

Regular and Closed Meeting Agenda for Monday, July 8, 2024, at 5:30 p.m. to be held in the Council Chambers, in the Town Hall Complex, at 240 Main Street, Milk River, Alberta



1. Call to Order
2. Additions to the Agenda
3. Delegations 5:40 pm
4. Approval of Minutes
 - A) Minutes of the June 10, 2024, Regular Council Meeting
5. Business Arising from Minutes
6. Financial Report
7. Administration Reports
 - A) Public Works
 - B) Community Peace Officer
 - C) Chief Administrative Officer
8. Break (10-15 minutes)
9. Old Business
10. Bylaws and Policies
11. New Business
 - A) Correspondence
 - B) Block 39
 - C) 8th Avenue Subdivision
 - D) Milk River Region Potable Water Supply Project: Technical Memorandum No. 1: Conceptual Design Report
 - E) Milk River Ladies Evening Golf League Donation Request
 - F) Community Futures Chinook Invoice
 - G) DTR Services Ltd. Invoice
 - H) Community Garden Property Tax Waiver Request
 - I) Rain Barrels
 - J) Pool Assessment
 - K) County Support Letter
12. Councillor Reports
 - A) Authorities, Boards, Committees and Commission Minutes
13. Mayor's Report
 - A) Authorities, Boards, Committees and Commission Minutes
14. Closed Session
 - A) FOIP Section 17: Disclosure harmful to personal privacy
15. Adjournment

Request for Decision

Approval of Minutes

July 8, 2024



RECOMMENDATION

That the minutes for the June 10, 2024, regular council meeting be accepted as presented.

That the minutes for the July 4, 2024, special council meeting be accepted as presented.

LEGISLATIVE AUTHORITY

Municipal Government Act, Section 208(1)(a)

Procedure Bylaw 1060

BACKGROUND

As per the MGA and the Town's Procedural Bylaw, minutes are to be recorded and given to council for adoption at a subsequent council meeting.

RISKS/CONSEQUENCES

1. By not approving the previous meetings minutes, Council would then not approve the decisions they made, as recorded, and no motion would be actioned by administration.
2. The minutes of the Council meetings can be adopted as amended. Council would need to be specific in an amendment to the recording of the previous meetings minutes.

FINANCIAL CONSIDERATIONS

None

ATTACHMENTS

1. Prior to Adoption: June 10, 2024, regular council meeting minutes

Prior to Adoption

Minutes of the Town of Milk River Regular and Closed Council meeting held on Monday, June 10, 2024, at 5:30 p.m. in the Council Chambers, in the Town Hall Complex, at 240 Main Street, Milk River, Alberta.

Present - Elected Officials

Mayor Larry Liebelt, Councillor Peggy Losey, Councillor Anne Michaelis, and Deputy Mayor Shayne Johnson

Absent - Elected Officials

Councillor Dave Degenstein

Present - Administration

Kelly Lloyd, Chief Administrative Officer

1. Call to Order

Mayor Liebelt called the meeting to order at 5:31 p.m.

2. Additions to the Agenda

A) Additions to the Agenda

Added Items: 11B) Speed on Centre Avenue
11C) Gopher Control

Moved by Deputy Mayor Johnson, **“that Council approve the agenda for June 10, 2024, regular council meeting as amended.”**

Motion Carried 2024-155

3. Delegation: 5:40 p.m.

A) Jarrad McCoy

Mr. McCoy was in attendance to update Council on his project to repurpose the Erle Rivers School.

Moved by Councillor Losey, **“that the report from Mr. McCoy regarding the repurposing of Erle Rivers School be accepted as information.”**

Motion Carried 2024-156

B) Iron Order

Mr. S. Ainscough spoke to Iron Order’s desire to host a Bike Rodeo in town on July 13 and that the group wishes to make it an annual event. A dinner and a dance is scheduled for the Saturday (13th) evening. Proceeds from this year’s event is to go to the Erle Rivers Scholarship Foundation.

Moved by Deputy Mayor Johnson, **“that the Iron Order presentation be accepted as information.”**

Motion Carried 2024-159

4. Approval of Minutes

A) Minutes of the May 13, 2024, Regular Council Meeting

Moved by Councillor Michaelis, "that Council approve the May 13, 2024, regular council meeting minutes as presented."

Motion Carried 2024-157

5. Business Arising from Minutes

6. Financial Report

7. Administration Reports

A) Public Works

The report was contained within the agenda package.

Moved by Councillor Losey, "that Council accept the Public Works report for the period ending June 10, 2024, as information."

Motion Carried 2024-158

B) Community Peace Officer

The report was contained within the agenda package.

Moved by Councillor Michaelis, "that Council accept the Community Peace Officer report for the period ending May 31, 2024, as information."

Motion Carried 2024-160

C) Chief Administrative Officer

CAO Lloyd provided a verbal report in addition to the report contained within the agenda package.

Moved by Councillor Losey, "that Council accept the Chief Administrative Officer Report for the period ending May 31, 2024, as information."

Motion Carried 2024-161

8. Break

The Mayor recessed the meeting at 6:40 p.m.

The Mayor reconvened the meeting at 6:54 p.m.

9. Old Business

10. Bylaws and Policies

11. New Business

A) Correspondence

Moved by Councillor Losey, "that Council direct administration to write a letter regarding LGFF funding/downloading, etc., copying all municipalities, Alberta Municipalities, and RMA."

Motion Carried 2024-162

Moved by Councillor Michaelis, **“that correspondence for the period ending June 10, 2024, be accepted as information.”**

Motion Carried 2024-163

B) Speed on Centre Avenue

Moved by Councillor Losey, **“that Council direct administration to explore the use of a speed reader board to place on Centre Avenue, with recommendations.”**

Motion Carried 2024-164

C) Gopher Control

Moved by Councillor Losey, **“that Council direct administration to write a letter to Horizon School Division Board requesting gopher control on the football field as it is affecting our property/gopher control efforts, offering the Town’s assistance.”**

Motion Carried 2024-165

12. Councillors Reports

Councillor Michaelis attended an online drought preparedness session, and a Milk River Health Professionals Attraction and Retention Committee meeting.

Councillor Degenstein provided a written report where it was noted he attended a Ridge Country Housing meeting, Seniors Coffee, ATB’s Opening in Warner, an FCSS meeting, and the Federation of Canadian Municipalities convention.

Councillor Losey attended a Ridge Country Housing meeting and an online drought preparedness session.

Deputy Mayor Johnson attended the Milk River and District Ag Society meeting, and the Federation of Canadian Municipalities convention.

Moved by Deputy Mayor Johnson, **“that the Councillors reports for the period ending June 10, 2024, be accepted as information.”**

Motion Carried 2024-166

13. Mayors Report

Mayor Liebelt attended a Riverside Community Golf Society meeting, a Chief Mountain Regional Solid Waste Services Commission meeting, and the Federation of Canadian Municipalities Convention.

Moved by Councillor Michaelis, **“that Council accept the Mayors Report for the period ending June 10, 2024, as information.”**

Motion Carried 2024-167

14. Closed Session

A) Section 21: Disclosure harmful to intergovernmental relations

Moved by Deputy Mayor Johnson, “that Council move into closed session in accordance with Section 197(2) of the Municipal Government Act at 7:43 p.m., to discuss matters exempt from disclosure under FOIP Section 21: Disclosure harmful to intergovernmental relations, with Council and the CAO to remain in **attendance.**”

Motion Carried 2024-168

Moved by Councillor Losey, “that the meeting reconvene to the regular Council meeting at 8:06 p.m.”

Motion Carried 2024-169

Rise and report

Moved by Councillor Michaelis, “that Council directs administration to write a response to Alberta Infrastructure regarding the Visitor Information Centre.”

Motion Carried 2024-170

15. Adjournment

Moved by Councillor Losey, “that the regular council meeting of June 10, 2024, adjourn at 8:07 p.m.”

Motion Carried 2024-171

Larry Liebelt
Mayor

Kelly Lloyd
Chief Administrative Officer

These minutes were approved on the _____ day of _____ 2024.

Prior to Adoption

Minutes of the Town of Milk River Special Council meeting held on Thursday, July 4, 2024, at 6:00 p.m. in the Council Chambers, in the Town Hall Complex, at 240 Main Street, Milk River, Alberta.

Present - Elected Officials

Mayor Larry Liebelt, Councillor Peggy Losey, Councillor Dave Degenstein, Councillor Anne Michaelis, and Deputy Mayor Shayne Johnson

Present - Administration

Kelly Lloyd, Chief Administrative Officer
Barry Salter, Public Works Supervisor

1. Call to Order

Mayor Liebelt called the meeting to order at 6:00 p.m.

2. Adoption of Agenda

Moved by Councillor Losey, "that the special meeting agenda for July 4, 2024, be accepted as presented."

Motion Carried 2024-172

3) Special Meeting Business

A) Water Conservation

Moved by Councillor Degenstein, "that Bylaw 1070 be revised as follows:

3.10.2 Level 2 Water Restrictions

- 3.10.2.1. All non-essential water use is prohibited (e.g.: washing cars, sidewalks, pads, exterior of buildings and watering lawns, etc.)
- 3.10.2.2 Bulk water sales are prohibited, with the exception of domestic and livestock use.
- 3.10.2.3 ~~All non-residential users of water will~~ *may* be requested to reduce hours of operation to contribute to the conservation of water.

3.10.3. Level 3 Water Restrictions

- 3.10.3.1. All non-essential water use is prohibited (e.g.: washing cars, sidewalks, pads, exterior of buildings, and watering lawns, etc.)
- 3.10.3.2. Bulk water sales are prohibited, with the exception of domestic and livestock use.
- 3.10.3.3. Major ~~All non-essential~~ users of water may ~~will~~ be required to reduce or cease hours of operation.

4. EXEMPTIONS

- 4.1.2. Watering by metered drip irrigation (~~underground sprinkler system~~) is permitted at any time."

Motion Carried 2024-173

Moved by Deputy Mayor Johnson, "that Bylaw 1070 be revised as follows:

3.10.2 Level 2 Water Restrictions

- 3.10.2.1. All non-essential water use is prohibited (e.g.: washing cars, sidewalks, pads, exterior of buildings ~~and watering lawns~~, etc.)
- 3.10.2.2 *Lawn watering is allowed two days a week from 6:00 - 9:00 a.m. OR 7:00 - 10:00 p.m. ODD numbered addresses are allowed on Tuesdays and Fridays and EVEN numbered addresses are allowed on Mondays and Thursdays.*

Motion Carried 2024-174

The Mayor recessed the meeting at 7:54 p.m.

The Mayor reconvened the meeting at 8:02 p.m.

Moved by Councillor Losey, **“that Council give first reading** to the Revised Water Conservation Bylaw 1070.”

Motion Carried 2024-175

Moved by Councillor Degenstein, **“that Council give second reading** to the Revised Water Conservation Bylaw 1070.”

Motion Carried 2024-176

Moved by Deputy Mayor Johnson, **“that the Revised Water Conservation Bylaw 1070 receive unanimous consent for consideration of third reading.”**

Motion Carried 2024-177

Moved by Councillor Michaelis, **“that the Revised Water Conservation Bylaw 1070 be given third and final reading.”**

Motion Carried 2024-178

Moved by Deputy Mayor Johnson, **“that the Town of Milk River move to a Level 2 Water Restriction as per the Water Conservation Bylaw 1070 Revised, effective Friday July 5.”**

Motion Carried 2024-179 with four in favour and Councillor Degenstein opposed.

4) Adjournment

Moved by Councillor Degenstein, **“that the special council meeting of July 4, 2024, adjourn at 8:28 p.m.”**

Motion Carried 2024-180

Larry Liebelt
Mayor

Kelly Lloyd
Chief Administrative Officer

These minutes were approved on the XX of XXXX, 2024.

Request for Decision

Financial Report

July 8, 2024



RECOMMENDATION

That the Financial Report for the period ending June 30, 2024, be accepted as information.

LEGISLATIVE AUTHORITY

BACKGROUND

On a quarterly basis, a high-level financial report is provided to council for review and information.

RISKS/CONSEQUENCES

1. Council may provide further direction on any item contained in the report. Council shall be specific in the direction it provides.

FINANCIAL CONSIDERATIONS

None

ATTACHMENTS

1. 2024 Year to Date Operating Budget
2. Cash Report

**Revenue and Expenses - by Funtion
for the 6 Months Ended June 30, 2024**

	2023 Actual	2024 Budget	2024 YTD Actual	Remaining Dollars	% Collected/ Used
Operating Revenues					
Taxation	-1,051,542.40	-1,207,616.00	-1,175,404.48	-32,211.52	97.33
Sale of Goods and Services	-719,610.81	-675,790.00	-336,172.41	-339,617.59	49.75
Other Revenue/Franchise Fees	-307,141.47	-298,216.00	-167,879.58	-130,336.42	56.29
Conditional Grants	-292,858.82	-213,600.00	-320.85	-213,279.15	0.15
Transfer from other Functions	0.00	0.00	0.00	0.00	0.00
Transfer from Reserves	0.00	-276,889.00	0.00	-276,889.00	0.00
TOTAL REVENUES	-2,371,153.50	-2,672,111.00	-1,679,777.32	-992,333.68	62.86
Expenditures					
Salaries, Wages & Benefits	613,892.69	745,156.00	347,265.03	397,890.97	46.60
Contracted & General Services	616,576.88	967,080.00	298,154.12	668,925.88	30.83
Materials, Goods & Utilities	462,662.18	514,175.00	228,749.93	285,425.07	44.49
Government Requisitions	246,548.76	258,828.00	162,059.70	96,768.30	62.61
Transfers to Local Boards	46,208.03	47,701.00	34,794.08	12,906.92	72.94
Transfers to Ind/Organizations	30,612.07	36,640.00	20,811.72	15,828.28	56.80
Bank Charges	7,443.84	7,700.00	4,777.78	2,922.22	62.05
Interest on Capital Long Term	0.00	0.00	0.00	0.00	0.00
Other Transactions	28,052.19	28,440.00	14,400.31	14,039.69	50.63
Transfer from Capital	0.00	66,391.00	0.00	66,391.00	0.00
TOTAL EXPENDITURES	2,051,996.64	2,672,111.00	1,111,012.67	1,494,707.33	41.58

Operating Revenue/Expenditures by Department for the 6 Months Ended June 30, 2024

Department	REVENUES				EXPENDITURES				Actual Contribution to Surplus
	Budget	YTD Actual	Remaining Dollars	% Collected	Budget	YTD Actual	Remaining Dollars	% Used	
0 General Government	-1,478,166	-1,314,338	-163,828	88.9	230,795	128,011	102,784	55.5	-1,186,327
11 Council	0	-19	19	0.0	97,800	32,502	65,298	33.2	32,483
12 Administration	-443,694	-19,585	-424,109	4.4	426,372	194,731	231,641	45.7	175,146
23/24 Fire/Disaster Services	-24,184	-11,233	-12,951	46.4	106,517	24,510	82,007	23.0	13,277
26 Bylaw Enforcement	-2,400	-2,713	313	113.0	76,733	60,283	16,450	78.6	57,570
31 Common Services	-62	-207	145	0.0	165,832	91,414	74,418	55.1	91,207
32 Roads	-24,450	-25,140	690	102.8	417,823	92,119	325,704	22.0	66,979
33 Airport	-465	0	-465	0.0	8,701	3,835	4,866	44.1	3,835
4101 Water Supply/Distribution	-307,800	-128,362	-179,438	41.7	348,643	181,985	166,658	52.2	53,623
42 Wastewater	-106,000	-46,290	-59,710	43.7	72,902	41,836	31,066	57.4	-4,454
43 Solid Waste	-117,700	-61,284	-56,416	52.1	113,205	61,211	51,994	54.1	-73
43 Transfer Station	-12,385	-149	-12,236	1.2	24,624	12,699	11,925	51.6	12,550
56 Cemetery	-2,500	-1,505	-995	60.2	5,000	5,000	0	100.0	3,495
61 Planning & Development	-7,850	-6,292	-1,558	80.2	15,000	12,401	2,599	82.7	6,109
62 Economic Development	-50,000	-48,780	-1,220	97.6	164,290	14,637	149,653	8.9	-34,143
72 General Recreation	-6,055	0	-6,055	0.0	178,515	59,240	119,275	33.2	59,240
7201 Campground	-13,000	-6,318	-6,682	48.6	57,141	20,133	37,008	35.2	13,815
7202 Pool	-75,400	-7,562	-67,838	10.0	134,917	53,017	81,900	39.3	45,455
7203 Golf Course	0	0	0	0.0	7,000	1,132	5,868	16.2	1,132
74 Culture & Library	0	0	0	0.0	20,301	20,317	-16	100.1	20,317
									0
TOTAL OPERATING	-2,672,111	-1,679,777	-992,334	62.9	2,672,111	1,111,013	1,561,098	41.6	-568,764



TOWN OF MILK RIVER

Cash and Investments Report

General Ledger	Description	2024 Opening Balance	2024 YTD Balance
CHEQUING ACCOUNTS			
3-12-00-120-00	General Bank Chequing Account (ATB)	173,506.13	67,413.93
3-12-00-130-00	General Savings Account (ATB)	662,883.91	581,594.71
* TOTAL CHEQUING ACCOUNTS		836,390.04	649,008.64
TOWN TERM DEPOSITS			
3-41-00-310-00	Water Capital GIC	3,842.16	3,949.05
3-43-00-310-00	Equipment Replacement Capital GIC	367,829.06	378,061.99
3-97-00-315-00	General Capital GIC	537,785.59	552,746.67
* TOTAL TOWN TERM DEPOSITS		909,456.81	934,757.71
ARMS LENGTH TERM DEPOSITS			
3-43-00-315-00	Transfer Station Operating GIC	5,359.29	5,508.38
* TOTAL ARMS LENGTH TERM DEPOSIT		5,359.29	5,508.38
**P TOTAL CASH AND INVESTMENTS		1,751,206.14	1,589,274.73

*** End of Report ***

Request for Decision

Administration Reports

July 8, 2024



RECOMMENDATION

That the Administration Reports for the period ending July 8, 2024, be accepted as information.

LEGISLATIVE AUTHORITY

BACKGROUND

On a monthly basis, administration provides Council with reports on the following: Public Works, Municipal Enforcement (Community Peace Officer), and the Chief Administrative Officer.

RISK/CONSEQUENCES

1. Council may provide further direction on any item contained in the reports. Council shall be specific in the direction it provides.

FINANCIAL CONSIDERATIONS

None

ATTACHMENTS

1. Public Works Report
2. Community Peace Officer Report
3. Chief Administrative Officer Report

July 2024 Public Works Report for Council Meeting

It has been a busy month coming into summer and end of school. The pool was certified by Alberta Health, and we were able to open June 14, 2024. This year because we have brought in extra staff, we are able to be open on Sundays for the season. We brought in Drain Master (Combo Unit-Vac Truck) to flush half the towns sewers for regular maintenance. At this we started cleaning drains out and ran into problems on Railway; the buildup of debris rendered the drains useless. We brought the truck back a few more time to clean the drains out and ensure they were working appropriately.

Through the month we have replaced 11 residential water meters. A plumber on site at a resident of 2 Avenue, showed us a sewer problem causing backups at the address. The pipe was partially replaced from house to approximately 1 meter before main. Once it was dug up there was a date marked on new pipe as being June 2019. We replaced remaining pipe with PVC and saddles to allow sewer to flow freely without obstructions. The contractor came in to pave the following repairs that were done: Curling Club, 4 Avenue and 2 Avenue. Concrete sidewalk was completed as well at Curling Club sidewalk and curb.

Through the month the pesticide company has been in town completing spraying. The sweepers arrived and completed spring clean-up of debris on roads. There has been continuous gopher control going on at baseball fields and throughout town where needed. This will still be ongoing as there is a huge population this year. The results for the asbestos testing came back for the theatre and we will have to do some asbestos remediation before demolition. We put out a Request for Proposals on the asbestos removal and two companies provided quotes. Both were at approximately \$125,000 with the chosen company offering a discounted rate with the Town supplying water, power etc. I am reviewing this and getting more explanation at this time before agreeing.

June 17, 2024 was the two major breaks on the Milk River Project in Montana; having them shutting the water to the river off. We went to Calgary to get an 8" pump and hoses from the Alberta Provincial Emergency Management Reserve, for worst case scenario. At this time the Raw Water Pumps were turned off due to running dry. We brought a contractor in to ensure pumps were still in good working order. The low-level sensor at the Raw Water was changed out as well due to being faulty. Kelly and I continue to work with the Province of Alberta on this ongoing situation.

June 24, 2024, our second summer student started, and we were able to step up the cutting of grass and weeds. The students have continued to replace more of the street signs in between all of the regular work needed. Our Transfer Station Operator resigned from the position. I am presently doing interviews for a replacement. We are actively filling potholes as we are made aware of them.



Administration

- Council meeting agenda preparation
- Council meeting attendance
- Council meeting minutes
- Council meeting highlights for newsletter
- Staff meeting
- Walk in visitors, phone calls, and emails
- Attend EPR webinars and meeting with Circular Materials
- Bylaw revisions
- Policy creation / revisions
- **Updates from CPO's (when applicable)**
- Development inquiries/meetings
- AAIP - Rural Renewal Program weekly meetings
- AHS Monthly meeting
- Lot queries
- Regional Water meeting
- Attend LGAA Conference
- Siphon Break - media/communication to residents and businesses/meetings with Alberta Environment and Parks/meeting with Mayors and Reeve
- Town Hall with MLA Hunter
- Alberta Municipalities Municipal Leaders Caucus

<u>2022-04-03</u>	Moved by Councillor Losey, “that administration look into the affordability of raising our grants to the small committees.”	WIP
	2023	
<u>Motion Carried 2023-206</u>	Moved by Deputy Mayor Degenstein, “that Bylaw 1024 and Policy R1.0 be revised reflecting the following changes and bring back to a future Council meeting: <i>the failure to cut grass or weeds, including responsibility for the land at the front of property to the centre of the Street/Avenue and at the alley to the centre of the alley responsibility for the land at the front of the property to the gutter of the Street/Avenue and to where the lane for driving begins in the alley.”</i>	WIP
<u>Motion Carried 2023-231</u>	Moved by Councillor Johnson, “that Council direct administration to determine options regarding kochia weeds.”	WIP
<u>Motion Carried 2023-255</u>	Moved by Councillor Losey, “that Council directs administration to work with the Milk River and District Ag Society to mitigate water drainage.”	WIP
<u>Motion Carried 2023-260</u>	Moved by Councillor Michaelis, “that Council write a letter to all ministries regarding the Visitor Information Centre, including the Milk River Watershed Council Canada.”	Complete
<u>Motion Carried 2024-25</u>	Moved by Councillor Losey, “that Council directs administration to go to RFP for auditor services.”	05-Jul
<u>Motion Carried 2024-49</u>	Moved by Councillor Degenstein, “that Council donate \$1,200 to sponsor the band for Canada Day.”	Complete
<u>Motion Carried 2024-50</u>	Moved by Deputy Mayor Johnson, “that the bouncy houses be provided for the Canada Day celebrations.”	Complete
<u>Motion Carried 2024-74</u>	Moved by Councillor Michaelis, “that Council provide a letter of support to the Milk River Cable Club in their grant application to the Community Foundation.”	Complete
<u>Motion Carried 2024-79</u>	Moved by Deputy Mayor Johnson, “that Council direct administration to prepare and propose a policy regarding construction clean up.”	WIP
<u>Motion Carried 2024-140</u>	Moved by Councillor Degenstein, “that Council approve a donation to Wounded Warriors in the amount of \$195.00 business card size.”	WIP
<u>Motion Carried 2024-146</u>	Moved by Councillor Degenstein, “that the Town of Milk River apply for the Municipal Recycling Roundup Grant through Alberta Recycling to hold a round up event for electronics, paints, tires and used oil this summer in conjunction with the County of Warner.”	WIP
<u>Motion Carried 2024-147</u>	Moved by Councillor Degenstein, “that the Town of Milk River discontinue utilizing the services of the current grant writer and for administration to look to other opportunities for grant writing.”	Complete
<u>Motion Carried 2024-150</u>	Moved by Councillor Losey, “that a support letter be drafted and provided to Jarrad McCoy regarding efforts to repurpose Erle Rivers School.”	Complete
<u>Motion Carried 2024-162</u>	Moved by Councillor Losey, “that Council direct administration to write a letter regarding LGFF funding/downloading, etc., copying all municipalities, Alberta Municipalities, and RMA.”	WIP

<u>Motion</u> <u>Carried 2024-</u> <u>164</u>	Moved by Councillor Losey, “that Council direct administration to explore the use of a speed reader board to place on Centre Avenue, with recommendations.”	WIP
<u>Motion</u> <u>Carried 2024-</u> <u>165</u>	Moved by Councillor Losey, “that Council direct administration to write a letter to Horizon School Division Board requesting gopher control on the football field as it is affecting our property/gopher control efforts, offering the Town’s assistance.”	WIP
<u>Motion</u> <u>Carried 2024-</u> <u>170</u>	Moved by Councillor Michaelis, “that Council directs administration to write a response to Alberta Infrastructure regarding the Visitor Information Centre.”	Complete

July 8 meeting

2024 Operational Projects	
Council	
CWG Membership	Complete
Mayors and Reeves Membership	Complete
Training (Brownlee/MLC/SouthGrow)	Complete
Council Nutrition Breaks (\$10/per person)	Continuous
Gingerbread House Contest - Nov 2024	Not started
FCM (June 6-9) x 3	Complete
Community Garden insurance/property tax	Complete
Administration	
Council Chambers	Phase 1 Complete
HVAC	Not started
Work Alone Check In	Not started
RCMP	Complete
Common Services	
Fall Arrest Equipment	Complete
Computer	Complete
Roads	
Sign Modernization Project	WIP
Solid Waste	
added recycling fee to utilities?	to be revisited
Economic Development	
Theatre & Rolfe Building Demolition	Asbestos Abatement Quotes Received
Housing Needs Assessment	WIP
CF Beautification Program x 5	WIP
AAIP Program under Taber	Complete
Pool	
Assessment	Waiting for report

2024 Capital Projects	
Administration	
Server	Complete
Emergency Management	
Generator	Ordered
Roads	
Street light at 3rd Avenue and 1st Street	In Fortis' que
line painter	Complete
8th avenue power - Phase 8A	WIP
8th avenue power - Phase 8B	WIP
8th and main curb and gutter	WIP
curb and gutter	WIP
Waste Water	
CCTV	WIP
Storm Water	
Drainage Improvement Project	WIP
Civic Centre Drainage	WIP
Economic Development	
GLAC land purchase	Complete
Recreation	
Block 39 Detailed Design - Phase 1	Not started
Campground	
electrical upgrade	Complete
Irrigation	Not started
Pool	
concrete ramp	Not started
resurface pool - epoxy	Not started
Liner	Not started
Splashpark	Not started

Request for Decision

Correspondence

July 8, 2024



RECOMMENDATION

That correspondence for the period ending July 8, 2024, be accepted as information.

LEGISLATIVE AUTHORITY

BACKGROUND

Correspondence is a collection of general information received at the Town Office and is provided to Council as information.

RISKS/CONSEQUENCES

1. Council may provide further direction on any item contained in correspondence. Council shall be specific in the direction it provides.
2. Council may direct Administration on any item contained in correspondence.

FINANCIAL CONSIDERATIONS

None

ATTACHMENTS

1. FCSS Annual Report
2. County of Warner Economic Development
3. Municipal Affairs - Meeting with Minister
4. Prime Minister Response Letter
5. Milk River and District Senior Citizens Thank You
6. Municipal Affairs - CCBF
7. Milk River Basin Water Management Plan



REPORT TO MUNICIPALITIES

COUNSELLING SERVICES 2024



Goal 1

Timely and Relevant Direct Service Delivery

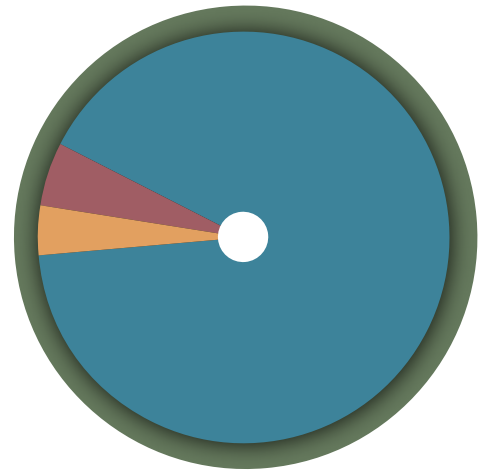
Deliver accessible and evidence-informed services to meet community needs throughout the lifecycle of residents.

► MENTAL HEALTH SUPPORTS

ONE-ON-ONE

COUNSELLING
SERVICES FORMATS:

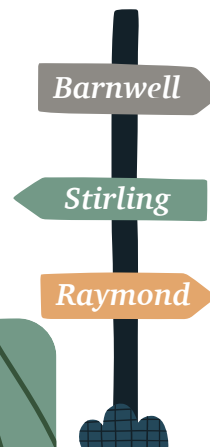
In-Person	91%
Phone	5%
Online	4%



450 CLIENTS SUPPORTED

3,517 SERVICE HOURS

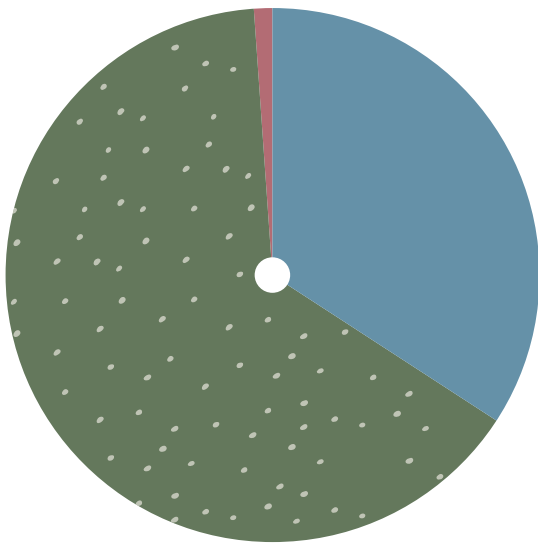
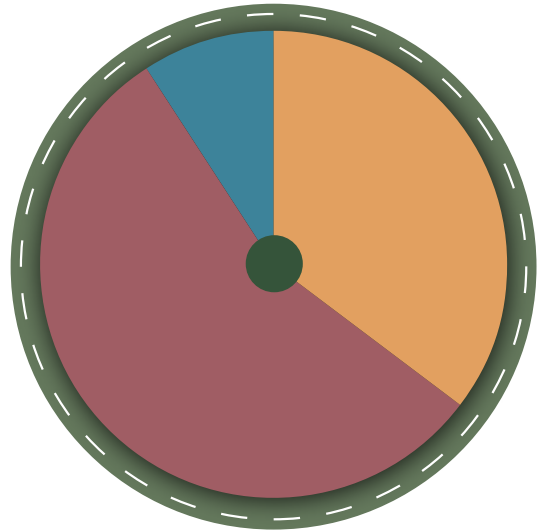
2,662 SERVICE VISITS



CLIENT DEMOGRAPHICS

AGES:

Adult (18–54)	57%
Children/Youth (0-17)	33%
Seniors (55+)	10%



GENDER:

Females	64%
Males	35%
Non-binary or Transgender	1%



GROUP PROGRAMS

173 CLIENTS SUPPORTED

477 SERVICE HOURS

425 SERVICE VISITS

Taming Worry Dragons

This group program is designed to help children ages 8-12 and their parents identify signs and impacts of anxiety. It provides them with essential tools and strategies to better cope with life stressors.

Circle Of Healing

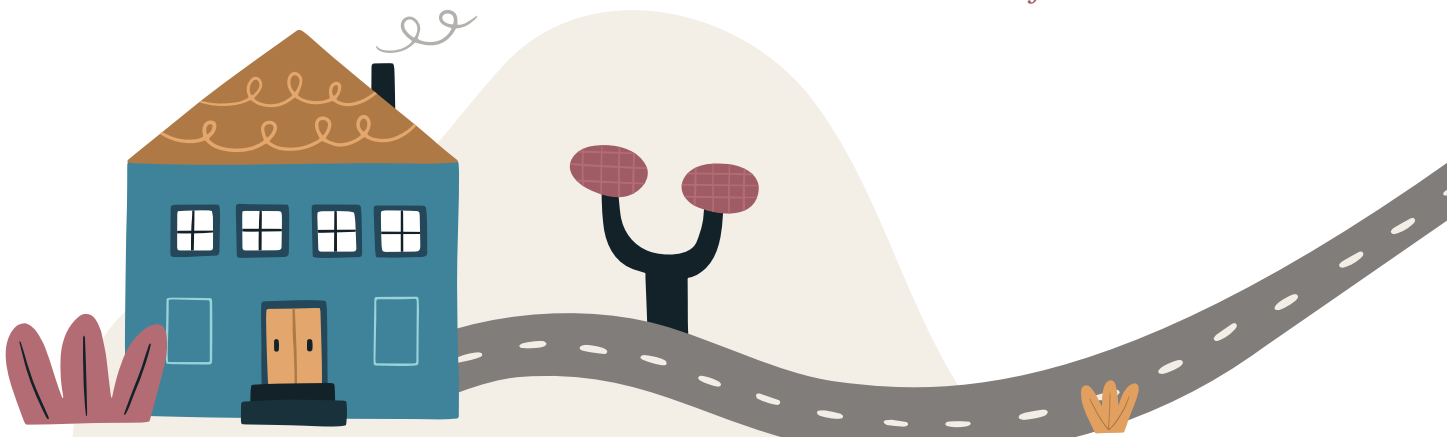
Utilizing the use of drums, this program helps individuals of all ages heal from anxiety, depression, trauma, grief/loss and provide a sense of belonging.

Rainbows For All Children

Rainbows is an 8 week program that helps children who are grieving a loss of someone due to death, divorce, deployment, incarceration, or trauma.



Circle of Healing with Seniors



Thrive (New)

A therapeutic group designed to help new parents navigate the early days of parenthood. The focus of this group is on building coping strategies to promote perinatal mental wellness.

Mom and Baby Thriving Together (New)

An educational group designed to help parents learn more about parenting and early childhood development. The focus on the group is both to build mental wellness as well as to promote healthy attachments between parents and children. This program is a collaboration between Counselling and Family Services.

Blue Christmas: Therapeutic Drumming (New)

A support group for families dealing with grief/loss during the holiday season that utilizes drumming to help participants regulate emotions and provide them with a sense that they are not alone in their grief.

Rainbows For All Children

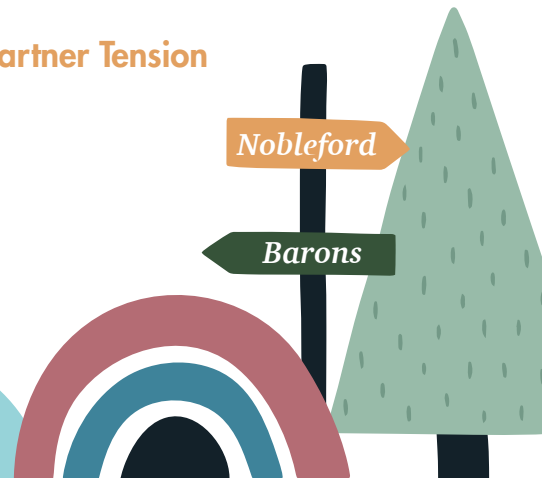
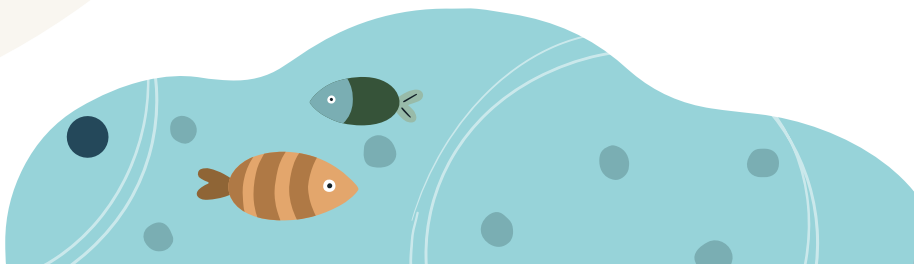


TOP 10 REASONS CLIENTS SEEK COUNSELLING SERVICES:

- **INDIVIDUAL**
Anxiety, Stress, Grief/Loss
- **FAMILY**
Family/Domestic Violence, Parent/Adult Child Conflict
- **COUPLE/RELATIONSHIP**
Communication, Conflict Resolution, Spousal/Partner Tension
- **SCHOOL/EMPLOYMENT**
Stress Management, Interpersonal Skills

Nobleford

Barons



Goal 2

Enhance Community Spirit

Recognize the uniqueness of each municipality with an inclusive approach.

► COMMUNITY AWARENESS AND ENGAGEMENT

199 SERVICE HOURS

1,446 SERVICE VISITS

EVENTS

- Low German Mennonite (LGM) Information Night
- Alberta Irrigation Districts Association Conference
- Newcomers Resource Fair

COMMUNITY COLLABORATION

- SAKA (Southern Alberta Kanadier Association)
- Healthy Together Initiative
- Palliser School Division Clinical Consultation

PRESENTATIONS

- Youth Employment Program
- Farming Mental Health
- Circle of Healing through Drumming
- Caregiver Café-Love Languages
- Baby and Me
- Senior Appreciation Day
- Emergency Service Provider Counselling



Coffee Chat with Seniors

Hola



► VOLUNTEERING

Two Counselling Practicum Student Placements.

81 CLIENTS SUPPORTED BY PRACTICUM STUDENTS

423 SERVICES HOURS PROVIDED BY PRACTICUM STUDENTS

537 SERVICES VISITS



MEREL KROSS
Practicum Student
Yorkville University



KAITLYNN MORIN
Practicum Student
Gonzaga University

► CULTURAL PROGRAMMING

115 CLIENTS SUPPORTED

761 SERVICE HOURS

675 SERVICE VISITS



Newcomers Resource Fair



Goal 3

Entry Point for Supports

Connect residents to supports at the earliest opportunity through a person-centred approach.

► INFORMATION AND REFERRALS

COUNSELLING SERVICES PROVIDERS MADE **156** INTERNAL REFERRALS
AND **32** EXTERNAL REFERRALS

TOP EXTERNAL REFERRALS

- AHS Addictions and Mental Health
- ICS (Integrated Coordinated Access)
- Lethbridge Family Services



In the most recent 90 days, the Counselling Services webpage has received the following visits.

525 VISITS **327** UNIQUE VISITORS

1 MINUTE & 44 SECONDS AVERAGE DURATION ON THE PAGE



► COMMUNITY CAPACITY BUILDING

PARTNERSHIP HIGHLIGHTS

AGKNOW

- The FCSS Counselling Team is working with AgKnow to address the mental health needs of the local agricultural community.
- The FCSS Counseling Services Supervisor:
 - Serves as a Represented on the AgKnow's Provincial Advisory Committee.
 - Is the trained facilitator in southern Alberta to provide the Introduction to Suicide Prevention for Agriculture workshop.
 - Is a member of the AgKnow Therapists Network.

FIRST RESPONDER SUPPORTS

- The FCSS Counselling Team is available to provide regular mental health check-ins and Trauma Counselling for the Taber Police Services staff and their families.
- The FCSS Counselling Services Supervisor has met with Taber Police Service and Stirling Fire Department to discuss the Emergency Response Provider Counselling service.
- The FCSS Counselling Service Team has provided a confidential online counselling request form on the FCSS webpage.





Goal 4

Capture Impact

Measure the positive impact of programs and services.

► INFORMATION STUDY AND RESEARCH

623 TOTAL # OF CLIENTS SUPPORTED

4,193 TOTAL # OF SERVICE HOURS

4,533 TOTAL # OF SERVICE VISITS

► CLIENT TESTIMONIALS

“ *I am extremely thankful and relieved for the free counseling sessions through FCSS. If these were not available, I would not have been able to afford the help. Having the access to talk to a professional has been very helpful, for my well being and mental health. When I first went I was at the point of exhaustion! I was unsure of where to turn or what to do. My mental health was the worst it had ever been. Through my counsellor's knowledge, support and compassion, I have gained strategies and supports which have been very beneficial for my overall well-being. These will also help to ensure continuous improvement in my life and mental health.* ”

- Client



“ As a couple who’s been married over twenty years, we can attest to the fact that a good marriage relationship requires work. However, knowing what type of tools are required to make it work can be a challenge. We are farmers in the Coaldale, AB area. Over the course of six months, we have accessed FCSS’s free counseling services, and are so grateful for the resources that it provides. With no cost barriers, and a counsellor who understood the pressures of the agriculture industry, we have gained valuable insights to help our relationship weather the ups and downs of another farming season on the horizon. A big, “Thank you” goes to our counsellor and FCSS for their support. ”

- Client

“ I am writing to you to let you know what a great experience I had with my counsellor at FCSS. I sought counselling at a low point in my life. I was dealing with my adult son who is fighting addictions and I was living with an Alcoholic boyfriend. I had a panic attack one night but thought it was a heart attack and ended up in emergency overnight.

I started doing counselling every two weeks at FCSS. I have coverage with my employment but certainly not enough for the counselling I received from my FCSS counsellor. It took some months but I am on a very good path right now. It was never a problem getting in to see my counsellor and he was very professional. My son is now in treatment and I have left the boyfriend. I don’t know if I would have had the courage to move forward without the counselling I received. ”

- Client



► ONE-ON-ONE PRE AND POST SURVEYS

ADULT CLIENTS

	Pre-surveys	Post-surveys
I am good at handling whatever comes my way	65%	78%
I am optimistic about my future	42%	77%
My relationship with my family is enjoyable	65%	76%

YOUTH CLIENTS

	Pre-surveys	Post-surveys
I am better at solving problems	52%	83%
I know adults that I can go to when I need help	77%	91%
I understand that it is ok to be myself	69%	88%

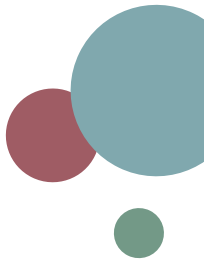
► GROUP PROGRAMMING SURVEYS

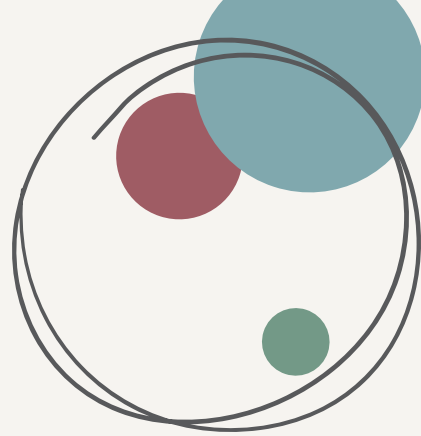
ADULT CLIENTS

I am able to better handle whatever comes my way	100%
I am more optimistic about my future	100%
My relationship with my family is more enjoyable	100%

YOUTH CLIENTS

I am better at solving problems	94%
I know adults that I can go to when I need help	100%
I understand that it is ok to be myself	97%
I am treated with respect at my school/community	94%
I look for opportunities to help others in my school/community	88%
My parents listen to my ideas and opinions	94%





FCSS

Family & Community
Support Services

www.fcss.ca





COUNTY OF WARNER NO. 5

PO BOX 90
300 COUNTY ROAD
WARNER, AB T0K 2L0

RECEIVED
JUN 17 2024

Phone: 403-642-3635
www.warnercounty.ca

June 13, 2024

TOWN OF MILK RIVER
PO BOX 270
MILK RIVER, AB T0K1M0

Dear Sir/Madam:

Re: Economic Development Land Contact Database

The County of Warner is launching a pilot project which will create a database for land that developers within a variety of industries may be interested in. Through this project a virtual map will become available online indicating which parcels are part of the database. Contact information will have to be requested from the Administration office and will be considered public information. Taking part in having your contact information on the list will not create an obligation to accept a purchase or business proposal but could open the door to economic opportunities.

You are receiving this letter since according to our records you have property along Highway 4 outside of the Town of Milk River. Should you wish to take part in this pilot project, you can go to the County of Warner website and fill out the Economic Development Land Contact Database form (<https://warnercounty.ca/p/land-database>).

Should you have any questions regarding this letter or other economic development initiatives, please contact the Administration office.

Regards,

Nikki Stevens
Municipal Clerk

From: MA Engagement Team <ma.engagement@gov.ab.ca>
Sent: June 14, 2024 11:37 AM
To: MA Engagement Team
Subject: Meeting request with Minister McIver – ABmunis Fall 2024 Convention

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Dear Chief Administrative Officer:

I am writing to inform you of a potential opportunity for municipal councils to meet with the Honourable Ric McIver, Minister of Municipal Affairs, at the Alberta Municipalities (ABmunis) Fall 2024 Convention, scheduled to take place at the Westerner Park (4847A 19 Street Red Deer, AB, T4R 2N7) from September 25-27, 2024.

Should your council wish to meet with Minister McIver during the convention, please submit a request by email with potential topics for discussion to ma.engagement@gov.ab.ca no later than July 12, 2024.

We generally receive more requests than can be reasonably accommodated over the course of the convention. Requests which meet the following criteria will be given priority for meetings during the convention:

- * Municipalities that identify up to three discussion topics related to policies or issues directly relevant to the Minister of Municipal Affairs and the department.
 - o It is highly recommended to provide details on the discussion topics.
- * Municipalities located within the Capital Region can be more easily accommodated throughout the year, so priority will be given to requests from municipalities at a distance from Edmonton and to municipalities with whom Minister McIver has not yet had an opportunity to meet.
- * Meeting requests received after the deadline will not be considered for the convention.

Meeting times with the Minister are scheduled for approximately 15 minutes. This allows the Minister to engage with as many councils as possible. All municipalities that submit meeting requests will be notified at least two weeks prior to the convention as to the status of their request.

Municipal Affairs will make every effort to find alternative opportunities throughout the remainder of the year for municipalities the Minister is unable to accommodate during the convention.

Engagement Team
Municipal Services Division
Municipal Affairs

Office of the
Prime Minister



Cabinet du
Premier ministre

RECEIVED

JUN 11 2024

Ottawa, Canada K1A 0A2

June 4, 2024

His Worship Larry Liebelt
Mayor
Town of Milk River
P.O. Box 270
Milk River, Alberta
T0K 1M0

Dear Mayor Liebelt:

On behalf of Prime Minister Justin Trudeau, I would like to acknowledge receipt of your letter of May 15, 2024, relating to federal carbon pollution pricing. I regret the delay in replying.

Thank you for sharing your concerns with the Prime Minister. Please be assured that your comments, offered on behalf of the Town of Milk River Council, have been carefully reviewed.

I have taken the liberty of forwarding a copy of your letter to the Honourable Chrystia Freeland, Deputy Prime Minister and Minister of Finance, for her information and consideration.

Once again, thank you for taking the time to write.

Yours sincerely,

A handwritten signature in blue ink that reads "A. Noel".

A. Noel
Executive Correspondence Officer

Canada

RECEIVED

JUN 17 2024

On behalf of our organization
we Thank-you for the recent
\$200.00 donation we recieved.
Your generosity is truly
appreciated and we will be
putting it to very good use.
Once again we Thank-you.



ALBERTA
MUNICIPAL AFFAIRS

*Office of the Minister
MLA, Calgary-Hays*

AR114222

Dear Chief Elected Officials:

The Government of Alberta administers federal funding through the Canada Community-Building Fund (CCBF) to provide Alberta communities with flexible capital funding to invest in local infrastructure priorities. As you may be aware, the Canada-Alberta agreement for the CCBF for 2014-24 expired on March 31, 2024. The Alberta government is in active negotiations with the Government of Canada on a 10-year renewal agreement that will cover the 2024-34 period.

The Government of Canada sent a draft renewal agreement to Alberta late in 2023, and the agreement has several aspects that are concerning for Alberta and for local governments. As a result, we are standing up for the interests of Alberta in negotiations and doing our utmost to ensure funding continues to flow to local governments with as much flexibility as possible to address local priorities without unnecessary administrative burdens. As these negotiations are ongoing, there may be delays in the 2024 program, including the notification of allocation amounts and timing of payments to local governments.

As discussions with the federal government continue, we are working with the municipal associations to ensure the Alberta government understands the perspectives of local governments. We will continue to advocate for your interests and the interests of the province, and I will provide more information on the signing of the agreement as soon as possible.

Thank you for your understanding and patience during this renewal process.

Sincerely,

Ric McIver
Minister

cc: Chief Administrative Officers

Approved Water Management Plan for the Milk River Basin (Alberta)

Phase One



Any comments, questions, or suggestions regarding the content of this document may be directed to:

Lands Division
Lands Planning Branch
3rd Floor, South Petroleum Plaza
9915 – 108 Street
Edmonton, Alberta
T5K 2G8

General inquiries, contact us by telephone or online.
Hours: 8:15 am to 4:30 pm (open Monday to Friday, closed statutory holidays)
Toll free: 310-0000 (in Alberta)
Phone: 780-427-2711 (outside Alberta long distance charges apply)
[alberta.ca/general-inquiries](https://open.alberta.ca/general-inquiries)

<https://open.alberta.ca/publications/approved-water-management-plan-for-milk-river-basin-alberta-phase-one>

Recommended citation:

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Photo credits:

Page 1 (cover): Milk River Watershed Council Canada
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Page 9: Monica Dahl
Page 19: Milk River Watershed Council Canada

Executive summary

The Approved Water Management Plan for the Milk River Basin (Alberta) provides direction for the management of water in the Alberta portion of the Milk River basin. The recommendations and strategies contained in this plan were developed through stakeholder engagement. The focus of this plan is to provide efficiencies in the decision-making process by enabling water allocation transfers in the basin. This plan is intended to align with existing plans, policies, legislation, and inter-jurisdictional agreements that affect water management in the basin.

The principle recommendations presented in this plan include:

- Enable water allocation transfers to be approved by the designated Director under the *Water Act*.
- Enable the Director to use water conservation holdbacks for water allocation transfers.
- Maintain the existing moratoria on water allocations for the issuance of new surface water licences in the basin. The Director shall retain the discretion to issue temporary diversion licences.
- Improve the administration of water management through data collection and innovation.

In addition, this plan contains recommendations to develop a water shortage strategy for low flow and drought conditions.

Successful implementation of the recommendations presented in this plan will require collaboration between all stakeholders. Coordination with the designated Watershed Planning and Advisory Council for the Milk River Basin is key to the implementation of the non-legislated aspects of this plan, specifically the development of a water shortage strategy, the plan review and the timing for initiating phase two of this plan.

Finally, it is recommended that a future phase two of the plan could include the following objectives: develop a strategy for the protection of the aquatic environment; determine the need for and recommendations on water conservation objective(s) as required; determine the need for amendments to existing moratoria or the creation of a Crown Reservation; and develop further recommendations on water conservation holdback(s). Amendments to this plan will be considered in the future as required.



Prairie rattlesnake

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1.0 Introduction

This is the Approved Water Management Plan for the Milk River Basin (Alberta) – Phase One. The Milk River Basin is unique in the province due to the international and interprovincial agreements that affect management of the water. Use of water in the basin has been under partial moratoria since the mid 1980's. An approved water management plan provides direction for water allocation decisions under the *Water Act*. In 2015, the Milk River Watershed Council Canada published an Integrated Watershed Management Plan, which recommends the development of an approved water management plan for the Milk River Basin with a specific focus on water allocation transfers under the provisions of the *Water Act*. This approved water management plan was developed in response to these recommendations and to address stakeholder concerns raised over the need for secure, reliable, quality water supplies to support economic development in the basin. Efforts were made to ensure that this plan aligns with priorities of the South Saskatchewan Regional Plan, Alberta's Water for Life Strategy and within the provisions of the Boundary Waters Treaty. The Framework for Water Management Planning was followed in developing this plan, as described in the Terms of Reference for an Approved Water Management Plan to be Developed for the Milk River Basin (Alberta) – Phase One, approved on March 17, 2016.



2.0 Planning area

2.1 Location

The boundary of the planning area is defined by the geographical boundaries of that land from which surface water flows into the Milk River Basin located within southern Alberta, Canada along the Montana borders and up to Saskatchewan (Figure 1). Under this plan, the Milk River Basin includes the Milk River, the North Milk River, and its tributaries (referred to as the “Milk River Sub-Basin”), and the Battle, Lodge and Middle creeks and its tributaries (referred to as the “Eastern Tributaries”) in Alberta (Figure 2). Originating primarily in the foothills of western Montana and flowing northeast into Alberta near Del Bonita, the Milk River flows due east for about 248 km across southern Alberta before re-entering Montana. Only a small portion (11%) of the entire 59,857 square kilometre (km²) basin is located within Alberta. Most of the basin (65%) is within Montana and (24%) in Saskatchewan. The Milk River Basin is the only one in Alberta that drains south to the United States. As such, the Milk River in Alberta contributes to the headwaters of the Mississippi-Gulf of Mexico drainage basin.

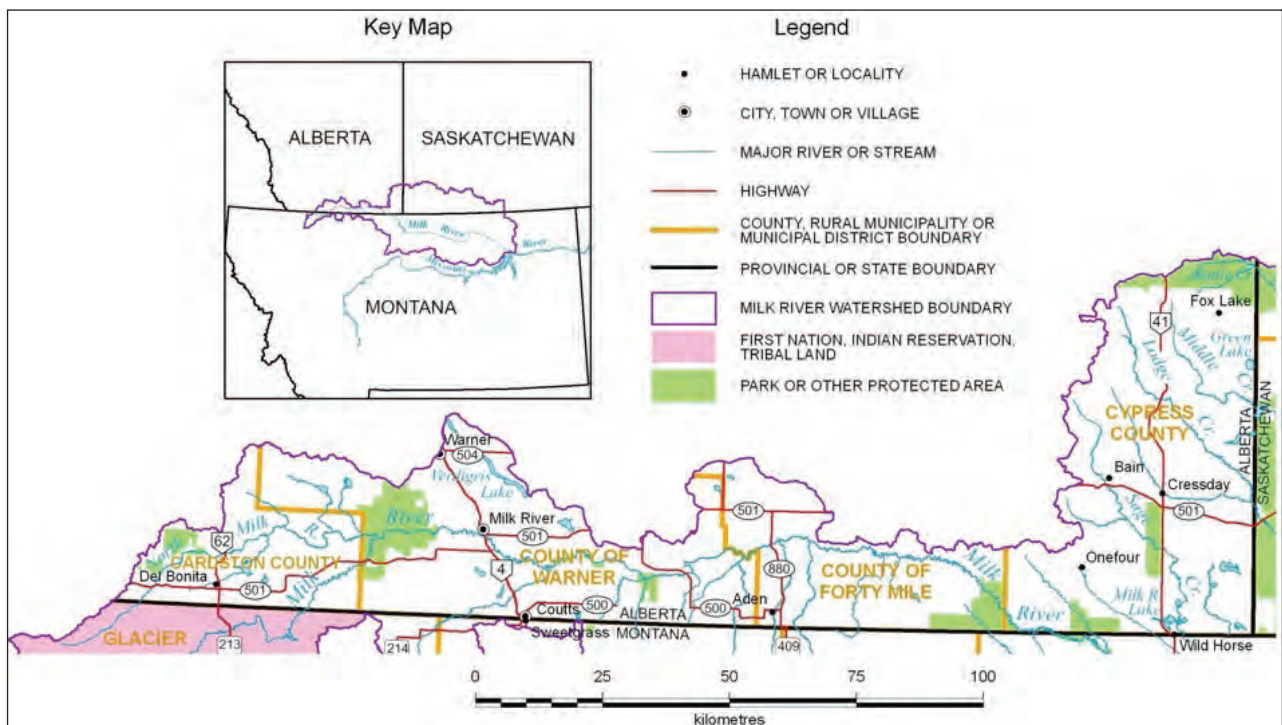


Figure 1: Milk River Basin in Alberta

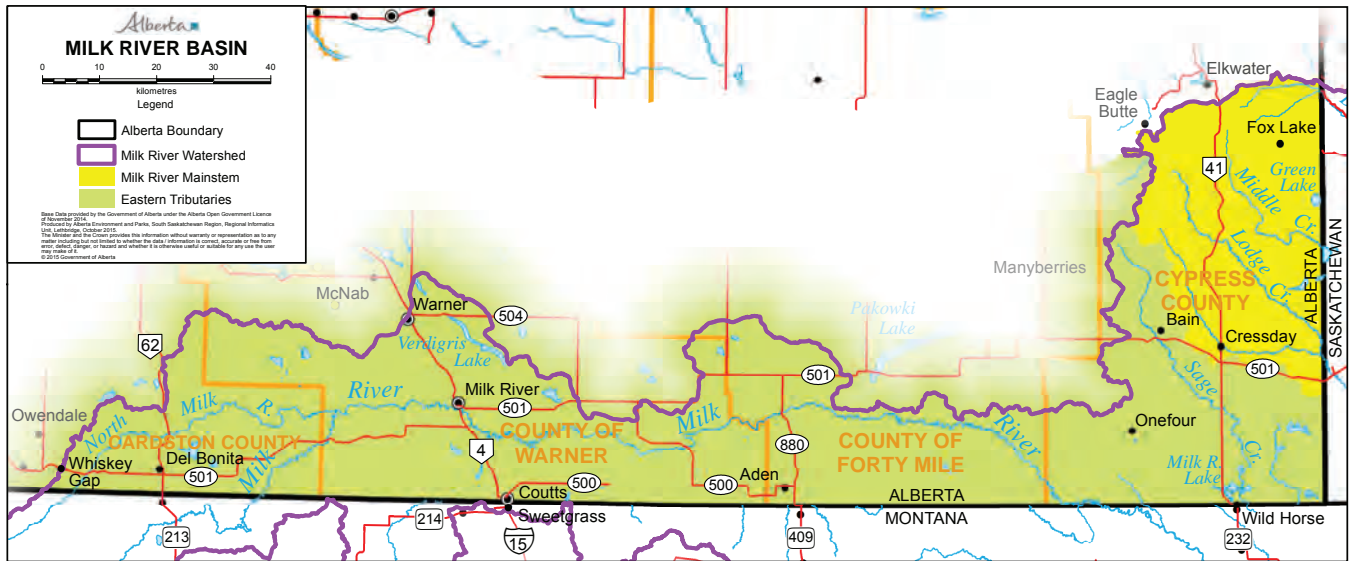


Figure 2: Milk River mainstem and eastern tributaries within the Milk River Basin in Alberta

2.2 Landscape and land use

In 2012, the population in Alberta's portion of the basin was 2534 people, down by 9.1% from 2008, as cited in the Milk River Transboundary State of the Watershed Report (2013). The Milk River Basin is primarily rural (with 1054 people in 2012), but includes the small urban centres of the Town of Milk River (with 814 people in 2023), the Village of Coutts (with 224 people in 2023) and a portion of the Village of Warner (with 364 people in 2023). Overall population is on the decline, but at a higher rate in rural areas than in the urban centres. The primary land use in the Milk River Basin is agriculture, predominantly grazing with some cropland use.

3.0 Planning context

This plan was developed within the context of various legislation, policies, administrative boundaries, agreements, and existing moratoria. Efforts were made to ensure that this plan aligns with priorities under the South Saskatchewan Regional Plan, the goals of Alberta's Water for Life Strategy and within the provisions of the Boundary Waters Treaty. A water management plan approved by the Lieutenant Governor in Council – referred to as an Approved Water Management Plan – is a mechanism that provides direction to decision-makers regarding water allocation decisions under the *Water Act*, and provides assurance that the goals of the Water For Life Strategy are being achieved, including: safe, secure drinking water; healthy aquatic ecosystems; and reliable, quality water supplies for a sustainable economy.

3.1 Administrative boundaries

The Milk River Basin falls within the South Saskatchewan Regional Plan (SSRP), as identified under Alberta's Land-use Framework. The administrative boundaries of Cardston County, County of Warner, County of Forty Mile, and Cypress County cover portions of the Milk River Basin in Alberta. The Town of Milk River, Village of Coutts and Village of Warner also find all or part of their administrative boundaries within the planning area. Although there are no First Nation reserves within the Milk River Basin, the western portion of the basin is within Treaty 7 land the eastern portion is within Treaty 4 land. The Milk River Basin also includes several parks and protected areas, such as Cypress Hills Provincial Park, Writing-on-Stone Provincial Park and the Twin River Heritage Rangeland Natural Area.

3.2 International agreements

Under the Boundary Waters Treaty (1909), it was agreed that the Milk and St. Mary rivers would be treated as one river for the purposes of irrigation and power, and they would be apportioned equally. However, more or less than half of either could be used, in order to afford more beneficial use to each country. Prior appropriations on each river, for the irrigation season, were also agreed on for each country.

In 1917, a diversion on the St. Mary River was completed in Montana by the United States to divert a portion of the water from the St. Mary River into the Milk River through syphons and canals. This water is carried by the Milk River through Alberta then returned to eastern Montana, where it is used for irrigation. Milk River flows in the summer months within Alberta are predominantly water diverted by the United States from the St. Mary River into the Milk River.

The 1921 Order of the International Joint Commission (IJC) clarified the apportionment of each river above and below the prior appropriations, and within and outside the irrigation season. It also clarified the apportionment points for each river (i.e., the final crossing of the Milk at the international boundary, known as 'Eastern Crossing'). The Order was made after the IJC heard submissions from Alberta, Saskatchewan, Montana, and the U.S. and Canadian Federal governments, and other stakeholders between 1915 and 1921.



Alberta is entitled to receive the following quantities of the natural flow of the Milk River:

Non-irrigation season (November 1 to March 31)

- 50% of the natural flow

Irrigation season (April 1 to October 31)

- For natural flow rate up to 18.86 cubic meters per second (m³/s) (666 cubic feet per second (cfs)):
 - 25% of the natural flow
- For natural flow rates in excess of 18.86 m³/s (666 cfs):
 - 4.7 m³/s (166 cfs) out of the first 18.86 m³/s, plus 50% of the natural flow above 18.86 m³/s

In 1991, a Letter of Intent was written by the Accredited Officers of the IJC following discussions with Alberta and Montana (and revised in 2001) to allow more flexibility in the apportionment to meet their spring and summer water needs. The Letter of Intent allows for the United States to incur a deficit to Canada up to a maximum of 9800 cubic decameters (dam³) on the St. Mary River during the period March to May. This deficit may be reduced to no less than 4900 dam³ during June to July, while Canada can incur a similar maximum deficit of 4900 dam³ on the Milk River during the period June to September 15th. The deficits can be offsetting and must be equalized by October 31st each year.

Natural flows are calculated according to the most current version of the Procedures for the Division of the Waters of the St. Mary and Milk Rivers prepared by the U.S. Geological Survey and the Water Survey of Canada. The apportionment specified in the Boundary Waters Treaty and the Order can not be altered by the development of an approved water management plan.

3.3 Inter-provincial agreement

The Battle, Lodge and Middle creeks, collectively known as the Eastern Tributaries in the Milk River Basin, which originate in the Cypress Hills of Alberta and flow southeastward into Saskatchewan, are governed by the 1969 Master Agreement on Apportionment. This agreement is administered by the Prairie Provinces Water Board. The agreement considers the requirements of the Boundary Waters Treaty for the Eastern Tributaries at the U.S.-Canada boundary; as such, Alberta and Saskatchewan share the Canadian portion of the tributaries. Alberta is entitled to 25% of the annual natural flow of each of Battle, Lodge and Middle creeks crossing into Saskatchewan, however, the actual flow can be adjusted from time to time on an equitable basis during each calendar year.

4.0 Issues considered

The Approved Water Management Plan for the Milk River Basin (Alberta) – Phase One was prepared with public input. Participation in the planning process included local residents, water licensees, landowners and representatives from municipalities, First Nations, the Métis Nation of Alberta, Milk River Watershed Council Canada and Government of Alberta. The following describes the issues considered in the development of this plan.

4.1 Natural and human influences on Milk River flows

The Milk River Basin is a water-limited area. The climate is amongst the warmest and driest in Alberta, and there is little natural runoff as evaporation typically exceeds precipitation. The Milk River Basin is the smallest of the major river basins in Alberta, with an average annual natural volume of 167,000 dam³ (135,389 acre feet). Approximately 106,000 dam³ (85,935 acre feet) of this natural volume come from the headwaters of the Milk River in Montana.

The Milk River flows in Alberta are much greater than natural flows during the summer months when water from the St. Mary River in Montana is diverted into the Milk River by the United States. Alberta's average annual entitlement (1950 to 2021) has been 46,422 dam³ (37,634 acre feet) during irrigation season (Apr 1 to Oct 31) (Accredited Officers, 2023). The natural flow of the Milk River is low and can approach zero flow in the downstream reaches in mid-summer or winter periods. The seasonal variability of the river flow and the timing of diversion of St. Mary River water into the Milk River limits Alberta's ability to access water for irrigation use, particularly during the latter part of the growing season when demand for irrigation in Alberta is highest. The majority of the natural flow of the Milk River occurs between mid-March and mid-June in most years. Flows in the Milk River are severely impacted if the water diverted from the St. Mary River into the Milk River is cut off or restricted. During the summer of 2020, only natural flows were present in the Milk River due to the failure of Drop 5 on the St. Mary Diversion Canal on May 17, 2020.

In 2017, 2020, 2021 and 2023, the lack of natural flows in the Milk River led to requests by the Accredited Officers for Alberta to stop consumptive use for irrigation purposes in mid-summer. Alberta Environment and Protected Areas required the cessation of irrigation diversions on August 3, 2017, July 24, 2020, July 9, 2021 and Aug 5, 2023.

4.2 Eastern tributaries

For the Eastern Tributaries portion of the basin, the average entitlement available to Alberta from 1985 to 2022 was 2250 dam³ for Battle Creek; 1039 dam³ for Middle Creek; and 3407 dam³ for Lodge Creek. The seasonal timing of spring runoff and precipitation have a significant influence on water availability for the Eastern Tributaries. Since 1985, there have been a few occasions, when there were shortfalls in the delivery by Alberta to Saskatchewan on Middle Creek (in 1989, 1998 and 2008) and Lodge Creek (in 1998 and 1989). Alberta and Saskatchewan continue to work cooperatively and investigate solutions, including improvements to timing and accuracy of interim water use reporting, to ensure future deficits do not occur. There have been no deficits for the Battle Creek (Prairie Provinces Water Board, 2024).

4.3 Moratoria on new surface water licence

Since the mid-1980s, the Alberta portion of the Milk River Basin has been under moratoria on the issuance of new surface water licences, with some exceptions for certain water uses depending on which portion of the basin is under consideration. The moratoria are described in more detail under section 5.0 of this plan.

4.4 Administrative processes

According to the *Water Act*, if there is no approved water management plan for the basin, then requests for water allocation licence transfers must be taken to the Lieutenant Governor in Council for consideration, which can be a lengthy process. This approved water management plan for the Milk River Basin enables decisions on applications for water allocation transfers to be made at the regional level by the designated Director under the *Water Act* (see Section 81). Enabling decisions to be made by the Director regarding applications for water allocation transfers ensures a more efficient and effective decision-making process. An efficient process is required, considering the amount of requests that are likely given the limited natural flows available for use, now and in the future, in Alberta. The key point is that the flow in the Milk River which Alberta can access is limited and steps need to be taken to add flexibility to water management so the available water can be used as beneficially as possible. An approved water management plan is one mechanism to provide that flexibility.

4.5 Health of the aquatic ecosystem

Maintaining the health of the aquatic ecosystem and water quality are issues of concern in the Milk River Basin. Erosion and sedimentation of the water course is prevalent during periods of increased flows intended to support irrigation. The impacts on the aquatic environment (e.g., sensitive fish species) as a result of the fluctuating flows and riverbank erosion are recognized issues that need to be further assessed and addressed in the future. The current condition of the Milk River Basin is described in more detail in the Milk River Transboundary State of the Watershed Report 2nd Edition (2013).



Northern Leopard Frog

5.0 Summary of water allocations and water use

5.1 Water allocations

Growth in water demand and allocations was fairly consistent from 1910 to 1990. As of 2024, Alberta has licensed allocations of 33,247.5 dam³ (26,954 acre feet) from the portion of the basin contributing directly to the Milk River Sub-Basin within Alberta, with allocations for irrigation purposes representing 74% of the total allocation volume. This includes 14,902 dam³ (12,081 acre feet) of licensed allocation withdrawing directly from the river, 45% of all allocations.

Since 1985, the Alberta portion of the basin contributing to the Milk River Sub-Basin has been under moratorium on the issuance of new licences under the Water Administration Criterion #6, Milk River Basin – Surface Water, with the exception of applications for municipal and agricultural (small stockwatering projects). Projects with storage, multi-use benefits or provincial projects may also be exempt. In 2010, the total amount of water allocated was approximately 38% of the historical average estimated Canadian entitlement of the natural flow of the Milk River. The entitlement is provisionally calculated twice-monthly during the irrigation season from April 1 through October 31st, through modelling that computes natural flows, shares and deliveries during each period.

As of 2024, for the Eastern Tributaries portion of the basin, there is a total allocation of 8,788.4 dam³ (7,125 acre feet) which is more than Alberta's average entitlement. This portion of the basin (except for Battle Creek) has been under moratorium since 1983 to issuance of any new licences with limited exceptions as outlined in Appendix C: Water Administration Criterion #4, Lodge Creek Basin.

Allocations in this portion of the basin include minor diversion for irrigation and filling of reservoir storages. Unlike in the Milk River Sub-Basin, there is water storage infrastructure in existence in the Eastern Tributaries portion of the basin. Alberta Agriculture and Irrigation has three reservoirs in the Lodge-Middle creeks sub-watersheds – Bare Creek, Cressday and Michel reservoirs – with a combined storage of over 2250 dam³ allowed under their licences that is used to support agricultural uses. There are also several private licensee storages – Greasewood, Massy, Mitchell and Middle Creek reservoirs that the licensees use to support their licensed irrigation projects in the Lodge-Middle creek sub-watershed. Alberta Agriculture and Irrigation also operates Reesor Lake Reservoir on Battle Creek in Cypress Hills Interprovincial Park.

5.2 Water use

Note that allocations are not a direct measure of actual use; rather, they represent the maximum amount of water that can be used under the terms of licences issued, when and if sufficient water is available in a given year. Water use data gathered during the irrigation season through the Milk River Water Use Metering Pilot Project that operated from 2007 to 2012 showed a range of water use from 1820 dam³ (in 2010) to 9052 dam³ (in 2012) of water for irrigation and municipal purposes (average of 5259 dam³ for all years). Most licensees are still required under the provisions of their licence terms and conditions to monitor and report their water use monthly and on an annual basis to the department's Water Use Reporting System or upon request by the department depending on the individual licence.

6.0 Recommendations for decisions under the *Water Act*

Recommendations presented in this plan represent advice to the Minister of Environment and Protected Areas, the Lieutenant Governor in Council and the Director, who are solely responsible for making decisions under the *Water Act*.

6.1 Enable water allocation transfers

Recommendation:

The Director (as designated under the *Water Act*) is hereby authorized to consider applications to transfer water allocations under licences in good standing in the Milk River Basin in Alberta, subject to sections 81, 82 and 83 of the *Water Act*.

Rationale and Application:

Water allocation transfers are a means by which a reliable water allocation could be obtained, provided a licensee is willing to transfer all or part of their allocation. In order for a transfer of a water allocation under a licence to be considered as per Sections 81 and 82 of the *Water Act*, an application for the transfer must be submitted to the designated Director. The designated Director decides whether the transfer will be allowed. Under the *Water Act* (81(6)), proposed transfers must undergo public review. The applicant for a transfer must also provide public notice of the application. Directly affected parties may submit statements of concern. If a transfer is approved, then a new licence is issued for the transferred allocation. The Director may attach conditions to the new licence, however, the priority of the transferred water is maintained.

6.2 Enable water conservation holdbacks

Recommendation:

The Director is hereby authorized to withhold up to 10% of an allocation of water under a licence that is being transferred, if the Director is of the opinion that withholding water is in the public interest to protect the aquatic environment or to implement a water conservation objective.

Rationale and Application:

The discretion of the Director is maintained to consider the withholding of water during a transfer process. Section 83 of the *Water Act* stipulates that withholding water may be considered if the Director is of the opinion that the holdback is in the public interest to protect the aquatic environment or to implement a water conservation objective. Water conservation objectives are not considered in this plan but may be considered in subsequent phases of the plan. Further, the unique nature of flows in the basin would need to be considered in making a decision related to public interest to protect the aquatic environment.

Matters and Factors

The Matters and Factors that must be considered for a water allocation transfer are listed in Table 1.

Table 1: Matters and Factors that must be considered in making decisions on applications for a transfer of an allocation of water under a licence in the Milk River Basin.

Matters and Factors	Guidelines
Existing, potential and cumulative effects on the aquatic environment.	No significant adverse effect on the aquatic environment resulting from the transfer.
Efficiency of use.	Industry standards and best practices.
Existing, potential and cumulative hydraulic, hydrological and hydrogeological effects.	No significant adverse effect.
Existing, potential and cumulative effects on household users, traditional agriculture users and other higher and lower priority licensees.	From the <i>Water Act</i> , Section 82(3)(b): the transfer of the allocation, in the opinion of the Director, does not impair the exercise of rights of any household user, traditional agriculture user or other licensee other than the household user, traditional agriculture user or other licensee who has agreed in writing that the transfer of the allocation may take place.
With respect to irrigation, the suitability of the land to which the allocation of water is to be transferred for irrigated agriculture.	The land must be suitable for irrigated agriculture: Class 4 or better in accordance with the standards for the Classification of Land for Irrigation in the Province of Alberta (Alberta Agriculture and Irrigation).
The historic volume, rate and timing of the diversion under the original and proposed licence.	No significant adverse effect on the aquatic environment.
Location of the existing diversion and the proposed new diversion.	No significant adverse effect on the aquatic environment.
Water quality (including public health and safety and assimilative capacity).	No significant adverse effect on public health and safety.
No significant adverse effect on assimilative capacity.	
Linkages between surface and ground water and the effects or changes in overall water use.	No significant adverse effect on groundwater quantity or quality.
Existing, potential and cumulative effects on the operation of reservoirs or other water infrastructure.	No significant adverse effect on operations unless the reservoir or infrastructure licensee agrees it is feasible to adjust operations to mitigate effects (applicable only to the Eastern Tributaries).
Master Agreement on Apportionment (Alberta's commitments to Saskatchewan).	The terms of the agreement will be met.
Boundary Waters Treaty (Agreement between Canada and U.S.A.).	The terms of the agreement will be met.
First Nation treaty rights and traditional uses.	The policy of the Government of Alberta regarding consultation with First Nations shall apply.
The <i>Water Act</i> (82)(5)(c)(iv) also provides that the Director may consider any other matters applicable to the transfer of the allocation that the Director considers relevant.	

6.3 Restrictions on new applications for surface water allocations

Recommendations for the Eastern Tributaries:

The Director shall continue to follow the moratorium on the issuance of new surface water licences for the Eastern Tributaries (except for Battle Creek) with limited exceptions as outlined in Appendix C: Water Administration Criterion #4, Lodge Creek Basin. The Director shall retain the discretion to issue temporary diversion licences.

Rationale and Application:

As per the 1969 Master Agreement on Apportionment, Alberta is entitled to 25% of the annual natural flow of each of Battle, Lodge and Middle creeks (or Eastern Tributaries) crossing into Saskatchewan. Since 1985, Alberta has accumulated several deficits in water expected to go to Saskatchewan for Middle and Lodge Creeks. The Eastern Tributaries portion of the basin is currently over allocated based on Alberta's average entitlement of the natural flow of these tributaries. This portion of the basin (except for Battle Creek) has been under moratorium since 1983 to issuance of any new licences with limited exceptions as outlined in Appendix C: Water Administration Criterion #4, Lodge Creek Basin. Maintaining the existing policy outlined in the moratorium for this portion of the basin recognizes the limitations on water availability, but still allows for some applications for new licences or temporary diversion licences to be considered at the discretion of the Director. For this portion of the basin, the moratorium will remain in place unless revisited in phase two or until a Crown Reservation is approved.

Recommendations for the Milk River Sub-Basin:

The Director shall continue to follow the moratorium under the Water Administration Criterion #6, Milk River Basin – Surface Water (for the Milk River Sub-Basin), which only permits the Director to consider applications for new surface water licences for municipal or agricultural uses (small stockwatering projects), or for projects with provisions for storage, multi-use benefits or provincial projects. The Director shall retain the discretion to issue temporary diversion licences.

Rationale and Application:

As per the Boundary Waters Treaty (1909), Alberta is entitled to 50% of the annual natural flow of the Milk River from November 1 to March 31, and for a portion of the natural flow rate from April 1 to October 31 (irrigation season). Maintaining the existing policy outlined in the moratorium for the Milk River Sub-Basin recognizes the limitations on water availability, but still allows for some applications for new licences (only municipal or small stockwatering) or temporary diversion licences to be considered at the discretion of the Director. For this portion of the basin, the moratorium will remain in place unless revisited in phase two or until a Crown Reservation is approved.

Matters and Factors

The *Water Act* (sections 11(3) and 51(4)) contains provisions for an approved water management plan to identify Matters and Factors that must be considered by the designated Director under the *Water Act* when making decisions on applications for water licences, preliminary certificates or approvals.

The Matters and Factors that must be considered when making decisions on applications for water licences, preliminary certificates or approvals in the Milk River Sub-Basin and the Eastern Tributaries in Alberta are listed in Table 2.

Table 2: Matters and Factors that must be considered when making decisions on applications for a new water licence, preliminary certificate or approval affecting surface water in the Milk River Basin.

Matters and Factors	Guidelines
Existing, potential and cumulative effects on the aquatic environment.	No significant adverse effect on the aquatic environment.
Efficiency of use.	Industry standards and best practices.
Existing, potential, and cumulative hydraulic, hydrological and hydrogeological effects.	No significant adverse effect.
With respect to irrigation, the suitability of the land for irrigated agriculture.	The land must be suitable for irrigated agriculture: Class 4 or better in accordance with the standards for the Classification of Land for Irrigation in the Province of Alberta (Alberta Agriculture and Irrigation).
Water quality (including public health and safety and assimilative capacity).	No significant adverse effect on public health and safety. No significant adverse effect on assimilative capacity.
Linkages between surface and ground water and the effects or changes in overall water use.	No significant adverse effect on groundwater quantity or quality.
Boundary Waters Treaty (Agreement between Canada and U.S.A.) or Master Agreement on Apportionment (Alberta's commitments to Saskatchewan).	The terms of the agreement will be met.
First Nation treaty rights and traditional uses.	The policy of the Government of Alberta regarding consultation with First Nations shall apply.

7.0 Recommended water management strategies

7.1 Water management and administration

Recommendation:

Improve the administration of water management in the Milk River Basin. The following actions are recommended to support this process:

- Improve actual licensed water use data collection.
- Explore innovations and improvements in water licensing and legislation to better match allocations with needs.

Rationale and Application:

Alberta Environment and Protected Areas is committed to enhancing its water management and administration in the Milk River Basin. The recommended actions are intended to enhance the ability to track actual licensed water use and align water allocations with the needs in the Milk River Basin.

7.2 Water storage strategy

Recommendation:

Develop a water shortage strategy for the Milk River Basin to facilitate voluntary actions to share available water during low flow and drought conditions.

Rationale and Application:

Taking a proactive, voluntary approach will help to avoid a call on priority, especially during low flow or drought conditions. Water licence holders should be encouraged to take voluntary actions to share available water during critical low flow periods. Discussions should be held with licence holders regarding voluntary actions that may be taken. Efforts should also be made to improve knowledge of the inter-relationship between water storage, release, and use in the Eastern Tributaries.

8.0 Performance monitoring and future phases

8.1 Plan review

This plan should be reviewed at 10-year intervals and include public consultation.

Rational: A review of this plan will enable future adjustments to be made as necessary.

8.2 Performance monitoring

Regular monitoring of this plan will help ensure recommendations are achieved and water allocation transfers are successful. The following performance monitoring is recommended:

- Inspect original licence to confirm decommissioning of the original licence project if the entire allocation was transferred or is in accordance with the amended licence if only part of the allocation was transferred.
- Assess if water licences are in good standing including compliance with water use reporting requirements to ensure accuracy of water use data being collected.

8.3 Future phases of the plan

Phase two of this plan could include the following objectives:

1. Develop a strategy for the protection of the aquatic environment.
2. Determine the need for and recommendations on water conservation objective(s) as required.
3. Determine the need for amendments to the existing moratoria on new water allocations or the creation of a Crown Reservation.
4. Develop further recommendations on water conservation holdback(s) as required.
5. Recommend amendments to the approved water management plan for the Milk River Basin.



9.0 References

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Appendix A: Relationship to other planning initiatives and strategies

The development of this water management plan occurs within both a provincial and regional context influenced by legislation, policy and regional planning. Information in this section was limited to legislation, policy and planning that directly influence the scope of this planning process.

Alberta Land Stewardship Act

The Alberta Land Stewardship Act sets out the legal basis for regional land use planning in Alberta. The Milk River Basin falls under the South Saskatchewan Regional Plan (SSRP), which came into effect in September 2014.

Boundary Waters Treaty (1909) and the 1921 Order of the International Joint Commission

The Boundary Waters Treaty (1909), 1921 Order of the International Joint Commission (IJC) and Letter of Intent (as amended) form the requirements of the international apportionment. The IJC and its designated officers lead monitoring the apportionment requirements and hear disputes. The apportionment specified in the Boundary Waters Treaty and the Order, and the mandate of the IJC and its officers, can not be altered by the development of an approved water management plan.

Water Act

The purpose of the *Water Act* is to support and promote the conservation and management of water, including wise allocation and use of water.

The following *Water Act* highlights are relevant to the Milk River planning process:

- Existing licences that are in good standing are protected (and will be respected in this process).
- A limited amount of water under a Traditional Agricultural Registration can be used on an owner's land base.
- The importance of "household uses" of water are recognized and provided with a statutory right that has priority over all other uses.
- The *Water Act* requires that a strategy for protection of the aquatic environment be part of the provincial water management planning framework.

- Through the water allocation transfer mechanism, the Act allows for flexible water management – particularly in areas where all reliable water available is already allocated.
- The *Water Act* enables Albertans the opportunity to provide advice on water management.
- The *Water Act* requires that an Approved Water Management Plan will identify the matters and factors that must be considered in making decision on applications for water allocation transfers, licences, preliminary certificates or approvals.

The main difference between a **water management plan** and an **approved water management plan** is that the latter requires approval by the Lieutenant Governor in Council or by the Minister if authorized by the Lieutenant Governor in Council. If an approved water management plan exists, then it must be considered when the Director makes decisions for that area under the *Water Act*.

An approved water management plan:

- facilitates transfer applications to the Director under Section 82 of the *Water Act*, and
- is required when, during a transfer application, a Director decides under Section 83 of the *Water Act* to hold back up to 10% of the allocation.

The Framework for Water Management Planning provides direction for the development of water management plans to ensure the sustainable management of Alberta's water resources. The Milk River water management planning process adhered to the principles and processes outlined in this framework.

Master Agreement on Apportionment

The 1969 Master Agreement on Apportionment is administered by the Prairie Provinces Water Board. The agreement considers the requirements of the Boundary Waters Treaty between the U.S. and Canada. Alberta and Saskatchewan share the Canadian portion of the Eastern Tributaries. Alberta is entitled to 25% of the annual natural flow of each of Battle, Lodge and Middle creeks crossing into Saskatchewan.

Appendix B: Glossary

Allocation

The volume, rate and timing of a diversion of water.

Aquatic environment (as defined in Alberta's Water Act)

The components of the earth related to, living in or located in or on water or the beds or shores of a water body, including but not limited to all organic and inorganic matter, and living organisms and their habitat, including fish habitat, and their interacting natural systems.

Basin

The area that drains to a common water body such as a river, stream or lake. There are seven major river basins in Alberta, including the Milk River Basin. A basin is often referred to as a watershed.

Crown Reservation

Can be used to dedicate any unallocated water (or water that becomes unallocated in the future) to certain purposes and with certain priority dates (although never earlier than the date of the Crown Reservation).

Director

For purposes of administration of the *Water Act* (Section 163), certain staff in Alberta Environment and Protected Areas, such as Approvals Managers, are designated as "Directors". Under the *Water Act*, a Director has sole authority to make decisions concerning a number of specified subjects, e.g., transfers, holdbacks and establishing water conservation objectives.

Eastern Tributaries

The area of the Milk River Basin within Alberta that includes the Battle, Lodge and Middle creeks and their tributaries, which flow into Saskatchewan before joining the Milk River in the United States.

Groundwater

Water located beneath the ground surface in soil pore spaces and in the fractures of geologic formations. A formation of rock/soil is called an aquifer when it can yield a useable quantity of water. Groundwater that is in an aquifer that readily (drawdown cone for a well intersects a surface water body) flows naturally under the ground to surface water bodies is considered surface water for licencing purposes in Alberta.

Licence in good standing

The determination of a licence in good standing is a decision of the Director. For a licence to be in good standing generally the terms and conditions of a licence must be met, including any water use reporting requirements. A review of a licence for good standing will also include, but is not limited to, a determination that the licence is current (has not expired), is not under suspension, is not currently being considered for cancellation, is not currently subject to an Investigation, Water Management Order or an Enforcement Order, is not subject to a prosecution, administrative penalty, civil matter or Environmental Appeal Board appeal and there are no outstanding complaints that may result in compliance or enforcement action. A licence must be deemed in good standing to be eligible for consideration of a water allocation transfer.

Milk River Basin

Milk River Basin includes the Milk River and the North Milk River and their tributaries (referred to as the "Milk River Sub-Basin"), and the Battle, Lodge and Middle creeks and their tributaries (referred to as the "Eastern Tributaries").

Milk River Sub-Basin

The area of the Milk River Basin within Alberta that includes the North Milk River and the Milk River and their tributaries, but excludes the Eastern Tributaries.

Natural flow

A calculated flow that estimates the flow in rivers that would have occurred in the absence of man-made effects on, or regulation of, flow.

Surface water

Water bodies such as lakes, ponds, wetlands, rivers, and streams. It may also refer to sub-surface water or groundwater with a direct and immediate hydrological connection to surface water (for example, water in a well beside a river).

Water allocation transfer

Occurs when the holder of an existing water withdrawal licence, that is determined to be in good standing, agrees to transfer all or part of the amount they are allocated to another person or organization or where the holder of the licence wishes to move all or part of their own licence and where there is a change in the point of diversion and/or point of use (appurtenance) of the licence. When this occurs, the allocation is separated from the original land, and a new licence, with the priority number of the transferred allocation, is issued and attached to the new location. The decision on a Water Allocation Transfer occurs under the provision of the *Water Act* for which Alberta Environment and Protected Areas has jurisdiction. During a transfer, conditions may be placed on the new licence. Water allocation transfers may occur only if authorized under an approved water management plan, or by the Lieutenant Governor in Council.

Water conservation holdback

If the Director is of the opinion that withholding water is in the public interest to protect the aquatic environment or to implement a water conservation objective, and the ability to withhold water has been authorized in an applicable approved water management plan or order of the Lieutenant Governor in Council, the Director may withhold up to 10% of an allocation of water under a licence that is being transferred. The withholding occurs at the time the new licence created for the transferred allocation is issued (see section 83 of the *Water Act*).

Water conservation objective

The amount and quality of water set by a Director for the protection of a natural water body or its aquatic environment; the protection of tourism, recreational, transportation or waste assimilation uses of water; or the management of fish or wildlife, and may include water necessary for the rate of flow of water or water level requirements.

Water licence

Provides the authority for diverting and using water. The licence identifies the water source, the location of the diversion site, a maximum amount of water that may be diverted and used, at a maximum rate of diversion, for the purpose specified, the land or undertaking the licence is associated with, the priority of the “water right” established by the licence, and the conditions under which the diversion and use must take place.

Watershed

A watershed is often referred to as a basin (see definition for basin).

**Appendix C: Water Administration Criterion #4, Lodge
Creek Basin**

**WATER RESOURCES ACT
WATER ADMINISTRATION CRITERION #4
LODGE CREEK BASIN**

RECOMMENDED BY: Allan Strome June 29/83
DIRECTOR DATE

WATER RESOURCES ADMINISTRATION DIVISION

APPROVED BY: Peter Kvelynchuk June 29/83
ASSISTANT DEPUTY MINISTER DATE

WATER RESOURCES MANAGEMENT SERVICES

(Discussed at Directors' Meeting No. 206)

WATER RESOURCES ACT

WATER ADMINISTRATION CRITERION #4

***LODGE CREEK BASIN**

PREAMBLE


The Lodge Creek Basin has been heavily allocated in both Saskatchewan and Alberta for a considerable period of time. The 1969 Master Agreement on Apportionment provides, in Schedule A, that Alberta is permitted to make a net depletion of one-half the natural flow of water arising in or flowing through Alberta. However, Article 6 of Schedule A also states that:

"This agreement shall not adversely affect any right to water in Battle or Lodge Creeks which has been given by the Government of Canada prior to the transfer of the natural resources to the provinces and is still subsisting, or any right to such water given by either Province heretofore which has been recognized and approved by both Provinces."

The Prairie Provinces Water Board Committee on Interjurisdictioned Agreements Administration reviewed streamflow and licence data and in 1981 submitted a report (#61) to the P.P.W.B. which recommended that Article 6 would be satisfied if 50% of the natural flow originating in Alberta be released to the United States via Saskatchewan to serve International commitments, and that Alberta share the remaining flow on a 50-50 basis with Saskatchewan. The report was approved by Prairie Provinces Water Board.

The review of all water rights data in Alberta for Lodge Creek Basin shows that the total of all net depletions granted to projects of record in Alberta exceeds Alberta's share of the total runoff in the basin. Historically the actual use of water has been less than that granted or applied for and excess flows have been delivered to Saskatchewan at least 75% of the years in the period 1951 to 1978. This is not expected to continue as irrigation projects are upgraded to make better use of the time and duration of flow each year and thus consume a larger percent of the water assigned to them under their licences.

This policy is intended to place restrictions on further development of projects of a type and scale which are likely to have a significant impact on the hydrology of the basin while allowing the approval of further domestic projects which in total have minimal impact on the stream.


V. Carlson, P. Geol.
Controller of Water Resources

* INCLUDES MIDDLE CREEK

WATER RESOURCES ACT

WATER ADMINISTRATION CRITERION #4

*LODGE CREEK BASIN

IMPLEMENTATION DATE: July 1, 1983

To meet Interprovincial and International commitments the policy on acceptance of applications for those surface water projects requiring licences** under provisions of the Water Resources Act in the *Lodge Creek Basin is as follows:

1. Domestic and Agricultural Applications for Construction of Dams

- will not be accepted when located on the main stem of Lodge Creek, Middle Creek, or Bare Creek.
- will be accepted for consideration, on tributaries, subject to normal licensing procedures only where the storage capacity is 20 Acre-feet or less and the design of the project is such that evaporation and seepage losses are minimized.
- outlet facilities for release of water may be required.

2. Municipal Applications

- will be considered only where compensation is provided for holders of existing licences which would have to be cancelled as provided under Section 11 (4), (5), (6) and (7) of the Water Resources Act.

* INCLUDES MIDDLE CREEK

** A licence is not required under the Water Resources Act for normal size dugouts or small-scale pumping diversions which supply water for single household or stockwatering purposes.

.../2

- will be considered only where the facilities are capable of:

- (a) storing sufficient water for carry-over requirements.
- (b) diverting the required quantity of water during short term runoff periods.
- (c) storing water with minimal evaporation losses. A storage capacity to surface area ratio less than 6 (six) will have to be supported by evidence that clearly and conclusively indicates that no other sites are available which will provide minimal losses.
- (d) adequate outlet facilities for release of water must be incorporated in the instream works where storage is provided.

- time restrictions for diversion of water from the stream may be applied.

3. Irrigation, Industrial, Storage and All Other Applications

- will not be accepted.

4. Applications in Non-contributing Areas

- where it can be clearly and conclusively demonstrated by the proponent that a project is in a non-contributing area of the Basin applications will be accepted for any type of project and given consideration subject to normal licensing procedures.

SUBMITTED BY: A.J. Ferrett

A.J. Ferrett

FORWARDED BY: V. Carlson

V. Carlson

Controller of Water Resources

FIGURE 16. LODGE CREEK BASIN - GENERAL PLAN

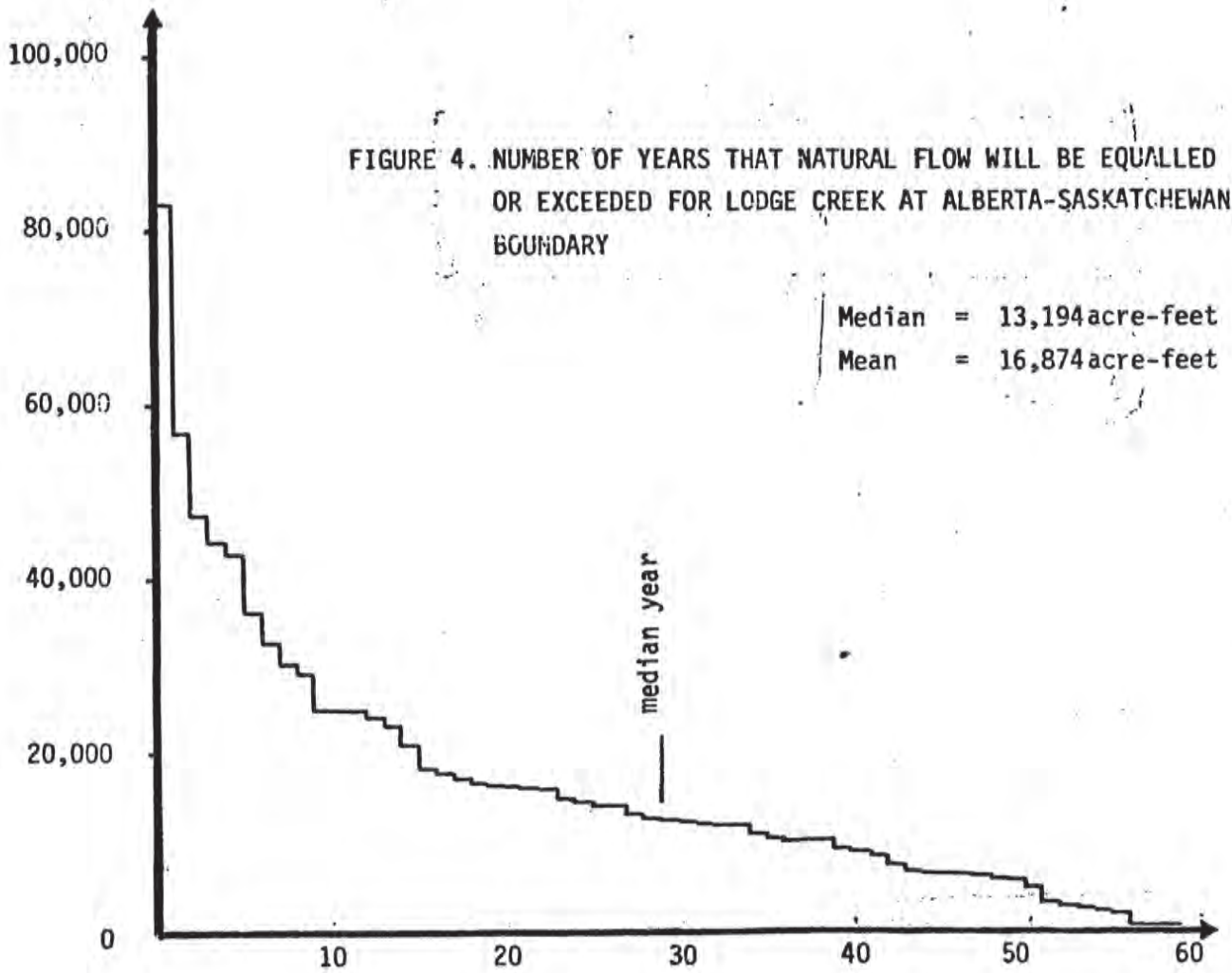


LODGE CREEK

@ ALTA - SASK BOUNDARY

	MEAN ANNUAL ACRE FEET	MEDIAN ANNUAL ACRE FEET
NATURAL RUN-OFF	16,874	13,194
U.S.A. SHARE (50%)	8,437	6,597
ALBERTA SHARE (50% of remainder)	4,219	3,299
*TOTAL ALBERTA ALLOCATIONS APPLICATION DATE PRIOR TO 1969-10-30 (NET DIVERSION)	3,809	3,809
*TOTAL ALBERTA ALLOCATIONS APPLICATIONS TO 1981 (NET DIVERSION)	4,316	4,316

*EFFECTIVE DRAINAGE AREA ONLY



Number of years that natural flow will be equalled or exceeded.

Note: (Based on a period of 59 years)

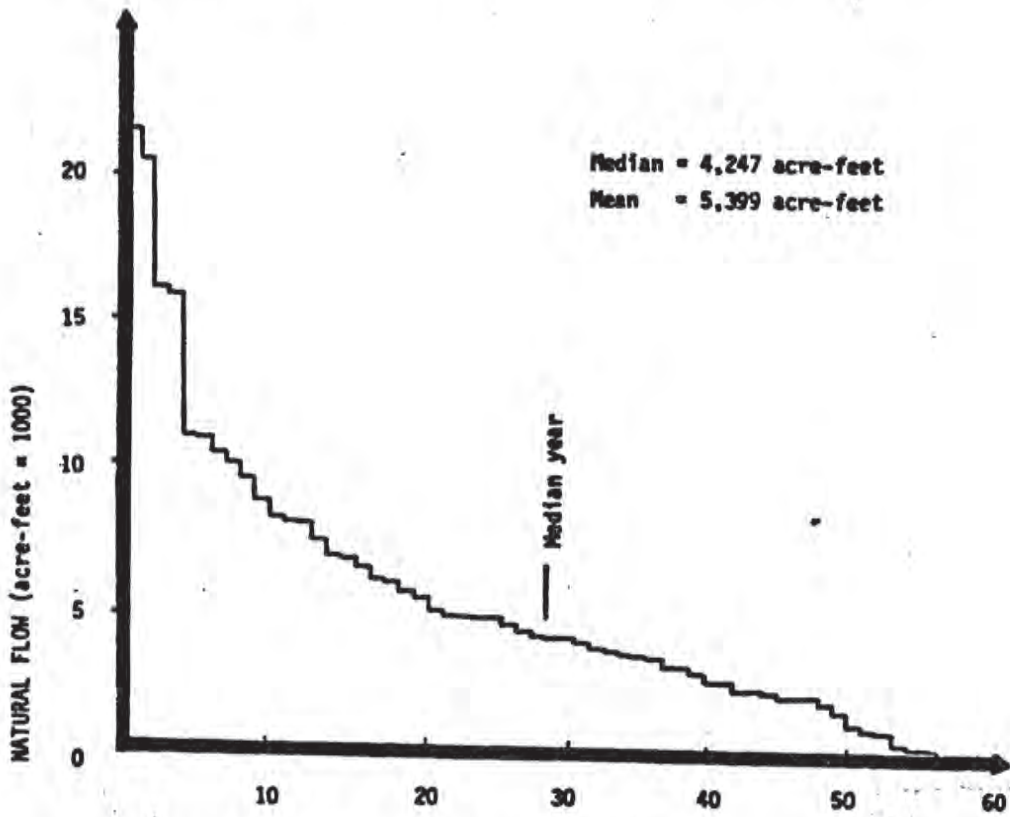
ALBERTA SHARE = 25%

MEDIAN = 3,298 acre-feet

MEAN = 4,218 acre-feet

Information from P.P.W.B. Report #61

FIGURE 5. NUMBER OF YEARS THAT NATURAL FLOW WILL BE EQUALLED OR EXCEEDED FOR MIDDLE CREEK AT THE ALBERTA - SASKATCHEWAN BOUNDARY.



Number of years that flow will be equalled or exceeded.

Note: (Based on period of 59 years)

ALBERTA SHARE = 25%

MEDIAN = 1,062 acre-feet

MEAN = 1,350 acre-feet

Information from P.P.W.B. Report #61

MIDDLE CREEK

@ ALTA - SASK BOUNDARY

	MEAN ANNUAL ACRE FEET	MEDIAN ANNUAL ACRE FEET
NATURAL RUN-OFF	5,399	4,247
U.S.A. SHARE (50%)	2,700	2,124
ALBERTA SHARE (50% of remainder)	1,350	1,062
*TOTAL ALBERTA ALLOCATIONS APPLICATION DATE PRIOR TO 1969-10-30 (NET DIVERSION)	1,215	1,215
*TOTAL ALBERTA ALLOCATIONS APPLICATIONS TO 1981 (NET DIVERSION)	1,218	1,218

*EFFECTIVE DRAINAGE AREA ONLY

TABLE 8. NET DEPLETION FOR MIDDLE, LODGE AND McRAE CREEK BASINS

(acre-feet)

		Alberta		Saskatchewan		
		Lodge	Middle	Lodge	Middle	McRae
1	All data on file.	4,316	1,378	2,354	3,255	248
2	All data on file. Effective drainage area only.	4,316	1,218	2,347	3,196	248
3	Data from all file numbers having application dates prior to 1969 - 10 - 30. Effective drainage area only.	3,809	1,215	2,317	2,985	235
4	Data from licence and authority numbers only having application dates prior to 1969 - 10 - 30. Effective drainage area only.	3,809	1,215	2,317	2,729	235
5	Data from licences only having application dates prior to 1969 - 10 - 30. Effective drainage area only.	3,248	955	2,317	1,479	235
A	Data from all file numbers having application dates prior to 1931 - 04 - 01. Effective drainage area only.	1,001	639	1,629	105	0
B	Data from all file numbers having application dates prior to 1940 - 01 - 01. Effective drainage area only.	1,042	1,019	1,756	2,310	35
C	Data from all file numbers having application dates prior to 1950 - 01 - 01. Effective drainage area only.	1,225	1,037	1,756	2,488	66
D	Data from all file numbers having application dates prior to 1960 - 01 - 01. Effective drainage area only.	1,333	1,169	2,261	2,559	100

III-8

SUMMARY OF LODGE - MIDDLE CREEK HYDROMETRIC DATA

YEAR	LODGE @ A-S RECORDED	LODGE @ A-S NATURAL	% RETAINED BY ALBERTA	MIDDLE @ A-S RECORDED	MIDDLE @ A-S NATURAL	% RETAINED BY ALBERTA
1951	35,800.	36,561.	2	9,980.	10,550.	5
1952	79,400.	83,128.	4	20,600.	20,800.	1
1953	22,300.	25,612.	13	7,650.	8,300.	8
1954	4,860.	6,608.	26	2,510.	3,210.	22
1955	44,100.	47,708.	8	16,000.	16,370.	2
1956	10,400.	12,813.	19	3,450.	4,240.	19
1957	17,100.	21,594.	21	6,350.	7,070.	10
1958	24,500.	25,415.	4	4,140.	4,900.	16
1959	8,630.	10,345.	17	4,170.	4,990.	16
1960	15,300.	15,073.	-	6,830.	7,500.	9
1961	1,580.	3,795.	58	157.	280.	44
1962	4,610.	6,125.	25	528.	820.	36
1963	8,570.	9,281.	8	1,610.	2,190.	26
1964	5,960.	7,080.	16	1,560.	2,370.	34
1965	41,640.	42,950.	3	15,680.	16,057.	2
1966	16,930.	17,967.	6	7,090.	8,322.	15
1967	43,140.	44,370.	3	10,510.	11,149.	6
1968	2,270.	2,756.	18	1,080.	1,131.	5
1969	14,900.	16,852.	12	4,910.	5,531.	11
1970	14,700.	16,527.	11	9,920.	10,339.	4
1971	12,500.	13,865.	10	4,790.	5,709.	16
1972	10,300.	12,284.	16	3,370.	4,419.	24
1973	1,640.	2,008.	18	237.	402.	41
1974	10,900.	12,629.	14	3,560.	4,247.	16
1975	23,000.	23,963.	4	5,730.	6,213.	8
1976	15,500.	16,267.	5	3,800.	3,427.	-
1977	157.	230.	32	125.	125.	0
1978	15,300.	18,247.	16	3,090.	3,759.	18

Information taken from P.P.W.B. Report #61, Table 3

Appendix D: Water Administration Criterion #6, Milk River Basin - Surface Water

WATER RESOURCES ACT
WATER ADMINISTRATION CRITERION #6
MILK RIVER BASIN - SURFACE WATER

RECOMMENDED BY: Alta Strome Sept. 25/85
A.R. STROME DATE
DIRECTOR
WATER RESOURCES ADMINISTRATION DIVISION

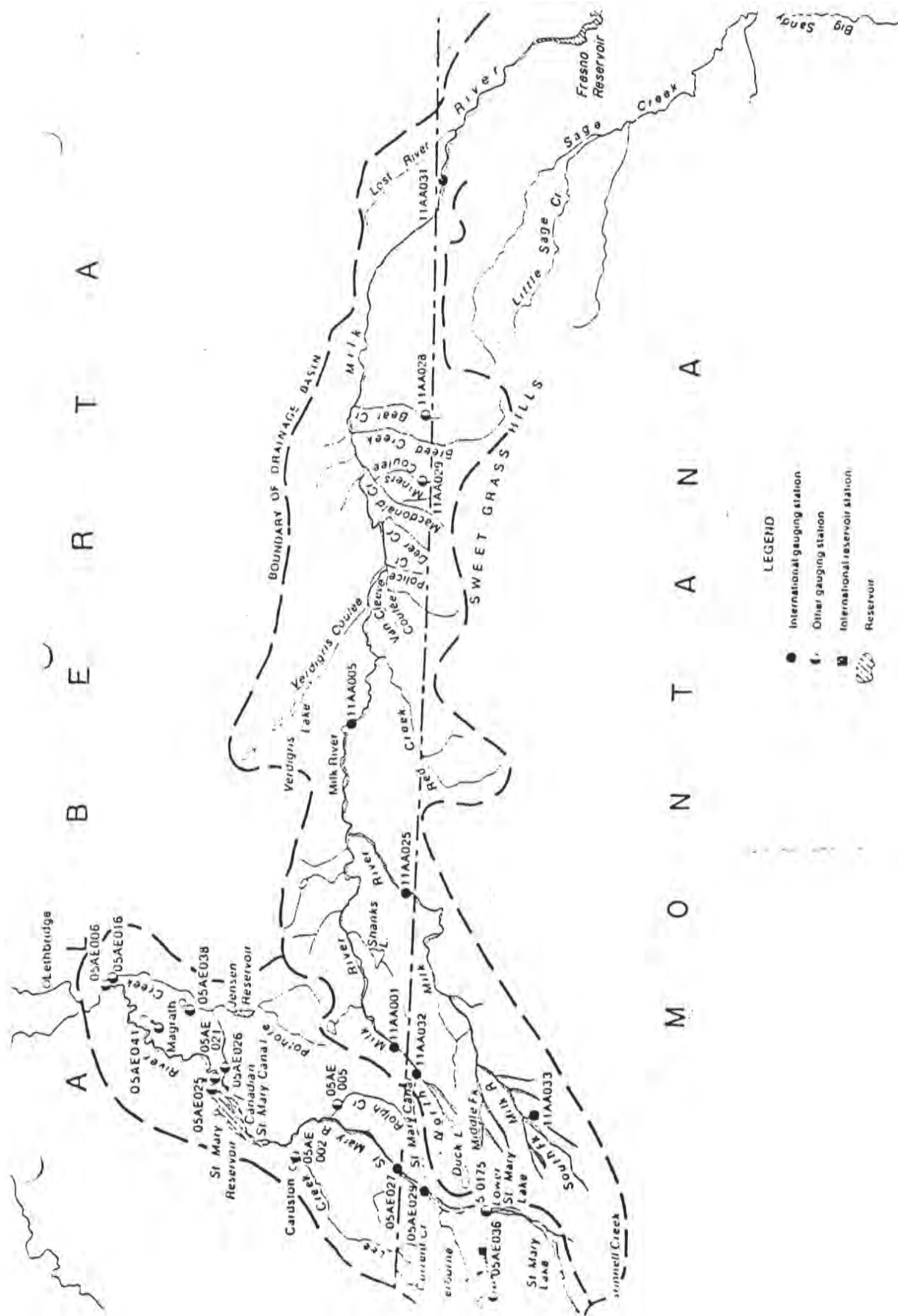
APPROVED BY: P. G. Melnychuk Sept 25/85
P.G. MELNYCHUK DATE
ASSISTANT DEPUTY MINISTER
WATER RESOURCES MANAGEMENT SERVICES
(Discussed at Directors' Meeting No. 253)

IMPLEMENTATION DATE: September 30, 1985

ALBERTA ENVIRONMENT

EDMONTON

0309c

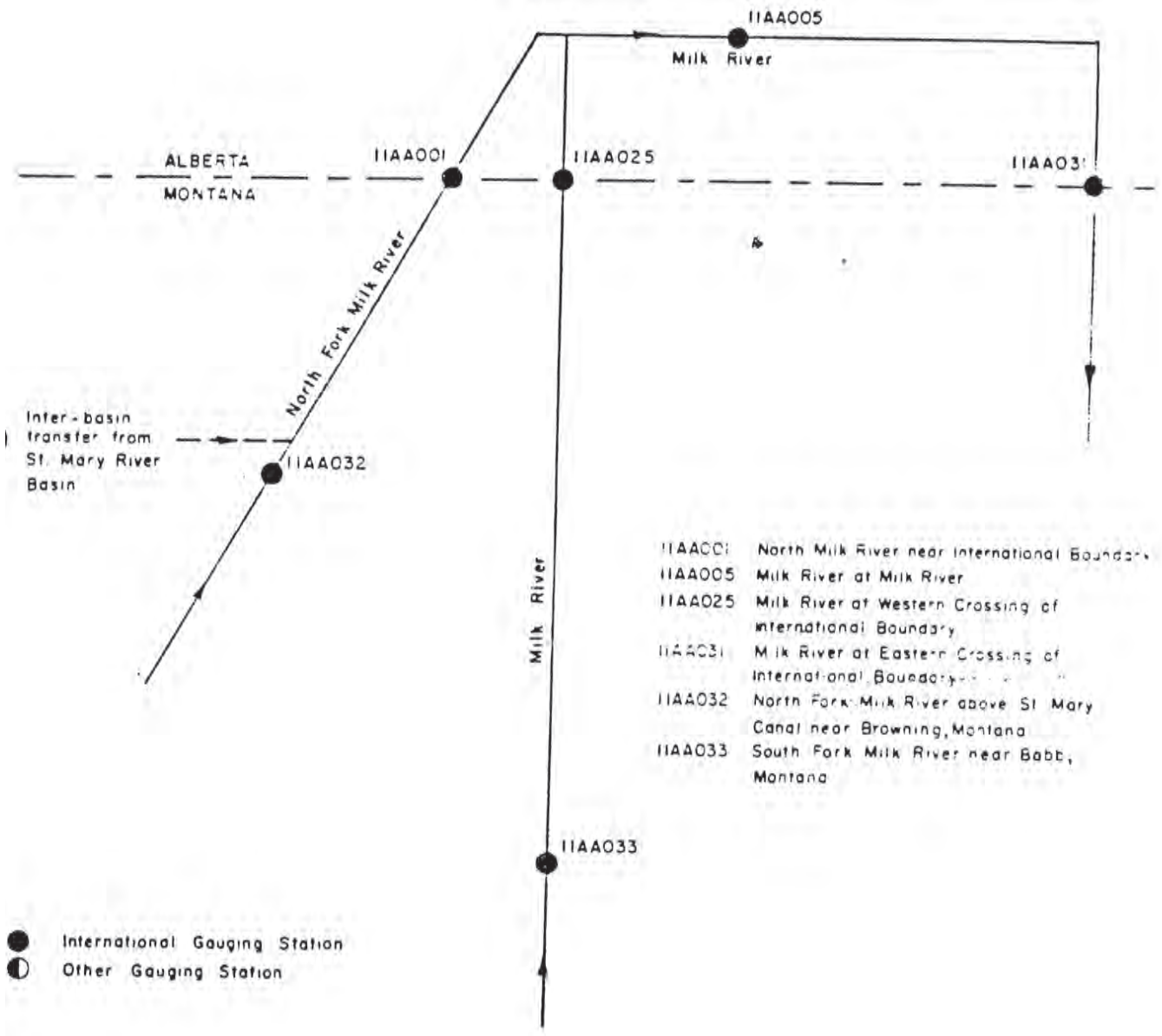


112°

113°

111°

SCHMATIC MAP
MILK RIVER BASIN



- IIAA001 North Milk River near International Boundary
- IIAA005 Milk River at Milk River
- IIAA025 Milk River at Western Crossing of International Boundary
- IIAA031 Milk River at Eastern Crossing of International Boundary
- IIAA032 North Fork Milk River above St. Mary Canal near Browning, Montana
- IIAA033 South Fork Milk River near Babb, Montana

- International Gauging Station
- Other Gauging Station

WATER RESOURCES ACT
ADMINISTRATION CRITERION # 6
MILK RIVER BASIN - SURFACE WATER

PREAMBLE:

Milk River is an international stream. The apportionment of the waters of the Milk River is governed by the Boundary Waters Treaty of 1909 between the United States and Great Britain. The 1921 Order of the International Joint Commission clarified the terms of the Treaty and provided general procedural guidelines for determining natural flow.

During the irrigation season (April 1 to October 31) the United States share of the water is equal to 75% of the natural flow at the eastern crossing of the International Boundary if the natural flow is equal to or less than 666 cubic feet per second (cfs). Flows greater than 666 cfs are divided equally between the United States and Canada. During the non-irrigation season (November 1 to March 31) the natural flow is divided equally between the two countries.

Water Survey of Canada of the Federal Department of Environment represents Canada in matters respecting the division of flows on international streams such as the Milk River to ensure that Orders of the International Joint Commission are complied with.

Factors impacting on allocation of water from the Milk River are as follows:

0309c

1. The United States uses the Milk River as a conveyance canal to deliver their portion of the St. Mary River water to the lower portion of the Milk River in the United States. This water is definitely NOT available for allocation in Canada.
2. Canada's share is usually available ONLY during a relatively short period each year, generally between spring run-off to approximately early June. Periods of zero flows, seldom exceeding 5 days, have been recorded on the Milk River. These periods of zero flow can occur in any month.
3. On an annual basis there is sufficient water available to serve existing licensees in Canada. Total allocation for the Milk River Basin is about 19,770 acre-feet of water. This value is comprised of 9,678 acre-feet for projects that divert water directly from the Milk and North Milk Rivers and 10,092 acre-feet for projects on tributaries of these rivers. Between 1912 and 1983 inclusive Canada's share of the natural flow of the Milk River during the March to October period has varied from a high of about 136,250 acre-feet in 1927 to a low of about 6,500 acre-feet in 1944. The median flow for the same period is about 32,000 acre-feet.
4. The current basin allocation added to all applications in PFRA offices totals 23,671 acre-feet which represents Canada's share of the flows in the Milk River with a probability of occurrence of about 70%. The value of 70% is generally understood to be an acceptable level of water supply reliability for most applicants who plan to develop modern private irrigation systems.

Based on the above factors, the following criterion is recommended in order to ensure that Canada complies with the Orders of the International Joint Commission.

A handwritten signature in black ink, appearing to read 'V. Carlson', written in a cursive style.

V. Carlson

Controller of Water Resources

WATER RESOURCES ACT
ADMINISTRATION CRITERION # 6
MILK RIVER BASIN - SURFACE WATER

Alberta Environment will cease to issue authorizations for diversion and use of water from the Milk and North Milk Rivers Basins subject to the following:

- (1) Applications already received in the Water Rights Branch will be processed.

- (2) Applications slated for survey or already surveyed and in preparation in Lethbridge and Medicine Hat PFRA offices will be processed if they are received before January 1, 1987. A list of these projects is attached.
Revised to 1989

- (3) Applications for Domestic, Municipal and Agricultural (small stockwatering projects) are exempt.

- (4) Projects with provisions for:
 - (a) storage of total requirement;

 - (b) multi-use benefits; or,

 - (c) provincial projects:may be exempted by the Controller of Water Resources.

- (5) Where it can be clearly and conclusively demonstrated that the project is in a non-contributing area of the Basin, applications will be considered for any type of project and given consideration subject to normal licensing procedures.

Applications received after September 30, 1985 and not on the list of those specifically exempted will be acknowledged but will not be processed further.

SUBMITTED BY: Hamid Rahim

Hamid Rahim

Allocation Manager

REVIEWED BY: A.J. Ferrett 1985-09-13

A.J. Ferrett

Branch Head

FORWARDED BY: V. Carlson

V. Carlson

Controller of Water Resources

WATER RIGHTS BRANCH
Water Resources Administration Division
Alberta Environment

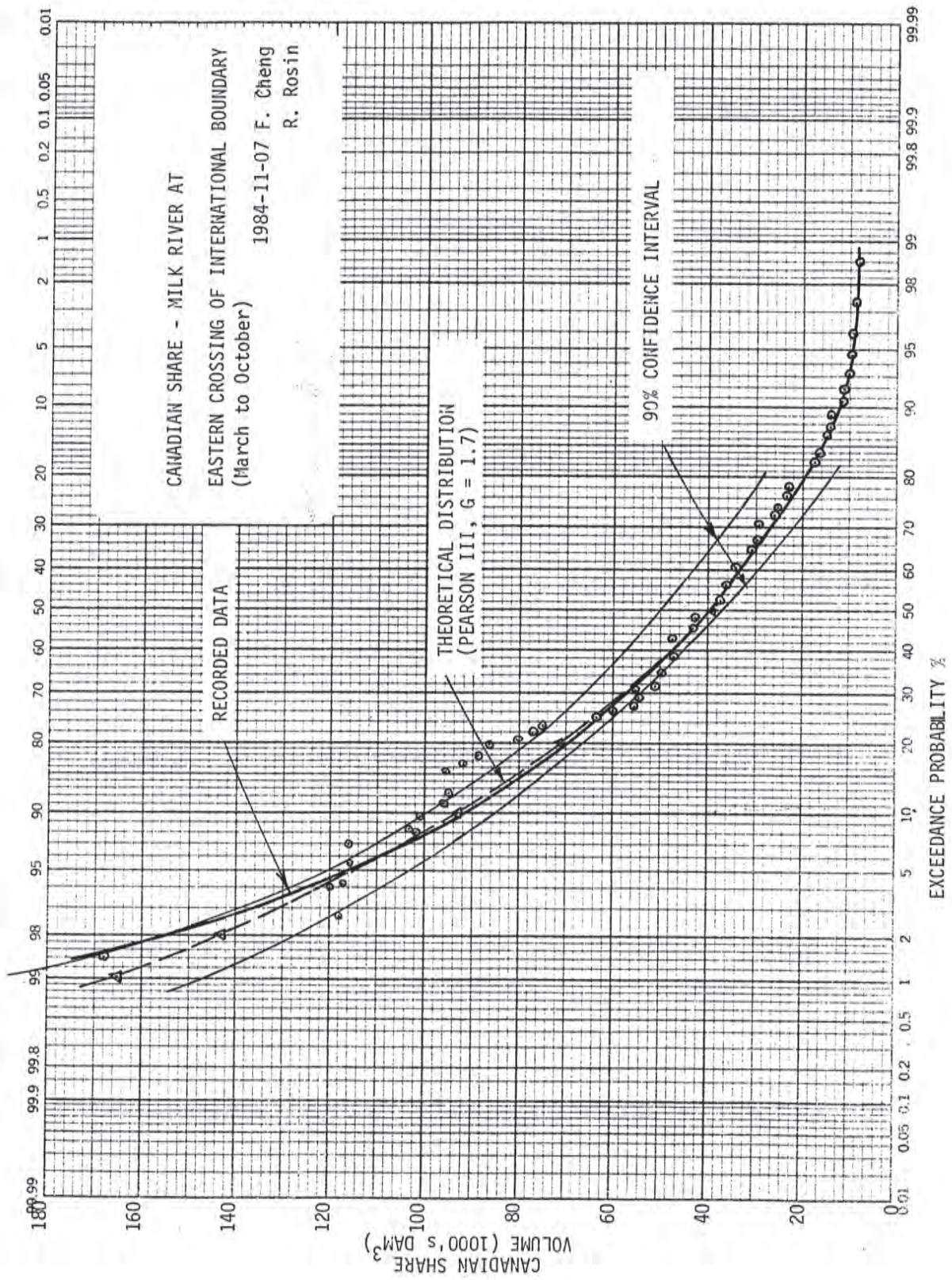
MILK RIVER BASIN

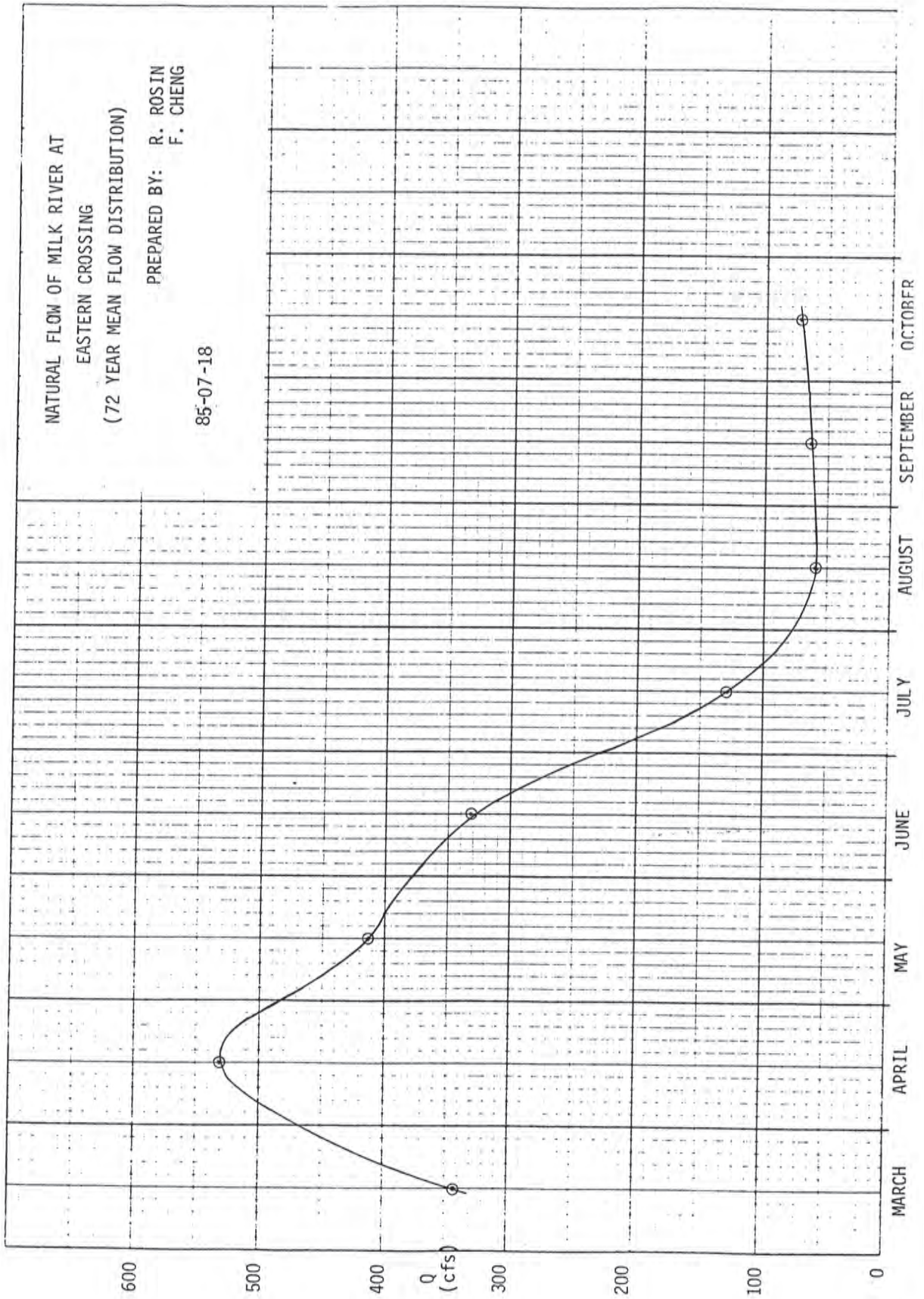
Name	Location	Approx. Area Acres	Source
Victor E. Thompson	NW 11-2-16-4	93	Milk River
John Dobrocane	NE 15-2-16-4 SE 15-2-16-4	177	Milk River
Lloyd Hofer	SW 29-2-16-4	225	Milk River
Willard and Emma Swanson	NE 21-2-16-4 NE 21-2-16-4 SE 21-2-16-4	13 122 27	Milk River
Joseph O. and Margaret L. O'Donnell	SW 29-2-16-4	64	Milk River
R.J. (Bob) Bogle	SW 15-2-16-4	120	Milk River
Warren Cunningham	SW 29-2-16-4	53	Milk River
William Lindeman	SW 30-2-16-4	7	Milk River
William J. Snow	NW 26-2-17-4 SW 27-2-17-4	106 247	Milk River Milk River
Ralph E. Beard	SE 7-2-15-4	321	Milk River
Irvin C. Morton	SE 6-2-21-4	10	Milk River
Alfred Jones	SE 1-1-20-4	297	Milk River
H.B. of River Road	NW 9-2-14-4	160	Milk River
H.B. of River Road	NW 9-2-14-4	377	Milk River
Ralph Stelton	NW 32-1-12-4	200	Milk River

0183d

46 8003

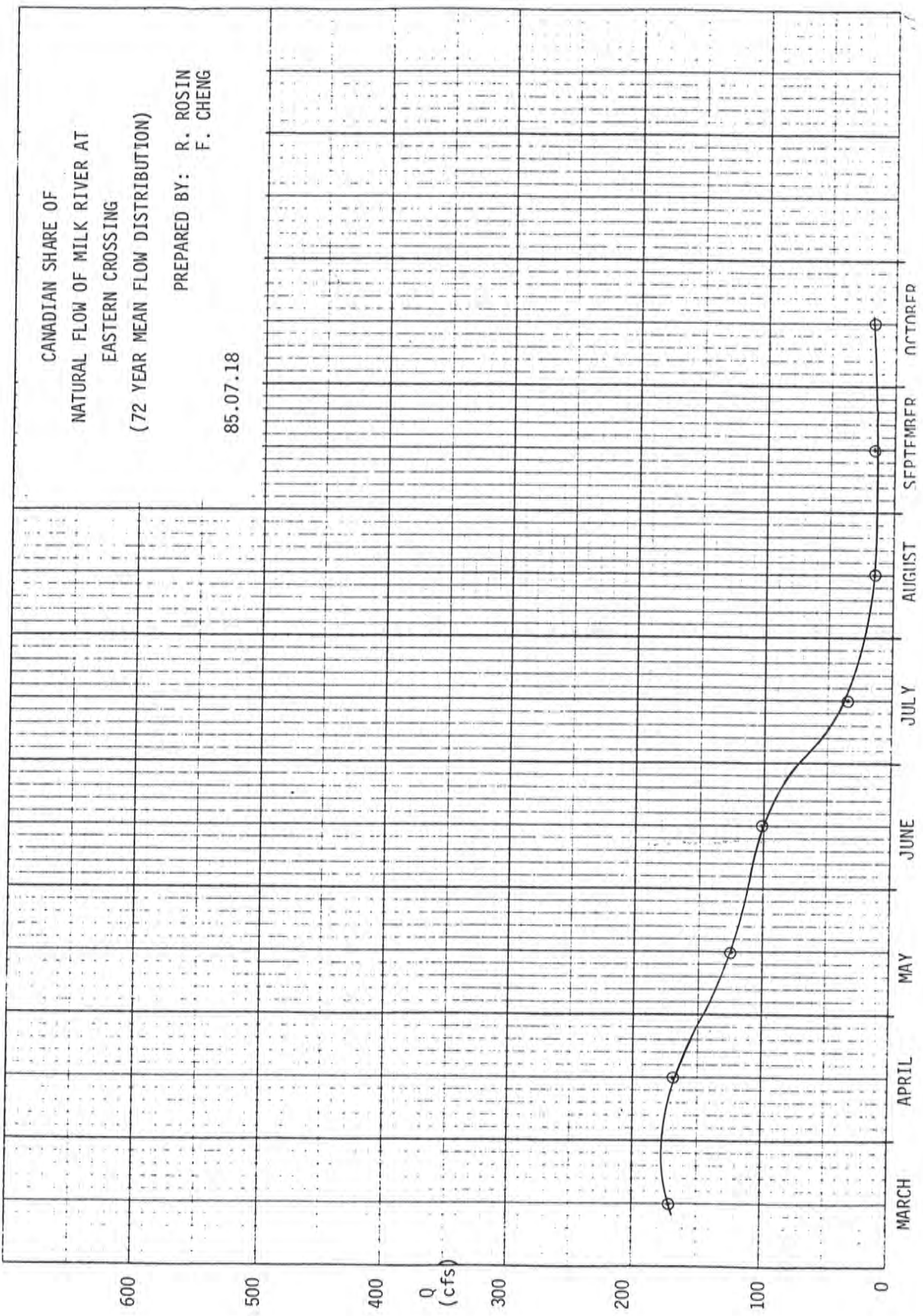
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MONTHLY RUNOFF VOLUME (DAM³)

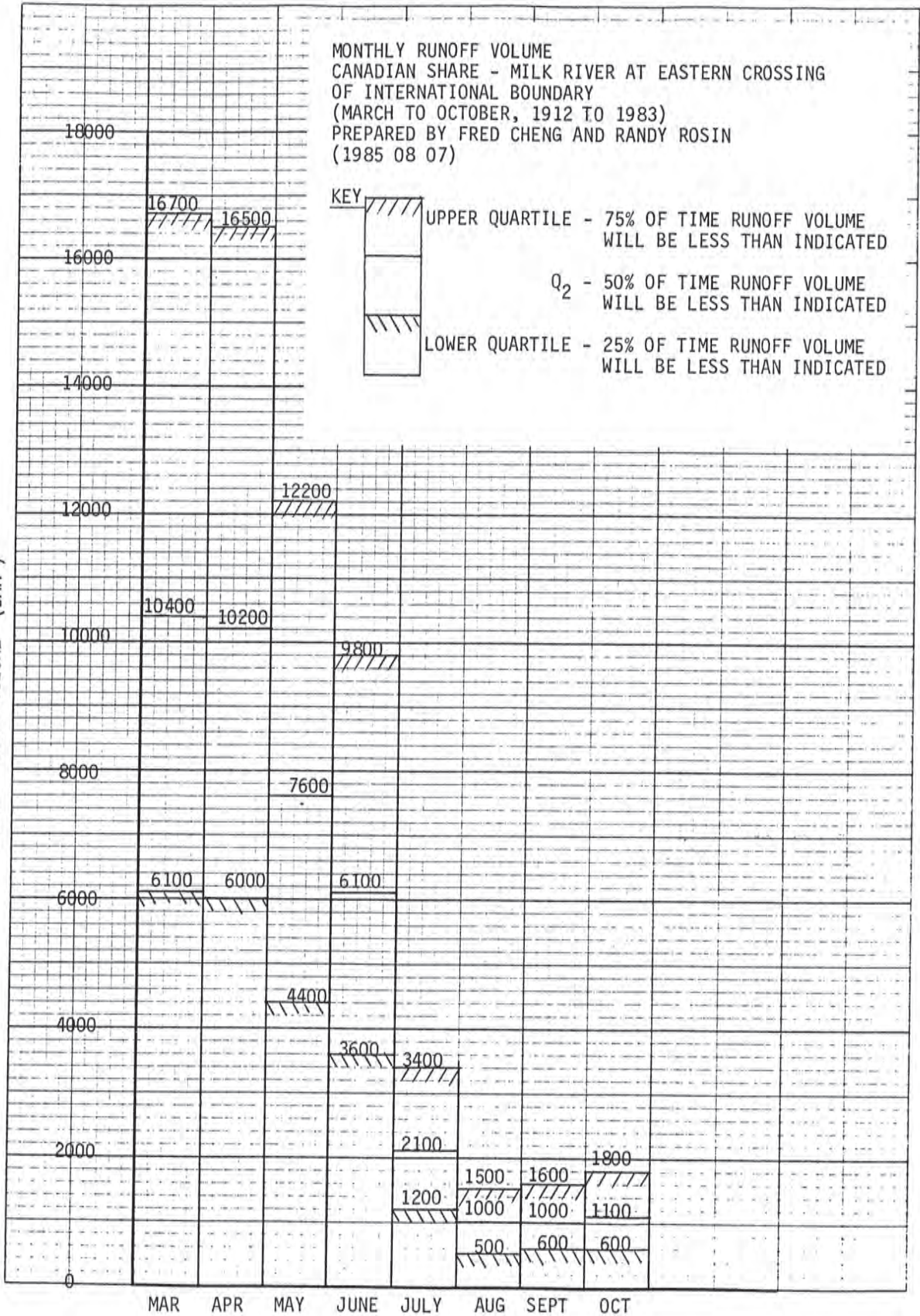


TABLE 8

HISTORICAL SUMMARY
MARCH TO OCTOBER NATURAL FLOW OF MILK RIVER
AT
EASTERN CROSSING OF INTERNATIONAL BOUNDARY
(Cubic Decametres)

Year	Computed Natural Flow	United States Share	Canadian Share	Year	Computed Natural Flow	United States Share	Canadian Share	Year	Computed Natural Flow	United States Share	Canadian Share
1912	141 000	93 500	47 100	1936	79 900	50 200	29 700	1961	46 700	32 800	14 100
1913	155 000	110 000	46 300	1937	112 000	78 900	32 700	1962	72 200	48 500	23 700
1914	85 100	59 500	25 700	1938	133 000	89 700	43 500	1963	34 300	23 700	10 600
1915	173 000	121 000	50 800	1939	50 100	33 600	16 500	1964	154 000	104 000	49 700
1916	280 000	187 000	92 000	1940	69 700	46 400	23 300	1965	284 000	181 000	103 000
1917	270 000	174 000	96 000	1941	31 200	21 500	9 700	1966	147 000	98 600	48 000
1918	79 700	55 600	24 100	1942	105 000	75 900	29 600	1967	310 000	194 000	116 000
1919	33 800	24 100	9 700	1943	143 000	98 600	44 900	1968	139 000	96 600	42 700
1920	212 000	136 000	77 000	1944	28 000	20 000	8 000	1969	236 000	147 000	88 900
1921	70 200	50 300	19 900	1945	53 800	36 100	17 600	1970	121 000	84 700	36 500
1922	108 000	76 500	31 100	1946	51 400	35 000	16 400	1971	128 000	91 300	36 600
1923	101 000	72 700	28 900	1947	204 000	128 000	75 000	1972	228 000	148 000	80 300
1924	89 200	63 300	25 900	1948	254 000	168 000	86 000	1973	44 500	29 600	14 900
1925	149 000	101 000	48 200	1949	69 900	49 700	20 200	1974	117 000	82 200	34 500
1926	30 200	21 200	9 600	1950	149 000	106 000	42 900	1975	324 000	206 000	118 000
1927	449 000	281 000	168 000	1951	343 000	226 000	115 000	1976	118 000	87 300	37 400
1928	273 000	178 000	95 300	1952	249 000	154 000	94 700	1977	37 100	25 800	11 400
1929	184 000	123 000	60 600	1953	317 000	200 000	117 000	1978	274 000	173 000	101 000
1930	131 000	87 900	43 000	1954	181 000	127 000	54 600	1979	248 000	153 000	95 600
1931	36 800	25 000	11 700	1955	197 000	133 000	63 500	1980	99 400	69 500	29 900
1932	94 400	64 800	29 600	1956	139 000	97 300	41 600	1981	113 000	79 200	34 200
1933	117 000	80 500	36 600	1957	130 000	83 400	40 800	1982	164 000	109 000	55 100
1934	117 000	79 600	37 100	1958	139 000	89 700	49 600	1983	46 600	32 600	13 900
1935	97 600	64 600	32 900	1959	159 000	105 000	54 500				
				1960	121 000	76 400	45 000				

The totals of the United States and Canadian shares may not agree with the computed natural flow as all figures have been rounded for this summary. Table is a direct conversion from English to metric units, totals in some cases may not concur.

Request for Decision

Block 39

July 8, 2024



RECOMMENDATION

That Council accept the report on Block 39 as information.

LEGISLATIVE AUTHORITY

BACKGROUND

Block 39 was requested to be on Council’s agenda for discussion.

RISKS/CONSEQUENCES

1. Council may provide further direction on any item contained in the report. Council shall be specific in the direction it provides.

FINANCIAL CONSIDERATIONS

ATTACHMENTS

None

Request for Decision

8th Avenue Subdivision

July 8, 2024



RECOMMENDATION

That Council accept the report on the 8th Avenue Subdivision as information.

LEGISLATIVE AUTHORITY

BACKGROUND

The 8th Avenue Subdivision was requested to be on Council's agenda for discussion.

RISKS/CONSEQUENCES

1. Council may provide further direction on any item contained in the report. Council shall be specific in the direction it provides.

FINANCIAL CONSIDERATIONS

ATTACHMENTS

None

Request for Decision

Milk River Region Potable Water Supply Project: Technical Memorandum No. 1: Conceptual Design Report

July 8, 2024



RECOMMENDATION

That Council accept the Milk River Region Potable Water Supply Project: Technical Memorandum No. 1: Conceptual Design report as information.

LEGISLATIVE AUTHORITY

BACKGROUND

In 2020, MPE was retained by the Town of Milk River to develop a regional water supply concept. This concept included upgrades at the RWSC Water Treatment Plant (WTP), twinning of the regional water transmission pipeline to Warner, and a new regional water transmission pipeline from Warner to Milk River.

In 2023, the scope of work for this study was changed by request of the technical committee to include the evaluation of two alternatives. The first being the previously mentioned regional water supply concept and the second alternative being upgrades to the Milk River Water Treatment Plant and raw water system.

The main reason for this scope change is due to infrastructure projects being completed in the U.S. which will provide more reliability for flow through the Milk River.

The Milk River Region Potable Water Supply Project: Technical Memorandum No. 1: Conceptual Design report builds upon the concept development completed by MPE in 2020 and is aligned with the work scope provided in the approved ACP grant application to fund this report.

RISKS/CONSEQUENCES

1. Council may provide further direction on any item contained in the report. Council shall be specific in the direction it provides.

FINANCIAL CONSIDERATIONS

ATTACHMENTS

1. Milk River Region Potable Water Supply Project: Technical Memorandum No. 1: Conceptual Design Report



a division of Englobe

Report for:

TOWN OF MILK RIVER

MILK RIVER REGION

POTABLE WATER SUPPLY PROJECT

TECHNICAL MEMORANDUM NO. 1:

CONCEPTUAL DESIGN REPORT

Prepared By:

Kyle Lohrenz, P.Eng.
Project Manager

Date: May 2024

Project #: 1440-058-00

MPE a division of Englobe
Suite 300, 714 5th Ave. S
Lethbridge, AB
P: (403) 329-3442
Email: klohrenz@mpe.ca

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CORPORATE AUTHORIZATION

This report has been prepared by MPE a division of Englobe (MPE) under authorization of the Town of Milk River. The material in this report represents the best judgment of MPE given the available information. Any use that a third party makes of this report, or reliance on or decisions made based upon it is the responsibility of the third party. MPE accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions taken based upon this report.

Should any questions arise regarding content of this report, please contact the undersigned.

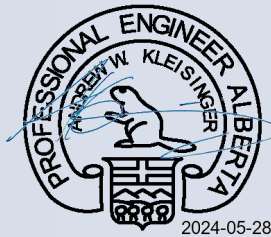
MPE A DIVISION OF ENGLOBE

Professional Stamp




Kyle Lohrenz, P.Eng.
Project Manager

Professional Seal



Andrew Kleisinger, P.Eng.
Senior Project Manager

Professional Seal

PERMIT TO PRACTICE MPE ENGINEERING LTD.
Signature 
APEGA ID <u>89080</u>
Date _____
PERMIT NUMBER: P 3680
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)

Corporate Permit

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1 INTRODUCTION

1.1 STUDY BACKGROUND

The Town of Milk River (Town), the County of Warner (County), and the Villages of Warner and Coutts are partnering to develop a regional water supply concept that will meet the growing needs of all involved municipalities. Limitations within the existing infrastructure and raw water availability impact the growth potential in the involved municipalities making it critical that a long-term solution be developed that satisfies the needs of all municipalities.

Currently, an existing regional water supply line conveys potable water from the Ridge Water Services Commission (RWSC) to the Village of Warner and County of Warner hamlets (New Dayton and Wrentham). The concept proposed in this study would see new infrastructure constructed to extend existing potable water supply sources to the Town of Milk River and existing regional supply line between the Town of Milk River and the Village of Coutts.

In 2020, MPE was retained by the Town of Milk River to develop a regional water supply concept. This concept included upgrades at the RWSC Water Treatment Plant (WTP), twinning of the regional water transmission pipeline to Warner, and a new regional water transmission pipeline from Warner to Milk River. This study will build upon the concept development completed by MPE in 2020 and is aligned with the work scope provided in the ACP grant application package.

In 2023, the scope of work for this study was changed by request of the technical committee to include the evaluation of two alternatives. The first being the previously mentioned regional water supply concept and the second alternative being upgrades to the Milk River Water Treatment Plant and raw water system. The main reason for this scope change is due to infrastructure projects being completed in the U.S. which will provide more reliability for flow through the Milk River.

1.2 SCOPE OF STUDY

The objective of this initial concept development study is to complete all work items specified for phases 1-3 that were detailed in the formal ACP grant application that was approved by Municipal Affairs.

Specifically, the project work scope includes the following items:

- Review of existing water treatment plant record drawings, historical regional water demands, and previously completed feasibility-level studies.
- Development of population and regional water demand projections.
- Water license allocation review, accounting of existing licenses and review of available additional allocation and related transfer requirements.
- Completion of a general capacity and condition assessment of existing infrastructure at the RWSC (Raymond) WTP and existing transmission mains.
- Concept development including drawings and project implementation plan.
- Development of capital cost estimate (AACE Class 4).
- Development of recommendation to proceed with further design development for most appropriate upgrade options.

1.3 TECHNICAL COMMITTEE

A Technical Committee was established for this project and includes administrative representation from all project stakeholders including Town of Milk River, the Ridge Water Services Commission, the County of Warner, the Village of Warner, and the Village of Coutts.

2 REGIONAL WATER DEMAND PROJECTIONS

2.1 POPULATION PROJECTIONS

Historic population figures for the Towns of Milk River and Raymond as well as the Villages of Coutts, Stirling, and Warner were obtained from Statistics Canada (www.statcan.ca). Historical growth rates in the municipalities ranged from -2.0% to 1.8%. A growth rate projection of 2.0% was selected to allow for future growth and has been utilized for the population projections developed in this study. This projected growth rate was selected based on discussions with the Technical Committee and typical projected growth rates for Southern Alberta. Table 2.1 provides historical and projected populations for the 25-year design horizon.

2.1.1 Hamlet Population

Statistics Canada no longer provides population data for hamlets. Populations for the Hamlets of New Dayton and Wrentham were calculated using an estimated aerial house count and the County of Warner's average household size of 2.9 people per household from Statistics Canada. Projections used for this project were extrapolated further to meet the 25-year design horizon for this study (i.e. year 2048).

Table 2.1: Population Projections

Location	Growth Rate Projection	Historical Populations				Projected Populations					
	%/yr	2006	2011	2016	2021	2023	2028	2033	2038	2043	2048
Town of Milk River	2.0%	816	811	827	824	857	947	1,045	1,154	1,274	1,406
Town of Raymond	2.0%	3,225	3,743	3,713	4,199	4,369	4,823	5,325	5,880	6,492	7,167
Village of Coutts	2.0%	305	277	245	224	233	257	284	314	346	382
Village of Stirling	2.0%	921	1,090	978	1,164	1,211	1,337	1,476	1,630	1,800	1,987
Village of Warner	2.0%	307	331	373	364	379	418	462	510	563	621
Hamlet of New Dayton	2.0%	-	-	-	99	103	114	126	139	153	169
Hamlet of Wrentham	2.0%	-	-	-	66	69	76	84	92	102	113

2.2 WATER DEMAND PROJECTIONS

2.2.1 Municipal Water Demands

2.2.1.1 WATER DEMAND PROJECTIONS

Historical water usage from 2018 to 2022 for each Municipality was reviewed. A 5-year historical average was utilized to develop average day demand in Lpcd (Litre/Capita/Day). Using these historical per-capita demands and the projected populations from Section 2.1, the historical water demand projections can be found in Table 2.2.

Upon review, the historical per capita consumption levels in the region were not typical of similar sized communities in Alberta. Consumption levels in Milk River, Coutts, Stirling, and Warner are higher than normal. The demand projections in these communities, with exception to Coutts which is discussed in the following section, have been changed to a more typical per capita demand of 500 Lpcd. The national average for total per capita water usage is 427 Lpcd (Stats Canada, 2019). Historically 500 Lpcd has been used in other regional water projects in Alberta that MPE has been a part of. Typically, the province will not fund systems that utilize demand forecasts based on historical per capita consumption levels greater than 500 Lpcd. Peaking factors were calculated separately for each community based on historical maximum day demand to average day demand ratios.

2.2.1.2 VILLAGE OF COUTTS

The historical per capita consumption levels for the Village of Coutts tend to be higher than typical for southern Alberta communities. It is understood that this projection still exceeds that for nearby communities, however there are extenuating circumstances for the Village of Coutts that drive an increased level of demand. The Village of Coutts services the potable water needs of Sweet Grass, Montana. The population of Sweet Grass is not factored into the total population serviced by Coutts. In addition to this, Coutts services all Canada and United States border crossing travellers and workers which contributes to the Village's total water usage. For these reasons, the per-capita demands for Coutts (876 Lpcd) were unchanged for this study.

Using the updated per-capita demands and the projected populations from Section 2.1, the projected water demands can be found in Table 2.3.

2.2.1.3 WATER CONSERVATION INITIATIVES

The communities of Milk River, Coutts, Stirling, and Warner may need to take steps towards reducing their historical per capita consumption in order to meet the target consumption level; water conservation strategies will become increasingly important.

As part of the "Water for Life Strategy", the Government of Alberta is committing itself to the wise management of the Province's water quantity and quality. The Province is promoting water conservation initiatives to ensure there is a sustainable water supply available to meet continued growth. Water conservation can be achieved in several different ways including the installation of meters and the institution of a consumption-based user pay water rate structure. Communities should also be encouraging various water conservation measures for their residents including the installation of low-flow toilets and shower fixtures, the use of water efficient appliances, the installation of timers on sprinkler systems, fixing leaky taps, etc.

Additional water conservation tips and information on the Water for Life Strategy can be found on the Government of Alberta's Water for Life website at <https://www.alberta.ca/water-for-life-strategy>.

Table 2.2: Historical Water Demand Projections

Location	Current (2023)						Projected (2048)				
	Population	Average Day (m ³ /day)	Max Day (m ³ /day)	Average Day (Lpcd)	Max Day (Lpcd)	Estimated Annual Consumption (m ³)	Population	Average Day (m ³ /day)	Peaking Factor	Max Day (m ³ /day)	Estimated Annual Consumption (m ³)
Town of Milk River	857	538	1,585	627	1,848	196,229	1,406	882	2.5	2,238	321,934
Town of Raymond	4,369	2,011	5,955	460	1,363	733,964	7,167	3,299	2.8	9,135	1,204,146
Village of Coutts	233	204	613	876	2,630	74,519	382	335	3.0	991	122,256
Village of Stirling	1,211	657	1,995	543	1,647	239,837	1,987	1,078	2.9	3,152	393,478
Village of Warner	379	218	1,018	576	2,688	79,652	621	358	3.4	1,226	130,678
Hamlet of New Dayton	103	22	82	213	793	8,012	169	36	4.4	160	13,145
Hamlet of Wrentham	69	31	117	449	1,704	11,260	113	51	4.1	206	18,474
Total	7,220	3,681	11,364	3,745	12,674	1,343,473	11,846	6,039	23	17,108	2,204,110

Table 2.3: Water Demand Projections

Location	Current (2023)						Projected (2048)				
	Population	Average Day (m ³ /day)	Max Day (m ³ /day)	Average Day (Lpcd)	Max Day (Lpcd)	Estimated Annual Consumption (m ³)	Population	Average Day (m ³ /day)	Peaking Factor	Max Day (m ³ /day)	Estimated Annual Consumption (m ³)
Town of Milk River	857	538	1,585	500	1,848	196,229	1,406	703	2.5	1,784	256,682
Town of Raymond	4,369	2,011	5,955	460	1,363	733,964	7,167	3,299	2.8	9,135	1,204,146
Village of Coutts	233	204	613	876	2,630	74,519	382	335	3.0	991	122,256
Village of Stirling	1,211	657	1,995	500	1,647	239,837	1,987	993	2.9	2,905	362,594
Village of Warner	379	218	1,018	500	2,688	79,652	621	311	3.4	1,064	113,388
Hamlet of New Dayton	103	22	82	213	793	8,012	169	36	4.4	160	13,145
Hamlet of Wrentham	69	31	117	449	1,704	11,260	113	51	4.1	206	18,474
Total	7,220	3,681	11,364	3,499	12,674	1,343,473	11,846	5,728	23	16,244	2,090,684

2.2.2 Industrial / Commercial Water Demands

The Technical Committee has requested that, for planning purposes, some allowance for possible future industrial/commercial development be taken into consideration. As such, the Technical Committee provided MPE with approximate locations of potential development. Figure 5.2 depicts the designated areas. MPE has utilized the methodology described in this section to attempt to quantify potential future water demands attributed to industrial/commercial development. Later sections of this report will speak to the impacts of this demand on infrastructure and seek to provide additional context.

Water demands for future commercial and industrial development are determined based on criteria outlined in the “*City of Lethbridge Design Standards 2021 Edition*”. These factors can be used to estimate water usage for potential industrial/commercial development areas identified within the County, based on the area of the development.

Assumptions made in the development of potable water demands for industrial/commercial development areas within the County include:

- Average day demand (ADD) of 20 m³/ha/day for Commercial/Institutional areas,
- ADD of 30 m³/ha/day for Industrial areas,

Industrial and commercial water demand projections are summarized in Table 2.4 below.

Table 2.4: Water Demand Projections (Industrial / Commercial)

Location	Development Land Area (ha)	Demand Factor (m³/day/ha)	Average Day (m³/day)	Max Day (m³/day)	Estimated Annual Consumption (m³)
New Dayton	235	30	7,050	10,575	1,833,000
Highway 4	150	30	4,500	6,750	1,170,000
Coutts	85	30	2,550	3,825	663,000
Total	470	90	14,100	21,150	3,666,000

Notes:

1. Annual Consumption assumes 5-day weeks.

3 REGULATORY REVIEW

3.1 OVERVIEW

This section provides an assessment of regulatory requirements pertaining to existing facilities, including a review of diversion licenses held under the Water Act.

3.2 RAW WATER DIVERSION LICENCES

Copies of raw water licenses were obtained from Alberta Environment and Protected Areas (AEPA). Each diversion license has a designated priority year, a specified maximum annual consumption, and a specified maximum diversion rate. The priority year is significant because in times of drought, water restrictions can be put in place and based on the priority year of the license newer licenses will be restricted first. Table 3.1 provides a summary of water licenses currently held by each Municipality.

Further, a comparison of water licenses versus water demands indicates whether additional water license will be needed to meet current and future demands to facilitate the upgrade alternative concepts in Section 5 of this report.

Table 3.2 provides a summary of the water licences that are drawn from the St. Mary River and are diverted through the works of the Cross Coulee Reservoir which is relevant when considering the proposed regional water supply concept (Alternative 1). These licenses are the focus of this analysis as they are transferrable and could be used to supply water via the regional water supply pipeline. Licenses held in differing basins are not transferable and therefore cannot be used by the RWSC Regional Water Treatment Plant. The total allocation for each Municipality is compared with the projected water demands to determine the annual surplus/deficit.

Table 3.1: Diversion License Summary

License Holder	Raw Water Source	License No.	Priority Number	Licence Allocation		Total Allocation	Max Diversion Rate
				acre-ft	m ³		
Town of Raymond	St. Mary River	00033531-00-00	1914-07-29-01	362	446,889	2,777,625	7,828
			1935-07-08-04	116	143,202		
			1976-09-28-01	522	644,409		
			1986-01-14-07	1,250	1,543,125		
Village of Stirling		00034867-00-00	1982-09-28-02	375	462,938	462,938	N/A
Village of Warner		00037575-00-01	1986-03-18-02	75	92,588	139,499	1,382
			1979-02-26-01	38	46,911		
County of Warner - Hamlet of Wrentham		00404323-00-00	1986-08-05-04	40	49,383	49,383	86.4
County of Warner - Hamlet of New Dayton		00157059-00-01	2001-10-18-01	9.7	11,975	25,555	51.8
		00294524-00-01	1980-04-21-01	11	13,580		25.9
East Raymond Hutterites				34	41,938	41,938	
Town of Milk River	Milk River	00034369-00-00	1958-02-12-01	382	471,579	471,579	1,296
		00034369-00-01	2003-10-07-01				3974 ²
Village of Coutts		00326649-00-00	1961-04-13-01	200	246,900	246,900	1,521

Notes:

1. Total License Allocation and Diversion Rates are based on applicable licenses via the St. Mary River. Town of Milk River and Village of Coutts water license allocations are not included.
2. Town of Raymond Projected Annual Consumption includes 2022 annual raw water usage of 404,087 m³ for residential irrigation.

Table 3.2: Diversion License Surplus/Deficit for Regional Water Supply Concept

License Holder	Raw Water Source	License No.	Priority Number	Licence Allocation		Total Allocation ¹	Max Diversion Rate ¹	Projected Maximum Day (2048)	Projected Annual Consumption (2048)	Annual Surplus
				acre-ft	m ³	m ³	m ³ /day	m ³ /day	m ³	m ³
Town of Raymond ²	St. Mary River	00033531-00-00	1914-07-29-01	362	446,889	2,777,625	7,828	9,678	1,685,709	1,091,916
			1935-07-08-04	116	143,202					
			1976-09-28-01	522	644,409					
			1986-01-14-07	1,250	1,543,125					
Village of Stirling		00034867-00-00	1982-09-28-02	375	462,938	462,938	N/A	3,340	416,863	46,075
Village of Warner		00037575-00-01	1986-03-18-02	75	92,588	139,499	1,382	1,299	138,444	1,055
			1979-02-26-01	38	46,911					
County of Warner - Hamlet of Wrentham		00404323-00-00	1986-08-05-04	40	49,383	49,383	86.4	206	19,572	29,811
County of Warner - Hamlet of New Dayton		00157059-00-01	2001-10-18-01	9.7	11,975	25,555	51.8	160	13,926	11,629
		00294524-00-01	1980-04-21-01	11	13,580		25.9			
East Raymond Hutterites				34	41,938	41,938		191	35,710	6,228
Town of Milk River								2,371	341,067	-341,067
Village of Coutts								1,050	129,521	-129,521
Total¹				2,833	3,496,937				2,780,811	716,126

Notes:

1. Total License Allocation and Diversion Rates are based on applicable licenses via the St. Mary River. Town of Milk River and Village of Coutts water license allocations are not included.
2. Town of Raymond Projected Annual Consumption includes 2022 annual raw water usage of 404,087 m³ for residential irrigation.

3.3 NEW WATER LICENSE ACQUISITION/TRANSFER

All municipalities will be required to have sufficient license allocations under the Water Act for any and all future municipal water demands. Where a reliable source of groundwater can be acquired new water licenses are available. However, because of the stressed nature of Southern Alberta's surface water supply, acquisition of additional surface water allocations can be a challenge. At this time, the Oldman and South Saskatchewan River Basins are closed to new allocations. This closure eliminates the possibility of applying to Alberta Environment and Protected Areas (AEPA) for new or increased surface water allocations. However, the Water Act does have provision for transfer of existing surface water allocations between discreet locations within the River Basin and between license holders. The monetary value of transferred licenses is determined by a free market system and is separate from the regulatory process. The feasibility of the license transfer itself is assessed on a case by case basis by AEPA with consideration for license standing, purpose, in stream flows, and aquatic protection. During the transfer process, AEPA may choose to withhold a portion (10%) of the allocation. This holdback provision is in place to protect the aquatic environment and, as a water conservation measure, is meant to allow AEPA to reach its Water Conservation Objective (WCO).

Currently all municipalities have sufficient license allocation to meet project 25-year water demands (2048) for all existing license users. Additional license allocation will only be required if Milk River and Coutts move their raw water diversion point, which is required only by the proposed regional water supply concept (Alternative 1). This is discussed further in the next section.

3.3.1 Town of Milk River / Village of Coutts

The regional water supply concept (Alternative 1) detailed in Section 5.2 of this study would necessitate acquisition of additional license allocation for use within the Town of Milk River and the Village of Coutts. Additional licenses would need to be acquired from other license holders and transferred to the Town of Raymond Diversion point and the Town of Milk River designated as the point of municipal use.

MPE a division of Englobe, on behalf of the Town of Milk River, has been in discussion with the Raymond Irrigation District (RID) regarding the potential to obtain additional license allocation through RID's water license. The RID expressed interest in selling license allocation to Milk River and Coutts and provided a letter to MPE with steps required to start this process.

Following these discussions, MPE submitted a request for information on regulatory requirements from AEPA. AEPA provide a letter response outlining all regulatory requirements that are required for Milk River to receive water from the RID, which are summarized below:

- Application for a water allocation transfer as outlined in Part 5, Division 2 of the Water Act for a portion of RID's license.
- Obtain a special Act of the Legislature as outlined in Section 47 of the Water Act, as this is required to allow the transfer of water from the South Saskatchewan River Basin to the Milk River Basin.

If this regional water supply concept project proceeds, Milk River and Coutts will maintain their existing licence allocation off the Milk River. Milk River has raw water users that require certain volumes of water, but the remaining surface water allocation could be re-purposed or sold.

4 REVIEW OF EXISTING INFRASTRUCTURE

4.1 OVERVIEW

This purpose of this section is to review the general capacity and condition of relevant existing water treatment and distribution infrastructure for the Town of Raymond, Village of Warner, Hamlets of New Dayton and Wrentham, Town of Milk River, Village of Coutts, and existing transmissions mains (Raymond to Warner and Milk River to Coutts).

A flow diagram summarizing existing infrastructure and capacities for all municipalities is provided in Figure 4.1.

4.2 RWSC WATER TREATMENT PLANT

The Ridge Water Services Commission (RWSC) is a cooperative venture of its member municipalities including the Town of Raymond, Village of Stirling, Village of Warner, Hamlet of New Dayton, Hamlet of Wrentham, and other rural users in the County of Warner. The Commission owns and operates the RWSC Water Treatment Plant, which was constructed in 2009 and is located in the Town of Raymond. The facility utilizes membrane ultrafiltration and various chemical pre and post-treatment processes to produce potable water for the region.

MPE a division of Englobe has completed several projects with the RWSC Water Treatment Plant over the past several years including: Warner Regional Water Supply Project – Regional Booster Pumping System (2012), Raymond WTP – Post Equalization Tank (2013), Raymond WTP – pH Adjustment Pilot and Implementation (2013-2014), and Raymond WTP – Powdered Activated Carbon System (2019).

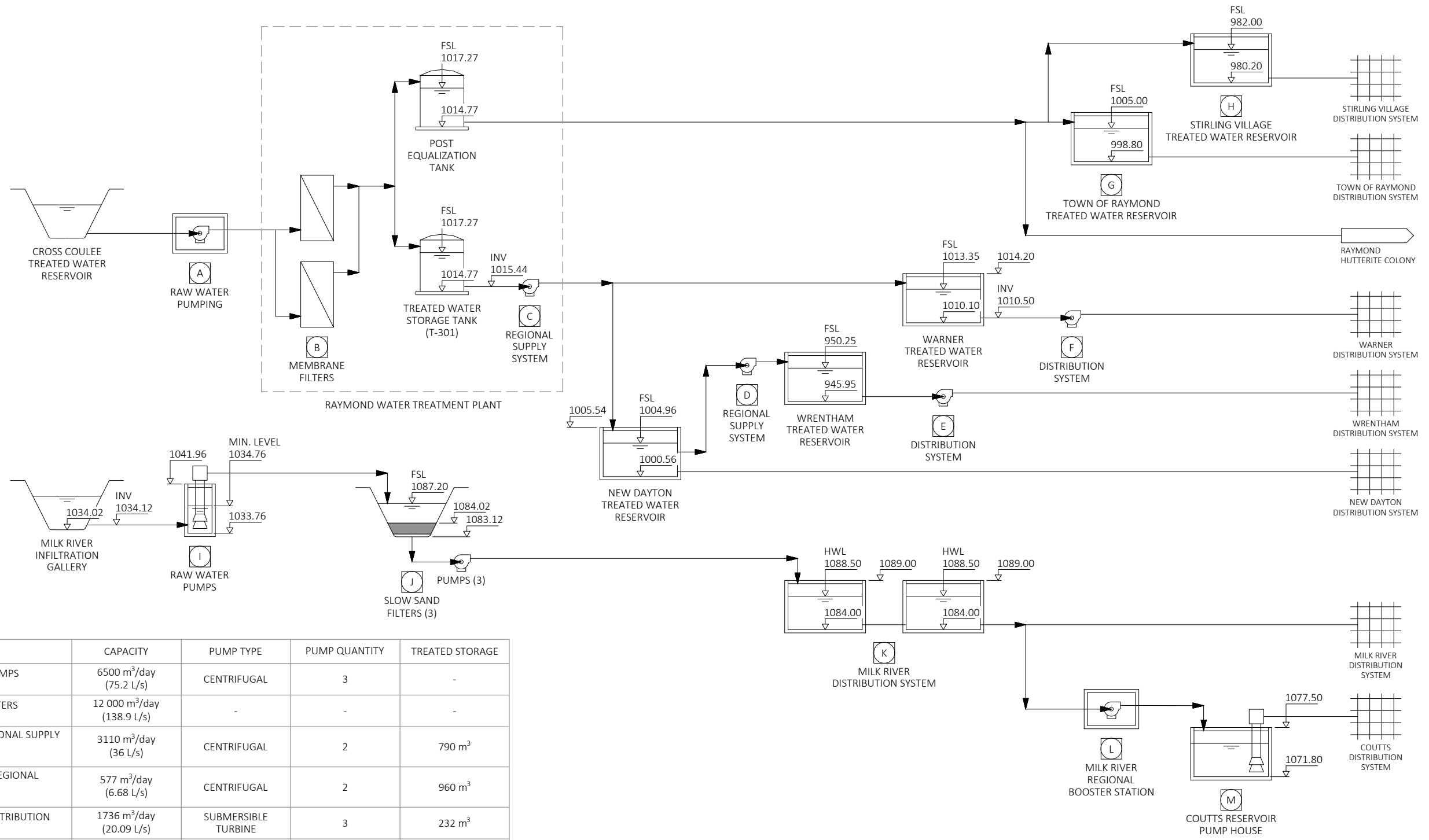
4.2.1 Treatment Capacity

The RWSC WTP currently houses two membrane filtration skids allowing for 12 MLD of ultimate capacity at the plant. The RWSC WTP has space for an additional membrane filtration skid to be added within the existing WTP footprint, allowing for an increase of up to 18 MLD of ultimate capacity at the plant.


4.2.2 Regional Transmission Pumping

The Raymond regional pumping system was constructed in 2012 and consists of two 30 hp centrifugal duty pumps rated at 18 L/s. The combined max pump capacity is therefore 36 L/s (3,110 m³/day). The current firm capacity is sufficient to meet projected (2048) combined maximum day water demands for the Village of Warner, the Hamlet of New Dayton, and the Hamlet of Wrentham (1,430 m³/day).

The overall condition of the regional transmission pumping system is good. Centrifugal pumps have an approximated life expectancy of 20-25 years. Based on the construction date (2012), these pumps should have at least 9 years left before replacement should be considered, assuming routine maintenance and repairs are being performed.



EQUIPMENT	DESCRIPTION	CAPACITY	PUMP TYPE	PUMP QUANTITY	TREATED STORAGE
(A)	RAW WATER PUMPS ULTIMATE	6500 m ³ /day (75.2 L/s)	CENTRIFUGAL	3	-
(B)	MEMBRANE FILTERS ULTIMATE	12 000 m ³ /day (138.9 L/s)	-	-	-
(C)	RAYMOND REGIONAL SUPPLY SYSTEM ULTIMATE	3110 m ³ /day (36 L/s)	CENTRIFUGAL	2	790 m ³
(D)	NEW DAYTON REGIONAL SUPPLY SYSTEM ULTIMATE	577 m ³ /day (6.68 L/s)	CENTRIFUGAL	2	960 m ³
(E)	WRENTHAM DISTRIBUTION ULTIMATE	1736 m ³ /day (20.09 L/s)	SUBMERSIBLE TURBINE	3	232 m ³
(F)	WARNER DISTRIBUTION ULTIMATE	2592 m ³ /day (30 L/s)	CENTRIFUGAL	3	455 m ³
(G)	TOWN OF RAYMOND TREATED WATER RESERVOIR	-	-	-	6819 m ³
(H)	STIRLING VILLAGE TREATED WATER RESERVOIR	-	-	-	2272 m ³
(I)	RAW WATER PUMPS ULTIMATE	8225 m ³ /day (95.2 L/s)	VERTICAL TURBINE	2	-
(J)	SLOW SAND FILTERS ULTIMATE	50 L/s (4.3 MLD)	-	-	-
(K)	MILK RIVER DISTRIBUTION ULTIMATE	6653 m ³ /day (77 L/s)	-	-	2250 m ³
(L)	MILK RIVER REGIONAL SUPPLY SYSTEM ULTIMATE	2298 m ³ /day (26.6 L/s)	CENTRIFUGAL	2	-
(M)	COUTTS DISTRIBUTION ULTIMATE	7776 m ³ /day (90 L/s)	VERTICAL TURBINE	3	520 m ³

 a division of Englobe		TOWN OF MILK RIVER	
		REGIONAL WATER SUPPLY STUDY EXISTING FLOW DIAGRAM	
SCALE:	DATE: NOVEMBER 2023	JOB: 1440-058-00	FIGURE: 4.1

4.3 HAMLET OF NEW DAYTON

The Hamlet of New Dayton currently obtains potable water from the regional pipeline network from the Town of Raymond. Potable water from the Town fills a treated water storage reservoir in New Dayton. A gravity fed system serves New Dayton's distribution system. Fire flows are also provided by local storage and the gravity distribution system.

In 2018, MPE completed the Wrentham Regional Water project which included upgrades to the RWSC WTP at Raymond, a pipeline to the Hamlet of New Dayton, a pipeline to the Village of Warner and a pipeline to the Hamlet of Wrentham. Booster stations, meter vaults and upgrades to pump stations were also included.

The booster pumping system in the New Dayton Metering Station provides potable water to the Hamlet of Wrentham through a regional transmission pipeline.

4.3.1 Regional Transmission Pumping

The New Dayton regional transmission pumping system was constructed in 2018 and consists of two 3 hp centrifugal duty pumps rated at 3.34 L/s. The combined max pump capacity is therefore 6.68 L/s (577 m³/day). The current firm capacity is sufficient to meet projected (2048) maximum day water demands for Wrentham (206 m³/day).

The overall condition of the regional transmission pumping system is good. Centrifugal pumps have an approximated life expectancy of 20-25 years. Based on the construction date (2018), these pumps should have at least 15 years left before replacement should be considered, assuming routine maintenance and repairs are being performed.

4.4 HAMLET OF WRENTHAM

The Village of Warner currently obtains potable water from the regional pipeline network from the Town of Raymond. Potable water from the Town fills a treated water storage reservoir in Wrentham. Distribution pumps provide flow and pressure to the Village's distribution system. Fire flows are provided by the local storage and booster pumping system in New Dayton.

The previously mentioned Wrentham Regional Water project (2016) added a regional pipeline from New Dayton to Wrentham, a new booster pumping system in New Dayton, and new distribution pumps in Wrentham.

4.4.1 Distribution Pumping

The Wrentham distribution pumping system was upgraded in 2018 and consists of one 0.5 hp submersible turbine duty pump rated at 0.59 L/s, one 3 hp submersible turbine duty pump rated at 2.84 L/s, and one 15 hp submersible turbine duty pump rated at 16.66 L/s. The combined max pump capacity is therefore 20.09 L/s (1736 m³/day). The current firm capacity is sufficient to meet projected (2048) maximum day water demands for Wrentham (206 m³/day).

The overall condition of the regional transmission pumping system is good. Submersible turbine pumps have an approximated life expectancy of 20-25 years. Based on the construction date (2018), these pumps should have at least 15 years left before replacement should be considered, assuming routine maintenance and repairs are being performed.

4.5 VILLAGE OF WARNER

The Village of Warner currently obtains potable water from the regional pipeline network from the Town of Raymond. Potable water from the Town fills a treated water storage reservoir in Warner. Distribution pumps provide flow and pressure to the Village's distribution system. Fire flows are also provided by local storage and pumping within the Village.

4.5.1 Distribution Pumping

The Warner distribution pumping system consists of three 10 hp centrifugal duty pumps rated at 10 L/s. The combined max pump capacity is therefore 30 L/s (2,592 m³/day). The current firm capacity is sufficient to meet projected (2048) maximum day water demands for the Warner (1,064 m³/day).

The overall condition of the regional transmission pumping system is fair. Operations Staff commented that the distribution pumps have had trouble keeping up with peak demands at times. Centrifugal pumps have an approximated life expectancy of 20-25 years. The installation date on two of these pumps is unknown, as they were the used for distribution pumping in the Warner Water Treatment Plant prior to being re-purposed into a pump station. Operations staff commented that one of the pumps was replaced approximately 3 years ago. During the Warner Regional Water Supply Project (2012), the WTP distribution pumps were not replaced. It is recommended that the two older pumps be considered for replacement based on age, general condition, and capability to meet future demands.

4.6 TOWN OF MILK RIVER

The Town of Milk River currently operates a slow sand filter water treatment system to meet its potable water needs. The original infiltration gallery, raw water pump station, raw water line, and slow sand filters were constructed in 1975 and have undergone various upgrades over the past 50 years. The Milk River WTP currently conveys potable water to the Village of Coutts via a regional pipeline.

MPE a division of Englobe has completed several projects with the Town of Milk River, related to the Water Treatment Plant over the past several years including Coutts Regional Water Supply Project (2013-2014), Town of Milk River Raw Water Storage Reservoir (2018), and Town of Milk Booster Station Upgrade (2019).

4.6.1 Raw Water Infiltration Gallery

The Town of Milk River receives its water supply from the Milk River through an infiltration gallery across the riverbed that feeds into a concrete-covered corrugated steel pipe reservoir located beneath the raw water pump station on the riverbank. The original infiltration gallery originally consisted of three, perforated 450 mm corrugated steel culverts which fed water into the reservoir through 250 mm steel intake pipelines. The most recent upgrade in 2005 replaced these with seven 300 mm PVC pipelines. The current intake piping is about 20 years old, which is well within the expected 50–80-year lifetime of PVC.

The Town's operations staff completes a full backwash cycle of the infiltration gallery piping every 3 weeks, which takes approximately 8 hours. This procedure requires closing all the buried gate valves along the riverbank, except for the valve connected to the line being backwashed. Operations staff have reported that at least one of these gate valves is non-operational. For the duration of the backwash cycle the raw water reservoir cannot receive any raw water from the infiltration gallery.

4.6.2 Raw Water Pump Station

Raw water from the infiltration gallery is carried to the reservoir underneath the nearby raw water pump station. The raw water is then pumped to the Milk River Water Treatment Plant via two 75 hp Peerless vertical turbine pumps. Each pump has a capacity of 47.6 l/s. These pumps were upgraded alongside the infiltration gallery in 2005.

Based on the 25-year MDD of 1,784 m³/day for the Town of Milk River, a projected MDD of 991 m³/day for the Village of Coutts, and a 3,825 m³ MDD for commercial developments around Coutts, the existing raw water pumps and infiltration gallery have sufficient capacity to meet projected municipal and industrial demands.

The reservoir beneath the pumphouse and the internal piping are both in poor condition. The reservoir of the raw water station is composed of concrete-coated corrugated steel, and due to its age, concerns have emerged about potential leakage. Similarly, the internal piping infrastructure at the pump station has rusted through in some areas due to age, and operators have reported patching affected piping.

4.6.3 Raw Water Transmission Line

The raw water transmission line from the pump station to the WTP storage reservoir is 200 mm diameter asbestos cement and is approaching 50 years in age. The expected lifespan of an asbestos cement pipe is 50 to 70 years, depending on the quality of water being transmitted. It is recommended that this pipeline be considered for replacement based on age and general condition.

4.6.4 Milk River Water Treatment Plant

The Milk River WTP utilizes three slow sand filtration trains as its main treatment process. The third slow sand filter was added in 2012. Each slow sand filter has an approximate area of 2,100 m² and has been designed for a loading rate of 0.10 m³/m²/hr. The firm operating capacity of each filter is 2,160 m³/day. Therefore, with one filter out of service, the maximum treatment capacity is equal to 4,320 m³/day. The current firm capacity is sufficient to meet the combined projected (2048) maximum day water demands for Milk River and Coutts (2,775 m³/day).

4.6.5 Distribution Pumping

Milk River's distribution system consists of two pressure zones. The first is a gravity fed system that serves the lower elevations of the Town. The gravity zone consists of approximately 80% of the distribution system and includes the downtown core, both schools, the hospital, and industrial and residential areas of the Town. The other pressure zone is supplied by a booster station. The booster station provides increased pressure to residential and industrial areas located in the higher elevations of the Town. A separate regional booster station provides potable water to the Village of Coutts through a regional transmission pipeline.

The booster station pumping system was upgraded in 2019 and consists of two 7.5 hp centrifugal duty pumps rated at 13.5 L/s and one 25 hp centrifugal duty pump rated at 50 L/s. The combined max pump capacity is therefore 77 L/s (6,653 m³/day).

The overall condition of the distribution pumping system is good. Centrifugal pumps have an approximated life expectancy of 20-25 years. Based on the construction date (2019), these pumps should have at least 16 years left before replacement should be considered, assuming routine maintenance and repairs are being performed.

4.6.6 Regional Transmission Pumping

The Milk River regional pumping system was constructed in 2013 and consists of two 15 hp centrifugal duty pumps rated at 13.3 L/s. The combined max pump capacity is therefore 26.6 L/s (2,298 m³/day). The current firm capacity is sufficient to meet Coutt's projected maximum day water demands for 2048 (991 m³/day).

The overall condition of the regional transmission pumping system is good. Centrifugal pumps have an approximated life expectancy of 20-25 years. Based on the construction date (2013), these pumps should have at least 10 years left before replacement should be considered, assuming routine maintenance and repairs are being performed.

4.7 VILLAGE OF COUTTS

The Village of Coutts currently obtains potable water through a pipeline from the Town of Milk River. Potable water from the Town fills a treated water storage reservoir in Coutts. Distribution pumps provide flow and pressure to the Village's distribution system. Fire flows are also provided by local storage and pumping within the Village.

The previously mentioned Coutts Regional Water Supply Project (2013-2014) added a regional pipeline from Milk River to Coutts, a new booster pumping system in Milk River, and connections to the Milk River and Coutts treated water reservoirs.

4.7.1 Distribution Pumping

Distribution pumping consists of three 20 hp vertical turbine pumps rated at 30 L/s. The existing generator-powered 100 hp vertical turbine fire pump is still in place but is out of service. The combined max pump capacity is therefore 90 L/s (7,776 m³/day). The current firm capacity is sufficient to meet projected maximum day water demands for 2048 (991 m³/day).

The overall condition of the distribution pumping system is good. Vertical turbine pumps have an approximated life expectancy of 20-25 years. Operations staff commented that these pumps were replaced in 2016. These pumps should have at least 13 years left before replacement should be considered, assuming routine maintenance and repairs are being performed.

4.8 TREATED WATER STORAGE

According to Alberta Environment's Standards and Guidelines for Municipal Waterworks, Wastewater, and Storm Drainage Systems, treated water storage required for any licensed community where a water treatment plant can only provide the maximum daily design flow is determined by the following empirical relationship:

(A) Fire Protection:	as deemed necessary by the municipality
(B) Equalization Storage:	25% of Maximum Day Demand
(C) Emergency Storage:	15% of Average Day Demand

Total Treated Water Storage Required = (A) + (B) + (C)

Table 4.1 contains the projected water storage requirements for the involved municipalities.

Table 4.1: Projected Storage Requirements

Location	Current Storage	Future Treated Water Storage Requirements					Additional Storage Required for 25-Year Max Day Demand
	Total Storage Available	Equalization Storage	Emergency Storage	Fire Storage	Total Projected Storage Requirements (excluding fire protection)	Total Projected Storage Requirements (including fire protection)	Surplus
	(m3)						
Town of Milk River	2,250	650	132	1,032	782	1,814	436
Town of Raymond	6,819	2,442	495	1,396	2,937	4,334	2,485
Village of Coutts	520	251	50	658	302	960	-440
Village of Stirling	2,272	818	162	1,140	980	2,120	152
Village of Warner	455	418	54	924	471	1,395	-940
Hamlet of New Dayton	960	33	5	225	39	264	696
Hamlet of Wrentham	232	48	8	744	56	56	176

The level of fire protection is responsibility of the municipality. The fire flow projection is dependent on the area and construction type of the largest building within the area. Using these projected values in the required treated storage calculation gives a total required treated storage for each Municipality. Based on these calculations, fire storage is not sufficient in the Village of Coutts and the Village of Warner.

4.9 REGIONAL TRANSMISSION MAINS

4.9.1 Transmission Main - RWSC WTP to Warner

In 2012, a pipeline was constructed to supply potable water from the municipalities Regional Water Treatment Plant to The Village of Warner and the Hamlets of New Dayton and Wrentham. The expected service life of underground PVC piping is 75-100 years. Based on the construction date, this pipeline's remaining service life is estimated to be at least 64 years.

4.9.2 Transmission Main - Milk River WTP to Coutts

In 2013, a pipeline was constructed to supply potable water from the Milk River Water Treatment Plant to The Village of Coutts. The expected service life of underground PVC piping is 75-100 years. Based on the construction date, this pipeline's remaining service life is estimated to be at least 65 years.

5 CONCEPTUAL DESIGN DEVELOPMENT

5.1 OVERVIEW

The objective of this study centers around meeting the growing potable water needs of all involved municipalities. Limitations within the existing infrastructure impact the growth potential in the involved municipalities making it critical that a long-term solution be developed that satisfies the needs of all municipalities. To that end, two water supply alternatives are discussed in the following sections.

The Technical Committee has expressed interest in the potential for expanded regional growth of industrial and commercial developments along the Highway 4 corridor. A review of required upgrades to facilitate these developments are discussed in Section 5.4.

5.2 ALTERNATIVE 1: MILK RIVER REGIONAL WATER SUPPLY SYSTEM

5.2.1 Overview

Alternative 1 proposes a conceptual design that is based on an expanded regional potable water system to include the provision of potable water to the Town of Milk River and Village of Coutts. This proposed concept would see new infrastructure constructed to extend existing supply sources to the Town of Milk River and existing regional supply line between the Town of Milk River and the Village of Coutts. Proposed new infrastructure to connect the Town of Milk River would be sized appropriately to include capacity for current and projected growth within the Village of Coutts and existing supply infrastructure between Milk River and Coutts.

The Milk River Regional Water Supply System concept includes an expansion to the RWSC WTP in Raymond, a new potable water transmission pipeline from Warner to Milk River, a new regional booster pump station in Warner, and local upgrades to meet pumping and treated water storage capacities.

Figure 5.1 provides a conceptual flow diagram of the proposed Milk River Regional Water Supply System.

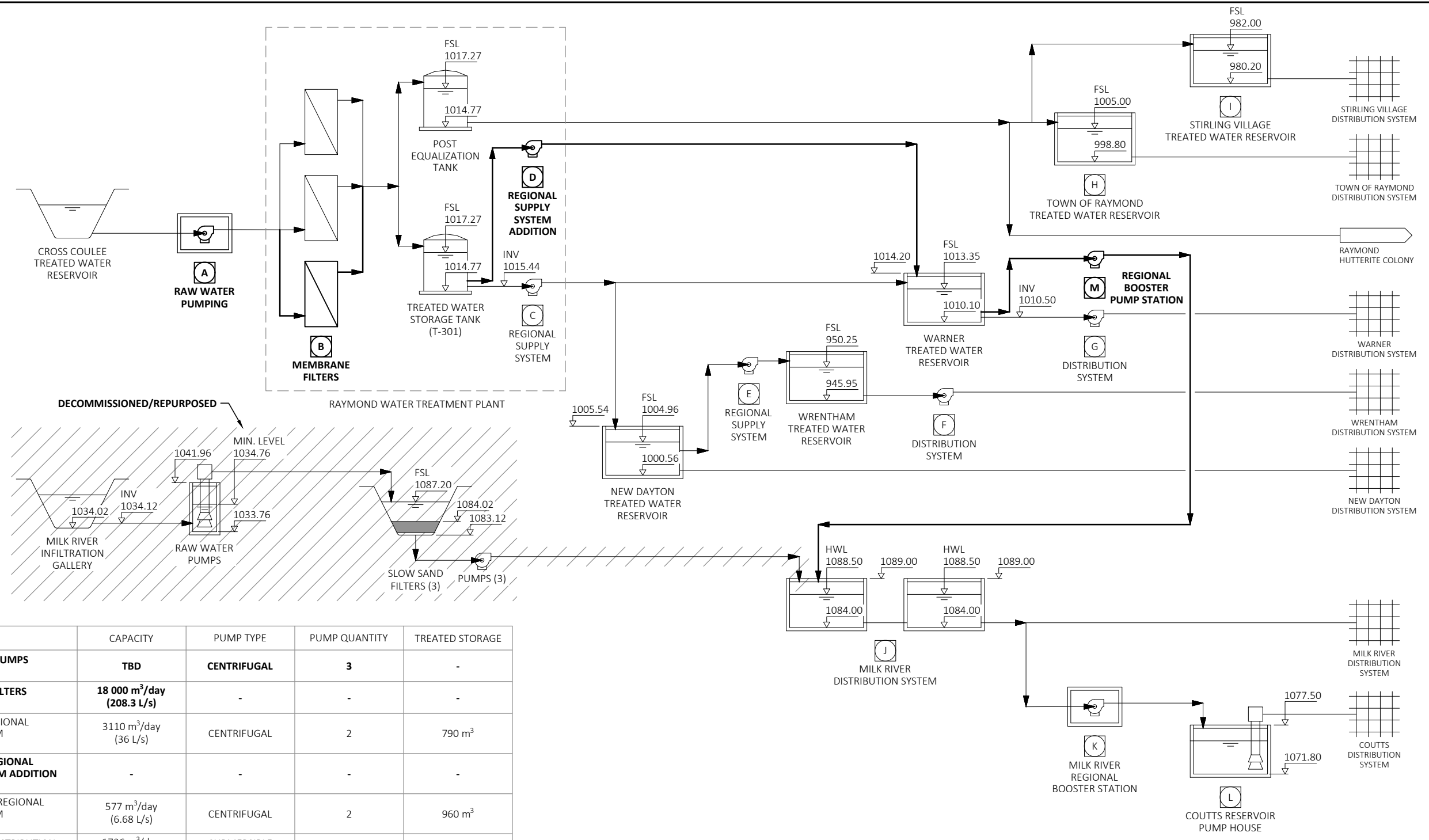
5.2.2 Regional Transmission Pipeline

An expanded regional transmission system is proposed to include the provision of potable water to the Town of Milk River and Village of Coutts. The regional transmission network is designed to supply Max Day Demand to all regional customers.

The proposed regional transmission system includes:

- Twinning of the existing regional transmission pipeline between the RWSC WTP and Warner
- New transmission pipeline from Warner to Milk River
- RWSC WTP, Warner, and Milk River connections

Figure 5.2 provides a conceptual alignment of the proposed regional transmission system addition. Figures 5.3 and 5.4 provide conceptual site plans detailing tie-ins to the existing RSWC WTP and Milk River WTP, respectively.



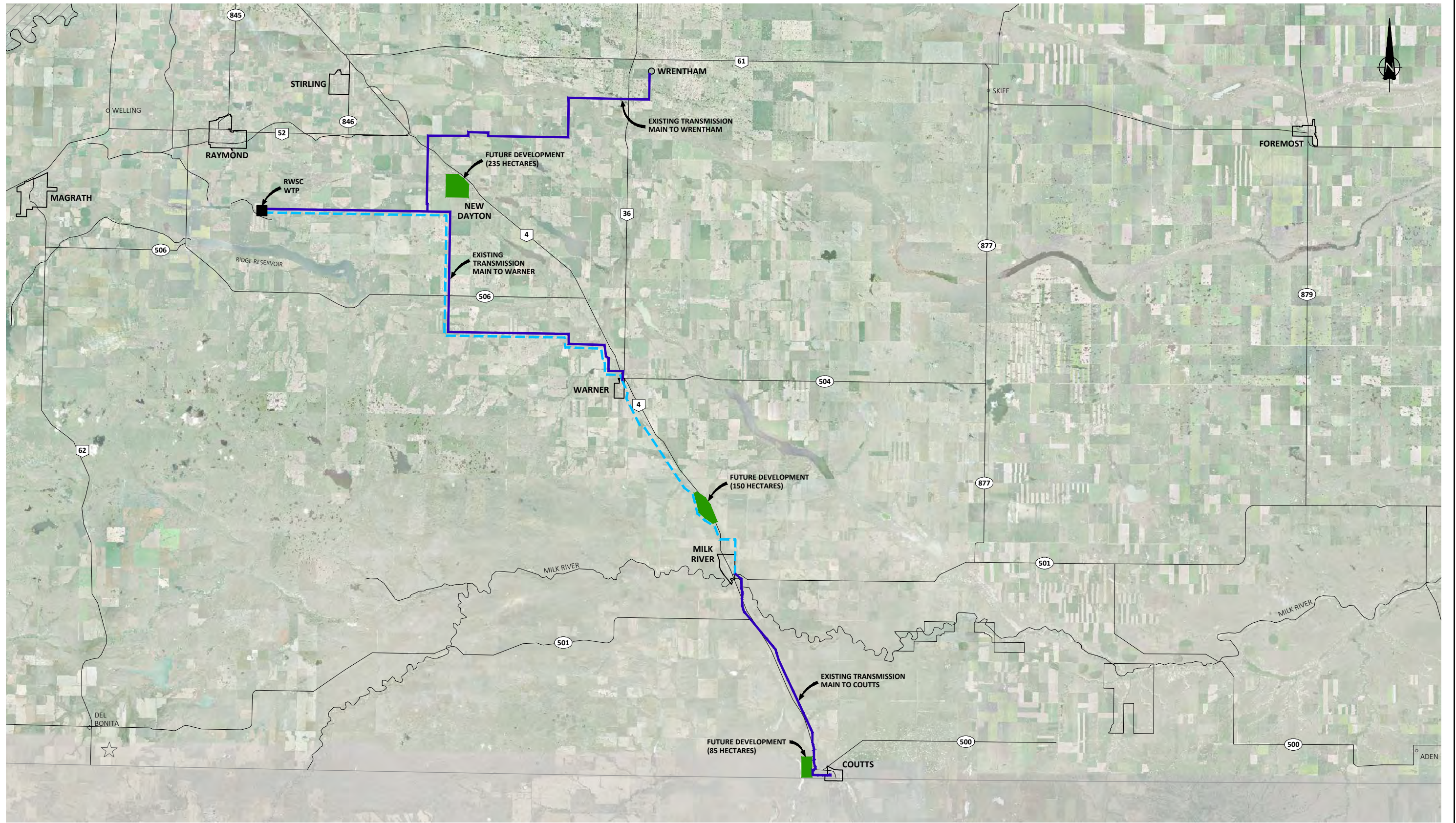
EQUIPMENT	DESCRIPTION	CAPACITY	PUMP TYPE	PUMP QUANTITY	TREATED STORAGE
A	RAW WATER PUMPS ULTIMATE	TBD	CENTRIFUGAL	3	-
B	MEMBRANE FILTERS ULTIMATE	18 000 m³/day (208.3 L/s)	-	-	-
C	RAYMOND REGIONAL SUPPLY SYSTEM ULTIMATE	3110 m ³ /day (36 L/s)	CENTRIFUGAL	2	790 m ³
D	RAYMOND REGIONAL SUPPLY SYSTEM ADDITION ULTIMATE	-	-	-	-
E	NEW DAYTON REGIONAL SUPPLY SYSTEM ULTIMATE	577 m ³ /day (6.68 L/s)	CENTRIFUGAL	2	960 m ³
F	WRENTHAM DISTRIBUTION ULTIMATE	1736 m ³ /day (20.09 L/s)	SUBMERSIBLE TURBINE	3	232 m ³
G	WARNER DISTRIBUTION ULTIMATE	2592 m ³ /day (30 L/s)	CENTRIFUGAL	3	455 m ³
H	TOWN OF RAYMOND TREATED WATER RESERVOIR	-	-	-	6819 m ³
I	STIRLING VILLAGE TREATED WATER RESERVOIR	-	-	-	2272 m ³
J	MILK RIVER DISTRIBUTION ULTIMATE	6653 m ³ /day (77 L/s)	-	-	2250 m ³
K	MILK RIVER REGIONAL SUPPLY SYSTEM ULTIMATE	2298 m ³ /day (26.6 L/s)	CENTRIFUGAL	2	-
L	COUTTS DISTRIBUTION ULTIMATE	7776 m ³ /day (90 L/s)	VERTICAL TURBINE	3	520 m ³
M	WARNER REGIONAL SUPPLY SYSTEM ULTIMATE	TBD	-	-	-



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TOWN OF MILK RIVER
REGIONAL WATER SUPPLY STUDY
MILK RIVER REGIONAL WATER SUPPLY SYSTEM
PROPOSED FLOW DIAGRAM

SCALE:	DATE: NOVEMBER 2023	JOB: 1440-058-00	FIGURE: 5.1
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LEGEND

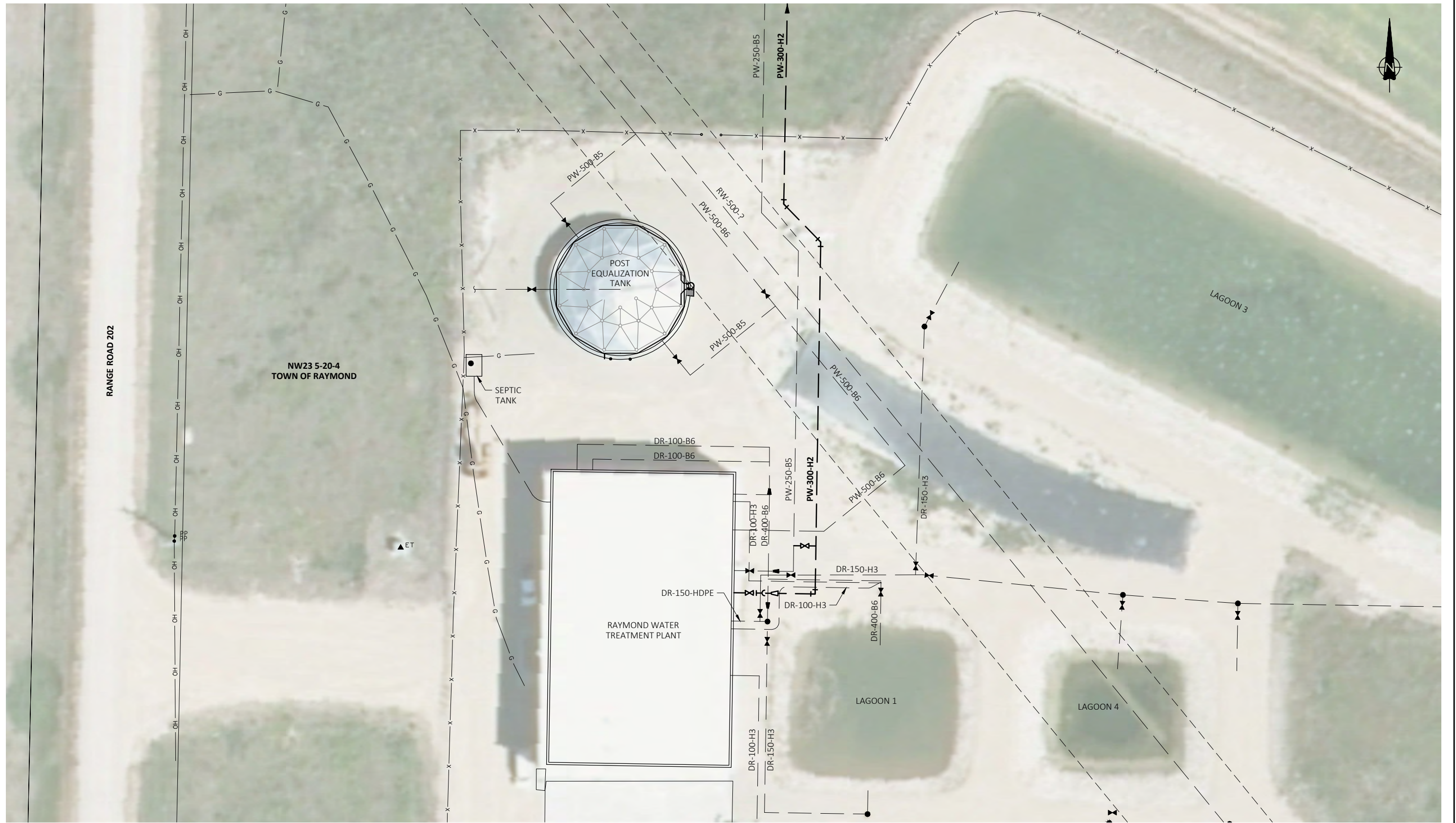
- FUTURE DEVELOPMENT
- EXISTING TRANSMISSION MAIN
- NEW TRANSMISSION MAIN



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TOWN OF MILK RIVER
REGIONAL WATER SUPPLY STUDY
PROPOSED TRANSMISSION MAIN

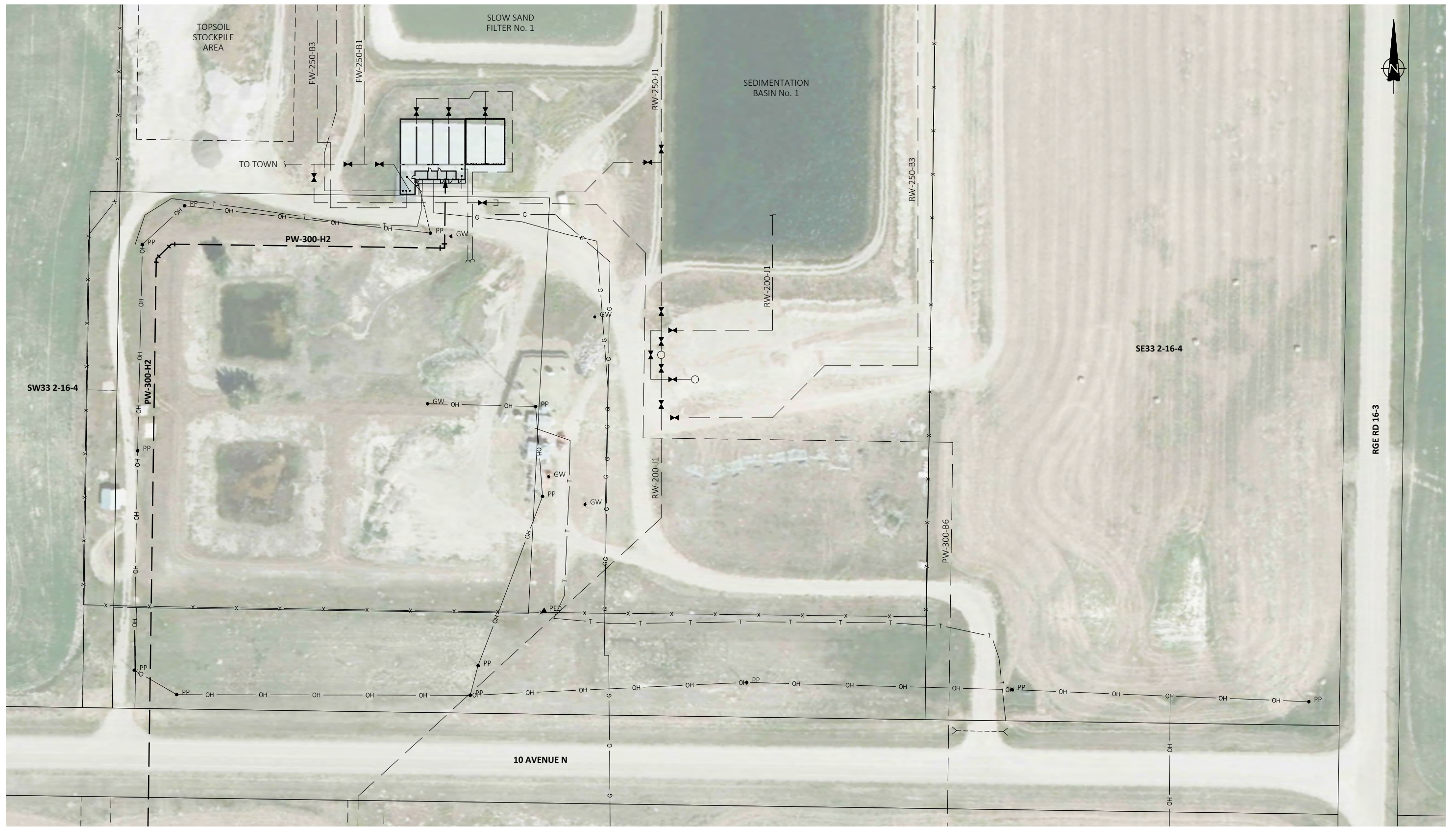
SCALE: 1:300 000	DATE: NOVEMBER 2023	JOB: 1440-058-00	FIGURE: 5.2
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TOWN OF MILK RIVER
REGIONAL WATER SUPPLY STUDY
RWSC WATER TREATMENT PLANT
SITE PLAN

SCALE: 1:500	DATE: SEPTEMBER 2023	JOB: 1440-058-00	FIGURE: 5.3
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TOWN OF MILK RIVER
REGIONAL WATER SUPPLY STUDY
MILK RIVER WATER TREATMENT PLANT
SITE PLAN

SCALE: 1:1250	DATE: SEPTEMBER 2023	JOB: 1440-058-00	FIGURE: 5.4
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5.2.3 RWSC Water Treatment Plant Upgrades

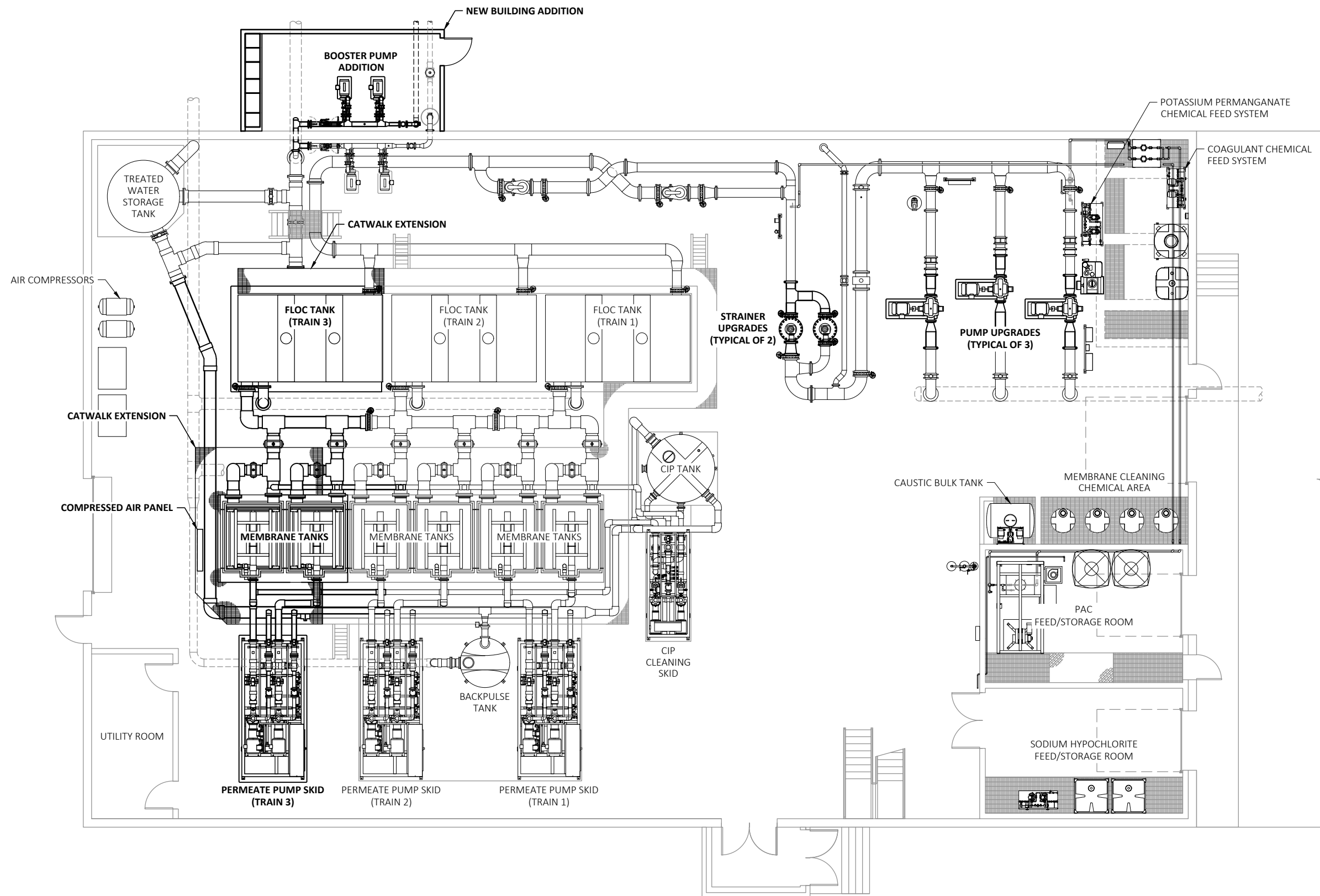
An expansion to the RWSC WTP would be required in order to have the capacity to meet projected maximum day demands for the proposed regional transmission system. The RWSC WTP has space for an additional membrane filtration skid to be added within the existing WTP footprint, allowing for an increase of up to 18 MLD of ultimate capacity at the plant. This would be sufficient to meet the projected potable water needs of the proposed regional transmission system. Capacity upgrades would be required all the way back to the raw water supply within the plant and further analysis within the Preliminary Design Phase should seek to better understand possible hydraulic capacity limitations of the upstream infrastructure.

A relatively small building expansion would be required for the new regional transmission pumping system.

Proposed upgrades to the RWSC WTP include:

- WTP Process Expansion
 - Low Lift Pump Upgrades
 - Strainer Addition
 - Flocculation Addition
 - Membrane Filtration Addition
 - Compressed Air System Modifications
 - Chemical Feed System Adjustments
 - Piping and Instrumentation
 - Miscellaneous Electrical
 - Catwalk Structural Extensions
- Regional Transmission Pumping Addition
 - Building Addition (complete with lighting, HVAC, etc.)
 - Transmission Pumps (complete with Variable Frequency Drives)
 - Piping and Instrumentation
 - Miscellaneous Electrical
- Electrical Upgrades
 - Upgrade Back-up Power Generator
 - Upgrade Electrical Service
 - Control Panel Addition
 - Programming and Commissioning
- Site Work

Figure 5.5 provides a building layout of the RWSC WTP, detailing the WTP process expansion within the existing building and the building addition for the regional transmission pumping system.



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TOWN OF MILK RIVER
REGIONAL WATER SUPPLY STUDY
RWSC WATER TREATMENT PLANT UPGRADE
PROPOSED PLAN

SCALE: 1:150	DATE: NOVEMBER 2023	JOB: 1440-058-00	FIGURE: 5.5
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5.2.4 Warner Regional Booster Pump Station

In order to supply potable water flows to the proposed regional customers (Milk River and Coutts), additional pressure boosting is required. For the purposes of this concept development, we have assumed a stand-alone regional booster station, similar to the station that services the Village of Coutts in Milk River. There is possible cost savings to the project if existing building footprint in the Warner Water Treatment Plant may be utilized, but ultimately, this will be a decision related to infrastructure ownership, management, and operations.

Figure 5.6 provides a conceptual site plan of the proposed Warner Regional Booster Pump Station and tie-ins to the existing Warner Water Treatment Plant.

The proposed Warner Regional Booster Pump Station would include:

- New Building (complete with lighting, HVAC, etc.)
- Transmission Pumps (complete with Variable Frequency Drives)
- Chlorine Boosting System
- Piping, Valves, and Instrumentation
- Back-up Power Generator (exterior, complete with rated enclosure)
- Site Work (complete with underground piping)

5.2.5 Local Upgrades

Based on a review of general capacity, condition assessments, and discussions with Operations Staff, proposed upgrades to existing infrastructure are summarised in the following sections.

5.2.5.1 WARNER WATER TREATMENT PLANT

Proposed upgrades to the existing Warner Water Treatment Plant include:

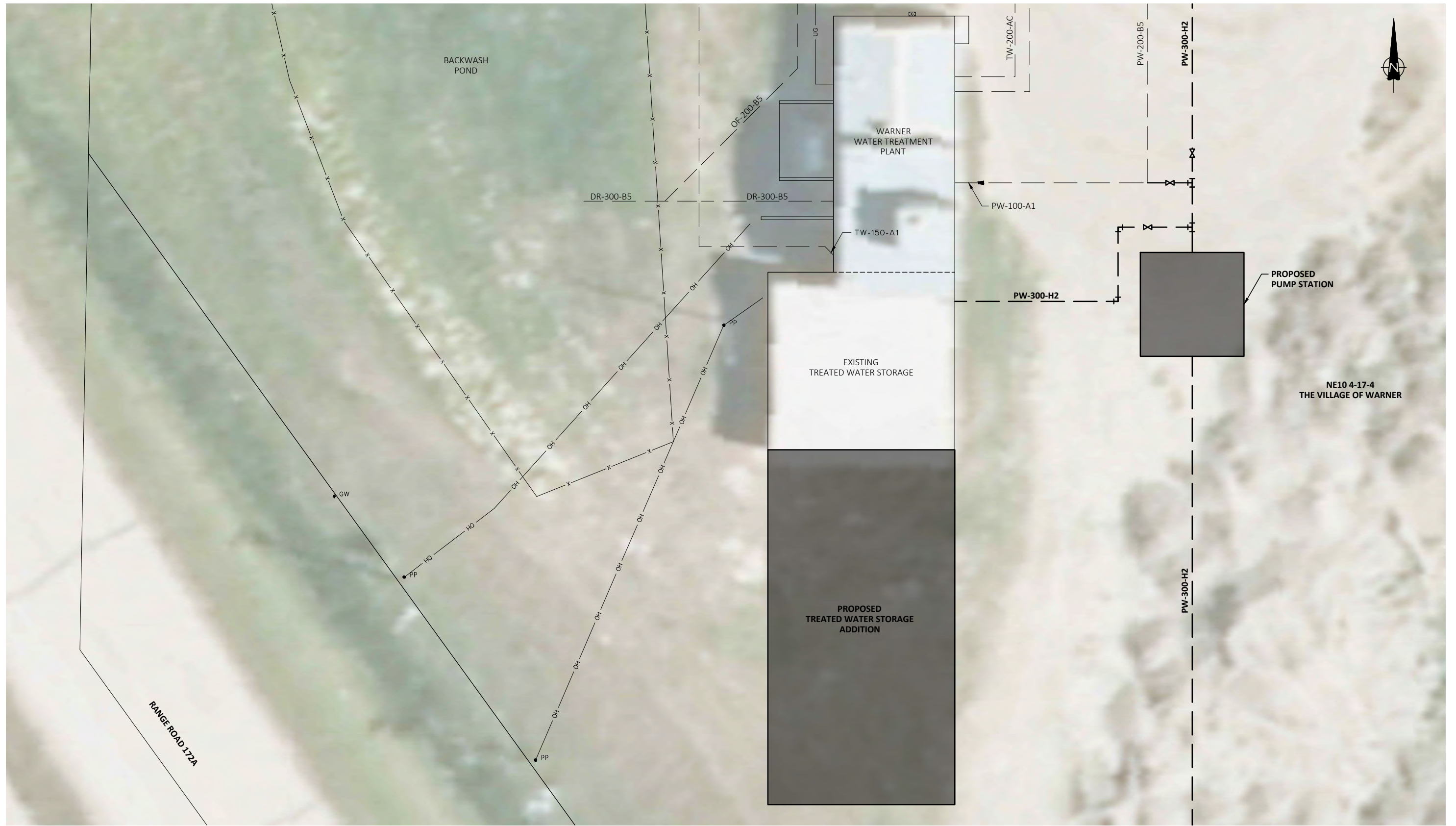
- Treated Water Reservoir Expansion
- Piping, Valves, and Instrumentation
- Site Work (complete with underground piping)

5.2.5.2 COUTTS RESERVOIR PUMP HOUSE

Upgrades to the existing Coutts Reservoir Pump House include:

- Treated Water Reservoir Expansion
- Bulk Fill System Addition
- Piping, Valves, and Instrumentation
- Site Work (complete with underground piping)

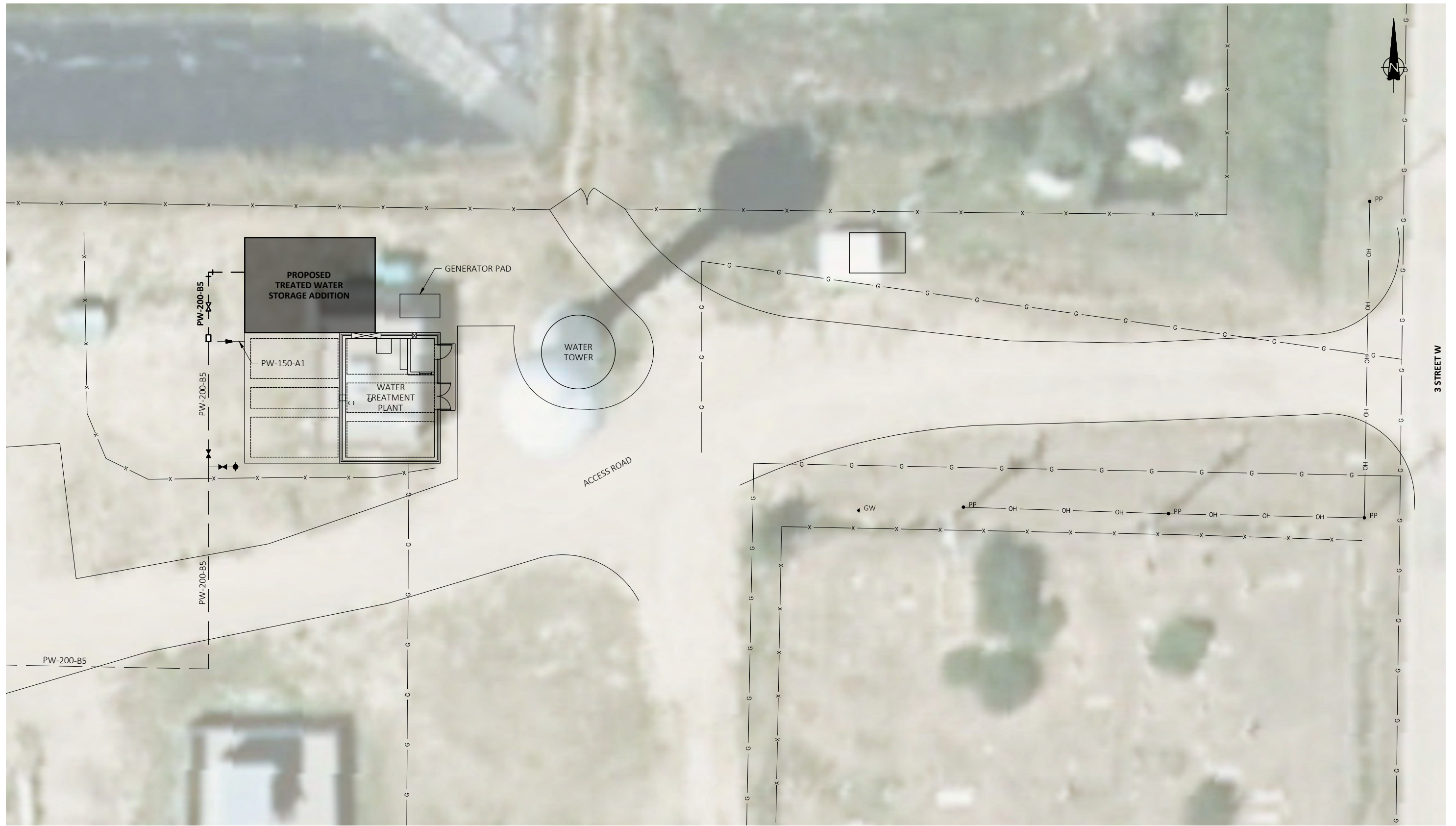
Figure 5.7 provides a conceptual site plan with tie-ins to the existing Coutts Reservoir Pump House.



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TOWN OF MILK RIVER
 REGIONAL WATER SUPPLY STUDY
 WARNER PUMP STATION
 SITE PLAN

SCALE: 1:250	DATE: SEPTEMBER 2023	JOB: 1440-058-00	FIGURE: 5.6
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TOWN OF MILK RIVER
 REGIONAL WATER SUPPLY STUDY
 COUTTS RESERVOIR PUMP HOUSE
 SITE PLAN

SCALE: 1:250

DATE: SEPTEMBER 2023

JOB: 1440-058-00

FIGURE: 5.7

5.2.6 Project Implementation

With a project of this scope, it is likely that at least two project phases will be required. Phasing the project will help to lessen the impact of financing such a large project. That said, the initial project phase would be the most significant and would require expansion of the RWSC WTP in Raymond, construction of the new potable water transmission pipeline from Warner to Milk River, and construction of the new regional booster pump station in Warner.

Local upgrades to pumping and treated water storage capacities can be completed in a later phase of the project. This is also related to funding as the Water for Life funding for regional projects would be limited to upgrades required at the RWSC plant to service the region and regional transmission upgrades required to convey water. Local upgrades would not be eligible under this grant.

5.2.7 Impact of Potential Industrial/Commercial Development

During this study, the Technical Committee has been reviewing the potential for major industrial and commercial developments along the Highway 4 corridor and the subsequent need to supply those potential developments with potable water. The water demand for the potential developments is estimated to be 21 MLD. The proposed development areas have been identified on Figure 5.2. Of note, this estimate demand is based on an assumed demand factor ($\text{m}^3/\text{day}/\text{ha}$). It is possible that this demand factor could be lessened based on the types of industrial and or commercial development that is considered in this concept development phase.

To provide sufficient potable water to support industrial/commercial growth, major upgrades to the RWSC WTP and regional transmission system capacities will be required. A review of the required upgrades to support these potential developments are summarized in the sections below.

5.2.7.1 RWSC WATER TREATMENT PLANT UPGRADES

As discussed in Section 5.2.3, the RWSC WTP has space for an additional membrane filtration skid to be added within the existing WTP footprint, allowing for an increase of up to 18 MLD of ultimate capacity at the plant. Based on the industrial and commercial water demand projections discussed in Section 2.2.2, the RWSC WTP would need to effectively double the full build-out capacity of the plant, to a total of 36 MLD, to facilitate these potential industrial/commercial developments.

A new water treatment plant matching the full build-out capacity of the existing RWSC WTP would be required meet the potable water demands for future industrial/commercial developments. In addition to a new WTP, capacity increases would be required for the RWSC WTP raw water pumping system to facilitate new potable water demands.

5.2.7.2 REGIONAL TRANSMISSION SYSTEM

The proposed regional transmission system, as discussed in Section 5.2.2, would require a capacity increase to facilitate future industrial/commercial developments. As the water demand projections would increase from 18 MLD to 36 MLD, this would require the pipeline size and regional transmission pumping system capacities to double as a result.

5.3 ALTERNATIVE 2: MILK RIVER WATER TREATMENT PLANT AND RAW WATER SYSTEM UPGRADES

5.3.1 Overview

Alternative 2 proposes upgrades to the existing raw and potable water infrastructure to provide more reliability and to meet the potable water supply needs of Milk River and Coutts.

This alternative includes replacement of the Milk River Raw Water Pump Station, a new raw water transmission pipeline from the Milk River Raw Water Pump Station to the Milk River Water Treatment Plant, replacement of the Milk River Water Treatment Plant, and local upgrades at Warner and Coutts to meet pumping and treated water storage capacities.

Figure 5.8 provides a conceptual flow diagram of the upgrades proposed in Alternative 2.

5.3.2 Milk River Raw Water Pump Station Replacement

A new Milk River Raw Water Pump Station is proposed to provide more reliability to Milk River's raw water supply system. The pump station design will provide the Town's operation staff with more reliable backflush systems to clean the river intake lines, using compressed air or raw water. The proposed design will allow for backflushing of lines individually, while maintaining raw water flow into the reservoir.

Figure 5.9 provides a conceptual site plan of the proposed Milk River Raw Water Pump Station. Figure 5.10 provides a conceptual building floor plan for the proposed Milk River Raw Water Pump Station.

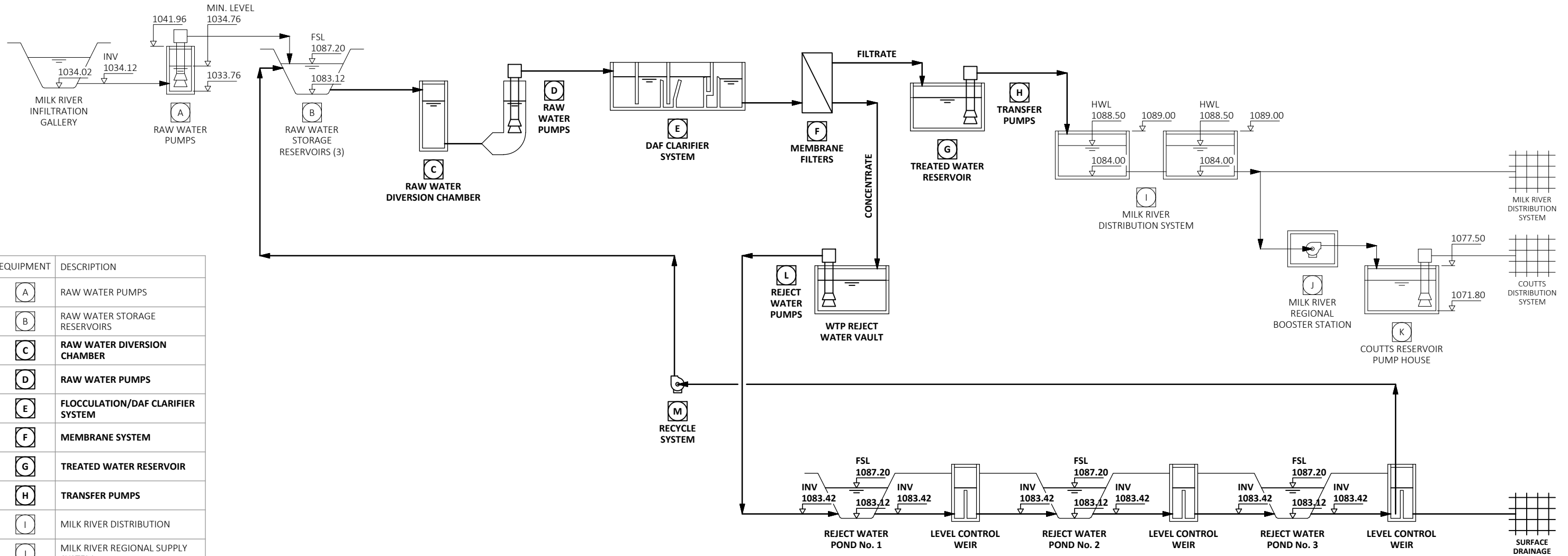
The proposed Milk River Raw Water Pump Station would include:

- New Building (complete with lighting, HVAC, etc.)
- Transmission Pumps (complete with Variable Frequency Drives)
- Compressed Air Backflush System
- Piping, Valves, and Instrumentation
- Back-up Power Generator (exterior, complete with rated enclosure)
- Site Work (complete with underground piping)

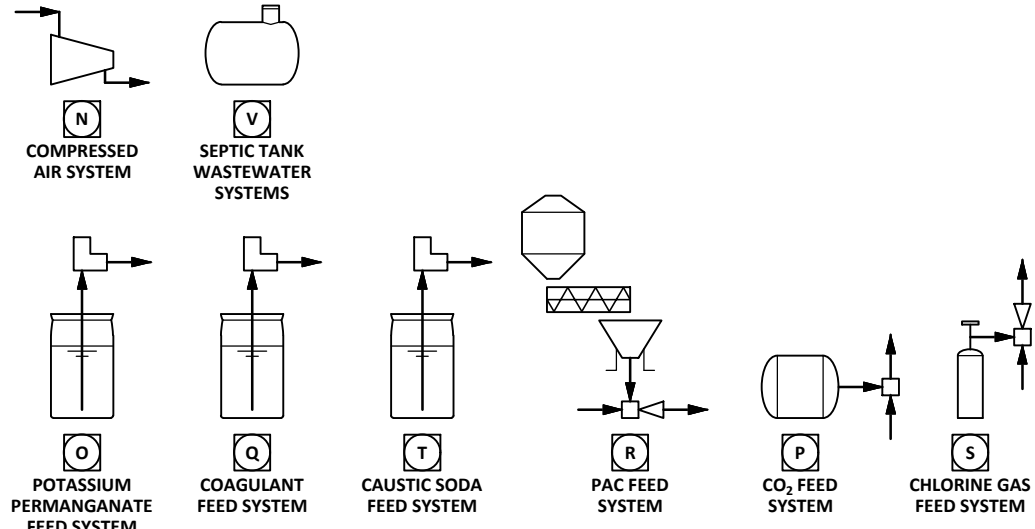
5.3.3 Raw Water Transmission Pipeline Replacement


A new raw water transmission system is proposed to replace the 50-year-old existing asbestos cement pipeline. The proposed raw water transmission pipeline is designed to provide sufficient raw water to meet Max Day Demand for Milk River and Coutts.

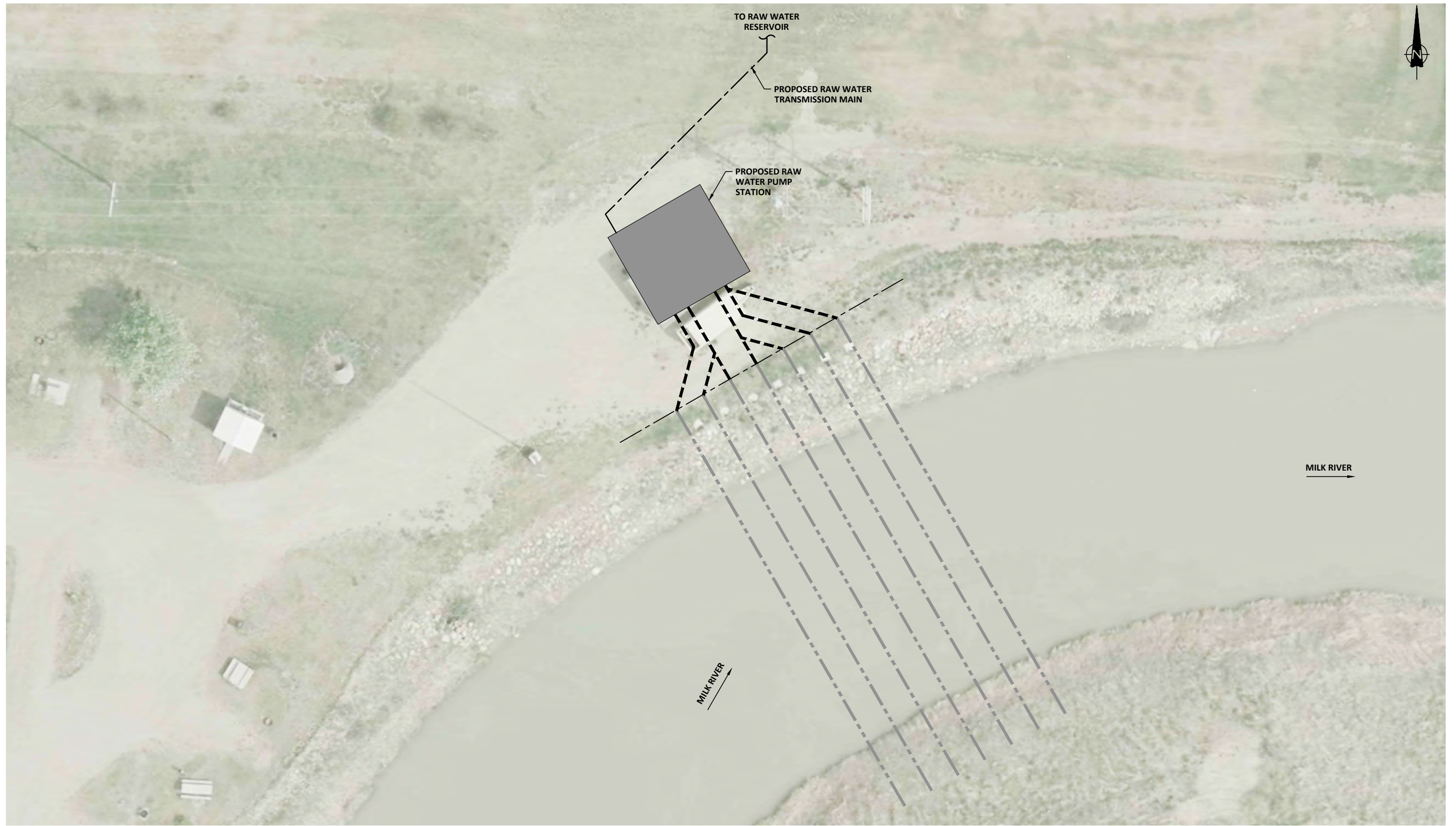
Figure 5.11 provides a conceptual alignment of the proposed raw water transmission system.



EQUIPMENT	DESCRIPTION
(A)	RAW WATER PUMPS
(B)	RAW WATER STORAGE RESERVOIRS
(C)	RAW WATER DIVERSION CHAMBER
(D)	RAW WATER PUMPS
(E)	FLOCCULATION/DAF CLARIFIER SYSTEM
(F)	MEMBRANE SYSTEM
(G)	TREATED WATER RESERVOIR
(H)	TRANSFER PUMPS
(I)	MILK RIVER DISTRIBUTION
(J)	MILK RIVER REGIONAL SUPPLY SYSTEM
(K)	COUTTS DISTRIBUTION
(L)	REJECT WATER PUMPS
(M)	RECYCLE SYSTEM
(N)	COMPRESSED AIR SYSTEM
(O)	POTASSIUM PERMANGANATE FEED SYSTEM
(P)	CO ₂ FEED SYSTEM
(Q)	COAGULANT FEED SYSTEM
(R)	PAC FEED SYSTEM
(S)	CHLORINE GAS FEED SYSTEM
(T)	CAUSTIC SODA FEED SYSTEM
(U)	WTP RESIDUAL WATER TREATMENT SYSTEM
(V)	SEPTIC TANK



 a division of Englobe		TOWN OF MILK RIVER REGIONAL WATER SUPPLY STUDY MILK RIVER WATER TREATMENT PLANT UPGRADES PROPOSED FLOW DIAGRAM	
SCALE:	DATE: NOVEMBER 2023	JOB: 1440-058-00	FIGURE: 5.8



LEGEND

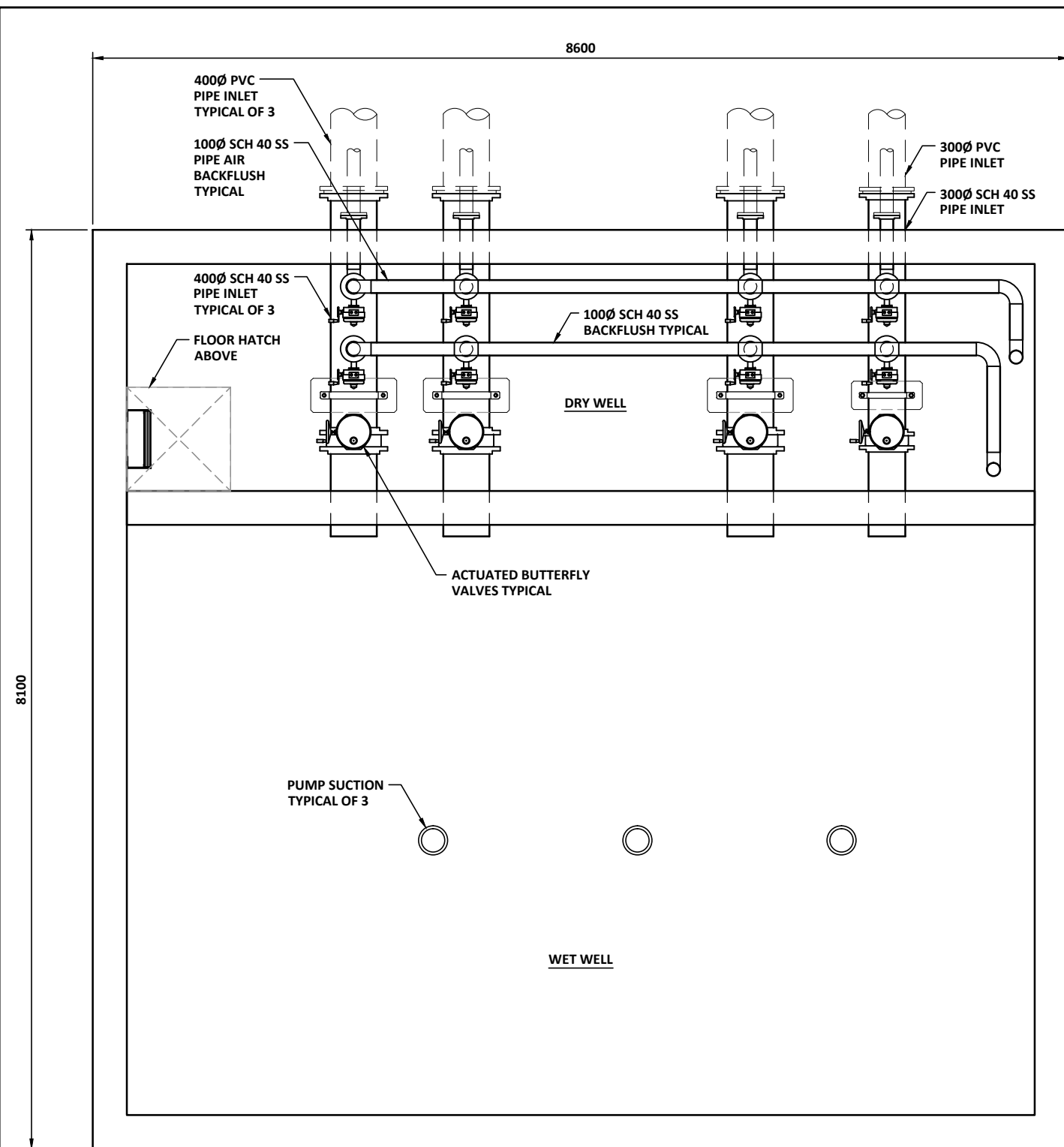
———	NEW HDPE PIPE
- - - -	EXISTING PVC PIPE
————	NEW SS PIPE



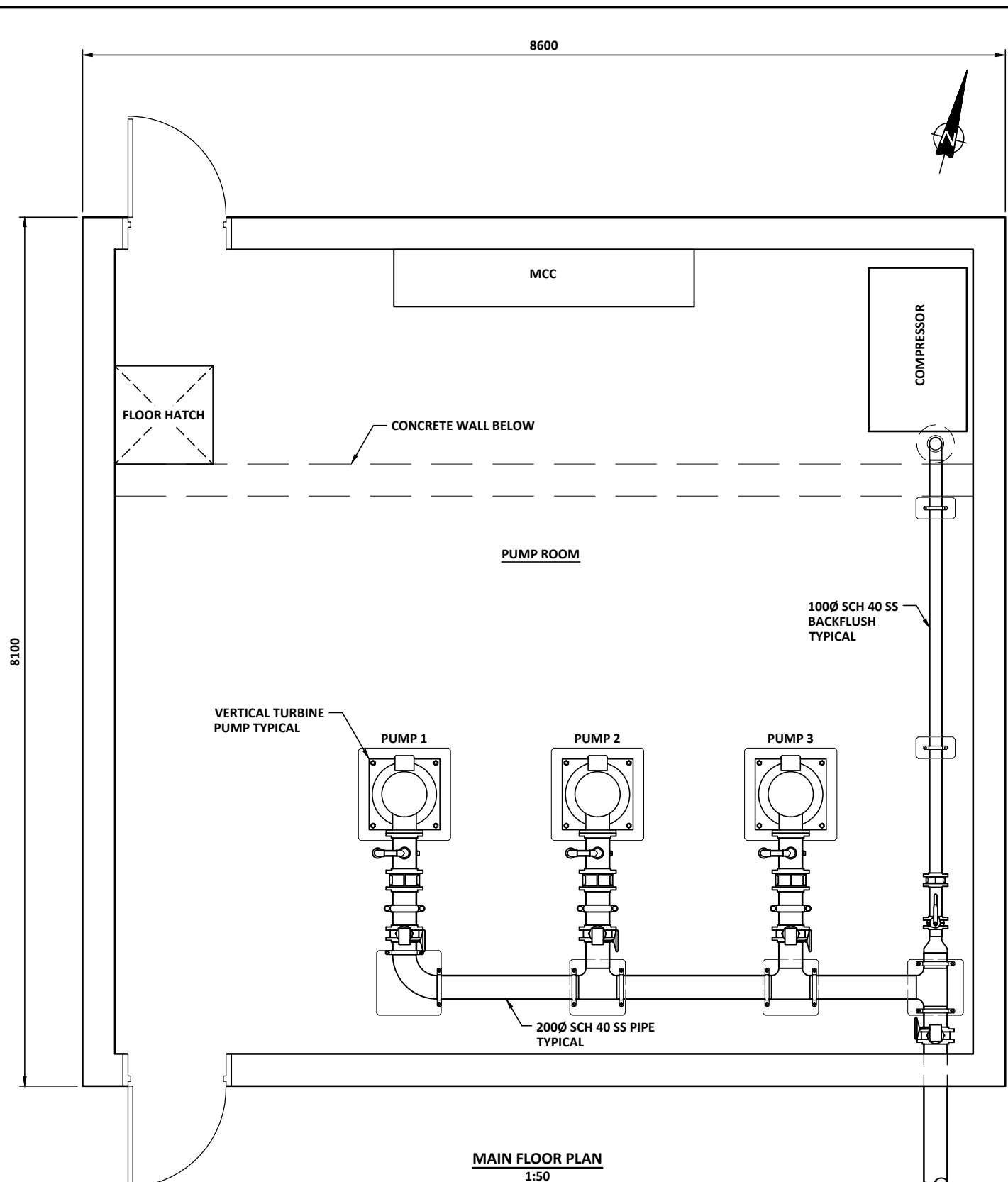
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TOWN OF MILK RIVER
REGIONAL WATER SUPPLY STUDY
PROPOSED RAW WATER TRANSFER STATION
SITE PLAN

SCALE: 1:300	DATE: MAY 2024	JOB: 1440-058-00	FIGURE: 5.9
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WET WELL PLAN
1:50



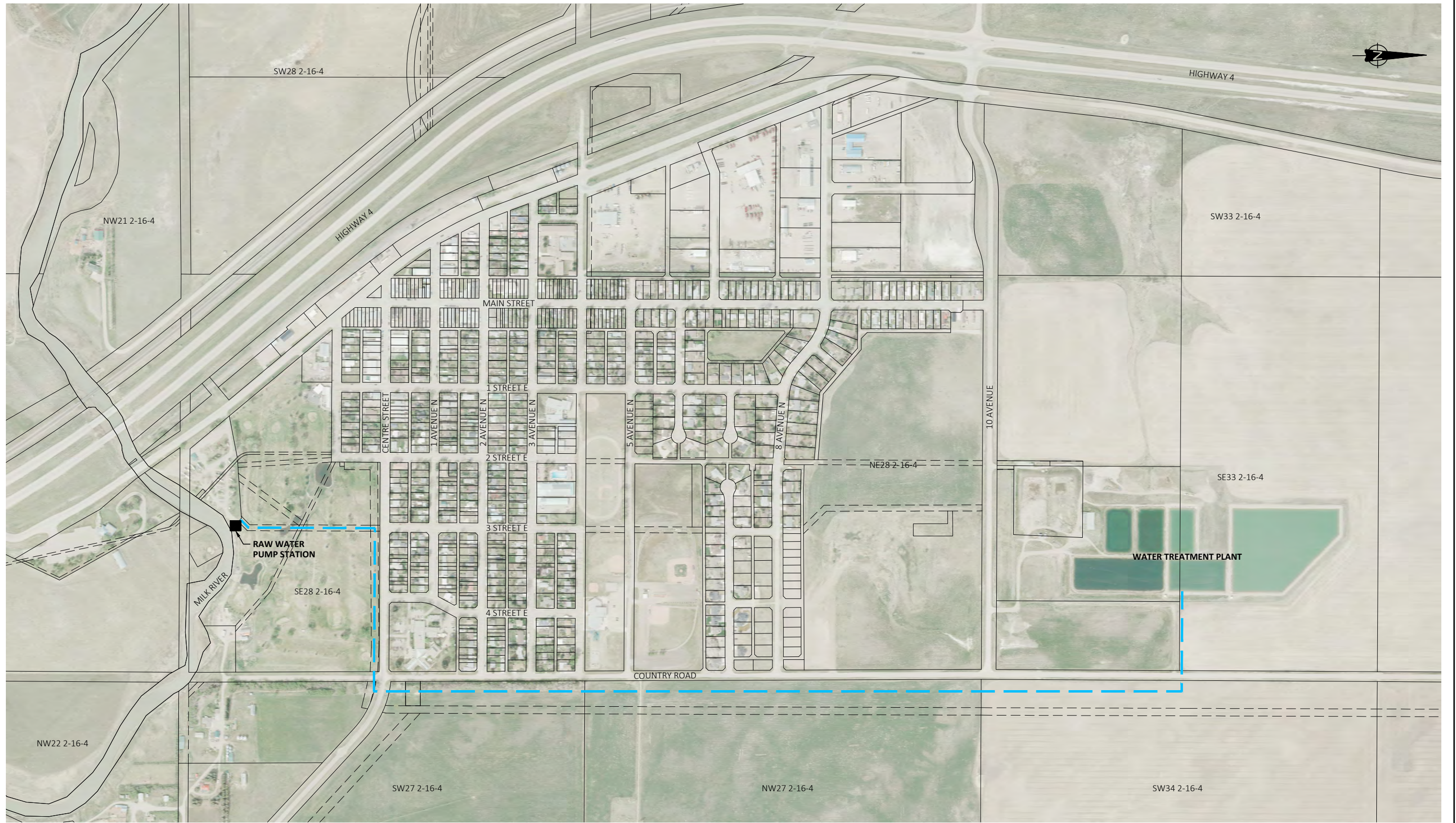
MAIN FLOOR PLAN
1:50



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TOWN OF MILK RIVER
REGIONAL WATER SUPPLY STUDY
RAW WATER TRANSFER STATION
MAIN FLOOR PLAN

SCALE: 1:50	DATE: MAY 2024	JOB: 1440-058-00	FIGURE: 5.10
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LEGEND

 PROPOSED RAW WATER TRANSMISSION MAIN



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TOWN OF MILK RIVER
REGIONAL WATER SUPPLY STUDY
PROPOSED RAW WATER TRANSMISSION MAIN

SCALE: 1:7500	DATE: MAY 2024	JOB: 1440-058-00	FIGURE: 5.11
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5.3.4 Milk River Water Treatment Plant Replacement

The slow sand filtration system at the existing Milk River Water Treatment Plant has the capacity to meet projected maximum day demands of Milk River and Coutts until 2071. A new water treatment plant would be required to accommodate the capacity increase required for new industrial and commercial developments.

For the purposes of this concept development, we have assumed that a microfiltration treatment system similar to those designed by MPE for other municipalities in southern Alberta will be suitable. Both commercial/industrial and projected municipal demands will be accounted for when determining design capacity of the new plant.

Figure 5.12 provides a conceptual site plan of the proposed Milk River Water Treatment Plant. Figure 5.13 provides a conceptual floor plan of the proposed Milk River Water Treatment Plant.

The proposed Milk River Water Treatment Plant would include:

- Water Treatment Plant Building Construction
 - New Building
 - Building Mechanical / HVAC
 - Building Electrical
- Process Mechanical Installation
 - Microfiltration Treatment Equipment
 - Dissolved Air Flootation Clarifier Equipment
 - Compressed Air System
 - Raw Water Transfer Pumps
 - Reject Water Collection System
 - Reject Water Submersible Pumps (complete with VFDs)
 - Pond Aeration System
 - Chemical Feed Systems (Caustic Soda, Chlorine Gas, CO₂, KMnO₄, Powder Activated Carbon)
 - Piping, Valves, and Instrumentation
- Site Work (complete with underground piping)

Capacity upgrades would be required all the way back to the raw water supply within the plant and further analysis within the Preliminary Design Phase should seek to better understand possible hydraulic capacity limitations of the upstream infrastructure.

5.3.5 Local Upgrades

Based on a review of general capacity, condition assessments, and discussions with Operations Staff, proposed upgrades to existing infrastructure are summarised in the following sections.

5.3.5.1 WARNER WATER TREATMENT PLANT

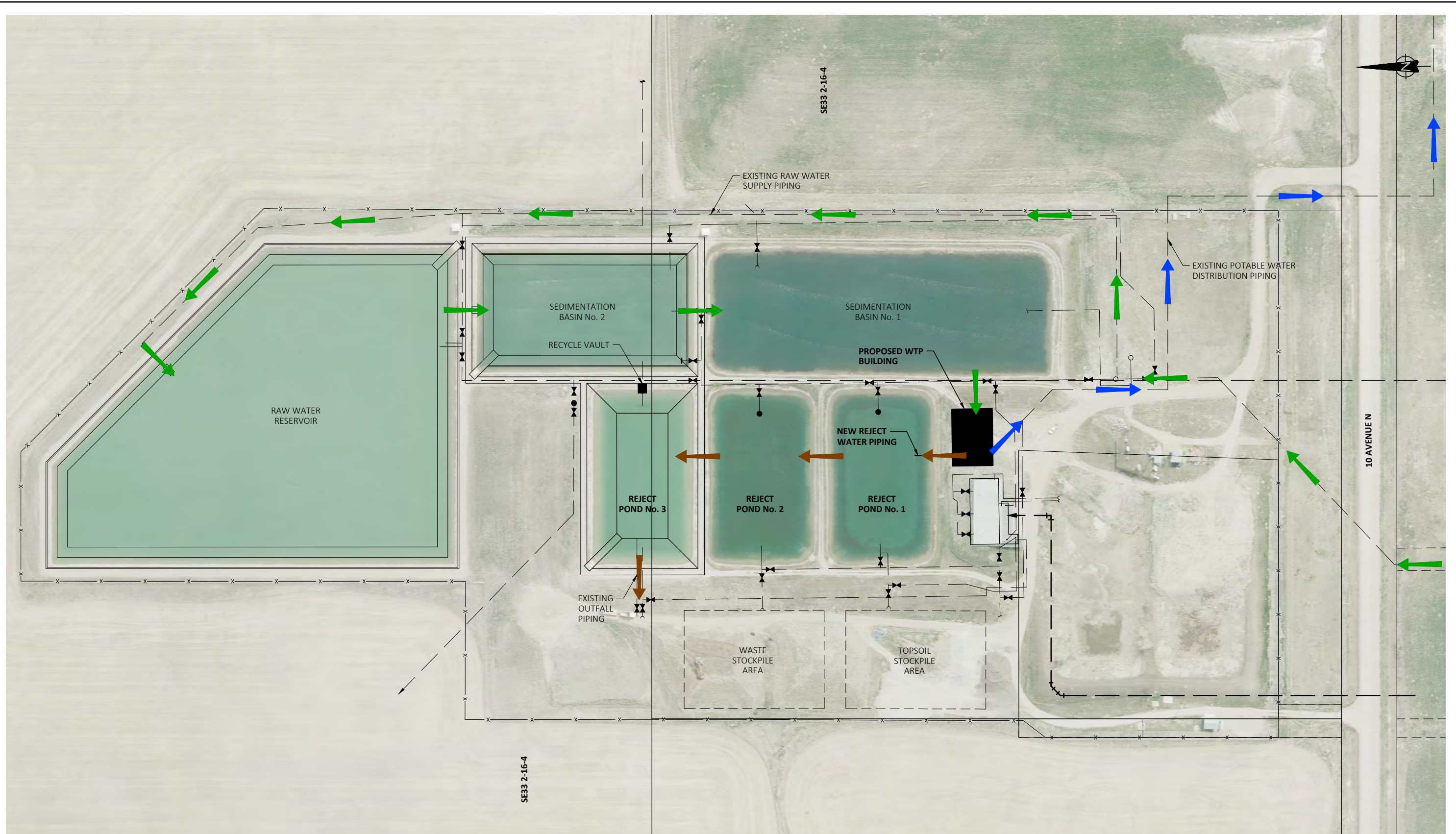
Proposed upgrades to the existing Warner Water Treatment Plant include:

- Treated Water Reservoir Expansion
- Piping, Valves, and Instrumentation
- Site Work (complete with underground piping)

5.3.5.2 COUTTS RESERVOIR PUMP HOUSE

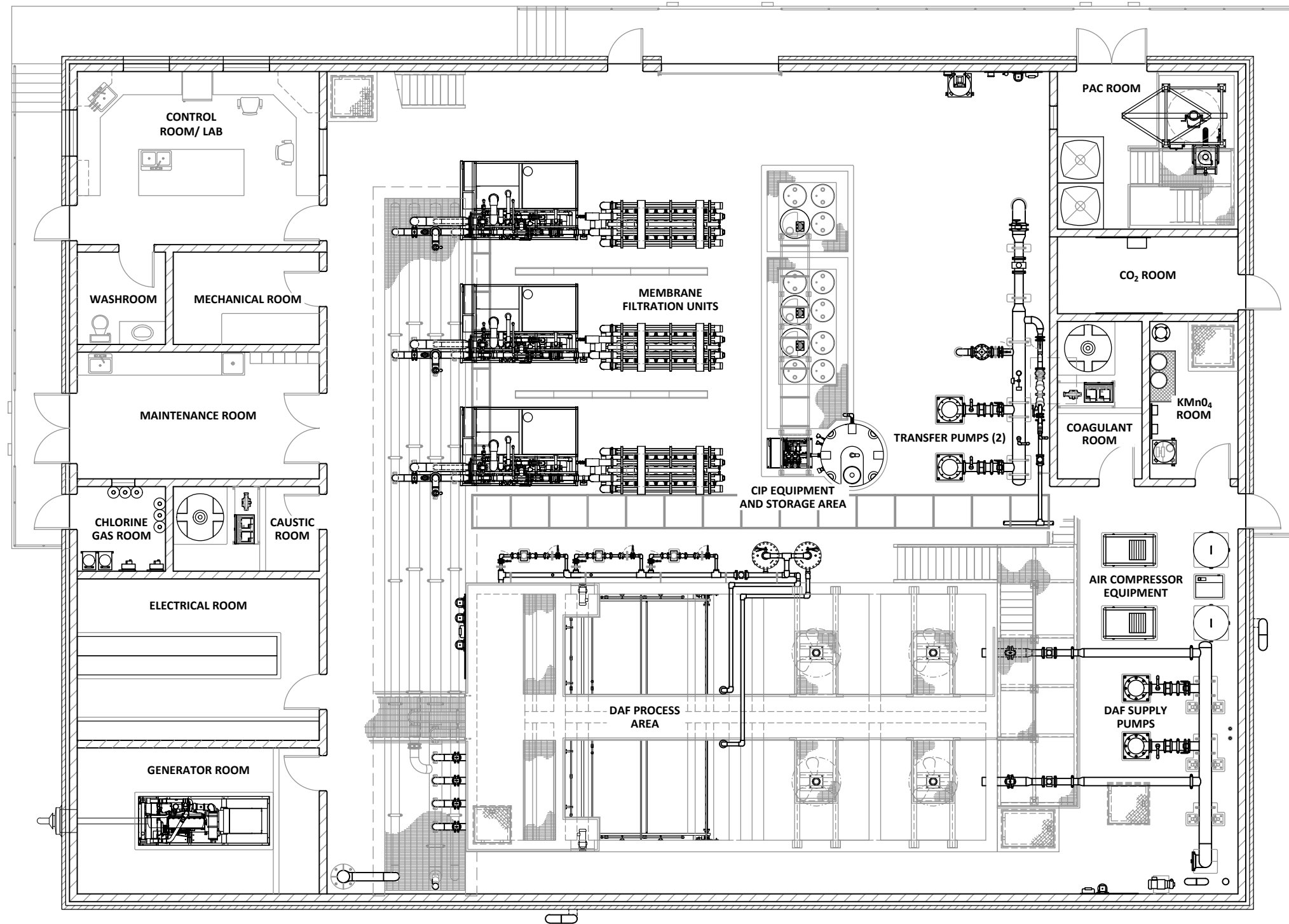
Upgrades to the existing Coutts Reservoir Pump House include:

- Treated Water Reservoir Expansion
- Bulk Fill System Addition
- Piping, Valves, and Instrumentation
- Site Work (complete with underground piping)



- LEGEND**
- RAW WATER FLOW PATH
 - BACKWASH FLOW PATH
 - POTABLE WATER FLOW PATH

<p>MPE a division of Englobe</p>		<p>TOWN OF MILK RIVER REGIONAL WATER SUPPLY STUDY MILK RIVER PROPOSED WATER TREATMENT PLANT SITE PLAN</p>	
SCALE: 1:2000	DATE: MAY 2024	JOB: 1440-058-00	FIGURE: 5.12



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TOWN OF MILK RIVER
REGIONAL WATER SUPPLY STUDY
MILK RIVER WATER TREATMENT
PLANT UPGRADES
MAIN FLOOR PLAN

SCALE: 1:125	DATE: MAY 2024	JOB: 1440-058-00	FIGURE: 5.13
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5.3.6 Project Implementation

With a project of this scope, at least three project phases will be required. Phasing the project will help to lessen the impact of financing such a large project. The initial project phase would involve construction of the replacement raw water pump station and installation of the new raw water transmission line between the raw water pump station and the existing water treatment plant.

Local upgrades to pumping and treated water storage capacities can be completed separately at any stage of this project. This is also related to funding as the Water for Life funding for regional projects would be limited to upgrades required to service the region or to convey water. Local upgrades would not be eligible under this grant.

The most significant project phase would involve construction of the new Milk River Water Treatment Plant. This phase can be implemented at any point that capacity increases are required, prior to 2071, after which the existing water treatment plant will become insufficient for projected demands. However, depending on when the work is carried out, the impact of financing may change. The cost implications of this phase will be discussed in Section 6.

5.3.7 Impact of Potential Industrial/Commercial Development

During this study, the Technical Committee has been reviewing the potential for major industrial and commercial developments along the Highway 4 corridor and the subsequent need to supply those potential developments with potable water. For Alternative 2, only the planned development near Coutts must be taken into account (see Figure 5.2), which provides an estimated increase in projected water demand of 3.8 MLD. Of note, this estimated demand is based on an assumed demand factor ($\text{m}^3/\text{day}/\text{ha}$). This demand factor could be changed depending on the types of industrial and or commercial development that is considered in this concept development phase.

Based on the industrial and commercial water demand projections discussed in Section 2.2.2, the existing infiltration gallery and raw water pumping station are capable of handling this demand with approximately 1.6 MLD in surplus pumping capacity. However, to provide sufficient potable water to support industrial/commercial growth, an increase to the existing water treatment and transmission system capacities will be required. A review of the required upgrades to support these potential developments are summarized in the sections below.

5.3.7.1 WATER TREATMENT PLANT REPLACEMENT

Based on the treatment capacity discussed in Section 4.6.4, the Milk River WTP has an ultimate capacity of 4.3 MLD. With a commercial and industrial demand of 3.8 MLD, the water treatment plant will be unable to accommodate any commercial/industrial development alongside even the region's current municipal demands.

A new water treatment plant exceeding the full capacity of the existing Milk River WTP would be required to meet the potable water demands for future industrial/commercial developments. Alternative 2 details the proposed construction of a new water treatment plant with sufficient capacity to handle both industrial and municipal flows. Therefore, accommodating future industrial/commercial developments would require advancing the construction timeline. This scenario is discussed further in Section 6.

5.3.7.2 REGIONAL TRANSMISSION SYSTEM

The existing regional transmission system, as discussed in Section 4.6.6, would require a capacity increase to facilitate future industrial/commercial developments. As the water demand projections would increase from 2.8 MLD to 6.6 MLD, this would require the pipeline size and regional transmission pumping system capacities to double as a result.

6 COST ESTIMATE

6.1 CAPITAL COST ESTIMATES

Order of magnitude cost estimates have been prepared for each alternative and summarized in Table 6.1 below. Cost estimates follow the American Association of Cost Engineering (AACE) format for a Class 4 estimate. Class 4 estimates are used for feasibility studies, typically, when a project is 1% to 15% complete. According to the AACE, Class 4 estimate contingency ranges from -30% to 50% of the cost which can be seen in the detailed cost estimates.

Capital costs are inclusive of a contingency and engineering fees and are exclusive of tax amounts.

Table 6.1: AACE Capital Cost Estimate

AACE Cost Estimate			
Item	Grand Subtotal (\$)	Cost (\$) (-30% Contingency)	Cost (\$) (-50% Contingency)
Alternative 1 - Milk River Regional Water Supply System			
RWSC Water Treatment Plant - Proposed Upgrades	\$5,628,000	\$4,531,000	\$9,708,000
Warner Booster Station and Treated Water Storage	\$1,852,000	\$1,490,000	\$3,195,000
Milk River/Coutts Connections and Treated Water Storage	\$1,226,000	\$987,000	\$2,115,000
Transmission Main - RWSC WTP to Warner	\$16,965,000	\$13,881,000	\$29,490,000
Transmission Main - Warner to Milk River	\$8,845,000	\$7,320,000	\$15,458,000
Total Project Cost	\$34,516,000	\$28,209,000	\$59,966,000
Alternative 2 - Water Treatment Upgrades			
Milk River Raw Water System - Transmission Main	\$1,607,000	\$1,294,000	\$2,773,000
Milk River Raw Water System - Pump Station	\$2,012,000	\$1,619,000	\$3,471,000
Milk River Water Treatment Plant - Proposed Upgrades	\$12,060,000	\$9,708,000	\$20,804,000
Coutts Treated Water Storage	\$1,005,000	\$808,000	\$1,734,000
Warner Treated Water Storage	\$1,122,000	\$944,000	\$1,976,000
Total Project Cost	\$17,806,000	\$14,373,000	\$30,758,000

The cost estimate provided is an opinion of probable cost and is a function of many factors that can change with time and hence must not be relied upon as the actual cost. Construction equipment and methods that are commonly used in the industry are assumed for estimating purposes. Refer to Appendix A for the complete details of the capital cost estimates.

6.2 PRESENT WORTH ANALYSIS

A present worth analysis has been prepared to examine the life cycle costs for each of the two alternatives. The present worth analysis includes both the capital cost as well as the operation and maintenance (O&M) costs over 50 years. The present worth analysis also assumes that the local share will be debentured over a 30-year period, based on interest rates received from the Alberta Capital Finance Authority. For the analysis, the following assumptions were used:

1. Capital Costs and Annual O&M cost were based on 2024 dollar value.
<https://acfa.gov.ab.ca/loan-form-script/rates.html>
2. Net Present Value (NPV) costs were based on the following parameters:
 - a. Inflation 2.14%¹
 - b. Discount Rate 5.00%
 - c. Debenture Rate 5.22%²
 - d. Funding Rate 90%³
3. For Alternative 1:
 - a. Operations and Maintenance costs include a potable water charge rate provided by the RWSC and the estimated operation, maintenance, and labor costs associated with the proposed booster pump station to be constructed in Warner.
 - b. Overhead costs as well as building power and gas usages were assumed to be 25% of the Milk River WTP. Electricity usage by equipment was calculated based on required head and an assumed 80% efficiency.
4. For Alternative 2:
 - a. Overhead costs were referenced from a cost projection developed for the construction of the Milk River Water Treatment Plant.
 - b. Building electrical and gas utilization costs as well as annual consumption were based on annual charge rates from a similarly sized water treatment plant designed by MPE.
 - c. Filter media maintenance costs and timelines were based on values provided by the operator.
 - d. Equipment operation parameters for O&M were based on the name plate power usage and duty point whenever possible.
 - i. For equipment whose operational durations were not specified in the drawings, operational durations were derived from duty points of upstream equipment under the assumption that they would activate simultaneously.
 - e. A lump sum of \$2.5 million (not including inflation) was applied every 10 years to capture any maintenance or upgrade expenses preceding construction of the water treatment plant.
 - i. This lump sum may or may not be considered eligible for funding. This report assumes that it is not.
 - f. The cost of the proposed water treatment plant was considered eligible for Water for Life and AWWMP grant funding at a cumulative rate of 80%.
 - i. Following construction of the water treatment plant, O&M costs were increased to match currently operating water treatment plants with similar scope, while other overhead costs such as administration and labor were retained.

¹ 20-year average calculated from CPI data available at StatsCan, current as of March 21, 2024

² Note: From AFCA (20-year interest rate), current as of April 2024.

³ Unless otherwise noted.

Additionally, the net present worth of Alternative 2 was assessed to account for two different scenarios representing time of construction for the proposed water treatment plant:

- A. New WTP constructed immediately.
 - a. Accounts for construction triggered by a number of operational considerations including:
 - i. Inability to source slow sand filter media,
 - ii. Challenges operating two filters simultaneously to meet production requirements,
 - iii. Changes to regulatory requirements for operating slow sand filtration systems,
 - iv. Additional capacity requirements due to new industrial developments.
- B. New WTP constructed in 2071, once the slow sand filtration system maximum capacity is reached.

Tables 6.2 and 6.3 provide details on the present worth analysis with and without funding from Water for Life and AWWMP, respectively, performed for the two alternatives. Table 6.4 provide details on the capital cost estimation. Refer to Appendix B for the complete details of the present worth analysis.

Table 6.2: Net Present Worth Analysis

Alternative	Description	Net Present Value of Debenture (\$)	Net Present Value of O&M Costs to 2071 (\$)	Total Net Present Value (\$)	2024 Debenture Cost per m ³ (\$/m ³)	2024 O&M Cost per m ³ (\$/m ³)	2024 Total Cost per m ³ (\$/m ³)
I	Milk River Regional Water Supply System	\$57,383,000	\$11,595,000	\$68,978,000	\$15.84	\$1.32	\$17.16
2a	Water Treatment Upgrades w/ 2024 Water Treatment Plant	\$27,729,000	\$8,635,000	\$36,364,000	\$7.66	\$1.38	\$9.04
2b	Water Treatment Upgrades w/ 2071 Water Treatment Plant	\$18,126,000	\$6,820,000	\$24,946,000	\$1.77	\$1.00	\$2.76

Table 6.3: Net Present Worth Analysis with Funding

Alternative	Description	Net Present Value of Debenture (\$)	Net Present Value of O&M Costs to 2071 (\$)	Total Net Present Value (\$)	2024 Debenture Cost per m ³ (\$/m ³)	2024 O&M Cost per m ³ (\$/m ³)	2024 Total Cost per m ³ (\$/m ³)
I	Milk River Regional Water Supply System	\$5,738,000	\$11,595,000	\$17,333,000	\$1.58	\$1.32	\$2.90
2a	Water Treatment Upgrades w/ 2024 Water Treatment Plant	\$4,905,000	\$8,635,000	\$13,540,000	\$1.35	\$1.38	\$2.74
2b	Water Treatment Upgrades w/ 2071 Water Treatment Plant	\$8,017,000	\$6,820,000	\$14,837,000	\$0.18	\$1.00	\$1.17

Table 6.4: Capital Cost Analysis

Alternative	Description	Funding Program	Total Cost	Funding Portion	2024 Debenture Cost per m ³	Municipal Contribution
I	Milk River Regional Water Supply System	Water for Life	\$55,972,000	90%	\$50,374,800	\$5,597,200
2a	Water Treatment Upgrades w/ 2024 Water Treatment Plant	Water for Life	\$27,047,000	90%	\$24,342,300	\$2,704,700
2b	Water Treatment Upgrades w/ 2071 Water Treatment Plant	Water for Life	\$39,548,000	56%	\$22,263,000	\$17,285,000

Alternative 1 presents the highest total capital costs, net present worth, and annual expenses of the two options by a significant margin.

Alternative 2 has been separated into two options which detail the costs of constructing a new water treatment plant in 2024 or 2071. As such, these options are not the only two possible construction years; it is possible to construct at any point between 2024 and 2071.

For the immediate construction option in Alternative 2a, the large debenture costs seen in Tables 6.2 and 6.3 reflect the capital costs incurred by the immediate construction of the water treatment plant. However, after the 30-year debenture period, no additional capital costs will be incurred, which results in the lowest total capital cost in Table 6.4. Alternative 2a will have higher O&M costs than Alternative 2b, since there is more time spent operating the new water treatment plant, which is more costly to operate than the existing facility.

Alternative 2b has lower annual debenture and O&M costs than Alternative 2a. However, the total capital cost is approximately 50% more than the capital cost of Alternative 2a. This is primarily attributed to the \$2.5 million upgrade allowance required to upkeep the current water treatment plant as well as accounting for inflation. Alternative 2b has capital costs spanning from 2024-2071, resulting in a series of smaller, once-per-decade lump sums punctuated by a larger expense that must be debentured past the 50-year design window, rather than a single large expense debentured within 30-years.

Based on this discussion, earlier construction options are generally more advisable, as any extra annual costs will be offset by the savings from the municipal contribution. However, early and late construction can be considered generally on par with each other if funding is secured for the upkeep sum. The decision on when to construct the new water treatment plant should consider whether additional funding can be secured, and if any benefits from delaying construction will offset the extra capital costs for water treatment plant upkeep.

7 CONCLUSIONS & RECOMMENDATIONS

7.1 GENERAL CONCLUSIONS

The following general conclusions have been developed through the course of this work:

- For Milk River and Coutts to be added to the regional supply system proposed in Alternative 1, additional license allocation must be acquired from other license holders and transferred to the Town of Raymond Diversion point with the Town of Milk River designated as the point of municipal use.
- There are two upgrade alternatives developed and evaluated for this report that should be considered:
 - Alternative 1: Milk River Regional Water Supply System.
 - Alternative 2: Milk River Water Treatment Plant and Raw Water System Upgrades.
- To accommodate future industrial and commercial developments in the region:
 - Alternative 1: Major upgrades to the RWSC WTP and regional transmission system capacities will be required.
 - Alternative 2: The existing WTP will reach capacity sooner than the anticipated 2071 date, which will result in the replacement WTP being required earlier.
- The most cost-effective alternative is Alternative 2: Milk River Water Treatment Plant and Raw Water System Upgrades, which can be divided into two scenarios:
 - Alternative 2a is more expensive in the short term due to operation and maintenance expenses but has a stable price range throughout the design window and a lower capital cost.
 - Alternative 2b provides lower annual expenses throughout the 50-year design window, but results in higher capital expenditures at various points, especially towards the end of the timeline, due to the maintenance cost and inflation.
- Local upgrades were identified for Warner and Coutts for both alternatives and will be further developed in preliminary design.

7.2 GENERAL RECOMMENDATIONS

The following general recommendations have been developed through the course of this work:

- Proceed with Alternative 2.
 - The initial phase of this alternative includes:
 - Replacement of the existing Milk River raw water pump house and upgrades to the existing intake structures.
 - Replacement of the existing raw water transmission line from the pump house to the Milk River WTP reservoir
 - Local treated water storage upgrades at Warner and Coutts
 - Determine the desired timeline for construction of the water treatment plant.
 - Review and verify funding options for carrying out this project.
- Review the feasibility of project costs and logistics required for future industrial and commercial developments.
 - Decide on whether to proceed with proposed infrastructure sizing based on accommodating these developments, as these additional costs would not be eligible for funding under the Water for Life program.
 - Alternatively, consider a smaller 'allowance' for future industrial and commercial developments, with the understanding that this could restrict the types of development and/or the density of development within the proposed areas.
- Develop Preliminary Design Packages for the identified initial phase projects.
- Proceed with applications for funding the identified initial phase projects.
- Consider providing a copy of this report to the Parliamentary Secretary of Agrifood Development and open a dialogue during detailed design for the inclusion of additional capacity in future infrastructure projects in the region to support agrifood development, in accordance with the general mandate from the province.

8 REFERENCES

Alberta Environment and Sustainable Resource Development, “Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems,” Drinking Water Branch, Environmental Policy Branch, Environmental Assurance Division, March 2013.

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APPENDIX A:

ORDER OF MAGNITUDE ESTIMATES



a division of Englobe



COST ESTIMATE

**MILK RIVER REGIONAL WATER SUPPLY STUDY
ALTERNATIVE 1 - RWSC WATER TREATMENT PLANT - PROPOSED UPGRADES
AACE CLASS 4 COST ESTIMATE***

*As per AACE International Recommended Practices

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
General Requirements				
1 Mobilization / Demobilization / Bonding & Insurance / Profit	1	LS	\$ 610,000.00	\$ 610,000.00
	SUBTOTAL			\$ 610,000.00
Process Expansion (to 18 MLD Firm Capacity)				
1 Low Lift Pumps (Remove and Replace/Upgrade)	3	ea	\$ 84,000.00	\$ 252,000.00
3 Flocculation (Supply and Install Additional Train)	1	ea	\$ 368,000.00	\$ 368,000.00
4 Membrane Filtration (Supply and Install 2 Additional Trains)	2	ea	\$ 1,024,000.00	\$ 2,048,000.00
5 Compressed Air System Modifications (Relocate, Reconfigure)	1	LS	\$ 16,000.00	\$ 16,000.00
6 Chemical Feed System Adjustments	1	LS	\$ 8,000.00	\$ 8,000.00
7 Instrumentation Upgrades	1	LS	\$ 14,000.00	\$ 14,000.00
8 Process Piping Modifications	1	LS	\$ 205,000.00	\$ 205,000.00
9 Misc Electrical	1	LS	\$ 137,000.00	\$ 137,000.00
10 Catwalk Structural Extensions	1	LS	\$ 32,000.00	\$ 32,000.00
	SUBTOTAL			\$ 4,172,000.00
Regional Transfer Pumping Addition				
1 Transfer Pumps	2	ea	\$ 28,000.00	\$ 56,000.00
2 VFD's	2	ea	\$ 27,000.00	\$ 54,000.00
3 Instrumentation	1	LS	\$ 26,000.00	\$ 26,000.00
4 Piping Modifications	1	LS	\$ 21,000.00	\$ 21,000.00
5 Misc Electrical	1	LS	\$ 37,000.00	\$ 37,000.00
6 Building Extension (c/w Lighting, HVAC)	25	m2	\$ 5,000.00	\$ 125,000.00
	SUBTOTAL			\$ 319,000.00
Electrical Upgrades				
1 Upgrade WTP Generator Complete	1	LS	\$ 237,000.00	\$ 237,000.00
2 Upgrade Electrical Service	1	LS	\$ 132,000.00	\$ 132,000.00
3 Control Panel Addition	1	ea	\$ 53,000.00	\$ 53,000.00
4 Programming and Commissioning	1	LS	\$ 105,000.00	\$ 105,000.00
	SUBTOTAL			\$ 527,000.00
	GRAND SUBTOTAL			\$ 5,628,000.00
			CONTINGENCY	
			-30%	50%
			\$ (1,688,000.00)	\$ 2,814,000.00
			SUBTOTAL	\$ 3,940,000.00 \$ 8,442,000.00
	15%	CONSULTING FEES	\$ 591,000.00	\$ 1,266,000.00
		PROJECT TOTAL	\$ 4,531,000.00	\$ 9,708,000.00



COST ESTIMATE

**MILK RIVER REGIONAL WATER SUPPLY STUDY
ALTERNATIVE 1 - TRANSMISSION MAIN - RWSC WTP TO WARNER
AACE CLASS 4 COST ESTIMATE***

*As per AACE International Recommended Practices

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST	
General Requirements					
1 Mobilization / Demobilization / Bonding & Insurance / Profit	1	LS	\$ 1,320,000.00	\$	1,320,000.00
2 Hydro Excavation Allowance	1	LS	\$ 130,000.00	\$	130,000.00
	SUBTOTAL			\$	1,450,000.00
Transmission Main					
1 300 mm DR 11 HDPE	42000	m	\$ 325.00	\$	13,650,000.00
2 300 mm Isolation Valves	10	ea	\$ 7,000.00	\$	70,000.00
3 Flushing Hydrants	8	ea	\$ 9,000.00	\$	70,000.00
4 Air Release Structures	25	ea	\$ 14,000.00	\$	350,000.00
5 Crossings					
a) Canadian Pacific Railway	1	ea	\$ 105,000.00	\$	105,000.00
b) County Roads	25	ea	\$ 8,000.00	\$	200,000.00
6 Connection to RWSC WTP	1	LS	\$ 30,000.00	\$	30,000.00
7 Connection to Warner Storage	1	LS	\$ 30,000.00	\$	30,000.00
8 Restoration	1	LS	\$ 160,000.00	\$	160,000.00
	SUBTOTAL			\$	14,665,000.00
Land Requirements					
1 Allowance for Temporary Workspace in existing ROW in Private Lands *				\$	-
a) Workspace Acquisition (30 m Construction)	300	ac	\$ 2,500.00	\$	750,000.00
b) Easement Preparation and Execution	1	LS	\$ 35,000.00	\$	35,000.00
c) Land Agent Requirements	1	LS	\$ 65,000.00	\$	65,000.00
	SUBTOTAL			\$	850,000.00
	GRAND SUBTOTAL			\$	16,965,000.00
				-30% CONTINGENCY	50% CONTINGENCY
			CONTINGENCY	\$ (5,090,000.00)	\$ 8,483,000.00
			SUBTOTAL	\$ 11,875,000.00	\$ 25,448,000.00
			15% ENGINEERING FEES	\$ 1,781,000.00	\$ 3,817,000.00
			GEOTECHNICAL/MATERIALS TESTING	\$ 50,000.00	\$ 50,000.00
			REGULATORY APPROVALS	\$ 75,000.00	\$ 75,000.00
			ENVIRONMENTAL ASSESSMENT, HISTORICAL RESOURCES AND FNC	\$ 100,000.00	\$ 100,000.00
			PROJECT TOTAL	\$ 13,881,000.00	\$ 29,490,000.00

* Assumption: Existing transmission main R.O.W. from WTP to Warner will be utilized for new transmission main



COST ESTIMATE

**MILK RIVER REGIONAL WATER SUPPLY STUDY
ALTERNATIVE 1 - WARNER BOOSTER STATION AND TREATED WATER STORAGE
AACE CLASS 4 COST ESTIMATE***

*As per AACE International Recommended Practices

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST	
Booster Pump Station at Warner					
1 Mobilization / Demobilization / Bonding & Insurance / Profit	1	LS	\$ 105,000.00	\$	105,000.00
2 Site Work (c/w underground piping)	1	LS	\$ 63,000.00	\$	63,000.00
3 New Building (c/w electrical lighting, HVAC, etc.)	30	m2	\$ 5,000.00	\$	150,000.00
4 Mechanical / Process / Analytical Equipment					
a) Process Mechanical Piping, Fittings, Valves, etc.	1	LS	\$ 53,000.00	\$	53,000.00
b) Supply & Install Booster Pump	2	ea	\$ 37,000.00	\$	74,000.00
c) Pressure Transmitter	2	ea	\$ 8,000.00	\$	16,000.00
d) Analyzers	2	ea	\$ 8,000.00	\$	16,000.00
d) Flow Measurement	1	ea	\$ 9,000.00	\$	9,000.00
c) Chlorine Boosting System	1	LS	\$ 42,000.00	\$	42,000.00
5 Power Supply	1	LS	\$ 37,000.00	\$	37,000.00
6 Electrical Equipment					
a) General Electrical	1	LS	\$ 111,000.00	\$	111,000.00
b) Programming and Commissioning	1	LS	\$ 49,000.00	\$	49,000.00
c) VFD's	2	ea	\$ 37,000.00	\$	74,000.00
	SUBTOTAL				\$ 799,000.00
Treated Water Storage at Warner					
1 Mobilization / Demobilization / Bonding & Insurance / Profit	1	LS	\$ 105,000.00	\$	105,000.00
2 Supply and Install 1000 m3 potable water reservoir	1	LS	\$ 820,000.00	\$	820,000.00
3 Fill and Outlet Control Valves	2	ea	\$ 11,000.00	\$	22,000.00
4 Instrumentation	1	LS	\$ 21,000.00	\$	21,000.00
5 Process Piping	1	LS	\$ 16,000.00	\$	16,000.00
6 Site Work and Underground Piping	1	LS	\$ 69,000.00	\$	69,000.00
	SUBTOTAL				\$ 1,053,000.00
	GRAND SUBTOTAL				\$ 1,852,000.00
				-30%	50%
				CONTINGENCY	CONTINGENCY
				CONTINGENCY	\$ (556,000.00) \$ 926,000.00
				SUBTOTAL	\$ 1,296,000.00 \$ 2,778,000.00
	15%	CONSULTING FEES		\$ 194,000.00	\$ 417,000.00
				PROJECT TOTAL	\$ 1,490,000.00 \$ 3,195,000.00



COST ESTIMATE

**MILK RIVER REGIONAL WATER SUPPLY STUDY
ALTERNATIVE 1 - TRANSMISSION MAIN - WARNER TO MILK RIVER
AACE CLASS 4 COST ESTIMATE***

*As per AACE International Recommended Practices

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
General Requirements				
1 Mobilization / Demobilization / Bonding & Insurance / Profit	1	LS	\$ 680,000.00	\$ 680,000.00
2 Hydro Excavation Allowance	1	LS	\$ 75,000.00	\$ 75,000.00
	SUBTOTAL			\$ 755,000.00
Transmission Main				
1 300 mm DR 11 HDPE	20000	m	\$ 325.00	\$ 6,500,000.00
2 300 mm Isolation Valves	6	ea	\$ 6,300.00	\$ 40,000.00
3 Flushing Hydrants	5	ea	\$ 9,000.00	\$ 45,000.00
4 Air Release Structures	15	ea	\$ 14,000.00	\$ 210,000.00
5 Crossings				
a) Canadian Pacific Railway	2	ea	\$ 105,000.00	\$ 210,000.00
b) Highway 4	1	ea	\$ 105,000.00	\$ 105,000.00
c) County Roads	15	ea	\$ 8,000.00	\$ 120,000.00
6 Connection to Warner Storage	1	LS	\$ 30,000.00	\$ 30,000.00
7 Connection to Milk River Storage	1	LS	\$ 30,000.00	\$ 30,000.00
8 Connection to Coutts Booster Station	1	LS	\$ 30,000.00	\$ 30,000.00
9 Restoration	1	LS	\$ 105,000.00	\$ 105,000.00
	SUBTOTAL			\$ 7,425,000.00
Land Requirements				
1 Allowance for Easements in Private Lands *				
a) Land Acquisition (20 m Permanent)	65	ac	\$ 6,000.00	\$ 390,000.00
b) Workspace Acquisition (10 m Construction)	30	ac	\$ 2,500.00	\$ 75,000.00
c) Easement Preparation and Execution	1	LS	\$ 35,000.00	\$ 35,000.00
d) Land Agent Requirements	1	LS	\$ 65,000.00	\$ 65,000.00
2 Legal Survey	12,000	m	\$ 8.00	\$ 100,000.00
	SUBTOTAL			\$ 665,000.00
	GRAND SUBTOTAL			\$ 8,845,000.00
			-30% CONTINGENCY	50% CONTINGENCY
			CONTINGENCY	CONTINGENCY
			\$ (2,654,000.00)	\$ 4,423,000.00
			SUBTOTAL	SUBTOTAL
			\$ 6,191,000.00	\$ 13,268,000.00
			15% ENGINEERING FEES	\$ 929,000.00 \$ 1,990,000.00
			GEOTECHNICAL/MATERIALS TESTING	\$ 75,000.00 \$ 75,000.00
			REGULATORY APPROVALS	\$ 50,000.00 \$ 50,000.00
			ENVIRONMENTAL ASSESSMENT, HISTORICAL RESOURCES AND FNC	\$ 75,000.00 \$ 75,000.00
			PROJECT TOTAL	\$ 7,320,000.00 \$ 15,458,000.00

* Assumption: 50% of the transmission main to be installed in new R.O.W. in private lands; 50% to be installed in road allowances



COST ESTIMATE

**MILK RIVER REGIONAL WATER SUPPLY STUDY
ALTERNATIVE 1 - MILK RIVER AND COUTTS
AACE CLASS 4 COST ESTIMATE***

*As per AACE International Recommended Practices

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
Potable Water Connection at Milk River				
1 Mobilization / Demobilization / Bonding & Insurance	1	LS	\$ 27,000.00	\$ 27,000.00
2 Site Work	1	LS	\$ 16,000.00	\$ 16,000.00
3 Process Piping	1	LS	\$ 21,000.00	\$ 21,000.00
4 Fill Valve	1	ea	\$ 16,000.00	\$ 16,000.00
5 Instrumentation	1	LS	\$ 48,000.00	\$ 48,000.00
6 Re-Configure Chlorine Boosting System	1	LS	\$ 11,000.00	\$ 11,000.00
7 General Electrical	1	LS	\$ 29,000.00	\$ 29,000.00
8 Programming and Commissioning	1	LS	\$ 21,000.00	\$ 21,000.00
	SUBTOTAL			\$ 210,000.00
Coutts Potable Water Connection at MR Booster Station				
1 Programming and Commissioning	1	LS	\$ 11,000.00	\$ 11,000.00
	SUBTOTAL			\$ 11,000.00
Treated Water Storage at Coutts				
1 Mobilization / Demobilization / Bonding & Insurance / Profit	1	LS	\$ 74,000.00	\$ 74,000.00
2 Supply and Install 500 m3 potable water reservoir	1	LS	\$ 560,000.00	\$ 560,000.00
3 Fill and Outlet Control Valves	2	ea	\$ 11,000.00	\$ 22,000.00
4 Instrumentation	1	LS	\$ 21,000.00	\$ 21,000.00
5 Process Piping	1	LS	\$ 16,000.00	\$ 16,000.00
6 Bulk Fill System	1	LS	\$ 105,000.00	\$ 105,000.00
7 Site Work and Underground Piping	1	LS	\$ 69,000.00	\$ 69,000.00
	SUBTOTAL			\$ 1,005,000.00
	GRAND SUBTOTAL			\$ 1,226,000.00
			-30% CONTINGENCY	\$ (368,000.00)
			50% CONTINGENCY	\$ 613,000.00
			SUBTOTAL	\$ 858,000.00
			15% CONSULTING FEES	\$ 129,000.00
			PROJECT TOTAL	\$ 987,000.00
				\$ 2,115,000.00

* Costs of Water License Allocations are not included and if required will be dependant on availability and negotiation with third parties.



COST ESTIMATE

**MILK RIVER REGIONAL WATER SUPPLY STUDY
ALTERNATIVE 2 - RAW WATER SYSTEM - RAW WATER PUMP STATION REPLACEMENT
AACE CLASS 4 COST ESTIMATE***

*As per AACE International Recommended Practices

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
General Requirements				
1 Mobilization / Demobilization / Bonding & Insurance / Profit	1	LS	\$ 300,000.00	\$ 300,000.00
2 Restoration	1	LS	\$ 100,000.00	\$ 100,000.00
	SUBTOTAL			\$ 400,000.00
Raw Water Pump Station Building				
1 Raw Water Pump Station Building Construction				
Building Structural/Architectural	1	LS	\$ 251,400.00	\$ 251,400.00
Building Electrical	1	LS	\$ 36,500.00	\$ 36,500.00
Building HVAC	1	LS	\$ 13,000.00	\$ 13,000.00
2 Civil Site Work	1	LS	\$ 15,000.00	\$ 15,000.00
3 Precast Concrete Wet and Dry Wells	160	m3	\$ 2,000.00	\$ 320,000.00
4 Generator	1	ea	\$ 90,000.00	\$ 90,000.00
	SUBTOTAL			\$ 726,000.00
Raw Water Pump Station Process Mechanical				
1 75 HP Vertical Turbine Pumps c/w VFDs	2	ea	\$ 51,000.00	\$ 102,000.00
2 Instrumentation	1	LS	\$ 23,000.00	\$ 23,000.00
3 Piping, Fittings, Valves, etc.	1	LS	\$ 148,760.00	\$ 148,760.00
4 Air Backflush System	1	LS	\$ 322,000.00	\$ 322,000.00
5 Process Electrical	1	LS	\$ 143,800.00	\$ 143,800.00
	SUBTOTAL			\$ 740,000.00
Raw Water Intake Upgrades				
1 Connection to Existing Intake Lines	7	ea	\$ 12,500.00	\$ 87,500.00
2 Connection to Raw Water Pump Station	1	LS	\$ 30,000.00	\$ 30,000.00
3 Civil Underground Piping and Site Work	1	LS	\$ 28,400.00	\$ 28,400.00
	SUBTOTAL			\$ 146,000.00
	GRAND SUBTOTAL			\$ 2,012,000.00
			-30% CONTINGENCY	50% CONTINGENCY
			\$ (604,000.00)	\$ 1,006,000.00
			SUBTOTAL	\$ 1,408,000.00
	15%	CONSULTING FEES	\$ 211,000.00	\$ 453,000.00
	PROJECT TOTAL			\$ 1,619,000.00
				\$ 3,471,000.00



COST ESTIMATE

MILK RIVER REGIONAL WATER SUPPLY STUDY
 ALTERNATIVE 2 - RAW WATER SYSTEM - RAW WATER TRANSMISSION MAIN REPLACEMENT
 AACE CLASS 4 COST ESTIMATE*

*As per AACE International Recommended Practices

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
General Requirements				
1 Mobilization / Demobilization / Bonding & Insurance / Profit	1	LS	\$ 200,000.00	\$ 200,000.00
2 Hydro Excavation Allowance	1	LS	\$ 50,000.00	\$ 50,000.00
	SUBTOTAL			\$ 250,000.00
Raw Water Transmission Main				
1 250 mm DR 11 HDPE	3000	m	\$ 300.00	\$ 900,000.00
2 250 mm Isolation Valves	3	ea	\$ 7,000.00	\$ 21,000.00
3 Flushing Hydrants	1	ea	\$ 9,000.00	\$ 9,000.00
4 Air Release Structures	2	ea	\$ 14,000.00	\$ 28,000.00
5 Crossings				
a) Highway 501	1	LS	\$ 40,000.00	\$ 40,000.00
b) County Roads	2	ea	\$ 8,000.00	\$ 16,000.00
6 Connection to Raw Water Pump Station	1	LS	\$ 30,000.00	\$ 30,000.00
7 Connection to Water Treatment Plant	1	LS	\$ 30,000.00	\$ 30,000.00
8 Restoration	1	LS	\$ 100,000.00	\$ 100,000.00
	SUBTOTAL			\$ 1,174,000.00
Land Requirements				
1 Allowance for Easements in Private Lands *				
a) Land Acquisition (20 m Permanent)	10	ac	\$ 6,000.00	\$ 60,000.00
b) Workspace Acquisition (10 m Construction)	5	ac	\$ 2,500.00	\$ 12,500.00
c) Easement Preparation and Execution	1	LS	\$ 35,000.00	\$ 35,000.00
d) Land Agent Requirements	1	LS	\$ 65,000.00	\$ 65,000.00
2 Legal Survey	1	LS	\$ 10,000.00	\$ 10,000.00
	SUBTOTAL			\$ 183,000.00
	GRAND SUBTOTAL			\$ 1,607,000.00
			-30% CONTINGENCY	50% CONTINGENCY
			\$ (482,000.00)	\$ 804,000.00
			SUBTOTAL	\$ 1,125,000.00 \$ 2,411,000.00
	15%	CONSULTING FEES	\$ 169,000.00	\$ 362,000.00
		PROJECT TOTAL	\$ 1,294,000.00	\$ 2,773,000.00



COST ESTIMATE

**MILK RIVER REGIONAL WATER SUPPLY STUDY
ALTERNATIVE 2 - MILK RIVER WATER TREATMENT PLANT - PROPOSED UPGRADES
AACE CLASS 4 COST ESTIMATE***

*As per AACE International Recommended Practices

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST
General Requirements				
1 Mobilization / Demobilization / Bonding & Insurance / Profit	1	LS	\$ 1,300,000.00	\$ 1,300,000.00
2 Piloting Microfiltration	1	LS	\$ 200,000.00	\$ 200,000.00
	SUBTOTAL			\$ 1,500,000.00
Water Treatment Plant Building				
1 New WTP Building (Structural/Architectural)	1	LS	\$ 2,700,000.00	\$ 2,700,000.00
2 Building Mechanical (HVAC)	1	LS	\$ 600,000.00	\$ 600,000.00
3 Electrical	1	LS	\$ 1,100,000.00	\$ 1,100,000.00
4 Civil Underground Piping and Site Work	1	LS	\$ 1,700,000.00	\$ 1,700,000.00
	SUBTOTAL			\$ 6,100,000.00
Process Mechanical				
1 Microfiltration Treatment Equipment Supply	1	LS	\$ 1,700,000.00	\$ 1,700,000.00
2 DAF Equipment Supply	1	LS	\$ 620,000.00	\$ 620,000.00
3 DAF to Membrane Transfer Piping/Instrumentation	1	LS	\$ 110,000.00	\$ 110,000.00
4 Compressed Air System	1	LS	\$ 120,000.00	\$ 120,000.00
5 KMnO4 Feed System	1	LS	\$ 75,000.00	\$ 75,000.00
6 CO2 Feed System	1	LS	\$ 150,000.00	\$ 150,000.00
7 Coagulant Feed System	1	LS	\$ 100,000.00	\$ 100,000.00
8 PAC Feed System	1	LS	\$ 225,000.00	\$ 225,000.00
9 Chlorine Gas Feed System	1	LS	\$ 100,000.00	\$ 100,000.00
10 Caustic Soda Feed System	1	LS	\$ 80,000.00	\$ 80,000.00
11 Membrane Cleaning Chemical Feed Systems	1	LS	\$ 50,000.00	\$ 50,000.00
12 Raw Water Pump System / Raw Water Supply to DAF	1	LS	\$ 250,000.00	\$ 250,000.00
13 Reject Water Submersible Pumps (c/w VFDs)	2	ea	\$ 50,000.00	\$ 100,000.00
14 Reject Water Collection System (Vault and Piping)	1	LS	\$ 250,000.00	\$ 250,000.00
15 Reject Pond Aeration	1	LS	\$ 100,000.00	\$ 100,000.00
16 Reject Water Recycle System	1	LS	\$ 50,000.00	\$ 50,000.00
17 Instrumentation	1	LS	\$ 100,000.00	\$ 100,000.00
18 Piping, Fittings, Valves, etc.	1	LS	\$ 200,000.00	\$ 200,000.00
19 Plant Service Water	1	LS	\$ 50,000.00	\$ 50,000.00
20 Lab Equipment	1	LS	\$ 30,000.00	\$ 30,000.00
	SUBTOTAL			\$ 4,460,000.00
	GRAND SUBTOTAL			\$ 12,060,000.00
			-30% CONTINGENCY	\$ (3,618,000.00)
			50% CONTINGENCY	\$ 6,030,000.00
			SUBTOTAL	\$ 8,442,000.00
	15%	CONSULTING FEES		\$ 1,266,000.00
			PROJECT TOTAL	\$ 9,708,000.00
				\$ 20,804,000.00



COST ESTIMATE

**MILK RIVER REGIONAL WATER SUPPLY STUDY
ALTERNATIVE 2 - WARNER TREATED WATER STORAGE
AACE CLASS 4 COST ESTIMATE***

*As per AACE International Recommended Practices

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST	
Treated Water Storage at Warner					
1 Mobilization / Demobilization / Bonding & Insurance / Profit	1	LS	\$ 105,000.00	\$ 105,000.00	
2 Supply and Install 1000 m3 potable water reservoir	1	LS	\$ 820,000.00	\$ 820,000.00	
3 Fill and Outlet Control Valves	2	ea	\$ 11,000.00	\$ 22,000.00	
4 Instrumentation	1	LS	\$ 21,000.00	\$ 21,000.00	
5 Process Piping	1	LS	\$ 16,000.00	\$ 16,000.00	
6 Site Work and Underground Piping	1	LS	\$ 69,000.00	\$ 69,000.00	
	SUBTOTAL			\$ 1,122,000.00	
	GRAND SUBTOTAL			\$ 1,122,000.00	
				-30%	50%
				CONTINGENCY	CONTINGENCY
			CONTINGENCY	\$ (337,000.00)	\$ 561,000.00
			SUBTOTAL	\$ 785,000.00	\$ 1,683,000.00
			15% CONSULTING FEES	\$ 118,000.00	\$ 252,000.00
			GEOTECHNICAL AND QA TESTING	\$ 33,000.00	\$ 33,000.00
			REGULATORY APPROVALS	\$ 8,000.00	\$ 8,000.00
			PROJECT TOTAL	\$ 944,000.00	\$ 1,976,000.00



COST ESTIMATE

**MILK RIVER REGIONAL WATER SUPPLY STUDY
ALTERNATIVE 2 - COUTTS TREATED WATER STORAGE
AACE CLASS 4 COST ESTIMATE***

*As per AACE International Recommended Practices

DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	COST	
Treated Water Storage at Coutts					
1 Mobilization / Demobilization / Bonding & Insurance / Profit	1	LS	\$ 74,000.00	\$ 74,000.00	
2 Supply and Install 500 m3 potable water reservoir	1	LS	\$ 560,000.00	\$ 560,000.00	
3 Fill and Outlet Control Valves	2	ea	\$ 11,000.00	\$ 22,000.00	
4 Instrumentation	1	LS	\$ 21,000.00	\$ 21,000.00	
5 Process Piping	1	LS	\$ 16,000.00	\$ 16,000.00	
6 Bulk Fill System	1	LS	\$ 105,000.00	\$ 105,000.00	
7 Site Work and Underground Piping	1	LS	\$ 69,000.00	\$ 69,000.00	
SUBTOTAL				\$ 1,005,000.00	
GRAND SUBTOTAL				\$ 1,005,000.00	
				-30%	50%
				CONTINGENCY	CONTINGENCY
				\$ (302,000.00)	\$ 503,000.00
SUBTOTAL				\$ 703,000.00	\$ 1,508,000.00
15% CONSULTING FEES				\$ 105,000.00	\$ 226,000.00
PROJECT TOTAL				\$ 808,000.00	\$ 1,734,000.00

* Costs of Water License Allocations are not included and if required will be dependant on availability and negotiation with third parties.

APPENDIX B:

PRESENT WORTH ANALYSIS



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Operations Cost										
Operation Unit Cost	(\$/m ³)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Operations Avg Day Cost	(\$/day)	13.70	14.29	14.60	14.92	15.24	16.95	23.82	29.46	36.45
Labour Unit Cost	(\$/m ³)	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.14
Labour Avg Day Cost	(\$/day)	81.51	85.05	86.88	88.75	90.65	100.83	141.71	175.30	216.85
Total Avg Day Cost	(\$)	95.21	99.34	101.48	103.66	105.89	117.77	165.52	204.76	253.30
Avg Day Unit Cost	(\$/m ³)	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.16
Administration Cost										
Administration Unit Cost	(\$/m ³)	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Administration Avg Day Cost	(\$/day)	24.54	25.61	26.16	26.72	27.30	30.36	42.67	52.79	65.30
Total Avg Day Cost	(\$)	24.54	25.61	26.16	26.72	27.30	30.36	42.67	52.79	65.30
Avg Day Unit Cost	(\$/m ³)	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04	0.04
Maintenance										
General Maintenance Allowance	(\$/day)	77.46	84.09	87.61	91.29	95.11	116.80	225.35	339.81	512.42
Total Avg Day Cost	(\$)	77.46	84.09	87.61	91.29	95.11	116.80	225.35	339.81	512.42
Avg Day Unit Cost	(\$/m ³)	0.12	0.13	0.13	0.13	0.13	0.15	0.21	0.26	0.32
Total Operation & Maintenance Costs										
Total Avg Day Cost	(\$)	229.62	243.76	251.18	258.86	266.80	310.75	514.61	714.27	1000.72
Avg Day Unit Cost	(\$/m ³)	0.36	0.36	0.37	0.37	0.37	0.39	0.48	0.54	0.62

Milk River Regional Water Supply Study Present Worth Analysis - Alternative 1

Initial Capital Cost: \$55,972,000
 Funding Rate: 90.00%
 Discount Rate: 5.00%
 Inflation Rate: 2.15 %
 Debenture Rate 5.220%

COST COMPONENTS	PRESENT WORTH											50 Year Total
		0	1	10	20	25	30	40	47	50		
		2024	2025	2034	2044	2049	2054	2064	2071	2074		
1 Regional Water Pipeline (No Funding)												
DEBENTURE PERIOD:												
Term: 30 years												
CAPITAL COSTS (\$):												
Initial Capital Cost	\$55,972,000											
Total	\$55,972,000	\$3,732,876	\$3,732,876	\$3,732,876	\$3,732,876	\$3,732,876	\$3,732,876	\$0	\$0	\$0	\$0	\$111,986,288
	\$57,383,000	\$3,732,876	\$3,732,876	\$3,732,876	\$3,732,876	\$3,732,876	\$3,732,876	\$0	\$0	\$0	\$0	\$111,986,288
ANNUAL OPERATION & MAINTENANCE COSTS (\$/yr):												
Operation, Maintenance, and Labour	\$2,478,000	\$83,813	\$78,325	\$113,425	\$137,493	\$160,365	\$187,500	\$258,207	\$324,890	\$359,013	\$9,354,863	
RWSC Charge Rate	\$9,117,000	\$226,170	\$235,653	\$341,051	\$514,287	\$631,536	\$775,516	\$1,169,435	\$1,558,999	\$1,763,443	\$38,426,297	
Total	\$11,595,000	\$309,982	\$313,978	\$454,476	\$651,780	\$791,901	\$963,016	\$1,427,641	\$1,883,888	\$2,122,456	\$47,781,160	
NET PRESENT WORTH:												
(Capital Cost + Annual Operation & Maintenance Costs):												
	\$68,978,000	\$4,042,858	\$4,046,854	\$4,187,352	\$4,384,656	\$4,524,777	\$963,016	\$1,427,641	\$1,883,888	\$2,122,456	\$159,767,447	
UNIT COST:												
Annual Production (m3)		235,593	240,305	287,187	350,079	386,516	426,745	520,200	597,546	634,120		
Capital Cost (\$/m3)		\$15.84	\$15.53	\$13.00	\$10.66	\$9.66	\$0.00	\$0.00	\$0.00	\$0.00		
O&M Cost (\$/m3)		\$1.32	\$1.31	\$1.58	\$1.86	\$2.05	\$2.26	\$2.74	\$3.15	\$3.35		
Total Cost (\$/m3)		\$17.16	\$16.84	\$14.58	\$12.52	\$11.71	\$2.26	\$2.74	\$3.15	\$3.35		
1 Regional Water Pipeline (Funding Included)												
DEBENTURE PERIOD:												
Term: 30 years												
CAPITAL COSTS (\$):												
Capital Cost	\$55,972,000											
Water for Life Eligible Capital Cost	\$50,375,000											
Non-Eligible Costs												
Total	\$5,597,000	\$5,738,000	\$373,274	\$373,274	\$373,274	\$373,274	\$373,274	\$0	\$0	\$0	\$0	\$11,198,229
ANNUAL OPERATION & MAINTENANCE COSTS (\$/yr):												
Operation, Maintenance, and Labour	\$2,478,000	\$83,813	\$78,325	\$113,425	\$137,493	\$160,365	\$187,500	\$258,207	\$324,890	\$359,013	\$9,354,863	
RWSC Charge Rate	\$9,117,000	\$226,170	\$235,653	\$341,051	\$514,287	\$631,536	\$775,516	\$1,169,435	\$1,558,999	\$1,763,443	\$38,426,297	
Total	\$11,595,000	\$309,982	\$313,978	\$454,476	\$651,780	\$791,901	\$963,016	\$1,427,641	\$1,883,888	\$2,122,456	\$47,781,160	
NET PRESENT WORTH:												
(Capital Cost + Annual Operation & Maintenance Costs):												
	\$17,333,000	\$683,256	\$687,252	\$827,750	\$1,025,054	\$1,165,175	\$963,016	\$1,427,641	\$1,883,888	\$2,122,456	\$58,979,388	
UNIT COST:												
Annual Production (m3)		235,593	240,305	287,187	350,079	386,516	426,745	520,200	597,546	634,120		
Capital Cost (\$/m3)		\$1.58	\$1.55	\$1.30	\$1.07	\$0.97	\$0.00	\$0.00	\$0.00	\$0.00		
O&M Cost (\$/m3)		\$1.32	\$1.31	\$1.58	\$1.86	\$2.05	\$2.26	\$2.74	\$3.15	\$3.35		
Total Cost (\$/m3)		\$2.90	\$2.86	\$2.88	\$2.93	\$3.01	\$2.26	\$2.74	\$3.15	\$3.35		

Milk River Regional Water Supply Study O&M Costs Alt 2

Engineer Input
To Be Determined
Not Applicable

Assumptions																							
General:	<table style="width: 100%;"> <tr> <td>Power Cost:</td> <td style="text-align: right;">0.12 \$/kW hr</td> </tr> <tr> <td>Gas Cost:</td> <td style="text-align: right;">9.62 \$/GJ</td> </tr> <tr> <td>Inflation:</td> <td style="text-align: right;">2.15 %</td> </tr> <tr> <td>Operations Annual Cost:</td> <td style="text-align: right;">20,000 \$/year</td> </tr> <tr> <td>Labour Annual Cost:</td> <td style="text-align: right;">119,000 \$/year</td> </tr> <tr> <td>Administration Annual Cost:</td> <td style="text-align: right;">35,834 \$/year</td> </tr> <tr> <td>Raw Water Conveyance:</td> <td style="text-align: right;">0 \$/m³</td> </tr> <tr> <td>Annual Electricity Consumption (Building):</td> <td style="text-align: right;">37,500 kWh/yr</td> </tr> <tr> <td>Annual Gas Consumption (Building):</td> <td style="text-align: right;">1,250 GJ/yr</td> </tr> </table>	Power Cost:	0.12 \$/kW hr	Gas Cost:	9.62 \$/GJ	Inflation:	2.15 %	Operations Annual Cost:	20,000 \$/year	Labour Annual Cost:	119,000 \$/year	Administration Annual Cost:	35,834 \$/year	Raw Water Conveyance:	0 \$/m ³	Annual Electricity Consumption (Building):	37,500 kWh/yr	Annual Gas Consumption (Building):	1,250 GJ/yr				
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	<table style="width: 100%;"> <tr> <td colspan="2">Process Chemical Consumption:</td> </tr> <tr> <td>Copper Sulfate Dosage Rate</td> <td style="text-align: right;">0.1 L/hr</td> </tr> <tr> <td>Density:</td> <td style="text-align: right;">2.286 kg/L</td> </tr> <tr> <td>Cost:</td> <td style="text-align: right;">2.82 \$/kg</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>Sodium Hypochlorite Dosage Rate</td> <td style="text-align: right;">0.16 L/hr</td> </tr> <tr> <td>Density:</td> <td style="text-align: right;">1.11 kg/L</td> </tr> <tr> <td>Cost:</td> <td style="text-align: right;">0.56 \$/kg</td> </tr> <tr> <td colspan="2"> </td> </tr> <tr> <td>Chlorine Gas Dosage Rate:</td> <td style="text-align: right;">3.18 mg/L</td> </tr> <tr> <td>Cost:</td> <td style="text-align: right;">0.98 \$/kg</td> </tr> </table>	Process Chemical Consumption:		Copper Sulfate Dosage Rate	0.1 L/hr	Density:	2.286 kg/L	Cost:	2.82 \$/kg			Sodium Hypochlorite Dosage Rate	0.16 L/hr	Density:	1.11 kg/L	Cost:	0.56 \$/kg			Chlorine Gas Dosage Rate:	3.18 mg/L	Cost:	0.98 \$/kg
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WTP General:	<table style="width: 100%;"> <tr> <td>Filter Media Life Expectancy</td> <td style="text-align: right;">50 years</td> </tr> <tr> <td>Sand</td> <td style="text-align: right;">42 m³</td> </tr> <tr> <td>Anthracite</td> <td style="text-align: right;">0 m³</td> </tr> <tr> <td>Sand Cost</td> <td style="text-align: right;">800 \$/m³</td> </tr> <tr> <td>Anthracite Cost</td> <td style="text-align: right;">3000 \$/m³</td> </tr> <tr> <td>Number of Filter Trains:</td> <td style="text-align: right;">3 Trains</td> </tr> <tr> <td>Maintenance Allowance Unit Cost:</td> <td style="text-align: right;">0.12 \$/m³</td> </tr> <tr> <td>Net Potable Water Production:</td> <td style="text-align: right;">0.435 MLD</td> </tr> <tr> <td>WTP Efficiency:</td> <td style="text-align: right;">65 %</td> </tr> </table>	Filter Media Life Expectancy	50 years	Sand	42 m ³	Anthracite	0 m ³	Sand Cost	800 \$/m ³	Anthracite Cost	3000 \$/m ³	Number of Filter Trains:	3 Trains	Maintenance Allowance Unit Cost:	0.12 \$/m ³	Net Potable Water Production:	0.435 MLD	WTP Efficiency:	65 %				
Filter Media Life Expectancy	50 years																						
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Net Potable Water Production:	0.435 MLD																						
WTP Efficiency:	65 %																						
Raw Water Pumping:	<table style="width: 100%;"> <tr> <td>Quantity:</td> <td style="text-align: right;">2 units</td> </tr> <tr> <td>Pump Head Required:</td> <td style="text-align: right;">80 m</td> </tr> <tr> <td>Power:</td> <td style="text-align: right;">55.927 kW</td> </tr> <tr> <td>Duty Point:</td> <td style="text-align: right;">47.6 L/s</td> </tr> </table>	Quantity:	2 units	Pump Head Required:	80 m	Power:	55.927 kW	Duty Point:	47.6 L/s														
Quantity:	2 units																						
Pump Head Required:	80 m																						
Power:	55.927 kW																						
Duty Point:	47.6 L/s																						
Copper Sulfate Pumping:	<table style="width: 100%;"> <tr> <td>Mixer</td> <td style="text-align: right;">0.037284994 kW</td> </tr> <tr> <td>Motor</td> <td style="text-align: right;">0.15 kW</td> </tr> </table>	Mixer	0.037284994 kW	Motor	0.15 kW																		
Mixer	0.037284994 kW																						
Motor	0.15 kW																						
Sedimentation Basin Aeration Basin:	<table style="width: 100%;"> <tr> <td>Quantity:</td> <td style="text-align: right;">2 units</td> </tr> <tr> <td>Aerator:</td> <td style="text-align: right;">3.73 kW</td> </tr> <tr> <td>Motor:</td> <td style="text-align: right;">0.1864 kW</td> </tr> </table>	Quantity:	2 units	Aerator:	3.73 kW	Motor:	0.1864 kW																
Quantity:	2 units																						
Aerator:	3.73 kW																						
Motor:	0.1864 kW																						
Slow Sand Filter	<table style="width: 100%;"> <tr> <td>Filtration Rate:</td> <td style="text-align: right;">25 L/s</td> </tr> </table>	Filtration Rate:	25 L/s																				
Filtration Rate:	25 L/s																						
Post-Filtration Booster Pump:	<table style="width: 100%;"> <tr> <td>Quantity:</td> <td style="text-align: right;">3 units</td> </tr> <tr> <td>Power:</td> <td style="text-align: right;">7.457 kW</td> </tr> <tr> <td>Duty Point:</td> <td style="text-align: right;">58 L/s</td> </tr> </table>	Quantity:	3 units	Power:	7.457 kW	Duty Point:	58 L/s																
Quantity:	3 units																						
Power:	7.457 kW																						
Duty Point:	58 L/s																						
UV Reactor (x2)	<table style="width: 100%;"> <tr> <td>Quantity:</td> <td style="text-align: right;">2 units</td> </tr> <tr> <td>Power:</td> <td style="text-align: right;">2.925 kW</td> </tr> <tr> <td>Minimum Flow Rate:</td> <td style="text-align: right;">25 L/s</td> </tr> </table>	Quantity:	2 units	Power:	2.925 kW	Minimum Flow Rate:	25 L/s																
Quantity:	2 units																						
Power:	2.925 kW																						
Minimum Flow Rate:	25 L/s																						
Booster to Plant Service Water	<table style="width: 100%;"> <tr> <td>Quantity:</td> <td style="text-align: right;">2 units</td> </tr> <tr> <td>Power:</td> <td style="text-align: right;">0.75 kW</td> </tr> </table>	Quantity:	2 units	Power:	0.75 kW																		
Quantity:	2 units																						
Power:	0.75 kW																						
Sodium Hypochlorite Pumping	<table style="width: 100%;"> <tr> <td>Motor</td> <td style="text-align: right;">0.1 kW</td> </tr> </table>	Motor	0.1 kW																				
Motor	0.1 kW																						

Projected Operational Costs

Year	Unit	2024	2026	2027	2028	2029	2034	2050	2060	2070
Milk River + Coutts Projected Water Usage										
Total	Avg Day (m ³ /day)	645	672	685	699	713	787	1,080	1,317	1,605
	Max Day (m ³ /day)	1,725	1,795	1,831	1,867	1,905	2,103	2,887	3,519	4,290

Operations Cost										
Operation Unit Cost	(\$/m ³)	0.08	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Operations Avg Day Cost	(\$/day)	54.79	57.18	58.41	59.66	60.94	67.78	95.27	117.85	145.78
Labour Unit Cost	(\$/m ³)	0.51	0.51	0.51	0.51	0.51	0.51	0.52	0.53	0.54
Labour Avg Day Cost	(\$/day)	326.03	340.20	347.51	354.98	362.62	403.31	566.83	701.19	867.40
Total Avg Day Cost	(\$)	380.82	397.37	405.92	414.64	423.56	471.09	662.09	819.04	1013.18
Avg Day Unit Cost	(\$/m ³)	0.59	0.59	0.59	0.59	0.59	0.60	0.61	0.62	0.63
Administration Cost										
Administration Unit Cost	(\$/m ³)	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.16	0.16
Administration Avg Day Cost	(\$/day)	98.18	102.44	104.64	106.89	109.19	121.45	170.69	211.15	261.20
Total Avg Day Cost	(\$)	98.18	102.44	104.64	106.89	109.19	121.45	170.69	211.15	261.20
Avg Day Unit Cost	(\$/m ³)	0.15	0.15	0.15	0.15	0.15	0.15	0.16	0.16	0.16
Maintenance										
Filter Replacement	(\$/day)	6	6	6	6	6	7	10	12	15
General Maintenance Allowance	(\$/day)	77.46	84.09	87.61	91.29	95.11	116.80	225.35	339.81	512.42
Total Avg Day Cost	(\$)	82.98	89.85	93.50	97.30	101.26	123.63	234.95	351.69	527.11
Avg Day Unit Cost	(\$/m ³)	0.13	0.13	0.14	0.14	0.14	0.16	0.22	0.27	0.33
Total Operation & Maintenance Costs										
Total Avg Day Cost	(\$)	643.89	676.68	693.76	711.31	729.35	827.42	1253.04	1639.98	2164.32
Avg Day Unit Cost	(\$/m ³)	1.00	1.01	1.01	1.02	1.02	1.05	1.16	1.25	1.35

Milk River Regional Water Supply Study Present Worth Analysis - Alternative 2a

Initial Capital Cost: \$6,243,000
 Funding Rate: 90.00%
 Discount Rate: 5.00%
 Inflation Rate: 2.15 %
 Debenture Rate 5.220%

COST COMPONENTS	PRESENT WORTH	0	1	10	20	25	30	40	47	50	50 Year Total	
		2024	2025	2034	2044	2049	2054	2064	2071	2074		
2 Water Treatment Upgrade (No Funding)												
DEBENTURE PERIOD:		Term: 30 years										
CAPITAL COSTS (\$):												
Initial Capital Cost	\$6,243,000	\$416,357	\$416,357	\$416,357	\$416,357	\$416,357	\$0	\$0	\$0	\$0	\$12,490,717	
WTP Capital Cost @ 2024	\$20,804,000	\$1,387,457	\$1,387,457	\$1,387,457	\$1,387,457	\$1,387,457	\$0	\$0	\$0	\$0	\$41,623,718	
Total	\$27,047,000	\$1,803,814	\$1,803,814	\$1,803,814	\$1,803,814	\$1,803,814	\$0	\$0	\$0	\$0	\$54,114,434	
ANNUAL OPERATION & MAINTENANCE COSTS (\$/yr):												
Operation, Maintenance, and Labour	\$0										\$0	
OML for Plant	\$8,635,000	\$326,276	\$333,291	\$403,616	\$499,290	\$555,321	\$617,641	\$764,047	\$886,724	\$945,156	\$29,730,292	
Total	\$8,635,000	\$326,276	\$333,291	\$403,616	\$499,290	\$555,321	\$617,641	\$764,047	\$886,724	\$945,156	\$29,730,292	
NET PRESENT WORTH: (Capital Cost + Annual Operation & Maintenance Costs):		\$36,364,000	\$2,130,090	\$2,137,105	\$2,207,431	\$2,303,104	\$2,359,136	\$617,641	\$764,047	\$886,724	\$945,156	\$83,844,726
UNIT COST:												
Annual Production (m3)		235,593	240,305	287,187	350,079	386,516	426,745	520,200	597,546	634,120		
Capital Cost (\$/m3)		\$7.66	\$7.51	\$6.28	\$5.15	\$4.67	\$0.00	\$0.00	\$0.00	\$0.00		
O&M Cost (\$/m3)		\$1.38	\$1.39	\$1.41	\$1.43	\$1.44	\$1.45	\$1.47	\$1.48	\$1.49		
Total Cost (\$/m3)		\$9.04	\$8.89	\$7.69	\$6.58	\$6.10	\$1.45	\$1.47	\$1.48	\$1.49		
2 Water Treatment Upgrade (Funding Included)												
DEBENTURE PERIOD:		Term: 30 years										
CAPITAL COSTS (\$):												
Initial Capital Cost	\$6,243,000											
Water for Life Eligible Capital Cost	\$6,243,000											
Non-Eligible Costs	\$0											
Water for Life Eligible Grants	\$5,619,000											
Payable Capital Cost	\$624,000	\$41,616	\$41,616	\$41,616	\$41,616	\$41,616					\$1,248,471	
WTP Capital Cost @ 2024, Discounted	\$4,160,800	\$277,491	\$277,491	\$277,491	\$277,491	\$277,491					\$8,324,744	
Total	\$4,784,800	\$319,107	\$319,107	\$319,107	\$319,107	\$319,107					\$9,573,215	
ANNUAL OPERATION & MAINTENANCE COSTS (\$/yr):												
Operation, Maintenance, and Labour	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	
OML for Plant @ 2071	\$8,635,000	\$326,276	\$333,291	\$403,616	\$499,290	\$555,321	\$617,641	\$764,047	\$886,724	\$945,156	\$29,730,292	
Total	\$8,635,000	\$326,276	\$333,291	\$403,616	\$499,290	\$555,321	\$617,641	\$764,047	\$886,724	\$945,156	\$29,730,292	
NET PRESENT WORTH: (Capital Cost + Annual Operation & Maintenance Costs):		\$13,540,000	\$645,383	\$652,398	\$722,724	\$818,397	\$874,429	\$617,641	\$764,047	\$886,724	\$945,156	\$39,303,507
UNIT COST:												
Annual Production (m3)		235,593	240,305	287,187	350,079	386,516	426,745	520,200	597,546	634,120		
Capital Cost (\$/m3)		\$1.35	\$1.33	\$1.11	\$0.91	\$0.83	\$0.00	\$0.00	\$0.00	\$0.00		
O&M Cost (\$/m3)		\$1.38	\$1.39	\$1.41	\$1.43	\$1.44	\$1.45	\$1.47	\$1.48	\$1.49		
Total Cost (\$/m3)		\$2.74	\$2.71	\$2.52	\$2.34	\$2.26	\$1.45	\$1.47	\$1.48	\$1.49		

Milk River Regional Water Supply Study Present Worth Analysis - Alternative 2b

Initial Capital Cost: \$6,243,000
 Funding Rate: 90.00%
 Discount Rate: 5.00%
 Inflation Rate: 2.15 %
 Debenture Rate 5.220%

COST COMPONENTS	PRESENT WORTH											50 Year Total
		0	1	10	20	25	30	40	47	50		
		2024	2025	2034	2044	2049	2054	2064	2071	2074		
2 Water Treatment Upgrade (No Funding)												
DEBENTURE PERIOD:												
Term: 30 years												
CAPITAL COSTS (\$):												
Initial Capital Cost	\$6,243,000	\$416,357	\$416,357	\$416,357	\$416,357	\$416,357	\$0	\$0	\$0	\$0	\$0	\$12,490,717
WTP Capital Cost @ 2071	\$20,804,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$56,539,281	\$0	\$0	\$56,539,281
WTP Upgrade Allowance	\$12,500,000	\$0	\$2,553,750	\$3,092,600	\$3,825,669	\$0	\$4,732,506	\$5,854,298	\$0	\$0	\$0	\$20,058,823
Total	\$39,547,000	\$19,169,000	\$416,357	\$2,970,107	\$3,508,957	\$4,242,027	\$416,357	\$4,732,506	\$5,854,298	\$56,539,281	\$0	\$89,088,821
ANNUAL OPERATION & MAINTENANCE COSTS (\$/yr):												
Operation, Maintenance, and Labour	\$6,493,000	\$235,019	\$240,923	\$302,009	\$390,610	\$445,407	\$508,853	\$668,154	\$0	\$0	\$0	\$21,302,267
OML for Plant @ 2071	\$3,243,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$886,724	\$945,156	\$0	\$3,662,933
Total	\$6,820,000	\$235,019	\$240,923	\$302,009	\$390,610	\$445,407	\$508,853	\$668,154	\$886,724	\$945,156	\$0	\$24,965,200
NET PRESENT WORTH:												
(Capital Cost + Annual Operation & Maintenance Costs):												
	\$25,989,000	\$651,376	\$3,211,030	\$3,810,966	\$4,632,636	\$861,764	\$5,241,358	\$6,522,453	\$57,426,005	\$945,156	\$0	\$114,054,020
UNIT COST:												
Annual Production (m3)		235,593	240,305	287,187	350,079	386,516	426,745	520,200	597,546	634,120	634,120	
Capital Cost (\$/m3)		\$1.77	\$12.36	\$12.22	\$12.12	\$1.08	\$11.09	\$11.25	\$94.62	\$0.00	\$0.00	
O&M Cost (\$/m3)		\$1.00	\$1.00	\$1.05	\$1.12	\$1.15	\$1.19	\$1.28	\$1.48	\$1.49	\$1.49	
Total Cost (\$/m3)		\$2.76	\$13.36	\$13.27	\$13.23	\$2.23	\$12.28	\$12.54	\$96.10	\$1.49	\$1.49	
2 Water Treatment Upgrade (Funding Included)												
DEBENTURE PERIOD:												
Term: 30 years												
CAPITAL COSTS (\$):												
Initial Capital Cost	\$6,243,000											
Water for Life Eligible Capital Cost	\$6,243,000											
Non-Eligible Costs	\$0											
Water for Life Eligible Grants	\$5,619,000											
Payable Capital Cost	\$624,000	\$41,616	\$41,616	\$41,616	\$41,616	\$41,616	\$0	\$0	\$0	\$0	\$0	\$1,248,471
WTP Upgrade Allowance	\$12,500,000	\$0	\$2,553,750	\$3,092,600	\$3,825,669	\$0	\$4,732,506	\$5,854,298	\$0	\$0	\$0	\$20,058,823
WTP Capital Cost @ 2071, Discounted	\$4,161,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$11,307,856	\$0	\$0	\$11,307,856
Total	\$17,285,000	\$9,059,000	\$41,616	\$2,595,366	\$3,134,215	\$3,867,285	\$41,616	\$4,732,506	\$5,854,298	\$11,307,856	\$0	\$32,615,151
ANNUAL OPERATION & MAINTENANCE COSTS (\$/yr):												
Operation, Maintenance, and Labour	\$6,493,000	\$235,019	\$240,923	\$302,009	\$390,610	\$445,407	\$508,853	\$668,154	\$0	\$0	\$0	\$21,302,267
OML for Plant @ 2071	\$3,243,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$886,724	\$945,156	\$0	\$3,662,933
Total	\$6,820,000	\$235,019	\$240,923	\$302,009	\$390,610	\$445,407	\$508,853	\$668,154	\$886,724	\$945,156	\$0	\$24,965,200
NET PRESENT WORTH:												
(Capital Cost + Annual Operation & Maintenance Costs):												
	\$15,879,000	\$276,635	\$2,836,288	\$3,436,225	\$4,257,895	\$487,022	\$5,241,358	\$6,522,453	\$12,194,580	\$945,156	\$0	\$57,580,350
UNIT COST:												
Annual Production (m3)		235,593	240,305	287,187	350,079	386,516	426,745	520,200	597,546	634,120	634,120	
Capital Cost (\$/m3)		\$0.18	\$10.80	\$10.91	\$11.05	\$0.11	\$11.09	\$11.25	\$18.92	\$0.00	\$0.00	
O&M Cost (\$/m3)		\$1.00	\$1.00	\$1.05	\$1.12	\$1.15	\$1.19	\$1.28	\$1.48	\$1.49	\$1.49	
Total Cost (\$/m3)		\$1.17	\$11.80	\$11.97	\$12.16	\$1.26	\$12.28	\$12.54	\$20.41	\$1.49	\$1.49	

Request for Decision

Milk River Ladies Evening Golf League

July 8, 2024



RECOMMENDATION

That Council approve a donation to the Milk River Ladies Evening Golf League in the amount of \$_____ for hole and/or door prizes.

LEGISLATIVE AUTHORITY

BACKGROUND

Milk River Ladies Evening Golf League is hosting a Golf Tournament on July 13th.

The organizing committee is requesting a donation towards hole or door prizes.

RISKS/CONSEQUENCES

1. Council may provide further direction on any item contained in the report. Council shall be specific in the direction it provides.

FINANCIAL CONSIDERATIONS

ATTACHMENTS

1. Letter

Milk River Ladies Golf Tournament
July 13th, 2024

Dear Donor,

Milk River Ladies Evening Golf League is excited to host our ladies' tournament on July 13th, 2024. We already have a huge interest with more ladies signing up. We anticipate an excellent turnout this year. We would like to ask you for donations that we can use as door raffles and/or hole prizes.

If you would like to donate, please by July 11th, contact Caitlyn Schamber (403-647-4309) or drop off your donation at B & C Insurance. Once again we thank you for your support, your business name will be displayed at our registration table. With your help, we are confident that we can put on a great event!

Sincerely,
The Milk River Ladies Evening Golf League

Community Futures Chinook Beautification Program Invoice

Request for Decision

Community Futures Chinook Beautification Program Invoice

July 8, 2024



RECOMMENDATION

That Council approve payment of the Community Futures Chinook Investment Fund Invoice for the beautification loan program in the Town of Milk River in the amount of \$15,000.

LEGISLATIVE AUTHORITY

BACKGROUND

Council approved the 2024 operating budget on April 23, 2024. The original amount approved to participate in the Community Futures Chinook Beautification Loan program was \$10,000. The additional \$5,000 is to provide for the loan interest.

RISKS/CONSEQUENCES

1. Council may provide further direction on any item contained in the report. Council shall be specific in the direction it provides.

FINANCIAL CONSIDERATIONS

ATTACHMENTS

1. CF Chinook Invoice

Community Futures Chinook Investment Fund
5324 - 48 Avenue Taber, AB T1G 1S4

Invoice

Invoice # 11

Invoice Date 06/19/2024

Due Date 06/19/2024

Case:

P.O. Number:

Bill To:
Town of Milk River.

Description	Qty	Rate	Amount
Beautification Program - Grant		10,000.00	10,000.00
Beautification Program - Interest		5,000.00	5,000.00

Payments/Credits \$0.00

Balance Due \$15,000.00

Request for Decision

DTR Services Ltd. Invoice

July 8, 2024



RECOMMENDATION

That Council approve payment of \$114,666.30 to DTR Services Ltd., for an emergency generator.

LEGISLATIVE AUTHORITY

BACKGROUND

On the approved 2024 Capital Plan, one of the items was an emergency generator, with payment to be covered by a grant. The generator was ordered, and the grant application did not go through.

Although the capital budget was approved, the allocation of where the dollars were to come from has changed. Administration is looking at reserves to cover the amount of the invoice.

The purpose of this generator is for emergency purposes, scheduled to be placed at the Civic Centre which is also the designated community emergency centre.

RISKS/CONSEQUENCES

1. Council may provide further direction on any item contained in the report. Council shall be specific in the direction it provides.

FINANCIAL CONSIDERATIONS

ATTACHMENTS

1. Invoice



DTR Services Limited
 #3, 525 - 39 Street North
 Lethbridge, AB T1H5B8
 CANADA
 4033209550

PAGE 1
 INVOICE NO 26254
 INVOICE DATE 10-May-24

S TOWMIL
O TOWN OF MILK RIVER
L BOX 270
D 240 MAIN STREET
 MILK RIVER, AB T0K1M0
T
O

S TOWN OF MILK RIVER
H RANDY
I HALL EMERGENCY GENERATOR
P MILK RIVER, AB T0K1M0
T
O

TOTAL DUE 114,666.30

SLS1	SLS2	DUE DATE	DISC DUE DATE	ORDER NO	ORDER DATE	SHIP NO
100		09-Jun-24	10-May-24	00041389	29-Mar-23	

TERMS DESCRIPTION	CUSTOMER PO NO	SHIP VIA	SHIP DATE
NET 30 DAYS	TBI	Picked Up	10-May-24

ITEM ID	TX CL	UNITS	ORDERED	SHIPPED	UNIT PRICE	EXTENSION
NGP HFW130 HIPOWER 130KW 120/208V 400A IVECO DIESEL STAMFORD GENERATOR SAFETY SHUT DOWNS 12 VOLT OIL DRAIN EXTENSION EMEGENCY STOP COLD WEATHER PACKAGE DEEP SEA CONTROLER 72 DBA 26-28 WEEKS DLEIVERY SO ONE THING HAS IMPROVED FRT EXTRA	1	EA	1.0000	1.0000	89,997.0000	89,997.00
NGP ASCO LIFE SAFTY TRANSFER PANEL 400A MUST BE USED IF 24 HOUR OCCUPANCY IS REQUIRED FRT TO BE DETERMINED COMMISSIONING NOT INCLUDED FACTORY WARRANTY REQUIRES COMMISSIONING TO BE PERFORMED	1	EA	1.0000	1.0000	14,734.0000	14,734.00
FREIGHT INCOMING FRT TO LETHBRIDGE	1	EA	1.0000	1.0000	4,475.0000	4,475.00



DTR Services Limited
 #3, 525 - 39 Street North
 Lethbridge, AB T1H5B8
 CANADA
 4033209550

PAGE 2
INVOICE NO 26254
INVOICE DATE 10-May-24

S TOWMIL
O TOWN OF MILK RIVER
L BOX 270
D 240 MAIN STREET
 MILK RIVER, AB T0K1M0
T
O

S TOWN OF MILK RIVER
H RANDY
I HALL EMERGENCY GENERATOR
P MILK RIVER, AB T0K1M0
T
O

TOTAL DUE 114,666.30

SLS1	SLS2	DUE DATE	DISC DUE DATE	ORDER NO	ORDER DATE	SHIP NO
100		09-Jun-24	10-May-24	00041389	29-Mar-23	

TERMS DESCRIPTION	CUSTOMER PO NO	SHIP VIA	SHIP DATE
NET 30 DAYS	TBI	Picked Up	10-May-24

ITEM ID	TX CL	UNITS	ORDERED	SHIPPED	UNIT PRICE	EXTENSION
---------	-------	-------	---------	---------	------------	-----------

Reprint

We appreciate your business. 857585970RT0001

TAXABLE	NONTAXABLE	FREIGHT	SALES TAX	MISC	TOTAL
109,206.00	0.00	0.00	5,460.30	0.00	114,666.30
TOTAL DUE					114,666.30

Request for Decision

Community Garden Property Tax Waiver Request

July 8, 2024



RECOMMENDATION

That Council waives the Community Garden Property Tax Waiver Request in the amount of \$366.32.

LEGISLATIVE AUTHORITY

BACKGROUND

In the 2024 Operating Budget, an amount of \$1,000 was approved for the Community Garden. \$656.00 has been paid to date for insurance.

RISKS/CONSEQUENCES

1. Council may provide further direction on any item contained in the report. Council shall be specific in the direction it provides.

FINANCIAL CONSIDERATIONS

2-11-00-770-00 \$366.32

ATTACHMENTS

1. Tax Notice

TOWN OF MILK RIVER

Box 270
240 Main Street
Milk River, AB T0K 1M0
(403) 647-3773



2024

**TAXATION NOTICE
& PROPERTY ASSESSMENT**

ROLL NO.	PROP. SIZE	RIVER LOT	QUAD PORT	QUAD	SEC	TWP	RGE	MER
506000	0				0	0	0	0
SUBDIVISION NAME								
CIVIC ADDRESS		217 MAIN STREET N.W.						
MORTGAGE NUMBER	PLAN	BLOCK	LOT					
	2227Y	5	6					
MORTGAGE COMPANY NAME								

DATE OF MAILING	2024-May-22
NOTICE OF ASSESSMENT	2024-May-29
DUE DATE	2024-Aug-31

ASSESSMENT COMPLAINT MUST BE RECEIVED	
ON OR BEFORE	2024-Jul-24



Canada

PREVIOUS ASSESSMENT		CURRENT ASSESSMENT	
DESCRIPTION	AMOUNT	DESCRIPTION	AMOUNT
COMMERCIAL - VACANT	12,910	COMMERCIAL - VACANT	12,910
TOTAL ASSESSMENT	12,910	TOTAL ASSESSMENT	12,910
		EXEMPT	0
		TAXABLE	12,910

IMPORTANT PENALTY INFORMATION

PAST DUE taxes will continue to accrue monthly penalties. Penalties on CURRENT taxes will be levied as follows: 5% Penalty on September 1st, 2024, 1.5% Penalty will be imposed on the unpaid balance on the first day of each month thereafter. Receipt for taxes paid can be requested via letter, email or in person at the Town Hall.

EDUCATION TAXES	TAX RATE	% OF TOTAL	TAX AMOUNT
NON RES. ASFF (SCHOOL TAX)	0.003248040	11.44628	41.93
TOTAL 2024 EDUCATION TAXES			41.93
SUB TOTAL 2024 TAXES			41.93

FOR COMPARISON 2023 TAXES (NOT INCLUDING LOCAL IMPROVEMENTS) WERE 369.59

MUNICIPAL AND OTHER TAXES	TAX RATE	% OF TOTAL	TAX AMOUNT
HOMES FOR THE AGED	0.000253990	0.89539	3.28
NON RES. GENERAL MUNICIPAL	0.021000000	74.00906	271.11
ROADS OP. LEVY	0.000000000	13.64927	50.00
TOTAL 2024 MUNICIPAL AND OTHER TAXES			324.39
SUB TOTAL 2024 TAXES			366.32

Take notice that you have been assessed under the provisions of the Municipal Government Act for the above mentioned property and taxes are now due and payable as shown. In the event of non-payment, the said taxes may be recovered as provided in the Municipal Government Act.

TOTAL 2024 TAXES	366.32
CURRENT OUTSTANDING	0.00
TOTAL CURRENT TAXES PAYABLE FOR 2024	366.32

Your property has been assessed as shown for the above taxation year. The assessment roll will be open for inspection during office hours.
IF YOU OR YOUR AGENT WISH TO FILE A COMPLAINT TO THE ASSESSMENT REVIEW BOARD, YOU OR YOUR AGENT MUST SUBMIT YOUR COMPLAINT IN WRITING ON OR BEFORE JULY 24, 2024 TO THE CLERK OF THE ASSESSMENT REVIEW BOARD, 240 Main Street, Milk River.

September 1, 2024 on outstanding taxes.	384.64
October 1, 2024 on outstanding taxes. See other important penalty information.	390.13

TOWN OF MILK RIVER

Box 270
240 Main Street
Milk River, AB T0K 1M0
(403) 647-3773



ROLL NUMBER	506000
LAST DATE BEFORE PENALTY	2024-Aug-31

2024

**TAXATION NOTICE
& PROPERTY ASSESSMENT**

ARREARS OR CREDIT	CURRENT TAXES	NET DUE
0.00	366.32	366.32

AMOUNT DUE PLEASE PAY	366.32
AMOUNT PAID	

PLEASE SUBMIT THIS PORTION WHEN MAKING PAYMENT. THANK YOU.



⑈00506000⑈

Town of Milk River
240 Main Street
Milk River, AB T0K 1M0

July 2, 2024
File:N:\1440-041-10\L01

Attention: Barry Salter
Public Works Supervisor

Dear Mr. Salter,

Re: Town of Milk River - Swimming Pool Assessment

The Town of Milk River (Town) retained MPE a division of Englobe (MPE) to provide a condition assessment at the pool located at 305, 3rd Ave NE, Milk River, Alberta. This cursory review was performed by Craig Ambler and Brandon Granson from MPE, on May 23, 2024, multiple Town employees were on site as well. This letter is intended to provide condition and recommendations for the small pool, main pool and building.

Small Pool

The overall condition of the small pool was poor. The small pool's concrete basin exhibits large cracks and spalling (flaking) concrete, creating significant tripping and toe-stub hazards. Additionally, extensive paint chipping poses aesthetic concerns. The perimeter of the small pool was concrete covered with rubber pavers. Beneath the rubber pavers, large amounts of mold build-up and ant infestations were observed as well as foliage and debris build up between the pavers. A buildup of water on top of the rubber pavers also showed drains that are not able to drain water effectively. It was made clear by Town staff that the water lines from the mechanical room to the small pool are no longer operational and haven't been for at least 5 years. Access to the pool is located next to the mechanical room door. If the door is left open, it creates a bottleneck and disrupts traffic flow in the area.



Figure 1 - Beneath Rubber Pavers, Mold, mildew, ants



Figure 2 - Cracking/Spalling of the small pool basin

The small pool basin suffers from significant cracks and deterioration. Repairing it would be cost-prohibitive, requiring a complete rebuild. Filling the existing basin with concrete creates a flat platform ideal for a spray park. This eliminates the need for chlorine in the water supply and allows for easy drainage and repurposing of water for irrigation. Once transformed into a spray park, removing a portion or all of the dividing fence between the main pool and the repurposed area would improve traffic flow around the mechanical room door, alleviating congestion.



Figure 3 - Poor Drainage



Figure 4- Debris Collecting in basin, leading to staining

Main Pool

The larger pool was observed to be a concrete base covered with a vinyl liner. This liner showed deterioration including staining, but otherwise was in good condition. Also, it was observed in the deep end of the pool that water is being trapped underneath this liner, creating large pockets of water that could cause damage to the liner. The skimmer drain was observed to have deteriorated and cracked around the top. Also, the skimmer box was cracking with some pieces of the inside of the box broken off. Additionally, the rubber surfacing covering the pool deck appeared to be cracked in some areas. The fencing surrounding the pool area was subject to corrosion, as well as other damage including bending of the fence itself.



Figure 5 – Stained Vinyl Liner



Figure 6- Peeling Rubber Surface



Figure 7 –Cracked Skimmer Drain



Figure 8- Cracked Skimmer

It is recommended, in areas where water is being trapped underneath the liner, that the water be squeegeed out from underneath it and then re-adhered at spots where the liner is open or cracked, so no water can enter. It is also recommended to re-adhere areas of the rubber surfacing of the pool deck where cracking is present. It is suggested that the fence surrounding the large pool be replaced.



Figure 9 – Stained Vinyl Liner



Figure 10- Peeling Rubber Surface

Building and Perimeter

A visual inspection was conducted in both the guard room and change rooms, revealing multiple leaks originating from the roof. No leaks were found in the mechanical room; they were isolated to the guard room and both male and female change rooms. These leaks have led to pooling of water, visible stains on the walls and floors, and water damage to the wood slats on the ceiling. Identifying the exact source of the leaks was not possible due to the wood slats on the ceiling. Given the age of the current roof and the persistent leaks, there's a risk that the roof's structural integrity may be compromised over time. The exterior roofing displayed signs of damage, with the tar roofing peeling off in certain areas, suggesting a potential risk of water damage to the interior. It was also observed that the metal trim around the edge of the roof was subject to large amounts of paint chipping.



Figure 11 – Water Damaged Ceiling Slats



Figure 12- Water Stained Floors from Roof Leaks

Considering the extent of the damage and the nature of the leaks, it is recommended to undertake a complete replacement of the existing roof to ensure long-term structural integrity and prevent further water damage. In both the male and female changerooms areas of reduced lighting were noticed creating dark spots. It is recommended to switch to LED lighting and add lighting to dark areas such as over the toilets.



Figure 13 - Deteriorated Roofing Material



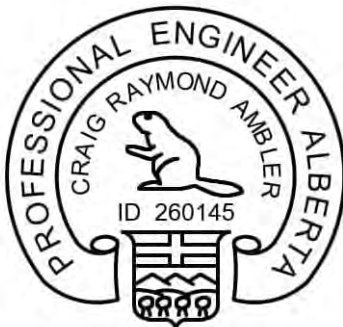
Figure 14 - Damaged Flashing

Conclusion

MPE can offer Structural, Mechanical, Electrical, and Civil engineering services if the Town of Milk River would like to proceed with the repairs and recommendations made within this letter. If you have any questions, comments, or concerns please feel free to contact the undersigned.


Yours truly,

MPE a division of Englobe



July 4, 2024

Craig Ambler, P.Eng.
Structural Engineer
cambler@mpe.ca
(403) 329-3442

PERMIT TO PRACTICE	
MPE, a division of Englobe Corp.	
Signature	
APEGA ID	107563
Date	July 4, 2024
PERMIT NUMBER: P 7841	
The Association of Professional Engineers and Geoscientists of Alberta (APEGA)	

Calvin van Mulligen, M.Sc., P.Eng.
Structural Director
cvanmulligen@mpe.ca
(403) 359-4095

From: Nicole Paul <npaul@warnercounty.ca>
Sent: July 4, 2024 10:15 AM
To: Kelly Lloyd
Cc: Nicole Paul
Subject: Support letter Request
Attachments: Letter of Support - Public Trust Grant_NP.docx

CAUTION: This email originated from outside your organization. Exercise caution when opening attachments or clicking links, especially from unknown senders.

Good morning,

The County of Warner is applying for a Resiliency and Public Trust Program grant, for the purpose of developing a Livestock Disaster Preparedness and Emergency Response Plan. Our current Municipal Emergency Plan does not have a livestock-specific section, so this undertaking will provide us with that missing component. Headed by our Agricultural Services Department, our intention is to develop a continual livestock safety monitoring program, learn safe-handling methods and resilient livestock emergency practices, and to incorporate this into our Municipal Emergency Plan.

The County asks for your support with this project, in the form of a letter to be included with the grant application. I plan to submit the grant application on August 01, 2024.

A sample letter has been attached for you to use, at your discretion. Please don't hesitate to contact me if you would like more information about this project.

Thank you kindly,

Nikki Paul
Municipal Clerk
Director of Emergency Management
County of Warner No. 5
www.warnercounty.ca

P: 403-642-3635
C: 403-421-0054
npaul@warnercounty.ca

Date, 2024

Nikki Paul
Director of Emergency Management
County of Warner No. 5
Warner, AB
T0K 2L0

RE: Resiliency and Public Trust Program Grant

To Whom It May Concern:

This letter is to confirm that [Your Organization] supports the application made by the County of Warner for the Resiliency and Public Trust Program grant, to fund the development and delivery of a Livestock Disaster Preparedness and Emergency Response Plan.

We strongly believe in supporting the County of Warner's commitment to collaborate with county ratepayers and stakeholders, to proactively implement and maintain structured Livestock Emergency Response practices within the county. Efficient emergency response initiatives increase public trust as well as resiliency in the local agriculture sector.

We look forward to the development of cohesive emergency plans and strategies which will address the specific local needs of county residents, producers and livestock owners in the region.

Sincerely,

Request for Decision

Councillor Reports

July 8, 2024



RECOMMENDATION

That the Councillors reports for the period ending July 8, 2024, be accepted as information.

LEGISLATIVE AUTHORITY

BACKGROUND

Elected Officials, appointed at the annual organizational meeting, attend regular meetings of various boards, commissions, and committees. Each elected official is required to keep Council informed by providing regular activity of the board, commission, or committee they are appointed to.

RISKS/CONSEQUENCES

Should committee reports not be relayed, members of Council will not be informed on the various boards, commissions, and committees.

FINANCIAL CONSIDERATIONS

None

ATTACHMENTS

1. Milk River and District Ag Society
2. Family & Community Support Services
3. Oldman River Regional Services Commission Minutes
4. Ridge Country Housing Minutes



MILK RIVER & DISTRICT AGRICULTURE SOCIETY

Ongoing events

- **FCSS Stay & Play** - Wednesdays, July 10 and 24 at 10:0 to 12PM, call Penny for more info 403-915-4017
- Pickleball and exercise classes have taken a break for the summer. Check back for times in the fall

Upcoming events at the Civic Centre:

- **Bonanza Day/Oktoberfest Planning committee meeting** - July 2, at 7:30PM in the Agora room, Civic Ctr
- **Iron Order Motorcycle Club** - July 13
- **Bonanza Day** - August 3. Look for the poster in this newsletter for more information.

Our 3rd annual **Oktoberfest** will be on October 19th. Mark that date on the calendar and keep an eye open for more information.

Reminder: The Town Hall is the central place to book your function, please keep in mind they are taking the bookings as a service to the Ag Society. If you have any questions or concerns, please direct them directly to us by phone or email.

The Town office hours are Mon to Thurs 8:30am to 4:30pm, Fri 8:30am to 3:30pm, closed noon to 1:00 for lunch, or you can call 403-647-3773.

Follow us on FB: <https://www.facebook.com/mrdagsociety>

Our email address is mrdagsociety@outlook.com

Check us out at: [Milk River & District Ag Society - Home](#)

Barons-Eureka-Warner Family & Community Support Services (FCSS)
Minutes of Board Meeting – Wednesday, April 3, 2024
Coaldale Hub (2107-13th Street)
In-person and Online

Attendance (in-person)

Board Members:

Degenstein, Dave – Town of Milk River, Chair
Chapman, Bill - Town of Coaldale, Vice-Chair
Bekkering, Garth – Town of Taber
Coad, Ray – Town of Vauxhall
Doell, Daniel – Village of Barons
Feist, Teresa - Town of Picture Butte
Foster, Missy – Village of Barnwell
Heggie, Jack – County of Warner
Hickey, Lorne – Lethbridge County
Jensen, Kelly – Town of Raymond
Kirby, Martin – Village of Warner
Nilsson, Larry – Village of Stirling

Attendance (on-line):

Jensen, Melissa – Town of Nobleford
Payne, Megan – Village of Coutts

Absent

Caldwell, Heather – Town of Coalhurst
Harris, Merrill – M.D. of Taber

Staff (in-person):

Morrison, Zakk – Executive Director
DeBow, Petra – Manager
Hashizume, Linda – Executive Assistant
Florence-Greene, Evelyn – Accounting Assistant

Call to Order

D. Degenstein called the meeting to order at 4:03 p.m.

Approval of Agenda

G. Bekkering moved the Board approve the agenda as amended.
Delegation: Supports for Newcomers to a) and Auditor to b).
Addition: 6b) Seniors Week

Carried Unanimously

Minutes

J. Heggie moved the minutes of the March 6, 2024, FCSS Board meeting be approved as presented.

Carried Unanimously



Delegation

Supports for Newcomers

Margarita Penner, Newcomer Services Supervisor presented information on support for newcomers through FCSS.

The Board discussed the Supports for Newcomers.

L. Hickey moved the Board receive the presentation on Supports for Newcomers as information.

Carried Unanimously

Margarita Penner left the meeting at 4:13 pm.

Audited Financial Statements

Daniel Bosters, KPMG presented the Year End Audited Financial Statement for December 31, 2023.

The Board discussed the Draft Year End Audited Financial Statement for December 31, 2023.

L. Hickey moved the Board to approve the Year End Audited Financial Statement for December 31, 2023, as presented.

Carried Unanimously

Daniel Bosters left the meeting at 4:41 p.m.

Correspondence

The following correspondence was presented for information:

- Family and Community Support Services Association of Alberta (FCSSAA) – Board Meeting Highlights from January 19, 2024
- FCSSAA March 2024 News
- Southern Alberta Kanadier Association (SAKA) Committee minutes from March 20, 2024

Z. Morrison noted that the FCSSAA South Region Meeting will be held June 5, 2024 in Lethbridge. Once the details are finalized, he will send out the information to the Board.

L. Nilsson moved the Board to receive the correspondence presented for information.

Carried Unanimously

Reports

Executive Director

Z. Morrison reviewed the Executive Director's report.



The following was highlighted:

- National Volunteer Week is April 15 – 19, 2024. FCSS Monthly Message at <https://fcss.ca/monthly-message/national-volunteer-week-2/>

T Feist moved the Board to approve the Executive Director's Report as presented.

Carried Unanimously

Financial Report

Z. Morrison reviewed the Financial Report.

The Board discussed the Financial Report.

B. Chapman moved the Board approve the April 2024 Financial Report including:

- Financial statement for February 29, 2024;
- Monthly accounts for February 29, 2024;
- ATB Mastercard statement February 13, 2024 to March 12, 2024

Carried

M. Jensen left the meeting at 5:02 pm.

New Business

Signing Authority

K. Jensen moved the Board authorize the removal Linda Hashizume, Executive Assistant and Eva Penner, Administrative Assistant from signing authority effective June 5, 2024.

Carried Unanimously

M. Kirby moved the Board to authorize the addition of Michael Fedunec, Counselling Services Supervisor and Kaitlynn Weaver, Outreach Services Supervisor for signing authority effective June 5, 2024.

Carried Unanimously

B. Chapman asked Z. Morrison if FCSS Senior events could be held at the Coaldale Senior Center instead of at the HUB.

Z. Morrison responded Seniors groups in all our communities are given the option to choose where they would like their monthly meetings and/or events. Z. Morrison will follow up with FCSS staff regarding the request.



Round Table:

L. Hickey reported that another organization he is part of have moved to digital signatures only for signing documents, and asked if FCSS has considered this option.

B. Chapman attended a presentation at the University of Lethbridge regarding the Alberta government investing millions to train more physicians in rural areas.

T. Feist reported:

- Seniors speaker series in Picture Butte is going really well.
- Clothing & Toy Fest will be held April 13.
- Tax Program is being utilized.
- Recruiting a new Doctor for the Town.

Date of Next Meeting

K. Jensen moved the Board to cancel the May 1, 2024 Board meeting.

Carried

The date of the next regular Board meeting will be June 5, 2024, at the Coaldale Hub (2107-13th Street) in-person and online (via Teams) starting at 4:00 p.m.

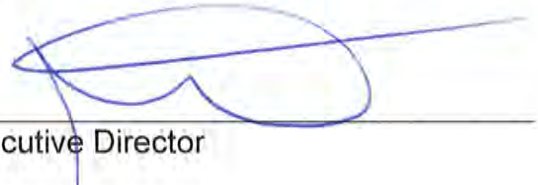
Adjournment

T. Feist moved the meeting adjourn at 5:19 p.m.

Carried



Chairperson



Executive Director





OLDMAN RIVER REGIONAL SERVICES COMMISSION

BOARD OF DIRECTORS' MEETING MINUTES

Thursday, December 7, 2023 – 7:00 p.m.

ORRSC Conference Room (3105 - 16 Avenue North, Lethbridge) or ZOOM Virtual Meeting

BOARD OF DIRECTORS:

Colin Bexte (Virtual).....Village of Arrowwood
 Jake Hiebert (Absent) Village of Barnwell
 Dan Doell (In Person)..... Village of Barons
 Mike Wetzstein (Virtual)..... Town of Bassano
 Ray Juska (In Person) City of Brooks
 Roger Houghton (In Person)..... Cardston County
 Allan Burton (Absent) Town of Cardston
 Sue Dahl (Virtual)..... Village of Carmangay
 James F. Smith (Absent) Village of Champion
 Brad Schlossberger (In Person)..... Town of Claresholm
 Scott Akkermans (In Person) Town of Coalhurst
 Tanya Smith (In Person)..... Village of Coutts
 Dave Slingerland (Absent) Village of Cowley
 Dave Filipuzzi (Virtual) Mun. Crowsnest Pass
 Dean Ward (Virtual)..... Mun. Crowsnest Pass
 Stephen Dortch (In Person) Village of Duchess
 Gordon Wolstenholme (In Person).....Town of Fort Macleod
 Mark Peterson (In Person)..... Village of Glenwood
 Suzanne French (Virtual) Village of Hill Spring
 Morris Zeinstra (Absent)Lethbridge County

Brad Koch (Absent) Village of Lomond
 Gerry Baril (In Person) Town of Magrath
 Peggy Losey (In Person) Town of Milk River
 Dean Melnyk (Virtual)..... Village of Milo
 Victor Czop (In Person) Town of Nanton
 Marinus de Leeuw (Absent)..... Town of Nobleford
 Teresa Feist (Absent) Town of Picture Butte
 Tony Bruder (Virtual) M.D. of Pincher Creek
 Don Anderberg (In Person) Town Pincher Creek
 Ronald Davis (Absent)..... M.D. of Ranchland
 Neil Sieben (Absent) Town of Raymond
 Don Norby (In Person) Town of Stavely
 Matthew Foss (Absent)..... Village of Stirling
 John DeGroot (Absent) MD of Taber
 Raymond Coad (In Person) Town of Vauxhall
 Christopher Northcott (In Person)..... Vulcan County
 Richard DeBolt (In Person) Town of Vulcan
 David Cody (In Person)..... County of Warner
 Marty Kirby (In Person)..... Village of Warner
 Evan Berger (In Person) M.D. Willow Creek

STAFF:

Mike Burla Senior Planner
 Ryan Dyck Planner
 Carlin Groves GIS Technologist
 Steve Harty Senior Planner
 Raeanne Keer Executive Assistant
 Lenze Kuiper Chief Administrative Officer

Jennifer Maxwell Subdivision Technician
 Kattie Schlamp..... Planner
 Gavin Scott Senior Planner
 Tristan Scholten.....Intern Planner
 Jaime Thomas.....GIS Analyst

Being the Organizational Meeting, Chief Administrative Officer Lenze Kuiper called the meeting to order at 7:00 pm.

1. APPROVAL OF AGENDA

Moved by: Richard DeBolt

THAT the Board adopts the Agenda for December 7, 2023, as presented.

CARRIED

2. ADOPTION OF LIST OF MEMBERS AND ALTERNATE MEMBERS FOR 2023-24

Moved by: Tanya Smith

THAT the Board adopts the List of Members and Alternate Members for 2023-2024, as presented.

CARRIED

3. ELECTION OF EXECUTIVE COMMITTEE FOR 2023-2024

a. Nomination Information

L. Kuiper presented the Executive Committee Election process to the Board and presented the list of nominations received during the nomination period.

b. Election of Chair

L. Kuiper stated that Administration received 1 nomination for Chair, Gord Wolstenholme of the Town of Fort Macleod, and inquired if there were any nominations from the floor for the position of Chair, and there were none.

L. Kuiper asked a second and third time if there were any nominations from the floor for the position of Chair, and there were none.

Mr. Gord Wolstenholme of the Town of Fort Macleod was proclaimed Chair of the Oldman River Regional Services Commission Board of Directors.

c. Election of Vice Chair

L. Kuiper stated that Administration received 1 nomination for Vice Chair, Don Anderberg of the Town of Pincher Creek, and inquired if there were any nominations from the floor for the position of Vice Chair, and there were none.

L. Kuiper asked a second and third time if there were any nominations from the floor for the position of Vice Chair, and there were none.

Mr. Don Anderberg of the Town of Pincher Creek was proclaimed Vice Chair of the Oldman River Regional Services Commission Board of Directors.

d. Election of Executive Committee.

L. Kuiper stated that Administration received 5 nominations for Executive Committee members David Cody of the County of Warner, Christopher Northcott of Vulcan County, Brad Schlossberger of the Town of Claresholm, Neil Sieben of the Town of Raymond, and Scott Akkermans of the Town of Coalhurst, and inquired if there were any nominations from the floor for the Executive Committee, and there were none.

L. Kuiper asked a second and third time if there were any nominations from the floor for the Executive Committee, and there were none.

David Cody of the County of Warner, Christopher Northcott of Vulcan County, Brad Schlossberger of the Town of Claresholm, Neil Sieben of the Town of Raymond, and Scott Akkermans of the Town of Coalhurst were proclaimed members of the Executive Committee for the Oldman River Regional Services Commission Board of Directors.

4. APPROVAL OF MINUTES

e. Minutes of September 7, 2023

Moved by: Gerry Baril

THAT the Board adopts the minutes of September 7, 2023, as presented.

CARRIED

5. BUSINESS ARISING FROM THE MINUTES

There was no business arising from the minutes.

6. REPORTS

a. Executive Committee Report

Chair Wolstenholme presented the Executive Committee Report to the Board.

7. BUSINESS

a. Proposed 2024 Operating Budget & Proposed 5-year Capital Plan 2023-2027

L. Kuiper presented the proposed 2024 Operating Budget and 5-Year Capital Plan to the Board, highlighting an increase to membership fees for both planning and GIS, and a decrease in projected revenue for Fee for Service and Subdivision.

Moved by: Scott Akkermans

THAT the Board approves the 2024 Budget and 5 Year Capital Plan, as presented.

CARRIED

- b. Subdivision Activity**
 - **As of October 31, 2023**

L. Kuiper presented the Subdivision Activity statistics as of October 31, 2023 to the Board.

- c. Assessment Appeal Activity**

L. Kuiper presented the 2023 Assessment Appeal Board Statistics to the Board for information purposes.

- d. Subdivision and Development Appeal Board Activity**
 - **As of November 23, 2023**

L. Kuiper presented the 2023 Subdivision and Development Appeal Board Statistics to the Board as of November 23, 2023.

- e. ORRSC Periodical – Slope Adaptive Development**

R. Dyck, Planner, presented information on the upcoming ORRSC Periodical topic, Slope Adaptive Development

8. ACCOUNTS

- a. Balance Sheet and Comparative Income Statement**
 - **As of October 31, 2023**

L. Kuiper presented the Balance Sheet and Comparative Income Statements as of October 31, 2023.

Moved by: Brad Schlossberger

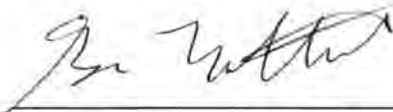
THAT the Board approves Balance Sheet and Comparative Income State, as of October 31, 2023, as presented.

CARRIED

9. NEXT MEETING – March 7, 2024

10. ADJOURNMENT

With no further questions and nothing further to discuss, L. Kuiper adjourned the meeting, the time being 8:10 pm.



Gordon Wolstenholme, Chair



Lenze Kuiper, Chief Administrative Officer

RIDGE COUNTRY HOUSING

GENERAL BOARD MEETING AGENDA

Thursday June 20, 2024 @ 4:00 p.m.2024

@ Ridgeview Lodge, Raymond, AB.

Welcome and/or introductions.

Attendance / Welcome board members and/or guests.

Present: K Geddert, P. Jensen, L. Nilsson, D. Toovey, P. Losey, B. Coppieters, M. Payne, K. Jensen, C. Block, B. Jackson

Absent: D. Degenstein, _____, _____, _____.

Guest(s): A. Tollestrup

RCH Business Meeting:

Call to order by Chair, P. Losey at 4:01 p.m.

Welcome to our new North Regional Manager – Christy Block – Introductions

Skills Questionnaire & Expense claims handed out return to Bruce by end of meeting.

1. Additions to current agenda.

Add. #1 _____

Add. #2 _____

1.1 Motion to adopt the agenda. Motion by L. Nilsson. Carried

2. Reading and adoption of minutes from previous meeting (May 16th, 2024).

2.1 Motion by B. Coppieters. Carried

3. Financial Report – Allen Tollestrup

3.1 Financial report - F/S's for Lodge Operations and Housing Operations - Balance Sheets and Profit and Loss Reports as of May 31, 2024. Also, May 2024 cheque listings for Lodge Operations and Housing Operations are provided for review, comment, and approval.

3.2 Motion by M. Payne. Carried

4. Regional Manager's reports presented as follows.

4.1 South Region report - prepared and presented by Site Manger Karen.

_____ See Report _____

4.2 North Region report - prepared and presented by NR / Site Manager Christy Block.

_____ See Report _____

4.3 Motion to approve / accept reports. Motion by P. Jensen. Carried

5. CAO Report – prepared and presented by Bruce Jackson.

5.1 Status of operations - Staffing issues, Maintenance issues, Administration issues, etc.

_____ See Report _____

5.2 Motion to approve / accept report. Motion by D. Toovey. Carried

6. Old Business:

_____ None _____

7. New Business:

7.1 Budgets and Forecasts: 2024 & 2025 budgets and forecast were presented by Bruce Jackson – CAO – It was noted that budgets are going to be tight the next couple years due to inflation and increased wages expected during union negotiations. Requisitions will need remain at current levels for the next 2 years.

7.2 Motion to approve / accept report. Motion by K. Jensen. Carried

8. Special reports _____ None _____

9. Correspondence received, etc. – as provided for your review (includes relevant emails).

Hair Salon at Ridgeview Lodge: Management was approached by the Hair Stylist serving the Lodge and asked if she might service other clients and rent the space. After checking with the Government oversight person to ensure we could we obtained the proper documentation to do so. Correspondence was from the former employer of the stylist who was angry that they were not informed what was happening as they had provided the stylist initially. CAO called and apologized for not having communicated properly with the business, thanked them for their service, and let them know that they would be considered for any future changes with the Salon..

10. Board round table. (Member discussions)

_____ None _____

11. Next regular meeting – Thursday, Sep 19, 2024; 4:00 p.m., at Prairie Rose Lodge in Milk River.

12. Closed session (in camera), as required. In: 5:06 p.m. Out: 5:13 p.m.

13. Motion to adjourn by K. Jensen at 5:14 p.m. Carried

Request for Decision

Mayors Report

July 8, 2024



RECOMMENDATION

That the Mayors Report for July y8, 2024, be accepted as information.

LEGISLATIVE AUTHORITY

BACKGROUND

Mayor Liebelt will provide a report from the Mayors Desk.

RISKS/CONSEQUENCES

1. Council may provide further direction on any item contained in the report. Council shall be specific in the direction it provides.

FINANCIAL CONSIDERATIONS

None

ATTACHMENTS

1. Chief Mountain Regional Solid Waste Services Commission

**MINUTES OF THE CHIEF MOUNTAIN REGIONAL SOLID WASTE SERVICES COMMISSION MEETING HELD
MARCH 13, 2024, AT THE TOWN OF MAGRATH.**

Members Present:

Brian Wickhorst – Village of Glenwood
Gerry Baril – Town of Magrath
Allan Burton – Town of Cardston
Tyler Lindsay – Village of Warner (Zoom)
Bryce Coppieters – Town of Raymond

Tanya Smith – Village of Coutts
Wayne Harris – Cardston County
Gary Bikman – Village of Stirling
Peggy Losey – Town of Milk River

Others Present:

Marian Carlson – SEO
Suzanne Pierson – Secretary/Treasurer

Lee Beazer – Operator

Commenced at 5:01 pm

Gary Bikman in the Chair.

AGENDA

Tanya Smith moved that the agenda be approved as amended. Carried

MINUTES

Bryce Coppieters moved that the minutes of the February 14, 2024, regular board meeting be adopted as presented. Carried

NEW BUSINESS

The SEO reported that Kim Welby will facilitate the strategic planning on Thursday, March 28, 2024, at noon at the Town of Magrath. Lunch will be provided.

The SEO advised that the Town of Raymond received a letter from Alberta Municipal Affairs stating the \$200,000 ACP Grant was successfully acquired. The SEO will work with the Town of Raymond to move the project forward.

The SEO reported that the Finance Committee reviewed the RFP for Audit services on March 15, 2024. The Commission received 3 proposals, and based on the scoring, the Finance Committee passed a motion at their meeting to accept the proposal from MWG Chartered Professional Accountants.

Allan Burton arrived at 5:06 p.m.

24-02 Bryce Coppieters moved to accept the proposal from MWG Chartered Professional Accountants for auditing services for 2024, 2025, 2026, 2027 and 2028. If the contract is satisfactorily carried out for the five (5) year term, the contract may be extended for two (2) one (1) year extensions for 2029 and 2030 at the sole discretion of the Commission. There will be a clause to terminate the contract earlier if the Commission is unsatisfied with the work. Carried

The SEO advised that she participated in the Circular Materials webinar held on February 21, 2024. They anticipate implementation by April 1, 2025, for those communities that registered prior to December 31, 2023. A total of 254 communities are registered throughout the province.

The SEO reported that the Operator has set up training for the Transfer Station Operators starting this Saturday in Mountain View.

The SEO advised that the website was launched on February 22, 2024. The SEO has asked the participating municipalities to advertise the Commission website.

Wayne Harris moved to approve the SEO's report. Carried

The Operator reported that 706.46 tonnes of waste were delivered to the Landfill in February 2024, leaving the year's available tonnage at 8,405.08 tonnes.

The Operator advised that Wilde Brothers Engineering has completed the year-end report. The SEO confirmed that, per their report, the Landfill should last until 2074 if the usage remains the same.

The Operator reported that the DEF pollution system has been deleted on both semi-trucks.

The Operator advised that a new cell needs to be dug this year. Jim Aneca would like to dig the new cell at the same price as the last completed cell.

24-03 Tanya Smith moved to hire JIM Equipment to dig the new cell at the Landfill at the same price as the past contract. Carried

Allan Burton moved to approve the Operator's report. Carried

Financial Statement

The Financial Statement for February 29, 2024, was reviewed.

Gerry Baril moved to accept the February 29, 2024, Financial Statement. Carried

Approval of Bills

Bills for February 2024 were reviewed.

Brian Wickhorst moved to approve the bills for February 2024. Carried

The Policy Committee, via email, updated Policy F7 Fees – Landfill Tipping Fee and Schedule F7A and are now presenting them to the board for approval.

24-04 Allan Burton moved to approve the revision to Policy F7 Fees – Landfill Tipping Fee and Schedule F7A. Carried

Gary Bikman suggested meeting every other month for board meetings. The SEO and Operator can send out monthly reports via email on the months there isn't a board meeting.

24-05 Wayne Harris moved to have board meetings every other month starting in April and review the meeting schedule next January 2025. Carried

CORRESPONDENCE

A letter from Avail regarding the 2023 Audit. Filed

A letter from Genesis regarding the Annual General Meeting on Monday, April 8, 2024, at 3 pm. Filed

24-06 Bryce Coppieters moved to have Duane Gladden act as proxy at the Annual General Meeting on Monday, April 8, 2024. Carried

A letter from Wilde Brothers Engineering regarding the 2023 year-end report on Closure & Post Closure. This letter was sent to Avail to aid in the Audit. Filed

ADJOURNMENT

Tanya Smith moved the meeting adjourned.

Adjournment at 5:33 p.m.

The Next Commission board meeting is scheduled for Wednesday, April 10, 2024, at 5:00 p.m. in the Town of Magrath.



Chairman

**MINUTES OF THE CHIEF MOUNTAIN REGIONAL SOLID WASTE SERVICES COMMISSION MEETING HELD
APRIL 10, 2024, AT THE TOWN OF MAGRATH.**

Members Present:

Brian Wickhorst – Village of Glenwood
Byrne Cook – Town of Magrath
Allan Burton – Town of Cardston
Derek Baron – Village of Warner (Zoom)
Randy Taylor – County of Warner (Zoom)

Tanya Smith – Village of Coutts
Wayne Harris – Cardston County
Gary Bikman – Village of Stirling
Larry Liebelt – Town of Milk River
Bryce Coppieters – Town of Raymond (Zoom)

Others Present:

Marian Carlson – SEO

Suzanne Pierson – Secretary/Treasurer

Commenced at 5:00 pm

Gary Bikman in the Chair.

AGENDA

Byrne Cook moved that the agenda be approved as presented.

Carried

MINUTES

Tanya Smith moved that the minutes of the March 13, 2024, regular board meeting be adopted as presented.

Carried

NEW BUSINESS

DELEGATION

Chandra Deaust from Avail reviewed the audited financial books for 2023. Avail found the books to be in order.

24-07 Allan Burton moved to accept the audited 2023 Financial Statement as performed by Avail.

Carried

Chandra Deaust was excused at 5:34 p.m.

The SEO reported that the draft Kim Welby updated for the Strategic Plan was emailed this afternoon to the Board for review.

The SEO advised that the RFP for the ACP grant was finalized and issued on April 2, 2024. Submissions are to be received by May 17, 2024. The SEO would like 2 to 3 representatives from the Board to be appointed to review the submissions along with the SEO and bring a final recommendation to the Board.

The SEO reported that she has been reviewing all the Human Resources Policies and drafting revisions where necessary for the Policy Committee to review.

The SEO advised that she will visit every municipality in May to update them regarding plans for the Commission. All municipalities are booked except for Raymond; she is waiting to hear from them on a date.

The SEO reported that she keeps participating in the Circular Materials webinars.

The SEO is working on an information package about the items accepted at the Transfer Stations that the municipalities can post on their websites.

The SEO advised that the Town of Raymond has put off hauling waste to the Landfill due to the wet conditions and is planning to begin next week.

The SEO reviewed the Strategic Planning documents with the board from Kim Welby.

24-08 Byrne Cook moved to accept the new Strategic Planning document. Carried

24-09 Wayne Harris moved to appoint Larry Liebelt, Allan Burton, and Bryce Coppieters to review the RFP submissions for the ACP grant and bring a recommendation to the Board. Carried

The board discussed taking over the transfer stations in depth.

Brian Wickhorst was excused at 6:15 p.m.

Byrne Cook moved to approve the SEO's report. Carried

The board reviewed the Operator's report that 706.09 tonnes of waste were delivered to the Landfill in March 2024, leaving the year's available tonnage at 7,698.99 tonnes.

The Operator's report stated that a water pump was replaced on the 2012 Peterbilt, and minor repairs were completed on the tarps for both trucks.

Tanya Smith moved to approve the Operator's report. Carried

Financial Statement

The Financial Statement for March 31, 2024, was reviewed.

Allan Burton moved to accept the March 31, 2024, Financial Statement. Carried

Approval of Bills

Bills for March 2024 were reviewed.

Tanya Smith moved to approve the bills for March 2024.

Carried

The board inquired how many outstanding accounts there are for waste brought to the Landfill. Suzanne advised that only a couple of accounts remain outstanding, and the Operator is working with her to clear the accounts.

ADJOURNMENT

Tanya Smith moved the meeting adjourned.

Adjournment at 6:37 p.m.

The Next Commission board meeting is scheduled for Wednesday, June 12, 2024, at 5:00 p.m. in the Town of Magrath.



Chairman

**MINUTES OF THE CHIEF MOUNTAIN REGIONAL SOLID WASTE SERVICES COMMISSION MEETING HELD
JUNE 12, 2024, AT THE TOWN OF MAGRATH.**

Members Present:

Brian Wickhorst – Village of Glenwood
Byrne Cook – Town of Magrath
Larry Liebelt – Town of Milk River
Bryce Coppieters – Town of Raymond

Tanya Smith – Village of Coutts (Zoom)
Wayne Harris – Cardston County
Randy Taylor – County of Warner

Others Present:

Marian Carlson – SEO
Suzanne Pierson – Secretary/Treasurer

Lee Beazer – Operator

Commenced at 5:03 pm

Byrne Cook in the Chair.

AGENDA

Bryce Coppieters moved that the agenda be approved as amended. Carried

MINUTES

Wayne Harris moved that the minutes of the April 10, 2024, regular board meeting be adopted as presented. Carried

NEW BUSINESS

The SEO advised that she has attended 10 Council meetings and is scheduled to attend Glenwood today.

The SEO reported that the website statistics for May 2024, were 250 visits.

Randy Taylor moved to approve the SEO's report. Carried

The Operator advised that 908.99 tonnes of waste were delivered to the Landfill in April 2024 and 908.68 in May 2024, leaving the year's available tonnage at 5,880.69 tonnes.

The Operator advised that Standoff has started hauling some waste directly to the Landfill. The board would like a record of loads brought to the Landfill.

The Operator reported that quotes have been received for a skid steer as per the budget. The Operator will order a skid steer from Chinook Equipment.

Bryce Coppieters moved to approve the Operator's report. Carried

Tanya Smith arrived by Zoom at 5:12 p.m.

Financial Statement

The Financial Statements for April 30, 2024, and May 31, 2024, were reviewed.

Brian Wickhorst moved to accept the April 30, 2024, and May 31, 2024, Financial Statements. Carried

Approval of Bills

Bills for April 2024 and May 2024 were reviewed.

Wayne Harris moved to approve the bills for April 2024 and March 2024. Carried

The Secretary/Treasurer reviewed the Statement of Receipts and Disbursements, which now has the 2023 actual figures based on the trial balance from Avail's audit.

24-10 Bryce Coppieters moved to approve the Statement of Receipts and Disbursements for 2023. Carried

The Operator received a quote for the wind fence at the Stirling Transfer Station. Bryce Coppieters suggested contacting Raymond to see if the wind fence is adequate. The board wants a chain link fence used at the Stirling Transfer Station.

The board reviewed the Request for Decision regarding the Regional Transfer Stations Redevelopment.

24-11 Larry Liebelt moved to accept the proposal from Morrison Hershfield (now Stantec) in the amount of \$99,692 for the Regional Transfer Stations Redevelopment Project and the additional value added feature in the amount of \$1,500 for the Climate Change Screening. Carried

Wayne Harris inquired as to when the requisitions are due. The requisitions are due April 30th and September 30th each year.

CORRESPONDENCE

A letter from the Town of Magrath regarding the final annexation report. Filed

A letter from the Land & Property Rights Tribunal regarding the notice of annexation hearing on July 15, 2024, at 10:00 a.m. via WebEx. Filed

Randy Taylor moved correspondence for information. Carried

ADJOURNMENT

Bryce Coppieters moved the meeting adjourned.

Adjournment at 5:55 p.m.

The Next Commission board meeting is scheduled for Wednesday, September 11, 2024, at 5:00 p.m. in the Town of Magrath.

Chairman