

MONTHLY REPORTING PERIOD -

APRIL, 2025

SUMMARY

This document provides a summary of water quantity and quality data collected by BMID in April 2025.

WATER SUPPLY SUMMARY

Water Source	Active / Not Active	Volume (Mega Liters)	Irrigation / Domestic	Comments
Mission Ck.	Active	438.689	Domestic/Irrig.	Primary Water supply. Domestic and irrig. demand.
Scotty Creek	Not Active	0	Irrig. only	Scotty Creek source will resume operations in summer 2025
Well 3 Cornish	Not Active	0	Irrig. only	Well #3 upgrade underway to provide for irrigation
Well 4	Active	17.200	Domestic	Primary domestic source to Scotty Creek service area
Well 5	Not Active	0	Irrig. only	Well #5 will resume supply in summer 2025
Well 6	Not Active	0	Irrig. only	Well # 6 will resume supply in summer 2025
April 2025	Total:	455.889		10 Year Average for April = 495.12

WATER QUALITY SUMMARY

Raw Water Microbiological Su	ummary	E-Coli		
Location	# of Samples	Lowest E.Coli Reading	Ave. E.Coli Reading	Highest E.Coli Reading
Mission Creek Intake	4	1	37.25	127
Stevens Reservoir	4	0	0.0	0
Hadden Reservoir	4	0	1.25	5
Treated Water Microbiologica	I Summary	T 1.11% O		
		Turbidity Summary		-
Location	Low Reading	Average Reading	High Reading	Comments
Mission Creek Raw Water	2.05 NTU	6.54 NTU	23.83 NTU	
Distribution Intake	0.45 NTU	0.58 NTU	0.82 NTU	
Booster # 1 (first customer)	0.32 NTU	0.46 NTU	0.72 NTU	
UV Treatment Plant	0.65 NTU	0.78 NTU	0.93 NTU	
		UV Treatment Plant		
Plant Flow Volume	In-Spec	Off-Spec	% Off-Spec	Comments
m ³	438,631 m ³	59 m³	0.01%	

WATER QUALITY DISTRIBUTION TESTING

		CARO (third party) Testing	22
BMID Population:	30,000	In House Pres./Absence	10
Required Minimum # of Tests:	30	Total Tests:	32
		Total Positive Tests:	0

Documentation and figures are provided on the following pages to support this submission.



1.0 FLOWS - APRIL, 2025

Mission Creek provided 96% of the 455.889 Mega Liters used in the BMID system in April, with Well # 4 supplying the remaining 4%.

Figure 1.1 - Domestic Water System Flow



Table 1.2 - April 2025 - Daily Consumption Report

Year	Mission Cr	Well #4	Well #5	System Total
2025	ML/Day	ML/Day	ML/Day	ML/Day
1-Apr	8.356	0.433	0	8.789
2-Apr	11.549	0.435	0	11.984
3-Apr	11.787	0.462	0	12.249
4-Apr	10.022	0.464	0	10.486
5-Apr	8.119	0.525	0	8.644
6-Apr	8.385	0.493	0	8.877
7-Apr	8.172	0.473	0	8.646
8-Apr	7.823	0.441	0	8.263
9-Apr	9.339	0.441	0	9.779
10-Apr	8.245	0.443	0	8.688
11-Apr	9.979	0.443	0	10.422
12-Apr	7.657	0.413	0	8.070
13-Apr	9.975	0.561	0	10.536
14-Apr	10.234	0.561	0	10.795
15-Apr	13.113	0.482	0	13.595
16-Apr	10.486	0.535	0	11.021
17-Apr	12.469	0.459	0	12.928
18-Apr	14.237	0.638	0	14.874
19-Apr	12.361	0.695	0	13.056
20-Apr	15.422	0.622	0	16.044
21-Apr	15.299	0.614	0	15.913
22-Apr	15.469	0.625	0	16.094
23-Apr	19.143	0.574	0	19.717
24-Apr	20.509	0.769	0	21.278
25-Apr	23.727	0.771	0	24.497
26-Apr	28.197	0.809	0	29.006
27-Apr	30.333	0.982	0	31.315
28-Apr	28.774	0.635	0	29.410
29-Apr	24.405	0.685	0	25.089
30-Apr	25.106	0.719	0	25.824
Totals ML	438.689	17.200	0.000	455.889
Avg's	14.623	0.00		15.196
Max	30.333	0.00		31.315
Min	7.657	0.00		8.070



2.0 RAW WATER QUALITY - BACTERIOLOGICAL MONITORING

Raw water samples were taken at three points at BMID settling ponds before chlorination. Samples were taken at the Mission Creek raw water intake, the outlet for Stevens Pond, and the point of disinfection at the end of Hadden Reservoir.

Samples from the previous month are also provided to show a two-month trend

Figure 2.1 - Raw Water E.Coli Readings (CARO Lab results) March 2024 - April 2025



Table 2.1 - E.Coli Readings (CARO Labs)

	Mission Creek Raw	Stevens Pond Outlet	Distribution Intake
Date	Water Intake E.Coli	E.Coli	Hadden Pond E.Coli
3-Mar-25	6	0	0
10-Mar-25	0	0	0
17-Mar-25	1	0	0
24-Mar-25	0	0	0
31-Mar-25	1	0	0
7-Apr-25	20	0	0
14-Apr-25	127	0	0
22-Apr-25	1	0	5
28-Apr-25	1	0	0

Stevens or WTP Intake (Raw) - Sampling of raw water at intake from Mission Creek

Stevens Outlet (Raw) - Sampling point after exiting 142,000 m³ 1st upper balancing reservoir (Stevens Res.) Hadden Outlet (Raw) - Sampling point after exiting 75,000 m³ 2nd lower balancing reservoir (Hadden Res.)

(Hadden Outlet = Distribution Intake - Point of Disinfection)



3.0 RAW AND TREATED WATER TURBIDITY

Turbidity is measured online at four locations, Mission Creek raw water intake, the Distribution Intake, the UV treatment plant, and Booster#1. The first user of the BMID system is located near Booster #1. The highest turbidity level recorded at this location was 0.72 NTU on April 7th, 2025.





Table 3.1 - Daily Monitoring Record – Turbidity at On-Line Turbidity Analyzers

	Turbidit	y Point Sampling	for April 2025	
Data	Mission Creek Intake	Distribution Intake	Booster#1- First User	UV Plant
Date	Daily Average [NTU]	Daily Average NTU	Daily Average NTU	Daily Average [NTU]
1	4.77	0.62	0.33	0.78
2	4.60	0.64	0.32	0.78
3	3.90	0.60	0.34	0.78
4	3.43	0.59	0.36	0.78
5	2.66	0.57	0.35	0.78
6	3.33	0.59	0.45	0.93
7	23.83	0.61	0.72	0.84
8	17.90	0.63	0.53	0.77
9	8.87	0.63	0.51	0.81
10	7.20	0.61	0.47	0.81
11	5.99	0.67	0.52	0.84
12	5.48	0.60	0.64	0.85
13	3.87	0.59	0.53	0.81
14	3.13	0.63	0.53	0.80
15	2.44	0.69	0.65	0.82
16	3.00	0.69	0.48	0.79
17	3.91	0.62	0.43	0.78
18	2.68	0.54	0.35	0.76
19	6.08	0.51	0.40	0.75
20	6.12	0.49	0.42	0.77
21	4.07	0.49	0.42	0.74
22	2.83	0.50	0.46	0.79
23	2.43	0.51	0.72	0.85
24	2.05	0.47	0.45	0.69
25	2.43	0.45	0.44	0.78
26	8.16	0.45	0.47	0.74
27	16.43	0.45	0.33	0.76
28	13.75	0.52	0.39	0.76
29	14.00	0.58	0.41	0.65
30	6.99	0.82	0.52	0.71
AVG	6.54	0.58	0.46	0.78



4.0 CHLORINE CONTACT TIME

Temperature, pH, peak flow and chlorine residual levels are recorded to determine the CT levels that are required to provide 3 log inactivation of *Giardia*. Chlorine Contact times exceeded the CT levels required to provide 3 log (99.9%) inactivation of *Giardia Lamblia* throughout the month of April, 2025.



Figure 4.1 - CT Trending – BMID Mission Creek Source – April 2025

CTa – CT achieved CTr – CT Required

The minimum CT that BMID achieved was 3.65 X that of what was required

Table 4.2	-	CT Table –	Mission	Creek	Source

	BMID April 2024												
						Mission	Creek So	urce					
DATE	pH	TEMP	PEAK	Free Cl2	CT	CT	CTa/CTr	Free Cl2	CI2	VOLUME	TIME	FLOW	Dosage
DAIL	(Average)	(Present)	FLOW	residual	achieved	req'd		Req'd	Dosage	TOTAL		Daily Average	Average
April		[°C]	L/s	[mg/L]				[mg/L]	mg/L	Liters	[mins]	L/s	KG/Day
1	7.37	6.3	135	1.19	1471.9	171.5	8.58	0.14	3.23	10029827	1237	89	25
2	7.36	7.0	137	1.22	1487.0	163.4	9.10	0.13	3.25	10029827	1219	90	25
3	7.33	7.3	145	1.24	1433.0	158.7	9.03	0.14	3.32	10029827	1156	91	26
4	7.32	7.1	135	1.27	1570.8	160.9	9.77	0.13	3.25	10029827	1237	92	26
5	7.32	7.5	135	1.28	1586.1	156.6	10.13	0.13	3.24	10029827	1239	99	28
6	7.31	8.1	136	1.31	1606.6	150.2	10.69	0.12	3.32	10029827	1226	96	28
7	7.30	8.8	126	1.31	1735.9	142.6	12.17	0.11	3.50	10029827	1325	87	26
8	7.37 8.6 153 1.36 1488.8		149.2	9.98	0.14	3.48	10029827	1095	96	29			
9	7.33	9.1	210	1.40	1112.3	142.6	7.80	0.18	3.56	10029827	795	110	34
10	7.31	9.3	134	1.39	1730.8	139.5	12.41	0.11	3.59	10029827	1245	97	30
11	7.30	9.4	232	1.33	960.0	137.1	7.00	0.19	7.23	10029827	722	58	36
12	7.30	8.7	139	1.24	1491.8	142.4	10.48	0.12	3.56	10029827	1203	90	28
13	7.30	8.4	230	1.24	901.2	145.4	6.20	0.20	3.56	10029827	727	118	36
14	7.30	<mark>8.9</mark>	216	1.38	1069.5	142.7	7.49	0.18	3.52	10029827	775	120	37
15	7.30	8.9	286	1.43	836.4	143.5	5.83	0.25	3.41	10029827	585	154	46
16	7.31	9.9	187	1.33	1190.8	132.9	8.96	0.15	3.38	10029827	895	123	36
17	7.30	9.6	251	1.30	865.3	134.7	6.42	0.20	3.38	10029827	666	147	43
18	7.30	9.4	262	1.30	830.5	136.6	6.08	0.21	3.37	10029827	639	168	49
19	7.29	10.3	193	1.28	1106.6	127.6	8.67	0.15	3.39	10029827	865	145	43
20	7.26	10.4	265	1.27	800.7	125.2	6.40	0.20	3.39	10029827	630	182	53
21	7.24	10.3	260	1.29	828.9	125.4	6.61	0.20	3.38	10029827	643	180	53
22	7.22	9.9	363	1.35	622.4	128.8	4.83	0.28	3.39	10029827	461	182	53
23	7.21	10.0	398	1.40	587.6	128.2	4.58	0.31	3.38	10029827	420	225	66
24	7.20	10.1	341	1.40	705.5	126.8	5.56	0.26	3.38	10029827	490	242	71
25	7.18	10.5	424	1.44	567.7	122.9	4.62	0.31	3.29	10029827	394	279	79
26	7.19	10.6	485	1.30	448.5	120.7	3.72	0.35	3.31	10029827	345	333	95
27	7.15	10.8	514	1.32	428.9	117.5	3.65	0.36	3.34	10029827	325	358	103
28	7.13	10.9	491	1.27	432.3	115.2	3.75	0.34	3.33	10029827	340	340	98
29	7.12	10.9	404	1.24	513.6	114.3	4.49	0.28	3.32	10029827	414	289	83
30	7.06	10.9	425	1.37	538.4	113.4	4.75	0.29	3.35	10029827	393	296	86
Averages	7.27	9.26	260	1.32	1031.7	137.2	7.33	0.20	3.51	10029827	790.2	165.87	48.94



5.0 ULTRAVIOLET DISINFECTION

Total Water Treated:	438,690 m ³	100.00%
On-Spec Water:	438,631 m ³	99.99%
Off-Spec Water:	59 m ³	0.01%

Average monthly chlorine residual before UV Treatment was 1.49 mg/L The average monthly chlorine residual after UV treatment and re-chlorination was 1.45 mg/L.

Figure 5.1 - UV Disinfection – BMID Mission Creek Source – April 2025



Table 5.2 - UV Disinfection Table – Mission Creek Source

	Inlet CI2	Outlet Cl2				In Spec Water	Off Spec	Off Spec %
	Daily	Daily	UVT	Turbidity		Volume	Water	of Water
Date	mg/L	mg/L	% T	NTU		Cubic Meters	Cubic Meters	Percentage
1-Apr	1.14	1.41	88.3	0.78		8356.0	0	0.00%
2-Apr	1.40	1.42	88.3	0.78		11519.7	29.3	0.25%
3-Apr	1.63	1.40	87.9	0.78		11757.9	29.3	0.25%
4-Apr	1.57	1.44	88.3	0.78		10022.0	0	0.00%
5-Apr	1.53	1.47	88.3	0.78		8119.2	0	0.00%
6-Apr	1.54	1.45	88.2	0.93		8384.5	0	0.00%
7-Apr	1.38	1.43	87.7	0.84		8172.4	0	0.00%
8-Apr	1.08	1.46	87.7	0.77		7822.9	0	0.00%
9-Apr	1.36	1.45	87.7	0.81		9338.9	0	0.00%
10-Apr	1.44	1.45	87.6	0.81		8244.5	0	0.00%
11-Apr	1.53	1.48	87.5	0.84		9978.9	0	0.00%
12-Apr	1.58	1.45	87.4	0.85		7656.8	0	0.00%
13-Apr	1.53	1.49	87.4	0.81		9975.2	0	0.00%
14-Apr	1.68	1.50	88.0	0.80		10233.6	0	0.00%
15-Apr	1.66	1.50	88.2	0.82		13113.2	0	0.00%
16-Apr	1.60	1.34	87.9	0.79		10486.3	0	0.00%
17-Apr	1.47	1.45	87.9	0.78		12468.9	0	0.00%
18-Apr	1.55	1.46	87.7	0.76		14236.5	0	0.00%
19-Apr	1.51	1.45	87.7	0.75		12360.6	0	0.00%
20-Apr	1.46	1.46	87.6	0.77		15421.6	0	0.00%
21-Apr	1.50	1.45	87.5	0.74		15299.2	0	0.00%
22-Apr	1.49	1.45	88.0	0.79		15468.9	0	0.00%
23-Apr	1.49	1.51	88.7	0.85		19142.7	0	0.00%
24-Apr	1.55	1.53	88.8	0.69		20508.5	0	0.00%
25-Apr	1.58	1.54	88.7	0.78		23726.9	0	0.00%
26-Apr	1.38	1.45	88.8	0.74		28197.2	0	0.00%
27-Apr	1.49	1.43	88.7	0.76		30333.2	0	0.00%
28-Apr	1.53	1.45	88.2	0.76		28774.2	0	0.00%
29-Apr	1.45	1.41	88.0	0.65		24404.5	0	0.00%
30-Apr	1.46	1.42	87.8	0.71		25105.8	0	0.00%
Average	1.49	1.45	88.0		Total	438630.7	58.6	0.013%



6.0 WATER DISTRIBUTION SAMPLING (TREATED)

Third Party Analysis (CARO Analytical Services)

- Samples taken once per week at ten locations around the BMID service area
- 22 samples were found to be absent of Coliforms.
- 22 samples were found to be absent of *E.Coli*.

Table 6.1 - CARO Independent Lab Testing – Total Coliforms – E.Coli

	2921 B	elgo Rd	Boo	ster 1	Ellison	Blow-Off	Ellison	Ellison School		3976 Highway 97		Prospect Reservoir		eservoir	We	#4	Kirschr	er Res	Pearson	n School
Date	Coliforms	E.coli	Coliforms	E.coli	Coliforms	E.coli	Coliforms	E.coli	Coliforms	E.coli	Coliforms	E.coli	Coliforms	E.coli	Coliforms	E.coli	Coliforms	E.coli	Coliforms	E.coli
3-Mar-25	0	0	0	0							0	0			0	0	0	0	0	0
10-Mar-25			0	0	0	0	0	0	0	0			0	0	0	0				
17-Mar-25	0	0	0	0							0	0			0	0	0	0	0	0
24-Mar-25			0	0	0	0	0	0	0	0			0	0	0	0				
31-Mar-25	0	0	0	0							0	0			0	0	0	0	0	0
7-Apr-25			0	0			0	0	0	0			0	0	0	0				
14-Apr-25	0	0	0	0							0	0			0	0	0	0	0	0
22-Apr-25			0	0			0	0	0	0			0	0	0	0				
28-Apr-25	0	0	0	0							0	0			0	0	0	0	0	0

In-House Analysis (BMID Staff)

- Presence/Absence samples taken on a three-week cycle at seven sites around the BMID service area.
- All 10 samples were found to be absent of both *Total Coliforms* and *E.Coli*.

Table 6.2 - BMID In-house Testing – Presence Absence

		4/8/2	2025			4/14/2025				4/22/	2025		4/28/2025			
Location	CI2	Temp.	Pres.	Abs.	CI2	Temp	Pres.	Abs.	CI2	Temp.	Pres.	Abs.	CI2	Temp.	Pres.	Abs.
Sylvania Cres	0.71	1.1	-	Х									0.79	14.2	-	Х
170 Kneller Rd	0.86	11.2	-	X									0.85	14.1	-	X
2105 Morrison					0.90	10.5	-	X								
Staymen Rd					0.74	10.8	-	X								
260 Campion Rd									0.50	12.5	-	X				
Fenwick Rd									0.35	12.8	-	X				
Solly Ct	0.61	10.9	-	X									0.72	14.0	-	Х

Table 6.3 - BMID Disinfection By-product Testing – THM and HAA

7-Apr-25			
Location	THM (mg/L)	HAA (mg/L)	
Kirschner Reservoir	0.1840	0.1090	
Pearson School	0.1010	0.0945	
2921 Belgo Rd	0.2310	0.0982	
Ellison School*	0.0085	0.00208	*Primarily Ground Water
3976 Hwy 97 N	0.1760	0.1050	

- THM and HAA quarterly averages were above the acceptable limits as set out in the Guideline for Canadian Drinking Water Quality (below 0.10 mg/L for THM and below 0.08 mg/L for HAA).
- Disinfection by-products are likely to reduce in the following months as the Water Treatment Plant, which will resume full-time operations, removes DBP precursors.



7.0 Well #6 POTENTIAL POTABILITY TESTING

• BMID will take monthly bacterial samples on the raw water at Well #6 to determine the potential potability of the source. Results are as follows:

Well 6 Bacterial Testing			
Date	Total Coliforms	E.Coli Coliforms	
24-Jun-24	0	0	
29-Jul-24	0	0	
26-Aug-24	0	0	
28-Oct-24	0	0	
25-Nov-24	0	0	
31-Dec-24	0	0	
27-Jan-25	0	0	
24-Feb-25	0	0	
24-Mar-25	0	0	
28-Apr-25	0	0	