574)**	**(33,771)**	**(1,173)**	**(20,422)**	**(41,123)**	**(190,335)**
CIMR	(924)	-	-	-	-	-	(924)
DISTRIBUTION - excluding CIMR	(78,348)	(9,327)	(11,482)	(270)	(6,535)	-	(105,963)
TOTAL DISTRIBUTION	(79,272)	(9,327)	(11,482)	(270)	(6,535)	-	(106,886)
TRANSMISSION	-	(5,247)	(22,289)	(903)	(13,887)	(41,123)	(83,449)
Ending Balance	**881,720,446**	**315,094,536**	**22,705,710**	**31,066,004**	**123,069,630**	**282,390,922**	**1,656,047,249**

CIMR	126,655,882	15,770,315	-	-	-	-	142,426,197
DISTRIBUTION - excluding CIMR	755,064,564	191,567,501	7,719,942	7,145,181	39,382,281	-	1,000,879,469
TOTAL DISTRIBUTION	881,720,446	207,337,816	7,719,942	7,145,181	39,382,281	-	1,143,305,667
TRANSMISSION	-	107,756,720	14,985,769	23,920,823	83,687,348	282,390,922	512,741,582
	-	-	-	-	-	-	**1,656,047,249**

-
-

Section 3.3	**ACCUMULATED DEPRECIATION**							
	Pipe Size (mm)	**50-250**	**300**	**350**	**400**	**450**	**500-1500**	**TOTAL**
	Opening Balance	**155,860,294**	**50,246,863**	**3,470,827**	**4,050,039**	**20,675,667**	**62,286,687**	**296,590,378**
	CIMR	39,559,574	4,697,384	-	-	-	-	44,256,958
	DISTRIBUTION - excluding CIMR	116,300,721	29,151,667	1,180,081	931,509	6,616,213	-	154,180,191
	TOTAL DISTRIBUTION	155,860,294	33,849,050	1,180,081	931,509	6,616,213	-	198,437,148
	TRANSMISSION	-	16,397,812	2,290,746	3,118,530	14,059,454	62,286,687	98,153,229
	Additions	**10,944,706**	**3,840,363**	**286,231**	**383,327**	**1,481,238**	**3,822,503**	**20,758,369**
	CIMR	1,444,292	179,782	-	-	-	-	1,624,074
	DISTRIBUTION - excluding CIMR	9,500,414	2,342,772	97,319	88,165	473,996	-	12,502,666
	TOTAL DISTRIBUTION	10,944,706	2,522,554	97,319	88,165	473,996	-	14,126,740
	TRANSMISSION	-	1,317,809	188,913	295,162	1,007,242	3,822,503	6,631,629
	Retirements/Adjustments	**(79,272)**	**(14,574)**	**(33,771)**	**(1,173)**	**(20,422)**	**(41,123)**	**(190,335)**
	CIMR	(924)	-	-	-	-	-	(924)
	DISTRIBUTION - excluding CIMR	(78,348)	(9,327)	(11,482)	(270)	(6,535)	-	(105,963)
	TOTAL DISTRIBUTION	(79,272)	(9,327)	(11,482)	(270)	(6,535)	-	(106,886)
	TRANSMISSION	-	(5,247)	(22,289)	(903)	(13,887)	(41,123)	(83,449)
	Ending Balance	**166,725,729**	**54,072,652**	**3,723,287**	**4,432,193**	**22,136,483**	**66,068,068**	**317,158,412**
	CIMR	41,002,942	4,877,166	-	-	-	-	45,880,108
	DISTRIBUTION - excluding CIMR	125,722,787	31,485,111	1,265,918	1,019,404	7,083,674	-	166,576,895
	TOTAL DISTRIBUTION	166,725,729	36,362,277	1,265,918	1,019,404	7,083,674	-	212,457,002
	TRANSMISSION	-	17,710,375	2,457,369	3,412,788	15,052,808	66,068,068	104,701,409

Section 4 REPORT - PP&E CONTINUITY SCHEDULE BASED ON Case II Hydraulic Modeling FOR WATER MAINS

	Plant in Service				Accumulated Depreciation/Amortization				Mid-Year Value		Net Book Value Before Distribution of Land Rights	Distribution of Land Rights	Net Book Value After Distribution of Land Rights	
	Opening Balance	Capital Additions	Retirements	Closing Balance	Opening Balance	Expense	Disposals/ Retirements	Closing Balance	Plant in Service	Accumulated Depreciation				
Property, Plant & Equipment (PP&E)														
Water Treatment Plant	699,377,464	31,603,050	(738,227)	730,242,286	252,531,242	20,761,243	(750,387)	272,542,098	714,809,875	262,536,670	452,273,205	554,960	452,828,165	-
Reservoirs & Pumphouses	99,178,794	1,379,531	(106,856)	100,451,470	36,485,421	2,455,045	(106,856)	38,833,610	99,815,132	37,659,515	62,155,617	5,197,729	67,353,346	-
Distribution Mains	1,090,773,392	52,639,161	(106,886)	1,143,305,667	198,437,148	14,126,740	(106,886)	212,457,002	1,117,039,529	205,447,075	911,592,454	-	911,592,454	-
Transmission Mains	465,386,913	47,438,118	(83,449)	512,741,582	98,153,229	6,631,629	(83,449)	104,701,409	489,064,248	101,427,319	387,636,928	516,633	388,153,561	-
Hydrants	145,965,363	9,306,530	(147,147)	155,124,746	33,186,152	3,111,631	(147,147)	36,150,635	150,545,054	34,668,393	115,876,661	-	115,876,661	-
Meters	71,325,035	5,910,436	(437,227)	76,798,245	27,681,792	3,838,090	(437,227)	31,082,654	74,061,640	29,382,223	44,679,417	-	44,679,417	-
Meters - Regional		-	-	-			-	-	0	0	-	-	-	
Services	319,278,918	22,964,177	(84,580)	342,158,514	90,839,451	5,994,149	(84,580)	96,749,019	330,718,716	93,794,235	236,924,482	-	236,924,482	236,924,482 -
General Plant	75,428,992	7,956,895	(1,921,251)	81,464,636	31,166,570	4,763,194	(1,882,154)	34,047,610	78,446,814	32,607,090	45,839,724	6,254,534	52,094,258	52,094,258 -
Land & Land Rights	12,523,795	121	-	12,523,916	-	-	-	-	12,523,855	-	12,523,855	(12,523,855)	-	
Software & Other Intangibles	-	-	-	-	-	-	-	-	0	0	-	-	-	-
Total PP&E excluding PNIU + CWIP	**2,979,238,667**	**179,198,018**	**(3,625,623)**	**3,154,811,061**	**768,481,004**	**61,681,721**	**(3,598,687)**	**826,564,039**	**3,067,024,864**	**797,522,521**	**2,269,502,343**	(0)	**2,269,502,343**	
Plant Not In Use	1,750,365	-	-	1,750,365	-	-	-	-			1,750,365	-	-	
Construction Work in Progress (CWIP)	48,110,985	(6,560,845)	-	41,550,139	-	-	-	-			41,550,139	-	-	
Total PP&E	**3,029,100,017**	**172,637,173**	**(3,625,623)**	**3,198,111,566**	**768,481,004**	**61,681,721**	**(3,598,687)**	**826,564,039**	**3,067,024,864**	**797,522,521**	**2,312,802,847**	**-**	**2,269,502,343**	
Contributions in Aid of Construction (CIAC)														
Water Treatment Plant	18,246,713	2,546,667	-	20,793,380	710,599	1,554,639	-	2,265,237	19,520,047	1,487,918	18,032,129	-	18,032,129	-
Reservoirs & Pumphouses	484,820	-	-	484,820	463,583	6,725	-	470,308	484,820	466,945	17,875	-	17,875	0.00
Distribution Mains	486,748,832	24,405,168	(30,104)	511,123,896	108,898,568	5,604,814	(30,104)	114,473,278	498,936,364	111,685,923	387,250,441	-	387,250,441	-
Transmission Mains	109,337,037	4,905,711	(3,347)	114,239,401	21,547,356	1,333,540	(3,347)	22,877,549	111,788,219	22,212,452	89,575,767	-	89,575,767	-
Hydrants	76,881,945	4,424,375	(8,673)	81,297,647	24,087,053	1,646,225	(8,673)	25,724,605	79,089,796	24,905,829	54,183,967	-	54,183,967	-
Meters	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Services	208,017,377	12,938,039	(1,082)	220,954,334	59,985,893	4,043,260	(1,082)	64,028,071	214,485,856	62,006,982	152,478,874	-	152,478,874	-
General Plant	1,932,774	-	-	1,932,774	135,625	93,590	-	229,215	1,932,774	182,420	1,750,353	-	1,750,353	-
Land & Land Rights	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total CIAC	**901,649,498**	**49,219,960**	**(43,206)**	**950,826,252**	**215,828,676**	**14,282,793**	**(43,206)**	**230,068,264**	**926,237,875**	**222,948,470**	**703,289,405**	**-**	**703,289,405**	-
														-
PP&E, net of CIAC	**$ 2,127,450,519**	**$ 123,417,213**	**$ (3,582,418)**	**$ 2,247,285,314**	**$ 552,652,328**	**$47,398,928**	**$ (3,555,481)**	**$ 596,495,775**	**$ 2,140,786,989**	**$ 574,574,052**	**$ 1,609,513,442**	**$ -**	**$ 1,566,212,937**	-

Working Capital	$16,265,125
Average Materials and Supplies	5,328,090
	$21,593,215
Total Rate Base	**$1,587,806,152**

SECTION 5 REPORT - FUNCTIONALIZATION OF DISTRIBUTION AND TRANSMISSION MAINS CIAC

Section 5.1 Case II Hydraulic Model

Pipe Size (mm)	50-250	300	350	400	450	500-1500
DISTRIBUTION	100.00%	64.00%	34.00%	23.00%	32.00%	0.00%
TRANSMISSION	0.00%	36.00%	66.00%	77.00%	68.00%	100.00%

Section 5.2 CIAC

						TOTAL	
Opening Balance	367,323,716	147,930,871	10,639,890	6,511,316	43,615,248	20,064,828	**596,085,869** (131)

	CIMR	126,677,315	15,770,315	-	-	-	-	142,447,630
	DISTRIBUTION - excluding CIMR	240,646,401	84,582,756	3,617,563	1,497,603	13,956,879	-	344,301,202
	TOTAL DISTRIBUTION	367,323,716	100,353,071	3,617,563	1,497,603	13,956,879	-	486,748,832
	TRANSMISSION	-	47,577,800	7,022,327	5,013,714	29,658,368	20,064,828	109,337,037
	Additions	16,267,033	12,416,476	400,991	240,233	-	- 13,854	**29,310,879**	-
	CIMR	-	-	-	-	-	-	-
	DISTRIBUTION - excluding CIMR	16,267,033	7,946,544	136,337	55,254	-	-	24,405,168
	TOTAL DISTRIBUTION	16,267,033	7,946,544	136,337	55,254	-	-	24,405,168
	TRANSMISSION	-	4,469,931	264,654	184,980	-	(13,854)	4,905,711
	Retirements/Adjustments	(24,154)	(9,296)	-	-	-	-	**(33,451)**	-
	CIMR	-	-	-	-	-	-	-
	DISTRIBUTION - excluding CIMR	(24,154)	(5,950)	-	-	-	-	**(30,104)**
	TOTAL DISTRIBUTION	(24,154)	(5,950)	-	-	-	-	(30,104)
	TRANSMISSION	-	(3,347)	-	-	-	-	(3,347)
	Ending Balance	**383,566,595**	**160,338,050**	**11,040,881**	**6,751,549**	**43,615,248**	**20,050,974**	**625,363,297**	(131)
	CIMR	126,677,315	15,770,315	-	-	-	-	142,447,630
	DISTRIBUTION - excluding CIMR	256,889,280	92,523,350	3,753,899	1,552,856	13,956,879	-	368,676,266
	TOTAL DISTRIBUTION	383,566,595	108,293,665	3,753,899	1,552,856	13,956,879	-	511,123,896
	TRANSMISSION	-	52,044,385	7,286,981	5,198,693	29,658,368	20,050,974	114,239,401

	Pipe Size (mm)	50-250	300	350	400	450	500-1500	TOTAL	
Section 5.3	**ACCUMULATED AMORTIZATION**								
	Opening Balance	85,402,667	29,618,038	1,391,518	818,779	6,852,729	6,362,193	**130,445,923**	-
	CIMR	39,419,068	4,683,467	-	-	-	-	44,102,535	
	DISTRIBUTION - excluding CIMR	45,983,599	15,958,125	473,116	188,319	2,192,873	-	64,796,033	
	TOTAL DISTRIBUTION	85,402,667	20,641,593	473,116	188,319	2,192,873	-	108,898,568	
	TRANSMISSION	-	8,976,445	918,402	630,460	4,659,855	6,362,193	21,547,356	
	Expense	4,203,816	1,714,759	133,536	81,829	545,652	258,762	**6,938,354**	-
	CIMR	1,444,292	179,782	-	-	-	-	1,624,074	
	DISTRIBUTION - excluding CIMR	2,759,524	982,385	45,402	18,821	174,609	-	3,980,740	
	TOTAL DISTRIBUTION	4,203,816	1,162,167	45,402	18,821	174,609	-	5,604,814	
	TRANSMISSION	-	552,592	88,134	63,008	371,044	258,762	1,333,540	
	Retirements/Adjustments	(24,154)	(9,296)	-	-	-	-	**(33,451)**	-
	CIMR	-	-	-	-	-	-	-	
	DISTRIBUTION - excluding CIMR	(24,154)	(5,950)	-	-	-	-	(30,104)	
	TOTAL DISTRIBUTION	(24,154)	(5,950)	-	-	-	-	(30,104)	
	TRANSMISSION	-	(3,347)	-	-	-	-	(3,347)	
	Ending Balance	**89,582,328**	**31,323,500**	**1,525,054**	**900,608**	**7,398,381**	**6,620,956**	**137,350,827**	-
	CIMR	40,863,360	4,863,249	-	-	-	-	45,726,609	
	DISTRIBUTION - excluding CIMR	48,718,969	16,934,561	518,518	207,140	2,367,482	-	68,746,669	
	TOTAL DISTRIBUTION	89,582,328	21,797,810	518,518	207,140	2,367,482	-	114,473,278	
	TRANSMISSION	-	9,525,690	1,006,536	693,468	5,030,899	6,620,956	22,877,549	

CONSUMPTION INPUTS

SECTION 1 PRODUCTION, CONSUMPTION, WATER LOSS, BASE DEMAND

Section 1.1 Total Production (m^3)

	2019	2020	2021	2022	2023
Total System Production	130,167.0	129,825.6	137,271.6	136,260.8	140,625.2

Section 1.2 Annual Consumption (m^3)

	2019	2020	2021	2022	2023
In-City					
Residential	44,603.1	48,105.2	50,304.6	47,400.4	47,718.0
Multi-Residential	17,766.6	18,498.4	19,229.0	18,695.1	18,938.0
Commercial	24,098.8	19,565.7	20,486.4	22,547.4	25,042.0
University of Alberta	2,034.5	1,841.4	1,855.9	2,033.6	2,161.0
Regional	33,969.6	33,610.3	36,917.9	36,253.5	37,252.1
Total Consumption	**122,472.5**	**121,621.0**	**128,793.8**	**126,930.0**	**131,111.1**

Regional COS	$ 35,315,856
Regional Cons.	37,252.1
Regional Rate	**$ 0.9480**

Section 1.3 Water Loss (%) - Customer Specific

University of Alberta	1.30%
Regional Water Customer Group	1.30%

Section 1.4 Water Loss (%) - Total System, Customer Segments / Classes

	Water Loss % by Customer				
	2019	2020	2021	2022	2023
In-City					
Residential	1.0836	1.0911	1.0894	1.1009	1.0982
Multi-Residential	1.0836	1.0911	1.0894	1.1009	1.0982
Commercial	1.0836	1.0911	1.0894	1.1009	1.0982
University of Alberta	1.0130	1.0101	1.0111	1.0100	1.0130
Regional	1.0130	1.0101	1.0111	1.0100	1.0130
Total System	**1.0628**	**1.0675**	**1.0658**	**1.0735**	**1.0726**

Check Balance

Section 1.5 Production (m^3) - Customer Segments / Classes

	Total Water Produced				
	2019	2020	2021	2022	2023
In-City					
Residential	48,330.67	52,485.38	54,801.64	52,185.18	52,402.37
Multi-Residential	19,251.35	20,182.72	20,947.99	20,582.27	20,797.10
Commercial	26,112.84	21,347.25	22,317.81	24,823.34	27,500.31
University of Alberta	2,060.9	1,860.0	1,876.5	2,053.9	2,189.1
Regional	34,411.2	33,950.2	37,327.7	36,616.0	37,736.3
Total Production	**130,167.0**	**129,825.6**	**137,271.6**	**136,260.8**	**140,625.2**
Check Balance	-	-	-	-	-

Section 1.6 Base Demand (m^3/day)

	Base Demand				
	2019	2020	2021	2022	2023
Days in Year	365	366	365	365	365
In-City					
Residential	132.4	143.4	150.1	143.0	143.6
Multi-Residential	52.7	55.1	57.4	56.4	57.0
Commercial	71.5	58.3	61.1	68.0	75.3
University of Alberta	5.6	5.1	5.1	5.6	6.0
Regional	94.3	92.8	102.3	100.3	103.4
Base Demand	**356.6**	**354.7**	**376.1**	**373.3**	**385.3**

SECTION 2 MAX DAY - DEMAND AND PEAKING INPUTS

Section 2.1 Max Day Peaking Factor - Methodology: 5 Year Rolling Average of High Five Day (H5D)

	2019				2020				2021				2022				2023			
Date	Date	Total	In-City	Regional	Date	Total	In-City	Regional	Date	Total	In-City	Regional	Date	Total	In-City	Regional	Date	Total	In-City	Regional
	27-May-19	457.1	336.4	120.7	27-Jul-20	430.0	309.2	120.8	27-Jun-21	558.1	423.7	134.4	22-Aug-22	482.2	352.6	129.6	8-Jun-23	534.9	393.6	141.3
	28-May-19	480.3	346.1	134.2	28-Jul-20	436.5	319.3	117.2	28-Jun-21	602.5	446.2	156.3	23-Aug-22	479.5	349.4	130.1	9-Jun-23	545.1	389.9	155.2
	29-May-19	489.3	362.7	126.6	29-Jul-20	432.0	316.4	115.6	29-Jun-21	605.6	442.5	163.1	24-Aug-22	483.6	352.0	131.6	10-Jun-23	523.6	373.8	149.8
	30-May-19	427.0	304.3	122.7	30-Jul-20	415.9	307.5	108.4	30-Jun-21	607.9	444.5	163.4	25-Aug-22	495.6	360.3	135.3	11-Jun-23	509.6	365.1	144.5
	31-May-19	441.6	319.1	122.5	31-Jul-20	428.9	315.2	113.7	1-Jul-21	580.4	425.1	155.3	26-Aug-22	488.0	359.8	128.2	12-Jun-23	536.5	392.8	143.7
Avg H5D		**459.1**	**333.7**	**125.3**		**428.7**	**313.5**	**115.1**		**590.9**	**436.4**	**154.5**		**485.8**	**354.8**	**131.0**		**529.9**	**383.0**	**146.9**
Ave Daily		**356.74**	263.6	93.1		**354.6**	261.1	93.5		**376.1**	275.0	101.0		**373.3**	279.1	94.2		**385.0**	**286.9**	**98.1**
															-				-	
															-				-	

Section 2.2 Peaking Factor Data

2019	2020	2021	2022	2023	5 Year Average

In-City	Ave H5D	333.7	**1.27**	313.52	**1.20**	436.4	**1.59**	354.8	**1.27**	383.0	**1.34**	**1.33**
	Ave Daily	263.6		261.1		275.0		279.1		286.9		
Regional	Ave H5D	125.3	**1.35**	115.14	**1.23**	154.5	**1.53**	131.0	**1.39**	146.9	**1.50**	**1.40**
	Ave Daily	93.1		93.5		101.0		94.2		98.1		
Total System	Ave H5D	459.1	**1.29**	428.66	**1.21**	590.9	**1.57**	485.8	**1.30**	529.9	**1.38**	**1.35**
	Ave Daily	356.7		354.636		376.1		373.3		385.0		

SECTION 3 MAX HOUR - DEMAND AND PEAKING INPUTS

Section 3.1 Max Hour Demand - In-City and Regional

	2019	2020	2021	2022	2023
Total System	678.4	568.0	864.5	715.7	681.7
Regional	125.3	115.1	154.5	131.0	146.9
In-City	**553.07**	**452.86**	**710.01**	**584.74**	**534.79**

Section 3.2 Max Hour Peaking Factor - In City

	2019	2020	2021	2022	2023	
In-City Max Hour Demand	553.1	452.9	710.0	584.7	534.8	
In-City Average Demand	263.6	261.1	275.0	279.1	286.9	
In-City Peak Factor	**2.10**	**1.73**	**2.58**	**2.09**	**1.86**	**2.07**

SECTION 4 IN CITY - CUSTOMER CLASS PEAKING INPUTS

Section 4.1 Consumption Blocks - In City + University of Alberta

		A	B	(A*B)	C (A*B-A)	D (C / Sum C)	E	F (A*E-C-A)	G (F / Sum F)	
	Base Demand		**Maximum Day Demand**				**Maximum Hour Demand**			
	Revenue Consumption	Average Daily Water Use mgl/day	Peak Month to Average Month Factors	Total Capacity Requirement	Extra Capacity Requirement	**% of Total Extra Capacity Requirement**	System Max Hour To System Max Day Ratio	Max Day Extra Capacity Requirement	**% of Total 3 - way Extra Capacity Requirement**	
Residential										
0 m³ - 10.0 m³	57.55%	82.62	105.55%	87.2	4.6	10.98%	156%	48.6	**26.96%**	0.00%
10.1 m³ - 35.0 m³	37.60%	53.98	126.41%	68.2	14.3	34.12%	156%	38.0	**21.09%**	0.00%
> 35.0 m³	4.85%	6.97	154.13%	10.7	3.8	9.03%	156%	6.0	**3.32%**	0.00%
	100.00%	143.57		166.2	22.6	54.12%		92.7	**51.37%**	0.00%
										-
Multi-Residential										
0 m³ - 100.0 m³	21.30%	12.13	103.60%	12.6	0.4	1.04%	156%	7.0	**3.89%**	0.00%
100.1 m³ - 1000.0 m³	59.55%	33.93	107.40%	36.4	2.5	6.01%	156%	20.3	**11.27%**	0.00%
> 1000 m³	19.15%	10.91	116.51%	12.7	1.8	4.31%	156%	7.1	**3.93%**	0.00%
	100.00%	56.98		61.7	4.8	11.37%		34.4	**19.08%**	0.00%
Commercial										
0 m³ - 25.0 m³	11.97%	9.02	105.29%	9.5	0.5	1.14%	156%	5.3	**2.94%**	0.00%
25.1 m³ - 100.0 m³	14.79%	11.14	107.23%	11.9	0.8	1.93%	156%	6.7	**3.69%**	0.00%
100.1 m³ - 1000.0 m³	33.48%	25.23	116.31%	29.3	4.1	9.85%	156%	16.4	**9.07%**	0.00%
1000.1 m³ - 5000.0 m³	21.83%	16.45	125.08%	20.6	4.1	9.87%	156%	11.5	**6.36%**	0.00%
> 5,000m³	17.93%	13.51	132.16%	17.9	4.3	10.40%	156%	10.0	**5.52%**	0.00%
	100.00%	75.34		89.2	13.9	33.19%		49.7	**27.58%**	0.00%
University of Alberta										
0 m³ - 25.0 m³	0.02%	0.00	100.00%	0.0	-	0.00%	100%	-	**0.00%**	0.00%
25.1 m³ - 100.0 m³	0.05%	0.00	100.00%	0.0	-	0.00%	100%	-	**0.00%**	0.00%
100.1 m³ - 1000.0 m³	0.56%	0.03	100.00%	0.0	-	0.00%	100%	-	**0.00%**	0.00%
1000.1 m³ - 5000.0 m³	2.47%	0.15	100.00%	0.1	-	0.00%	100%	-	**0.00%**	0.00%
> 5,000m³	96.91%	5.81	109.49%	6.4	0.6	1.32%	156%	3.5	**1.97%**	0.00%
	100.00%	6.00		6.5	0.6	1.32%		3.5	**1.97%**	0.00%
TOTAL		**281.9**		**323.7**	**41.8**	**100.00%**		**180.4**	**100.00%**	

Section 4.2

INCREMENTAL CAPACITY REQUIREMENTS FOR ALL IN-CITY CUSTOMERS

Calculation of In-City Max Day Peak Factors

Calculation of Max Day Factors	**Proportion Extra-Capacity Usage (%)**	**Extra Capacity Requirement (ML/D)**	**Calculated Max Day Demand (ML/D)**	**Average Demand (ML/D)**	**Max Day Peak Factor**	
In-City						
Residential	54.12%	50.6	194.2	143.6	1.35	-
Multi-Residential	11.37%	10.6	67.6	57.0	1.19	-
Commercial	33.19%	31.0	106.4	75.3	1.41	-
University of Alberta	1.32%	1.2	7.2	6.0	1.21	-
Total In-City	**100.00%**	**93.5**	**375.4**	**281.9**	**1.33**	-
						(0.01)

Calculation of In-City Max Hour Peak Factor

Calculation of Max Hour Factors	**Proportion Extra-Capacity Usage (%)**	**Extra Capacity Requirement (ML/D)**	**Calculated Max Hour Demand (ML/D)**	**Average Demand (ML/D)**	**Max Hour Peak Factor**	
In-City						
Residential	51.37%	155.6	299.2	143.6	2.08	-
Multi-Residential	19.08%	57.8	114.8	57.0	2.01	-

Commercial	27.58%	83.5	158.9	75.3	2.11	-
University of Alberta	1.97%	6.0	12.0	6.0	1.99	-
Total In-City	**100.00%**	**302.9**	**584.8**	**281.9**	**2.07**	-
					(0.06)	

SECTION 5 **FIRE PROTECTION - INPUTS**

Section 5.1 **Fire Protection - Reservoir Requirements without Treatment Plants**

Reservoir	Gross Storage (ML)	Fire Storage (ML)	% Fire
Rosslyn I	55.9	5.7	
Rosslyn II	67.1	6.9	
Papachase I	56.6	6.2	
Papachase II	24.9	3.5	
Londonderry	45.3	2.6	
Thorncliffe	43.4	2.9	
Mill Woods	56.2	5.9	
North Jasper Place	46.1	4.7	
Ormsby	45.3	3.0	
Clareview	64.6	3.0	
Castle Downs	34.0	2.4	
Kaskitayo	28.9	4.0	
Total	**568.4**	**50.7**	**8.92%**

Section 5.2 **Public Fire Protection - Number of Hydrants**
Section 5.3 **Private Fire Protection - Average Number of Private Firelines**
Section 5.4 **Equivalent Private and Public Fire Meters**

Fireline Size (inches)	Fireline Size (mm)	2023 Average Number of Firelines	Factor [1]	Equivalent Meters
Private Firelines				
5/8	15	0	1.00	-
3/4	20	31	1.00	31
1	25	12	1.00	12
1 1/2	40	29	2.90	84
2	50	394	6.19	2,440
4	100	131	38.32	5,023
6	150	2,646	111.31	294,573
8	200	1,944	237.21	461,116
10	250	304	426.58	129,503
12	300	137	689.04	94,284
14	350	1	1,033.51	1,034
16	400	2	1,468.37	2,937
18	450	4	2,001.55	8,006
20	500	1	2,640.64	2,641
		5,636		1,001,682
Public Hydrants				
4	100	22,757	111.31	2,533,082
Total		28,393		2,533,082

Allocation Factors	
Private	28.34%
Public	71.66%
Toal	100.00%

[1] Factors Based on M1 Manual, 6th Edition, page 147, demand factor.
Connection size 1 inch and higher raised to the 2.63 power.
Ie POWER(20,2.63) 2640.638121

SECTION 1 FINANCIAL INPUTS

Section 1.1 Rate Revenue

Rate Revenue	Oracle Account	$	
Metered Sales and Service Charges			
Metered Revenue:			
Residential	4351 / 4353	109,640,733	
Multi-Residential	4381 / 4383	33,058,826	
Commercial	4361 / 4363/ 4365	37,179,730	
University of Alberta	4361 / 4363	1,821,682	
Regional	4395	34,883,740	
Service Charge Revenue:			
Residential	4352	44,393,764	
Multi-Residential	4382	2,833,311	
Commercial	4362	7,976,774	
Total		**271,788,560**	
Fire Protection			
Hydrants	4451	13,345,149	
Firelines	4452	2,728,170	
Total Fire Protection		**16,073,319**	
Total Rate Revenue		**287,861,878**	-

Section 1.2 Non Rate Revenue Items

Section 1.2.1 Revenue Offsets

Other Revenue	Oracle Account	$	
Late Payment/Interest A/R Charge	4505		
Connection Fees	4515		
Hydrant and Temporary Services	4520		
Meter Reading Revenue	4532/4533		
Surplus Sales	4555		
Interest Income	4578		
Water Permit Revenue	4591		
Miscellaneous Revenue	4592		
Water Truckfill Revenue	4593		
Facility Revenue	4594		
Customer Service Revenue	4595		
Misc Revenue			
Total		5,204,697	-

Section 1.2.2 Revenue Tax (Franchise Fee)

	Oracle Account		
Revenue Tax (Franchise Fee)	5300	19,235,609	excludes property tax

Section 1.3 Operations and Maintenance Costs by Function

	Total System	AUC Specific Disallowance[1]	Regional Share of Disallowance (%)	Regional Share of Disallowance ($)
Water Treatment Plant:				
Power	9,028,081	-	0.0%	-
Chemicals	8,677,714	-	0.0%	-
Hot Water		-	0.0%	-
Other Utilities		-	0.0%	-
All Other Costs	19,087,739	-	0.0%	-
Lowlift		-	0.0%	-
Lab Component	6,947,857	-	0.0%	-
Reservoirs:				-
Power and Other Utilities	1,599,172	-	0.0%	-
All Other Costs	1,578,169	-	0.0%	-
Transmission:				-
Lab Component		-	0.0%	-
All Other Costs	2,623,065	-	0.0%	-
Distribution:				-
Lab Component		-	0.0%	-
All Other Costs	16,571,423	-	0.0%	-
Services	113,569	-	0.0%	-
Hydrants	2,931,233	-	0.0%	-
Meters				

Administration before BD Disallowance:	31,398,912
BD Disallowance	(178,107)
Administration net of BD Disallowance	31,220,805

Regional Meters		-	0.0%	-
In-City	4,752,086	-	0.0%	-
Administration	31,273,957	(4,551,873)	12.2%	(555,143)
Customer Billing	10,193,871	-	0.0%	-
Total	**115,377,935**	**(4,551,873)**		**(555,143)**

-

[1] *Disallowance amount reflects the costs at the total business unit level (Total EWSI).*

Section 1.3A **Regional Disallowances**

Corporate Disallowances, excluding business development		(1,557,102)
EWSI Portion of STIP Pool B Disallowance		(1,229,912)
Total System Disallowances		**(2,787,013)**
RWCG Specific Disallowance		
AFUDC Adjustment (RWCG-Specific)		(54,257)
Property Tax Adjustment (RWCG-Specific)		(160,984)
RWCG Share of Admin	3,814,151	
Administration net of BD Disallowance	31,273,957	12.20%
Grossed Up AFUDC/Property Tax Adjustment		(1,764,860)
Grossed-Up		**(4,551,873)**

Section 1.4 **Average Materials and Supplies**

Source: Oracle Financial Report

Materials and Supplies	
December 31, 2021	5,042,081
December 31, 2022	4,853,944
December 31, 2023	6,088,245
Average	5,328,090

Section 1.5 **Working Capital**

Source: 2009-11 Lead Lag Study

	2022-2026 Actual	Ratio	Working Capital		
Water Service Expenses	$ 129,408,831	5.1%	$ 6,594,532		
Depreciation	47,399,115	14.0%	$ 6,635,876		
Interest Expense (Net of AFUDC)	43,383,180	11.1%	$ 4,813,750		
Retained Earnings	57,934,089	14.0%	$ 8,110,772		
Dividends	20,000,000	-50.0%	-$ 10,000,000		
Consumption Deferral Account			$ -	Added for 2023	(15,681,945)
GST Collection	37,276	1.5%	$ 562		
GST Input Tax Credit	1,905,520	5.8%	$ 109,633		
			$ 16,265,125	$ 15,681,944.65	

Section 1.6 **Cost of Capital**

Section 1.6.1 **Cost Rates - Debt and Equity**

	In City Cost Rate	Regional Cost Rate	
Debt	4.49%	4.49%	
Equity (Approved)	9.640%	8.50%	*AUC 20622-D01-2016*
Contributions	n/a	0.00%	

Embedded Cost of Debt	
Interest expense	42,326,177
Mid-Year debt and other L-T liabilities	941,834,784
Embedded Cost of debt	**4.49%**

-

Section 1.6.2 **Capital Structure - Total System**

Source: Oracle Financial Report

	EWSI Actual	
	$	%
Debt		
Equity		
Total	**-**	**0%**

Section 1.6.3 **Capital Structure - Regional (Deemed)**

	Regional Deemed (excluding contributions)	Regional Deemed (including contributions)			
	(%)	($)	(%)		
Debt	70%	148,593,352	61.30%	4.49%	
Equity	30%	63,682,865	26.27%	8.50%	
Contributions	n/a	30,110,876	12.42%		0.056958091
Total	100%	242,387,093	100.00%		

check

- Regional Cost of Service is based on the inclusion of contributions in the capital structure.

Total System Rate Base - Common to All (applicable to In-City, Fire Protection and Regional)

	Before Contributions	Contributions	Net of Contributions
Plant in Service, net of depreciation			
Water Treatment Plant	452,828,165	18,032,129	434,796,036
Transmission	388,153,561	89,575,767	298,577,794
Subtotal	**840,981,726**	**107,607,896**	**733,373,830**
General Plant	52,094,258		52,094,258
Working Capital	16,265,125		16,265,125
Materials and Supplies	5,328,090		5,328,090
Total	**914,669,199**	**107,607,896**	**807,061,303**

Total System Rate Base - Common to All excludes Reservoirs & Pumphouses, Distribution Mains, Hydrants, Meters and Services

SECTION 2 **WATER OPERATIONS INPUTS**

Section 2.1 **Service Information**

Section 2.1.1 **Service Information - Average Meters and Equivalent Meters**

Size of Service		Average Meters in Service					
(in millimetres)	inches	Residential	Multi-Res	Commercial	U of A	Regional	Total
16	5/8	282,495	103	11,898	-	-	294,497
20	3/4	4,978	313	3,763	-	-	9,054
25	1	425	1,350	3,326	-	-	5,101
40	1.5	25	1,347	2,139	-	-	3,511
50	2	2	532	1,368	-	1	1,904
75	3	-	132	252	-	3	387
100	4	1	46	118	-	2	167
150	6	-	7	56	-	2	65
200	8	-	2	3	-	1	6
250	10	-	-	1	1	3	5
300	12	-	-	2	-	2	4
400	16	-	-	-	-	1	1
500	20	-	-	-	-	-	-
600	24	-	-	-	-	1	1
	Total	287,927	3,833	22,926	1	16	314,702
	Annual Equivalents (Total x 12)	3,455,120	45,995	275,106	12	192	3,776,425

	Equivalent Meters						
	Meter Ratio[1]	Residential	Multi-Res	Commercial	U of A	Regional	Total
	1.0	282,495	103	11,898			294,497
	1.5	7,468	469	5,645			13,581
	2.5	1,063	3,375	8,315			12,753
	5.0	124	6,736	10,693			17,553
	8.0	16	4,258	10,946			15,220
	15.0	-	1,982	3,777			5,759
	25.0	25	1,158	2,940			4,123
	50.0	-	350	2,815			3,165
	80.0	-	160	248			408
	115.0	-	-	115			115
	168.8	-	-	253			253
	241.4	-	-	-			-
	260.0	-	-	-			-
	260.0	-	-	-			0
10,413		291,191	18,591	57,645	-	-	367,426
		3,494,292	223,089	691,735	-	-	4,409,115

[1] Weighting factor based on AWWA M6 Manual with 5/8" meter equivalencies

Section 2.1.2 **Service Information - Other Meter Accounts**

Other Meter Accounts	U of A	1	Regional 9

Section 2.1.3 **Service Information - Length of Pipe for Distribution Analysis**

Diameter of Main (mm)	Diameter of Main (inches)	Length of Main (km)	Case II Hydraulic Model	Replacement Cost $

< 150	<6	151.5	0%	$	27.49
150	6	701.3	0%	$	27.49
200	8	1,470.0	0%	$	36.65
250	10	649.1	0%	$	45.82
300	12	837.6	36%	$	54.98
350	14	46.9	66%	$	64.14
400	16	50.7	77%	$	73.31
450	18	185.9	68%	$	82.47
		4,092.9			

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1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19

EPCOR - WATER UTILITY
WATER - EXHIBIT 1.0
ALLOCATION FACTOR SUMMARY

Note Reference	COSA Allocations	Base - All	Base In-City	Base In-City + UofA	Max-Day All	Max Day In-City	Max Day In-City + UofA	Max-Hour In-City	Max-Hour In-City + UofA	Meters	Services	Billing	Joint Fire Protection	Revenue Related	Direct Assignment	Total	Do Not Delete The Notes Below
1	As 100% Base All	100.0%														100.0%	Base - All 100%
2	As 100% Base In-City		100.0%													100.0%	Base In-City 100%
3	As 100% Base In-City + UofA			100.0%												100.0%	Base In-City + UofA 100%
4	As Max-Day All				100.0%											100.0%	Max-Day All 100%
5	As Max-Day In-City					100.0%										100.0%	Max Day In-City 100%
6	As Max-Day In-City + UofA						100.0%									100.0%	Max Day In-City + UofA 100%
7	As Max-Hour In-City							100.0%								100.0%	Max-Hour In-City 100%
8	As Max-Hour In-City + UofA								100.0%							100.0%	Max-Hour In-City + UofA 100%
9	As Base & Max Day All	74.1%			25.9%											100.0%	Base - All 74.1%, Max-Day All 25.9%
10	As Base & Max Day In-City		75.1%			24.9%										100.0%	Base In-City 75.1%, Max Day In-City 24.9%
11	As Base & Max Day In-City + UofA			75.1%			24.9%									100.0%	Base In-City + UofA 75.1%, Max Day In-City + UofA 24.9%
12	As Base & Max Day & Max Hour In-City		48.2%			16.0%		35.8%								100.0%	Base In-City 48.2%, Max Day In-City 16%, Max-Hour In-City 35.8%
13	As Base & Max Day & Max Hour & Fire In-City		41.7%			13.9%		30.9%					13.5%			100.0%	Base In-City 41.7%, Max Day In-City 13.9%, Max-Hour In-City 30.9%, Joint Fire Protection 13.5%
14	As Max Hour & Fire Protection In-City + UofA								91.1%				8.9%			100.0%	Max-Hour In-City + UofA 91.1%, Joint Fire Protection 8.9%
15	As 100% Meters									100.0%						100.0%	Meters 100%
16	As 100% Services										100.0%	0.0%				100.0%	Services 100%
17	As 100% Billing											100.0%				100.0%	Billing 100%
18	As 100% Joint Fire Protection												100.0%			100.0%	Joint Fire Protection 100%
19	As 100% Revenue Related In-City Less Fire													100.0%		100.0%	Revenue Related 100%
20	As Direct Assignment														100.0%	100.0%	Direct Assignment 100%
21	As Plant in Service Before G.P.	28.1%	17.1%	0.0%	9.8%	5.7%	0.0%	12.7%	2.8%	2.0%	10.7%	0.0%	5.8%	0.0%	5.2%	100.0%	Base - All 28.1%, Base In-City 17.1%, Max-Day All 9.8%, Max Day In-City 5.7%, Max-Hour In-City 12.7%, Max-Hour In-City + UofA 2.8%, Meters 2%, Services 10.7%, Joint Fire Protection 5.8%, Direct Assignment 5.2%
22	As Plant in Service Before G.P.; No	29.6%	18.1%	0.0%	10.4%	6.0%	0.0%	13.4%	2.9%	2.1%	11.3%	0.0%	6.1%	0.0%	0.0%	100.0%	Base - All 29.6%, Base In-City 18.1%, Max-Day All 10.4%, Max Day In-City 6%, Max-Hour In-City 13.4%, Max-Hour In-City + UofA 2.9%, Meters 2.1%, Services 11.3%, Joint Fire Protection 6.1%
23	As O&M Expenses	44.9%	8.9%	0.0%	7.2%	3.0%	0.0%	6.6%	3.1%	6.1%	0.1%	13.1%	3.2%	0.0%	3.8%	100.0%	Base - All 44.9%, Base In-City 8.9%, Max-Day All 7.2%, Max Day In-City 3%, Max-Hour In-City 6.6%, Max-Hour In-City + UofA 3.1%, Meters 6.1%, Services 0.1%, Billing 13.1%, Joint Fire Protection 3.2%, Direct Assignment 3.8%
24	As Water Treatment Plant	74.1%	0.0%	0.0%	25.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	Base - All 74.1%, Max-Day All 25.9%
25	As Pumping Plant	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	91.1%	0.0%	0.0%	0.0%	8.9%	0.0%	0.0%	100.0%	Max-Hour In-City + UofA 91.1%, Joint Fire Protection 8.9%
26	As Transmission Plant	74.1%	0.0%	0.0%	25.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	Base - All 74.1%, Max-Day All 25.9%
27	As Subtransmission Plant	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
28	As Distribution Plant	0.0%	41.7%	0.0%	0.0%	13.9%	0.0%	30.9%	0.0%	0.0%	0.0%	0.0%	13.5%	0.0%	0.0%	100.0%	Base In-City 41.7%, Max Day In-City 13.9%, Max-Hour In-City 30.9%, Joint Fire Protection 13.5%
29	As General Plant	28.1%	17.1%	0.0%	9.8%	5.7%	0.0%	12.7%	2.8%	2.0%	10.7%	0.0%	5.8%	0.0%	5.2%	100.0%	Base - All 28.1%, Base In-City 17.1%, Max-Day All 9.8%, Max Day In-City 5.7%, Max-Hour In-City 12.7%, Max-Hour In-City + UofA 2.8%, Meters 2%, Services 10.7%, Joint Fire Protection 5.8%, Direct Assignment 5.2%
30	As O&M Expenses W/O Admin	48.4%	8.2%	0.0%	6.7%	2.7%	0.0%	6.1%	3.4%	5.7%	0.1%	12.1%	3.0%	0.0%	3.5%	100.0%	Base - All 48.4%, Base In-City 8.2%, Max-Day All 6.7%, Max Day In-City 2.7%, Max-Hour In-City 6.1%, Max-Hour In-City + UofA 3.4%, Meters 5.7%, Services 0.1%, Billing 12.1%, Joint Fire Protection 3%, Direct Assignment 3.5%
31	As O&M Less Power/Chemicals/Utili	35.5%	10.7%	0.0%	8.7%	3.6%	0.0%	7.9%	2.2%	7.3%	0.2%	15.7%	3.7%	0.0%	4.5%	100.0%	Base - All 35.5%, Base In-City 10.7%, Max-Day All 8.7%, Max Day In-City 3.6%, Max-Hour In-City 7.9%, Max-Hour In-City + UofA 2.2%, Meters 7.3%, Services 0.2%, Billing 15.7%, Joint Fire Protection 3.7%, Direct Assignment 4.5%

Base - All - allocates asset/cost to all customer segments
Base In-City - allocates asset/cost to In-City customer segments only
Base In-City + UofA - allocates assets/cost to In-City customers and U of A
Max - Day All - allocates asset/cost to all customer segments
Max - Day In City- allocates asset/cost to In-City Customers Only
Max - Day In-City + U of A - allocates assets/cost to In-City customers and U of A
Max - Hour In-City - allocates asset/cost to In-City customer segments only
Max - Hour In-City + U of A - allocates asset/cost to In-City customer and UofA
Meters - allocates asset/cost to meter related In-City customer segments only
Services - allocates asset/cost to service related In-City customer segments only
Billing - allocates asset/costs to billing related
Joint Fire Protection - allocates asset/cost to standby/oversizing related
Revenue Related - allocates asset/cost to revenue related
Direct Assignment - allocates asset/cost to specific customer segment or class of service

EPCOR - WATER UTILITY
WATER - EXHIBIT 1.1
SOURCE OF SUPPLY - ALL

	ML/D	Base	Base and Max Day	Base and Max Day and Max Hour	Source:
Base Demand	385.27	100.0%	74.1%	N/A	Input #2, Section 1.6, Base Demand (m^3/day)-Total System
Max Day	520.07		25.9%	N/A	Input #2, Section 2.1, Max Day Peaking Factor-Total System
Max Hour				N/A	Input #2, Section 3.1, Max Hour Demand -Total System
		100.0%	100.0%	N/A	

Note: Based on most recent historical year system data

EPCOR - WATER UTILITY
WATER - EXHIBIT 1.2
SOURCE OF SUPPLY - IN-CITY

	ML/D	Base	Base and Max Day	Base and Max Day and Max Hour	Source:
Base Demand	275.89	100.0%	75.08%	48.2%	Input #2, Section 1.6, Base Demand (m^3/day)-In-City
Max Day Demand	367.45		24.92%	16.0%	Input #2, Section 2.1, Max Day Peaking Factor - In-City
Max Hour Demand	572.32			35.8%	Input #2, Section 3.1, Max Hour Demand - In-City
		100.0%	100.0%	100.0%	

EPCOR - WATER UTILITY
WATER - EXHIBIT 1.3
DISTRIBUTION STORAGE - IN-CITY

	ML/D	Max Day Ratio	Max Hour Ratio	Source:
Fire Storage	50.67	8.9%	8.9%	Input #2, Section 5.1, Fire Protection - Reservoir Requirements
All Other	517.68	91.1%	91.1%	Input #2, Section 5.1, Fire Protection - Reservoir Requirements
Total Available Storage Capacity	568.35	100.0%	100.0%	

Note: Based on system planning criteria

EPCOR - WATER UTILITY
WATER - EXHIBIT 1.4
DISTRIBUTION MAIN ANALYSIS

Diameter of Main (mm)	Diameter of Main (inches)	Length of Main (km)	Case II Hydraulic Model	Distribution Length of Main (km)	Replacement Cost $	Distribution in Replacement Cost $	Pipe of 150 ml, or 6 inch, or less	Equivalent 8" and above	Total	Replacement Cost at Base Cost	Replacement Cost - Base Cost	Total cost of pipe of 150 ml, or 6 inch , or less	Equivalent 8" and above	Subtotal	Fire	Total
< 150	< 6	151.47	0.0%	151.47	$ 27.49	$ 4,164	151.47		151.47	$ 27.49	$ -	$ 4,164		$ 4,164	$ -	$ 4,164
150	6	701.31	0.0%	701.31	27.49	19,279	701.31		701.31	27.49	-	19,279		19,279	-	19,279
200	8	1,469.97	0.0%	1,469.97	36.65	`		1,469.97	1,469.97	36.65	-	-	53,879	53,879	-	53,879
250	10	649.12	0.0%	649.12	45.82	29,740		649.12	649.12	36.65	9.16	-	23,792	23,792	5,948	29,740
300	12	837.59	36.0%	536.06	54.98	29,472		536.06	536.06	36.65	18.33	-	19,648	19,648	9,824	29,472
350	14	46.86	66.0%	15.93	64.14	1,022		15.93	15.93	36.65	27.49	-	584	584	438	1,022
400	16	50.72	77.0%	11.67	73.31	855		11.67	11.67	36.65	36.65	-	428	428	428	855
450	18	185.85	68.0%	59.47	82.47	4,905		59.47	59.47	36.65	45.82	-	2,180	2,180	2,725	4,905
		4,092.90		3,595.01		$ 89,438 (3)	852.79	2,742.22	3,595.01			$ 23,443	$ 100,511	$ 123,955	$ 19,363	$ 143,317
Commodity/Capacity %														86.5%	13.5%	100.0%
Total cost of pipe of 150 ml, or 6 inch , or less		$ 23,443 (1)														
Equivalent 8" and above		100,511 (2)														
		$ 123,955														
Base & Extra Capacity	= (1+2)/ (3)	**86.5%**														
Fire																
= 1- (Comm/Cap %)		**13.5%**														
		100.0%														

	ML/D	Base	Base and Max Day	Base and Max Day and Max Hour	Base and Max Day and Max Hour and Fire Protection	Source:
Base Demand	275.89	100.0%	74.93%	48.16%	41.66%	Input #2, Section 1.6, Base Demand (m^3/day)-In-City
Max Day Demand	368.20		25.07%	16.12%	13.94%	Input #2, Section 2.1, Max Day Peaking Factor - In-City
Max Hour Demand	572.81			35.72%	30.89%	Input #2, Section 3.1, Max Hour Demand - In-City
Fire Protection					13.51%	
		100.0%	100.00%	100.00%	100.00%	

Exhibit2_Distribution Factors

EPCOR - WATER UTILITY
WATER - EXHIBIT 2.0
DISTRIBUTION FACTOR SUMMARY

	Base			Max-Day			Max-Hour		Customer			
CUSTOMER CLASS	**All**	**In-City**	**In-City + UofA**	**All**	**In-City**	**In-City + UofA**	**In-City**	**In-City + UofA**	**Meters**	**Services**	**Billing**	**Revenue Related**
Exhibit Sources	**#2.1**	**#2.1**	**#2.1**	**#2.2**	**#2.2**	**#2.2**	**#2.2**	**#2.2**	**#2.3**	**#2.3**	**#2.3**	**#2.5**
In-City												
Residential	37.3%	52.0%	50.9%	37.6%	54.8%	54.1%	52.4%	51.4%	91.5%	79.3%	91.5%	62.5%
Multi-Residential	14.8%	20.7%	20.2%	7.9%	11.5%	11.4%	19.5%	19.1%	1.2%	5.1%	1.2%	14.6%
Commercial	19.6%	27.3%	26.7%	23.0%	33.6%	33.2%	28.1%	27.6%	7.3%	15.7%	7.3%	18.3%
University of Alberta	1.6%	0.0%	2.1%	0.9%	0.0%	1.3%	0.0%	2.0%	0.0%	0.0%	0.0%	0.7%
Regional	26.8%	0.0%	0.0%	30.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
EWSI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fire Protection	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.9%
TOTAL	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

EPCOR - WATER UTILITY
WATER - EXHIBIT 2.1
BASE DISTRIBUTION FACTOR

	A	B	C	D	E	F	G	
Customer Class	**Annual Metered Sales[1]**	**Loss Factor[2]**	**Total Water Produced (Flow + Losses)**	**Base Demand[3]**	**Total All**	**Total In-City**	**In City + U of A**	**Source:**
Units:	**ML**		**ML**	**ML/D**	**%**	**%**	**%**	
						F=D/Total	**UofA)/(Total**	
			C=A X B	**=C/Days in TY**	**E=D/Total All**	**InCity**	**InCity + UofA)**	
In-City								
Residential	47,718.0	1.1009	52,535	143.57	37.3%	52.0%	50.9%	See notes
Multi-Residential	18,938.0	1.1009	20,850	56.98	14.8%	20.7%	20.2%	See notes
Commercial	25,042.0	1.1009	27,570	75.34	19.6%	27.3%	26.7%	See notes
University of Alberta	2,161.0	1.0100	2,183	6.00	1.6%	0.0%	2.1%	See notes
Regional	37,252.1	1.0100	37,625	103.39	26.8%	0.0%	0.0%	See notes
EWSI	0.0	0.0000	0	0.00	0.0%	0.0%	0.0%	See notes
Fire Protection	0.0	0.0000	0	0.00	0.0%	0.0%	0.0%	See notes
Total	**131,111.1**		**140,761**	**385.27**	**100.0%**	**100.0%**	**100.0%**	
		Historical Average Day		*356.62*				Consumption Input
Distribution Factor					**(Base-1)**	**(Base-2)**	**(Base-3)**	

(1) See Consumption Inputs, Current Year Consumption. Input #2, Section 1.2, Annual Consumption (m3).
(2) Losses based on utility information. Regional number is agreed upon between Edmonton Water and the Regional customers. Input #2, Section 1.4, Water Loss (%) - Total System, Customer Segments / Classes.
(3) Based on utility information. Input #2, Section 1.6, Base Demand (m3/day).

EPCOR - WATER UTILITY
WATER - EXHIBIT 2.2
MAX DAY/HOUR DISTRIBUTION FACTOR

	A	B	C	D	E	F	G	H	I	J	K	L	
	MAXIMUM DAY DEMAND							**MAXIMUM HOUR DEMAND**					**Source:**
	Base Demand[1]	**Max Day Peak Factor[2]**	**ExtraCap Use**	**Total Extra Capacity**	**Total All**	**Total In-City**	**In City + U of A**	**Max Hour Peak Factor[2]**	**ExtraCap Use**	**Total Extra Capacity**	**% of Total In-City**	**In City + U of A**	
Units:	**ML/D**		**ML/D**	**ML/D**	**%**	**%**	**%**		**ML/D**	**ML/D**	**ML/D**		
						F=D/Total In City	**UofA)/(Total InCity + UofA)**				**K=J/Total In City**		
			C=A X B	**D=C-A**	**E=D/Total All**				**I=H X A**	**J=I-A**			
In-City													

Residential	143.6	1.35	194.20	50.6	37.6%	54.8%	54.1%		2.08		299.2	155.6	52.4%	51.4%	See notes
Multi-Residential	57.0	1.19	67.62	10.6	7.9%	11.5%	11.4%		2.01		114.8	57.8	19.5%	19.1%	See notes
Commercial	75.3	1.41	106.39	31.0	23.0%	33.6%	33.2%		2.11		158.9	83.5	28.1%	27.6%	See notes
University of Alberta	6.0	1.21	7.23	1.2	0.9%	0.0%	1.3%		1.99		12.0	6.0	0.0%	2.0%	See notes
Regional	103.4	1.40	144.63	41.2	30.6%	0.0%	0.0%	N/A		N/A	N/A		0.0%	0.0%	See notes
EWSI	-	N/A	N/A	N/A	0.0%	0.0%	0.0%		-	N/A	N/A		0.0%	0.0%	See notes
Fire Protection	-	N/A	N/A	N/A	0.0%	0.0%	0.0%		-	N/A	N/A		0.0%	0.0%	See notes
Total	**385.3**		**520.07**	**134.8**	**100.0%**	**100.0%**	**100.0%**				**584.8**	**302.9**	**100.0%**	**100.0%**	
		Historical Max Day [3]	*536.5*												
Distribution Factor					**(Max Day-1)**	**(Max Day-2)**	**(Max Day-3)**						**(Max Hour-1)**	**(Max Hour-2)**	

(1) See Input #2, Section 1.6, Base Demand (m^3/day), Regional based on 5 year average.
(2) See Input #2, Section 4.2; Section 2.2

EPCOR - WATER UTILITY
WATER - EXHIBIT 2.3
CUSTOMER DISTRIBUTION FACTOR

CUSTOMER CLASS	Average Meters in Service [(1)]	% of Total	Number of Equivalent Services[(1)]	% of Total	Number of Billings[(2)]	% of Total	Source:
In-City							
Residential	287,926.7	91.5%	291,191.0	79.3%	287,926.7	91.5%	See notes
Multi-Residential	3,832.9	1.2%	18,590.7	5.1%	3,832.9	1.2%	See notes
Commercial	22,925.5	7.3%	57,644.6	15.7%	22,925.5	7.3%	See notes
University of Alberta	1.0	0.0%	-	0.0%	1.0	0.0%	See notes
Regional	16.0	0.0%	-	0.0%	9.0	0.0%	See notes
EWSI	-	0.0%	-	0.0%	-	0.0%	See notes
Fire Protection	-	0.0%	-	0.0%	-	0.0%	See notes
Total	**314,702**	**100.0%**	**367,426**	**100.0%**	**314,695**	**100.0%**	
Distribution Factor		**(Meters-1)**		**(Services-1)**		**(Billing-1)**	

(1) See Input #3, Financial & Operations, Section 2.1.1, Service Information - Average Meters and Equivalent Meters
(2) See Input #3, Financial & Operations, Section 2.1.2, Service Information - Other Meter Accounts

1.000000
-62.4%

EPCOR - WATER UTILITY
WATER - EXHIBIT 2.4
IN-CITY REVENUE DISTRIBUTION FACTOR

Customer Class	Rate Revenue[(1)]	% of Total
In-City		
Residential	$ 154,034,497	62.5%
Multi-Residential	35,892,137	14.6%
Commercial	45,156,503	18.3%
University of Alberta	1,821,682	0.7%
Regional	-	0.0%
EWSI	-	0.0%
Fire Protection	9,722,381.5	3.9%
Total	**$246,627,201**	**100.0%**
Distribution Factor		**(REV-1)**

(1) Used to allocate the revenue tax to In-City + UofA only. Regional and Fire protection are excluded.

1	2	3	4	5	6	7	8	9	10	11	12	13	14

Summary of Distribution Factors - DO NOT ERASE
DISTRIBUTION BY COST

	(Base-1)	(Base-2)	(Base-3)	(Max Day-1)	(Max Day-2)	(Max Day-3)	Max Hour-1	Max Hour-2	Meters	Services	Billing	As Public Fire	As Revenue
In-City													
Residential	37.26%	52.04%	50.93%	37.6%	54.8%	54.1%	52.4%	51.4%	91.5%	79.3%	91.5%	#REF!	62.46%
Multi-Residentia	14.79%	20.65%	20.21%	7.9%	11.5%	11.4%	19.5%	19.1%	1.2%	5.1%	1.2%	#REF!	14.55%
Commercial	19.56%	27.31%	26.73%	23.0%	33.6%	33.2%	28.1%	27.6%	7.3%	15.7%	7.3%	#REF!	18.31%
University of Albe	1.56%	0.00%	2.13%	0.9%	0.0%	1.3%	0.0%	2.0%	0.0%	0.0%	0.0%	#REF!	0.74%
Regional	26.83%	0.00%	0.00%	30.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	#REF!	0.00%
Fire Charges													#REF!
Blank	0.00%	0.00%	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	#REF!	0.00%
Blank	0.00%	0.00%	0.00%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	#REF!	3.94%
	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	#REF!	#REF!

1	2	3	4	5	6	7	8	9	10	11	12	13	14

DISTRIBUTION BY CUSTOMER

	Residential	Multi-Residential	Commercial	Alberta	Regional	Fire Protection
(Base-1)	37.26%	14.79%	19.56%	1.56%	26.83%	
(Base-2)	52.04%	20.65%	27.31%	0.00%	0.00%	
(Base-3)	50.93%	20.21%	26.73%	2.13%	0.00%	
(Max Day-1)	37.56%	7.89%	23.03%	0.92%	30.60%	
(Max Day-2)	54.85%	11.52%	33.63%	0.00%	0.00%	
(Max Day-3)	54.12%	11.37%	33.19%	1.32%	0.00%	
Max Hour-1	52.40%	19.47%	28.13%	0.00%	0.00%	
Max Hour-2	51.37%	19.08%	27.58%	1.97%	0.00%	
Meters	91.49%	1.22%	7.28%	0.00%	0.01%	
Services	79.25%	5.06%	15.69%	0.00%	0.00%	
Billing	91.49%	1.22%	7.28%	0.00%	0.00%	
As Revenue	62.46%	14.55%	18.31%	0.74%	0.00%	3.94%

EPCOR - WATER UTILITY
WATER - EXHIBIT 3.0
ALLOCATION OF RATE BASE

	Description	Total Rate Base [1]	Base			Extra Capacity										Classification	Classification Notes:
						Maximum Day			Maximum Hour								
			All	In-City	In-City + UofA	All	In-City	In-City + UofA	In-City	In-City + UofA	Meter	Services	Billing	Joint Fire Protection	Revenue Related	Direct Assignment	
	Plant in Service																
	Water Treatment Plant																
	Water Treatment Plant	$ 452,828,165	$ 335,461,345	$ -	$ -	$ 117,366,820	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	As Base & Max Day All	Base - All 74.1%, Max-Day All 25.9%
	Total Water Treatment Plant	$ 452,828,165	$ 335,461,345	$ -	$ -	$ 117,366,820	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
	Pumping Plant																
	Reservoirs & Pumphouses	$ 67,353,346	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 61,348,606	$ -	$ -	$ -	$ 6,004,740	$ -	$ -	As Max Hour & Fire Protection In-City + UofA	Max-Hour In-City + UofA 91.1%, Joint Fire Protection 8.9%
	Total Pumping Plant	$ 67,353,346	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 61,348,606	$ -	$ -	$ -	$ 6,004,740	$ -	$ -		
	Transmission & Distribution Plant																
	Transmission Mains	$ 388,153,561	$ 287,549,507	$ -	$ -	$ 100,604,054	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	As Base & Max Day All	Base - All 74.1%, Max-Day All 25.9%
	Subtransmission Mains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	As Base & Max Day In-City + UofA	Base In-City + UofA 75.1%, Max Day In-City + UofA 24.9%
	Distribution Mains	911,592,454	-	379,746,055	-	-	127,064,269	-	281,622,869	-	-	-	-	123,159,260	-	-	As Base & Max Day & Max Hour & Fire In-City	Base In-City 41.7%, Max Day In-City 13.9%, Max-Hour In-City 30.9%, Joint Fire Protection 13.5%
	Hydrants	115,876,661	-	-	-	-	-	-	-	-	-	-	-	-	-	115,876,661	As Direct Assignment	Direct Assignment 100%
	Meters	44,679,417	-	-	-	-	-	-	-	-	44,679,417	-	-	-	-	-	As 100% Meters	Meters 100%
	Meters - Regional	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	As Direct Assignment	Direct Assignment 100%
	Services	236,924,482	-	-	-	-	-	-	-	-	-	236,924,482	-	-	-	-	As 100% Services	Services 100%
	Total Transmission Plant	$ 1,697,226,574	$ 287,549,507	$ 379,746,055	$ -	$ 100,604,054	$ 127,064,269	$ -	$ 281,622,869	$ -	$ 44,679,417	$ 236,924,482	$ -	$ 123,159,260	$ -	$ 115,876,661		
	Subtotal Plant	$ 2,217,408,085	$ 623,010,852	$ 379,746,055	$ -	$ 217,970,874	$ 127,064,269	$ -	$ 281,622,869	$ 61,348,606	$ 44,679,417	$ 236,924,482	$ -	$ 129,164,000	$ -	$ 115,876,661		
	% Plant Before General Plant	100.0%	28.1%	17.1%	0.0%	9.8%	5.7%	0.0%	12.7%	2.8%	2.0%	10.7%	0.0%	5.8%	0.0%	5.2%		
	General Plant																	
	General Plant - includes software	$ 52,094,258	$ 14,636,588	$ 8,921,492	$ -	$ 5,120,858	$ 2,985,160	$ -	$ 6,616,254	$ 1,441,282	$ 1,049,667	$ 5,566,141	$ -	$ 3,034,490	$ -	$ 2,722,326	As Plant in Service Before G.P.	Base - All 28.1%, Base In-City 17.1%, Max-Day All 9.8%, Max Day In-City 5.7%, Max-Hour In-City 12.7%, Max-Hour In-City + UofA 2.8%, Meters 2%, Services 10.7%, Joint Fire Protection 5.8%, Direct Assignment 5.2%
	Software & Other Intangibles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	As Plant in Service Before G.P.	Base - All 28.1%, Base In-City 17.1%, Max-Day All 9.8%, Max Day In-City 5.7%, Max-Hour In-City 12.7%, Max-Hour In-City + UofA 2.8%, Meters 2%, Services 10.7%, Joint Fire Protection 5.8%, Direct Assignment 5.2%
	Total General Plant	$ 52,094,258	$ 14,636,588	$ 8,921,492	$ -	$ 5,120,858	$ 2,985,160	$ -	$ 6,616,254	$ 1,441,282	$ 1,049,667	$ 5,566,141	$ -	$ 3,034,490	$ -	$ 2,722,326		
	Total Plant In Service	**$ 2,269,502,343**	**$ 637,647,440**	**$ 388,667,547**	**$ -**	**$ 223,091,731**	**$ 130,049,430**	**$ -**	**$ 288,239,123**	**$ 62,789,887**	**$ 45,729,084**	**$ 242,490,622**	**$ -**	**$ 132,198,490**	**$ -**	**$ 118,598,987**		
	% Total Plant In Service	100.0%	28.1%	17.0%	0.0%	10.0%	6.0%	0.0%	13.0%	3.0%	2.0%	11.0%	0.0%	6.0%	0.0%	5.0%		
	Contributions																	
	Water Treatment Plant																	
	Water Treatment Plant	18,032,129	13,358,449	-	-	4,673,679	-	-	-	-	-	-	-	-	-	-	As Water Treatment Plant	Base - All 74.1%, Max-Day All 25.9%
	Total Water Treatment Plant	$ 18,032,129	$ 13,358,449	$ -	$ -	$ 4,673,679	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
	Pumping Plant																	
	Reservoirs & Pumphouses	17,875	-	-	-	-	-	-	-	16,281	-	-	-	1,594	-	-	As Pumping Plant	Max-Hour In-City + UofA 91.1%, Joint Fire Protection 8.9%
	Total Pumping Plant	$ 17,875	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 16,281	$ -	$ -	$ -	$ 1,594	$ -	$ -		
	Transmission & Distribution Plant																	
	Transmission Mains	$ 89,575,767	$ 66,358,963	$ -	$ -	$ 23,216,804	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	As Transmission Plant	Base - All 74.1%, Max-Day All 25.9%
	Subtransmission Mains	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	As Subtransmission Plant	
	Distribution Mains	387,250,441	-	161,318,610	-	-	53,977,733	-	119,635,238	-	-	-	-	52,318,860	-	-	As Distribution Plant	Base In-City 41.7%, Max Day In-City 13.9%, Max-Hour In-City 30.9%, Joint Fire Protection 13.5%
	Hydrants	54,183,967	-	-	-	-	-	-	-	-	-	-	-	-	-	54,183,967	As Direct Assignment	Direct Assignment 100%
	Meters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	As Direct Assignment	Direct Assignment 100%
	Services	152,478,874	-	-	-	-	-	-	-	-	-	152,478,874	-	-	-	-	As 100% Services	Services 100%
	Total Transmission Plant	$ 683,489,049	$ 66,358,963	$ 161,318,610	$ -	$ 23,216,804	$ 53,977,733	$ -	$ 119,635,238	$ -	$ -	$ 152,478,874	$ -	$ 52,318,860	$ -	$ 54,183,967		
	General Plant																	
	General Plant	$ 1,750,353	$ 491,785	$ 299,760	$ -	$ 172,059	$ 100,301	$ -	$ 222,304	$ 48,427	$ 35,269	$ 187,021	$ -	$ 101,958	$ -	$ 91,469	As Plant in Service Before G.P.	Base - All 28.1%, Base In-City 17.1%, Max-Day All 9.8%, Max Day In-City 5.7%, Max-Hour In-City 12.7%, Max-Hour In-City + UofA 2.8%, Meters 2%, Services 10.7%, Joint Fire Protection 5.8%, Direct Assignment 5.2%
	Software & Other Intangibles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	As Plant in Service Before G.P.	Base - All 28.1%, Base In-City 17.1%, Max-Day All 9.8%, Max Day In-City 5.7%, Max-Hour In-City 12.7%, Max-Hour In-City + UofA 2.8%, Meters 2%, Services 10.7%, Joint Fire Protection 5.8%, Direct Assignment 5.2%
	Total General Plant	$ 1,750,353	$ 491,785	$ 299,760	$ -	$ 172,059	$ 100,301	$ -	$ 222,304	$ 48,427	$ 35,269	$ 187,021	$ -	$ 101,958	$ -	$ 91,469		
	Total Contributions	**$ 703,289,405**	**$ 80,209,198**	**$ 161,618,369**	**$ -**	**$ 28,062,543**	**$ 54,078,034**	**$ -**	**$ 119,857,542**	**$ 64,708**	**$ 35,269**	**$ 152,665,895**	**$ -**	**$ 52,422,412**	**$ -**	**$ 54,275,437**		
	Other Rate Base Items																	
[2]	Working Capital	$ 16,265,125	$ 7,878,314	$ 1,335,037	$ -	$ 1,088,250	$ 446,708	$ -	$ 990,074	$ 559,693	$ 919,020	$ 21,963	$ 1,971,424	$ 487,761	$ -	$ 566,880	As O&M Expenses W/O Admin	Base - All 48.4%, Base In-City 8.2%, Max-Day All 6.7%, Max Day In-City 2.7%, Max-Hour In-City 6.1%, Max-Hour In-City + UofA 3.4%, Meters 5.7%, Services 0.1%, Billing 12.1%, Joint Fire Protection 3%, Direct Assignment 3.5%
	Working Capital Adjustment	$ (15,681,945)	$ -	$ -	$ (15,681,945)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	As 100% Base In-City + UofA	Base In-City + UofA 100%
[2]	Average Materials and Supplies	5,328,090	1,496,999	912,471	-	523,750	305,316	-	676,696	147,411	107,358	569,293	-	310,361	-	278,434	As Plant in Service Before G.P.	Base - All 28.1%, Base In-City 17.1%, Max-Day All 9.8%, Max Day In-City 5.7%, Max-Hour In-City 12.7%, Max-Hour In-City + UofA 2.8%, Meters 2%, Services 10.7%, Joint Fire Protection 5.8%, Direct Assignment 5.2%
	Total Other Rate Base Items	$ 5,911,270	$ 9,375,313	$ 2,247,508	$ (15,681,945)	$ 1,612,000	$ 752,024	$ -	$ 1,666,771	$ 707,105	$ 1,026,378	$ 591,256	$ 1,971,424	$ 798,123	$ -	$ 845,314		
	NET RATE BASE	**$ 1,572,124,208**	**$ 566,813,555**	**$ 229,296,686**	**$ (15,681,945)**	**$ 196,641,189**	**$ 76,723,419**	**$ -**	**$ 170,048,351**	**$ 63,432,284**	**$ 46,720,194**	**$ 90,415,984**	**$ 1,971,424**	**$ 80,574,202**	**$ -**	**$ 65,168,865**		
	% Total Rate Base	**100.0%**	**36.1%**	**14.6%**	**-1.0%**	**12.5%**	**4.9%**	**0.0%**	**10.8%**	**4.0%**	**3.0%**	**5.8%**	**0.1%**	**5.1%**	**0.0%**	**4.1%**		

[1] See Input #1-Capital, Section 2.4, for development of plant in service, after land and land right distribution. Section 4.0 for contributions.
[2] See Input #3-Financial & Operations, Section 1.5.3, Total System Rate Base - Common to All (applicable to In-City, Fire Protection and Regional).

EPCOR - WATER UTILITY
WATER - EXHIBIT 4.0
ALLOCATION OF O&M LESS MISCELLANEOUS REVENUES

Description	Total	Base: All	Base: In-City	Base: In-City + UofA	Extra Capacity: Maximum Day: All	Extra Capacity: Maximum Day: In-City	Extra Capacity: Maximum Day: In-City + UofA	Extra Capacity: Maximum Hour: In-City	Extra Capacity: Maximum Hour: In-City + UofA	Meter	Services	Billing	Joint Fire Protection	Revenue Related	Direct Assignment	Classification	Classification Notes:
O&M EXPENSES																	
Water Treatment Plant:																	
Power	$ 9,028,081	$ 9,028,081	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	As 100% Base All	Base - All 100%
Chemicals	8,677,714	8,677,714	-	-	-	-	-	-	-	-	-	-	-	-	-	As 100% Base All	Base - All 100%
Hot Water	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	As 100% Base All	Base - All 100%
Other Utilities	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	As 100% Base All	
All Other Costs	19,087,739	14,140,460	-	-	4,947,279	-	-	-	-	-	-	-	-	-	-	As Water Treatment Plant	Base - All 74.1%, Max-Day All 25.9%
Lowlift	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	As Water Treatment Plant	Base - All 74.1%, Max-Day All 25.9%
Lab Component	6,947,857	6,947,857	-	-	-	-	-	-	-	-	-	-	-	-	-	As 100% Base All	Base - All 100%
Reservoirs:																	
Power and Other Utilities	1,599,172	-	-	-	-	-	-	-	1,456,601	-	-	-	142,571	-	-	As Max Hour & Fire Protection In-City + UofA	Max-Hour In-City + UofA 91.1%, Joint Fire Protection 8.9%
All Other Costs	1,578,169	-	-	-	-	-	-	-	1,437,471	-	-	-	140,698	-	-	As Max Hour & Fire Protection In-City + UofA	Max-Hour In-City + UofA 91.1%, Joint Fire Protection 8.9%
Transmission:																	
Lab Component	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	As Water Treatment Plant	Base - All 74.1%, Max-Day All 25.9%
All Other Costs	2,623,065	1,943,203	-	-	679,862	-	-	-	-	-	-	-	-	-	-	As Transmission Plant	Base - All 74.1%, Max-Day All 25.9%
Distribution:																	
[1] Lab Component	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	As Water Treatment Plant	Base - All 74.1%, Max-Day All 25.9%
All Other Costs	16,571,423	-	6,903,230	-	-	2,309,843	-	5,119,494	-	-	-	-	2,238,856	-	-	As Distribution Plant	Base In-City 41.7%, Max Day In-City 13.9%, Max-Hour In-City 30.9%, Joint Fire Protection 13.5%
Services	113,569	-	-	-	-	-	-	-	-	-	113,569	-	-	-	-	As 100% Services	Services 100%
Hydrants	2,931,233	-	-	-	-	-	-	-	-	-	-	-	-	-	2,931,233	As Direct Assignment	Direct Assignment 100%
Meters																	
Regional Meters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	As Direct Assignment	Direct Assignment 100%
In-City	4,752,086	-	-	-	-	-	-	-	-	4,752,086	-	-	-	-	-	As 100% Meters	Meters 100%
Administration	31,273,957	11,115,706	3,331,707	-	2,715,828	1,114,800	-	2,470,822	693,767	2,293,500	54,812	4,919,870	1,148,445	-	1,414,701	As O&M Less Power/Chemicals/Utilities/Admin	Base - All 35.5%, Base In-City 10.7%, Max-Day All 8.7%, Max Day In-City 3.6%, Max-Hour In-City 7.9%, Max-Hour In-City + UofA 2.2%, Meters 7.3%, Services 0.2%, Billing 15.7%, Joint Fire Protection 3.7%, Direct Assignment 4.5%
Customer Billing	10,193,871	-	-	-	-	-	-	-	-	-	-	10,193,871	-	-	-	As 100% Billing	Billing 100%
Total O&M	**$ 115,377,936**	**$ 51,853,021**	**$ 10,234,937**	**$ -**	**$ 8,342,969**	**$ 3,424,643**	**$ -**	**$ 7,590,315**	**$ 3,587,839**	**$ 7,045,586**	**$ 168,381**	**$ 15,113,741**	**$ 3,670,569**	**$ -**	**$ 4,345,934**		
Revenue Tax (Franchise Fee)	**$ 19,235,609**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 19,235,609**	**$ -**	As 100% Revenue Related In-City Less Fire	Revenue Related 100%
Less: Miscellaneous Revenues																	
Other Revenue	5,204,697	-	-	-	-	-	-	-	-	-	-	-	-	5,204,697	-	As 100% Revenue Related In-City Less Fire	Revenue Related 100%
Total Miscellaneous Revenues	**$ 5,204,697**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 5,204,697**	**$ -**		
TOTAL O&M LESS MISC REVENUES	**$ 129,408,848**	**$ 51,853,021**	**$ 10,234,937**	**$ -**	**$ 8,342,969**	**$ 3,424,643**	**$ -**	**$ 7,590,315**	**$ 3,587,839**	**$ 7,045,586**	**$ 168,381**	**$ 15,113,741**	**$ 3,670,569**	**$ 14,030,912**	**$ 4,345,934**		

[1] A portion of the distribution lab O&M is distributed to Regional for water quality.

EPCOR - WATER UTILITY
WATER - EXHIBIT 5.0
ALLOCATION OF DEPRECIATION

Description	Total	Base: All	Base: In-City	Base: In-City + UofA	Extra Capacity: Maximum Day: All	Extra Capacity: Maximum Day: In-City	Extra Capacity: Maximum Day: In-City + UofA	Extra Capacity: Maximum Hour: In-City	Extra Capacity: Maximum Hour: In-City + UofA	Meter	Services	Billing	Joint Fire Protection	Revenue Related	Direct Assignment	Classification	Classification Notes:
DEPRECIATION																	
Water Treatment Plant																	
Water Treatment Plant	$ 20,761,243	$ 15,380,215	$ -	$ -	$ 5,381,028	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	As Water Treatment Plant	Base - All 74.1%, Max-Day All 25.9%
Total Water Treatment Plant	$ 20,761,243	$ 15,380,215	$ -	$ -	$ 5,381,028	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Pumping Plant																	
Reservoirs & Pumphouses	$ 2,455,045	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,236,171	$ -	$ -	$ -	$ 218,874	$ -	$ -	As Pumping Plant	Max-Hour In-City + UofA 91.1%, Joint Fire Protection 8.9%
Total Pumping Plant	$ 2,455,045	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,236,171	$ -	$ -	$ -	$ 218,874	$ -	$ -		
Transmission & Distribution Plant																	
Transmission Mains	$ 6,631,629	$ 4,912,802	$ -	$ -	$ 1,718,827	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	As Transmission Plant	Base - All 74.1%, Max-Day All 25.9%
Distribution Mains	14,126,740	-	5,884,838	-	-	1,969,086	-	4,364,245	-	-	-	-	1,908,571	-	-	As Distribution Plant	Base In-City 41.7%, Max Day In-City 13.9%, Max-Hour In-City 30.9%, Joint Fire Protection 13.5%
Hydrants	3,111,631	-	-	-	-	-	-	-	-	-	-	-	-	-	3,111,631	As Direct Assignment	
Meters	3,838,090	-	-	-	-	-	-	-	-	3,838,090	-	-	-	-	-	As 100% Meters	
Services	5,994,149	-	-	-	-	-	-	-	-	-	5,994,149	-	-	-	-	As 100% Services	
Total Transmission Plant	$ 33,702,239	$ 4,912,802	$ 5,884,838	$ -	$ 1,718,827	$ 1,969,086	$ -	$ 4,364,245	$ -	$ 3,838,090	$ 5,994,149	$ -	$ 1,908,571	$ -	$ 3,111,631		
General Plant																	
General Plant - includes software	$ 4,763,194	$ 1,338,284	$ 815,729	$ -	$ 468,221	$ 272,946	$ -	$ 604,951	$ 131,782	$ 95,975	$ 508,935	$ -	$ 277,456	$ -	$ 248,914	As Plant in Service Before G.P.	
Software & Other Intangibles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	As Plant in Service Before G.P.	
Total General Plant	$ 4,763,194	$ 1,338,284	$ 815,729	$ -	$ 468,221	$ 272,946	$ -	$ 604,951	$ 131,782	$ 95,975	$ 508,935	$ -	$ 277,456	$ -	$ 248,914		
TOTAL DEPRECIATION	**$ 61,681,721**	**$ 21,631,301**	**$ 6,700,567**	**$ -**	**$ 7,568,076**	**$ 2,242,032**	**$ -**	**$ 4,969,197**	**$ 2,367,953**	**$ 3,934,066**	**$ 6,503,084**	**$ -**	**$ 2,404,901**	**$ -**	**$ 3,360,544**		

EPCOR - WATER UTILITY
WATER - EXHIBIT 6.0
ALLOCATION OF AMORTIZATION

Description	Total	Base: All	Base: In-City	Base: In-City + UofA	Extra Capacity: Maximum Day: All	Extra Capacity: Maximum Day: In-City	Extra Capacity: Maximum Day: In-City + UofA	Extra Capacity: Maximum Hour: In-City	Extra Capacity: Maximum Hour: In-City + UofA	Meter	Services	Billing	Joint Fire Protection	Revenue Related	Direct Assignment	Classification	Classification Notes:
AMORTIZATION																	
Water Treatment Plant																	
Water Treatment Plant	$ (1,554,639)	$ (1,151,698)	$ -	$ -	$ (402,941)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	As Water Treatment Plant	Base - All 74.1%, Max-Day All 25.9%
Total Water Treatment Plant	$ (1,554,639)	$ (1,151,698)	$ -	$ -	$ (402,941)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -		
Pumping Plant																	
Reservoirs & Pumphouses	$ (6,725)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (6,125)	$ -	$ -	$ -	$ (600)	$ -	$ -	As Pumping Plant	Max-Hour In-City + UofA 91.1%, Joint Fire Protection 8.9%
Total Pumping Plant	$ (6,725)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ (6,125)	$ -	$ -	$ -	$ (600)	$ -	$ -		
Transmission & Distribution Plant																	
Transmission Mains	$ (1,333,540)	$ (987,905)	$ -	$ -	$ (345,635)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	As Transmission Plant	Base - All 74.1%, Max-Day All 25.9%
Distribution Mains	(5,604,814)	-	(2,334,822)	-	-	(781,239)	-	(1,731,524)	-	-	-	-	(757,230)	-	-	As Distribution Plant	Base In-City 41.7%, Max Day In-City 13.9%, Max-Hour In-City 30.9%, Joint Fire Protection 13.5%
Hydrants	(1,646,225)	-	-	-	-	-	-	-	-	-	-	-	-	-	(1,646,225)	As Direct Assignment	
Meters	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	As 100% Meters	
Services	(4,043,260)	-	-	-	-	-	-	-	-	-	(4,043,260)	-	-	-	-	As 100% Services	
Total Transmission Plant	$ (12,627,839)	$ (987,905)	$ (2,334,822)	$ -	$ (345,635)	$ (781,239)	$ -	$ (1,731,524)	$ -	$ -	$ (4,043,260)	$ -	$ (757,230)	$ -	$ (1,646,225)		
General Plant																	
General Plant - includes software	$ (93,590)	$ (26,295)	$ (16,028)	$ -	$ (9,200)	$ (5,363)	$ -	$ (11,886)	$ (2,589)	$ (1,886)	$ (10,000)	$ -	$ (5,452)	$ -	$ (4,891)	As Plant in Service Before G.P.	
Software & Other Intangibles	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	As Plant in Service Before G.P.	
Total General Plant	$ (93,590)	$ (26,295)	$ (16,028)	$ -	$ (9,200)	$ (5,363)	$ -	$ (11,886)	$ (2,589)	$ (1,886)	$ (10,000)	$ -	$ (5,452)	$ -	$ (4,891)		
TOTAL AMORTIZATION	**$ (14,282,793)**	**$ (2,165,898)**	**$ (2,350,850)**	**$ -**	**$ (757,776)**	**$ (786,602)**	**$ -**	**$ (1,743,410)**	**$ (8,715)**	**$ (1,886)**	**$ (4,053,259)**	**$ -**	**$ (763,281)**	**$ -**	**$ (1,651,116)**		

EPCOR - WATER UTILITY
WATER - EXHIBIT 7.0
DISTRIBUTION OF NET RATE BASE

Allocation Components	Total	In-City Residential	In-City Multi-Residential	In-City Commercial	University of Alberta	Regional	EWSI	Fire Protection	Basis of Distribution
Base									
All	$ 566,813,555	$ 211,216,559	$ 83,826,212	$ 110,844,651	$ 8,823,508	$ 152,102,624	$ -	$ -	Base-1
In-City	229,296,686	119,321,896	47,355,674	62,619,115	-	-	-	-	Base-2
In-City + UofA	(15,681,945)	(7,986,976)	(3,169,818)	(4,191,497)	(333,654)	-	-	-	Base-3
Maximum Day									
All	196,641,189	73,862,534	15,517,474	45,288,849	1,801,169	60,171,161	-	-	Max Day-1
In-City	76,723,419	42,080,896	8,840,601	25,801,922	-	-	-	-	Max Day-2
In-City + UofA	-	-	-	-	-	-	-	-	Max Day-3
Maximum Hour									
In-City	170,048,351	89,111,233	33,100,841	47,836,278	-	-	-	-	Max Hour-1
In-City + UofA	63,432,284	32,586,815	12,104,545	17,493,103	1,247,822	-	-	-	Max Hour-2
Meter	46,720,194	42,745,156	569,029	3,403,485	148	2,375	-	-	Meters
Services	90,415,984	71,656,067	4,574,790	14,185,128	-	-	-	-	Services
Billing	1,971,424	1,803,732	24,012	143,618	6	56	-	-	Billing
Joint Fire Protection	80,574,202	-	-	-	-	-	-	80,574,202	As Fire Protection
Revenue Related	-	-	-	-	-	-	-	-	As Revenue
Direct Assignment	65,168,865	-	-	-	-	-	-	65,168,865	Direct
Distribution of Net Rate Base	**$ 1,572,124,208**	**$ 676,397,912**	**$ 202,743,361**	**$ 323,424,652**	**$ 11,539,000**	**$ 212,276,217**	**$ -**	**$ 145,743,066**	

$	1,572,124,208 EXHIBIT 3
	- CHECK

EPCOR - WATER UTILITY	$ 141,991,797	$ 15,954,342	$ 10,338,546	$ 71,921,718	$ 2,776,873	$ 28,460,777	$ -	$ 12,539,542		
WATER - EXHIBIT 7.1										
DIRECT ASSIGNMENT OF NET RATE BASE										

		In-City							
Description	**Total**	**Residential**	**Multi-Residential**	**Commercial**	**University of Alberta**	**Regional**	**EWSI**	**Fire Protection**	
Plant in Service									
Water Treatment Plant									
Water Treatment Plant	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Total Water Treatment Plant	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Pumping Plant									
Reservoirs & Pumphouses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Total Pumping Plant	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Transmission & Distribution Plant									
Transmission Mains	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Subtransmission Mains	-	-	-	-	-	-	-	-	
Distribution Mains	-	-	-	-	-	-	-	-	
Hydrants	115,876,661	-	-	-	-	-	-	115,876,661	Public Fire Protection
Meters	-	-	-	-	-	-	-	-	
Meters - Regional	-	-	-	-	-	-	-	-	Regional
Services	-	-	-	-	-	-	-	-	
Total Transmission Plant	**$ 115,876,661**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 115,876,661**	
General Plant									
General Plant - includes software	$ 2,722,326	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,722,326.43	As Plant In Service Before G.P.
Software & Other Intangibles	-	-	-	-	-	-	-	-	As Plant In Service Before G.P.
Total General Plant	$ 2,722,326	$ -	$ -	$ -	$ -	$ -	$ -	$ 2,722,326	
Subtotal Plant	**$ 118,598,987**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 118,598,987**	
Contributions									
Water Treatment Plant									
Water Treatment Plant	-	-	-	-	-	-	-	-	
Total Water Treatment Plant	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Pumping Plant									
Reservoirs & Pumphouses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Transmission & Distribution Plant									
Transmission Mains	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Distribution Mains	-	-	-	-	-	-	-	-	
Hydrants	54,183,967	-	-	-	-	-	-	54,183,967	Public Fire Protection
Meters	-	-	-	-	-	-	-	-	
Services	-	-	-	-	-	-	-	-	
Total Transmission Plant	$ 54,183,967	$ -	$ -	$ -	$ -	$ -	$ -	$ 54,183,967	
General Plant									
General Plant - includes software	91,469	$ -	$ -	$ -	$ -	$ -	$ -	$ 91,469.44	
Software & Other Intangibles	-	-	-	-	-	-	-	-	
Total General Plant	$ 91,469	$ -	$ -	$ -	$ -	$ -	$ -	$ 91,469	
Total Contributions	**$ 54,275,437**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 54,275,437**	
Other Rate Base Items									
Working Capital	$ 566,880	$ -	$ -	$ -	$ -	$ -	$ -	$ 566,880	As Plant In Service Before G.P.
Average Materials and Supplies	278,434	-	-	-	-	-	-	278,434	As Plant In Service Before G.P.
Total Other Rate Base Items	$ 845,314	$ -	$ -	$ -	$ -	$ -	$ -	$ 845,314	
TOTAL NET DIRECT ASSIGNMENT OF RATE BASE	**$ 65,168,865**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 65,168,865**	
	$ 65,168,865	EXHIBIT 3							
	-	CHECK							

EPCOR - WATER UTILITY
WATER - EXHIBIT 7.2

DISTRIBUTION OF NET RATE BASE BY CUSTOMER

Description	Total	In-City Residential	In-City Multi-Residential	In-City Commercial	University of Alberta	Regional	EWSI	Fire Protection
Plant in Service								
Water Treatment Plant								
Water Treatment Plant	$ 452,828,165	$ 169,091,243	$ 58,873,195	$ 92,632,989	$ 6,297,122	$ 125,933,615	$ -	$ -
Total Water Treatment Plant	$ 452,828,165	$ 169,091,243	$ 58,873,195	$ 92,632,989	$ 6,297,122	$ 125,933,615	$ -	$ -
Pumping Plant								
Reservoirs & Pumphouses	$ 67,353,346	$ 31,516,375	$ 11,706,925	$ 16,918,474	$ 1,206,832	$ -	$ -	$ 6,004,740
Total Pumping Plant	**$ 67,353,346**	**$ 31,516,375**	**$ 11,706,925**	**$ 16,918,474**	**$ 1,206,832**	**$ -**	**$ -**	**$ 6,004,740**
Transmission & Distribution Plant								
Transmission Mains	$ 388,153,561	$ 144,941,003	$ 50,464,707	$ 79,402,801	$ 5,397,744	$ 107,947,308	$ -	$ -
Subtransmission Mains	-	-	-	-	-	-	-	-
Distribution Mains	911,592,454	414,884,813	147,887,997	225,660,383	-	-	-	123,159,260
Hydrants	115,876,661	-	-	-	-	-	-	115,876,661
Meters	44,679,417	40,878,012	544,173	3,254,818	142	2,272	-	-
Meters - Regional	-	-	-	-	-	-	-	-
Services	236,924,482	187,766,319	11,987,700	37,170,463	-	-	-	-
Total Transmission Plant	**$ 1,697,226,574**	**$ 788,470,147**	**$ 210,884,577**	**$ 345,488,464**	**$ 5,397,886**	**$ 107,949,579**	**$ -**	**$ 239,035,921**
General Plant								
General Plant - includes software	$ 52,094,258	$ 23,236,712	$ 6,612,538	$ 10,690,395	$ 303,107	$ 5,494,691	$ -	$ 5,756,816
Software & Other Intangibles	-	-	-	-	-	-	-	-
Total General Plant	$ 52,094,258	$ 23,236,712	$ 6,612,538	$ 10,690,395	$ 303,107	$ 5,494,691	$ -	$ 5,756,816
Subtotal Plant	**$ 2,269,502,343**	**$ 1,012,314,476**	**$ 288,077,235**	**$ 465,730,322**	**$ 13,204,947**	**$ 239,377,885**	**$ -**	**$ 250,797,478**
Contributions								
Water Treatment Plant								
Water Treatment Plant	18,032,129	6,733,404	2,344,397	3,688,750	250,759	5,014,819	-	-
Total Water Treatment Plant	$ 18,032,129	$ 6,733,404	$ 2,344,397	$ 3,688,750	$ 250,759	$ 5,014,819	$ -	$ -
Pumping Plant								
Reservoirs & Pumphouses	$ 17,875	$ 8,364	$ 3,107	$ 4,490	$ 320	$ -	$ -	$ 1,594
Transmission & Distribution Plant								
Transmission Mains	$ 89,575,767	$ 33,448,621	$ 11,645,944	$ 18,324,105	$ 1,245,659	$ 24,911,437	$ -	$ -
Subtransmission Mains	-	-	-	-	-	-	-	-
Distribution Mains	387,250,441	176,245,784	62,823,789	95,862,008	-	-	-	52,318,860
Hydrants	54,183,967	-	-	-	-	-	-	54,183,967
Meters	-	-	-	-	-	-	-	-
Services	152,478,874	120,841,868	7,714,994	23,922,012	-	-	-	-
Total Transmission Plant	$ 683,489,049	$ 330,536,273	$ 82,184,728	$ 138,108,125	$ 1,245,659	$ 24,911,437	$ -	$ 106,502,827
General Plant								
General Plant - includes software	$ 1,750,353	$ 780,747	$ 222,180	$ 359,194	$ 10,184	$ 184,620	$ -	$ 193,427
Software & Other Intangibles	-	-	-	-	-	-	-	-
Total General Plant	$ 1,750,353	$ 780,747	$ 222,180	$ 359,194	$ 10,184	$ 184,620	$ -	$ 193,427
Total Contributions	**$ 703,289,405**	**$ 338,058,789**	**$ 84,754,411**	**$ 142,160,560**	**$ 1,506,922**	**$ 30,110,876**	**$ -**	**$ 106,697,848**
Other Rate Base Items								
Working Capital	$ 16,265,125	$ 7,752,599	$ 1,914,038	$ 2,952,996	$ 143,628	$ 2,447,222	$ -	$ 1,054,642
Average Materials and Supplies	5,328,090	2,376,601	676,316	1,093,391	31,001	561,985	-	588,795
Total Other Rate Base Items	$ 21,593,215	$ 10,129,200	$ 2,590,355	$ 4,046,387	$ 174,629	$ 3,009,208	$ -	$ 1,643,436
Distribution of Net Rate Base	**$ 1,587,806,152**	**$ 684,384,888**	**$ 205,913,178**	**$ 327,616,149**	**$ 11,872,654**	**$ 212,276,217**	**$ -**	**$ 145,743,066**

$ 1,572,124,208	EXHIBIT 3
15,681,945	CHECK

Exhibit8_Calc_ROR & Distr_ROR

EPCOR - WATER UTILITY
WATER - EXHIBIT 8.0
CALCULATION OF RATE OF RETURN AND DISTRIBUTION OF RETURN

RATE OF RETURN CALCULATION [1]	**See Input #3, Section 1.5.2, Capital Structure - Total System In City**				**See Input #3, Section 1.5.3, Capital Structure - Regional (Deemed) Regional**				
	Capital Structure	%	Cost Rate	Weighted Cost of Capital	Capital Structure	%	Cost Rate	Weighted Cost of Capital	
Debt	$ -	60.00%	4.49%	2.70%	$ 148,593,352	61.30%	4.49%	2.76%	
Equity	-	40.00%	9.640%	3.86%	63,682,865	26.27%	8.50%	2.23%	
Contributions	-	0.00%	n/a	0.00%	30,110,876	12.42%	0.00%	0.00%	
Total Capital Structure	$ -	100.00%		**6.55%**	$ 242,387,093	100.00%		**4.99%**	12,095,115.92

RATE OF RETURN ON RATE BASE [2]	**Total Return**	**In-City Residential**	**In-City Multi-Residential**	**In-City Commercial**	**University of Alberta**	**Regional**	**EWSI**	**Fire Protection**	
		6.55%	**6.55%**	**6.55%**	**6.55%**	**4.9900%**	**6.55%**	**6.55%**	
Base									
All	$ 35,827,529	$ 13,834,685	$ 5,490,617	$ 7,260,325	$ 577,940	$ 8,663,963	$ -	$ -	Base-1
In-City	15,018,933	7,815,584	3,101,797	4,101,552	-	-	-	-	Base-2
In-City + UofA	(1,027,167)	(523,147)	(207,623)	(274,543)	(21,854)	-	-	-	Base-3
Maximum Day									
All	12,369,819	4,837,996	1,016,395	2,966,420	117,977	3,431,032	-	-	Max Day-1
In-City	5,025,384	2,756,299	579,059	1,690,026	-	-	-	-	Max Day-2
In-City + UofA	-	-	-	-	-	-	-	-	Max Day-3
Maximum Hour									
In-City	11,138,167	5,836,786	2,168,105	3,133,276	-	-	-	-	Max Hour-1
In-City + UofA	4,154,815	2,134,436	792,848	1,145,798	81,732	-	-	-	Max Hour-2
Meter	3,060,136	2,799,808	37,271	222,928	10	119	-	-	Meters
Services	5,922,247	4,693,472	299,649	929,126	-	-	-	-	Services
Billing	129,127	118,144	1,573	9,407	0	3	-	-	Billing
Joint Fire Protection	5,277,610	-	-	-	-	-	-	5,277,610	Fire Protection
Revenue Related	-	-	-	-	-	-	-	-	As Revenue
Direct Assignment	4,268,561	-	-	-	-	-	-	4,268,561	Direct
Total Return on Rate Base	**$ 101,165,159**	**$ 44,304,063**	**$ 13,279,690**	**$ 21,184,315**	**$ 755,805**	**$ 12,095,116**	**$ -**	**$ 9,546,171**	

[1] Capital structure and Cost provided by EPCOR Financial Records
[2] Return on rate base by class of service is based on each class' distributed rate base as calculated in Exhibit 12 and multiplied by the calculated return component
[3] Return on rate base for Regional before contributions

Base	From Exhibit 3 Regional Gross Rate Base		$647,022,753
% Share	From Exhibit 2 Distribution Factors		26.8%
			$173,626,508
Max Day	From Exhibit 3 Regional Gross Rate Base		$224,703,732
% Share	From Exhibit 2 Distribution Factors		30.6%
			$68,758,151
			$242,384,659
Return on Rate Base			$12,094,994
	Plus Billing		3
	Plus Direct Assign		0
Total Return on Rate Base Regional			$12,094,997

DO NOT ERASE - SUMMARY OF SPLIT BETWEEN DEBT AND EQUITY RETURN

RATE OF RETURN ON RATE BASE [2]	Debt Total Return	In-City Residential	In-City Multi-Residential	In-City Commercial	University of Alberta	Regional	EWSI	Fire Protection		
		2.6900%	2.6900%	2.6900%	2.6900%	2.7600%	2.6900%	2.6900%		2.690000%
										2.670000%
Base										
All	$15,947,816	$5,681,725	$2,254,925	$2,981,721	$237,352	$4,792,092	$0	$0	Base-1	
In-City	6,168,081	3,209,759	1,273,868	1,684,454	0	0	0	0	Base-2	
In-City + UofA	(421,844)	(214,850)	(85,268)	(112,751)	(8,975)	0	0	0	Base-3	
Maximum Day										
All	5,568,769	1,986,902	417,420	1,218,270	48,451	$1,897,725	0	0	Max Day-1	
In-City	2,063,860	1,131,976	237,812	694,072	0	0	0	0	Max Day-2	
In-City + UofA	0	0	0	0	0	0	0	0	Max Day-3	
Maximum Hour										
In-City	4,574,301	2,397,092	890,413	1,286,796	0	0	0	0	Max Hour-1	
In-City + UofA	1,706,328	876,585	325,612	470,564	33,566	0	0	0	Max Hour-2	
Meter	1,256,775	1,149,845	15,307	91,554	4	66	0	0	Meters	
Services	2,432,190	1,927,548	123,062	381,580	0	0	0	0	Services	
Billing	53,031	48,520	646	3,863	0	2	0	0	Billing	
Joint Fire Protection	2,167,446	0	0	0	0	0	0	2,167,446	Fire Protection	
Revenue Related	0	0	0	0	0	0	0	0	As Revenue	
Direct Assignment	1,753,042	0	0	0	0	0	0	1,753,042	Direct	
Total Return on Rate Base	**$43,269,795**	**$18,195,104**	**$5,453,796**	**$8,700,123**	**$310,399**	**$6,689,884**	**$0**	**$3,920,488**		

RATE OF RETURN ON RATE BASE [2]	Equity Total Return	In-City Residential	In-City Multi-Residential	In-City Commercial	University of Alberta	Regional	EWSI	Fire Protection		
		3.86%	3.86%	3.86%	3.86%	2.23%	3.86%	3.86%		3.8600000%
										4.0700000%
Base										
All	$19,879,713	$8,152,959	$3,235,692	$4,278,604	$340,587	$3,871,871	$0	$0	Base-1	
In-City	8,850,852	4,605,825	1,827,929	2,417,098	0	0	0	0	Base-2	
In-City + UofA	(605,323)	(308,297)	(122,355)	(161,792)	(12,879)	0	0	0	Base-3	
Maximum Day										
All	6,801,050	2,851,094	598,975	1,748,150	69,525	1,533,307	0	0	Max Day-1	
In-City	2,961,524	1,624,323	341,247	995,954	0	0	0	0	Max Day-2	
In-City + UofA	0	0	0	0	0	0	0	0	Max Day-3	
Maximum Hour										
In-City	6,563,866	3,439,694	1,277,692	1,846,480	0	0	0	0	Max Hour-1	
In-City + UofA	2,448,486	1,257,851	467,235	675,234	48,166	0	0	0	Max Hour-2	
Meter	1,803,361	1,649,963	21,965	131,375	6	53	0	0	Meters	
Services	3,490,057	2,765,924	176,587	547,546	0	0	0	0	Services	
Billing	76,096	69,624	927	5,544	0	1	0	0	Billing	
Joint Fire Protection	3,110,164	0	0	0	0	0	0	3,110,164	Fire Protection	
Revenue Related	0	0	0	0	0	0	0	0	As Revenue	
Direct Assignment	2,515,518	0	0	0	0	0	0	2,515,518	Direct	
Total Return on Rate Base	**$57,895,365**	**$26,108,959**	**$7,825,894**	**$12,484,192**	**$445,405**	**$5,405,232**	**$0**	**$5,625,682**		
	Check Error	$44,304,063	$13,279,690	$21,184,315	$755,805	$12,095,116	$0	$9,546,171		

Should be Same	$44,304,063	$13,279,690	$21,184,315	$755,805	$12,095,116	$0	$9,546,171
	$0	$0	$0	$0	$0	$0	$0

EPCOR - WATER UTILITY
WATER - EXHIBIT 8
CALCULATION OF RATE OF RETURN AND DISTRIBUTION OF RETURN

RATE OF RETURN CALCULATION [1]	**See Input #3, Section 1.5.2, Capital Structure - Total System**				**See Input #3, Section 1.5.3, Capital Structure - Regional (Deemed)**			
	In City				**Regional**			
	Capital Structure	%	Cost Rate	of Capital	Capital Structure	%	Cost Rate	Weighted Cost of Capital
Debt	$ -	60.00%	4.49%	2.70%	$ 148,593,352	70.00%	4.49%	3.15%
Equity	-	40.00%	9.640%	3.86%	63,682,865	30.00%	8.50%	2.55%
Contributions	-	0.00%	n/a	0.00%	-	0.00%	0.00%	0.00%
Total Capital Structure	$ -	100.00%		**6.55%**	$ 212,276,217	100.00%		**5.70%**

		In-City							
		Residential	**Multi-Residential**	**Commercial**	**University of Alberta**	**Regional**	**EWSI**	**Fire Protection**	
RATE OF RETURN ON RATE BASE [2]	**Total Return**	**6.55%**	**6.55%**	**6.55%**	**6.55%**	**5.70%**	**6.55%**	**6.55%**	
Base									
All	$ 35,833,416	$ 13,834,685	$ 5,490,617	$ 7,260,325	$ 577,940	$ 8,669,850	$ -	$ -	Base-1
In-City	15,018,933	7,815,584	3,101,797	4,101,552	-	-	-	-	Base-2
In-City + UofA	(1,027,167)	(523,147)	(207,623)	(274,543)	(21,854)	-	-	-	Base-3
Maximum Day									
All	12,368,543	4,837,996	1,016,395	2,966,420	117,977	3,429,756	-	-	Max Day-1
In-City	5,025,384	2,756,299	579,059	1,690,026	-	-	-	-	Max Day-2
In-City + UofA	-	-	-	-	-	-	-	-	Max Day-3
Maximum Hour									
In-City	11,138,167	5,836,786	2,168,105	3,133,276	-	-	-	-	Max Hour-1
In-City + UofA	4,154,815	2,134,436	792,848	1,145,798	81,732	-	-	-	Max Hour-2
Meter	3,060,153	2,799,808	37,271	222,928	10	135	-	-	Meters
Services	5,922,247	4,693,472	299,649	929,126	-	-	-	-	Services
Billing	129,128	118,144	1,573	9,407	0	3	-	-	Billing
Joint Fire Protection	5,277,610	-	-	-	-	-	-	5,277,610	Standby-1
Revenue Related	-	-	-	-	-	-	-	-	As Revenue
Direct Assignment	4,268,561	-	-	-	-	-	-	4,268,561	Direct
Total Return on Rate Base	**$ 101,169,788**	**$ 44,304,063**	**$ 13,279,690**	**$ 21,184,315**	**$ 755,805**	**$ 12,099,744**	**$ -**	**$ 9,546,171**	

[1] Capital structure and Cost provided by EPCOR Financial Records
[2] Return on rate base by class of service is based on each class' distributed rate base as calculated in Exhibit 12 and multiplied by the calculated return component

DO NOT ERASE - SUMMARY OF SPLIT BETWEEN DEBT AND EQUITY RETURN

RATE OF RETURN ON RATE BASE [2]	Debt Total Return	In-City Residential 2.69%	Multi-Residential 2.69%	Commercial 2.69%	University of Alberta 2.69%	Regional 3.15%	EWSI 2.69%	Fire Protection 2.69%	
Base									
All	15,940,582	5,681,725	2,254,925	2,981,721	237,352	$4,784,858	0	0	Base-1
In-City	6,168,081	3,209,759	1,273,868	1,684,454	0	0	0	0	Base-2
In-City + UofA	(421,844)	(214,850)	(85,268)	(112,751)	(8,975)	0	0	0	Base-3
Maximum Day									
All	5,563,914	1,986,902	417,420	1,218,270	48,451	1,892,870	0	0	Max Day-1
In-City	2,063,860	1,131,976	237,812	694,072	0	0	0	0	Max Day-2
In-City + UofA	0	0	0	0	0	0	0	0	Max Day-3
Maximum Hour									
In-City	4,574,301	2,397,092	890,413	1,286,796	0	0	0	0	Max Hour-1
In-City + UofA	1,706,328	876,585	325,612	470,564	33,566	0	0	0	Max Hour-2
Meter	1,256,784	1,149,845	15,307	91,554	4	75	0	0	Meters
Services	2,432,190	1,927,548	123,062	381,580	0	0	0	0	Services
Billing	53,032	48,520	646	3,863	0	2	0	0	Billing
Joint Fire Protection	2,167,446	0	0	0	0	0	0	2167446.022	Standby-1
Revenue Related	0	0	0	0	0	0	0	0	As Revenue
Direct Assignment	1753042.458		**0**		**0**	0	0	1753042.458	Direct
Total Return on Rate Base	**43257715.42**	18195103.82	5453796.404	8700123.131	310399.113	6677804.467	0	3920488.48	

RATE OF RETURN ON RATE BASE [2]	Equity Total Return	In-City Residential 3.86%	Multi-Residential 3.86%	Commercial 3.86%	University of Alberta 3.86%	Regional 2.55%	EWSI 3.86%	Fire Protection 3.86%	
Base									
All	19,892,833	8,152,959	3,235,692	4,278,604	340,587	3,884,991	0	0	Base-1
In-City	8,850,852	4,605,825	1,827,929	2,417,098	0	0	0	0	Base-2
In-City + UofA	(605,323)	(308,297)	(122,355)	(161,792)	(12,879)	0	0	0	Base-3
Maximum Day									
All	6,804,629	2,851,094	598,975	1,748,150	69,525	1,536,886	0	0	Max Day-1
In-City	2,961,524	1,624,323	341,247	995,954	0	0	0	0	Max Day-2
In-City + UofA	0	0	0	0	0	0	0	0	Max Day-3
Maximum Hour									
In-City	6,563,866	3,439,694	1,277,692	1,846,480	0	0	0	0	Max Hour-1
In-City + UofA	2,448,486	1,257,851	467,235	675,234	48,166	0	0	0	Max Hour-2
Meter	1,803,368	1,649,963	21,965	131,375	6	61	0	0	Meters
Services	3,490,057	2,765,924	176,587	547,546	0	0	0	0	Services
Billing	76,096	69,624	927	5,544	0	1	0	0	Billing
Joint Fire Protection	3,110,164	0	0	0	0	0	0	3110164.18	Standby-1
Revenue Related	0	0	0	0	0	0	0	0	As Revenue
Direct Assignment	2515518.173	$0	$0	$0	$0	$0	$0	$2,515,518	Direct
Total Return on Rate Base	57912072.35	26108959.39	7825893.725	12484191.56	445405.4186	5421939.906	0	5625682.354	
	Check Error	44304063.21	13279690.13	21184314.69	755804.5315	12099744.37	0	9546170.833	
	Should be Same	44304063.21	13279690.13	21184314.69	755804.5315	12099744.37	0	9546170.833	

8669849.57

EPCOR - WATER UTILITY
WATER - EXHIBIT 9.0
DISTRIBUTION OF O&M

Allocation Components	Total	In-City Residential	In-City Multi-Residential	In-City Commercial	University of Alberta	Regional	EWSI	Fire Protection	Basis of Distribution
Base									
All	$ 51,853,021	$ 19,322,432	$ 7,668,557	$ 10,140,248	$ 807,189	$ 13,914,594	$ -	$ -	Base-1
In-City	10,234,937	5,326,078	2,113,778	2,795,081	-	-	-	-	Base-2
In-City + UofA	-	-	-	-	-	-	-	-	Base-3
Maximum Day									
All	8,342,969	3,133,793	658,366	1,921,487	76,419	2,552,904	-	-	Max Day-1
In-City	3,424,643	1,878,332	394,611	1,151,700	-	-	-	-	Max Day-2
In-City + UofA	-	-	-	-	-	-	-	-	Max Day-3
Maximum Hour									
In-City	7,590,315	3,977,589	1,477,496	2,135,231	-	-	-	-	Max Hour-1
In-City + UofA	3,587,839	1,843,166	684,654	989,440	70,579	-	-	-	Max Hour-2
Meter	7,045,586	6,446,135	85,812	513,259	22	358	-	-	Meters
Services	168,381	133,444	8,520	26,417	-	-	-	-	Services
Billing	15,113,741	13,828,144	184,082	1,101,034	48	432	-	-	Billing
Joint Fire Protection	3,670,569	-	-	-	-	-	-	3,670,569	As Fire Protection
Revenue Related	14,030,912	8,763,204	2,041,946	2,569,007	103,638	-	-	553,118	As Revenue
Direct Assignment	4,345,934	-	-	-	-	-	-	4,345,934	Direct
Distribution of Revenue Req. Less Misc. Revenue	**$ 129,408,848**	**$ 64,652,318**	**$ 15,317,822**	**$ 23,342,903**	**$ 1,057,895**	**$ 16,468,289**	**$ -**	**$ 8,569,622**	
	$ 129,408,848	EXHIBIT 4,5,6							
	-	CHECK							
EPCOR - WATER UTILITY	$ 115,377,936	$ 55,889,114	$ 13,275,876	$ 20,773,896	$ 954,257	$ 16,468,289	$ -	$ 8,016,504	
WATER - EXHIBIT 9.1									
DIRECT ASSIGNMENT OF O&M									

Description	Total	In-City Residential	In-City Multi-Residential	In-City Commercial	University of Alberta	Regional	EWSI	Fire Protection	
O&M EXPENSES									
Water Treatment Plant:									
Power	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Chemicals	-	-	-	-	-	-	-	-	
Hot Water	-	-	-	-	-	-	-	-	
Other Utilities	-	-	-	-	-	-	-	-	
All Other Costs	-	-	-	-	-	-	-	-	
Lowlift	-	-	-	-	-	-	-	-	
Lab Component	-	-	-	-	-	-	-	-	
Reservoirs:									
Power and Other Utilities	-	-	-	-	-	-	-	-	
All Other Costs	-	-	-	-	-	-	-	-	
Transmission:									
Lab Component	-	-	-	-	-	-	-	-	
All Other Costs	-	-	-	-	-	-	-	-	
Distribution:									
Lab Component	-	-	-	-	-	-	-	-	
All Other Costs	-	-	-	-	-	-	-	-	
Services	-	-	-	-	-	-	-	-	
Hydrants	2,931,233	-	-	-	-	-	-	2,931,233	Public Fire Protection
Meters									
Regional Meters	-	-	-	-	-	-	-	-	Regional
In-City	-	-	-	-	-	-	-	-	
Administration	1,414,701	-	-	-	-	-	-	1,414,701	As O&M Before Admin.
Customer Billing	-	-	-	-	-	-	-	-	
Total O&M	**$ 4,345,934**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 4,345,934**	
Revenue Tax (Franchise Fee)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Less: Miscellaneous Revenues									
Other Revenue	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Total Miscellaneous Revenues	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
TOTAL O&M LESS MISC REVENUES	**$ 4,345,934**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 4,345,934**	

$	4,345,934	EXHIBIT 4,5,6
	-	CHECK

EPCOR - WATER UTILITY
WATER - EXHIBIT 9.2
DISTRIBUTION OF O&M BY CUSTOMER

Description	Total	In-City Residential	In-City Multi-Residential	In-City Commercial	University of Alberta	Regional	EWSI	Fire Protection
O&M EXPENSES								
Water Treatment Plant:								
Power	$ 9,028,081	$ 3,364,211	$ 1,335,165	$ 1,765,509	$ 140,539	$ 2,422,657	$ -	$ -
Chemicals	8,677,714	3,233,650	1,283,350	1,696,992	135,085	2,328,637	-	-
Hot Water	-	-	-	-	-	-	-	-
Other Utilities	-	-	-	-	-	-	-	-
All Other Costs	19,087,739	7,127,581	2,481,639	3,904,692	265,438	5,308,389	-	-
Lowlift	-	-	-	-	-	-	-	-
Lab Component	6,947,857	2,589,039	1,027,520	1,358,706	108,156	1,864,435	-	-
Reservoirs:								
Power and Other Utilities	1,599,172	748,294	277,958	401,696	28,654	-	-	142,571
All Other Costs	1,578,169	738,466	274,307	396,420	28,278	-	-	140,698
Transmission:								
Lab Component	-	-	-	-	-	-	-	-
All Other Costs	2,623,065	979,483	341,031	536,588	36,477	729,487	-	-
Distribution:								
Lab Component	-	-	-	-	-	-	-	-
All Other Costs	16,571,423	7,542,002	2,688,388	4,102,177	-	-	-	2,238,856
Services	113,569	90,005	5,746	17,818	-	-	-	-
Hydrants	2,931,233	-	-	-	-	-	-	2,931,233
Meters								
Regional Meters	-	-	-	-	-	-	-	-
In-City	4,752,086	4,347,770	57,878	346,181	15	242	-	-
Administration	31,273,957	15,801,848	3,378,734	5,504,495	211,583	3,814,151	-	2,563,146
Customer Billing	10,193,871	9,326,766	124,159	742,622	32	292	-	-
Total O&M	**$ 115,377,936**	**$ 55,889,114**	**$ 13,275,876**	**$ 20,773,896**	**$ 954,257**	**$ 16,468,289**	**$ -**	**$ 8,016,504**
Revenue Tax (Franchise Fee)	$ 19,235,609	$ 12,013,871	$ 2,799,396	$ 3,521,967	$ 142,081	$ -	$ -	$ 758,294
Less: Miscellaneous Revenues								
Other Revenue	$ 5,204,697	$ 3,250,667	$ 757,450	$ 952,960	$ 38,444	$ -	$ -	$ 205,176
Total Miscellaneous Revenues	$ 5,204,697	$ 3,250,667	$ 757,450	$ 952,960	$ 38,444	$ -	$ -	$ 205,176
TOTAL O&M LESS MISC REVENUES	**$ 129,408,848**	**$ 64,652,318**	**$ 15,317,822**	**$ 23,342,903**	**$ 1,057,895**	**$ 16,468,289**	**$ -**	**$ 8,569,622**

$	129,408,848	EXHIBIT 4,5,6
	-	CHECK

47,310,445

EPCOR - WATER UTILITY
WATER - EXHIBIT 9.3
SUMMARY OF DISALLOWANCE

Description	Total	In-City Residential	In-City Multi-Residential	In-City Commercial	University of Alberta	Regional	EWSI	Fire Protection	
				PERCENTAGE DISTRIBUTIONS					
O&M EXPENSES									
Water Treatment Plant:									
Power	100.0%	37.3%	14.8%	19.6%	1.6%	26.8%	0.0%	0.0%	From Exhibit 9.2
Chemicals	100.0%	37.3%	14.8%	19.6%	1.6%	26.8%	0.0%	0.0%	From Exhibit 9.2
Hot Water	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	From Exhibit 9.2
Other Utilities	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	From Exhibit 9.2
All Other Costs	100.0%	37.3%	13.0%	20.5%	1.4%	27.8%	0.0%	0.0%	From Exhibit 9.2
Lowlift	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	From Exhibit 9.2
Lab Component	100.0%	37.3%	14.8%	19.6%	1.6%	26.8%	0.0%	0.0%	From Exhibit 9.2
Reservoirs:									
Power and Other Utilities	100.0%	46.8%	17.4%	25.1%	1.8%	0.0%	0.0%	8.9%	From Exhibit 9.2
All Other Costs	100.0%	46.8%	17.4%	25.1%	1.8%	0.0%	0.0%	8.9%	From Exhibit 9.2
Transmission:									
Lab Component	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	From Exhibit 9.2
All Other Costs	100.0%	37.3%	13.0%	20.5%	1.4%	27.8%	0.0%	0.0%	From Exhibit 9.2
Distribution:									
Lab Component	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	From Exhibit 9.2
All Other Costs	100.0%	45.5%	16.2%	24.8%	0.0%	0.0%	0.0%	13.5%	From Exhibit 9.2
Services	100.0%	79.3%	5.1%	15.7%	0.0%	0.0%	0.0%	0.0%	From Exhibit 9.2
Hydrants	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	From Exhibit 9.2
Meters									

Regional Meters	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	From Exhibit 9.2
In-City	100.0%	91.5%	1.2%	7.3%	0.0%	0.0%	0.0%	0.0%	From Exhibit 9.2
Administration	100.0%	50.5%	10.8%	17.6%	0.7%	12.2%	0.0%	8.2%	From Exhibit 9.2
Customer Billing	100.0%	91.5%	1.2%	7.3%	0.0%	0.0%	0.0%	0.0%	From Exhibit 9.2
Total O&M	**100.0%**	**48.4%**	**11.5%**	**18.0%**	**0.8%**	**14.3%**	**0.0%**	**6.9%**	

	DISTRIBUTION OF DOLLARS							
O&M EXPENSES								
Water Treatment Plant:								
Power	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Chemicals	-	-	-	-	-	-	-	-
Hot Water	-	-	-	-	-	-	-	-
Other Utilities	-	-	-	-	-	-	-	-
All Other Costs	-	-	-	-	-	-	-	-
Lowlift	-	-	-	-	-	-	-	-
Lab Component	-	-	-	-	-	-	-	-
Reservoirs:								
Power and Other Utilities	-	-	-	-	-	-	-	-
All Other Costs	-	-	-	-	-	-	-	-
Transmission:								
Lab Component	-	-	-	-	-	-	-	-
All Other Costs	-	-	-	-	-	-	-	-
Distribution:								
Lab Component	-	-	-	-	-	-	-	-
All Other Costs	-	-	-	-	-	-	-	-
Services	-	-	-	-	-	-	-	-
Hydrants	-	-	-	-	-	-	-	-
Meters								
Regional Meters	-	-	-	-	-	-	-	-
In-City	-	-	-	-	-	-	-	-
Administration	(4,551,873)	(2,299,933)	(491,769)	(801,170)	(30,796)	(555,143)	-	(373,062)
Customer Billing	-	-	-	-	-	-	-	-
Total O&M	**$ (4,551,873)**	**$ (2,299,933)**	**$ (491,769)**	**$ (801,170)**	**$ (30,796)**	**$ (555,143)**	**$ -**	**$ (373,062)**
Overall Percentage Regional Disallowance						**12.2%**		
Regional Disallowance	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (555,143)**	**$ 555,143**	**$ -**

$ (4,551,873)	Financial Inputs
-	CHECK

EPCOR - WATER UTILITY
WATER - EXHIBIT 10.0
DISTRIBUTION OF DEPRECIATION

Allocation Components	Total	In-City			University of Alberta	Regional	EWSI	Fire Protection
		Residential	Multi-Residential	Commercial				
Base								
All	$ 21,631,301	$ 8,060,656	$ 3,199,059	$ 4,230,164	$ 336,731	$ 5,804,691	$ -	$ -
In-City	6,700,567	3,486,855	1,383,840	1,829,872	-	-	-	-
In-City + UofA	-	-	-	-	-	-	-	-
Maximum Day								
All	7,568,076	2,842,727	597,217	1,743,020	69,321	2,315,791	-	-
In-City	2,242,032	1,229,699	258,342	753,990	-	-	-	-
In-City + UofA	-	-	-	-	-	-	-	-
Maximum Hour								
In-City	4,969,197	2,604,031	967,281	1,397,884	-	-	-	-
In-City + UofA	2,367,953	1,216,479	451,868	653,025	46,582	-	-	-
Meter	3,934,066	3,599,348	47,915	286,590	13	200	-	-
Services	6,503,084	5,153,795	329,037	1,020,252	-	-	-	-
Billing	-	-	-	-	-	-	-	-
Joint Fire Protection	2,404,901	-	-	-	-	-	-	2,404,901
Revenue Related	-	-	-	-	-	-	-	-
Direct Assignment	3,360,544	-	-	-	-	-	-	3,360,544
Distribution of Depreciation	**$ 61,681,721**	**$ 28,193,591**	**$ 7,234,559**	**$ 11,914,796**	**$ 452,647**	**$ 8,120,682**	**$ -**	**$ 5,765,446**

$	61,681,721	EXHIBIT 4,5,6
	-	CHECK

EPCOR - WATER UTILITY
WATER - EXHIBIT 10.1
DIRECT ASSIGNMENT OF DEPRECIATION

Description	Total	In-City			University of Alberta	Regional	EWSI	Fire Protection	
		Residential	Multi-Residential	Commercial					
DEPRECIATION									
Water Treatment Plant									
Water Treatment Plant	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Total Water Treatment Plant	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Pumping Plant									
Reservoirs & Pumphouses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Total Pumping Plant	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Transmission & Distribution Plant									
Transmission Mains	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Distribution Mains	-	-	-	-	-	-	-	-	
Hydrants	3,111,631	-	-	-	-	-	-	3,111,631	As Public Fire Protection
Meters	-	-	-	-	-	-	-	-	
Services	-	-	-	-	-	-	-	-	
Total Transmission Plant	**$ 3,111,631**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 3,111,631**	
General Plant									
General Plant - includes software	$ 248,914	$ -	$ -	$ -	$ -	$ -	$ -	$ 248,914	As Plant In Service Before G.P.
Software & Other Intangibles	-	-	-	-	-	-	-	-	As Plant In Service Before G.P.
Total General Plant	$ 248,914	$ -	$ -	$ -	$ -	$ -	$ -	$ 248,914	
TOTAL DEPRECIATION	**$ 3,360,544**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ 3,360,544**	

$ 3,360,544	EXHIBIT 4,5,6
-	CHECK

EPCOR - WATER UTILITY
WATER - EXHIBIT 10.2
DISTRIBUTION OF DEPRECIATION BY CUSTOMER

Description	Total	In-City			University of Alberta	Regional	EWSI	Fire Protection		
		Residential	Multi-Residential	Commercial						
DEPRECIATION										
Water Treatment Plant										
Water Treatment Plant	$ 20,761,243	$ 7,752,487	$ 2,699,215	$ 4,247,033	$ 288,710	$ 5,773,798	$ -	$ -	$ 19,206,605	$ 5,341,446
Total Water Treatment Plant	**$ 20,761,243**	**$ 7,752,487**	**$ 2,699,215**	**$ 4,247,033**	**$ 288,710**	**$ 5,773,798**	**$ -**	**$ -**		
Pumping Plant										
Reservoirs & Pumphouses	$ 2,455,045	$ 1,148,779	$ 426,720	$ 616,682	$ 43,989	$ -	$ -	$ 218,874		
Total Pumping Plant	**$ 2,455,045**	**$ 1,148,779**	**$ 426,720**	**$ 616,682**	**$ 43,989**	**$ -**	**$ -**	**$ 218,874**		
Transmission & Distribution Plant										
Transmission Mains	$ 6,631,629	$ 2,476,326	$ 862,193	$ 1,356,602	$ 92,221	$ 1,844,287	$ -	$ -	$ 5,298,089	$ 1,473,423
Distribution Mains	14,126,740	6,429,375	2,291,787	3,497,007	-	-	-	1,908,571		
Hydrants	3,111,631	-	-	-	-	-	-	3,111,631		
Meters	3,838,090	3,511,539	46,746	279,598	12	195	-	-		

Services		5,994,149		4,750,456		303,287		940,406		-		-		-		-				
Total Transmission Plant	**$**	**33,702,239**	**$**	**17,167,696**	**$**	**3,504,012**	**$**	**6,073,614**	**$**	**92,233**	**$**	**1,844,482**	**$**	**-**	**$**	**5,020,202**				
General Plant																				
General Plant - includes software	$	4,763,194	$	2,124,629	$	604,612	$	977,467	$	27,714	$	502,402	$	-	$	526,370	$	4,669,604	$	492,531
Software & Other Intangibles		-		-		-		-		-		-		-		-				
Total General Plant	$	4,763,194	$	2,124,629	$	604,612	$	977,467	$	27,714	$	502,402	$	-	$	526,370				
TOTAL DEPRECIATION	**$**	**61,681,721**	**$**	**28,193,591**	**$**	**7,234,559**	**$**	**11,914,796**	**$**	**452,647**	**$**	**8,120,682**	**$**	**-**	**$**	**5,765,446**				

$	61,681,721	EXHIBIT 4,5,6
	-	CHECK
	18,224,631.15	

195.14

EPCOR - WATER UTILITY
WATER - EXHIBIT 11.0
DISTRIBUTION OF AMORTIZATION

Allocation Components	Total	In-City Residential	In-City Multi-Residential	In-City Commercial	University of Alberta	Regional	EWSI	Fire Protection
Base								
All	$ (2,165,898)	$ (807,097)	$ (320,315)	$ (423,558)	$ (33,716)	$ (581,212)	$ -	$ -
In-City	(2,350,850)	(1,223,340)	(485,511)	(641,999)	-	-	-	-
In-City + UofA	-	-	-	-	-	-	-	-
Maximum Day								
All	(757,776)	(284,636)	(59,798)	(174,525)	(6,941)	(231,875)	-	-
In-City	(786,602)	(431,432)	(90,638)	(264,533)	-	-	-	-
In-City + UofA	-	-	-	-	-	-	-	-
Maximum Hour								
In-City	(1,743,410)	(913,607)	(339,364)	(490,438)	-	-	-	-
In-City + UofA	(8,715)	(4,477)	(1,663)	(2,403)	(171)	-	-	-
Meter	(1,886)	(1,725)	(23)	(137)	(0)	(0)	-	-
Services	(4,053,259)	(3,212,271)	(205,083)	(635,905)	-	-	-	-
Billing	-	-	-	-	-	-	-	-
Joint Fire Protection	(763,281)	-	-	-	-	-	-	(763,281)
Revenue Related	-	-	-	-	-	-	-	-
Direct Assignment	(1,651,116)	-	-	-	-	-	-	(1,651,116)
Distribution of Amortization	**$ (14,282,793)**	**$ (6,878,586)**	**$ (1,502,396)**	**$ (2,633,498)**	**$ (40,829)**	**$ (813,087)**	**$ -**	**$ (2,414,397)**

$	(14,282,793) EXHIBIT 4,5,6
	- CHECK

EPCOR - WATER UTILITY
WATER - EXHIBIT 11.1
DIRECT ASSIGNMENT OF AMORTIZATION

Description	Total	In-City Residential	In-City Multi-Residential	In-City Commercial	University of Alberta	Regional	EWSI	Fire Protection	
AMORTIZATION									
Water Treatment Plant									
Water Treatment Plant	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Total Water Treatment Plant	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Pumping Plant									
Reservoirs & Pumphouses	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Total Pumping Plant	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	
Transmission & Distribution Plant									
Transmission Mains	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	
Distribution Mains	-	-	-	-	-	-	-	-	
Hydrants	(1,646,225)	-	-	-	-	-	-	(1,646,225)	As Public Fire Protection
Meters	-	-	-	-	-	-	-	-	
Services	-	-	-	-	-	-	-	-	
Total Transmission Plant	**$ (1,646,225)**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (1,646,225)**	
General Plant									
General Plant - includes software	$ (4,891)	$ -	$ -	$ -	$ -	$ -	$ -	$ (4,891)	
Total General Plant	**$ (4,891)**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (4,891)**	
TOTAL AMORTIZATION	**$ (1,651,116)**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ (1,651,116)**	

$	(1,651,116)	EXHIBIT 4,5,6
	-	CHECK

EPCOR - WATER UTILITY
WATER - EXHIBIT 11.2
DISTRIBUTION OF AMORTIZATION BY CUSTOMER

Description	Total	In-City Residential	In-City Multi-Residential	In-City Commercial	University of Alberta	Regional	EWSI	Fire Protection
AMORTIZATION								
Water Treatment Plant								
Water Treatment Plant	$ (1,554,639)	$ (580,520)	$ (202,122)	$ (318,025)	$ (21,619)	$ (432,352)	$ -	$ -
Total Water Treatment Plant	**$ (1,554,639)**	**$ (580,520)**	**$ (202,122)**	**$ (318,025)**	**$ (21,619)**	**$ (432,352)**	**$ -**	**$ -**
Pumping Plant								
Reservoirs & Pumphouses	$ (6,725)	$ (3,147)	$ (1,169)	$ (1,689)	$ (120)	$ -	$ -	$ (600)
Total Pumping Plant	**$ (6,725)**	**$ (3,147)**	**$ (1,169)**	**$ (1,689)**	**$ (120)**	**$ -**	**$ -**	**$ (600)**
Transmission & Distribution Plant								
Transmission Mains	$ (1,333,540)	$ (497,959)	$ (173,376)	$ (272,796)	$ (18,544)	$ (370,864)	$ -	$ -
Distribution Mains	(5,604,814)	(2,550,868)	(909,271)	(1,387,445)	-	-	-	(757,230)
Hydrants	(1,646,225)	-	-	-	-	-	-	(1,646,225)
Meters	-	-	-	-	-	-	-	-
Services	(4,043,260)	(3,204,346)	(204,577)	(634,336)	-	-	-	-
Total Transmission Plant	**$ (12,627,839)**	**$ (6,253,173)**	**$ (1,287,225)**	**$ (2,294,578)**	**$ (18,544)**	**$ (370,864)**	**$ -**	**$ (2,403,455)**
General Plant								
General Plant - includes software	$ (93,590)	$ (41,746)	$ (11,880)	$ (19,206)	$ (545)	$ (9,872)	$ -	$ (10,342.43)
Total General Plant	**$ (93,590)**	**$ (41,746)**	**$ (11,880)**	**$ (19,206)**	**$ (545)**	**$ (9,872)**	**$ -**	**$ (10,342)**
TOTAL AMORTIZATION	**$ (14,282,793)**	**$ (6,878,586)**	**$ (1,502,396)**	**$ (2,633,498)**	**$ (40,829)**	**$ (813,087)**	**$ -**	**$ (2,414,397)**

$	(14,282,793)	EXHIBIT 4,5,6
	-	CHECK

EPCOR - WATER UTILITY
WATER - EXHIBIT 12.0
DISTRIBUTED O&M, DEPRECIATION, AMORTIZATION, RATE OF RETURN

Allocation Components	TOTAL	In-City			University of Alberta	Regional	EWSI	Fire Protection		
		Residential	Multi-Residential	Commercial						
Base										
All	$ 107,145,953	$ 40,410,676	$ 16,037,918	$ 21,207,179	$ 1,688,144	$ 27,802,036	$ -	$ -		
In-City	29,603,587	15,405,178	6,113,904	8,084,506	-	-	-	-		
In-City + UofA	(1,027,167)	(523,147)	(207,623)	(274,543)	(21,854)	-	-	-		
Maximum Day										
All	27,523,088	10,529,880	2,212,179	6,456,401	256,776	8,067,852	-	-		
In-City	9,905,457	5,432,898	1,141,375	3,331,184	-	-	-	-		
In-City + UofA	-	-	-	-	-	-	-	-		
Maximum Hour										
In-City	21,954,269	11,504,798	4,273,518	6,175,952	-	-	-	-		
In-City + UofA	10,101,892	5,189,605	1,927,706	2,785,859	198,722	-	-	-		
Meter	14,037,902	12,843,566	170,975	1,022,639	45	677	-	-		
Services	8,540,452	6,768,441	432,122	1,339,889	-	-	-	-		
Billing	15,242,868	13,946,288	185,655	1,110,441	48	435	-	-		
Joint Fire Protection	10,589,800	-	-	-	-	-	-	10,589,800		
Revenue Related	14,030,912	8,763,204	2,041,946	2,569,007	103,638	-	-	553,118		
Direct Assignment	10,323,923	-	-	-	-	-	-	10,323,923		
Regional Disallowance	-	-	-	-	-	(555,143)	555,143	-		
Total Revenue Requirements	**$ 277,972,936**	**$ 130,271,386**	**$ 34,329,676**	**$ 53,808,515**	**$ 2,225,517**	**$ 35,315,856**	**$ 555,143**	**$ 21,466,841**		
O & M	$ 129,408,848	$ 64,652,318	$ 15,317,822	$ 23,342,903	$ 1,057,895	$ 16,468,289	$ -	$ 8,569,622	16407135.97	$ (61,153)
Disallowance	-	-	-	-	-	(555,143)	555,143	-	-553335.5182	$ 1,808
Depreciation	61,681,721	28,193,591	7,234,559	11,914,796	452,647	8,120,682	-	5,765,446	8120682.389	$ -
Amortization	(14,282,793)	(6,878,586)	(1,502,396)	(2,633,498)	(40,829)	(813,087)	-	(2,414,397)	-813087.3851	$ -
Rate Of Return										$ -
Debt	43,269,795	18,195,104	5,453,796	8,700,123	310,399	6,689,884	-	3,920,488	6600751.784	$ (89,132)
Equity	57,895,365	26,108,959	7,825,894	12,484,192	445,405	5,405,232	-	5,625,682	5352609.628	$ (52,622)
Total Rate of Return	$ 101,165,159	$ 44,304,063	$ 13,279,690	$ 21,184,315	$ 755,805	$ 12,095,116	$ -	$ 9,546,171	11953361.41	$ (141,754)
Total Revenue Requirements	**$ 277,972,936**	**$ 130,271,386**	**$ 34,329,676**	**$ 53,808,515**	**$ 2,225,517**	**$ 35,315,856**	**$ 555,143**	**$ 21,466,841**	35114756.87	$ (201,099)
	-									
		$ -	$ -	$ -	$ -	$ -	$ -	$ -		

EPCOR - WATER UTILITY
WATER - EXHIBIT 13.0
FIRE PROTECTION RESULTS FOR PUBLIC AND PRIVATE FIRE

		Joint Fire Protection		Joint Fire [1]		
Description	**Total**	**Public**	**Private**	**Public**	**Private**	**Direct Public [2]**
O&M EXPENSES						
Water Treatment Plant:						
Power	$ -	$ -	$ -	71.7%	28.3%	$ -
Chemicals	-	-	-	71.7%	28.3%	-
Hot Water	-	-	-	71.7%	28.3%	-
Other Utilities	-	-	-	71.7%	28.3%	-
All Other Costs	-	-	-	71.7%	28.3%	-
Lowlift	-	-	-	71.7%	28.3%	-
Lab Component	-	-	-	71.7%	28.3%	-
Reservoirs:						
Power and Other Utilities	142,571	102,169	40,402	71.7%	28.3%	-
All Other Costs	140,698	100,827	39,871	71.7%	28.3%	-
Transmission:						
Lab Component	-	-	-	71.7%	28.3%	-
All Other Costs	-	-	-	71.7%	28.3%	-
Distribution:						
Lab Component	-	-	-	71.7%	28.3%	-
All Other Costs	2,238,856	1,604,409	634,447	71.7%	28.3%	-
Services	-	-	-	71.7%	28.3%	-
Hydrants	2,931,233	-	-	71.7%	28.3%	2,931,233
Meters						
Regional Meters	-	-	-	71.7%	28.3%	-
In-City	-	-	-	71.7%	28.3%	-
Administration	2,563,146	822,998	325,446	71.7%	28.3%	1,414,701
Customer Billing	-	-	-	71.7%	28.3%	-
Total O&M	$ 8,016,504	$ 2,630,403	$ 1,040,167			$ 4,345,934
Revenue Tax (Franchise Fee)	758,294	543,409	214,886	71.7%	28.3%	-
Less: Miscellaneous Revenues						
Other Revenue	205,176	147,033	58,143	71.7%	28.3%	-
Total Miscellaneous Revenues						
TOTAL O&M LESS MISC REVENUES	**$ 8,569,622**	**$ 3,026,778**	**$ 1,196,909**			**$ 4,345,934**
Depreciation						
Water Treatment Plant	$ -	$ -	$ -	71.7%	28.3%	$ -
Reservoirs & Pumphouses	218,874	156,850	62,025	71.7%	28.3%	-
Transmission Mains	-	-	-	71.7%	28.3%	-
Distribution Mains	1,908,571	1,367,720	540,851	71.7%	28.3%	-
Hydrants	3,111,631	-	-	71.7%	28.3%	3,111,631
Meters	-	-	-	71.7%	28.3%	-
Services	-	-	-	71.7%	28.3%	-
General Plant	526,370	198,830	78,626	71.7%	28.3%	248,914
Software & Other Intangibles	-	-	-	71.7%	28.3%	-
Total Depreciation	**$ 5,765,446**	**$ 1,723,400**	**$ 681,501**			**$ 3,360,544**
Amortization						
Water Treatment Plant	$ -	$ -	$ -	71.7%	28.3%	$ -

Reservoirs & Pumphouses	(600)	(430)	(170)	71.7%	28.3%	-
Transmission Mains	-	-	-	71.7%	28.3%	-
Distribution Mains	(757,230)	(542,646)	(214,584)	71.7%	28.3%	-
Hydrants	(1,646,225)	-	-	71.7%	28.3%	(1,646,225)
Meters	-	-	-	71.7%	28.3%	-
Services	-	-	-	71.7%	28.3%	-
General Plant	(10,342)	(3,907)	(1,545)	71.7%	28.3%	(4,891)
Software & Other Intangibles	-	-	-	71.7%	28.3%	-
Total Amortization	**$ (2,414,397)**	**$ (546,982)**	**$ (216,299)**			**$ (1,651,116)**
Rate of Return						
Debt	$ 3,920,488	$ 1,553,235	$ 614,211	71.7%	28.3%	$ 1,753,042
Equity	5,625,682	2,228,805	881,359	71.7%	28.3%	2,515,518
Total Rate of Return	**$ 9,546,171**	**$ 3,782,040**	**$ 1,495,570**			**$ 4,268,561**
Total	**$ 21,466,841**	**$ 7,985,236**	**$ 3,157,682**			**$ 10,323,923**

Distributed Revenue Requirement	**Total**	**Public**	**Private**
Joint Fire Protection Costs	$ 11,142,918	$ 7,985,236	$ 3,157,682
Directly Assigned Fire Protection Costs	10,323,923	10,323,923	
	$ 21,466,841	**$ 18,309,159**	**$ 3,157,682**

[1] See Input #1-Consumption, Section 5.4, for development of equivalent meters for public and private fire.
[2] Hydrants directly assigned to public fire protection.

$21,466,841 Exhibit 12
$0

EPCOR - WATER UTILITY
WATER - EXHIBIT 14.1
DISTRIBUTION OF REVENUE REQUIREMENT BY CUSTOMER

Description	Total	Fire Protection	% Total
O&M EXPENSES			
Water Treatment Plant:			
Power	$ 9,028,081	$ -	0.0%
Chemicals	8,677,714	-	0.0%
Hot Water	-	-	0.0%
Other Utilities	-	-	0.0%
All Other Costs	19,087,739	-	0.0%
Lowlift	-	-	0.0%
Lab Component	6,947,857	-	0.0%
Reservoirs:			
Power and Other Utilities	1,599,172	142,571	8.9%
All Other Costs	1,578,169	140,698	8.9%
Transmission:			
Lab Component	-	-	0.0%
All Other Costs	2,623,065	-	0.0%
Distribution:			
Lab Component	-	-	0.0%
All Other Costs	16,571,423	2,238,856	13.5%
Services	113,569	-	0.0%
Hydrants	2,931,233	2,931,233	100.0%
Meters			
Regional Meters	-	-	0.0%
In-City	4,752,086	-	0.0%
Administration	31,273,957	2,563,146	8.2%
Customer Billing	10,193,871	-	0.0%
Total O&M	$ 115,377,936	$ 8,016,504	6.9%
Revenue Tax (Franchise Fee)	$ 19,235,609	$ 758,294	3.9%
Less: Miscellaneous Revenues			
Other Revenue	$ 5,204,697	$ 205,176	3.9%
Total Miscellaneous Revenues	5,204,697	$ 205,176	3.9%
TOTAL O&M LESS MISC REVENUE	**$ 129,408,848**	**$ 8,569,622**	**6.6%**
Regional Disallowance	-	-	0.0%
Depreciation			
Water Treatment Plant	$ 20,761,243	$ -	0.0%
Reservoirs & Pumphouses	2,455,045	218,874	8.9%
Transmission Mains	6,631,629	-	0.0%
Distribution Mains	14,126,740	1,908,571	13.5%
Hydrants	3,111,631	3,111,631	100.0%
Meters	3,838,090	-	0.0%
Services	5,994,149	-	0.0%
General Plant	4,763,194	526,370	11.1%
Software & Other Intangibles	-	-	0.0%
Total Depreciation	**$ 61,681,721**	**$ 5,765,446**	**9.3%**
Amortization			
Water Treatment Plant	(1,554,639)	-	0.0%
Reservoirs & Pumphouses	(6,725)	(600)	8.9%
Transmission Mains	(1,333,540)	-	0.0%
Distribution Mains	(5,604,814)	(757,230)	13.5%
Hydrants	(1,646,225)	(1,646,225)	100.0%
Meters	-	-	0.0%
Services	(4,043,260)	-	0.0%
General Plant	(93,590)	(10,342)	11.1%
Software & Other Intangibles	-	-	0.0%
Total Amortization	**$ (14,282,793)**	**$ (2,414,397)**	**16.9%**
Rate of Return			
Debt	$ 43,269,795	$ 3,920,488	9.1%
Equity	57,895,365	5,625,682	9.7%
Total Rate of Return	**$ 101,165,159**	**$ 9,546,171**	**9.4%**
Total Revenue Requirements	**$ 277,972,936**	**$ 21,466,841**	**7.7%**
	$ 277,972,936	$ 21,466,841	EXHIBIT 12.0
	-	-	CHECK

EPCOR - WATER UTILITY
WATER - EXHIBIT 14.2
DISTRIBUTION OF NET RATE BASE BY CUSTOMER

Description	Total	Fire Protection	Percentage of Total
Plant in Service			
Water Treatment Plant			
Water Treatment Plant	$ 452,828,165	$ -	0.0%
Total Water Treatment Plant	$ 452,828,165	$ -	0.0%
Pumping Plant			
Reservoirs & Pumphouses	$ 67,353,346	$ 6,004,740	8.9%
Total Pumping Plant	$ 67,353,346	$ 6,004,740	8.9%
Transmission & Distribution Plant			
Transmission Mains	$ 388,153,561	$ -	0.0%
Subtransmission Mains	-	-	0.0%
Distribution Mains	911,592,454	123,159,260	13.5%
Hydrants	115,876,661	115,876,661	100.0%
Meters	44,679,417	-	0.0%
Meters - Regional	-	-	0.0%
Services	236,924,482	-	0.0%
Total Transmission Plant	$ 1,697,226,574	$ 239,035,921	14.1%
General Plant			
General Plant - includes software	$ 52,094,258	$ 5,756,816	11.1%
Software & Other Intangibles	-	-	0.0%
Total General Plant	$ 52,094,258	$ 5,756,816	11.1%
Subtotal Plant	**$ 2,269,502,343**	**$ 250,797,478**	**11.1%**
Contributions			
Water Treatment Plant			
Water Treatment Plant	$ 18,032,129	$ -	0.0%
Total Water Treatment Plant	$ 18,032,129	$ -	0.0%
Pumping Plant			
Reservoirs & Pumphouses	$17,875	$1,594	8.9%

EPCOR - WATER UTILITY
WATER - EXHIBIT 14.3
DISTRIBUTION OF REVENUE REQUIREMENT BY CUSTOMER

Description	Total	In-City	University of Alberta	Percentage of Total: In-City	Percentage of Total: University of Alberta
O&M EXPENSES					
Water Treatment Plant:					
Power	$ 9,028,081	$ 6,464,885	$ 140,539	71.6%	1.6%
Chemicals	8,677,714	6,213,992	135,085	71.6%	1.6%
Hot Water	-	-	-	0.0%	0.0%
Other Utilities	-	-	-	0.0%	0.0%
All Other Costs	19,087,739	13,513,912	265,438	70.8%	1.4%
Lowlift	-	-	-	0.0%	0.0%
Lab Component	6,947,857	4,975,265	108,156	71.6%	1.6%
Reservoirs:					
Power and Other Utilities	1,599,172	1,427,947	28,654	89.3%	1.8%
All Other Costs	1,578,169	1,409,193	28,278	89.3%	1.8%
Transmission:					
Lab Component	-	-	-	0.0%	0.0%
All Other Costs	2,623,065	1,857,102	36,477	70.8%	1.4%
Distribution:					
Lab Component	-	-	-	0.0%	0.0%
All Other Costs	16,571,423	14,332,567	-	86.5%	0.0%
Services	113,569	113,569	-	100.0%	0.0%
Hydrants	2,931,233	-	-	0.0%	0.0%
Meters					
Regional Meters	-	-	-	0.0%	0.0%
In-City	4,752,086	4,751,829	15	100.0%	0.0%
Administration	31,273,957	24,685,077	211,583	78.9%	0.7%
Customer Billing	10,193,871	10,193,547	32	100.0%	0.0%
Total O&M	$ 115,377,936	$ 89,938,886	$ 954,257	78.0%	0.8%
Revenue Tax (Franchise Fee)	$ 19,235,609	$ 18,335,233	$ 142,081	95.3%	0.7%
Less: Miscellaneous Revenues					
Other Revenue	$ 5,204,697	$ 4,961,077	$ 38,444	95.3%	0.7%
Total Miscellaneous Revenues	5,204,697	$ 4,961,077	$ 38,444	95.3%	0.7%
TOTAL O&M LESS MISC REVENUE	**$ 129,408,848**	**$ 103,313,043**	**$ 1,057,895**	**79.8%**	**0.8%**
Regional Disallowance	-	-	-	0.0%	0.0%
Depreciation					
Water Treatment Plant	$ 20,761,243	$ 14,698,735	$ 288,710	70.8%	1.4%
Reservoirs & Pumphouses	2,455,045	2,192,182	43,989	89.3%	1.8%
Transmission Mains	6,631,629	4,695,121	92,221	70.8%	1.4%
Distribution Mains	14,126,740	12,218,169	-	86.5%	0.0%
Hydrants	3,111,631	-	-	0.0%	0.0%
Meters	3,838,090	3,837,883	12	100.0%	0.0%
Services	5,994,149	5,994,149	-	100.0%	0.0%
General Plant	4,763,194	3,706,708	27,714	77.8%	0.6%
Software & Other Intangibles	-	-	-	0.0%	0.0%
Total Depreciation	**$ 61,681,721**	**$ 47,342,947**	**$ 452,647**	**76.8%**	**0.7%**
Amortization					
Water Treatment Plant	(1,554,639)	(1,100,667)	(21,619)	70.8%	1.4%
Reservoirs & Pumphouses	(6,725)	(6,005)	(120)	89.3%	1.8%
Transmission Mains	(1,333,540)	(944,132)	(18,544)	70.8%	1.4%
Distribution Mains	(5,604,814)	(4,847,585)	-	86.5%	0.0%
Hydrants	(1,646,225)	-	-	0.0%	0.0%
Meters	-	-	-	0.0%	0.0%
Services	(4,043,260)	(4,043,260)	-	100.0%	0.0%
General Plant	(93,590)	(72,832)	(545)	77.8%	0.6%
Software & Other Intangibles	-	-	-	0.0%	0.0%
Total Amortization	**$ (14,282,793)**	**$ (11,014,480)**	**$ (40,829)**	**77.1%**	**0.3%**
Rate of Return					
Debt	$ 43,269,795	$ 32,349,023	$ 310,399	74.8%	0.7%
Equity	57,895,365	46,419,045	445,405	80.2%	0.8%
Total Rate of Return	**$ 101,165,159**	**$ 78,768,068**	**$ 755,805**	**77.9%**	**0.7%**
Total Revenue Requirements	**$ 277,972,936**	**$ 218,409,577**	**$ 2,225,517**	**78.6%**	**0.8%**
	$ 277,972,936	$ 218,409,577	$ 2,225,517	EXHIBIT 12.0	
	-	-	-	CHECK	

EPCOR - WATER UTILITY
WATER - EXHIBIT 14.4
DISTRIBUTION OF NET RATE BASE BY CUSTOMER

Description	Total	In-City	University of Alberta	Percentage of Total: In-City	Percentage of Total: University of Alberta
Plant in Service					
Water Treatment Plant					
Water Treatment Plant	$ 452,828,165	$ 320,597,428	$ 6,297,122	70.8%	1.4%
Total Water Treatment Plant	$ 452,828,165	$ 320,597,428	$ 6,297,122	70.8%	1.4%
Pumping Plant					
Reservoirs & Pumphouses	$ 67,353,346	$ 60,141,773	$ 1,206,832	89.3%	1.8%
Total Pumping Plant	$ 67,353,346	$ 60,141,773	$ 1,206,832	89.3%	1.8%
Transmission & Distribution Plant					
Transmission Mains	$ 388,153,561	$ 274,808,510	$ 5,397,744	70.8%	1.4%
Subtransmission Mains	-	-	-	0.0%	0.0%
Distribution Mains	911,592,454	788,433,193	-	86.5%	0.0%
Hydrants	115,876,661	-	-	0.0%	0.0%
Meters	44,679,417	44,677,003	142	100.0%	0.0%
Meters - Regional	-	-	-	0.0%	0.0%
Services	236,924,482	236,924,482	-	100.0%	0.0%
Total Transmission Plant	$ 1,697,226,574	$ 1,344,843,188	$ 5,397,886	79.2%	0.3%
General Plant					
General Plant - includes software	$ 52,094,258	$ 40,539,644	$ 303,107	77.8%	0.6%
Software & Other Intangibles	-	-	-	0.0%	0.0%
Total General Plant	$ 52,094,258	$ 40,539,644	$ 303,107	77.8%	0.6%
Subtotal Plant	**$ 2,269,502,343**	**$ 1,766,122,033**	**$ 13,204,947**	**77.8%**	**0.6%**
Contributions					
Water Treatment Plant					
Water Treatment Plant	$ 18,032,129	$ 12,766,551	$ 250,759	70.8%	1.4%
Total Water Treatment Plant	$ 18,032,129	$ 12,766,551	$ 250,759	70.8%	1.4%
Pumping Plant					
Reservoirs & Pumphouses	$17,875	$15,961	$ 320	89.3%	1.8%

EPCOR - WATER UTILITY
WATER - EXHIBIT 14.5
DISTRIBUTION OF REVENUE REQUIREMENT BY CUSTOMER

Description	Total	Regional	Percentage of Total	ERROR CHECK	
O&M EXPENSES					
Water Treatment Plant:					
Power	$ 9,028,081	$ 2,422,657	26.8%	$ 9,028,081	100.0%
Chemicals	8,677,714	2,328,637	26.8%	8,677,714	100.0%
Hot Water	-	-	0.0%	-	0.0%
Other Utilities	-	-	0.0%	-	0.0%
All Other Costs	19,087,739	5,308,389	27.8%	19,087,739	100.0%
Lowlift	-	-	0.0%	-	0.0%
Lab Component	6,947,857	1,864,435	26.8%	6,947,857	100.0%
Reservoirs:					
Power and Other Utilities	1,599,172	-	0.0%	1,599,172	100.0%
All Other Costs	1,578,169	-	0.0%	1,578,169	100.0%
Transmission:					
Lab Component	-	-	0.0%	-	0.0%
All Other Costs	2,623,065	729,487	27.8%	2,623,065	100.0%
Distribution:					
Lab Component	-	-	0.0%	-	0.0%
All Other Costs	16,571,423	-	0.0%	16,571,423	100.0%
Services	113,569	-	0.0%	113,569	100.0%
Hydrants	2,931,233	-	0.0%	2,931,233	100.0%
Meters					
Regional Meters	-	-	0.0%	-	0.0%
In-City	4,752,086	242	0.0%	4,752,086	100.0%
Administration	31,273,957	3,814,151	12.2%	31,273,957	100.0%
Customer Billing	10,193,871	292	0.0%	10,193,871	100.0%
Total O&M	$ 115,377,936	$ 16,468,289	14.3%	$ 115,377,936	100.0%
Revenue Tax (Franchise Fee)	$ 19,235,609	$ -	0.0%	$ 19,235,609	100.0%
Less: Miscellaneous Revenues					
Other Revenue	$ 5,204,697	$ -	0.0%	$ 5,204,697	100.0%
Total Miscellaneous Revenues	5,204,697	$ -	0.0%	5,204,697	100.0%
TOTAL O&M LESS MISC REVENUES	**$ 129,408,848**	**$ 16,468,289**	**12.7%**	**$ 129,408,848**	**100.0%**
Regional Disallowance	-	(555,143)	0.0%	555,143	
Depreciation					
Water Treatment Plant	$ 20,761,243	$ 5,773,798	27.8%	$ 20,761,243	100.0%
Reservoirs & Pumphouses	2,455,045	-	0.0%	2,455,045	100.0%
Transmission Mains	6,631,629	1,844,287	27.8%	6,631,629	100.0%
Distribution Mains	14,126,740	-	0.0%	14,126,740	100.0%
Hydrants	3,111,631	-	0.0%	3,111,631	100.0%
Meters	3,838,090	195	0.0%	3,838,090	100.0%
Services	5,994,149	-	0.0%	5,994,149	100.0%
General Plant	4,763,194	502,402	10.5%	4,763,194	100.0%
Software & Other Intangibles	-	-	0.0%	-	0.0%
Total Depreciation	**$ 61,681,721**	**$ 8,120,682**	**13.2%**	**$ 61,681,721**	**100.0%**
Amortization					
Water Treatment Plant	(1,554,639)	(432,352)	27.8%	(1,554,639)	100.0%
Reservoirs & Pumphouses	(6,725)	-	0.0%	(6,725)	100.0%
Transmission Mains	(1,333,540)	(370,864)	27.8%	(1,333,540)	100.0%
Distribution Mains	(5,604,814)	-	0.0%	(5,604,814)	100.0%
Hydrants	(1,646,225)	-	0.0%	(1,646,225)	100.0%
Meters	-	-	0.0%	-	0.0%
Services	(4,043,260)	-	0.0%	(4,043,260)	100.0%
General Plant	(93,590)	(9,872)	10.5%	(93,590)	100.0%
Software & Other Intangibles	-	-	0.0%	-	0.0%
Total Amortization	**$ (14,282,793)**	**$ (813,087)**	**5.7%**	**$ (14,282,793)**	**100.0%**
Rate of Return					
Debt	$ 43,269,795	$ 6,689,884	15.5%	$ 43,269,795	100.0%
Equity	57,895,365	5,405,232	9.3%	57,895,365	100.0%
Total Rate of Return	**$ 101,165,159**	**$ 12,095,116**	**12.0%**	**$ 101,165,159**	**100.0%**
Total Revenue Requirements	**$ 277,972,936**	**$ 35,315,856**	**12.7%**	**$ 277,972,936**	**99.8%**
	$ 277,972,936	$ 35,315,856	EXHIBIT 12.0	$ 277,972,936	
	-	-	CHECK	-	

EPCOR - WATER UTILITY
WATER - EXHIBIT 14.6
DISTRIBUTION OF NET RATE BASE BY CUSTOMER

Description	Total	Regional	Percentage of Total	ERROR CHECK	
Plant in Service					
Water Treatment Plant					
Water Treatment Plant	$ 452,828,165	$ 125,933,615	27.8%	$ 452,828,165	100.0%
Total Water Treatment Plant	$ 452,828,165	$ 125,933,615	27.8%	$ 452,828,165	100.0%
Pumping Plant					
Reservoirs & Pumphouses	$ 67,353,346	$ -	0.0%	$ 67,353,346	100.0%
Total Pumping Plant	$ 67,353,346	$ -	0.0%	$ 67,353,346	100.0%
Transmission & Distribution Plant					
Transmission Mains	$ 388,153,561	$ 107,947,308	27.8%	$ 388,153,561	100.0%
Subtransmission Mains	-	-	0.0%	-	0.0%
Distribution Mains	911,592,454	-	0.0%	911,592,454	100.0%
Hydrants	115,876,661	-	0.0%	115,876,661	100.0%
Meters	44,679,417	2,272	0.0%	44,679,417	100.0%
Meters - Regional	-	-	0.0%	-	0.0%
Services	236,924,482	-	0.0%	236,924,482	100.0%
Total Transmission Plant	$ 1,697,226,574	$ 107,949,579	6.4%	$ 1,697,226,574	100.0%
General Plant					
General Plant - includes software	$ 52,094,258	$ 5,494,691	10.5%	$ 52,094,258	100.0%
Software & Other Intangibles	-	-	0.0%	-	0.0%
Total General Plant	$ 52,094,258	$ 5,494,691	10.5%	$ 52,094,258	100.0%
Subtotal Plant	**$ 2,269,502,343**	**$ 239,377,885**	**10.5%**	**$ 2,269,502,343**	**100.0%**
Contributions					
Water Treatment Plant					
Water Treatment Plant	$ 18,032,129	$ 5,014,819	27.8%	$ 18,032,129	100.0%
Total Water Treatment Plant	$ 18,032,129	$ 5,014,819	27.8%	$ 18,032,129	100.0%
Pumping Plant					
Reservoirs & Pumphouses	$17,875	$ -	0.0%	$17,875	100.0%

Transmission & Distribution Plant					**Transmission & Distribution Plant**								**Transmission & Distribution Plant**									
Transmission Mains	$89,575,767	-	0.0%		Transmission Mains	$89,575,767	63,418,671	1,245,659	70.8%	1.4%			Transmission Mains	$89,575,767	24,911,437	27.8%		$89,575,767	100.0%			
Subtransmission Mains	-	-	0.0%		Subtransmission Mains	-	-	-	0.0%	0.0%			Subtransmission Mains	-	-	0.0%		-	0.0%			
Distribution Mains	387,250,441	52,318,860	13.5%		Distribution Mains	387,250,441	334,931,581	-	86.5%	0.0%			Distribution Mains	387,250,441	-	0.0%		387,250,441	100.0%			
Hydrants	54,183,967	54,183,967	100.0%		Hydrants	54,183,967	-	-	0.0%	0.0%			Hydrants	54,183,967	-	0.0%		54,183,967	100.0%			
Meters	-	-	0.0%		Meters	-	-	-	0.0%	0.0%			Meters	-	-	0.0%		-	0.0%			
Services	152,478,874	-	0.0%		Services	152,478,874	152,478,874	-	100.0%	0.0%			Services	152,478,874	-	0.0%		152,478,874	100.0%			
Total Transmission Plant	$ 683,489,049	$106,502,827	15.6%		Total Transmission Plant	$ 683,489,049	$550,829,126	$1,245,659	80.6%	0.2%			Total Transmission Plant	$ 683,489,049	$24,911,437	3.6%		$ 683,489,049	100.0%			
General Plant					**General Plant**								**General Plant**									
General Plant - includes software	$ 1,750,353	$ 193,427	11.1%		General Plant - includes software	$ 1,750,353	$ 1,362,121	$ 10,184	77.8%	0.6%			General Plant - includes software	$ 1,750,353	$ 184,620	10.5%		$ 1,750,353	100.0%			
Software & Other Intangibles	-	-	0.0%		Software & Other Intangibles	-	-	-	0.0%	0.0%			Software & Other Intangibles	-	-	0.0%		-	0.0%			
Total General Plant	$ 1,750,353	$ 193,427	11.1%		Total General Plant	$ 1,750,353	$ 1,362,121	$ 10,184	77.8%	0.6%			Total General Plant	$ 1,750,353	$ 184,620	10.5%		$ 1,750,353	100.0%			
Total Contributions	**$ 703,289,405**	**$ 106,697,848**	**15.2%**		**Total Contributions**	**$ 703,289,405**	**$ 564,973,759**	**$ 1,506,922**	**80.3%**	**0.2%**			**Total Contributions**	**$ 703,289,405**	**$ 30,110,876**	**4.3%**		**$ 703,289,405**	**100.0%**			
Other Rate Base Items					**Other Rate Base Items**								**Other Rate Base Items**									
Working Capital	$ 16,265,125	$1,054,642	6.5%		Working Capital	$ 16,265,125	$12,619,633	$143,628	77.6%	0.9%			Working Capital	$ 16,265,125	$2,447,222	15.0%		$ 16,265,125	100.0%			
Average Materials and Supplies	5,328,090	588,795	11.1%		Average Materials and Supplies	5,328,090	4,146,309	31,001	77.8%	0.6%			Average Materials and Supplies	5,328,090	561,985	10.5%		5,328,090	100.0%			
Total Other Rate Base Items	$ 21,593,215	$1,643,436	7.6%		Total Other Rate Base Items	$ 21,593,215	$16,765,942	$174,629	77.6%	0.8%			Total Other Rate Base Items	$ 21,593,215	$3,009,208	13.9%		$ 21,593,215	100.0%			
NET RATE BASE	**$ 1,587,806,152**	**$145,743,066**	**9.2%**		**NET RATE BASE**	**$ 1,587,806,152**	**$1,217,914,215**	**$11,872,654**	**76.7%**	**0.7%**			**NET RATE BASE**	**$ 1,587,806,152**	**$212,276,217**	**13.4%**		**$ 1,587,806,152**	**100.0%**			
	$ 1,587,806,152	$ 145,743,066	EXHIBIT 7.2			$ 1,587,806,152	$ 1,217,914,215	$ 11,872,654	EXHIBIT 7.2					$ 1,587,806,152	$ 212,276,217	EXHIBIT 7.2		$ 1,587,806,152				
	$ -	$ -	CHECK			$ -	$ -	$ -	CHECK					$ -	$ -	CHECK		$ -				

EPCOR - WATER UTILITY
WATER - EXHIBIT 15.0
SUMMARY OF THE COST OF SERVICE ANALYSIS

	Total	In-City			University of Alberta	Regional	EWSI	Public Fire	Private Fire
		Residential	Multi-Residential	Commercial					
Test Period Rate Revenues [1]	$ 287,861,878	$ 154,034,497	$ 35,892,137	$ 45,156,503	$ 1,821,682	$ 34,883,740	$ -	$ 13,345,149	$ 2,728,170
Less:									
Distributed Revenue Requirement	277,972,936	130,271,386	34,329,676	53,808,515	2,225,517	35,315,856	555,143	18,309,159	3,157,682
Change in Cost of Service [2]	$ 9,888,943	$ 23,763,111	$ 1,562,461	$ (8,652,012)	$ (403,835)	$ (432,116)	$ (555,143)	$ (4,964,010)	$ (429,512)
Test Period Percentage Comparison [3]	**-3.4%**	**-15.4%**	**-4.4%**	**19.2%**	**22.2%**	**1.2%**	**0.0%**	**37.2%**	**15.7%**

[1] Test period revenues for In-City and UofA are based on the PBR process, Regional revenues are based on cost of service and/or a negotiated settlement, public and private fire is based on forecast and fixed contract.
[2] Change in cost of service will differ from actual due to PBR rate setting process and timing difference of revenues to test period for cost of service.
[3] Test period percentage comparison is provided for cost of service parameters and are not direct rate adjustment recommendations given the PBR process that is currently in place.

EPCOR - WATER UTILITY
WATER - EXHIBIT 15.1
AVERAGE UNIT COSTS

	Total	In-City			University of Alberta	Regional
		Residential	Multi-Residential	Commercial		
Base $/M^3	$1.04	$1.16	$1.16	$1.16	$0.77	$0.75
Max Day $/M^3	$0.29	$0.33	$0.18	$0.39	$0.12	$0.22
Max Hour $/M^3	$0.24	$0.35	$0.33	$0.36	$0.09	$0.00
Standby/Revenue/Direct/Disallowance $/M^3	$0.27	$0.18	$0.11	$0.10	$0.05	($0.01)
Total Variable $/M^3	$1.83	$2.03	$1.77	$2.01	$1.03	$0.95
Fixed Costs - $/account/month	$10.02	$9.71	$17.15	$12.62	$7.75	$10.29
Average Total Cost $/M^3	$2.12	$2.73	$1.24	$2.15	$1.03	$0.95
Average Total Revenue $/M^3	$2.20	$3.23	$1.90	$1.80	$0.84	$0.9364

Basic Data:						
Annual Water Consumption (ML)	131,111	47,718	18,938	25,042	2,161	37,252
Annual Water Consumption (M^3) [1]	131,111,051	47,718,000	18,938,000	25,042,000	2,161,000	37,252,051
Number of Accounts	314,695	287,927	3,833	22,926	1	9
Number of Equivalent Services	367,426	291,191	18,591	57,645	0	-

[1] One ML equals 1,000 cubic meters (M^3)

		In-City							
		Residential	Multi-Residential	Commercial	University of Alberta	Regional	EWSI	Public Fire	Private Fire
Check Calculation:									
Base $/ML	$ 135,722,372	$ 55,292,706	$ 21,944,199	$ 29,017,141	$ 1,666,289	$ 27,802,036	$ -	$ -	$ -
Max Day $/ML	37,428,545	15,962,778	3,353,554	9,787,585	256,776	8,067,852	-	-	-
Max Hour $/ML	32,056,161	16,694,403	6,201,225	8,961,812	198,722	-	-	-	-
Standby/Direct $/ML	34,944,635	8,763,204	2,041,946	2,569,007	103,638	(555,143)	555,143	18,309,159	3,157,682
Customer Costs - $/account/month	37,821,222	33,558,295	788,752	3,472,970	93	1,112			
Total Costs - $/equivalent/month									
	$ 277,972,936	$ 130,271,386	$ 34,329,676	$ 53,808,515	$ 2,225,517	$ 35,315,856	$ 555,143	$ 18,309,159	$ 3,157,682
	277,972,936	130,271,386	34,329,676	53,808,515	2,225,517	35,315,856	555,143	18,309,159	3,157,682
	-	-	-	-	-	-	-	-	-
	$ 277,972,936								
	277,972,936								
	-								
	135.7	55.3	21.9	29.0	1.7	27.8	-	-	-
	37.4	16.0	3.4	9.8	0.3	8.1	-	-	-
	32.1	16.7	6.2	9.0	0.2	-	-	-	-
	13.5	8.8	2.0	2.6	0.1	(0.6)	0.6	18.3	3.2
	37.8	33.6	0.8	3.5	0.0	0.0	-	-	-
		-	-	-	-	-	-	-	-

21.5

Appendix B

EPCOR Water Services Inc.
Cost of Service by Customer
2023

2023		City of St. Albert	Capital Region Northeast	Capital Region Parkland	Capital Region Southwest	Strathcona County	Sturgeon County	Town of Morinville	Total RWCG	Enoch Cree Nation	DND	Total Wholesale
Consumption (m3)		5,649,892	6,055,687	6,208,775	6,771,083	10,339,752	412,149	1,325,885	36,763,223	232,856	255,911	37,251,990
Interim to Final Rate Adjustment												
Final Rate ($ per m^3)		$ 0.9480	$ 0.9480	$ 0.9480	$ 0.9480	$ 0.9480	$ 0.9480	$ 0.9480	$ 0.9480	$ 0.9480	$ 0.9480	$ 0.9480
Interim Rate ($ per m3)		$ 0.9550	$ 0.9550	$ 0.9550	$ 0.9550	$ 0.9550	$ 0.9550	$ 0.9550	$ 0.9550	$ 0.9550	$ 0.9550	$ 0.9550
Difference ($ per m3)		(0.0070)	(0.0070)	(0.0070)	(0.0070)	(0.0070)	(0.0070)	(0.0070)	(0.0070)	(0.0070)	(0.0070)	(0.0070)
SBRF Receivable (Payable)		(39,411)	(42,242)	(43,309)	(47,232)	(72,125)	(2,875)	(9,249)	(256,442)	(1,624)	(1,785)	(259,852)
Accrued Interest												
2023 Interest Charges	6.49%	(1,279)	(1,371)	(1,406)	(1,533)	(2,341)	(93)	(300)	(8,325)	(53)	(58)	(8,435)
2024 Interest Charges (to December 31, 2024)	6.30%	(2,562)	(2,746)	(2,815)	(3,070)	(4,688)	(187)	(601)	(16,669)	(106)	(116)	(16,891)
Balance December 31, 2024 (Payable)		$ (43,252)	$ (46,359)	$ (47,530)	$ (51,835)	$ (79,155)	$ (3,155)	$ (10,150)	$ (281,436)	$ (1,783)	$ (1,959)	$ (285,178)
		-	-	-	-	-	-	-		-	-	-

Per AUC Rule 23
Interest will be calculated at a rate equal to the bank of Canada's Policy Interest Rate plus 1 3/4%, subject to any previously approved Commission procedure for awarding interest. (Based on V39079 at bankofcanada.ca)

Date	Number of Days	Policy Rate	Policy Rate + 1.75%	Weighted Average Rate
01-Jan-23				
26-Jan-23	25	4.25%	6.00%	
08-Jun-23	133	4.50%	6.25%	
13-Jul-23	35	4.75%	6.50%	
01-Jan-24	172	5.00%	6.75%	
	365			**6.49%**

01-Jan-24				
06-Jun-24	157	5.00%	6.75%	
25-Jul-24	49	4.75%	6.50%	
05-Sep-24	42	4.50%	6.25%	
24-Oct-24	49	4.25%	6.00%	
12-Dec-24	49	3.75%	5.50%	
01-Jan-25	20	3.25%	5.00%	
	366			**6.30%**

Regional Water Customers Group

October 6, 2022

EPCOR Water Services Inc.
10065 Jasper Avenue
Edmonton, AB T5J 3B1

Attention: Mr. Darrell Manning, Director Regulatory Services

RE: 2023 Interim Rate

Thank you for the 2023 forecast recommending an interim rate of $1.01/m³, as presented at the September 28, 2022 Regional Water Customers Group (RWCG) Steering Committee meeting. As per usual this rate is interim only and is subject to year-end true up.

The RWCG is pleased to advise we support an interim rate of $1.01/m³ for 2023.

Sincerely,

Jason Casault, Chair
Regional Water Customers Group Steering Committee

p.c. Regional Water Customers Group
Bill Stannard, Raftelis Financial Consultants, Inc.

Note - Use a blended rate for 2023. **$ 0.955**

Regional Water Customers Group

May 5, 2023

EPCOR Water Services Inc.
10065 Jasper Avenue
Edmonton, AB T5J 3B1

Attention: Saqib Chaudhary, Director Regulatory Services

RE: 2023 - Mid-year Interim Rate Adjustment

Thank you for attending the May 4, 2023 Regional Water Customers Group (RWCG) Steering Committee meeting and for the financial and operational updates provided by EPCOR.

Due to the additional expected surplus from 2022, and the lower forecast rates for 2023, the RWCG would like to revise the RWCG interim rate for the period from July 1, 2023 to December 31, 2023 to $0.90/m³.

Sincerely,

Jason Casault, Chair
Regional Water Customers Group Steering Committee

p.c. Regional Water Customers Group
Bill Stannard, Raftelis Financial Consultants, Inc.

EPCOR Water Services Inc.
Regional Cost of Service
City of St. Albert
2023

		2023	Total
Consumption (m3)		5,649,892	5,649,892
Interim to Final Rate Adjustment			
Final Rate ($ per m3)		$ 0.9480	
Interim Rate ($ per m3)		$ 0.9550	
Difference ($ per m3)		(0.0070)	
SBRF Receivable (Payable)		(39,411)	(39,411)
Accrued Interest	Rate		
2023 Interest Charges	6.49%	(1,279)	(1,279)
2024 Interest Charges (to December 31, 2024)	6.30%	(2,562)	(2,562)
Balance December 31, 2024 (Payable)		**$ (43,252)**	**$ (43,252)**

Per AUC Rule 23
Interest will be calculated at a rate equal to the bank of Canada's Policy Interest Rate plus 1 3/4%, subject to any

Date	Number of Days	Policy Rate	Policy Rate + 1.75%	Weighted Average Rate
01-Jan-23				
26-Jan-23	25	4.25%	6.00%	
08-Jun-23	133	4.50%	6.25%	
13-Jul-23	35	4.75%	6.50%	
01-Jan-24	172	5.00%	6.75%	
	365			**6.49%**

01-Jan-24				
06-Jun-24	157	5.00%	6.75%	
25-Jul-24	49	4.75%	6.50%	
05-Sep-24	42	4.50%	6.25%	
24-Oct-24	49	4.25%	6.00%	
12-Dec-24	49	3.75%	5.50%	
01-Jan-25	20	3.25%	5.00%	
	366			**6.30%**

Amount Owed from 2023	39,410.90
Net interest on balance to December 31, 2024	3,841.13
Total Owed	43,252.04
	-

EPCOR Water Services Inc.
Regional Cost of Service
Capital Region Northeast Water Services Commission
2023

		2023	Total
Consumption (m3)		6,055,687	6,055,687
Interim to Final Rate Adjustment			
Final Rate ($ per m3)		$ 0.9480	
Interim Rate ($ per m3)		$ 0.9550	
Difference ($ per m3)		(0.0070)	
SBRF Receivable (Payable)		(42,242)	(42,242)
Accrued Interest	Rate		
2023 Interest Charges	6.49%	(1,371)	(1,371)
2024 Interest Charges (to December 31, 2024)	6.30%	(2,746)	(2,746)
Balance December 31, 2024 (Payable)		**$ (46,359)**	**$ (46,359)**

Per AUC Rule 23

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Date	Number of Days	Policy Rate	Policy Rate + 1.75%	Weighted Average Rate
01-Jan-23				
26-Jan-23	25	4.25%	6.00%	
08-Jun-23	133	4.50%	6.25%	
13-Jul-23	35	4.75%	6.50%	
01-Jan-24	172	5.00%	6.75%	
	365			**6.49%**

01-Jan-24				
06-Jun-24	157	5.00%	6.75%	
25-Jul-24	49	4.75%	6.50%	
05-Sep-24	42	4.50%	6.25%	
24-Oct-24	49	4.25%	6.00%	
12-Dec-24	49	3.75%	5.50%	
01-Jan-25	20	3.25%	5.00%	
	366			**6.30%**

Amount Owed from 2023	42,241.53
Net interest on balance to December 31, 2024	4,117.02
Total Owed	46,358.55

EPCOR Water Services Inc.
Regional Cost of Service
Capital Region Parkland Water Services Commission
2023

		2023	Total
Consumption (m3)		6,208,775	6,208,775
Interim to Final Rate Adjustment			
Final Rate ($ per m3)		$ 0.9480	
Interim Rate ($ per m3)		$ 0.9550	
Difference ($ per m3)		(0.0070)	
SBRF Receivable (Payable)		(43,309)	(43,309)
Accrued Interest	Rate		
2023 Interest Charges	6.49%	(1,406)	(1,406)
2024 Interest Charges (to December 31, 2024)	6.30%	(2,815)	(2,815)
Balance December 31, 2024 (Payable)		**$ (47,530)**	**$ (47,530)**

Per AUC Rule 23

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Date	Number of Days	Policy Rate	Policy Rate + 1.75%	Weighted Average Rate
01-Jan-23				
26-Jan-23	25	4.25%	6.00%	
08-Jun-23	133	4.50%	6.25%	
13-Jul-23	35	4.75%	6.50%	
01-Jan-24	172	5.00%	6.75%	
	365			**6.49%**

01-Jan-24				
06-Jun-24	157	5.00%	6.75%	
25-Jul-24	49	4.75%	6.50%	
05-Sep-24	42	4.50%	6.25%	
24-Oct-24	49	4.25%	6.00%	
12-Dec-24	49	3.75%	5.50%	
01-Jan-25	20	3.25%	5.00%	
	366			**6.30%**

Amount Owed from 2023	43,309.40
Net interest on balance to December 31, 2024	4,221.10
Total Owed	47,530.49
	-

EPCOR Water Services Inc.
Regional Cost of Service
Capital Region Southwest Water Services Commission
2023

		2023	Total
Consumption (m3)		6,771,083	6,771,083
Interim to Final Rate Adjustment			
Final Rate ($ per m3)		$ 0.9480	
Interim Rate ($ per m3)		$ 0.9550	
Difference ($ per m3)		(0.0070)	
SBRF Receivable (Payable)		(47,232)	(47,232)
Accrued Interest	Rate		
2023 Interest Charges	6.49%	(1,533)	(1,533)
2024 Interest Charges (to December 31, 2024)	6.30%	(3,070)	(3,070)
Balance December 31, 2024 (Payable)		**$ (51,835)**	**$ (51,835)**

Per AUC Rule 23

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Date	Number of Days	Policy Rate	Policy Rate + 1.75%	Weighted Average Rate
01-Jan-23				
26-Jan-23	25	4.25%	6.00%	
08-Jun-23	133	4.50%	6.25%	
13-Jul-23	35	4.75%	6.50%	
01-Jan-24	172	5.00%	6.75%	
	365			**6.49%**

01-Jan-24				
06-Jun-24	157	5.00%	6.75%	
25-Jul-24	49	4.75%	6.50%	
05-Sep-24	42	4.50%	6.25%	
24-Oct-24	49	4.25%	6.00%	
12-Dec-24	49	3.75%	5.50%	
01-Jan-25	20	3.25%	5.00%	
	366			**6.30%**

Amount Owed from 2023	47,231.79
Net interest on balance to December 31, 2024	4,603.39
Total Owed	51,835.17
	-

EPCOR Water Services Inc.
Regional Cost of Service
Strathcona County
2023

		2023	Total
Consumption (m3)		10,339,752	10,339,752
Interim to Final Rate Adjustment			
Final Rate ($ per m3)		$ 0.9480	
Interim Rate ($ per m3)		$ 0.9550	
Difference ($ per m3)		(0.0070)	
SBRF Receivable (Payable)		(72,125)	(72,125)
Accrued Interest	Rate		
2023 Interest Charges	6.49%	(2,341)	(2,341)
2024 Interest Charges (to December 31, 2024)	6.30%	(4,688)	(4,688)
Balance December 31, 2024 (Payable)		**$ (79,155)**	**$ (79,155)**

Per AUC Rule 23

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Date	Number of Days	Policy Rate	Policy Rate + 1.75%	Weighted Average Rate
01-Jan-23				
26-Jan-23	25	4.25%	6.00%	
08-Jun-23	133	4.50%	6.25%	
13-Jul-23	35	4.75%	6.50%	
01-Jan-24	172	5.00%	6.75%	
	365			**6.49%**

01-Jan-24				
06-Jun-24	157	5.00%	6.75%	
25-Jul-24	49	4.75%	6.50%	
05-Sep-24	42	4.50%	6.25%	
24-Oct-24	49	4.25%	6.00%	
12-Dec-24	49	3.75%	5.50%	
01-Jan-25	20	3.25%	5.00%	
	366			**6.30%**

Amount Owed from 2023	72,125.09
Net interest on balance to December 31, 2024	7,029.58
Total Owed	79,154.67
	-

EPCOR Water Services Inc.
Regional Cost of Service
Sturgeon County
2023

		2023	Total
Consumption (m3)		412,149	412,149
Interim to Final Rate Adjustment			
Final Rate ($ per m3)		$ 0.9480	
Interim Rate ($ per m3)		$ 0.9550	
Difference ($ per m3)		(0.0070)	
SBRF Receivable (Payable)		(2,875)	(2,875)
Accrued Interest	Rate		
2023 Interest Charges	6.49%	(93)	(93)
2024 Interest Charges (to December 31, 2024)	6.30%	(187)	(187)
Balance December 31, 2024 (Payable)		**$ (3,155)**	**$ (3,155)**

Per AUC Rule 23

Interest will be calculated at a rate equal to the bank of Canada's Policy Interest Rate plus 1 3/4%, subject to any previously approved Commission procedure for awarding interest. (Based on V39079 at bankofcanada.ca)

Date	Number of Days	Policy Rate	Policy Rate + 1.75%	Weighted Average Rate
01-Jan-23				
26-Jan-23	25	4.25%	6.00%	
08-Jun-23	133	4.50%	6.25%	
13-Jul-23	35	4.75%	6.50%	
01-Jan-24	172	5.00%	6.75%	
	365			**6.49%**

01-Jan-24				
06-Jun-24	157	5.00%	6.75%	
25-Jul-24	49	4.75%	6.50%	
05-Sep-24	42	4.50%	6.25%	
24-Oct-24	49	4.25%	6.00%	
12-Dec-24	49	3.75%	5.50%	
01-Jan-25	20	3.25%	5.00%	
	366			**6.30%**

Amount Owed from 2023	2,874.95
Net interest on balance to December 31, 2024	280.20
Total Owed	3,155.15
	-

EPCOR Water Services Inc.
Regional Cost of Service
Town of Morinville
2023

		2023	Total
Consumption (m3)		1,325,885	1,325,885
Interim to Final Rate Adjustment			
Final Rate ($ per m3)		$ 0.9480	
Interim Rate ($ per m3)		$ 0.9550	
Difference ($ per m3)		(0.0070)	
SBRF Receivable (Payable)		(9,249)	(9,249)
Accrued Interest	Rate		
2023 Interest Charges	6.49%	(300)	(300)
2024 Interest Charges (to December 31, 2024)	6.30%	(601)	(601)
Balance December 31, 2024 (Payable)		**$ (10,150)**	**$ (10,150)**

Per AUC Rule 23

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Date	Number of Days	Policy Rate	Policy Rate + 1.75%	Weighted Average Rate
01-Jan-23				
26-Jan-23	25	4.25%	6.00%	
08-Jun-23	133	4.50%	6.25%	
13-Jul-23	35	4.75%	6.50%	
01-Jan-24	172	5.00%	6.75%	
	365			**6.49%**

01-Jan-24				
06-Jun-24	157	5.00%	6.75%	
25-Jul-24	49	4.75%	6.50%	
05-Sep-24	42	4.50%	6.25%	
24-Oct-24	49	4.25%	6.00%	
12-Dec-24	49	3.75%	5.50%	
01-Jan-25	20	3.25%	5.00%	
	366			**6.30%**

Amount Owed from 2023	9,248.73
Net interest on balance to December 31, 2024	901.42
Total Owed	10,150.15
	-

EPCOR Water Services Inc.
Regional Cost of Service
Enoch Cree Nation
2023

		2023	Total
Consumption (m3)		232,856	232,856
Interim to Final Rate Adjustment			
Final Rate ($ per m3)		$ 0.9480	
Interim Rate ($ per m3)		$ 0.9550	
Difference ($ per m3)		(0.0070)	
SBRF Receivable (Payable)		(1,624)	(1,624)
Accrued Interest	Rate		
2023 Interest Charges	6.49%	(53)	(53)
2024 Interest Charges (to December 31, 2024)	6.30%	(106)	(106)
Balance December 31, 2024 (Payable)		**$ (1,783)**	**$ (1,783)**

Per AUC Rule 23

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Date	Number of Days	Policy Rate	Policy Rate + 1.75%	Weighted Average Rate
01-Jan-23				
26-Jan-23	25	4.25%	6.00%	
08-Jun-23	133	4.50%	6.25%	
13-Jul-23	35	4.75%	6.50%	
01-Jan-24	172	5.00%	6.75%	
	365			**6.49%**

01-Jan-24				
06-Jun-24	157	5.00%	6.75%	
25-Jul-24	49	4.75%	6.50%	
05-Sep-24	42	4.50%	6.25%	
24-Oct-24	49	4.25%	6.00%	
12-Dec-24	49	3.75%	5.50%	
01-Jan-25	20	3.25%	5.00%	
	366			**6.30%**

Amount Owed from 2023	1,624.29
Net interest on balance to December 31, 2024	158.31
Total Owed	1,782.60
	-

EPCOR Water Services Inc.
Regional Cost of Service
3rd Canadian Division Support Base Edmonton
2023

		2023	Total
Consumption (m3)		255,911	255,911
Interim to Final Rate Adjustment			
Final Rate ($ per m3)		$ 0.9480	
Interim Rate ($ per m3)		$ 0.9550	
Difference ($ per m3)		(0.0070)	
SBRF Receivable (Payable)		(1,785)	(1,785)
Accrued Interest	Rate		
2023 Interest Charges	6.49%	(58)	(58)
2024 Interest Charges (to December 31, 2024)	6.30%	(116)	(116)
Balance December 31, 2024 (Payable)		**$ (1,959)**	**$ (1,959)**

Per AUC Rule 23

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Date	Number of Days	Policy Rate	Policy Rate + 1.75%	Weighted Average Rate
01-Jan-23				
26-Jan-23	25	4.25%	6.00%	
08-Jun-23	133	4.50%	6.25%	
13-Jul-23	35	4.75%	6.50%	
01-Jan-24	172	5.00%	6.75%	
	365			**6.49%**

01-Jan-24				
06-Jun-24	157	5.00%	6.75%	
25-Jul-24	49	4.75%	6.50%	
05-Sep-24	42	4.50%	6.25%	
24-Oct-24	49	4.25%	6.00%	
12-Dec-24	49	3.75%	5.50%	
01-Jan-25	20	3.25%	5.00%	
	366			**6.30%**

Amount Owed from 2023	1,785.11
Net interest on balance to December 31, 2024	173.98
Total Owed	1,959.09
	-

EPCOR Water Services Inc.
Regional Revenue
Cost of Service by Customer
2023

		City of St. Albert		Capital Region Parkland Water Services Commission		Capital Region Northeast Water Services		Capital Region Southwest Water Services		Strathcona County		Sturgeon County		Town of Morinville		Amount owing to the RWCG		Deparment of National Defence		Enoch Cree Nation		Total Amount owing to Wholesale Customers	
		2023	Total	2023	Total	2023	Total	2023	Total	2023	Total	2023	Total	2023	Total	2023	Total	2023	Total	2023	Total	2023	Total
Consumption (m3)		5,649,892	5,649,892	6,208,775	6,208,775	6,055,687	6,055,687	6,771,083	6,771,083	10,339,752	10,339,752	412,149	412,149	1,325,885	1,325,885	36,763,223	36,763,223	255,911	255,911	232,856	232,856	37,251,990	37,251,990
Interim to Final Rate Adjustment																							
Final Rate ($ per m3)		0.9480		0.9480		0.9480		0.9480		0.9480		0.9480		0.9480		0.9480		0.9480		0.9480		0.9480	
Interim Rate ($ per m3)		0.9550		0.9550		0.9550		0.9550		0.9550		0.9550		0.9550		0.9550		0.9550		0.9550		0.9550	
Difference ($ per m3)		(0.0070)		(0.0070)		(0.0070)		(0.0070)		(0.0070)		(0.0070)		(0.0070)		(0.0070)		(0.0070)		(0.0070)		(0.0070)	
SBRF Receivable (Payable)		(39,411)	(39,411)	(43,309)	(43,309)	(42,242)	(42,242)	(47,232)	(47,232)	(72,125)	(72,125)	(2,875)	(2,875)	(9,249)	(9,249)	(256,442)	(256,442)	(1,785)	(1,785)	(1,624)	(1,624)	(259,852)	(259,852)
Accrued Interest	Rate																						
2023 Interest Charges	6.49%	(1,279)	(1,279)	(1,406)	(1,406)	(1,371)	(1,371)	(1,533)	(1,533)	(2,341)	(2,341)	(93)	(93)	(300)	(300)	(8,325)	(8,325)	(58)	(58)	(53)	(53)	(8,435)	(8,435)
2024 Interest Charges (to December 31, 2024)	6.30%	(2,562)	(2,562)	(2,815)	(2,815)	(2,746)	(2,746)	(3,070)	(3,070)	(4,688)	(4,688)	(187)	(187)	(601)	(601)	(16,669)	(16,669)	(116)	(116)	(106)	(106)	(16,891)	(16,891)
Balance December 31, 2024 (Payable)		**(43,252)**	**(43,252)**	**(47,530)**	**(47,530)**	**(46,359)**	**(46,359)**	**(51,835)**	**(51,835)**	**(79,155)**	**(79,155)**	**(3,155)**	**(3,155)**	**(10,150)**	**(10,150)**	**(281,436)**	**(281,436)**	**(1,959)**	**(1,959)**	**(1,783)**	**(1,783)**	**(285,178)**	**(285,178)**
																-						-	-

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08-Jun-23	133	4.50%	6.25%	
13-Jul-23	35	4.75%	6.50%	
01-Jan-24	172	5.00%	6.75%	
	365			**6.49%**

01-Jan-24				
06-Jun-24	157	5.00%	6.75%	
25-Jul-24	49	4.75%	6.50%	
05-Sep-24	42	4.50%	6.25%	
24-Oct-24	49	4.25%	6.00%	
12-Dec-24	49	3.75%	5.50%	
01-Jan-25	20	3.25%	5.00%	
	366			**6.30%**

Date	Overnight/Policy Rate
01/01/22	0.25%
02/01/22	0.25%
03/01/22	0.25%
04/01/22	0.25%
05/01/22	0.25%
06/01/22	0.25%
07/01/22	0.25%
08/01/22	0.25%
09/01/22	0.25%
10/01/22	0.25%
11/01/22	0.25%
12/01/22	0.25%
13/01/22	0.25%
14/01/22	0.25%
15/01/22	0.25%
16/01/22	0.25%
17/01/22	0.25%
18/01/22	0.25%
19/01/22	0.25%
20/01/22	0.25%
21/01/22	0.25%
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24/01/22	0.25%
25/01/22	0.25%
26/01/22	0.25%
27/01/22	0.25%
28/01/22	0.25%
29/01/22	0.25%
30/01/22	0.25%
31/01/22	0.25%
01/02/22	0.25%
02/02/22	0.25%
03/02/22	0.25%
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14/02/22	0.25%
15/02/22	0.25%
16/02/22	0.25%
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27/02/22	0.25%
28/02/22	0.25%
01/03/22	0.25%
02/03/22	0.25%
03/03/22	0.50%
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12/03/22	0.50%
13/03/22	0.50%
14/03/22	0.50%
15/03/22	0.50%
16/03/22	0.50%
17/03/22	0.50%
18/03/22	0.50%
19/03/22	0.50%
20/03/22	0.50%
21/03/22	0.50%
22/03/22	0.50%
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25/03/22	0.50%
26/03/22	0.50%
27/03/22	0.50%
28/03/22	0.50%
29/03/22	0.50%
30/03/22	0.50%
31/03/22	0.50%
01/04/22	0.50%
02/04/22	0.50%
03/04/22	0.50%
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05/04/22	0.50%
06/04/22	0.50%
07/04/22	0.50%
08/04/22	0.50%

Date	Rate	Rate + 1.75%	Number of Days
01-Jan-22	0.25%	2.00%	61
03-Mar-22	0.50%	2.25%	42
14-Apr-22	1.00%	2.75%	49
02-Jun-22	1.50%	3.25%	42
14-Jul-22	2.50%	4.25%	56
08-Sep-22	3.25%	5.00%	49
27-Oct-22	3.75%	5.50%	42
08-Dec-22	4.25%	6.00%	24
01-Jan-23			365
		Weighted Interest Rate	**3.69%**

Date	Overnight/Policy Rate
01/01/23	4.25%
02/01/23	4.25%
03/01/23	4.25%
04/01/23	4.25%
05/01/23	4.25%
06/01/23	4.25%
07/01/23	4.25%
08/01/23	4.25%
09/01/23	4.25%
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26/01/23	4.50%
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29/01/23	4.50%
30/01/23	4.50%
31/01/23	4.50%
01/02/23	4.50%
02/02/23	4.50%
03/02/23	4.50%
04/02/23	4.50%
05/02/23	4.50%
06/02/23	4.50%
07/02/23	4.50%
08/02/23	4.50%
09/02/23	4.50%
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28/02/23	4.50%
01/03/23	4.50%
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31/03/23	4.50%
01/04/23	4.50%
02/04/23	4.50%
03/04/23	4.50%
04/04/23	4.50%
05/04/23	4.50%
06/04/23	4.50%
07/04/23	4.50%
08/04/23	4.50%

Date	Rate	Rate + 1.75%	Number of Days
01-Jan-23	4.25%	6.00%	25
26-Jan-23	4.50%	6.25%	133
08-Jun-23	4.75%	6.50%	35
13-Jul-23	5.00%	6.75%	172
01-Jan-24			365
		Weighted Interest Rate	**6.49%**

Date	Overnight/Policy Rate
01/01/24	5.00%
02/01/24	5.00%
03/01/24	5.00%
04/01/24	5.00%
05/01/24	5.00%
06/01/24	5.00%
07/01/24	5.00%
08/01/24	5.00%
09/01/24	5.00%
10/01/24	5.00%
11/01/24	5.00%
12/01/24	5.00%
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15/01/24	5.00%
16/01/24	5.00%
17/01/24	5.00%
18/01/24	5.00%
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26/01/24	5.00%
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29/01/24	5.00%
30/01/24	5.00%
31/01/24	5.00%
01/02/24	5.00%
02/02/24	5.00%
03/02/24	5.00%
04/02/24	5.00%
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07/02/24	5.00%
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31/03/24	5.00%
01/04/24	5.00%
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03/04/24	5.00%
04/04/24	5.00%
05/04/24	5.00%
06/04/24	5.00%
07/04/24	5.00%

Date	Rate	Rate + 1.75%	Number of Days
01-Jan-24	5.00%	6.75%	157
06-Jun-24	4.75%	6.50%	49
25-Jul-24	4.50%	6.25%	42
05-Sep-24	4.25%	6.00%	49
24-Oct-24	3.75%	5.50%	49
12-Dec-24	3.25%	5.00%	20
			0
		Weighted Interest Rate	**6.30%**

09/04/22	0.50%
10/04/22	0.50%
11/04/22	0.50%
12/04/22	0.50%
13/04/22	0.50%
14/04/22	1.00%
15/04/22	1.00%
16/04/22	1.00%
17/04/22	1.00%
18/04/22	1.00%
19/04/22	1.00%
20/04/22	1.00%
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25/04/22	1.00%
26/04/22	1.00%
27/04/22	1.00%
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29/04/22	1.00%
30/04/22	1.00%
01/05/22	1.00%
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09/04/23	4.50%
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12/07/23	4.75%
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20/07/22	2.50%
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26/10/22	3.25%
27/10/22	3.75%
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29/10/22	3.75%

20/07/23	5.00%
21/07/23	5.00%
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REPORT

Capital Region Southwest Water Services Commission

Water Master Plan Update

MAY 2026

carbon neutral since 2009

PROUDLY CANADIAN
100% CANADIAN, EMPLOYEE-OWNED

CANADA BEST MANAGED COMPANIES Platinum member

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EXECUTIVE SUMMARY

Introduction

The Capital Region Southwest Water Services Commission (the Commission) supplies water to the following members, along with several small commercial and residential users:

- Leduc County
  - Hamlet of New Sarepta
  - Edmonton Airports (as a customer of Leduc County)
- City of Beaumont
- City of Leduc
- Town of Calmar
- Village of Hay Lakes
- Camrose County (Hamlet of Armena)
- Town of Millet

The City of Camrose, the City of Wetaskiwin, and the County of Wetaskiwin have expressed interest in being serviced by the Commission. A separate study is underway to determine the feasibility.

The Master Plan provides a comprehensive review of the Commission's future water demand requirements, system operations, anticipated future upgrades, and an assessment of the condition of all facilities. This report also provides the creation of a policy to formalize the practice of what infrastructure the Commission is responsible to plan and construct, and an updated financial plan for capital and operational forecasting.

Strategic Initiatives

The following Strategic Initiatives have been established by the Commission to add focus to the Master Plan and provide a framework for decision making, resource allocation, and on-going organizational improvements:

- Emergency Preparedness – Priority: High
- Rate Predictability – Priority: High
- Commission Governance – Priority: High
- Member Education – Priority: Medium
- Environmental Stewardship – Priority: Medium
- Commission Expansion – Priority: Low
- Member Communications – Priority: Low

Water Demand Projections

Through discussions with the Commission and its Members, the following growth rates have been applied for water supply in this report. Table ES-1 presents the short-term (5-year) water demand projections, as provided by the Members, and Table ES-2 presents the growth rates for the 25-year water demand projections.

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Table ES-1 Short-Term Projected Water Demands (m^3)

Customer	2026	2027	2028	2029	2030
City of Leduc	3,362,414	3,446,474	3,532,636	3,620,952	3,711,476
City of Beaumont	1,748,558	1,824,432	1,903,599	1,986,202	2,072,388
Leduc County	1,057,385	1,110,254	1,182,420	1,265,190	1,353,753
Town of Calmar	235,000	240,000	245,000	250,000	255,000
Edmonton Airports	471,184	485,319	499,879	514,875	530,322
Village of Hay Lakes	40,364	41,576	42,823	44,108	45,431
Hamlet of New Sarepta	55,026	56,126	57,249	58,394	59,562
Camrose County (Hamlet of Armena)	65,238	68,335	70,951	72,961	74,103
Town of Millet	194,638	199,017	203,495	208,074	212,755

Table ES-2 Long-Term Projected Increase in Water Demand

Customer	Projected Increase in Water Demand 2031 – 2051
City of Leduc	2.5%
City of Beaumont	3.5%
Leduc County	3.0%
Town of Calmar	1.0%
Edmonton Airports	3.5%
Village of Hay Lakes	2.0%
Hamlet of New Sarepta	2.0%
Camrose County (Hamlet of Armena)	2.6% (+Tillicum Beach at 1.0%)
Town of Millet	2.0%
Looma/Rolly View (Leduc County)	5.33 L/s ADD (10-year) then 4.0%
Saunders Lake (Leduc County)	17.5 L/s ADD (25-year)

Proposed System Upgrades

Upgrades proposed over the 25-year study period, along with the Opinion of Probable Costs, are summarized in Table ES-3 below.

Table ES-3 Proposed System Upgrades

Year	Proposed Upgrade	Opinion of Probable Costs
5-Year (2031)	• 350 mm Nisku East Lateral Replacement • 600 mm Beaumont Secondary Supply Main	$8,363,000
10-Year (2036)	• Highway 21 Booster Pumps Upgrade	$762,000
20-Year (2046)	• 900 mm Watermain Twinning from EIA R1 to EIA R2 • 500 mm Beaumont Supply Main Extension to Beaumont Reservoir • 300 mm Highway 21 Waterline Replacement (3 km)	$21,968,000
25-Year (2051)	• 900 mm Watermain Twinning from EIA R2 to the Millet Line • Install fourth Nisku Booster Station Pump	$9,589,000

Short-Term Capital Improvements Plan

The short-term (5-year) Capital Plan is divided into four categories for identifying expenditures and funding sources: operation, repair, replacement, and system improvements. Table ES-4 details the 5-year Capital Plan cost breakdown.

Table ES-4 5-Year Capital Plan Cost Breakdown[1]

Facility	2026	2027	2028	2029	2030
General					
Cathodic Protection Report and Maintenance	$6,000	$6,000	$6,000	$6,000	$6,000
Annual Infrastructure Maintenance	$117,000	$117,000	$117,000	$117,000	$117,000
Air Release Manhole Rehab	$18,700				
Nisku Booster Station & Beaumont Piping Upgrades	$3,675,840				
SCADA Upgrades	$68,750	$600,000	$150,000		
Water Master Plan and Strategic Plan	$152,000				
Camrose & Wetaskiwin Regional Water Supply Feasibility Study	$229,500				
Camrose & Wetaskiwin Regional Water Supply Preliminary Design		$150,000	$150,000		
Emergency Planning	$120,000	$120,000			
Sub-Total	$4,387,790	$993,000	$423,000	$123,000	$123,000
Facility Assessment Capital Plan	$395,500	$615,300	$63,000	$35,900	$75,000
YEARLY TOTAL	$4,782,290	$1,608,300	$486,000	$158,900	$198,000

[1]*All costs are presented in 2026 dollars and exclude inflation; inflation will be incorporated as part of future rate structure reviews.*

Rate Review

To support long-term financial planning and evaluate the sustainability of future water rates, three water sales rate scenarios were developed to assess a range of funding strategies—from reliance on debt financing to fully funding capital upgrades through 100% reserve allocations. The three scenarios reviewed are:

- Scenario 1 – Fully funded capital through reserves
- Scenario 2 – Mixed reserves and debt financing
- Scenario 3 – Fixed allocation

A comparison of the water rates for the reviewed scenarios up to 2051 is shown in Table ES-5.

Table ES-5 Water Sales Rate Comparison

Year	Scenario 1 ($/m^3)	Scenario 2 ($/m^3)	Scenario 3 ($/m^3)
2026	1.74	1.74	1.74
2027	1.74	1.74	1.79
2028	1.74	1.74	1.84
2029	1.74	1.74	1.89
2030	1.75	1.74	1.94
2031	1.80	1.74	1.99
2035	2.02	1.91	2.19
2040	2.29	2.18	2.44
2045	2.56	2.45	2.69
2050	2.81	2.70	2.94
2051	2.86	2.75	2.99

Following a detailed review of these three funding scenarios at the March 2026 Board Meeting, the Commission determined that Scenario 3 – Fixed Allocation best supports the Commission's long-term interests and aligns with the objectives of the Strategic Plan. Fixed Allocation allows the reserve contribution to remain stable, while the water sales rate increases in line with rising water purchase costs and operational expenditures.

Large Demand User and Infrastructure Upgrade Policy

A Large Demand User and Infrastructure Upgrade Policy was created to establish a consistent framework for evaluating proposed system connections and growth, including large-demand users, to ensure the regional water system can continue to operate reliably and within design capacity. It outlines how the Commission will assess potential system impacts, identify required infrastructure upgrades, and assign financial responsibility.

The Commission maintains responsibility for planning and funding capacity upgrades associated with anticipated, planned growth, while Members are responsible for funding upgrades driven by unplanned or large-demand

developments that exceed established projections or create system constraints. Where upgrades provide both local and system-wide benefits, costs can be shared proportionally.

Recommendations

Associated recommends the following:

- Complete the identified system upgrades in the appropriate timeframe.
- Review existing fire storage requirements with the communities that did not provide them.
- Strategic Plan No. 2.5.2 – Environmental Stewardship: Promote water conservation among Members, by providing educational materials or encouraging the development of public education programs.
- Strategic Plan No. 2.4.1 – Emergency Preparedness:
  - Review the long-term sustainability and vulnerability of existing infrastructure and operations, with consideration of climate-related hazards.
  - Establish and maintain emergency response protocols specific to climate-related events; the Commission has recently updated its emergency response plan and should continue to review and refine it on an ongoing basis.
  - Continue to review water restriction protocols to support consistent and coordinated demand management during shortages.
  - Undertake the SCADA System Modernization
- Undertake the maintenance and upgrade recommendations outlined in the Facilities Assessment.
- Implement the Short-Term (5-year) Capital Improvement Program, as outlined in Section 8.
- Strategic Plan No. 2.4.2 – Rate Predictability: Adopt Scenario 3 – Fixed Allocation for long-term capital funding.
- Strategic Plan No. 2.4.3 – Commission Governance:
  - Adopt the Large Demand User and Infrastructure Upgrade Policy.
  - Conduct a Governance Review to ensure operation of the Commission is optimal
- Begin the update to this Master Plan 5 years after adoption to review and confirm system water demands, future service connections, and the timing of proposed upgrades. System upgrades should be undertaken based on updated water demands.

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1 INTRODUCTION

The Capital Region Southwest Water Services Commission (the Commission) owns potable water pipelines located south of the City of Edmonton. These water pipelines supply EPCOR treated water to several municipalities and rural customers.

In 2020, Associated Engineering (Associated) completed the Commission's current Master Plan. The Commission has requested an update to the current Master Plan, including an assessment of the Commission's 15 existing facilities, to review the Commission's system based on capacity and design life.

Associated Engineering is concurrently completing a Feasibility Study for the Commission which investigates servicing the City of Camrose, the City of Wetaskiwin and the County of Wetaskiwin. This work will be presented in a separate report, and these communities are not part of the current Master Plan update. The next Water Master Plan Update, in 5 years, would address any required changes to future capital forecasting if servicing Camrose and Wetaskiwin are deemed feasible through the study.

1.1 Members and Stakeholders

The Commission supplies water to the following members, as shown on Figure 1-1, along with several small commercial and residential users:

- Leduc County
  - Hamlet of New Sarepta
  - Edmonton Airports (as a customer of Leduc County)
- City of Beaumont
- City of Leduc
- Town of Calmar
- Village of Hay Lakes
- Camrose County (Hamlet of Armena)
- Town of Millet

In addition to these members and customers, the following organizations are impacted or have an interest in the Commission's Master Plan:

- EPCOR – the Commission's water source from the City of Edmonton.
- Regional Water Customer Group (RWCG) – the negotiating body for the Water Service Commissions being serviced by EPCOR, of which the Commission is a member.
- Alberta Environment and Parks – the regulator for water transmission systems.

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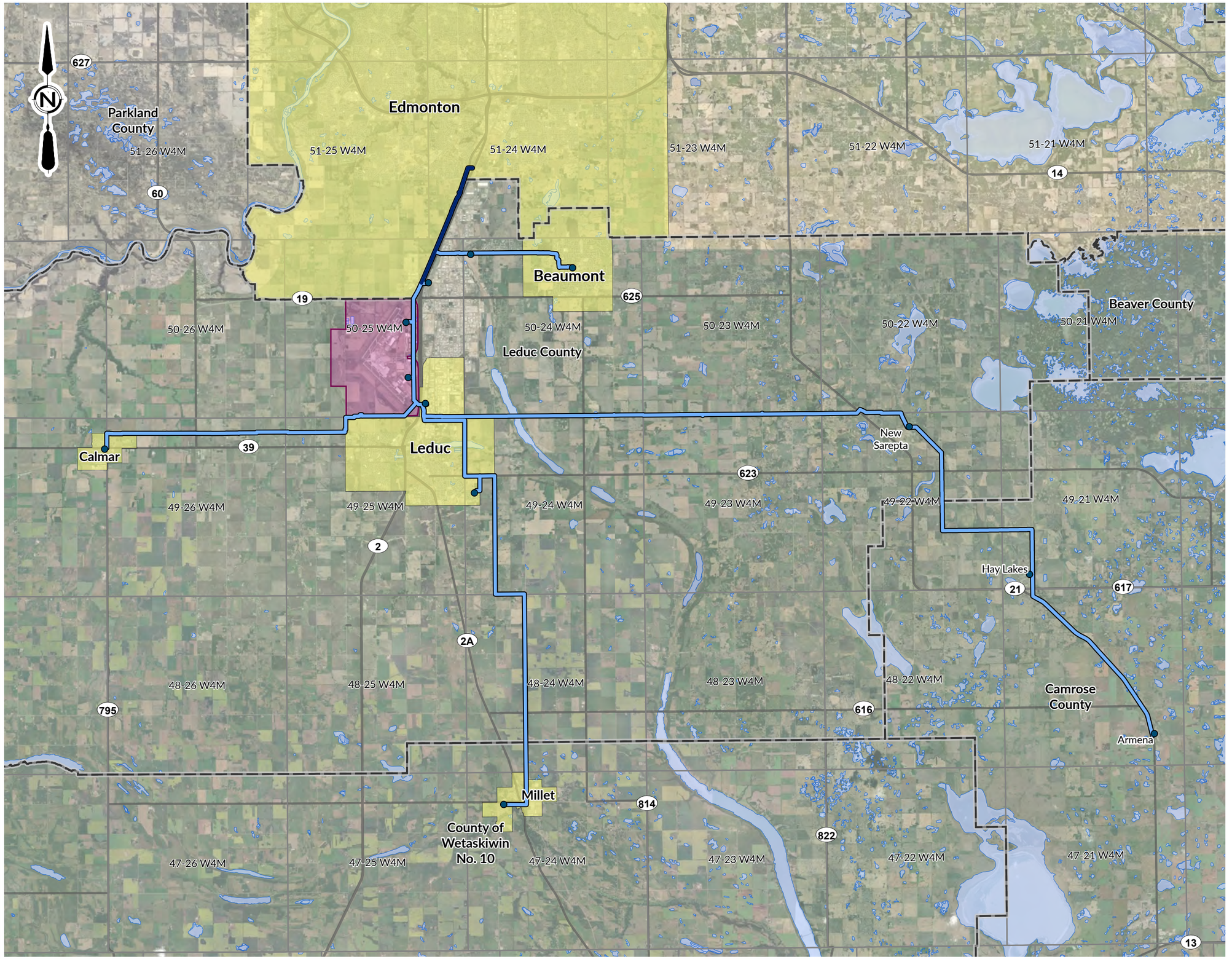

LEGEND:

- Service Location
- Existing Waterline EPCOR
- Existing Waterline CRSWSC

Base Data

- Highway
- Water Body
- Edmonton International Airport Land

FIGURE 1-1

CRSWSC
WATER MASTER PLAN

COMMISSION'S SYSTEM OVERVIEW

AE PROJECT No.	2025-3197-00
SCALE	1:200,000
DATE	2026APR21
PROJECTION	NAD 1983 3TM 114
DRAWN BY	DD
CHECKED BY	KR
DESCRIPTION	ISSUED FOR DRAFT

0 2,500 5,000 m

IF NOT 25 mm ADJUST SCALES
SCALE(S) SHOWN ARE INTENDED FOR TABLOID (11X17) SIZE DRAWINGS UNLESS NOTED OTHERWISE

SAVE DATE: 2026-04-20 2:05 PM SAVED BY:
DRAWING PATH: D:\project_data\2025-3197-00\2025-3197-00.aprx
DATA SOURCE: World Imagery: Earthstar Geographics.

1.2 Scope/Objectives

The Master Plan will assess the needs of the above members against the capacity of the existing water pipeline. The scope of work includes the following:

- Review of the existing system.
- Recommendation of solutions to satisfy the Commission's current and future water demand projections and development changes.
- Assessment of the waterlines based on design life expectancy of the Commission's current system.
- Assessment of the Commission's facilities, description of the condition and evaluation of repairs and upgrades required.
- Creation of a policy to formalize the practice of what infrastructure the Commission is responsible to plan and construct
- Updated Financial Plan, by reviewing funds available in reserve for capital improvement and required funding needed to meet current and future operation and maintenance needs to meet objectives of the Master Plan.
- Update of the Master Plan.

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2 STRATEGIC INITIATIVES

In the Fall of 2025, Associated Engineering engaged Strategic Steps Inc. to assist with the creation of a set of strategic priorities to include to add focus to the Commission Master Plan.

Strategic Steps engaged Commission members through a survey that asked members to rank strategic themes from the Commission's previous strategic plan. This was followed up with a check-in with newly elected Commission members in early November 2025. During this check-in, several priorities were ranked and others identified.

The 2026 Strategic Priorities outline the governance direction for the Commission for this master planning period. They provide a framework for decision-making, resource allocation, and ongoing organizational improvement.

The following section was prepared by Strategic Steps Inc. and summarizes the strategic themes identified by Commission members as high, medium, and low priorities, based on alignment with similar themes from the Commission's 2022 Strategic Plan.

2.1 Vision, Mission, and Values

The Board is looking towards the future of the Capital Region. When doing so, it is important that Commissioners agree on what the destination looks like. With this in mind, the Board first decides on the Commission's ideal long-term future (Vision) and the general direction it will take to achieve that future (Mission).

These items were generated for the 2019 Strategic Plan and have remained consistent since then.

2.1.1 Vision Statement

Empowering Communities with Water

The Board's vision provides a long-term picture of where or what the region wishes to be or become. The vision also indicates what makes the Commission unique from other similar organizations.

2.1.2 Mission Statement

The CRSWSC delivers a reliable supply of clean, safe, drinking water to our members

The mission generated by the Board answers a question about what business the Commission is in. It lets readers know what the Commission does and who benefits from its work.

2.2 Values

The values expressed here are the guiding principles that help determine how the Commission will operate, both in public and privately.

- *Innovation: We explore new ways of meeting member needs and maintain technology and processes that are considered leading edge.*
- *Integrity: We do what we say we are going to do.*
- *Leadership: We provide high-value service delivery and environmental protection that inspires our regional neighbors. We are seen as leaders in our field of expertise.*

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- *Quality: When our services are measured alongside similar services provided elsewhere, our services are among the most reputable, timely, and efficient.*
- *Reliability: We are committed to providing dependable service to member municipalities.*

2.3 Overview

The rest of this plan contains a series of priorities that are identified by the Commission as being noteworthy to achieve over the next 5 years. They are focused on the Board's governance role and so are phrased as outcomes – or a desired change over time. Once the Board has identified a goal as important, it is the responsibility of administration to determine how best to achieve that goal using limited resources and available expertise.

2.3.1 Relative Priorities

At the adoption of this plan in 2026, these priorities are identified and ranked relative to one another, giving Administration the direction to focus on what the Board members identify as the highest priorities. Administration will report on the progress made on the strategic plan through regular board meetings throughout the duration of the master plan.

Board members are aware that their governance role as Commissioners means that they are responsible for identifying priorities that benefit the Commission and its customers as a region rather than focusing solely on their own municipalities.

2.3.2 Goal Summary

The goals in Table 2-1 are described in detail through the rest of this plan. What is illustrated here are the goals and their relative priorities as of the creation of this plan and its adoption by the Commission in 2026.

These seven goals have a relative ranking from highest to lowest, with the most important and timely goals appearing at the top of the list.

Table 2-1 Goal Summary

Goal	Priority
Emergency Preparedness	High
Rate Predictability	High
Commission Governance	High
Member Education	Medium
Environmental Stewardship	Medium
Commission Expansion	Low
Member Communications	Low

These goals will be expanded upon and undertaken over the span of the current Master Plan duration. The relative priority will change over the course of implementation until the next Master Plan is adopted.

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2.4 High Priority Goals

High priorities are defined as being both timely and important for the success of the Commission over the course of this plan. The priority on each item below will likely change over the life of this plan as effort is expended in completing these goals and as new strategic priorities emerge.

2.4.1 Emergency Preparedness

Goal

The Commission is prepared to respond to, and recover from, unanticipated events that may limit or eliminate customers' access to safe, reliable water.

What it Means

Emergency Preparedness refers to the organization's capacity to anticipate, plan for, respond to, and recover from disruptions such as natural disasters, system failures, security incidents, or operational crises. It includes emergency plans, resource allocation, response protocols, staff training, and coordination with municipal partners.

Why Ranked as a High Priority

Emergencies pose immediate safety, service continuity, reputational, and financial risks, preparedness is foundational. Without strong, realistic, and practiced emergency plans, all other strategic initiatives are vulnerable.

2.4.2 Rate Predictability

Goal

The Commission provides members with realistic forecasts for costs associated with Commission operations and water pricing through the course of this plan.

What it Means

Rate Predictability involves establishing stable, high-value, transparent, and long-term cost forecasts around which Commission members can budget realistically. This certainty reduces volatility in rates for services and helps municipalities plan their budgets with confidence.

Why Ranked as a High Priority

Stable and predictable costs for Commission members directly affect municipal members budgeting ability and political accountability. Predictability also affects growth plans and serves as a basis for realistic strategic planning.

2.4.3 Commission Governance

Goal

Role clarity and long-term planning ensure that the Commission operates in a predictable and effective manner, providing confidence for Commission members and customers.

What it Means

Governance refers to the membership, structures, bylaws, policies, plans, and processes that guide decision-making, ensure accountability, clarify roles, and support transparent organizational oversight.

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Why Ranked as a High Priority

The Board and Administration of the Commission have, over many years, established a strong foundation of bylaws, policies, and strategic plans to support the Commission's operations. As part of maintaining an effective and responsive organization, it is appropriate for the Board to periodically evaluate governance options to ensure the structure continues to meet the evolving needs of its members and supports the efficient delivery of its mandate. This review could include an evaluation of various governance models to confirm that a commission is still the most appropriate.

Options such as a Part 9 company, a municipally controlled corporation, or an independent utility structure could be examined to determine whether a different governance approach may provide enhanced flexibility, accountability, and long-term sustainability. Recent examples within Alberta, such as the Capital Region Wastewater Commission's transition to an independent utility (Arrow Utilities), or the Leduc and District Regional Waste Management Authority transition to a commission demonstrate the appropriateness of making sure to evaluate options periodically to ensure the most appropriate structure is in place. This could potentially support a more utility-focused, regionally responsive service model.

2.5 Medium Priority Goals

Medium priorities are typically defined as being either timely or important – but not both – at the start of this plan. As high priorities get completed or move into a status of being more operational than governance, these goals may elevate to become high priorities based on the will of the Board.

2.5.1 Member Education

Goal

Commission members, their elected officials, and their administrators understand the role of the Commission and how it provides services.

What it Means

Member education means that the Commission provides training opportunities, orientation, workshops, and resources for members' municipal officials. This can be general or it can be focused on specific aspects of the Commission's service delivery. Recent direction from the Board has been to extend training opportunities to member municipalities administration on a cost share basis to elevate knowledge across the membership.

Why Ranked as a Medium Priority

Regular education is primarily an operational function, however there are times, such as at the beginning of an electoral term, that it takes on increasing importance. This means that the education function can also have strategic, governance-focused, deliverables.

2.5.2 Environmental Stewardship

Goal

The Commission understands the fundamental importance of water to the ecosystem and seeks to minimize the Commission's impact on the physical environment through its distribution of safe drinking water to its customers.

What it Means

Environmental stewardship includes initiatives that minimize or reduce environmental impact, comply with regulations, and support sustainable resource management.

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Why Ranked as a Medium Priority

Stewardship of the physical environment is strategically important to the Commission and its members. This goal relies on strong governance and operational stability for effective implementation to minimize water loss.

2.6 Low Priority Goals

Low priorities are defined as goals that are neither timely or important compared to the high and medium priorities at the start of this Commission's plan. These items remain significant and may elevate in status as the environment shifts or as other work is completed and resources become available.

2.6.1 Commission Expansion

Goal

The members of the Commission are always looking at how to maximize value through economies of scale to members and beyond.

What it Means

The potential of expansion for the Commission is based on adding additional members who are in need of a stable long-term supply of water. Planning for expansion has positive ramifications on existing membership through potential redundancies to the transmission system and increasing economies of scale for additional water supply to existing members.

Why Ranked as a Low Priority

Expansion is long-term and complex. Various plans and regional agreements would need to be updated should this be undertaken. The Commission is currently evaluating this through the City of Camrose Water supply feasibility study, which is being done in conjunction with the Water Master Plan.

2.6.2 Member Communications

Goal

Commission members are always aware of the activities of the Commission, both as a routine practice and in times of emergency.

What it Means

This strategy ensures clear, transparent, timely communication with municipal members, including operational updates and strategic direction.

Why Ranked as a Low Priority

Communication strengthens relationships and builds trust. It depends on the delivery of high priority goals for communication to be effective and useful to recipients. Recently there has been a focus on ensuring consistent communication and response to water demand management which will continue to be worked on over the course of the next Water Master Plan cycle.

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2.7 Summary

The Strategic Priorities Update provide a roadmap that was developed by the Commission's Board and Administrations. It is important that both the Board and administration work together to achieve the priorities that are outlined in this plan. Progress towards the goals of the plan will continue to be reported on through the Commission's annual reporting.

Also important is the recognition that the environment in which the Commission operates is always shifting. In response, the Commission's plans also must shift to remain relevant. As with any plan, this one must be used, reviewed and updated on a regular basis.

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3 DESIGN CRITERIA

3.1 Historical Water Demands

The Commission provided water consumption records from 2018 to 2024. These have been reviewed and analysed in conjunction with the 2020 Master Plan Update.

Table 3-1 summarizes the historical water consumption records for all members and Edmonton Airports. The records indicate that from 2018 to the end of 2024 there has been an increase of 934,840 m^3 in water demand for the Commission. The average annual increase in water consumption for the Commission over this period was 2.5% per year.

Table 3-1 Water Consumption Records 2018-2024 (m^3)

Customer	2018	2019	2020	2021	2022	2023	2024
City of Leduc	2,911,949	2,771,635	2,779,246	3,027,254	2,997,233	3,092,786	3,200,394
City of Beaumont	1,326,824	1,301,174	1,381,538	1,528,692	1,492,574	1,539,347	1,602,423
Leduc County	685,952	720,559	606,876	784,335	887,067	958,424	959,079
Town of Calmar	237,193	223,393	233,662	250,478	211,457	212,210	224,348
Edmonton Airports	378,415	492,839	364,037	397,700	476,745	417,768	426,130
Village of Hay Lakes	37,097	40,069	35,517	37,468	35,351	36,239	36,901
Hamlet of New Sarepta	47,632	44,664	47,868	52,846	49,747	50,399	52,889
Camrose County (Hamlet of Armena)	6,558	8,873	14,710	20,476	35,585	52,558	63,602
Town of Millet	188,019	179,214	177,964	195,704	180,310	183,230	188,713
TOTAL	5,819,639	5,782,420	5,641,418	6,294,953	6,063,622	6,542,961	6,754,479

A breakdown of the historical water consumption data by reservoir is provided in Appendix A.

The amount of water supplied to the Commission's members in 2024 was 6,754,479 m^3, or an average day demand of 771 m^3/hr (214 L/s). Figure 3-1 shows the ratio of average water consumption among the Commission's members.

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Figure 3-1 2024 Water Consumption by Customer

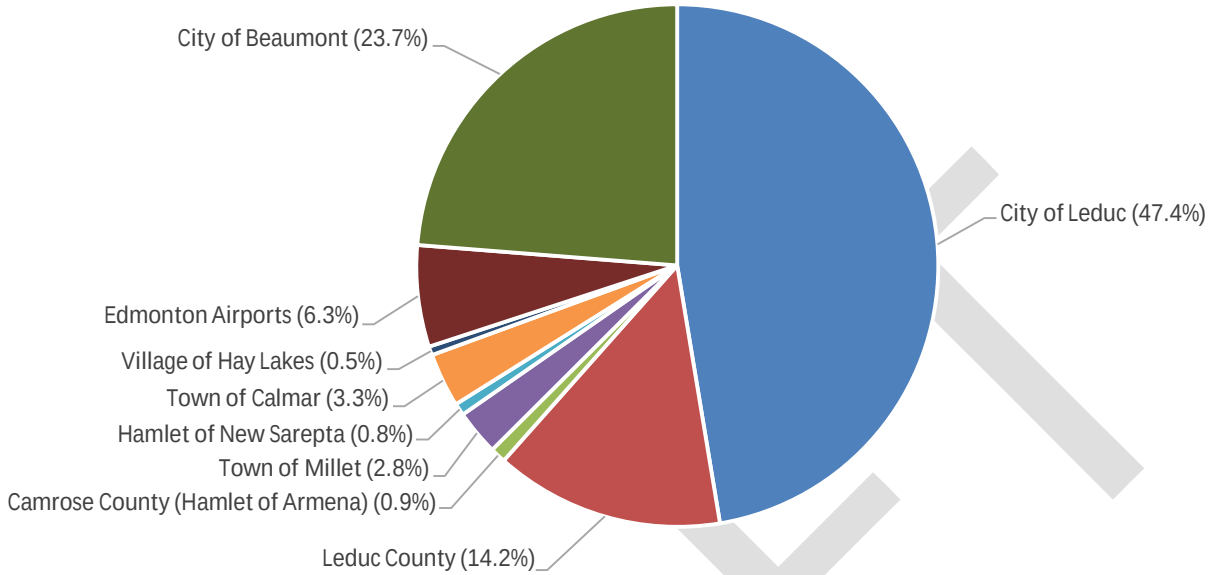

Table 3-2 shows the average annual historical growth rates (water demand) for each Commission member and Edmonton Airports from 2018 to 2024.

Table 3-2 Average Annual Historical Growth Rates

Customer	Growth in Water Demand 2018 – 2024
City of Leduc	1.6%
City of Beaumont	3.2%
Leduc County	5.7%
Town of Calmar	-0.9%
Edmonton Airports	2.0%
Village of Hay Lakes	-0.1%
Hamlet of New Sarepta	1.8%
Camrose County (Hamlet of Armena)	46%
Town of Millet	0.1%

As shown in the table, the average annual water usage increased for all but two members (Hay Lakes and Millet) with the highest increase occurring for Camrose County. It is understood that Camrose County has begun servicing additional communities downstream of the Armena Reservoir since the 2020 Master Plan, which can account for the unusually high growth. As this is from additional communities, this high rate of growth is considered inorganic and therefore is not expected to continue.

3.2 Projected Water Demands

The average day demand (ADD) is defined as the average daily water usage in a year. For this study, the ADD was determined using the 2024 consumption records. As this study began in 2025, the 2024 records were the most recent at the time. The Peak Day Demand (PDD) represents the maximum recorded consumption in the system on a single day. To project the PDD, a peak day to average day ratio (peak day factor) is used. For this study, a Peak Day Factor of 1.8 is used, consistent with the 2020 Master Plan. The PDD is then used in determining the delivery capacity required of the system.

It should be noted that, while municipal boundaries may change over time, the projected water demand reflects overall regional growth and is not dependent on specific municipal boundary limits.

The Commission requested that members and customers provide short-term projected water demands (5 years). Table 3-3 summarizes the projected water demands provided by each of the members and Edmonton Airports.

Table 3-3 Short-Term Projected Water Demands (m^3)

Customer	2026	2027	2028	2029	2030
City of Leduc	3,362,414	3,446,474	3,532,636	3,620,952	3,711,476
City of Beaumont	1,748,558	1,824,432	1,903,599	1,986,202	2,072,388
Leduc County	1,057,385	1,110,254	1,182,420	1,265,190	1,353,753
Town of Calmar	235,000	240,000	245,000	250,000	255,000
Edmonton Airports	471,184	485,319	499,879	514,875	530,322
Village of Hay Lakes	40,364	41,576	42,823	44,108	45,431
Hamlet of New Sarepta	55,026	56,126	57,249	58,394	59,562
Camrose County (Hamlet of Armena)	65,238	68,335	70,951	72,961	74,103
Town of Millet	194,638	199,017	203,495	208,074	212,755

Based on these short-term projections and discussions with the Commission and the members, long-term projected water demands (25-years) were also determined. Future connections to the Commission's system are also included in the long-term projections. The locations added are discussed below.

Leduc County Rural (Rolly View and Looma)

Leduc County Rural is comprised of the Hamlets of Rolly View and Looma. The future Rolly View tie-in is located approximately 12 km east of the City of Leduc boundary along Township Road 500, and the future Looma tie-in is located approximately 5 km further east. Updated demand projections have not been received, or a projected timeline for servicing. As such, the demand projections included in the 2020 Master Plan will be applied and have been adjusted for the current period.

The water demand projections are identified below:

- 2.1 L/s ADD for the 5-year period
- 5.33 L/s ADD for the 10-year period

- 4% growth after 10 years
- 95% of the water usage will be applied to Looma, and 5% applied to Rolly View

Leduc County Saunders Lake Industrial Area

The Saunders Lake Industrial Area is located south of the Nisku Business Park and north of Township Road 500. The 2020 Master Plan identified that construction was anticipated to begin in 2022, however, it does not appear to have begun at this time.

The 25-year horizon at 50% buildout, as identified during the 2020 Master Plan, will be applied for current planning purposes, and has been adjusted to coincide with the current planning period. As such, the 25-year (2051) ADD will be 8.75 L/s.

Camrose County (Tillicum Beach)

Camrose County has indicated that the Tillicum Beach Reservoir is anticipated to be connected to the regional system, projected to be completed between 2031-2035. The projected demand at that time is assumed to be a one-time addition of 0.46 L/s ADD. This demand will be applied in 2031, with a 1.0% growth rate, and will be added to the Armena demands.

The long-term projections for existing Commission Members and customers and future connections are shown in Table 3-4.

Table 3-4 Long-Term Projected Water Demand Increase

Customer	Projected Increase in Water Demand 2031 – 2051
City of Leduc	2.5%
City of Beaumont	3.5%
Leduc County	3.0%
Town of Calmar	1.0%
Edmonton Airports	3.5%
Village of Hay Lakes	2.0%
Hamlet of New Sarepta	2.0%
Camrose County (Hamlet of Armena)	2.6% (+Tillicum Beach at 1.0%)
Town of Millet	2.0%
Looma/Rolly View (Leduc County)	5.33 L/s ADD (10-year) then 4.0%
Saunders Lake (Leduc County)	17.5 L/s ADD (25-year)

Detailed water demand projections are provided in Appendix A.

3.3 Assumptions

Assumptions made regarding long-term demands are discussed below.

City of Edmonton – Discovery Park

The Discovery Park Reservoir was constructed west of Highway 2 and north of Highway 19 in 2018. The reservoir services the Discovery Business Park which is partially developed. Discovery Park is no longer supplied by the Commission; however, it remains included in the existing water model as upstream conditions will affect water supply to Nisku East and Beaumont.

EPCOR has provided updated demand projections based on the current usage at the Discovery Park Reservoir. A demand growth rate of 1.0% has been applied to the 25-year design horizon. No peaking factor will be applied, as EPCOR has advised that filling of the reservoir will not occur during peak usage events.

Camrose County (Hamlet of Armena)

The historical growth rate for the Hamlet of Armena since 2018 has been unusually high, as discussed above. As the 5-year growth projections provided by Camrose County are much lower, at 2.6%, this indicates that continued significant growth is not anticipated. A long-term growth rate of the same has been applied.

Reservoir Allocation

The allocation of water demand between reservoirs for Leduc County, City of Leduc, and Edmonton Airports has been assigned based on usage data over the last 3 years. Details of the historical usage is included in Appendix A. The demand allocation by reservoir is shown in Table 3-5 below.

Table 3-5 Reservoir Demand Allocation

City of Leduc	
North Reservoir: 60%	Robinson Reservoir: 40%
Leduc County	
Nisku East Reservoir: 80%	Nisku West Reservoir: 20%
Edmonton Airports	
EIA Reservoir 1: 30%	EIA Reservoir 2: 70%

Leduc County 510 Local Area Structure Plan and East Vistas Area Structure Plan

Significant growth is expected to occur within Leduc County in the 510 Local Area and East Vistas Area. As these developments are both currently underway, future water demand will be included in the adopted growth projection for the County. Both developments are anticipated to be serviced from the Nisku East Reservoir.

Single Commercial/Residential Customers

Single customer water use totalled 0.04 L/s ADD in 2023. This flowrate is negligible compared to the rest of the Commission (215 L/s ADD); therefore, single customers have been excluded from the current assessment.

Miquelon Lake Provincial Park

Alberta Parks has expressed interest in receiving water service from the Commission system. They have provided an Average Day design demand of 197 m^3/day, or 2.3 L/s. They have also provided a Peak Day design demand of 4.6 L/s.

The park's water treatment plant has received several upgrades in recent years, extending its serviceable life. However, the asset is nearing the end of its lifecycle and will require a permanent, long-term solution within approximately 5 years.

The addition of these demands would require extensive upgrades to the Commission's existing system; therefore, Miquelon Lake has been excluded from the current study. If appropriate, servicing will be investigated in the Feasibility Study for supplying Wetaskiwin and Camrose.

STRATEGIC PLAN No. 2.6.1 – COMMISSION EXPANSION

3.4 Pipeline Analysis Criteria

A maximum velocity of 1.5 m/s is recommended for supply waterlines, as maintaining velocities at or below this threshold minimizes head loss and pumping requirements, improving system efficiency. While this limit primarily serves as a design guideline for new infrastructure, it also supports lower long-term operations and maintenance costs by reducing energy consumption and minimizing wear on system components. Existing waterlines can typically accommodate higher velocities before replacement is required; however, acceptable operating velocities should be evaluated on a case-by-case basis considering pipe material, age, condition, and system criticality.

Operating above 3.0 m/s is generally considered a threshold where risks to system performance, reliability, and asset life increase significantly. While short-term or localized exceedances may be manageable, sustained operation at these velocities typically warrants mitigation (e.g., upsizing pipes, operational controls, or system upgrades) and should be carefully evaluated. High velocities and potential sudden changes in these velocities can result in pressure surges and possibly negative pressure, which can then cause serious pipe (equipment) damage.

The minimum system pressure recommended for supply waterlines is 140 kPa (20 psi) to maintain positive pressure within the waterline. The maximum recommended system pressure must account for potential surge pressures and must not exceed the maximum allowable pipe pressure based on AWWA standards.

Hazen-Williams pipe roughness coefficients (C-values) are presented below:

- Steel pipe = 125
- Concrete pressure pipe = 120
- HDPE and PVC pipe = 135

The C-values have been based on the 2020 Master Plan values and have been updated where appropriate based on recent model validation. The validation of the model is further discussed in Section 5.2.

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4 EXISTING SYSTEM

4.1 Commission Components

The system comprises of five major sections of pipeline. The main transmission line to the City of Leduc, the Beaumont line, the Calmar line, the Millet line, and the Highway 21 line.

A brief description of each section of the system is provided below. Figure 4-1 identifies the location of pipelines as well as the facilities described.

Main Transmission Line (to the City of Leduc) (Installed 1978)

- 750 mm steel transmission main from the point of transfer from EPCOR, just south of the Discovery Park Reservoir
- 600 mm steel transmission main to the Leduc North Reservoir
- Lateral mains to:
  - Nisku West Reservoir (500 mm)
  - EIA Reservoir 1 (200 mm)
  - EIA Reservoir 2 (300 mm)
- 900 mm PVC SDR 25 mains to and from the Nisku Booster Station
- Nisku Booster Station within Lot 4, Plan 1011 M.C.
- Nisku West, EIA R1, EIA R2, and Leduc North reservoirs and fill stations

Beaumont Line (Installed 1987)

- 400 mm concrete supply main to the City of Beaumont
- 200 mm lateral main to Nisku East Reservoir
- City of Beaumont and Nisku East reservoirs and fill stations

Calmar Line (Installed 1981)

- 300 mm steel supply main to the Town of Calmar, from just upstream of the Leduc North Reservoir
- Town of Calmar Reservoir and fill station

Millet Line (Installed 2018)

- 550 mm HDPE DR11 supply main, from just upstream of the Leduc North Reservoir to the Leduc Robinson Reservoir lateral
- 300 mm HDPE DR11 supply main, from the Leduc Robinson Reservoir lateral to the Town of Millet
- 400 mm lateral main to the Leduc Robinson Reservoir
- Telford Lake Booster Station located within NW 25-49-25-W4M
- Leduc Robinson and Town of Millet reservoirs and fill stations

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Highway 21 Line (Installed 2009)

- 250 mm HDPE DR11 supply main, from just upstream of the Leduc North Reservoir later to the Hamlet of New Sarepta.
- 200 mm HDPE DR11 supply main, from the Hamlet of New Sarepta to the Village of Hay Lakes.
- 150 mm HDPE DR11 supply main, from the Village of Hay Lakes to the Hamlet of Armena.
- Highway 21 Booster Station within SW 01-50-24-W4M which is approximately 11.5 km east of the City of Leduc Boundary.
- The Commission's radio hub, located at the Highway 21 Booster Station. The main Supervisory Control and Data Acquisition (SCADA) system is located at the Nisku Booster Staton.
- Hamlet of New Sarepta, Village of Hay Lakes, and Hamlet of Armena reservoirs and fill stations.

4.2 System Updates Since Previous Master Plan

EPCOR Purchase of Boundary Booster Station and 750 mm Waterline

The Blackmud Booster Station (formerly the Boundary Booster Station) was purchased by EPCOR in 2021 along with the existing 750 mm steel waterline extending south to Discovery Park lateral. Due to this purchase, there are now two separate custody transfer points between EPCOR and the Commission. The locations of these are within the Nisku Booster Station and along the Beaumont supply line, just off the main supply line. The purchase of the Blackmud Booster Station will ultimately allow EPCOR to operate at a lower pressure, which has necessitated construction of the Commission's Nisku Booster Station. EPCOR has committed to operating the Blackmud Booster Station at a pressure which will meet the needs of the City of Beaumont and the Nisku East Reservoir, until such time as a second fill line to Beaumont is constructed.

The water use agreement between the Commission and EPCOR requires the Commission to provide notice to EPCOR 5 years prior to construction of the additional Meter Vault and Second Fill Line to service the City of Beaumont. Based on Associated's analysis the second fill line would be required shortly after 2031 (5 years) due to velocity criteria in the existing 400 mm waterline (specifically west of the Nisku East lateral). EPCOR has agreed to meeting the minimum supply pressure to the City of Beaumont until the second fill line is constructed, estimated to be completed by spring of 2028.

Nisku Booster Station

The Nisku Booster Station was constructed with the understanding that EPCOR's ultimate intention is to operate the Blackmud Booster Station at the Tertiary Pressure Zone of 752 m HGL, which will not be sufficient to meet the Commissions needs. As such, the Nisku Booster Station was constructed north of the Nisku West Reservoir, and services all downstream members and customers. The lateral servicing Nisku West is located within the Nisku Booster Station, downstream of the PRV but upstream of the booster pumps.

Beaumont Main Reservoir Supply

The City of Beaumont has started constructing (March, 2026) a new water transmission line from the Main Reservoir to the St. Vital Pumphouse and Reservoir in order to establish a second regional supply connection and ultimately transition St. Vital into the primary service reservoir. This proposed extension would require installing a new pipeline between the two reservoirs and integrating it with the existing Commission supply system.

However, supplying water to St. Vital is constrained primarily by system pressure limitations and elevation differences within Beaumont's network. The St. Vital Reservoir sits 14.5 m higher than the Main Reservoir; the existing

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Commission supply main cannot deliver peak day flows and would only provide average day flows without additional boosting. Furthermore, the presence of a high point between the reservoirs at an elevation of 738.8 m requires a minimum hydraulic grade line of approximately 752 m to maintain adequate pressure.

Current Commission Water Supply Policy indicates that the Commission will supply water to only one reservoir, meaning any new connection to St. Vital, as well as any required booster infrastructure—must be fully funded and constructed by the City of Beaumont. Given these constraints, the City has proposed converting the existing Main Reservoir into a pumping station. This approach would utilize the existing air gap and reservoir at the Main site, with water being repumped to the St. Vital Reservoir to meet peak day demands and support downstream distribution. Because this option does not require increased pressure from the Commission's system and relies solely on City-owned pumping infrastructure, it provides a practical means of supplying St. Vital under current system and policy conditions.

4.3 Facilities

Water is supplied from the Blackmud Booster Station, owned by EPCOR, via 750 mm pipe. EPCOR targets a discharge pressure from Blackmud of approximately 700 kPa (40.77 m head).

The three booster stations owned by the Commission are detailed below.

Nisku Booster Station

The Nisku Booster Station is located within Leduc County, immediately north of the Nisku West Reservoir (Lot 4, Plan 1011 M.C.), to supply and maintain pressure to the majority of the Commission, as described in Section 4.2 above.

Water is supplied to the Nisku Booster Station via a 900 mm diameter PVC DR 25 lateral pipe off of the 750 mm steel main that is owned by EPCOR. Table 4-1 summarizes the pumping capacities for the three pumps at the Nisku Booster Station.

Table 4-1 Nisku Booster Station Pumps

Pump	Pump ID	Rated Capacity	Rated Discharge Head	Power Required
1	P-101	817.2 m^3/hr (227 L/s)	47 m (461 kPa)	149 kW (200 Hp)
2	P-102	817.2 m^3/hr (227 L/s)	47 m (461 kPa)	149 kW (200 Hp)
3	P-103	817.2 m^3/hr (227 L/s)	47 m (461 kPa)	149 kW (200 Hp)

Highway 21 Booster Station

The Highway 21 Booster Station is located at SW01-50-24-4 to increase system pressure to maintain 140 kPa (20 psi) along the Highway 21 line. The Highway 21 Booster Station is located approximately 11.5 km east of the City of Leduc. Water is supplied to the Highway 21 Booster Station via a 250 mm diameter connection from the Commission's 250 mm Highway 21 Line.

A minimum supply pressure of 140 kPa (20 psi) is to be maintained at the upstream side of the Highway 21 Booster Station. The outlet pressure is controlled by VFDs. Based on information provided, this outlet pressure can fluctuate between 826 and 842 kPa. Both booster pumps have been upgraded since 2021. Table 4-2 summarizes the pumping capacities for the two current pumps at the Highway 21 Booster Station.

Table 4-2 Highway 21 Booster Station Pumps

Pump	Pump ID	Rated Capacity	Rated Discharge Head	Power Required
1	BP-0406	74.4 m^3/hr (20.7 L/s)	88.22 m (865 kPa)	30 kW (40 HP)
2	BP-0407	74.4 m^3/hr (20.7 L/s)	88.22 m (865 kPa)	30 kW (40 HP)

The Highway 21 Booster Station operates on a duty/standby pumping configuration, meaning one pump will run at a time.

Telford Lake Booster Station

The Telford Lake Booster Station is located at NW 25-49-25-W4M to supply and maintains water pressure to the Town of Millet. This booster station is located just south of Telford Lake within the City of Leduc. Water is supplied to the Telford Lake Booster Station via a 300 mm diameter connection from the Commission's 550 mm Millet Line, upstream of the Leduc Robinson Reservoir.

A minimum supply pressure of 140 kPa (20 psi) is to be maintained at the upstream side of the Telford Lake Booster Station. The outlet pressure is controlled by VFDs to approximately 680 kPa leaving the station. Table 4-3 summarizes the pumping capacities for the two booster pumps at the Telford Lake Booster Station.

Table 4-3 Telford Lake Booster Station Pumps

Pump	Pump ID	Rated Capacity	Rated Discharge Head	Power Required
1	PMP1	566 m^3/hr (157.2 L/s)	67.06 m (657 kPa)	149 kW (200 Hp)
2	PMP2	566 m^3/hr (157.2 L/s)	67.06 m (657 kPa)	149 kW (200 Hp)

The Telford Booster Station operates on a duty/standby pumping configuration, meaning one pump will run at a time.

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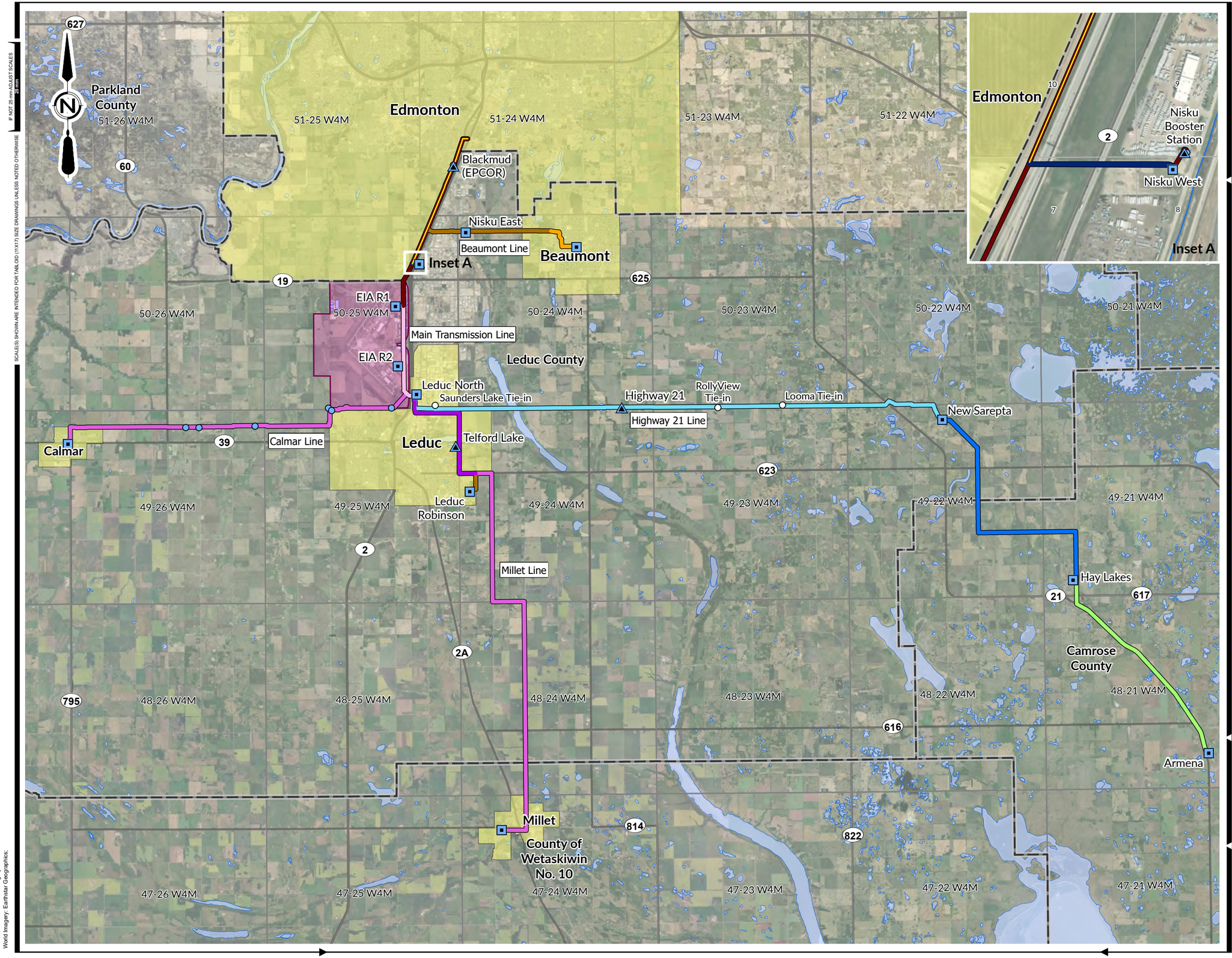

LEGEND:

CRSWSC Facility
- Booster Station
- Reservoir
- Single Connection
- Future Tie-In

Existing Waterline CRSWSC Pipe Diameter (mm)
- 150
- 200
- 250
- 300
- 400
- 500
- 550
- 600
- 750
- 900
- Waterline Owned by EPCOR

Base Data
- Highway
- Water Body
- Edmonton International Airport Land

FIGURE 4-1

CRSWSC
WATER MASTER PLAN

EXISTING SYSTEM

AE PROJECT No.	2025-3197-00
SCALE	1:180,000
DATE	2026APR21
PROJECTION	NAD 1983 3TM 114
DRAWN BY	DD
CHECKED BY	KR
DESCRIPTION	ISSUED FOR DRAFT

0 2,500 5,000 m

IF NOT 25 mm ADJUST SCALES
SCALE(S) SHOWN ARE INTENDED FOR TABLOID (11X17) SIZE DRAWINGS UNLESS NOTED OTHERWISE

SAVE DATE: 2026-04-20 2:05 PM SAVED BY:
DRAWING PATH: O:\2025\2025-3197-00\02025-3197-00.aprx
DATA SOURCE: World Imagery: Maxar
World Imagery: Earthstar Geographics;

4.4 System Capacity

EPCOR's 750 mm supply line to the Commission was designed to handle a theoretical ultimate demand of 650 L/s, based upon a maximum velocity of 1.5 m/s. This maximum velocity and other pipeline parameters are discussed in the design criteria provided in Section 3. The following are the theoretical capacities of each supply main in the system:

- Main Transmission Line – 600 mm (to Leduc North): 411 L/s
- Beaumont Line - 400 mm (to Nisku East and City of Beaumont): 194 L/s
- Calmar Line – 300 mm: 103 L/s
- Millet Line
  - Leduc North to Leduc Robinson – 550 mm: 240 L/s
  - Downstream of Leduc Robinson – 300 mm: 81 L/s
- Highway 21 Line
  - Leduc North to the Hamlet of New Sarepta – 250 mm: 57 L/s
  - New Sarepta to the Village of Hay Lakes – 200 mm: 37 L/s
  - Hay Lakes to the Hamlet of Armena – 150 mm: 22 L/s

4.5 Storage Capacity

As per the Commission's Bylaws, each customer is responsible to provide adequate storage to meet their requirements. Table 4-4 shows the existing storage capacity of each member and customer.

Table 4-4 Existing Water Storage Capacity

Member	Reservoir Capacity (m^3)	Total Reservoir Capacity (m^3)
City of Leduc	• North Reservoir = 14,000 • Corinthia Reservoir = 6,400 • Robinson Reservoir = 4,500	24,900
City of Beaumont	• Main Reservoir = 7,273 • St. Vital Reservoir = 10,000	17,273
Leduc County	• Nisku East Reservoir = 6,815 • Nisku West Reservoir = 4,545	11,360
Edmonton Airports	• EIA Reservoir 1 = 2,000* • EIA Reservoir 2 = 4,200	6,200
Town of Calmar	• Calmar Reservoir = 5,000	5,000
Hamlet of New Sarepta	• New Sarepta Reservoir = 1,286	1,286
Village of Hay Lakes	• Hay Lakes Reservoir = 474	474
Camrose County (Hamlet of Armena)	• Armena Reservoir = 120 • Ervick Reservoir = 618 • Ohaton Reservoir = 397	1,135
Town of Millet	• Millet Reservoir = 4,090	4,090

**Edmonton Airports has indicated that the total capacity of EIA R1 is 4,200 m^3, however due to hydraulic limitations only 2,000 m^3 is available*

5 HYDRAULIC ASSESSMENT

5.1 Existing System Model

The existing Commissions' system has been modelled using the computer hydraulics program WaterCAD, by Bentley. The model was updated to reflect upgrades to the existing system including pipeline extensions, Nisku Booster Station, Highway 21 booster pump upgrades, current design flows, and any other additional information relevant to the assessment.

The most significant update to the model has been the inclusion of the Nisku Booster Station. The station has been modelled based on available record drawings using the installed pump curves. It is understood that the pumps operate to maintain a target pressure at the Leduc North Reservoir, of 310 kPa (45 psi). An existing PRV currently limits the supply pressure within the Nisku Booster Station to 379 kPa (55 psi).

The Commission's system comprises three booster stations. Existing members, customers, and facilities supplied directly by these booster stations as well as EPCOR's Blackmud Booster Station, are identified below.

Blackmud Booster Station (EPCOR)

- Nisku East and West Reservoirs
- City of Beaumont
- Nisku Booster Station
- Discovery Park (EPCOR)

Nisku Booster Station

- EIA Reservoirs 1 and 2
- Leduc North Reservoir
- Town of Calmar
- Telford Lake Booster Station
- Highway 21 Booster Station

Telford Lake Booster Station

- Leduc Robinson Reservoir
- Town of Millet

Highway 21 Booster Station

- Hamlet of New Sarepta
- Village of Hay Lakes
- Hamlet of Armena

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5.2 Model Validation

The existing WaterCAD model was validated using information provided by the Commission. This included flow and pressure data at all Commission facilities on four different occasions. Each dataset was compared against the existing model, which was updated to reflect the recorded flows. Pressure results were then compared between the model and field data to assess the model's adequacy.

The data provided is listed below along with the reference used in the validation:

- Q5 Facility Pressure – Flow Snapshot Part 1 (Run 1)
- Q5 Facility Pressure – Flow Snapshot Part 2 (Run 2)
- Q5 Facility Pressure – Flow Snapshot Part 3 (Run 3)
- Point in Time Snapshot (Run 4)

The field results and modelled results were summarized and compared. Based on the observations, tie-in elevations at some locations were reviewed and revised where appropriate. Note that the pressure at the Blackmud Booster Station was not provided for the specific runs and is assumed at 700 kPa as indicated by the Commission. The Discovery Park demands are also unknown and assumed to be zero for validation purposes.

Following the adjustments, the model was rerun and the results summarized and compared against the field data provided. Table 5-1 presents the validation results comparison. Of note:

- Inlet elevations were reviewed and revised where necessary, generally from floor elevation to pipe centreline
- The diameter of the 400 mm C303 pipe was increased from the nominal diameter to the actual diameter of 406 mm
- The C value was reduced from 130 to 120 in the 400 mm C303 waterline to Beaumont

The pressure difference at Nisku East suggests that the Blackmud Booster Station pressure may have been operating slightly higher than 700 kPa.

Table 5-1 Validation Results Comparison

Location	Difference (SCADA to Model)			
	Run 1 10/6/2025	Run 2 10/3/2025	Run 3 10/3/2025	Run 4 10/1/2025
Fill Station Inlet Pressure (psi)				
Nisku East	3.1	3.9	3.5	1.9
Nisku West	0.0	-1.5	-0.8	0.0
Beaumont	0.2	5.2	4.6	2.8
EIA Reservoir 1	-0.8	-1.1	-0.6	-1.2
EIA Reservoir 2	-0.6	-0.9	-0.5	-0.4
Leduc North	0.3	0.0	1.5	0.0
Leduc Robinson	0.7	1.3	0.8	1.2

Location	Difference (SCADA to Model)			
	Run 1 10/6/2025	Run 2 10/3/2025	Run 3 10/3/2025	Run 4 10/1/2025
Calmar	0.8	1.9	2.0	1.1
Millet	0.7	1.1	-0.4	0.5
New Sarepta	-0.6	-2.5	0.8	0.0
Hay Lakes	-2.4	-8.4	0.8	-1.7
Armena	0.1	-10.8	4.8	0.6
Booster Station Pressure (psi)				
Nisku	1.7	0.3	1.8	0.4
Telford Lake	-1.1	-2.2	-0.5	-0.8
Highway 21	0.2	-4.1	3.1	0.4
Booster Station Flow (L/s)				
Nisku	1.3	7.8	-2.4	0.8
Telford Lake	0.3	-0.5	0.0	0.1
Highway 21	0.1	5.8	-2.5	-0.3

Runs 2 and 3 do not reconcile in terms of the flow through the booster stations and at the downstream fill stations, based on the information provided. This appears to be primarily focused downstream of the Highway 21 Booster Station. Although Runs 2 and 3 do not reconcile, Runs 1 and 4 showed very good results with the field data and modelled data falling well within 5 psi. The C-Values adopted in the 2020 Master Plan are appropriate for use in the current assessment, other than the 400 mm C303 watermain to Beaumont which has been reduced to 120. No further changes are proposed to the model.

5.3 Existing System Model Results

Based on the existing system peak day model results, the following operating conditions are expected at the booster stations:

- Two pumps operating at the Nisku Booster Station at 765 m HGL, to achieve a target operating pressure at Leduc North of 310 kPa (45 psi)
- One pump operating at the Telford Lake Booster Station at an HGL of 799 m
- One pump operating at the Highway 21 Booster Station at an HGL of 809 m
- Operating HGL of 754 m at the Blackmud Booster Station to meet the minimum supply pressure at Beaumont

Peak day pressures range from 140 kPa (20 psi) at Beaumont and south of Hay Lakes and 827 kPa (120 psi) at the discharge of the Highway 21 Booster Station.

Velocity within the waterlines will remain below 1.5 m/s (other than within some facilities).

5.4 Minimum Operating Pressure

The hydraulic analysis identified that it will be necessary for the Commission to monitor and increase the minimum supply pressure to the Leduc North Reservoir over time. Currently, the minimum delivery pressure is controlled to 310 kPa (45 psi) at Leduc North Reservoir, and the pumps at the Nisku Booster Station are operated to maintain this minimum system pressure. The setpoint is anticipated to meet the minimum system pressure for the next 5 years.

As demands continue to increase south and east of the City of Leduc, it will be necessary to assess and increase overall system pressure to maintain a minimum pressure of 140 kPa (20 psi) at all locations on the system.

5.5 Reservoir Filling Rates

The Commission establishes fill rate set points at their reservoirs to reflect the daily demand draw rates. Maximum flow rates are set at 1.9 x ADD, or slightly above the PDD (1.8 x ADD). These set points should be updated as required as demands change over time.

5.6 Pumping Assessment

The existing pumping capacity was assessed for each facility as presented in Table 5-2 below, using the peak day design demands. At each booster station, one pump is kept in reserve as backup. Values in **bold** indicate additional pumping is required.

Table 5-2 Pumping Capacity Assessment

Location	Flowrate (L/s)					
	2026	2031	2036	2041	2046	2051
Nisku – 2 Pumps Operating						
Total Capacity	454	454	454	454	454	454
Peak Day Flow	252.9	294.6	341.9	390.5	445.5	**507.9**
Surplus/Deficit	201.1	159.4	112.1	63.5	8.5	**-53.9**
Telford Lake – 1 Pump Operating						
Total Capacity	157.2	157.2	157.2	157.2	157.2	157.2
Peak Day Flow	88	99.3	112	126.3	142.5	**160.7**
Surplus/Deficit	69.2	57.9	45.2	30.9	14.7	**-3.5**
Highway 21 – 1 Pump Operating						
Total Capacity	20.7	20.7	20.7	20.7	20.7	20.7
Peak Day Flow	9.2	16.4	**23.3**	**26.6**	**30.5**	**35.2**
Surplus/Deficit	11.5	4.3	**-2.6**	**-5.9**	**-9.8**	**-14.5**

Existing pumping capacity (one pump in reserve)

- *Nisku Booster Station (3 x 227 L/s pumps at 47 m)*
- *Highway 21 Booster Station (2 x 20.7 L/s pumps at 88.2 m)*
- *Telford Lake Booster Station (2 x 157.2 L/s pumps at 67.1 m)*

The table indicates that a third pump will be required to operate at the Nisku Booster Station prior to 2051. As one pump is required to be maintained as backup, a fourth pump will need to be installed prior to 2051. Pump upgrades will be required for the Highway 21 Booster Station prior to 2036. Although Table 5-2 indicates that a pump upgrade may be required at the Telford Lake Booster Station by 2051, it is not anticipated due to increasing discharge pressure from the Nisku Booster Station. Pump replacement due to age or condition has not been considered in this assessment.

Figure 5-1 presents the system curve from the Nisku Booster Station including the current and projected average day and peak day demands through 2051. The figure presents the pump capacity based on the operational range of the VFD (between 30 and 60 Hz), for one pump, two pumps and three pumps operating simultaneously. The demand "curves" presented on the figure are directly related to the downstream demand distribution and downstream upgrades. As such, they are specific to each modelled year and cannot be combined into a single curve.

The figure indicates that a single pump would be sufficient to meet the existing AD and the 10-year AD. The 25-year AD demand is shown near the top end of a single pump capacity. Two pumps will be required to meet the existing and 10-year PD, and three pumps will be required to meet the 25-year PD demands. Note that the water model does not always capture the same level of detail as the system curve, as it does not account for VFD operating limitations. The system curve pump head requirements are based on the model results including discharge pressure assumptions at the Blackmud Booster Station and the Nisku Booster Station inlet PRV setpoint of 379 kPa (55 psi).

Figures 5-2 to 5-4 present the Hydraulic Grade Lines (HGL) from the Nisku Booster Station to Calmar, Millet, and Armena, respectively. The 2026, 2036, and 2051 peak day flows are shown on each figure.

The HGL figures demonstrate that the existing system has sufficient capacity for both the 2026 and 2036 peak day flows. Upgrades to accommodate the 2051 peak day flows will be required, and the resulting change in pipe rating is shown on the figures as dashed lines. Upgrades between the Nisku Booster Station and the Millet Line are assumed to be PVC DR25 pipe, in keeping with the discharge main from the Nisku Booster Station. In each HGL figure, the pipe pressure rating is noticeably lower due to the proposed upgrades. This is due to the fact that PVC has a lower pipe pressure rating than steel, which is the existing pipe material. The proposed upgrade east of the Highway 21 Booster Station is assumed to be HDPE DR 11 pipe, as increased pipe pressure rating is required.

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Figure 5-1 Nisku Booster Station System Curve

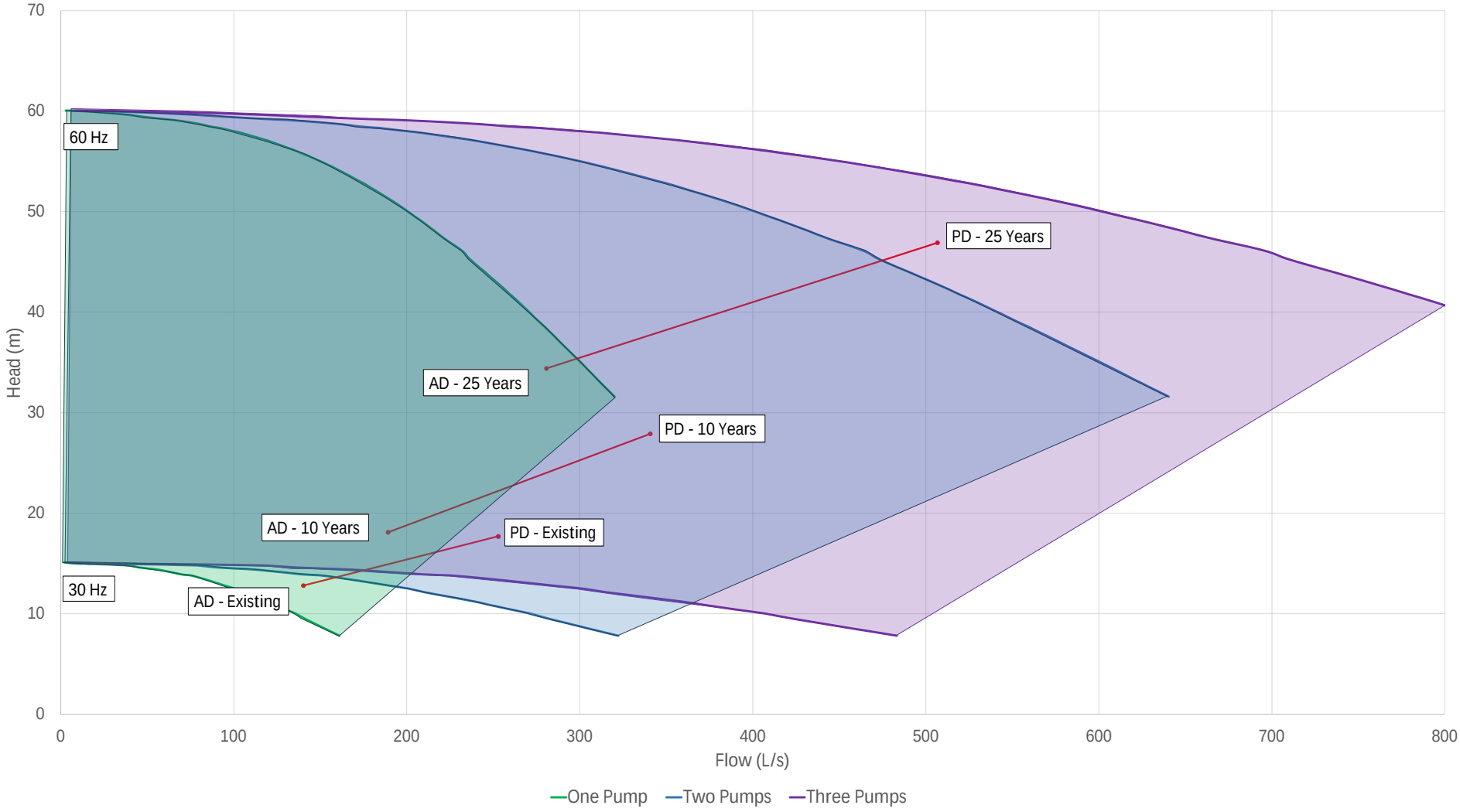
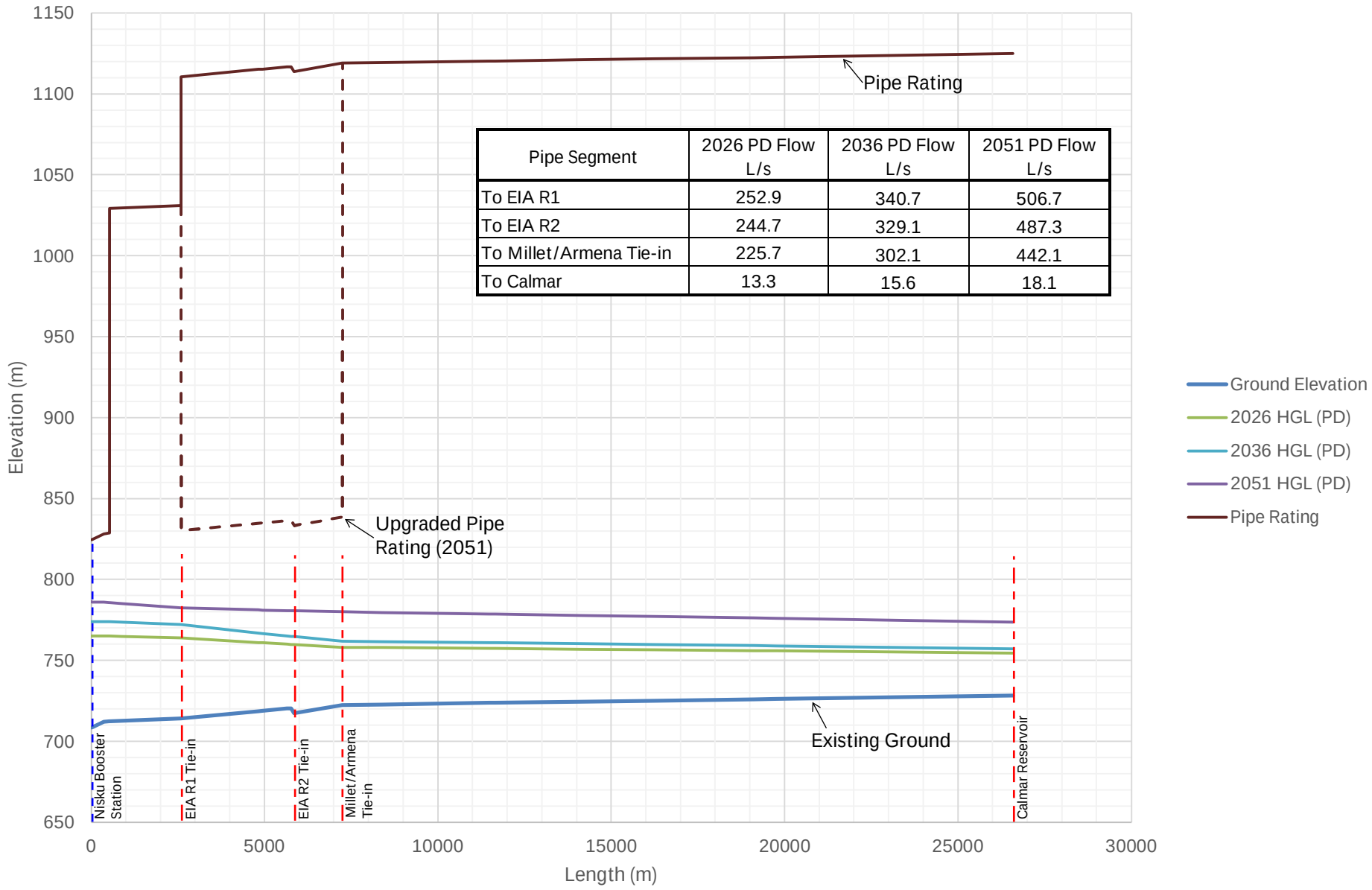


Figure 5-2 Hydraulic Grade Line
Nisku Booster Station to Calmar



Pipe Segment	2026 PD Flow L/s	2036 PD Flow L/s	2051 PD Flow L/s
To EIA R1	252.9	340.7	506.7
To EIA R2	244.7	329.1	487.3
To Millet/Armena Tie-in	225.7	302.1	442.1
To Calmar	13.3	15.6	18.1

Figure 5-3 Hydraulic Grade Line
Nisku Booster Station to Millet

Pipe Segment	2026 PD Flow L/s	2036 PD Flow L/s	2051 PD Flow L/s
To EIA R1	252.9	340.7	506.7
To EIA R2	244.7	329.1	487.3
To Calmar Tie-in	225.7	302.1	442.1
To Leduc North/Armena Tie-in	212.4	286.5	424
To Saunders Lake	88.0	117.0	176.5
To Leduc Robinson	88.0	112.0	160.7
To Millet	11.2	13.7	18.4

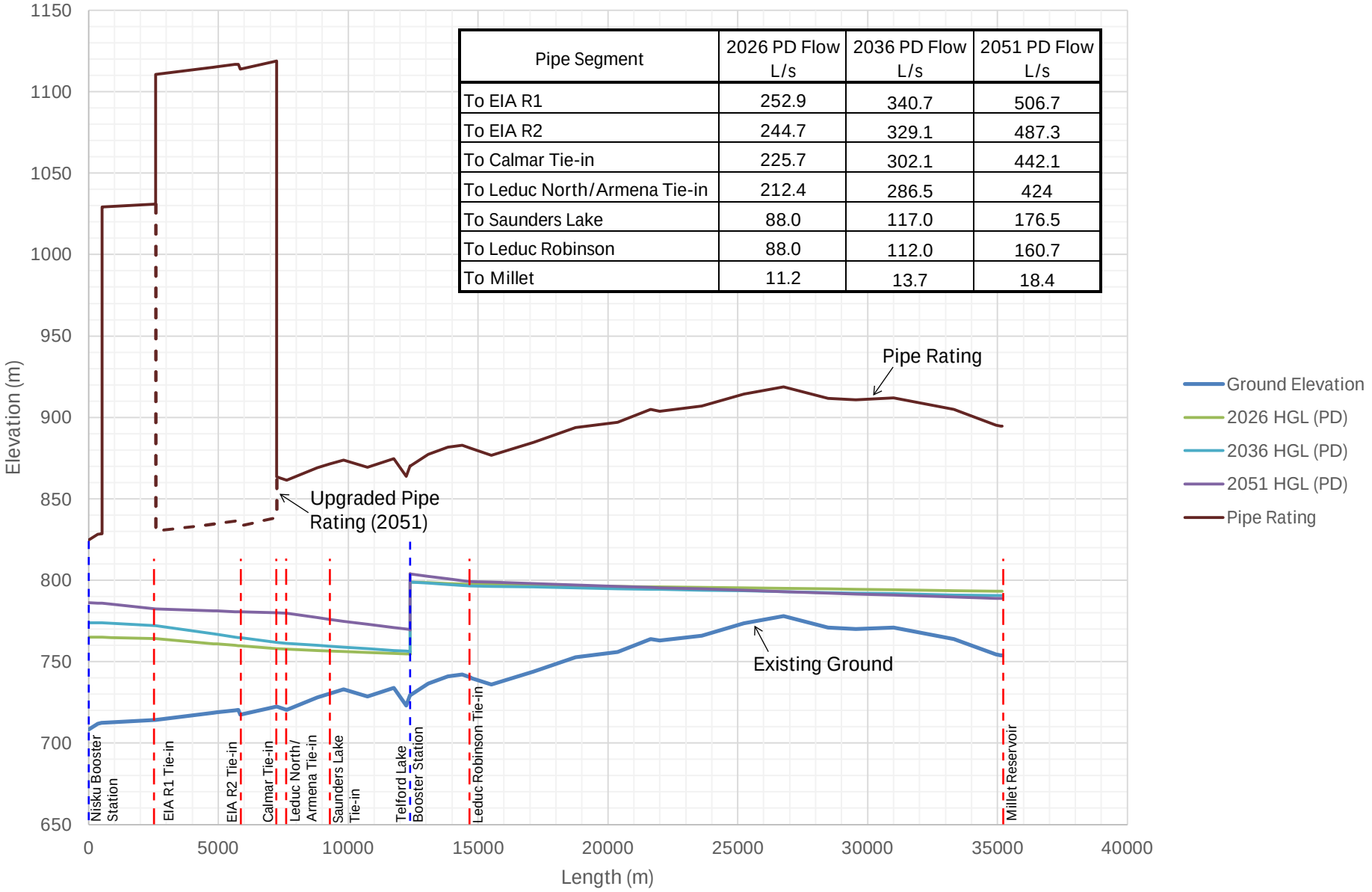
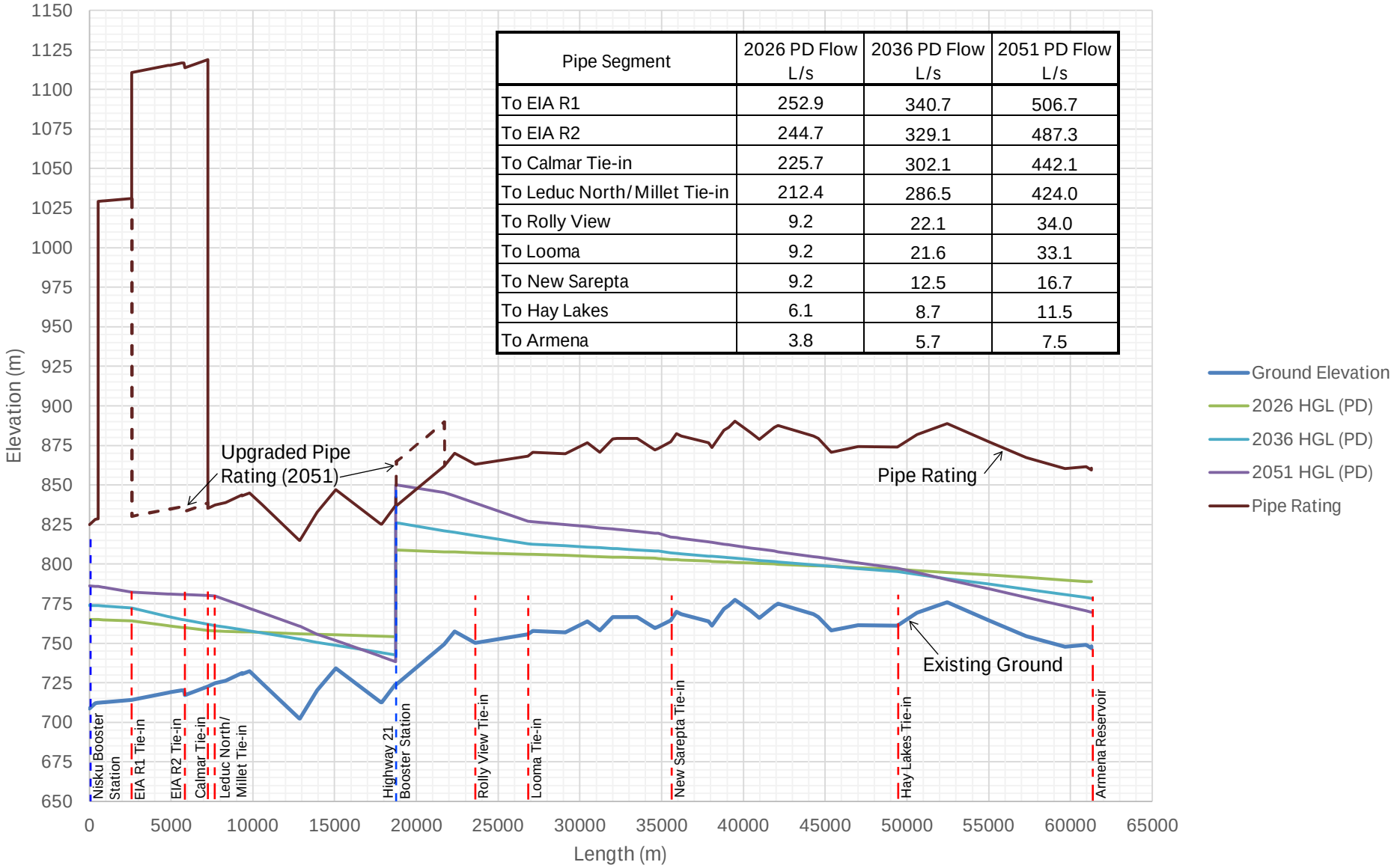


Figure 5-4 Hydraulic Grade Line
Nisku Booster Station to Armena

Pipe Segment	2026 PD Flow L/s	2036 PD Flow L/s	2051 PD Flow L/s
To EIA R1	252.9	340.7	506.7
To EIA R2	244.7	329.1	487.3
To Calmar Tie-in	225.7	302.1	442.1
To Leduc North/Millet Tie-in	212.4	286.5	424.0
To Rolly View	9.2	22.1	34.0
To Looma	9.2	21.6	33.1
To New Sarepta	9.2	12.5	16.7
To Hay Lakes	6.1	8.7	11.5
To Armena	3.8	5.7	7.5



5.7 Storage Assessment

The Commission's *Water Supply Policy* details the storage requirements for members and customers as two times the average day demand plus fire storage, where provided. Table 5-3 provides a comparison of each Community's reservoir capacity and the average two-day storage plus their reported fire storage requirements, based on the 2026 design demands. As shown, the average two-day demand is significantly lower than the capacity of the majority of the reservoirs. Values in bold show where the reservoir capacity does not meet the total storage requirements.

Table 5-3 Fire Storage Assessment

Customer	Reservoir Capacity	Fire Storage Requirement	2026 2-Day Storage	2026 + Fire	2051 2-Day Storage	2051 + Fire
City of Leduc	24,957	2,452	18,424	20,876	34,157	**36,609**
City of Beaumont	17,273	3,460	9,732	13,192	24,016	**27,476**
Leduc County	11,360	2,484	5,877	8,361	14,071	**16,555**
Town of Calmar	5,000	523*	1,281	1,804	1,735	2,258
Edmonton Airports	6,200	1,755	2,506	4,261	6,204	7,959
Village of Hay Lakes	474	523*	217	**740**	382	**905**
Hamlet of New Sarepta	1,286	648	302	950	495	1,143
Camrose County (Hamlet of Armena)	1,135	-	367	367	717	717
Town of Millet	4,090	523*	1,076	1,599	1,765	2,288

**The Town of Calmar, the Village of Hay Lakes, and the Town of Millet did not provide a fire storage requirement, therefore a value of 523 m^3 was assigned, based on a fire flow of 83 L/s for 1.75 hrs.*

Hay Lakes is the only member whose present-day total storage requirements exceed their reservoir capacity, based on the Commission's policy. However, the required fire storage has been assumed as the fire flow target has not been communicated. By 2051, Leduc, Beaumont, and Leduc County will all also require further reservoir capacity to meet the total projected storage requirements.

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6 PROPOSED SYSTEM UPGRADES

Proposed upgrades are outlined below based on the hydraulic assessment, and do not consider condition or age of the infrastructure. Note that the majority of the upgrades proposed for each scenario must occur before the benchmark year. For example, an upgrade which is necessary to meet the 2046 system demands will need to occur at some point between 2041 and 2046.

No upgrades are proposed to the existing system.

6.1 5-Year Model (2031)

Based on the 5-year (2031) peak day model results, the following operating conditions are expected at the booster stations:

- Two pumps operating at the Nisku Booster Station at 767.5 m HGL, to achieve a target operating pressure at Leduc North of 310 kPa (45 psi)
- One pump operating at the Telford Lake Booster Station at an HGL of 799 m
- One pump operating at the Highway 21 Booster Stations at an HGL of 816 m
- Operating HGL of 765 m at the Blackmud Booster Station to meet the minimum supply pressure at Beaumont

Peak day pressures range from 142 kPa (21 psi) at the Beaumont Reservoir and 901 kPa (131 psi) at the discharge of the Highway 21 Booster Station.

System Upgrades

Replace the existing 200 mm diameter Nisku East lateral with a 350 mm diameter lateral watermain due to velocity criteria.

A new supply main to the Beaumont Reservoir will be required shortly after 2031, as modelling indicates velocities of approximately 1.7 m/s in the 400 mm main west of the Nisku East lateral, resulting in headlosses of approximately 30 m and consequently lower pressures towards Beaumont. This would likely require increased pumping head to counteract, if not a new supply main. While this velocity exceeds the preferred design guideline of 1.5 m/s, it remains below the typical 3.0 m/s upper limit for existing infrastructure; however, it does indicate increasing hydraulic constraints and reduced system efficiency, supporting the need for future system upgrades.

The Commission will be responsible for installing the section of waterline located south of 41 Street SE, with EPCOR responsible for installing the section north of this location. It is anticipated that the watermain will terminate at a connection to the existing 400 mm supply main west of Beaumont. The watermain will be extended to the Beaumont Reservoir at a later date.

The timing, diameter and alignment of the future watermain will be determined in collaboration with EPCOR. The analysis indicates a 600 mm waterline will be required to service Beaumont throughout the study period. Flow through the proposed second supply main to Beaumont may offset the timing for future upgrades to the existing 750 mm EPCOR steel supply main (downstream of the Blackmud Booster Station). Note that upgrades to this EPCOR supply main have not been assessed as part of the current analysis. A new supply main to Beaumont would allow the operating HGL of the Blackmud Booster Station to be reduced from 765 m (in 2031) to 752 m, which is the EPCOR tertiary pressure zone operating HGL. In discussion with EPCOR, EPCOR undertakes capital planning in four-year

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cycles, and while the Beaumont second feed line is not included in the 2028–2031 cycle, it is currently anticipated to be delivered in the subsequent 2032–2035 cycle.

If possible, directing additional flow to the Nisku West Reservoir (reducing flow to the Nisku East Reservoir), may delay the required supply main construction.

6.2 10-Year Model (2036)

Based on the 10-year (2036) peak day model results, the following operating conditions are expected at the booster stations:

- Two pumps operating at the Nisku Booster Station at 774 m HGL, to achieve a target operating pressure at Leduc North of 343 kPa (50 psi)
- One pump operating at the Telford Lake Booster Station at an HGL of 799 m
- One pump operating at the Highway 21 Booster Stations at an HGL of 826 m
- Operating HGL of 752 m at the Blackmud Booster Station (see system upgrades for further details)

Peak day pressures range from 140 kPa (20 psi) at a high point upstream of the Highway 21 Booster Station and 999 kPa (145 psi) at the discharge of the Highway 21 Booster Station.

System Upgrades

The Highway 21 booster pumps will require upgrading by 2036 to meet the demand and pressure head requirements.

6.3 15-Year Model (2041)

Based on the 15-year (2041) peak day model results, the following operating conditions are expected at the booster stations:

- Two pumps operating at the Nisku Booster Station at 781 m HGL, to achieve a target operating pressure at Leduc North of 382 kPa (55 psi)
- One pump operating at the Telford Lake Booster Station at an HGL of 801 m
- One pump operating at the Highway 21 Booster Stations at an HGL of 834 m
- Operating HGL of 752 m at the Blackmud Booster Station (will depend on the future EPCOR zone pressure)

Peak day pressures range from 143 kPa (21 psi) at a high point upstream of the Highway 21 Booster Station and 1,078 kPa (156 psi) at the discharge of the Highway 21 Booster Station.

System Upgrades

No upgrades are anticipated in the 15-year (2041) system.

6.4 20-Year Model (2046)

Based on the 20-year (2046) peak day model results, the following operating conditions are expected at the booster stations:

- Two pumps operating at the Nisku Booster Station at 780 m HGL, to achieve a target operating pressure at Leduc North of 448 kPa (62 psi)
- One pump operating at the Telford Lake Booster Station at an HGL of 802 m

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- One pump operating at the Highway 21 Booster Stations at an HGL of 839 m
- Operating HGL of 752 m at the Blackmud Booster Station (will depend on the future EPCOR zone pressure)

Peak day pressures range from 140 kPa (20 psi) at a high point upstream of the Highway 21 Booster Station and 1,127 kPa (163 psi) at the discharge of the Highway 21 Booster Station.

System Upgrades

Twin the existing 600 mm steel watermain from EIA Reservoir 1 to EIA Reservoir 2 with a 900 mm pipe by 2046, as the velocity will exceed the preferred design guideline.

The new Beaumont supply main from north of the City of Beaumont will be extended to connect to the Beaumont Reservoir, as the velocity will exceed the preferred design guideline. The waterline is assumed to be 500 mm based on the current analysis.

Approximately 3 km of the Highway 21 watermain will be replaced with a 300 mm DR 11 HDPE pipe. The current watermain will not support the proposed growth and increase in operating pressure required to meet projected downstream demands. The existing HDPE pipe's pressure rating is 160 kPa, while the new HDPE material formulation will have a pressure rating of 200 kPa. The existing 3 km of watermain will be abandoned. This is the result of higher-than-expected growth in the downstream system.

6.5 25-Year Model (2051)

Based on the 25-year (2051) peak day model results, the following operating conditions are expected at the booster stations:

- Three pumps operating at the Nisku Booster Station at 787 m HGL, to achieve a target operating pressure at Leduc North of 524 kPa (76 psi)
- One pump operating at the Telford Lake Booster Station at an HGL of 804 m
- One pump operating at the Highway 21 Booster Stations at an HGL of 850 m
- Operating HGL of 752 m at the Blackmud Booster Station (will depend on the future EPCOR zone pressure)

Peak day pressures ranging from 140 kPa (20 psi) at a high point downstream of Hay Lakes and 1,234 kPa (179 psi) at the discharge of the Highway 21 Booster Station.

System Upgrades

Twin the existing 600 mm steel watermain from EIA Reservoir 2 to the Millet line tie-in with a 900 mm pipe by 2051, as the velocity will exceed the preferred design guideline.

Install the fourth pump at the Nisku booster station so that three pumps can operate with one as standby.

The Commission may also want to consider a short interconnection between the Highway 21 and Millet waterlines. Connecting these pipes at the easternmost point will reduce headloss in the Highway 21 waterline upstream of the Highway 21 Booster Station. Significant headloss through this line is a contributing factor of increased pumping head requirements at the Nisku Booster Station. This upgrade is not required and has therefore not been costed for the purpose of this Master Plan but has been identified for future consideration to reduce the potential pumping requirements and therefore electrical costs at the Nisku Booster Station. It is anticipated that the pumping head

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requirements at the Nisku Booster Station could be reduced by approximately 5 m in 2051, should the interconnection be constructed.

6.6 Summary of Proposed Upgrades

Upgrades proposed over the 25-year study period are summarized in Table 6-1 below and shown in Figure 6-1.

Table 6-1 Summary of Proposed Upgrades

Year	Proposed Upgrade
5-Year (2031)	• 350 mm Nisku East Lateral Replacement • 600 mm Beaumont Secondary Supply Main
10-Year (2036)	• Highway 21 Booster Pumps Upgrade
20-Year (2046)	• 900 mm Watermain Twinning from EIA R1 to EIA R2 • 500 mm Beaumont Supply Main Extension to Beaumont Reservoir • 300 mm Highway 21 Waterline Replacement (3 km)
25-Year (2051)	• 900 mm Watermain Twinning from EIA R2 to the Millet Line • Install fourth Nisku Booster Station Pump

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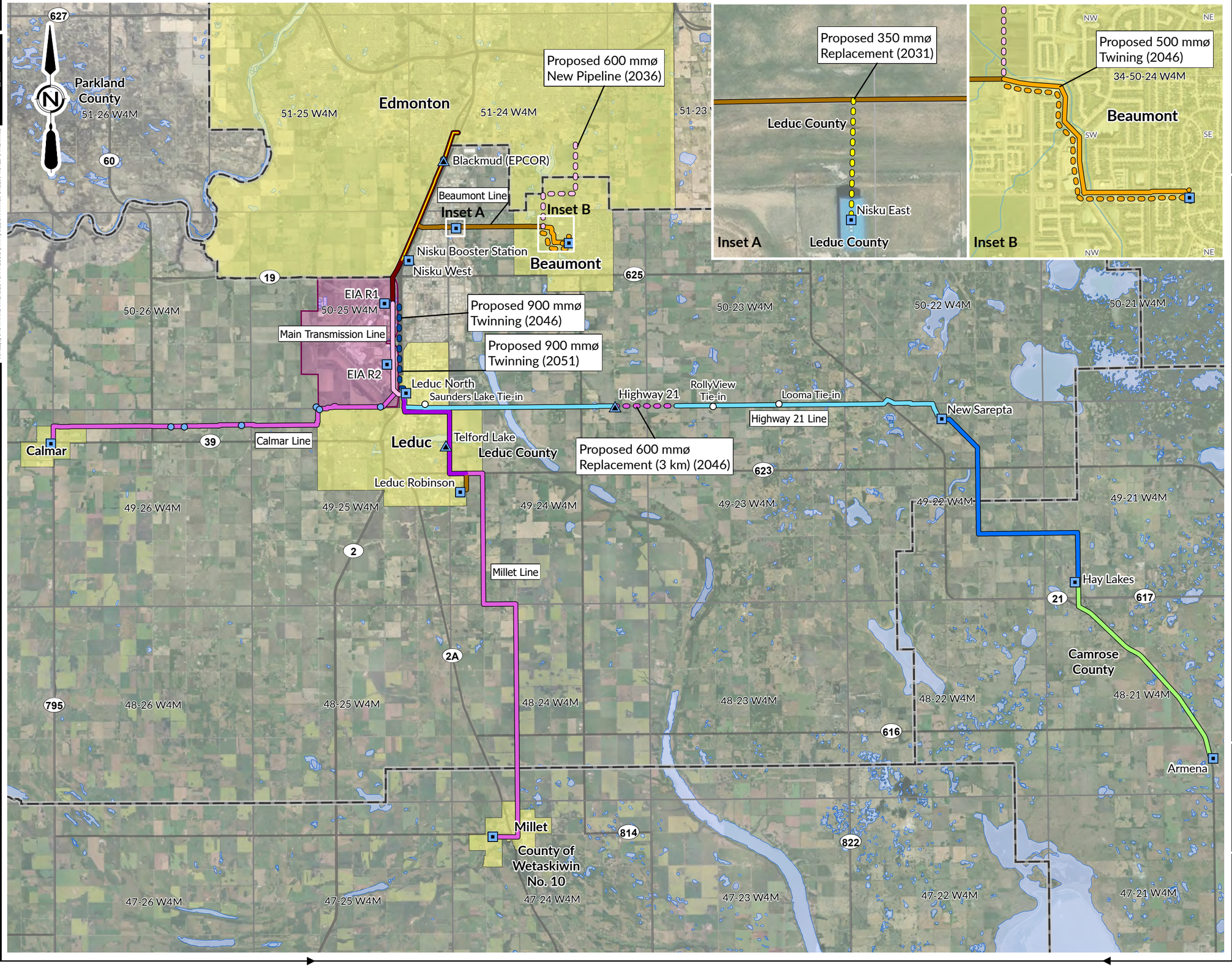
IF NOT 25 mm ADJUST SCALES
SCALE(S) SHOWN ARE INTENDED FOR TABLOID (11X17) SIZE DRAWINGS UNLESS NOTED OTHERWISE



Associated Engineering

CANADA'S BEST MANAGED COMPANIES Platinum member

LEGEND:

CRSWSC Facility
- Booster Station
- Reservoir
- Single Connection
- Future Tie-In

Existing Waterline CRSWSC
Pipe Diameter (mm)
- 150
- 200
- 250
- 300
- 400
- 500
- 550
- 600
- 750
- 900
- Waterline Owned by EPCOR

Proposed Upgrades
Pipe Diameter (mm)
- 300
- 350
- 500
- 600
- 900

Base Data
- Highway
- Water Body
- Edmonton International Airport Land

FIGURE 6-1

CRSWSC
WATER MASTER PLAN

PROPOSED UPGRADES

AE PROJECT No.	2025-3197-00
SCALE	1:180,000
DATE	2026APR21
PROJECTION	NAD 1983 3TM 114
DRAWN BY	DD
CHECKED BY	KR
DESCRIPTION	ISSUED FOR DRAFT

0 2,500 5,000 m

SAVE DATE: 2026-04-20 2:06 PM SAVED BY:
DRAWING PATH: O:\projects\...\2025-3197-00\2025-3197-00.aprx
DATA SOURCE: World Imagery, Esri, Maxar, Earthstar Geographics;

6.7 Water Conservation

In 2025, the Commission reported a water-billing capture rate of 96.98%, indicating that unaccounted-for water represented just over 3.02% of total system flow. Given that the Commission's metering equipment is understood to operate within an accuracy range of approximately ±2%, actual system water loss may be even lower than reported. Continued efforts to reduce water loss from the system and encourage water conservation remain important components of responsible system management.

To minimize losses and ensure accurate accounting of all water use, the Commission may consider several operational improvements. These include:

- Tracking all non-metered uses—such as sampling, hydrant flushing, and operational discharges—so that these flows can be incorporated into overall water-use reporting.
- Maintaining a regular meter-calibration program, which would help ensure that metered data remains reliable and reflective of true system conditions.

The Commission will also continue to encourage member municipalities and their customers to adopt water-conscious practices and improve accounting for water loss within their own distribution systems.

Member municipalities play a critical role in overall system efficiency and should consider undertaking community-level water audits to identify physical losses (such as leaks, service failures, or breakages) as well as commercial losses resulting from meter inaccuracies or billing anomalies. Water audits can provide valuable insight into system performance and guide targeted corrective actions. In addition, municipalities are encouraged to develop public education programs aimed at reducing residential and commercial water consumption. These programs could include guidance on household or business water audits, evaluation of water-efficient fixtures and operational practices, and consideration of low-water-use landscaping and irrigation methods.

To support these efforts, the Commission may provide member municipalities with educational materials outlining best practices for water conservation and system efficiency. Doing so would help promote consistent messaging across the region and strengthen collective progress toward reducing water loss and improving long-term water sustainability.

STRATEGIC PLAN No. 2.5.2 – ENVIRONMENTAL STEWARDSHIP

6.8 Climate Change

Climate change refers to long-term shifts in climatic conditions, including variations in temperature, precipitation, wind patterns, snow cover, and the frequency and severity of extreme weather events. These changes can affect both average conditions and the intensity of climate-related hazards. For a regional water system, climate change presents several key risks, including:

- Potential water shortages
- Reduced source-water quality
- Increased vulnerability of critical infrastructure

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The Commission's source water is the North Saskatchewan River, which is treated and supplied to the Commission by EPCOR. Climate-related hazards—both short-term and long-term—may influence the ability of the region to withdraw, treat, and distribute water reliably.

Risk of Water Shortage and Inadequate Water Quality

The risk of water shortage and reduced water quality is influenced by both drought conditions and river flow variability. During drought or low-flow periods, reduced water availability and diminished dilution capacity can degrade water quality through elevated temperatures, sediment buildup, and upstream nutrient loading, which may limit treatment effectiveness and constrain supply. Conversely, high-flow events can introduce increased turbidity and debris, also challenging treatment processes and potentially reducing available supply. In response to supply constraints, the Regional Water Customers Group may implement restrictions by adjusting daily water allocations to member commissions. The Commission would then reduce deliveries to its members, requiring local conservation measures. While such restrictions have historically been short in duration, more severe or prolonged conditions could necessitate stricter and longer-term measures to ensure essential water needs are met.

It is noted, however, that these risks are considered low likelihood, as current allocations from the North Saskatchewan River are estimated to be approximately 30% of total capacity. As such, while the potential consequences of water shortage or reduced quality are high, the likelihood of occurrence remains low under current allocation and supply conditions.

Infrastructure Vulnerability

Climate change may also increase risks to the Commission's extensive network of buried pipelines, river and creek crossings, booster stations, fill stations, and communication towers. Potential hazards include river flooding, high overland flows, heavy precipitation, and localized drainage failures. Flooding, riverbank erosion, and channel scouring may damage pipeline crossings or affect access to facilities. Higher temperatures, extreme weather, and stronger storm events may lead to greater wear on facilities, increased heating and cooling requirements, and greater exposure to power disruptions such as brownouts or blackouts—each of which can impair the Commission's ability to deliver water. In periods of severe weather, operator access to sites across the nine member communities may also be limited due to poor driving conditions or damaged roadways.

To mitigate climate-related infrastructure risks, the Commission can enhance system resilience through targeted upgrades to transmission mains; implement redundancy in key supply corridors; and harden critical facilities such as booster and fill stations against flooding and power disruptions. Expanding SCADA, backup power, and communications systems will support reliable operations, while coordinated emergency planning with EPCOR and member municipalities will strengthen response capabilities. These measures, supported by risk-informed asset management and capital planning, will help ensure continued service reliability under increasingly variable climate conditions.

Potential Regional Climate Futures

Two broad climate scenarios could significantly influence water demand in the Edmonton region. A wetter, cooler climate may reduce outdoor water use, potentially delaying the need for planned system upgrades. Conversely, a hotter, drier climate would likely increase water consumption and place additional pressure on the Commission to supply higher volumes, potentially requiring stricter conservation measures and policy enforcement.

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Recommended Actions

Considering these risks, the Commission should proactively assess the resilience of its infrastructure and operations under future climate conditions. Recommended actions include:

- Reviewing the long-term sustainability and vulnerability of existing infrastructure and operations, with consideration of climate-related hazards.
- Establishing and maintaining emergency response protocols specific to climate-related events; the Commission has recently updated its emergency response plan and should continue to review and refine it on an ongoing basis.
- Continuing to review water restriction protocols to support consistent and coordinated demand management during shortages.

STRATEGIC PLAN No. 2.4.1 – EMERGENCY PREPAREDNESS

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7 FACILITY ASSESSMENT

Associated undertook a facility assessment in 2025 to evaluate the condition, operational integrity, and maintenance requirements of key electrical, process, and building mechanical systems of the Commission's potable water infrastructure sites. The 2025 facility assessment was a follow-up to an initial assessment completed in 2020.

The facilities assessed in 2025 were the Nisku Booster Station, the Telford Lake Booster Station, the Highway 21 Booster Station, and the Fill Stations at all 12 reservoirs.

The assessment identified several deficiencies and maintenance considerations requiring attention to ensure continued operational reliability and compliance with asset management best practices. The majority of the identified issues pertain to routine maintenance activities and the planned replacement of components approaching or exceeding their expected service life.

The 5-Year Capital Plan as presented in the Facility Assessment is included below as Table 7-1. Appendix B provides a summary of the recommended actions, including suggested timelines for implementation.

Table 7-1 Facility Assessment 5-Year Capital Plan

Facility	2026	2027	2028	2029	2030
Airport #1 Fill Station	$ 51,000	$15,100	-	$1,200	$15,000
Airport #2 Fill Station	$23,000	$30,400	$21,000	$1,200	-
Calmar Fill Station	$203,500	$39,500	$9,500	$1,200	-
CRSWSC Nisku Booster Station	-	-	-	$3,100	-
Nisku West Fill Station	$17,500	$52,000	$25,000	$1,200	$10,000
Nisku East Fill Station	$4,000	$6,200	$500	$1,200	-
Beaumont Fill Station	$6,500	$10,300	-	$9,300	-
HWY 21 Booster Station	$10,000	$14,000	$1,000	$11,200	$50,000
Leduc North Fill Station	$15,000	$19,200	$1,000	$100	-
Leduc Robinson Fill Station	$6,000	$3,000	-	$1,200	-
Armena Fill Station	$14,000	$19,000	$2,500	$1,000	-
Town of Hay Lakes Fill Station	-	$304,000	-	$1,000	-
Hamlet of New Sarepta Fill Station	$26,000	$68,500	-	$1,000	-
Telford Lake Booster Station	$16,000	$21,600	$2,500	$1,000	-
Town of Millet Fill Station	$3,000	$12,500	-	$1,000	-
TOTAL	$395,500	$615,300	$63,000	$35,900	$75,000

8 SHORT-TERM (5 YEARS) CAPITAL IMPROVEMENT PROGRAM

The capital program is divided into the following categories for identifying expenditures and funding sources:

- Operation
- Repair
- Replacement
- System improvements

8.1 Operation Budget

The operation budget covers the day-to-day operations and preventative maintenance of the entire system including generating reports, meter readings, and generally the duties described for the System Operator in the Operations and Maintenance Manual. Funding for this service is from the annual operating budget and included in the water rates set annually.

Cathodic Protection

Arc Cathodic Protection Inc. continue to perform the annual CP survey of the Commission – Water Transmission Pipeline system.

8.2 Repair Budget

The repair costs are directly related to Operator's costs, and specialist contractors retained by the Operator to make repairs and service specialty equipment and valves. This service is funded from an annual budget for repair and is included in the water rates set annually.

The Commission should have capacity to address emergency repairs or replacements should they occur.

8.3 Replacement Budget

Planned replacements (pumps, valves, etc.) are normally engineered, scheduled, and budgeted. The funding for replacements should be from the Commission's accumulated reserve to spread expenditures over several years and provide water rate stability.

Valves Replacement Program

Isolation valves need to be assessed, exercised, and checked for their working conditions. The age of many of the Commission's large isolation valves are approximately 35 to 40 years. Existing isolation valves should be planned for phased replacement.

8.4 System Improvement Budget

Improvements to the system are engineered projects to provide specific improvement to capacity or longevity to the Commission's system. Improvements to the system may be eligible for grant funding and other grants. The available grant programs should be reviewed prior to each major capital project.

Typically, government funding sources will not provide grant funds for the portion of a project that is to service commercial users. This could significantly impact the amount of grant funds the commission is able to obtain for major projects.

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8.5 Capital Projects Carried Forward from 2025

The following projects were not completed in 2025, so the remaining budgets were carried forward into 2026.

- Air Release Manhole Rehab
- Nisku Booster Station & Beaumont Piping Upgrades
- SCADA System Modernization
- Water Master Plan and Strategic Plan
- Camrose & Wetaskiwin Regional Water Supply Feasibility Study

SCADA System Modernization

The Commission's SCADA system provides real-time monitoring and control across the network. The current backhaul uses GE MDS SD4 UHF radio modems, which are approaching end of life and should be replaced on a planned schedule.

The proposed system is structured around two communication tiers:

- Tier 1 – Refreshed UHF Radio Network (critical control): The existing licensed UHF network is refreshed and retained as the primary control path. It is low-bandwidth, low-latency, and suitable for critical event reporting, alarms, and control instructions. A Commission-owned radio link removes dependence on third-party carriers for core SCADA functions.
- Tier 2 – High-Speed Network (video and expanded telemetry): A higher-bandwidth tier supports site video monitoring, expanded telemetry, and remote engineering access. Transport is selected per site from ISP fibre, licensed-frequency microwave backhaul, cellular modem, or Starlink, allowing the most appropriate option for each location.

The replacement platform is a highly available VTScada deployment. Cybersecurity is aligned with IEC 62443, consistent with the OT requirements anticipated under federal Bill C-8. OT network security inspection is provided by Fortinet, with segmentation between the control network and the broader Commission and member IT environments.

Operating costs depend on the transport mix selected at each site and will be confirmed during detailed design. ISP fibre, cellular, and Starlink services have recurring monthly subscription costs. Licensed microwave backhaul has higher upfront capital and lower ongoing licensing fees, comparable to the existing UHF network. A mixed approach is anticipated.

STRATEGIC PLAN No. 2.4.1 – EMERGENCY PREPAREDNESS
STRATEGIC PLAN No. 2.4.3 – COMMISSION GOVERNANCE

Camrose/Wetaskiwin Regional Water Supply

The Commission is currently undertaking a feasibility study to assess the potential extension of regional water services to the City of Camrose, the City of Wetaskiwin and the County of Wetaskiwin. This work is being completed in parallel with the Master Plan and represents the first step toward determining the viability of constructing a regional water supply line to these communities. Should the project proceed beyond the feasibility stage, the next phases would include preliminary design, detailed design, and ultimately construction. While it is anticipated that future stages will be funded similarly to the current feasibility study, preliminary design costs have been included in the capital projections as a conservative measure and to ensure the Commission is able to reserve adequate funds should it be required

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8.6 2026 to 2030 Program

Within the next 5 years the following activities are anticipated to occur within the Commission:

2026

- Review the Commission SCADA upgrade requirements.
- Commission is to coordinate with the City of Beaumont and EPCOR to secure a future pipeline alignment for the future service pipeline from 50th Street to the Beaumont Reservoir.
- The Commission should share the Master Plan with its members to ensure alignment with municipal planning objectives and priorities.
- Repair the Commission's supply line at the Calmar Fill Station.
- Complete the 2025 projects that carried over into 2026.
- Commission to prepare an application and submit for the next phase of the Camrose/Wetaskiwin Regional Water Supply.

2027

- Full reconstruction of the process piping within the Hay Lakes Fill Station
- SCADA Modernization – High-Speed Network
- Camrose/Wetaskiwin Regional Water Supply Preliminary Design
- Miscellaneous maintenance items within the Commission Facilities
- Annual maintenance requirements

2028

- SCADA Modernization – UHF Radio Refresh
- Camrose/Wetaskiwin Regional Water Supply Preliminary Design
- Miscellaneous maintenance items within the Commission Facilities
- Annual maintenance requirements

2029

- Miscellaneous maintenance items within the Commission Facilities
- Annual maintenance requirements

2030

- Annual maintenance requirements.

In addition to the above, it is recommended through a yearly maintenance program that the following be undertaken:

- Servicing all mechanical components, including motors and pumps
- Servicing all electronic, electrical components
- SCADA – ensure programing is up to date
- Variable Speed Drive – Ensure parts are available and up to date
- All isolation (gate) valves, air valves, interior valves need to be exercised at least once a year
- GIS – asset inventory updated as required
- Cathodic protection – check annual (prevent corrosion)
- Inspect and clean all air heating units within the Commission facilities

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Table 8-1 details the 5-Year Capital Plan cost breakdown.

Table 8-1 5-Year Capital Plan[1]

Facility	2026	2027	2028	2029	2030
General					
Cathodic Protection Report and Maintenance	$6,000	$6,000	$6,000	$6,000	$6,000
Annual Infrastructure Maintenance	$117,000	$117,000	$117,000	$117,000	$117,000
Air Release Manhole Rehab	$18,700				
Nisku Booster Station & Beaumont Piping Upgrades	$3,675,840				
SCADA Upgrades	$68,750	$600,000	$150,000		
Water Master Plan and Strategic Plan	$152,000				
Camrose & Wetaskiwin Regional Water Supply Feasibility Study	$229,500				
Camrose & Wetaskiwin Regional Water Supply Preliminary Design		$150,000	$150,000		
Emergency Planning	$120,000	$120,000			
Sub-Total	$4,387,790	$993,000	$423,000	$123,000	$123,000
Facility Assessment Capital Plan[2]	$395,500	$615,300	$63,000	$35,900	$75,000
YEARLY TOTAL	$4,782,290	$1,608,300	$486,000	$158,900	$198,000

[1]All costs are presented in 2026 dollars and exclude inflation; inflation will be incorporated as part of future rate structure reviews.

[2]The Facility Assessment Capital Plan costs are taken from Table 7-1.

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9 LONG-TERM (25 YEARS) CAPITAL IMPROVEMENT PROGRAM

9.1 2026 Water Sales Rate

The current water sales rate is $1.74/m^3, which is composed of three major components:

- Water Purchase Rate: The cost of water purchased from EPCOR, forming the base input cost.
- Commission Operating Costs: This includes utilities, administration, management, contracted operations, professional services, repairs and maintenance, and other operating expenses.
- Water Reserve Contributions: Allocations directed toward long-term capital reserves to support future infrastructure needs and system sustainability.

Based on the Commission's approved 2026 Budget, the rate consists of the following:

- Water Purchases: $1.07
- Reserve Contributions: $0.49
- Operating Contract: $0.06
- Professional Fees: $0.01
- Utilities: $0.03
- Repairs & Maintenance: $0.03
- Administration Contract: $0.02
- Board Expenses: $0.02
- Other Expenses: $0.01

It is important to note that the EPCOR water purchase rate of $1.00/m^3 used in the 2026 budget is temporary and should not be considered reflective of long-term costs. This reduced rate is being applied to draw down the Balancing Fund. Once the fund is exhausted, the Commission's water purchase rate is anticipated to return to approximately $1.07/m^3, plus applicable inflation adjustments. As such, the water purchase rate of $1.07/m^3 will be used for the Master Plan.

Figure 9-1 shows the rate breakdown as described above.

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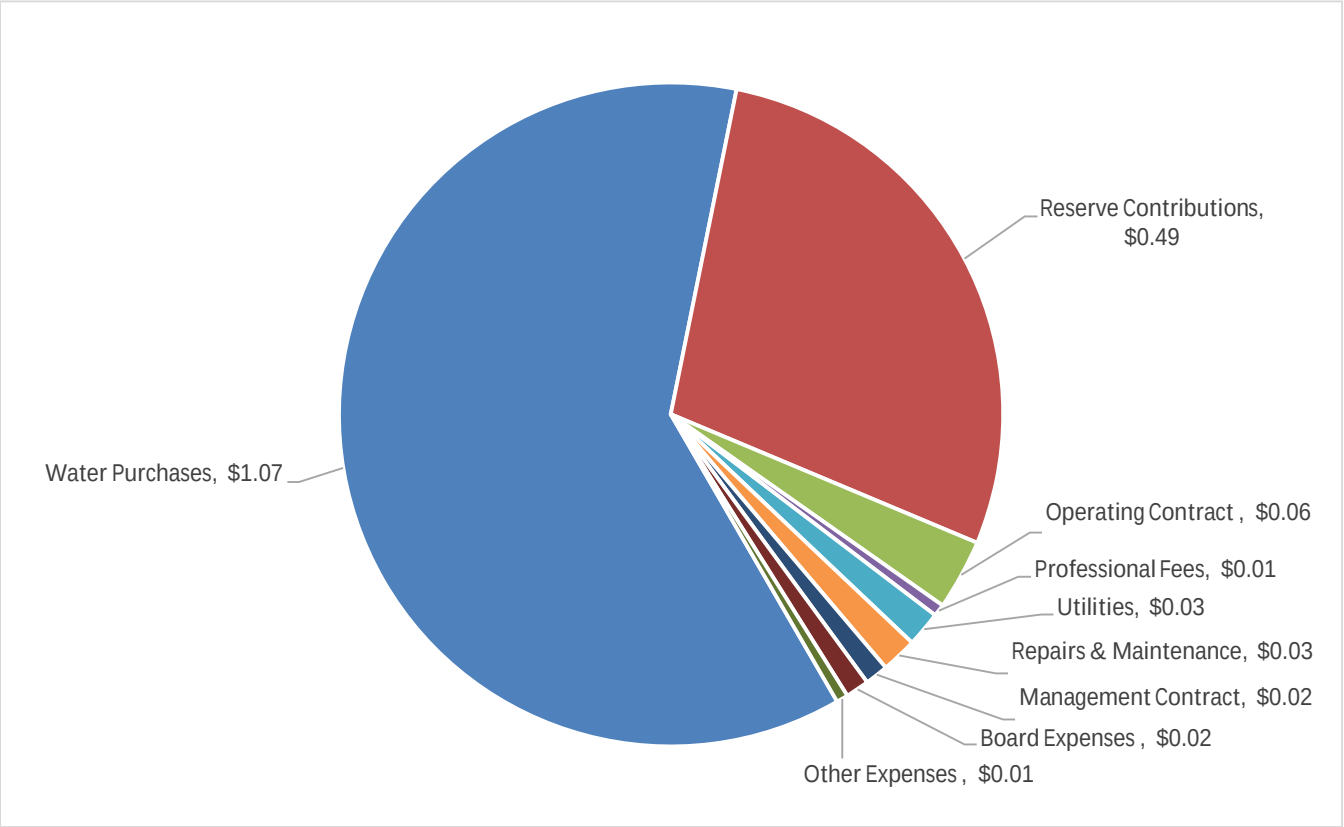
Figure 9-1 2026 Commission Water Sales Rate



9.2 Long-Term Capital Projects

The following long-term capital upgrades have been identified

- Year 2031 - $8,363,000
  - Nisku East Lateral Upgrades
  - Beaumont Secondary Feed
- Year 2036 – $762,000
  - Highway 21 Booster Pump Upgrades
- Year 2046 - $21,968,000
  - 900 mm Transmission Main Twinning (EIA 1 to EIA 2)
  - Beaumont Lateral Twinning
  - Highway 21 Main Replacement
- Year 2051 - $9,589,000
  - 900 mm Transmission Main Twinning (EIA 2 to Millet Line)
  - Nisku Booster Pump Upgrades

9.3 Long-Term Capital Funding Review

To support long-term financial planning and evaluate the sustainability of future water rates, three water sales rate scenarios were developed to assess a range of funding strategies—from reliance on debt financing to fully funding capital upgrades through 100% reserve allocations.

All scenarios are built on core assumptions to ensure comparability across the analysis. These include an annual EPCOR rate increase of $\$0.03/m^3$, which reflects historical trends and provides a reasonable basis for projecting future wholesale water costs. Commission operating costs are assumed to increase by $\$0.02/m^3$ annually to account for anticipated growth in administration requirements and increases on operating expenses such as insurance, power, gas, and maintenance. Each scenario also begins with the Commission's current capital reserve balance of $6,763,343, ensuring the modelling reflects the Commission's actual financial position at the start of the analysis period.

In addition to these core assumptions, the rate models include several key financial assumptions that influence long-term cost projections and borrowing requirements. Construction costs are assumed to increase at 5% annually, reflecting recent construction market conditions, including material and labour cost escalation, supply-chain issues, and increasing regulatory complexity. A general inflation rate of 3% is applied to align with long-term inflation targets and historical averages, ensuring future costs are represented in realistic dollars.

For scenarios requiring borrowing, an interest rate of 3.5% is assumed, representing a moderate long-term average consistent with municipal-style financing and intended to balance recent borrowing conditions with the potential for future interest rate variability. Where capital projects are funded through debentures, a higher rate of 4.5% is applied to account for issuance costs, longer-term market risk, and less favourable financing terms compared to shorter-term or internal borrowing.

Together, these scenarios provide a clear picture of how different funding models influence long-term water rates, reserve levels, and the Commission's future borrowing needs.

Scenario 1 — Fully Funded Capital through Reserves

Scenario 1 focuses on long-term financial independence by ensuring all future capital work is paid for using reserve funds only, with no reliance on debt. This scenario keeps the water rate at $\$1.74/m^3$ until 2030, using the current $\$0.49/m^3$ reserve allocation to cover cost increases during this period, with the allocation gradually reduced to $\$0.24/m^3$. After 2030, reserve contributions increase by $\$0.02/m^3$ every 5 years to support long-term capital planning.

The Commission maintains a healthy capital reserve balance between $14 million and $28 million to support unexpected or emergency projects. This approach avoids future borrowing but requires careful planning.

The Cash Flow and Water Rate is summarized in Figure 9-2 and Figure 9-3, and the detailed analysis is provided in Appendix C.

Scenario 2 — Mixed Reserves and Debt Financing

Scenario 2 keeps the water rate at $\$1.74/m^3$ until 2032, using the current $\$0.49/m^3$ reserve allocation to cover cost increases during this period, with the allocation gradually reduced to $0.19/m3 by 2032. After 2032, reserve contributions increase by $\$0.02/m^3$ every 5 years to support long-term capital planning.

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To complete major future upgrades, the Commission would only need to borrow $9.8 million in 2051, representing about 14% of the Commission's projected debt capacity. This debt is expected to be fully repaid by 2054, providing a balanced approach that maintains rate stability in the short-term while using borrowing responsibly when needed.

The Cash Flow and Water Rate is summarized in Figure 9-4 and Figure 9-5, and the detailed analysis is provided in Appendix C.

Scenario 3 — Fixed Allocation

In Scenario 3, the reserve allocation remains at $0.49/m^3, and the water sales rate increases in line with rising water purchase costs and operational expenditures.

This scenario allows the Commission to build and maintain a strong capital reserve, ranging between $20 million in 2031 and $88 million in 2051, to support unplanned or emergency capital projects and waterline replacements. By doing so, the Commission avoids the need for future borrowing. However, this approach results in higher water sales rates to sustain the reserve levels.

The Cash Flow and Water Rate is summarized in Figure 9-6 and Figure 9-7, and the detailed analysis is provided in Appendix C.

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Figure 9-2 Cash Flow – Scenario 1

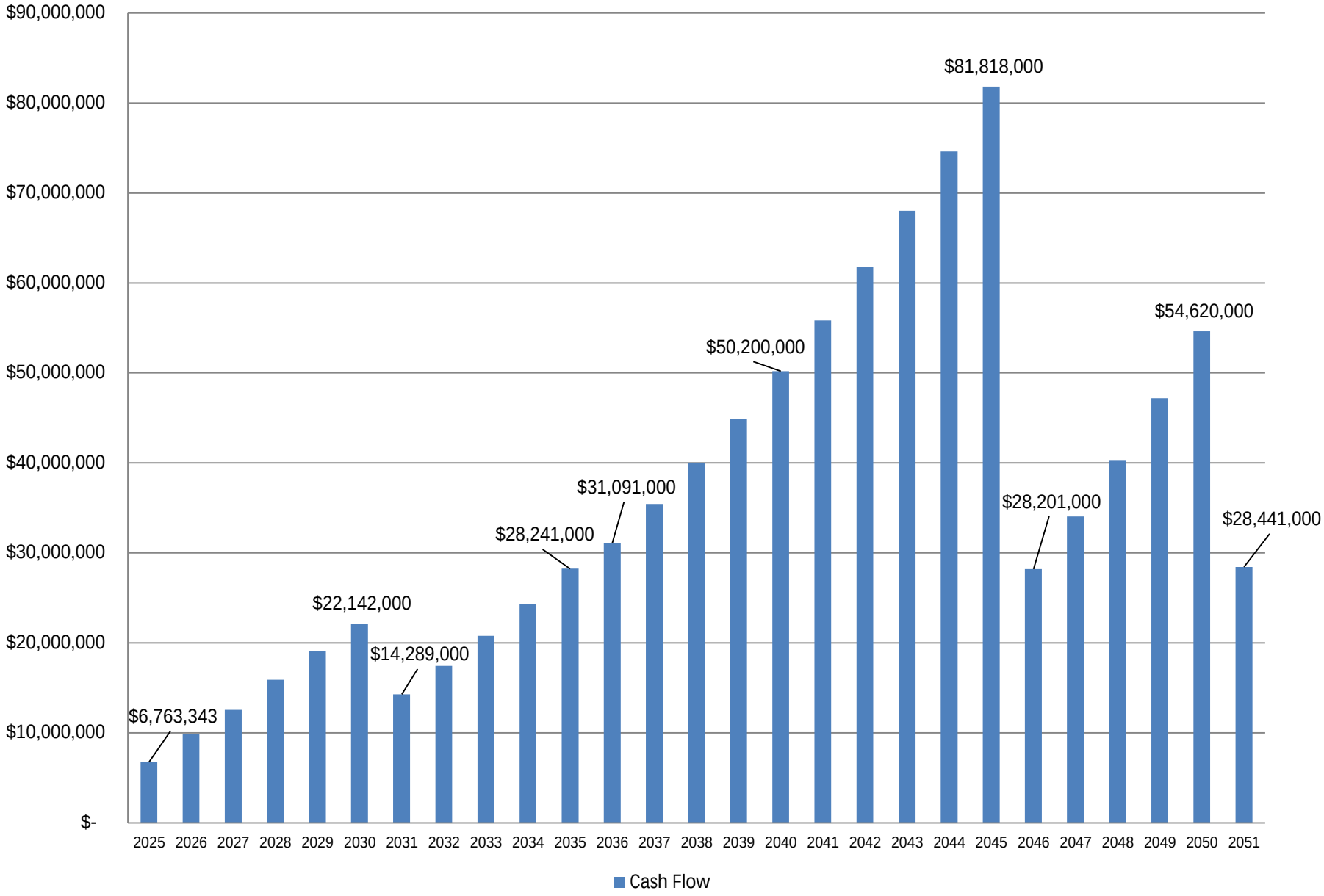


Figure 9-3 Water Rate – Scenario 1

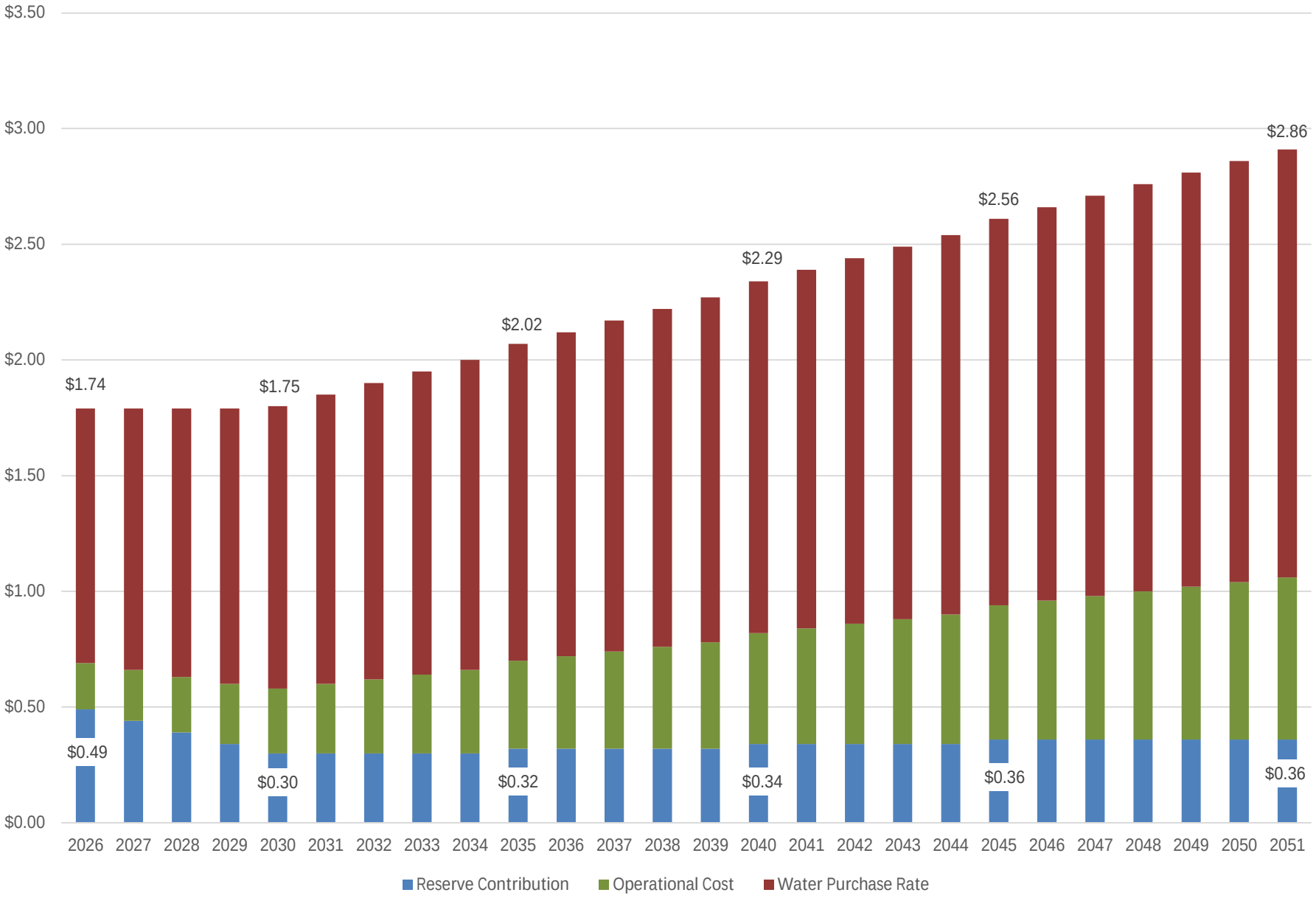


Figure 9-4 Cash Flow – Scenario 2

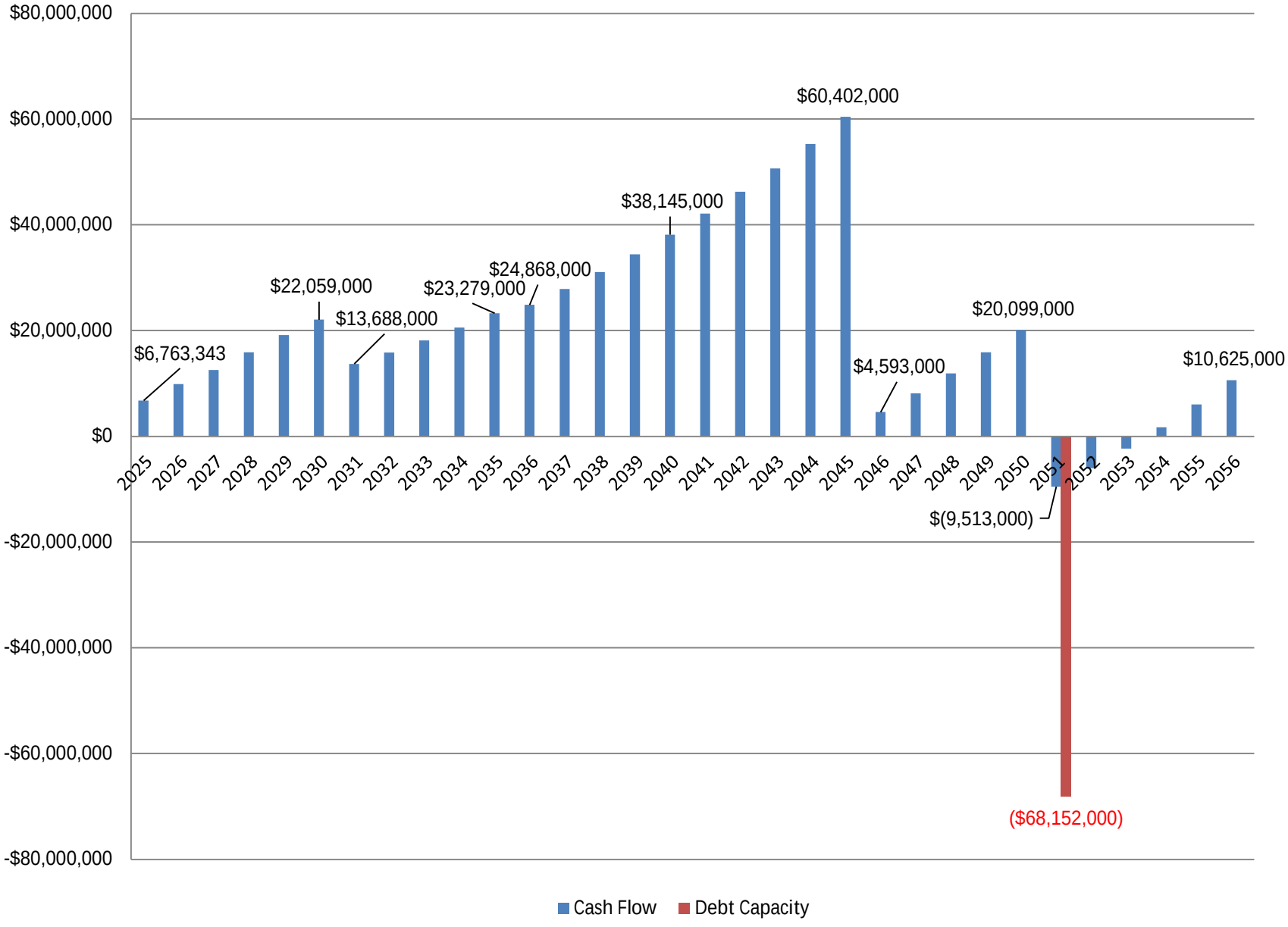


Figure 9-5 Water Rate – Scenario 2

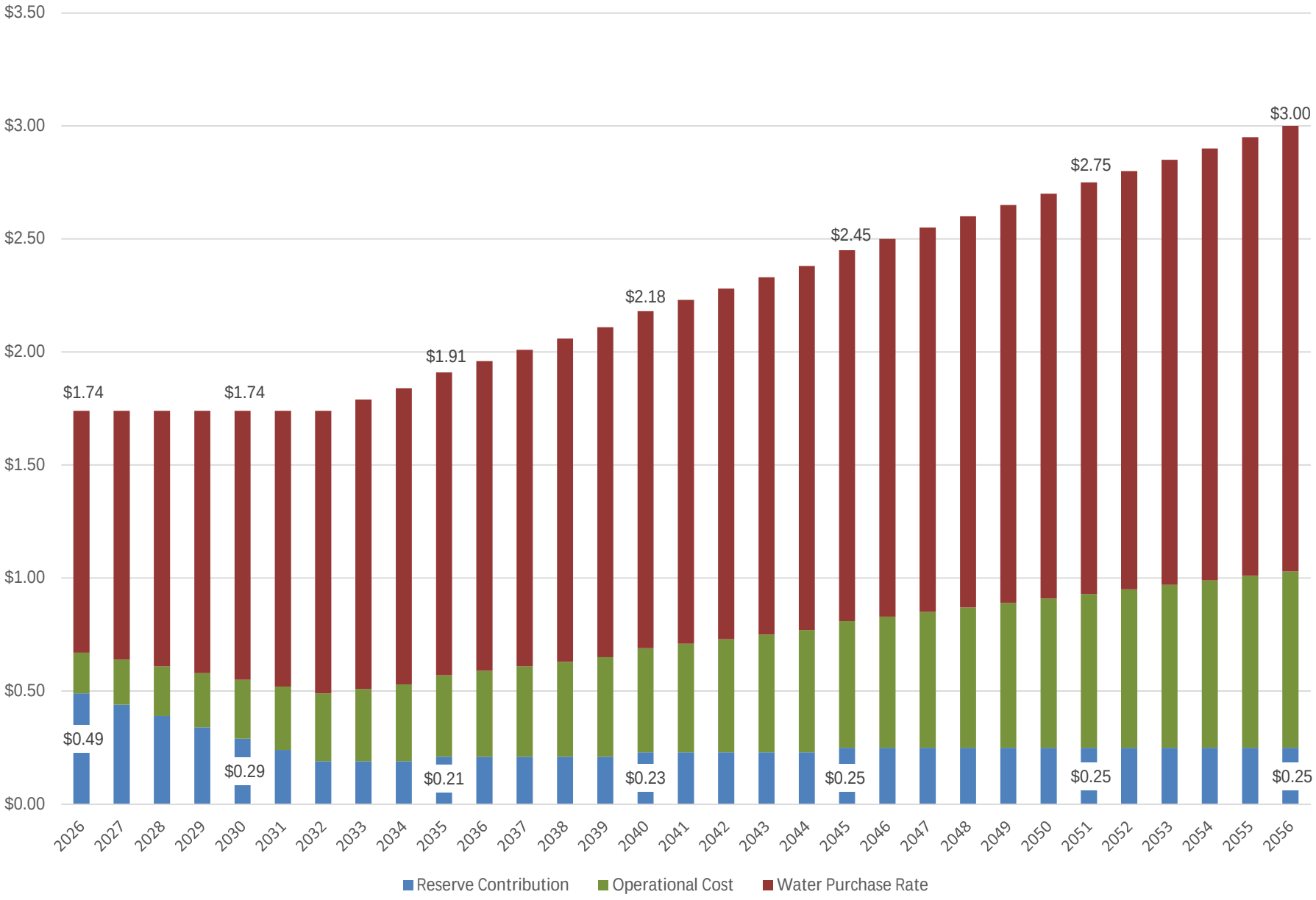


Figure 9-6 Cash Flow – Scenario 3

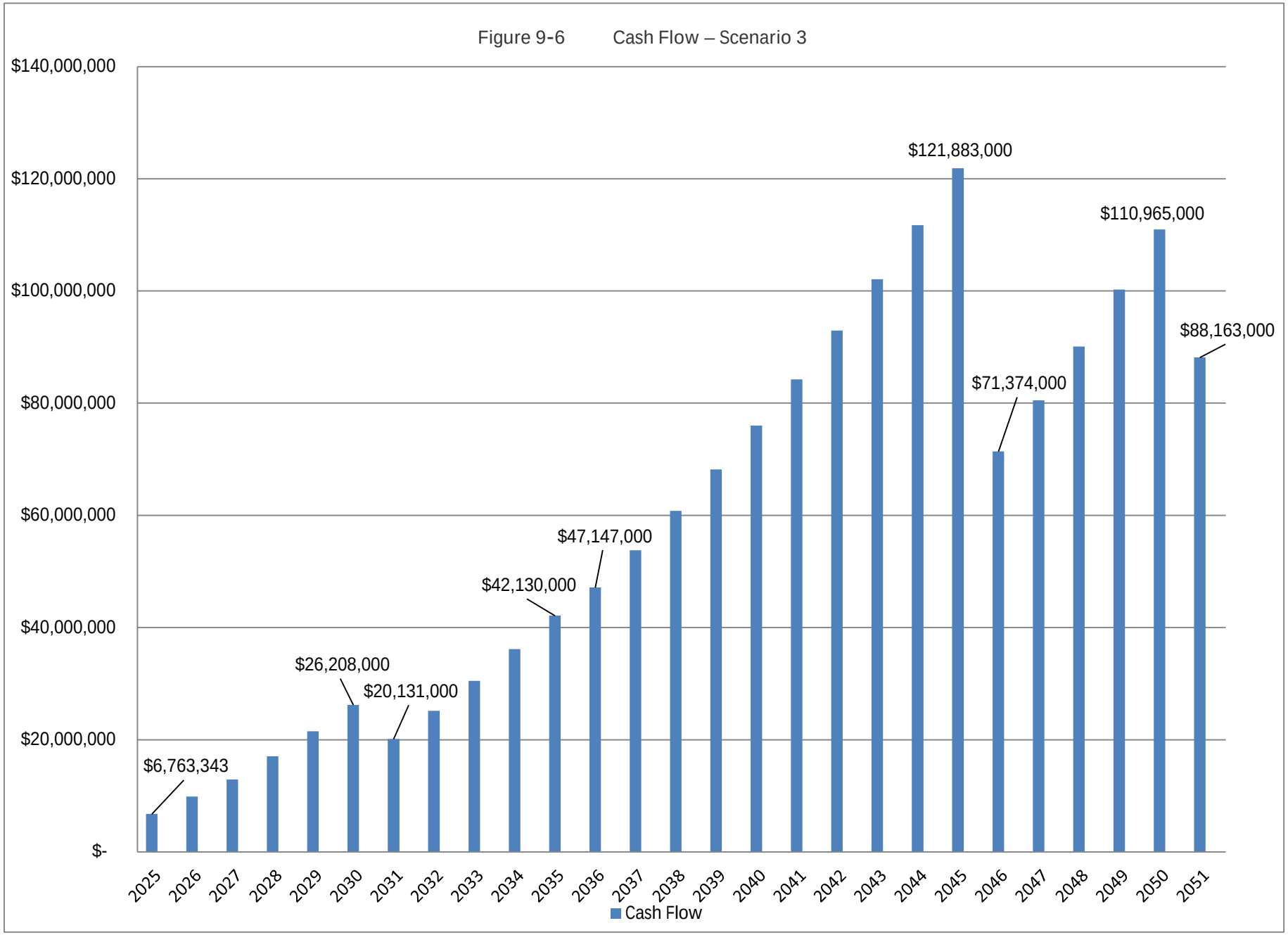
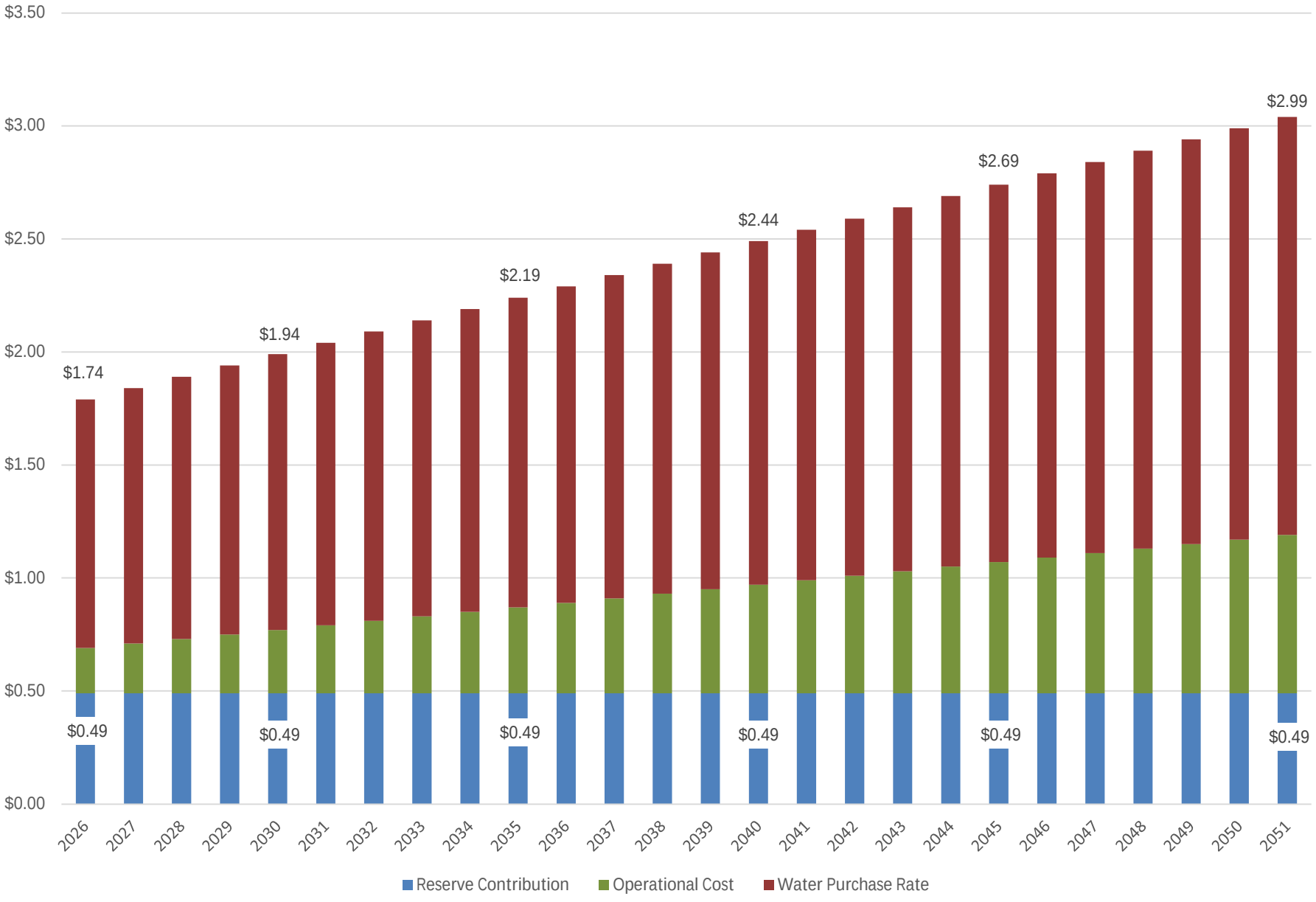


Figure 9-7 Water Rate – Scenario 3



9.4 Rate Model Summary

Table 9-1 below provides a comparison of the water rates for the reviewed scenarios until 2051.

Table 9-1 Water Sales Rate Comparison

Year	Scenario 1 ($/m^3)	Scenario 2 ($/m^3)	Scenario 3 ($/m^3)
2026	1.74	1.74	1.74
2027	1.74	1.74	1.79
2028	1.74	1.74	1.84
2029	1.74	1.74	1.89
2030	1.75	1.74	1.94
2031	1.80	1.74	1.99
2035	2.02	1.91	2.19
2040	2.29	2.18	2.44
2045	2.56	2.45	2.69
2050	2.81	2.70	2.94
2051	2.86	2.75	2.99

Table 9-2 provides a consolidated overview of each scenario to support clear comparison of the benefits within the master plan.

Table 9-2 Rate Model Summary

Category	Scenario 1 Reserves Only (No Debt)	Scenario 2 Mixed Reserves & Debt Financing	Scenario 3 Fixed Allocation
Water Rate Strategy	Hold $1.74/m^3 until 2030	Hold $1.74/m^3 until 2032	Adjusted based on water rate and operation cost increase
Reserve Allocation	Adjusted; reduced to $0.30/m^3 by 2030	Reduced to $0.19/m^3 by 2032	Held at $0.49/m^3
Reserve Growth Rule	+$0.02/m^3 every 5 years	+$0.02/m^3 every 5 years	No increase over time
Capital Funding Approach	All capital from reserves	Combination of reserves + debt	All capital from reserves
Capital Reserve Balance	Maintain $14M–$28M	Accumulate reserves until needed	$71M (2046), $88M (2051)
Debenture Requirement	None	Yes: $9.8M (2051)	None

Category	Scenario 1 Reserves Only (No Debt)	Scenario 2 Mixed Reserves & Debt Financing	Scenario 3 Fixed Allocation
Debt Capacity Impact	0% used	14% of 2051 capacity	0% used
Debt Payoff Year	N/A	2054	N/A
Who Pays for Future Costs?	Commission (via reserves)	Commission (mixed funding)	Commission (via reserves)
Key Advantage	No borrowing; healthy reserves	Stable water rate through 2032 + balanced approach	No borrowing + Reserves for replacements and emergencies
Key Disadvantage	Requires higher reserve rates later	Requires moderate debt	Highest water sales rate

Overall, the three scenarios offer different ways the Commission can fund its long-term capital needs, showing how various combinations of reserve contributions, water rate strategies, and borrowing affect overall financial stability. Each scenario highlights different trade-offs such as maintaining lower water rates, building stronger reserves, or relying on debt and demonstrates how these choices influence future planning and the responsibilities placed on member municipalities.

Together, these scenarios demonstrate how rising EPCOR rates, increasing operating costs, and current reserve levels shape the Commission's financial outlook over the coming decades. Following a detailed review of the funding scenarios at the March 2026 Board Meeting, the Commission determined that Scenario 3 best supports the Commission's long-term interests and aligns with the objectives of the Strategic Plan.

In selecting this scenario, the Commission should remain mindful of the need to balance financial resilience with rate stability and affordability. Maintaining appropriate reserve levels is essential for addressing long-term infrastructure needs and responding to unforeseen capital requirements; however, it is also important that reserve balances remain aligned with planned and anticipated expenditures. Doing so helps ensure that water rates are perceived as fair, reasonable, and reflective of the Commission's actual funding needs.

STRATEGIC PLAN No. 2.4.2 – RATE PREDICTABILITY

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10 POTENTIAL FUNDING SOURCES

Prior to the design and construction of any major project, the Commission should review the currently available grant programs, for there acceptance criteria and eligibility of the project. Below is a list of currently available grant programs.

It should be noted that previous direction from the Board has been to establish water rates such that the Commission remains financially self-sufficient and does not require additional funding from member municipalities, except in cases of infrastructure that falls outside the Commission's typical funding scope, as outlined in Section 11 – Large Demand User and Infrastructure Upgrade Policy.

10.1 Alberta Transportation and Economic Corridors – Water for Life

The Water for Life strategy, initiated in 2003 and renewed in 2008, is Alberta's comprehensive approach to managing water resources, focusing on safe drinking water, healthy aquatic ecosystems, and reliable water supplies for a sustainable economy. It relies on partnerships, knowledge, and conservation to address population growth and economic development. The Water for Life Program provides cost-shared funding for regional water and wastewater systems for municipalities, Metis Settlements, and regional commissions.

In previous discussion with Alberta Transportation and Economic Corridors (ATEC) regarding similar projects as is proposed by the Commission; ATEC identified that funding would only be attributed to the portion of the line that supports residential water use. This would leave the portion of the system that services industrial customers not funded. ATEC would consider Edmonton Airports and Nisku as industrial customers and may also consider industrial water uses within the City of Leduc as part of the overall industrial system demand.

Under the current Water for Life Funding, only the residential water demand would be considered for funding. The need for funding would be based on the residential water demand as compared to the overall system capacity.

10.2 Alberta Municipal Water/Wastewater Partnership

The Alberta Municipal Water/Wastewater Partnership, which launched in 1991, provides cost-shared funding to eligible municipalities to help build municipal facilities for water supply and treatment, and wastewater treatment and disposal.

Eligible projects can receive up to 75% of project costs. Funding is calculated as a percentage of eligible project costs based on the municipality's official population when the grant is approved. Populations and grant percentages are determined at the time of approval and do not change during the project.

Regional commissions are eligible to receive funding for multi-municipal, commission-owned water supply, water treatment, and wastewater treatment facilities. Municipalities that are part of a regional commission but require their own standalone facilities may submit individual funding applications.

10.3 Green Infrastructure Fund

The Green Infrastructure Fund supports environmental infrastructure projects that promote reduced greenhouse gas emissions, cleaner air, cleaner water and cleaner land. There are five eligible categories of investment: wastewater

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infrastructure, green energy generation infrastructure, green energy transmission infrastructure, solid waste infrastructure, and carbon transmission and storage infrastructure. By providing up to 50% federal funding on a cost-shared basis, the fund leverages additional investments from other partners.

The Green Infrastructure Fund was extended to March 31, 2036.

10.4 New Building Canada Fund

The New Building Canada Fund – National Infrastructure Component supports projects of a national significance that have broad public benefits and that contribute to Canada's long-term economic growth and prosperity and reduce potential economic disruptions or foregone economic activity.

10.5 Other Funding Sources or Alternatives

In addition to the above funding sources, Members of the Commission can allocate a portion of their received funding from such sources as the Municipal Sustainability Initiative (MSI) towards the project.

The debenture limit of the Commission can be increased, by having individual members of the Commission take a portion of the overall project debenture. This would require that each member utilize a portion of their debt capacity on behalf of the Commission. The Commission would be responsible to service the debt, through the Commissions water rate.

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11 LARGE DEMAND USER AND INFRASTRUCTURE UPGRADE POLICY

A copy of this proposed policy is included in Appendix D.

11.1 Purpose

The purpose of this Policy is to establish a clear, consistent framework for how the Commission will assess, evaluate, and determine the impacts of proposed water service connections and growth—including connections from Large-Demand Users—on the regional treated water transmission system. This includes identifying potential System Capacity Constraints, determining any required infrastructure upgrades, and allocating financial responsibility for such upgrades. The Policy ensures that system integrity, service reliability, system hydraulics, and long-term planning objectives are protected while enabling responsible and sustainable growth across all Members and Customers.

11.2 Definitions

All existing definitions in the Water Supply Policy remain. The following additional or updated definitions are proposed to be added:

- Large-Demand User – The specific water demand attributable to a single proposed customer, development, or service area that exceeds either:
  - when combined with a Member's Forecasted Growth, the Commission's long-term planning projections.
  - the demand projections included within the Commission's Long-Term Demand, and which may trigger the identification of System Capacity Constraints and the requirement for Capacity Upgrades.
- Forecasted Growth – Incremental user growth within a Member's service area that is consistent with and supported by the Commission's Long-Term Planning Projections and forms part of the Commission's Long-Term Demand
- Long-Term Planning – The 25-year planning forecast as outlined in the Commission's current Master Plan.
- Long-Term Planning Projections – The projected water demand, system requirements, and associated infrastructure needs established and adopted by the Commission through its master plans for the purpose of system planning, capacity management, and investment decisions.
- Long-Term Growth – The incremental increase in water demand within a Member's service area that is consistent with and supported by the Commission's Long-Term Planning Projections, representing anticipated and planned development over the applicable planning horizon.
- Long-Term Demand – The total projected water demand over the Commission's established planning horizon, as defined through its Long-Term Planning Projections and long-range demand forecasts, including Forecasted Growth within Member service areas, and used to guide system capacity planning and infrastructure development.
- Unplanned Capacity Growth – Demand generated by a Large-Demand Customer that exceeds a Member's Forecasted Growth and is not accounted for within the Commission's Long-Term Planning Projections or Long-Term Demand.
- System Capacity Constraints – Any condition in which a proposed connection would:
  - Reduce system pressures below Commission design standards
  - Exceed hydraulic, pumping, or transmission capacity

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- Impair water quality, redundancy, or operational reliability
- Compromise the Commission's ability to reliably serve existing Members and Customers

Interpretation:

- Forecasted Growth forms part of Long-Term Demand and is planned for by the Commission.
- Large-Demand Customer Demand represents demand outside of or exceeding planned growth.
- Unplanned Capacity Growth is the portion of Large-Demand Customer Demand that is not included in Long-Term Demand and may require Member-funded upgrades.

11.3 Policy Statement

The Commission shall maintain sufficient system capacity to meet Member needs as forecast in its long-term growth plans.

The Commission must ensure that any new connection or increase in demand does not create system capacity constraints or compromise its ability to maintain established service levels. The Commission also seeks to protect capacity for existing Members by requiring that any new connection or demand increase that reduces available capacity contributes financially in proportion to the incremental cost required to add that capacity in the future.

When System Capacity Constraints are identified, the Commission may, at its sole discretion:

- Deny the proposed connection
- Approve the connection subject to required Capacity Upgrades
- Impose demand-management, phasing, or operational conditions necessary to maintain system reliability
- Permit the Member to provide a financial contribution in lieu of constructing the required infrastructure

11.4 Funding Responsibility for Capacity Upgrades

Commission Responsibility – Forecasted Growth

The Commission shall fund and construct any capacity upgrades required to accommodate Forecasted Growth where:

- The additional demand aligns with long-term growth projections adopted by the Commission
- The required upgrade is included in the Commission's approved capital and financial plans

Interpretation: If growth was predictable and already identified through the Commission's master planning, the Commission funds the required upgrades.

Member Responsibility – Unplanned Large Capacity Growth

A Member shall be responsible for funding all Capacity Upgrades required to support a Large-Demand User when:

- The projected demand of the Large-Demand User exceeds the Member's forecasted growth in long-term planning.
- The demand necessitates upgrades not included in the Commission's capital plans.
- The upgrade accelerates, expands, or advances a Commission-planned project solely due to the new user's demand.
- The proposed connection would cause System Capacity Constraints as determined through Commission engineering assessments.

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Interpretation: If the demand was not forecasted as part of expected growth or would overload the system, the Member funds the required upgrades. The Commission's Board may, at their discretion, vote to waive all or a portion of the applicable surcharge for a Member.

11.5 Cost Allocation for Mixed Benefits

Where a required upgrade benefits both the Large-Demand User and the broader system:

- The Member shall pay the incremental cost attributable to the Large-Demand User and the mitigation of any System Capacity Constraints.
- The Commission shall pay the portion associated with Forecasted Growth or previously planned system development. The Member shall initially fund the total cost of the required upgrades, with the Commission reimbursing the Member for its share when the upgrades would have been undertaken through the Commission's normal capital planning and budgeting process.

11.6 System Capacity Constraints Evaluation

The Commission shall conduct hydraulic modelling, engineering evaluations, and operational assessments to determine whether a proposed connection may cause System Capacity Constraints.

If constraints are identified, the Commission shall issue a written notice to the Member outlining:

- The nature of the constraints
- Required mitigation measures or capacity upgrades
- Cost responsibilities under this policy
- Any conditions under which the connection may proceed

The Commission may defer, limit, or condition the approval of the connection until mitigation has been completed.

11.7 Application and Review Process

A Member proposing to connect a Large-Demand User shall submit a formal request for capacity assessment to the Commission.

The Commission shall complete the following:

- A hydraulic capacity assessment
- An evaluation of System Capacity Constraints
- A determination of whether the demand aligns with Forecasted Growth

The Commission shall issue a formal Determination of Capacity, identifying available system capacity, any applicable System Capacity Constraints, and the associated cost responsibilities. This determination will include the cost of completing the required capacity assessment, which may be charged back to the prospective or existing Member, as applicable.

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11.8 Payment and Construction Requirements

Member-funded Capacity Upgrades must be paid in full prior to construction or financed through agreements approved by the Commission.

All Commission upgrades must be designed, tendered, managed, and constructed under the Commission's authority to ensure consistency with system standards.

Upon completion, ownership of the infrastructure shall transfer to the Commission unless otherwise agreed in writing.

11.9 Policy Amendments

This Policy may be amended by resolution of the Commission Board.

STRATEGIC PLAN No. 2.4.3 – COMMISSION GOVERNANCE

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12 CONCLUSION AND RECOMMENDATIONS

Conclusions

The following conclusions from the Master Plan are outlined below:

- The average annual growth in water demand for the Commission from 2018 to 2024 was 2.5%. The projected average annual growth in water demand is also 2.5% over the 25-year study period.
- The Commission is anticipating the following new services to tie into the system:
  - Leduc County Rural (Rolly View and Looma)
  - Saunders Lake Industrial Park
- Changes to the system since the previous master plan include the Blackmud Booster Station, previously the Boundary Booster Station, being owned by EPCOR, the newly constructed Nisku Booster Station, and upgrades to the Highway 21 booster pumps
- Demand projections have also changed since the previous master plan
- The current supply pressure setpoint to the City of Leduc North Reservoir – 310 kPa (45 psi) is adequate to meet requirements for the next 5 years
- System capacity issues were identified in the future scenarios modelled. Upgrades to the system will be required.
- Three scenarios were reviewed for long-term capital funding:
  - Scenario 1 – Fully funded capital through reserves
  - Scenario 2 – Mixed reserves and debt financing
  - Scenario 3 – Fixed allocation
- Strategic Plan No. 2.6.1 – Commission Expansion: The City of Camrose, the City of Wetaskiwin, and the County of Wetaskiwin have expressed interest in being serviced by the Commission. A separate study is underway to determine the feasibility.

Recommendations

Associated recommends the following:

- Complete the identified system upgrades in the appropriate timeframe.
- Review existing fire storage requirements with the communities that did not provide them.
- Strategic Plan No. 2.5.2 – Environmental Stewardship: Promote water conservation among Members, by providing educational materials or encouraging the development of public education programs.
- Strategic Plan No. 2.4.1 – Emergency Preparedness:
  - Review the long-term sustainability and vulnerability of existing infrastructure and operations, with consideration of climate-related hazards.
  - Establish and maintain emergency response protocols specific to climate-related events; the Commission has recently updated its emergency response plan and should continue to review and refine it on an ongoing basis.
  - Continue to review water restriction protocols to support consistent and coordinated demand management during shortages.
  - Undertake the SCADA System Modernization.
- Undertake the maintenance and upgrade recommendations outlined in the Facilities Assessment.
- Implement the Short-Term (5-year) Capital Improvement Program, as outlined in Section 8.

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- Strategic Plan No. 2.4.2 – Rate Predictability: Adopt Scenario 3 for long-term capital funding.
- Strategic Plan No. 2.4.3 – Commission Governance:
  - Adopt the Large Demand User and Infrastructure Upgrade Policy
  - Conduct a Governance Review to ensure operation of the Commission is optimal
- Begin the update to this Master Plan 5 years after adoption to review and confirm system water demands, future service connections, and the timing of proposed upgrades. System upgrades should be undertaken based on updated water demands.

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CLOSURE

This report was prepared for the Capital Region Southwest Water Services Commission to provide a compressive review of the Commission's future water demand requirements, system operations, anticipated future upgrades, water performance review, and capital and operational forecasting.

The services provided by Associated Engineering Alberta Ltd. in the preparation of this report were conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practising under similar conditions. No other warranty expressed or implied is made.

Respectfully submitted,
Associated Engineering Alberta Ltd.

Prepared by:

Emma Knapik, E.I.T.
Civil Engineer-in-Training

Prepared by:

Candice Gottstein, P.Eng.
Project Engineer

Reviewed by:

Chris Parfitt, P.Eng.
Project Manager

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APPENDIX A – DEMAND TABLES

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Table 1 - Historical Water Usage by Reservoir

Location	2018		2019		2020		2021		2022		2023		2024	
	% Demand	AD (L/s)	% Demand	AD (L/s)	% Demand	AD (L/s)	% Demand	AD (L/s)	% Demand	AD (L/s)	% Demand	AD (L/s)	% Demand	AD (L/s)
Leduc North	100%	92.1	91%	79.8	72%	63.0	67%	64.3	63%	60.1	60%	59.3	59%	59.9
Leduc Robinson	0%	0.3	9%	8.1	28%	25.1	33%	31.6	37%	35.0	40%	38.7	41%	41.6
Beaumont	-	42.1	-	41.3	-	43.8	-	48.5	-	47.3	-	48.8	-	51.7
Nisku West	25%	5.3	25%	5.8	26%	5.0	31%	7.6	32%	9.1	21%	6.3	10%	3.2
Nisku East	75%	16.4	75%	17.0	74%	14.2	69%	17.2	68%	19.0	79%	23.9	90%	27.2
EIA R1	100%	12.0	98%	15.2	61%	7.1	23%	2.9	30%	4.5	33%	4.4	31%	4.1
EIA R2	0%	0.0	2%	0.4	39%	4.5	77%	9.7	70%	10.7	67%	8.9	69%	9.4
Calmar	-	7.5	-	7.1	-	7.4	-	7.9	-	6.7	-	6.7	-	7.1
Camrose County	-	0.2	-	0.3	-	0.5	-	0.6	-	1.1	-	1.7	-	2.0
Hay Lakes	-	1.2	-	1.3	-	1.1	-	1.2	-	1.1	-	1.1	-	1.2
New Sarepta	-	1.5	-	1.4	-	1.5	-	1.7	-	1.6	-	1.6	-	1.7
Millet	-	6.0	-	5.7	-	5.6	-	6.2	-	5.7	-	5.8	-	6.0

Table 2 - Detailed Demand Projections by Reservoir

Location	2026		2031		2036		2041		2046		2051	
	AD (L/s)	PD (L/s)	AD (L/s)	PD (L/s)	AD (L/s)	PD (L/s)	AD (L/s)	PD (L/s)	AD (L/s)	PD (L/s)	AD (L/s)	PD (L/s)
Leduc North	64.0	115.2	72.4	130.3	81.9	147.4	92.7	166.8	104.8	188.7	118.6	213.5
Leduc Robinson	42.6	76.8	48.3	86.9	54.6	98.3	61.8	111.2	69.9	125.8	79.1	142.3
Beaumont	56.3	101.4	69.8	125.7	83.0	149.3	98.5	177.3	117.0	210.6	139.0	250.2
Nisku West	8.5	15.3	11.3	20.3	13.1	23.5	15.1	27.3	17.6	31.6	20.4	36.6
Nisku East	25.5	45.9	33.8	60.9	39.2	70.6	45.4	81.8	52.7	94.8	61.1	109.9
EIA R1	4.5	8.2	5.4	9.7	6.4	11.6	7.6	13.7	9.1	16.3	10.8	19.4
EIA R2	10.6	19.0	12.6	22.7	15.0	27.0	17.8	32.1	21.2	38.1	25.1	45.2
Calmar	7.4	13.3	8.2	14.8	8.6	15.6	9.1	16.4	9.6	17.2	10.0	18.1
Camrose County	2.1	3.8	2.9	5.2	3.1	5.7	3.5	6.2	3.8	6.8	4.1	7.5
Hay Lakes	1.3	2.3	1.5	2.7	1.6	3.0	1.8	3.3	2.0	3.6	2.2	4.0
New Sarepta	1.7	3.1	1.9	3.5	2.1	3.8	2.3	4.2	2.6	4.7	2.9	5.2
Millet	6.2	11.2	6.9	12.4	7.6	13.7	8.4	15.1	9.3	16.7	10.2	18.4
Looma	-	-	2.0	3.6	5.1	9.1	6.2	11.1	7.5	13.5	9.1	16.4
Rolly View	-	-	0.1	0.2	0.3	0.5	0.3	0.6	0.4	0.7	0.5	0.9
Tillicum Beach	-	-	0.5	0.8	0.5	0.9	0.5	0.9	0.5	1.0	0.6	1.0
Saunders Lake	-	-	0.8	1.4	2.8	5.0	4.8	8.6	6.8	12.2	8.8	15.8
Discovery Park	2.7	2.7	2.8	2.8	3.0	3.0	3.1	3.1	3.3	3.3	3.4	3.4

APPENDIX B - FACILITY ASSESSMENT UPGRADE TABLES

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Five Year Capital Plan

	2026	2027	2028	2029	2030
General					
Sub-Total	$0	$0	$0	$0	$0

Facility Upgrades	2026	2027	2028	2029	2030
Airport #1 Fill	$ 51,000	$ 15,100	$ -	$ 1,200	$ 15,000
Airport #2 Fill	$ 23,000	$ 30,400	$ 21,000	$ 1,200	$ -
Calmar Fill Station	$ 203,500	$ 39,500	$ 9,500	$ 1,200	$ -
CRSWSC Nisku Booster Station	$ -	$ -	$ -	$ 3,100	$ -
Nisku West Fill Station	$ 17,500	$ 52,000	$ 25,000	$ 1,200	$ 10,000
Nisku East Fill Station	$ 4,000	$ 6,200	$ 500	$ 1,200	$ -
Beaumont Fill Station	$ 6,500	$ 10,300	$ -	$ 9,300	$ -
HWY 21 Booster Station	$ 10,000	$ 14,000	$ 1,000	$ 11,200	$ 50,000
Leduc North Reservoir Fill	$ 15,000	$ 19,200	$ 1,000	$ 100	$ -
Leduc Robinson Fill	$ 6,000	$ 3,000	$ -	$ 1,200	$ -
Armena Fill Station	$ 14,000	$ 19,000	$ 2,500	$ 1,000	$ -
Town of Hay Lakes	$ -	$ 304,000	$ -	$ 1,000	$ -
Hamlet of New Sarepta	$ 26,000	$ 68,500	$ -	$ 1,000	$ -
Telford Lake Booster	$ 16,000	$ 21,600	$ 2,500	$ 1,000	$ -
Town of Millet	$ 3,000	$ 12,500	$ -	$ 1,000	$ -
Sub-Total	$ 395,500	$ 615,300	$ 63,000	$ 35,900	$ 75,000
Yearly Summary	$ 395,500	$ 615,300	$ 63,000	$ 35,900	$ 75,000

Appendix B - Facility Upgrades - Edmonton International Airport

Facility Name — Airport #1 Fill

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
Airport #1 Fill		Electrical	Replace or remove UPS-6C panel from service	$ 1,500	1-2 years
Airport #1 Fill		Electrical	Replace Emergency lighting	$ 1,000	1-2 years
Airport #1 Fill		Electrical	Replace UPS batteries.	$ 1,000	5-10 years
Airport #1 Fill		Electrical	Replace CO detector	$ 100	5-10 years
Airport #1 Fill		Electrical	Replace smoke detector	$ 100	5-10 years
Airport #1 Fill		Controls	The old MDS 4710 series radio has been left in the PLC cabinet post SCADA upgrade. This can be removed and recycled.	$ 100	1-2 years
Airport #1 Fill		Controls	The Level Transmitter (LIT-0580) is discontinued; replace with modern unit.	$ 3,500	1-2 years
Airport #1 Fill		Controls	The pressure gauge between the PRV and flow valve needs a neck extension. The isolation valve handle obscures the face. The gauge is also smaller than the normally recommended 4” dial face.	$ 1,000	1-2 years
Airport #1 Fill	1	Process	Isolate and depressurize valve; open bonnet and inspect seat, plug, and diaphragm. Replace diaphragm, O-rings, and pilot components per manufacturer’s kit. If corrosion or scoring is evident, replace entire PRV with an NSF/ANSI 61-certified anti-cavitation model. Re-commission and calibrate to set pressure.	$ 35,000.00	Year 1
Airport #1 Fill	2	Process	Install galvanic isolation hardware on all flange bolts, nuts, and washers for FIT-0520.	$ 3,000.00	Year 1
Airport #1 Fill	3	Process	Replace existing hose bib with an NSF/ANSI 61-certified Watts LF7 backflow and anti-siphon preventor or equivalent. Commission and record annual cross-connection test per CSA B64.10.	$ 3,000.00	Year 1
Airport #1 Fill	4	Process	Remove and reinstall using an NSF-61 dielectric union to isolate stainless and carbon steel threads. Apply NSF-approved thread sealant.	$ 3,000.00	Year 1
Airport #1 Fill	5	Process	Replace with dual-stage stainless regulator (15 psi primary; analyzer-specific secondary). Use NSF-61-approved wetted materials and PTFE tubing. Pressure-test and document.	$ 3,000.00	Year 2
Airport #1 Fill	6	Process	Install galvanic isolation hardware on all flange bolts, nuts, and washers for FCV-0530.	$ 3,000.00	Year 1
Airport #1 Fill	7	Process	Install an NSF-61 dielectric union between the valve and thread-olet to mitigate galvanic corrosion between PCV and FCV-0530.	$ 3,000.00	Year 1
Airport #1 Fill	8	Process	Decommission mechanical level cable; install modern electronic level transmitter (submersible or radar) and integrate to SCADA.	See Electrical	Year 3 – 4
Airport #1 Fill	9	Process	Replace all existing butterfly valves with NSF/ANSI 61-certified units. Verify closure and tag for service direction.	$ 15,000.00	5
Airport #1 Fill	10	Process	Continue annual inspection; perform spot touch-ups using potable-approved epoxy where coating damage is observed.	$ -	Ongoing
Airport #1 Fill	11	Process	Conduct ultrasonic-thickness (UT) testing and localized radiography on representative pipe sections to establish baseline wall thickness data for future corrosion trending.	$ -	Not Included in Planning Budget. See Document Section
Airport #1 Fill	12	Process	Remove or cap unused stanchion bases and mark floor area to eliminate trip hazard.	$ 5,000.00	Year 2
Airport #1 Fill		Building Mechanical	Forced air furnace and accessories		
Airport #1 Fill		Building Mechanical	Along the ceiling is an exposed uncapped duct. Intent of this duct should be identified and either capped or properly terminated. Based on its location it is assumed to be vent.	$1,000	1

Appendix B - Facility Upgrades - Edmonton International Airport

Facility Name Airport #2 Fill

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
Airport #2 Fill		Electrical	Loose wires hang from a door jamb location for a door sensor. These wires need to be secured and the hole plugged	$ 200	1-2 years
Airport #2 Fill		Electrical	Replace UPS batteries.	$ 1,000	5-10 years
Airport #2 Fill		Electrical	Replace CO detector	$ 100	5-10 years
Airport #2 Fill		Electrical	Replace smoke detector	$ 100	5-10 years
Airport #2 Fill		Controls	The old MDS 4710 series radio has been left in the PLC cabinet post SCADA upgrade. This can be removed and recycled.	$ 100	1-2 years
Airport #2 Fill		Controls	Mount radio power supply correctly to a wall not loose.	$ 100	1-2 years
Airport #2 Fill		Controls	PIT's require Block and Bleed valves.	$ 3,000	2-5 years
Airport #2 Fill		Controls	Replace Flow control valve actuator with standard Rotork.	$ 7,500	2-5 years
Airport #2 Fill		Controls	Replace small pressure gauges with 4" faces.	$ 2,500	2-5 years
Airport #2 Fill	1	Process	Remove affected corroded Victaulic couplings for inspection. Replace any pitted or rusted housings. Clean and recoat with Victaulic-approved epoxy touch-up system. Verify HVAC humidity control to prevent reoccurrence.	$ 8,000	Year 2
Airport #2 Fill	2	Process	Disassemble air release connection, confirm valve and pipe materials. Replace with NSF-61 dielectric union between dissimilar metals. Re-seal threads using NSF-approved PTFE tape or sealant and reassemble.	$ 4,000	Year 1
Airport #2 Fill	3	Process	Inspect all support brace materials. Add rubber or EPDM isolating pads between pipe and clamp to eliminate direct metal contact. Standardize all supports to include non-conductive interfaces.	$ 2,000	Year 2
Airport #2 Fill	4	Process	Clean affected flange faces with Citrisurf 77 or equivalent. Rinse and dry. Perform localized pickling and passivation per ASTM A380/A967 to restore oxide layer. Improve HVAC dehumidification if condensation persists.	$ 10,000	Year 2
Airport #2 Fill	5	Process	Remove copper section and replace with PVC (NSF-61) or install dielectric union between stainless and copper. Ensure electrical isolation and confirm leak-tight joint.	$ 5,000	Year 1
Airport #2 Fill	6	Process	Replace all brass and copper components with 316L stainless or appropriate materials. Add dual regulator assembly for redundancy. Include dielectric unions between all dissimilar metals.	$ 3,000	Year 1
Airport #2 Fill	7	Process	Replace brass hose bib with stainless steel equivalent or add dielectric union. Install backflow with anti-siphon.	$ 3,000	Year 1
Airport #2 Fill	8	Process	Install NSF/ANSI 61-certified backflow with anti-siphon preventer (e.g., Watts LF7). Commission and test by certified cross-connection tester. Update CSA B64 test log.	$ 3,000	Year 1
Airport #2 Fill	9	Process	Conduct internal inspection of PCV body. Replace diaphragm, seat seals, and pilot assembly components. Reassemble, recalibrate, and document pressure setpoint.	$ 6,000	Year 3
Airport #2 Fill	10	Process	Install flange isolation kits (Mylar sleeves, insulating washers) between carbon steel valves and stainless piping. Verify electrical isolation.	$ 10,000	Year 2
Airport #2 Fill	11	Process	Remove rigid grout. Reseal wall penetrations with flexible fire-stop system to accommodate movement. Verify compliance with building and fire code.	$ 5,000	Year 1
Airport #2 Fill	13	Process	Conduct UT and localized radiography on representative piping sections to establish wall thickness baseline. Record data for future trending and asset management.	$ -	Not Included in Planning Budget. See Document Section
Airport #2 Fill		Building Mechanical	one supply duct with grill and return louver, and unit heater		
Airport #2 Fill		Building Mechanical	water marks and rusty spots on the combustion air intake duct to the unit heater	$ 2,000	1-2 years

Appendix B - Facility Upgrades - Calmar Fill Station

Facility Name Calmar Fill Station

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
Calmar Fill Station		Electrical	Replace UPS batteries.	$ 1,000	5-10 years
Calmar Fill Station		Electrical	Replace CO detector	$ 100	5-10 years
Calmar Fill Station		Electrical	Replace smoke detector	$ 100	5-10 years
Calmar Fill Station		Controls	Radio communication issues are with this location, recommend replacing radio antenna cable and antenna at next SCADA upgrade	$ 5,000	2-5 years
Calmar Fill Station		Controls	Radio power supply appears to be original to radio installation. Replace with new.	$ 500	2-5 years
Calmar Fill Station		Controls	Re-orient incoming PIT to allow for air expulsion	$ -	1-2 years
Calmar Fill Station		Controls	Add funnel and air gap between drain line and drain from Chlorine AIT to prevent sensor contamination. Ensure drain line to reservoir is air gapped to reservoir and holes are sealed.	$ 500	1-2 years
Calmar Fill Station		Controls	Upgrade old MiniRanger to newer version.	$ 3,000	2-5 years
Calmar Fill Station		Controls	Replace tiny pressure gauge between PRV and flow control valve with 4" unit for easier reading.	$ 1,000	2-5 years
Calmar Fill Station	1	Process	Replace all field clamps with cushioned, lined pipe supports (e.g., EPDM-lined saddle/clamps). Install isolation pads between pipe and support steel. Replace missing upper clamp and verify load rating/spacing per ASME B31.3 (Appendix D guidance).	$ 6,000	Year 1
Calmar Fill Station	2	Process	Install electrical isolation at every SS–CS interface (full-face isolating gasket + non-conductive sleeves + insulating washers; dielectric unions on threaded/o-let joints). Verify isolation with continuity test. Identify painted SS sections (spark test/PMI if needed) and label materials on P&IDs.	$ 6,000	Year 1
Calmar Fill Station	3	Process	Remove and replace complete PRV with NSF/ANSI 61 anti-cavitation model; include new pilots, strainers, isolation valves, and sense lines; factory start-up and set-point calibration.	$ 30,000	Year 1
Calmar Fill Station	4	Process	Bray butterfly valves appear to have epoxy-coated steel bodies. While coatings reduce galvanic potential, chips or coating damage will expose the substrate to corrosion. Inspect coating condition and touch up damaged areas per manufacturer specifications. Where stainless flanges or bolting contact coated steel, install mylar sleeves and insulating washers to mitigate galvanic attack.	$ 6,000	Year 1
Calmar Fill Station	5	Process	Demolish failed CS run and replace entire fill piping from indoor SS tie-in to external isolation manhole with 316L SS (pickled/passivated). Provide thrust control, dielectric breaks, hydrotest, and as-built updates.	$ 150,000	Year 1
Calmar Fill Station	6	Process	Install NSF/ANSI 61-certified backflow with anti-siphon preventer (e.g., Watts LF7). Commission and test by certified cross-connection tester. Update CSA B64 test log.	$ 3,000	Year 1
Calmar Fill Station	7	Process	Replace with stainless couplings (e.g., Victaulic Style 77SS or equivalent) and SS hardware; verify groove dimensions and torque to manufacturer specification.	$ 6,000	Year 2
Calmar Fill Station	8	Process	Install NSF-61 dielectric union between brass and stainless; remake threads with NSF-approved sealant; leak test.	$ 2,000	Year 1

Appendix B - Facility Upgrades - Calmar Fill Station

Facility Name Calmar Fill Station

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
Calmar Fill Station	9	Process	Localized clean, pickle, and passivate per ASTM A380/A967 for all affected welds; perform post-treatment inspection (ferroxyl or copper sulfate test) to confirm passivation.	$ 15,000	Year 2
Calmar Fill Station	10	Process	Design and install dedicated actuator support bracket/frame to remove bending/torque from valve shaft; verify alignment and travel after install.	$ 8,000	Year 2
Calmar Fill Station	11	Process	Install SS automatic ARV at high point upstream of magmeter; pipe discharge to drain. Replace downstream brass isolation with SS or add dielectric union to isolate from SS.	$ 10,000	Year 2
Calmar Fill Station	12	Process	Execute NDT program: UT thickness at representative straights/elbows/tees and targeted radiography at critical joints/penetrations; establish CMLs and baseline corrosion map for future trending.	$ -	Not Included in Planning Budget. See Document Section
Calmar Fill Station		Building Mechanical	natural gas fires unit heater, an exhaust fan and accessories		
Calmar Fill Station		Building Mechanical	Recommend that the ventilation within the building be reviewed, to ensure that the ventilation requirements are met.		
Calmar Fill Station		Building Mechanical	•Gas branch to the unit heater is not painted.	$ 500	1

Appendix B - Facility Upgrades - Nisku West Fill Station

Facility Name CRSWSC Nisku Booster Station

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
CRSWSC Nisku Booster Station		Electrical	Missing UPS power for camera system; deficiency from construction	$ -	1 year
CRSWSC Nisku Booster Station		Electrical	PLC cabinet has unsecured cabinet light hanging; warranty item from construction.	$ -	1 year
CRSWSC Nisku Booster Station		Electrical	Replace smoke detectors	$ 100	5-10 years
CRSWSC Nisku Booster Station		Electrical	Replace UPS batteries	$ 3,000	5-10 years
CRSWSC Nisku Booster Station		Electrical	HMI computers do not have a UPS; construction deficiency.	$ -	1 year
CRSWSC Nisku Booster Station		Process	Provide safe access: either install a fixed engineered platform with guardrails and ladder compliant with OHS Part 8 / CSA S157, or procure a rated mobile work platform. Add an SOP and signage for PCV maintenance access.	Investigate	Year 2
CRSWSC Nisku Booster Station		Process	Conduct UT thickness survey at representative CMLs (straights, elbows, reducers) and targeted radiography where warranted; store wall-thickness baseline for future trending.	$ -	Not Included in Planning Budget. See Document Section
CRSWSC Nisku Booster Station		Building Mechanical	Heating and ventilation system in the pump room, new in 2025	$ -	
CRSWSC Nisku Booster Station		Building Mechanical	Heating, ventilation and cooling system in the electrical room new, in 2025	$ -	
CRSWSC Nisku Booster Station		Building Mechanical	Heating, ventilation and cooling system in the office area, new in 2025	$ -	
CRSWSC Nisku Booster Station		Building Mechanical	Plumbing and fire protection system, new in 2025	$ -	

Appendix B - Facility Upgrades - Nisku West Fill Station

Facility Name Nisku West Fill Station

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
Nisku West Fill Station		Electrical	Replace UPS batteries.	$ 1,000	5-10 years
Nisku West Fill Station		Electrical	Replace CO detector	$ 100	5-10 years
Nisku West Fill Station		Electrical	Replace smoke detector	$ 100	5-10 years
Nisku West Fill Station		Controls	Remove obsolete MDS 4710 radio.	$ -	1-2 years
Nisku West Fill Station		Controls	Replace radio power supply with new.	$ 500	1-2 years
Nisku West Fill Station		Controls	Add funnel and air gap between drain line and drain from Chlorine AIT to prevent sensor contamination. Ensure drain line to reservoir is air gapped to reservoir and holes are sealed.	$ 500	1-2 years
Nisku West Fill Station		Controls	Upgrade old MiniRanger to newer version.	$ 3,000	1-2 years
Nisku West Fill Station	1	Process	Isolate and open PRV/PCV bodies; inspect seat/plug; replace diaphragms and full pilot rebuild kits; flush sense lines/strainers; document setpoints. Plan full replacement with anti-cavitation trims if wear or cavitation is noted.	$ 25,000	Year 3
Nisku West Fill Station	2	Process	Abrasive clean pipe stanchions to SSPC SP-3, repair/replace wasted baseplates/anchors, and apply 2-coat potable-approved epoxy; verify support spacing and load rating; add isolation pads where pipe contacts carbon steel.	$ 8,000	Year 2
Nisku West Fill Station	3	Process	Install flange isolation kits (full-face isolating gasket, non-conductive sleeves, insulating washers) at all SS–CS interfaces; verify electrical isolation with continuity test.	$ 4,000	Year 1
Nisku West Fill Station	4	Process	Replace with NSF/ANSI 61-certified butterfly valves; install new gaskets/bolting; implement quarterly exercise and annual leak-by verification log.	$ 10,000	Year 5
Nisku West Fill Station	5	Process	Install SS automatic ARV at the upstream high point; hard-pipe discharge to drain; verify magmeter accuracy post-installation and update calibration record.	$ 40,000	Year 2
Nisku West Fill Station	6	Process	De-energize, disassemble joint; clean flange faces; replace gasket and bolting; reassemble to torque spec; spot-coat exposed metal.	$ 2,000	Year 1
Nisku West Fill Station	7	Process	Mechanically clean to sound metal, apply approved coating; replace any corroded hardware with 316 SS; mark inspection date.	$ 8,000	Year 1
Nisku West Fill Station	8	Process	Install NSF/ANSI 61-certified backflow with anti-siphon preventer (e.g., Watts LF7). Commission and test by certified cross-connection tester. Update CSA B64 test log.	$ 3,000	Year 1
Nisku West Fill Station	9	Process	Perform UT thickness survey at representative straights/elbows/tees and targeted radiography at critical joints; establish corrosion monitoring locations (CMLs) for future trending.	$ -	Not Included in Planning Budget. See Document Section
Nisku West Fill Station		Building Mechanical	A ceiling mounted natural gas fires unit heater provides heating to the room. Based on observation the unit appears in a fair condition.		
Nisku West Fill Station		Building Mechanical	The gas meter is located within the meter room. When the meter is upgraded by the utility company, the gas meter should be relocated to the outside of the building.		
Nisku West Fill Station		Building Mechanical	Wall penetration near the PRV should be filled.	$ 500	1

Appendix B - Facility Upgrades - Nisku West Fill Station

Facility Name Nisku West Fill Station

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
Nisku West Fill Station		Building Mechanical	No exhaust air vent observed within room. Exhaust vent should be installed to allow for proper air changes within the space and to keep moisture levels down		

Appendix B - Facility Upgrades - Nisku East Fill Station

Facility Name Nisku East Fill Station

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
Nisku East Fill Station		Electrical	Replace UPS batteries.	$ 1,000	5-10 years
Nisku East Fill Station		Electrical	Replace CO detector	$ 100	5-10 years
Nisku East Fill Station		Electrical	Replace smoke detector	$ 100	5-10 years
Nisku East Fill Station		Controls	Add grounding rings to flow meter and connect to system ground.	$ 2,500	1-2 years
Nisku East Fill Station		Controls	Re-align chlorine analyser feed to eliminate possible air traps in line.	$ 100	1-2 years
Nisku East Fill Station		Controls	PI-0200 is small (2" face); replace with standard 4" face.	$ 500	2-5 years
Nisku East Fill Station		Controls	Add missing Block and Bleed valve to PIT-0200	$ 1,500	1-2 years
Nisku East Fill Station		Controls	Relocate manual sample line to not influence PIT due to pressure gradient	$ 100	1-2 years

Appendix B - Facility Upgrades - Nisku East Fill Station

Facility Name Nisku East Fill Station

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
Nisku East Fill Station	1	Process	Replace all field clamps with cushioned, lined supports (EPDM/Teflon liners); install isolation pads under saddles; standardize hardware; verify spacing and loads per ASME B31.3	$ 2,000	Year 2
Nisku East Fill Station	2	Process	Install NSF/ANSI 61-certified backflow with anti-siphon preventer (e.g., Watts LF7). Commission and test by certified cross-connection tester. Update CSA B64 test log. Confirm wetted materials; if brass remains, add dielectric union to isolate from stainless/CS; replace clear hose with rated potable hose/tube; remake joints with NSF-61 sealant.	$ 2,000	Year 1
Nisku East Fill Station	3	Process	The 87 psi fill-line branch includes stainless and brass dissimilar metal components with minor surface corrosion. Install dielectric isolation between dissimilar metals	$ 2,000	Year 1
Nisku East Fill Station	4	Process	Perform UT thickness survey at representative straights/elbows/tees and targeted radiography at critical joints; establish corrosion monitoring locations (CMLs) for future trending.	$ -	Not Included in Planning Budget. See Document Section
Nisku East Fill Station		Building Mechanical	The electric baseboard heater provides heating to the space		
Nisku East Fill Station		Building Mechanical	The Fill Station uses one portion of the reservoir building. Air handling unit is in another portion of the building that was not accessible		

Appendix B - Facility Upgrades - City of Beaumont

Facility Name Beaumont Fill Station

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
Beaumont Fill Station		Electrical	Replace distribution panel with new.	$ 5,000	5-10 years
Beaumont Fill Station		Electrical	Replace UPS batteries.	$ 1,000	5-10 years
Beaumont Fill Station		Electrical	Replace CO detector	$ 100	5-10 years
Beaumont Fill Station		Electrical	Replace smoke detector	$ 100	5-10 years
Beaumont Fill Station		Electrical	Place exit sign over doorway where it is required to be mounted.	$ 300	1-2 years
Beaumont Fill Station		Electrical	Replace external doorway light with newer LED and photocell.	$ 1,000	1-2 years
Beaumont Fill Station		Electrical	Remove old entry door switch.	$ 100	5-10 years
Beaumont Fill Station		Electrical	Replace 600-208 V 15kVA transformer due to age.	$ 3,000	5-10 years
Beaumont Fill Station		Controls	Replace radio power supply.	$ 500	1-2 years
Beaumont Fill Station		Controls	External radio mast support brackets are bent and not a correct use of unistrut. Replace supports.	$ 5,000	1-2 years
Beaumont Fill Station		Controls	Add a funnel and air gap between analyser drain and drain line. Then ensure drain line where it enters reservoir is sealed and air gapped to reservoir to prevent contamination.	$ 500	1-2 years
Beaumont Fill Station		Controls	Replace Miniranger transmitter with newer unit due to age.	$ 3,000	1-2 years
Beaumont Fill Station	1	Process	Install flange isolation kits at every DI–SS interface (full-face isolating gasket, non-conductive sleeves, insulating washers). Verify electrical isolation with continuity test and record in asset log.	$ 2,000	Year 1
Beaumont Fill Station	2	Process	Install NSF/ANSI 61 dielectric unions between brass regulators and SS connections; remake threads with NSF-approved sealant; leak-test and tag.	$ 2,000	Year 1
Beaumont Fill Station	3	Process	Remove threaded joint; install NSF-61 dielectric union between DI ARV and SS nipple; reassemble with NSF-approved sealant; function test ARV.	$ 2,000	Year 1
Beaumont Fill Station	4	Process	Execute NDT baseline: UT thickness at representative straights/elbows + targeted radiography at one flange pair; establish CMLs and enter wall-thickness baseline in asset database for trending.	$ -	Not Included in Planning Budget. See Document Section
Beaumont Fill Station		Building Mechanical	natural gas fired unit heater and a set of manually operated dampers.	$ -	
Beaumont Fill Station		Building Mechanical	The indoor natural gas piping is not painted.	$ 500	1

Appendix B - Facility Upgrades - HWY 21 Booster Fill Station

Facility Name HWY 21 Booster Station

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
HWY 21 Booster Station		Electrical	The MCC appears to be in good condition with no obvious signs of corrosion and given it's age it has at least another 10 years of life. There is a good section and a half of spare space provided. Expansion physically is not an issue for this MCC.	$ 50,000	10-15 years
HWY 21 Booster Station		Electrical	Replace BP-707 VFD and harmonic filter due to age.	$ 10,000	5-10 years
HWY 21 Booster Station		Electrical	Replace UPS batteries.	$ 1,000	5-10 years
HWY 21 Booster Station		Electrical	Replace CO detector	$ 100	5-10 years
HWY 21 Booster Station		Electrical	Replace smoke detector	$ 100	5-10 years
HWY 21 Booster Station		Electrical	Replace Sola power filter with new AEGIS power filter.	$ 1,000	2-5 years
HWY 21 Booster Station		Electrical	Install second receptacle outlet for sumps so both sumps can be turned plugged in with different trigger points on for true redundancy.	$ 500	10-15 years
HWY 21 Booster Station		Electrical	Provide sleeves over ground wires at tower to disguise copper from thieves.	$ 500	1-2 years
HWY 21 Booster Station		Controls	Change small 2" pressure gauges on basement piping to larger 4" face dials for easier reading.	$ 2,000	1-2 years
HWY 21 Booster Station		Controls	Clean PIT transmitters faces of white power the tappers to be inside glass.	$ 500	1-2 years
HWY 21 Booster Station	1	Process	Isolate existing/original centrifugal pump; verify and re-torque bonnet and suction flange fasteners to OEM spec using calibrated wrench and cross-pattern; if weep persists, replace casing gasket and suction flange gasket; check alignment and re-commission	$ 2,000	Year 1
HWY 21 Booster Station	2	Process	Victaulic fittings show superficial rusting. Surface prep per manufacturers requirements, and apply approved coating touch-up per manufacturers requirements; inspect coupling for pitting when depressurized—replace only if metal loss detected; record torque on re-assembly.	$ 4,000	Year 2
HWY 21 Booster Station	3	Process	Replace corroded bolts/washers on check valves with SS hardware as compatible; apply anti-seize suitable for potable environments; and isolate from galvanic corrosion; verify torque. Service/verify HVAC dehumidification capacity to maintain RH <60%; add wall RH/temperature logger and trend; ensure condensate drains are clear; keep dehumidifier as backup.	$ 6,000	Year 2
HWY 21 Booster Station	4	Process	Install additional dedicated receptacle/circuit so both sump pumps can operate; reset/raise ON level of floats to prevent submergence of weeping-tile invert; function-test both pumps and alternate lead/lag.	$ 1,000	Year 2
HWY 21 Booster Station	5	Process	Replace all galvanized instrument/sampling fittings with 316L SS; add dielectric unions at any SS–CS threaded interfaces; remake seals with NSF-61 sealant; leak-test	$ 8,000	Year 1
HWY 21 Booster Station	6	Process	Perform UT thickness survey at representative straights/elbows/tees and targeted radiography at critical joints; establish corrosion monitoring locations (CMLs) for future trending.	$ -	Not Included in Planning Budget. See Document Section
HWY 21 Booster Station		Building Mechanical	ventilation system for the pump room		
HWY 21 Booster Station		Building Mechanical	ventilation system for the generator		
HWY 21 Booster Station		Building Mechanical	unit heater		

Appendix B - Facility Upgrades - City of Leduc North Reservoir

Facility Name Leduc North Reservoir Fill

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
Leduc North Reservoir Fill		Electrical	Replace MCB and Main distribution panel with new combined panel.	$ 5,000	1-2 years
Leduc North Reservoir Fill		Electrical	Replace UPS-6E panel.	$ 2,500	1-2 years
Leduc North Reservoir Fill		Electrical	Paint incoming service conduits on exterior by door.	$ 500	1-2 years
Leduc North Reservoir Fill		Electrical	Replace UPS batteries.	$ 1,000	5-10 years
Leduc North Reservoir Fill		Electrical	Replace CO detector	$ 100	5-10 years
Leduc North Reservoir Fill		Electrical	Replace smoke detector	$ 100	5-10 years
Leduc North Reservoir Fill		Controls	Chlorine analyser water feed requires a re-route. As installed it has an air trap.	$ 100	1-2 years
Leduc North Reservoir Fill		Controls	Seal analyser water return line into level hatch to prevent contamination	$ 100	1-2 years
Leduc North Reservoir Fill		Controls	Replace level sensor with newer supported model.	$ 3,000	1-2 years
Leduc North Reservoir Fill	1	Process	Remove galvanized reducer and brass bib assembly. Replace with 316L stainless-steel reducer and valve. Install NSF/ANSI 61 dielectric union between dissimilar metals. Add CSA B64-compliant backflow prevention and antisiphon device.	$ 2,000	Year 1
Leduc North Reservoir Fill	2	Process	Install NSF/ANSI 61-certified backflow with anti-siphon preventer (e.g., Watts LF7). Commission and test by certified cross-connection tester. Update CSA B64 test log.	$ 3,000	Year 1
Leduc North Reservoir Fill	3	Process	Clean surface rust to SSPC standard. Recoat with potable-approved epoxy or polyurethane system. Maintain color coding and record maintenance date.	$ 4,000	Year 2
Leduc North Reservoir Fill	4	Process	Depressurize valve and isolation; repack stem gland with compatible packing per manufacturer procedure and requirements; test to confirm no further leakage.	$ 4,000	Year 2
Leduc North Reservoir Fill	5	Process	Light sand and touch up with appropriate coating; include in maintenance log.	$ 1,000	Year 3
Leduc North Reservoir Fill	6	Process	Extend vent piping to building exterior with screened termination (rodent- and insect-proof). Seal wall/roof penetration with appropriate boot or flashing. The cost associated for this item in budgetary planning would be a City of Leduc Cost. Commission is to coordinate with the City of Leduc to rectify the issue.	$ 10,000	Year 1
Leduc North Reservoir Fill	7	Process	Perform UT thickness survey at representative straights/elbows/tees and targeted radiography at critical joints; establish corrosion monitoring locations (CMLs) for future trending.	$ -	Not Included in Planning Budget. See Document Section
Leduc North Reservoir Fill		Building Mechanical	natural gas fired a forced air furnace		
Leduc North Reservoir Fill		Building Mechanical	The furnace does not have an outside air intake. There is insufficient ventilation within the room, due to the observed resting on equipment within the room. The ventilation within the room should be checked for adequacy		

Appendix B - Facility Upgrades - Leduc Robinson Fill Station

Facility Name Robinson Fill Station

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
Robinson Fill Station		Electrical	A Sola Hevi-duty power conditioner is installed to filter the power going to the UPS. After 10 years this filter needs to be closely inspected for wear and damage and replaced if any found. These units have shown a tendency to wear out and fail if exposed to significant line noise after several years while doing their job of noise filtering. AE recommends replacing this filter proactively with an AEGIS PH120.	$ 3,000	1-2 years
Robinson Fill Station		Electrical	Replace UPS batteries.	$ 1,000	5-10 years
Robinson Fill Station		Electrical	Replace CO detector	$ 100	5-10 years
Robinson Fill Station		Electrical	Replace smoke detector	$ 100	5-10 years
Robinson Fill Station	1	Process	Install a complete flange isolation kit for stainless control valve (full-face insulating gasket, sleeves, washers) at flow control valve. Verify electrical isolation with continuity test post-installation.	$ 3,000	Year 1
Robinson Fill Station	2	Process	Install NSF/ANSI 61-certified backflow with anti-siphon preventer (e.g., Watts LF7). Commission and test by certified cross-connection tester. Update CSA B64 test log.	$ 3,000	Year 1
Robinson Fill Station	3	Process	Perform UT thickness testing and targeted radiography on representative ASTM A139 carbon-steel piping segments. Establish baseline wall thickness for long-term asset management.	$ -	1-2 years
Robinson Fill Station		Building Mechanical	The unit heater is a separation combination type. The unit heater draws combustion air from outside and exhaust flue to outside. The unit heater is in a good condition. There is insufficient ventilation within the room, due to the observed resting on equipment within the room. The ventilation within the room should be checked for adequacy.		

Appendix B - Facility Upgrades - Hamlet of Armena

Facility Name Armena Fill Station

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
Armena Fill Station		Electrical	Add an AEGIS PH120 power filter to power circuit feeding UPS.	$ 3,000	1-2 years
Armena Fill Station		Controls	The PLC cabinet has a single power supply. Dual redundant supplies are recommended.	$ 1,000	1-2 years
Armena Fill Station		Controls	Incoming pressure transmitter needs a Block and Bleed to ensure all air is bled away from the sensor for an accurate reading. This tap assembly has a very strange configuration that is not recommended as it can lead to leaks, air traps and skewed sensor readings if water is flowing from the sample valve port. The sample valve is also upstream of the PRV so full system pressure is experienced at this point (92 psi).	$ 2,500	1-2 years
Armena Fill Station		Electrical	Replace UPS batteries.	$ 1,000	5-10 years
Armena Fill Station		Controls	Convert PRV to use a solenoid on the pilot and have the PLC energize the pilot for filling. This way in a power outage the PRV closes when the fill valve cannot.	$ 2,500	1-2 years
Armena Fill Station		Controls	Flow meter does not have grounding rings but since the piping is all SS technically they are not required as water and piping are all in contact and conductive.	$ 2,500	2-5 years
Armena Fill Station	1	Process	Clean, then pickle & passivate affected areas such as piping, flanges, connections per ASTM A380/A967; verify passive layer (ferroxyl or copper sulfate test)	$ 8,000	1-2 years
Armena Fill Station	2	Process	Remove corroded anchors/washers; install 316 SS hardware that is pickled/passivated; clean puddle flange to sound metal, pickle & passivate.	$ 6,000	Year 1
Armena Fill Station	3	Process	Disassemble Victaulic flange adapters as needed; mechanically clean to sound metal; recoat housings with manufacturer-approved system; replace carbon-steel nuts/bolts with 316 SS; add isolation kits (non-conductive gasket, sleeves, insulating washers) at SS–DI flanges; verify electrical isolation with continuity test.	$ 8,000	Year 1
Armena Fill Station	4	Process	Isolate and open PCV; inspect seat/plug/bonnet; replace diaphragm and full pilot rebuild kit; flush/clean strainers and sense lines; recalibrate setpoint and record.	$ 5,000	Year 2
Armena Fill Station	5	Process	Perform UT thickness survey at representative straights/elbows/tees and targeted radiography at critical joints/penetrations; establish CMLs and a corrosion map for future trending.	$ -	Not Included in Planning Budget. See Document Section
Armena Fill Station		Building Mechanical	The Armena Fill Station is a combination truck fill and fill station, and the room is shared with the County of Camrose. As such, the building mechanical system was not reviewed.	$ -	

Appendix B - Facility Upgrades - Town of Hay Lakes

Facility Name Hay Lakes Fill Station

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
Hay Lakes Fill Station		Electrical	AE recommends replacing the Sola power filter with a new AEGIS PH120 unit.	$ 3,000	1-2 years
Hay Lakes Fill Station		Electrical	Single EATON Powerware UPS in cabinet. UPS batteries should be replaced every 5 years.	$ 1,000	5-10 years
Hay Lakes Fill Station		Controls	Replace entire Momentum PLC with M580 series and convert program.	$ 50,000	1-2 years
Hay Lakes Fill Station		Controls	Remove spare SD4 radio in cabinet and store at Nisku Booster.	$ -	Year 1
Hay Lakes Fill Station		Controls	Air gap the chlorine discharge line to a funnel before it runs to the drain.	$ 500	1-2 years
Hay Lakes Fill Station		Controls	Re-route water line feed to chlorine analyser to eliminate air gaps.	$ 500	1-2 years
Hay Lakes Fill Station	1	Process	Replace entire fill system with 316L SS piping (pickled & passivated per ASTM A380/A967). Replace supports with engineered, cushioned/lined clamps and saddle supports rated for load/temperature; add isolation pads; verify spacing and loads per ASME B31.3 (Appendix D guidance). Install dedicated equipment support frames/brackets; remove loads from pipe; re-align spools; verify actuator alignment and valve stem loads; add removable service platforms where required. Re-route and re-elevate piping to provide clearances per OHS/ergonomic best practices	$ 250,000	1-2 years
Hay Lakes Fill Station		Building Mechanical	The Hay Lakes Fill Station is a shared with the Village of Hay Lakes. As such, the building mechanical system was not reviewed.	$ -	

Appendix B - Facility Upgrades - Hamlet of New Sarepta

Facility Name New Sarepta Fill Station

LOCATION	Item #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
New Sarepta Fill Station		Electrical	AE recommends replacing the Sola power filter with a new AEGIS PH120 unit.	$ 3,000	1-2 years
New Sarepta Fill Station		Electrical	Single EATON Powerware UPS in cabinet. UPS batteries should be replaced every 5 years.	$ 1,000	5-10 years
Hamlet of New Sarepta		Controls	Replace entire Momentum PLC with M580 series and convert program.	$ 50,000	1-2 years
Hamlet of New Sarepta		Controls	The original MDS 4710 radio as well as the newer SD4 radio are in the cabinet. The 4710 should be recycled.	$ -	Year 1
Hamlet of New Sarepta		Controls	Air gap the chlorine discharge line to a funnel before it runs to the drain.	$ 500	1-2 years
Hamlet of New Sarepta	1	Process	Replace all affected corrosion observed Victaulic couplings and re-seat on cleaned piping ends to ensure uniform gasket compression and seal integrity	$ 6,000	Year 1
Hamlet of New Sarepta	2	Process	Replace severely rusted or bloom-corroded flanges and threaded pipe with ASTM A312 TP316L stainless steel pickled & passivated per ASTM A380/A967.	$ 10,000	1-2 years
Hamlet of New Sarepta	3	Process	Install isolation kits (Mylar sleeves + insulating washers, isolating gaskets as applicable) at all dissimilar metal interfaces to mitigate galvanic corrosion.	$ 6,000	Year 1
Hamlet of New Sarepta	4	Process	Replace/retrofit pipe supports with cushioned clamps (e.g., Eaton Vibra-Clamp BVT or equivalent) to prevent metal-to-metal contact. And include where applicable isolating shims for unistrut as well.	$ 10,000	Year 1
Hamlet of New Sarepta	5	Process	Perform complete internal inspection of PCV body/seat; replace diaphragm and pilot rebuild kit per OEM (5–7 yr interval); verify pilot tubing/strainers are clear and correctly routed.	$ 5,000	Year 2
Hamlet of New Sarepta	6	Process	Install approved backflow prevention and antisiphon devices on all hose bibbs and outlet connections; add to CSA B64 cross-connection testing program.	$ 4,000	Year 1
Hamlet of New Sarepta	7	Process	Implement NDT program: UT thickness and targeted X-ray at representative segments (esp. couplings/flanges) to: establish baseline WT, support predictive maintenance, and enable trend-based renewal planning.	$ -	Not Included in Planning Budget. See Document Section
Hamlet of New Sarepta		Building Mechanical	The New Sarepta Fill Station is a shared with the Leduc County and as such, the building mechanical system was not evaluated.		

Appendix B - Facility Upgrades - Telford Lake Booster

Facility Name Telford Booster Station

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
Telford Booster Station		Electrical	Clean VFD inlet, outlet and internals. Dirty screens and internals will lead to heat buildup and reduced life. Use a qualified company like PACE to service the equipment.	$ 2,000	Year 1
Telford Booster Station		Electrical	Replace exit sign over door with exit and emergency lights to ensure proper illumination of exit path.	$ 1,500	1-2 Years
Telford Booster Station		Electrical	Install CO detector to match other facilities.	$ 100	1-2 Years
Telford Booster Station		Electrical	Install AEGIS power filter on power line to PLC UPS.	$ 3,000	1-2 Years
Telford Booster Station		Electrical	PLC cabinet UPS is a single unit. UPS batteries should be replaced every 5 years on average.	$ 1,000	5-10 years
Telford Booster Station		Controls	Online instrumentation is new and in good condition. One major issue is the pressure gauge and transmitter arrangements. Refer to photos, the piping is very non-standard and will allow for air to trap in the line going to the transmitter. Recommend all these trees be reconfigured such that the piping goes line tap -> isolation valve -> tee -> gauge, and from the other tee half -> Block and Bleed valve -> pressure transmitter. This configuration will ensure air is never trapped at the transmitter.	$ 5,000	1-2 Years
Telford Booster Station		Controls	Flow meter does not have grounding rings. Because the piping is coated steel it is considered non-conductive and SS grounding rings are recommended by the manufacturer. AE recommends SS grounding rings and a ground connection be installed.	$ 2,500	Year 1
Telford Booster Station	1	Process	Mechanically clean rusted areas using an approved rust remover. Pipe each air-release outlet to floor drain with rigid PVC or CPVC tubing to prevent discharge on valve surfaces. Recoat cleaned areas with a potable-grade corrosion-resistant coating.	$ 8,000	Year 1
Telford Booster Station	2	Process	Clean couplings using Victaulic-approved methods (wire brushing, solvent wipe). Apply manufacturer touch-up coating or paint. Inspect for pitting; replace housings and gaskets if rust reoccurs. Verify torque to manufacturer specs after reassembly.	$ 4,000	Year 2
Telford Booster Station	3	Process	Perform internal inspection of PCV bodies; replace diaphragms, seals, and pilot components using OEM rebuild kits; flush pilot lines and recalibrate pressure setpoints.	$ 8,000	Year 2
Telford Booster Station	4	Process	Perform a comprehensive visual inspection of all exposed and uncoated welds to identify areas of active or potential corrosion. Mechanically prepare affected weld surfaces and conduct full pickling and passivation treatment in accordance with ASTM A380 and ASTM A967 to restore corrosion resistance. Following treatment, implement a monitoring program to verify weld surface stability and evaluate the effectiveness of passivation	$ 5,000	Year 1
Telford Booster Station	5	Process	Conduct UT wall-thickness survey at representative straights/elbows and localized radiography at critical joints. Establish baseline wall-thickness data for future comparative assessments and trend analysis.	$ -	Not Included in Planning Budget. See Document Section
Telford Booster Station		Building Mechanical	one exhaust fan and associated dampers and hoods	$ -	
Telford Booster Station		Building Mechanical	two unit heaters	$ -	
Telford Booster Station		Building Mechanical	The natural gas piping in the building is not painted or marked.	$ 1,000	1

Appendix B - Facility Upgrades - Town of Millet

Facility Name Millet Fill Station

LOCATION	ITEM #	DISCIPLINE	ITEM	COST	TIMELINE/ YEAR
Millet Fill Station		Electrical	A Single EATON Powerware UPS is in the PLC cabinet. UPS batteries should be replaced every 5 years.	$ 1,000	5-10 years
Millet Fill Station		Electrical	The PLC cabinet does not have a power filter. AE recommends that a power filter like an Eaton AEGIS unit be used to pre-filter noise from the power line before it reaches the UPS.	$ 3,000	1-2 years
Millet Fill Station		Controls	Install grounding rings on flowmeter for added reliability of readings.	$ 2,500	2-5 years
Millet Fill Station		Controls	Online instrumentation is new and in good condition. One major issue is the pressure gauge and transmitter arrangements. Refer to photos, the piping is very non-standard and will allow for air to trap in the line going to the transmitter. Recommend all these trees be reconfigured such that the piping goes line tap -> isolation valve -> tee -> gauge, and from the other tee half -> Block and Bleed valve -> pressure transmitter. This configuration will ensure air is never trapped at the transmitter.	$ 3,000	1-2 years
Millet Fill Station		Controls	Install second PRV on chlorine sample line as incoming pressure is close to limit of one PRV.	$ 1,500	1-2 years
Millet Fill Station	1	Process	Replace existing carbon-steel coupling with a full 316 SS Victaulic coupling of the same size and rating. Use stainless-only tools during installation to prevent contamination. Verify groove dimensions and torque to manufacturer specifications.	$ 1,000	Year 1
Millet Fill Station	2	Process	Cut out and re-weld defective joints under approved WPS ensuring full fusion. Then mechanically clean and pickle (ASTM A380) followed by passivation (ASTM A967) for all SS welds and spools. Confirm surface quality using ferroxyl or copper-sulfate test. Following repair, ensure galvanic isolation between dissimilar metals, exclusive use of stainless-only tools, and improved environmental control to minimize moisture accumulation	$ 30,000	5-10 years
Millet Fill Station	3	Process	Install dielectric isolation kits (full-face gasket, mylar sleeves, and insulating washers) at each CS–SS interface including PCV, ARV, and appurtenances. Verify electrical isolation with a continuity test.	$ 2,000	Year 1
Millet Fill Station	4	Process	Perform internal inspection of PCV body and seat; replace diaphragm and pilot rebuild kit per OEM. Calibrate pressure setpoint and document maintenance in asset log.	$ 5,000	Year 2–3
Millet Fill Station	5	Process	Conduct UT wall-thickness testing and targeted X-ray at representative straights, elbows, and welds to create a baseline corrosion profile. Use data for future rate-of-loss tracking and renewal planning.	$ -	Not Included in Planning Budget. See Document Section
Millet Fill Station		Building Mechanical	This building is shared with the Town of Millet and as such the building mechanical systems were not reviewed.	$ -	

APPENDIX C - DETAILED RATE ANALYSIS

DRAFT

CRSWSC - Unit Cost Analysis - Scenario 1

Year	Projected Water Demand	Construction Cost (2026 Dollars) ($M)	Operating Cost (2026 Dollars)	Capital Yearly Costs (Fvalue) ($M)	Accured capital (per year)	Earned Interest	Value in Account	Water Reserve Rate ($/m3)	Water Rate
		$ 42,447,000.00		**$ 110,567,749**			$6,763,343		
2025	6,976,620	$ -	$ -				$ 6,763,343	$ 0.49	$ 1.74
2026	7,229,244	$ 644,000.00	$ -	$ 676,200.00	$3,542,330	$ 236,717	$ 9,866,190	$ 0.49	$ 1.74
2027	7,482,028	$ 870,000.00	$ -	$ 959,175.00	$3,292,092	$ 345,317	$ 12,544,424	$ 0.44	$ 1.74
2028	7,744,783	$ 91,000.00	$ -	$ 105,343.88	$3,020,465	$ 439,055	$ 15,898,600	$ 0.39	$ 1.74
2029	8,017,944	$ 52,000.00	$ -	$ 63,206.33	$2,726,101	$ 556,451	$ 19,117,945	$ 0.34	$ 1.74
2030	8,301,969	$ 109,000.00	$ -	$ 139,114.69	$2,490,591	$ 669,128	$ 22,138,550	$ 0.30	$ 1.75
2031	8,596,621	$ 8,363,000.00	$ -	$ 11,207,219.84	$2,578,986	$ 774,849	**$ 14,285,165**	$ 0.30	$ 1.80
2032	8,840,276	$ -	$ -	$ -	$2,652,083	$ 499,981	$ 17,437,229	$ 0.30	$ 1.85
2033	9,091,113	$ -	$ -	$ -	$2,727,334	$ 610,303	$ 20,774,866	$ 0.30	$ 1.90
2034	9,349,351	$ -	$ -	$ -	$2,804,805	$ 727,120	$ 24,306,791	$ 0.30	$ 1.95
2035	9,615,216	$ -	$ -	$ -	$3,076,869	$ 850,738	$ 28,234,398	$ 0.32	$ 2.02
2036	9,888,938	$ -	$ -	$ -	$3,164,460	$ 988,204	$ 32,387,062	$ 0.32	$ 2.07
2037	10,170,758	$ -	$ -	$ -	$3,254,643	$ 1,133,547	$ 36,775,252	$ 0.32	$ 2.12
2038	10,460,922	$ -	$ -	$ -	$3,347,495	$ 1,287,134	$ 41,409,881	$ 0.32	$ 2.17
2039	10,759,683	$ -	$ -	$ -	$3,443,099	$ 1,449,346	$ 46,302,325	$ 0.32	$ 2.22
2040	11,067,305	$ -	$ -	$ -	$3,762,884	$ 1,620,581	$ 51,685,790	$ 0.34	$ 2.29
2041	11,384,058	$ -	$ -	$ -	$3,870,580	$ 1,809,003	$ 57,365,373	$ 0.34	$ 2.34
2042	11,710,222	$ -	$ -	$ -	$3,981,475	$ 2,007,788	$ 63,354,636	$ 0.34	$ 2.39
2043	12,046,082	$ -	$ -	$ -	$4,095,668	$ 2,217,412	$ 69,667,716	$ 0.34	$ 2.44
2044	12,391,937	$ -	$ -	$ -	$4,213,259	$ 2,438,370	$ 76,319,345	$ 0.34	$ 2.49
2045	12,748,092	$ -	$ -	$ -	$4,589,313	$ 2,671,177	$ 83,579,835	$ 0.36	$ 2.56
2046	13,114,863	$ 22,729,000	$ -	$ 63,322,143.72	$4,721,351	$ 2,925,294	**$ 27,904,336**	$ 0.36	$ 2.61
2047	13,492,575	$ -	$ -	$ -	$4,857,327	$ 976,652	$ 33,738,315	$ 0.36	$ 2.66
2048	13,881,564	$ -	$ -	$ -	$4,997,363	$ 1,180,841	$ 39,916,519	$ 0.36	$ 2.71
2049	14,282,176	$ -	$ -	$ -	$5,550,843	$ 1,397,078	$ 46,864,440	$ 0.36	$ 2.76
2050	14,694,769	$ -	$ -	$ -	$5,772,876	$ 1,640,255	$ 54,277,572	$ 0.36	$ 2.81
2051	15,119,710	$ 9,589,000.00	$ -	$ 34,095,345.40	$6,003,791	$ 1,899,715	**$ 28,085,733**	$ 0.36	$ 2.86

CRSWSC - Unit Cost Analysis - Scenario 2

Year	Projected Water Demand	Construction Cost (2026 Dollars) ($M)	Operating Cost (2026 Dollars)	Capital Yearly Costs (Fvalue) ($M)	Net Present Valve	Depenture limit	Debt Servcie Level		Accured capital (per year)	Earned Interest	Value in Account	Water Reserve Rate ($/m3)	Water Rate
		$ 42,447,000.00		**$ 110,567,749**	**$ 67,157,946**						$6,763,343		
2025	6,976,620	$ -	$ -						$0	$ -	$6,763,343	$ 0.49	$ 1.74
2026	7,229,244	$ 644,000.00	$ -	$ 676,200.00		$25,409,346.81	$25,409,346.81		$3,542,330	$ 236,717	$ 9,866,190	$ 0.49	$ 1.74
2027	7,482,028	$ 870,000.00	$ -	$ 959,175.00		$26,560,810.33	$26,560,810.33		$3,292,092	$ 345,317	$ 12,544,424	$ 0.44	$ 1.74
2028	7,744,783	$ 91,000.00	$ -	$ 105,343.88		$27,768,512.69	$27,768,512.69		$3,020,465	$ 439,055	$ 15,898,600	$ 0.39	$ 1.74
2029	8,017,944	$ 52,000.00	$ -	$ 63,206.33		$29,035,396.28	$29,035,396.28		$2,726,101	$ 556,451	$ 19,117,945	$ 0.34	$ 1.74
2030	8,301,969	$ 109,000.00	$ -	$ 139,114.69		$30,364,575.93	$30,364,575.93		$2,407,571	$ 669,128	$ 22,055,530	$ 0.29	$ 1.74
2031	8,596,621	$ 8,363,000.00	$ -	$ 11,207,219.84		$31,756,692.74	$31,756,692.74		$2,063,189	$ 771,944	**$ 13,683,443**	$ 0.24	$ 1.74
2032	8,840,276	$ -	$ -	$ -		$32,983,344.03	$32,983,344.03		$1,679,652	$ 478,920	$ 15,842,016	$ 0.19	$ 1.74
2033	9,091,113	$ -	$ -	$ -		$34,258,416.90	$34,258,416.90		$1,727,311	$ 554,471	$ 18,123,798	$ 0.19	$ 1.79
2034	9,349,351	$ -	$ -	$ -		$35,583,861.29	$35,583,861.29		$1,776,377	$ 634,333	$ 20,534,507	$ 0.19	$ 1.84
2035	9,615,216	$ -	$ -	$ -		$36,961,707.56	$36,961,707.56		$2,019,195	$ 718,708	$ 23,272,410	$ 0.21	$ 1.91
2036	9,888,938	$ -	$ -	$ -		$38,394,057.38	$38,394,057.38		$2,076,677	$ 814,534	$ 26,163,622	$ 0.21	$ 1.96
2037	10,170,758	$ -	$ -	$ -		$39,883,113.12	$39,883,113.12		$2,135,859	$ 915,727	$ 29,215,208	$ 0.21	$ 2.01
2038	10,460,922	$ -	$ -	$ -		$41,431,157.52	$41,431,157.52		$2,196,794	$ 1,022,532	$ 32,434,533	$ 0.21	$ 2.06
2039	10,759,683	$ -	$ -	$ -		$43,040,563.97	$43,040,563.97		$2,259,533	$ 1,135,209	$ 35,829,276	$ 0.21	$ 2.11
2040	11,067,305	$ -	$ -	$ -		$44,713,815.39	$44,713,815.39		$2,545,480	$ 1,254,025	$ 39,628,780	$ 0.23	$ 2.18
2041	11,384,058	$ -	$ -	$ -		$46,453,487.50	$46,453,487.50		$2,618,333	$ 1,387,007	$ 43,634,121	$ 0.23	$ 2.23
2042	11,710,222	$ -	$ -	$ -		$48,262,267.97	$48,262,267.97		$2,693,351	$ 1,527,194	$ 47,854,666	$ 0.23	$ 2.28
2043	12,046,082	$ -	$ -	$ -		$50,142,939.21	$50,142,939.21		$2,770,599	$ 1,674,913	$ 52,300,178	$ 0.23	$ 2.33
2044	12,391,937	$ -	$ -	$ -		$52,098,418.81	$52,098,418.81		$2,850,146	$ 1,830,506	$ 56,980,830	$ 0.23	$ 2.38
2045	12,748,092	$ -	$ -	$ -		$54,131,730.21	$54,131,730.21		$3,187,023	$ 1,994,329	$ 62,162,182	$ 0.25	$ 2.45
2046	13,114,863	$ 22,729,000	$ -	$ 63,322,143.72		$56,246,027.08	$56,246,027.08		$3,278,716	$ 2,175,676	**$ 4,294,431**	$ 0.25	$ 2.50
2047	13,492,575	$ -	$ -	$ -		$58,444,588.88	$58,444,588.88		$3,373,144	$ 150,305	$ 7,817,880	$ 0.25	$ 2.55
2048	13,881,564	$ -	$ -	$ -		$60,730,833.36	$60,730,833.36		$3,470,391	$ 273,626	$ 11,561,896	$ 0.25	$ 2.60
2049	14,282,176	$ -	$ -	$ -		$63,108,316.56	$63,108,316.56		$3,570,544	$ 404,666	$ 15,537,107	$ 0.25	$ 2.65
2050	14,694,769	$ -	$ -	$ -		$65,580,745.90	$65,580,745.90		$3,673,692	$ 543,799	$ 19,754,598	$ 0.25	$ 2.70
2051	15,119,710	$ 9,589,000.00	$ -	$ 34,095,345.40		$68,151,971.51	$58,282,562.17	($68,151,971.51)	$3,779,928	$ 691,411	**$ (9,869,409)**	$ 0.25	$ 2.75
2052	15,573,301			$ -		$70,898,495.96	$64,478,288.53		$3,893,325	$ (444,123)	$ (6,420,207)	$ 0.25	$ 2.80
2053	16,040,500			$ -		$73,755,705.34	$71,056,713.67		$4,010,125	$ (288,909)	$ (2,698,992)	$ 0.25	$ 2.85
2054	16,521,715			$ -		$76,728,060.27	$76,728,060.27		$4,130,429	$ (121,455)	$ 1,309,983	$ 0.25	$ 2.90
2055	17,017,367			$ -		$79,820,201.10	$79,820,201.10		$4,254,342	$ 45,849	$ 5,610,174	$ 0.25	$ 2.95
2056	17,527,888			$ -		$83,036,955.20	$83,036,955.20		$4,381,972	$ 196,356	$ 10,188,502	$ 0.25	$ 3.00
2057	18,053,724			$ -		$86,383,344.50	$86,383,344.50		$4,513,431	$ 356,598	$ 15,058,530	$ 0.25	$ 3.05
2058	18,595,336			$ -		$89,864,593.28	$89,864,593.28		$4,648,834	$ 527,049	$ 20,234,413	$ 0.25	$ 3.10
2059	19,153,196			$ -		$93,486,136.39	$93,486,136.39		$4,788,299	$ 708,204	$ 25,730,916	$ 0.25	$ 3.15

CRSWSC - Unit Cost Analysis - Scenario 3

Year	Projected Water Demand	Construction Cost (2026 Dollars) ($M)	Operating Cost (2026 Dollars)	Capital Yearly Costs (Fvalue) ($M)	Net Present Valve	Depenture limit	Debt Servcie Level		Accured capital (per year)	Earned Interest	Value in Account	Water Reserve Rate ($/m3)	Water Rate
		$ 42,447,000.00		**$ 110,567,749**	**$ 67,157,946**						$6,763,343		
2025	6,976,620	$ -	$ -						$0	$ -	$ 6,763,343	$ 0.49	$ 1.74
2026	7,229,244	$ 644,000.00	$ -	$ 676,200.00		$25,409,346.81	$25,409,346.81		$3,542,330	$ 236,717	$ 9,866,190	$ 0.49	$ 1.74
2027	7,482,028	$ 870,000.00	$ -	$ 959,175.00		$26,560,810.33	$26,560,810.33		$3,666,194	$ 345,317	$ 12,918,525	$ 0.49	$ 1.79
2028	7,744,783	$ 91,000.00	$ -	$ 105,343.88		$27,768,512.69	$27,768,512.69		$3,794,944	$ 452,148	$ 17,060,273	$ 0.49	$ 1.84
2029	8,017,944	$ 52,000.00	$ -	$ 63,206.33		$29,035,396.28	$29,035,396.28		$3,928,793	$ 597,110	$ 21,522,969	$ 0.49	$ 1.89
2030	8,301,969	$ 109,000.00	$ -	$ 139,114.69		$30,364,575.93	$30,364,575.93		$4,067,965	$ 753,304	$ 26,205,123	$ 0.49	$ 1.94
2031	8,596,621	$ 8,363,000.00	$ -	$ 11,207,219.84		$31,756,692.74	$31,756,692.74		$4,212,344	$ 917,179	**$ 20,127,427**	$ 0.49	$ 1.99
2032	8,840,276	$ -	$ -	$ -		$32,983,344.03	$32,983,344.03		$4,331,735	$ 704,460	$ 25,163,622	$ 0.49	$ 2.04
2033	9,091,113	$ -	$ -	$ -		$34,258,416.90	$34,258,416.90		$4,454,645	$ 880,727	$ 30,498,994	$ 0.49	$ 2.09
2034	9,349,351	$ -	$ -	$ -		$35,583,861.29	$35,583,861.29		$4,581,182	$ 1,067,465	$ 36,147,641	$ 0.49	$ 2.14
2035	9,615,216	$ -	$ -	$ -		$36,961,707.56	$36,961,707.56		$4,711,456	$ 1,265,167	$ 42,124,264	$ 0.49	$ 2.19
2036	9,888,938	$ -	$ -	$ -		$38,394,057.38	$38,394,057.38		$4,845,580	$ 1,474,349	$ 48,444,193	$ 0.49	$ 2.24
2037	10,170,758	$ -	$ -	$ -		$39,883,113.12	$39,883,113.12		$4,983,671	$ 1,695,547	$ 55,123,411	$ 0.49	$ 2.29
2038	10,460,922	$ -	$ -	$ -		$41,431,157.52	$41,431,157.52		$5,125,852	$ 1,929,319	$ 62,178,582	$ 0.49	$ 2.34
2039	10,759,683	$ -	$ -	$ -		$43,040,563.97	$43,040,563.97		$5,272,245	$ 2,176,250	$ 69,627,077	$ 0.49	$ 2.39
2040	11,067,305	$ -	$ -	$ -		$44,713,815.39	$44,713,815.39		$5,422,979	$ 2,436,948	$ 77,487,004	$ 0.49	$ 2.44
2041	11,384,058	$ -	$ -	$ -		$46,453,487.50	$46,453,487.50		$5,578,188	$ 2,712,045	$ 85,777,238	$ 0.49	$ 2.49
2042	11,710,222	$ -	$ -	$ -		$48,262,267.97	$48,262,267.97		$5,738,009	$ 3,002,203	$ 94,517,450	$ 0.49	$ 2.54
2043	12,046,082	$ -	$ -	$ -		$50,142,939.21	$50,142,939.21		$5,902,580	$ 3,308,111	$ 103,728,141	$ 0.49	$ 2.59
2044	12,391,937	$ -	$ -	$ -		$52,098,418.81	$52,098,418.81		$6,072,049	$ 3,630,485	$ 113,430,675	$ 0.49	$ 2.64
2045	12,748,092	$ -	$ -	$ -		$54,131,730.21	$54,131,730.21		$6,246,565	$ 3,970,074	$ 123,647,314	$ 0.49	$ 2.69
2046	13,114,863	$ 22,729,000	$ -	$ 63,322,143.72		$56,246,027.08	$56,246,027.08		$6,426,283	$ 4,327,656	**$ 71,079,109**	$ 0.49	$ 2.74
2047	13,492,575	$ -	$ -	$ -		$58,444,588.88	$58,444,588.88		$6,611,362	$ 2,487,769	$ 80,178,240	$ 0.49	$ 2.79
2048	13,881,564	$ -	$ -	$ -		$60,730,833.36	$60,730,833.36		$6,801,966	$ 2,806,238	$ 89,786,444	$ 0.49	$ 2.84
2049	14,282,176	$ -	$ -	$ -		$63,108,316.56	$63,108,316.56		$6,998,266	$ 3,142,526	$ 99,927,236	$ 0.49	$ 2.89
2050	14,694,769	$ -	$ -	$ -		$65,580,745.90	$65,580,745.90		$7,200,437	$ 3,497,453	$ 110,625,126	$ 0.49	$ 2.94
2051	15,119,710	$ 9,589,000.00	$ -	$ 34,095,345.40		$68,151,971.51	$68,151,971.51		$7,408,658	$ 3,871,879	**$ 87,810,318**	$ 0.49	$ 2.99
2052	15,573,301			$ -		$70,898,495.96	$70,898,495.96		$7,630,918	$ 3,073,361	$ 98,514,597	$ 0.49	$ 3.04
2053	16,040,500			$ -		$73,755,705.34	$73,755,705.34		$7,859,845	$ 3,448,011	$ 109,822,453	$ 0.49	$ 3.09
2054	16,521,715			$ -		$76,728,060.27	$76,728,060.27		$8,095,641	$ 3,843,786	$ 121,761,879	$ 0.49	$ 3.14
2055	17,017,367			$ -		$79,820,201.10	$79,820,201.10		$8,338,510	$ 4,261,666	$ 134,362,055	$ 0.49	$ 3.19
2056	17,527,888			$ -		$83,036,955.20	$83,036,955.20		$8,588,665	$ 4,702,672	$ 147,653,392	$ 0.49	$ 3.24
2057	18,053,724			$ -		$86,383,344.50	$86,383,344.50		$8,846,325	$ 5,167,869	$ 161,667,585	$ 0.49	$ 3.29
2058	18,595,336			$ -		$89,864,593.28	$89,864,593.28		$9,111,715	$ 5,658,365	$ 176,437,666	$ 0.49	$ 3.34
2059	19,153,196			$ -		$93,486,136.39	$93,486,136.39		$9,385,066	$ 6,175,318	$ 191,998,050	$ 0.49	$ 3.39
2060	19,727,792			$ -		$97,253,627.69	$97,253,627.69		$9,666,618	$ 6,719,932	$ 208,384,600	$ 0.49	$ 3.44
2061	20,319,626			$ -		$101,172,948.88	$101,172,948.88		$9,956,617	$ 7,293,461	$ 225,634,678	$ 0.49	$ 3.49
2062	20,929,215			$ -		$105,250,218.72	$105,250,218.72		$10,255,315	$ 7,897,214	$ 243,787,207	$ 0.49	$ 3.54
2063	21,557,091			$ -		$109,491,802.54	$109,491,802.54		$10,562,975	$ 8,532,552	$ 262,882,733	$ 0.49	$ 3.59
2064	22,203,804			$ -		$113,904,322.18	$113,904,322.18		$10,879,864	$ 9,200,896	$ 282,963,493	$ 0.49	$ 3.64
2065	22,869,918			$ -		$118,494,666.36	$118,494,666.36		$11,206,260	$ 9,903,722	$ 304,073,475	$ 0.49	$ 3.69
2066	23,556,016			$ -		$123,270,001.42	$123,270,001.42		$11,542,448	$ 10,642,572	$ 326,258,494	$ 0.49	$ 3.74

APPENDIX D - LARGE DEMAND USER AND INFRASTRUCTURE UPGRADE POLICY

DRAFT

CRSWSC
Capital Region Southwest Water Services Commission

CAPITAL REGION SOUTHWEST WATER SERVICES COMMISSION

Policy Name: 9 – Large Demand User and Infrastructure Upgrade Policy

Related Bylaws and Policies: Bylaw 01/2021 and Policy 6 – Water Supply Policy

Date Approved:

Chairman:

Commission Manager:

To be Reviewed Before:

Policy Objective:

To establish a clear, consistent framework for how the Commission will assess, evaluate, and determine the impacts of proposed water service connections and growth—including connections from Large-Demand Users—on the regional treated water transmission system. This includes identifying potential System Capacity Constraints, determining any required infrastructure upgrades, and allocating financial responsibility for such upgrades. The Policy ensures that system integrity, service reliability, system hydraulics, and long-term planning objectives are protected while enabling responsible and sustainable growth across all Members and Customers.

Definitions:

All existing definitions in the Water Supply Policy remain. The following additional or updated definitions are proposed to be added:

Large-Demand User – the specific water demand attributable to a single proposed customer, development, or service area that exceeds either

a) When combined with a Member's Forecasted Growth, the Commission's long-term planning projections.

b) The demand projections included within the Commission's Long-Term Demand, and which may trigger the identification of System Capacity Constraints and the requirement for Capacity Upgrades.

Forecasted Growth – Incremental user growth within a Member's service area that is consistent with and supported by the Commission's Long-Term Planning Projections and forms part of the Commission's Long-Term Demand

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Long Term Planning – The 25 year planning forecast as outlined in the Commission's current Master Plan.

Long-Term Planning Projections – The projected water demand, system requirements, and associated infrastructure needs established and adopted by the Commission through its master plans for the purpose of system planning, capacity management, and investment decisions.

Long-Term Growth – The incremental increase in water demand within a Member's service area that is consistent with and supported by the Commission's Long-Term Planning Projections, representing anticipated and planned development over the applicable planning horizon.

Long-Term Demand – The total projected water demand over the Commission's established planning horizon, as defined through its Long-Term Planning Projections and long-range demand forecasts, including Forecasted Growth within Member service areas, and used to guide system capacity planning and infrastructure development.

Unplanned Capacity Growth – Demand generated by a Large-Demand Customer that exceeds a Member's Forecasted Growth and is not accounted for within the Commission's Long-Term Planning Projections or Long-Term Demand.

System Capacity Constraints – Any condition in which a proposed connection would:

a) Reduce system pressures below Commission design standards

b) Exceed hydraulic, pumping, or transmission capacity

c) Impair water quality, redundancy, or operational reliability

d) Compromise the Commission's ability to reliably serve existing Members and Customers

Interpretation:

a) Forecasted Growth forms part of Long-Term Demand and is planned for by the Commission.

b) Large-Demand Customer Demand represents demand outside of or exceeding planned growth.

c) Unplanned Capacity Growth is the portion of Large-Demand Customer Demand that is not included in Long-Term Demand and may require Member-funded upgrades.

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Policy:

The Commission shall maintain sufficient system capacity to meet Member needs as forecast in its long-term growth plans.

The Commission must ensure that any new connection or increase in demand does not create system capacity constraints or compromise its ability to maintain established service levels. The Commission also seeks to protect capacity for existing Members by requiring that any new connection or demand increase that reduces available capacity contributes financially in proportion to the incremental cost required to add that capacity in the future.

When System Capacity Constraints are identified, the Commission may, at its sole discretion:

a) Deny the proposed connection

b) Approve the connection subject to required Capacity Upgrades

c) Impose demand management, phasing, or operational conditions necessary to maintain system reliability

d) Permit the Member to provide a financial contribution in lieu of constructing the required infrastructure

Responsibilities and Authorities:

The Capital Region Southwest Water Servies Commission Board of Directors is responsible for the review and approval of this policy on or before the review date specified and every 5 years thereafter.

The Commission Manager is responsible for the development, implementation, monitoring, and adherence to this policy.

1) Funding Responsibility for Capacity Upgrades:

a) Commission Responsibility – Forecasted Growth:

The Commission shall fund and construct any capacity upgrades required to accommodate Forecasted Growth where:

i. The additional demand aligns with long-term growth projections adopted by the Commission

ii. The required upgrade is included in the Commission’s approved capital and financial plans

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Interpretation: If growth was predictable and already identified through the Commission's master planning, the Commission funds the required upgrades.

b) Member Responsibility – Unplanned Large Capacity Growth:

A Member shall be responsible for funding all Capacity Upgrades required to support a Large Demand User when:

i. The projected demand of the Large Demand User exceeds the Member's forecasted growth in long-term planning.

ii. The demand necessitates upgrades not included in the Commission's capital plans.

iii. The upgrade accelerates, expands, or advances a Commission planned project solely due to the new user's demand.

iv. The proposed connection would cause System Capacity Constraints as determined through Commission engineering assessments.

Interpretation: If the demand was not forecasted as part of expected growth or would overload the system, the Member funds the required upgrades. The Commission's Board may, at their discretion, vote to waive all or a portion of the applicable surcharge for a Member.

2) Cost Allocation for Mixed Benefits

a) Where a required upgrade benefits both the Large Demand User and the broader system:

i. The Member shall pay the incremental cost attributable to the Large Demand User and the mitigation of any System Capacity Constraints.

ii. The Commission shall pay the portion associated with Forecasted Growth or previously planned system development. The Member shall initially fund the total cost of the required upgrades, with the Commission reimbursing the Member for its share when the upgrades would have been undertaken through the Commission's normal capital planning and budgeting process.

3) System Capacity Constraints Evaluation

a) The Commission shall conduct hydraulic modelling, engineering evaluations, and operational assessments to determine whether a proposed connection may cause System Capacity Constraints.

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b) If constraints are identified, the Commission shall issue a written notice to the Member outlining:

   i. The nature of the constraints

   ii. Required mitigation measures or capacity upgrades

   iii. Cost responsibilities under this policy

   iv. Any conditions under which the connection may proceed.

c) The Commission may defer, limit, or condition the approval of the connection until mitigation has been completed

4) Application and Review Process

a) A Member proposing to connect a Large Demand User shall submit a formal request for capacity assessment to the Commission.

b) The Commission shall complete the following:

   i. A hydraulic capacity assessment

   ii. An evaluation of System Capacity Constraints

   iii. A determination of whether the demand aligns with Forecasted Growth

c) The Commission shall issue a formal Determination of Capacity, identifying available system capacity, any applicable System Capacity Constraints, and the associated cost responsibilities. This determination will include the cost of completing the required capacity assessment, which may be charged back to the prospective or existing Member, as applicable.

5) Payment and Construction Requirements

a) Member funded Capacity Upgrades must be paid in full prior to construction or financed through agreements approved by the Commission.

b) All Commission upgrades must be designed, tendered, managed, and constructed under the Commission's authority to ensure consistency with system standards.

c) Upon completion, ownership of the infrastructure shall transfer to the Commission unless otherwise agreed in writing.

6) Policy Amendments

a) This Policy may be amended by resolution of the Commission Board.