



2023 SCHEDULE 22 SUMMARY REPORT

ANGUS
DRINKING WATER SYSTEM

For the period of
January 1st, 2023 to December 31st, 2023

Prepared for the Corporation of the Township of Essa by the Ontario Clean Water Agency



This report was prepared in accordance with the requirements of [O.Reg 170/03, Schedule 22, Summary Reports for Municipalities](#) for the following system and reporting period:

Drinking-Water System Number:	260001026
Drinking-Water System Name:	Angus Drinking Water System
Drinking-Water System Owner:	The Corporation of the Township of Essa
Drinking-Water System Category:	Large Municipal Residential
Period being reported:	January 1, 2023 – December 31, 2023

1. Issue(s) of Non-Compliance

A Ministry of Environment, Conservation and Parks (MECP) Drinking Water System Inspection was conducted on June 8, 2023, for the period covering May 10, 2022 to June 8, 2023. October 11, 2023, the Inspection Report with an Inspection Summary Rating Record (IRR) of 100% was received.

The following is a summary of non-compliances noted in the MECP Inspection Report, as well as the duration and the measures taken to correct the non-compliance. If any self-reported non-compliances were included in the inspection report, they will be noted in Table 1.

Table 1. Non-Compliances and Corrective Actions noted in the 2022/2023 MECP Inspection Report

Non-Compliance(s)	Duration	Required Actions & Corrective Actions
N/A	N/A	N/A

The following table (Table 2) is a summary of any incidents that the Operating Authority interpreted as a instances where any requirements of the Act, the regulations, the system’s approval, drinking water works permit (DWWP), municipal drinking water licence (MDWL), and any orders applicable were not met. The Operating Authority reported the following incidents to the MECP and confirmation of whether the incidents are considered non-compliances are noted in the MECP Inspection Report and included in Table 1.

Table 2. Self-Reported Incidents and Corrective Actions for the Reporting Period

Incident	Duration	Corrective Actions
<p>July 17, 2023- SAC reference number N38NH- Chlorinated Drinking Water- Overflow Spill event from Brownley reservoir.</p> <p>On July 16 an equipment failure stopped the high lift pumps and the wells failed to shutdown causing the Brownley reservoir to overflow and 2,923 m³ of chlorinated water to spill</p>	<p>July 16 to July 17</p> <p>8 hours</p>	<ul style="list-style-type: none"> OCWA arrived on site on July 17 and found the reservoir overflowing. OCWA turned the wells off and observed the spilled chlorinated water in the ditch. Volume of spilled water was calculated. OCWA took free chlorine residuals- 1.56 mg/L OCWA restored operations to normal operating conditions by repairing failed equipment

<p>out onto the ground and into the ditch near the pumphouse.</p>		<ul style="list-style-type: none"> • Verbal notification of spill was made to SAC, MOH and MECP on July 17. • Written notification provided to SAC, MOH, MECP and Owner on July 18, 2023. No further actions required.
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For information on any Adverse Water Quality Incident(s) that may have occurred during the reporting period, please refer to the Angus Drinking Water System Annual Report (Section 11).

2. Assessment of Flowrates and Quantity of Water Supplied

The following tables (Table 3 to 21) summarize the quantities and flowrates of water supplied during the reporting period, including monthly averages and maximum daily flows as well as a comparison to the rated capacity and flowrates approved in the system’s approval, DWWP or MDWL.

As required by the MDWL, regulatory flow measuring devices are checked/verified and where necessary calibrated. To ensure flow measuring devices are within acceptable deviation limits, checks/verifications/calibrations are performed annually by a third party.

2.1 Treated Water

Municipal Drinking Water License (MDWL):	118-103 (Issue Number: 6)
Allowable Rated Capacity for Mill Street Well Supply System:	3,932 m ³ /day
Allowable Rated Capacity for McGeorge Street Well Supply System:	2,592 m ³ /day
Allowable Rated Capacity for Brownley Well Supply System:	4,251 m ³ /day
Allowable Flowrate into Treatment System:	N/A

As per the MDWL, the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system shall not exceed the listed rated capacity. However, the MDWL allows a system to be operated temporarily at a maximum daily volume and/or a maximum flowrate above the values set out in the MDWL for the purposes of fighting a large fire or for the maintenance of the drinking water system.

Table 3. Treated Water Annual and Monthly Average and Maximum Flows with Comparison to Rated Capacity and Total Volume for Mill Street Well Supply System in 2023

Treated Water Flow- Mill Street Well Supply System					
Timeframe	Average Flow (m³/day)	Percent of Rated Capacity	Maximum Flow (m³/day)	Percent of Rated Capacity	Total Volume (m³)
January	1,245.19	31.17%	1,410	35.86%	28,784.83
February	1,096.61	27.89%	1,383	35.17%	32,762.58
March	1,185.71	30.16%	1,370	34.84%	33,310.72
April	1,338.07	34.03%	1,693	43.06%	30,181.55
May	1,882.84	47.89%	2,683	68.23%	41,919.67
June	2,255.63	57.37%	2,965	75.41%	46,494.30
July	1,859.16	47.28%	2,779	70.68%	43,793.94
August	1,475.71	37.53%	1,778	45.22%	45,045.96
September	1,992.60	50.68%	2,405	61.16%	32,110.54
October	1,671.42	42.51%	2,564	65.21%	31,025.82
November	1,456.33	37.04%	1,607	40.87%	26,437.05
December	1,455.39	37.01%	1,670	42.47%	28,276.64
2023	1,576.22	40.09%	2,965	75.41%	420,143.60

A review of Mill Street Well Supply System flow information for the reporting period indicates it operated within the rated capacity specified in the MDWL (3,932 m³/day), for the maximum volume of treated water to the distribution system.

Table 4. Treated Water Annual and Monthly Average and Maximum Flowrates for Mill Street Well Supply System in 2023

Treated Water Flowrate- Mill Street Well Supply System		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	14.89	24.72
February	12.70	15.03
March	13.77	14.44
April	15.43	18.11
May	21.77	31.00
June	26.52	32.82
July	21.96	30.25
August	16.91	20.64
September	22.84	27.64
October	18.12	25.21
November	16.86	17.58
December	16.87	20.39

Treated Water Flowrate- Mill Street Well Supply System		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
2023	18.24	32.82

A summary of flowrates of water that flows out of the Mill Street treatment subsystem to the distribution system can be found in the above table. A summary of flowrates of water that flows into the Mill Street treatment subsystem can be found in Table 10. The applicable MDWL for the reporting period did not list a maximum allowable limit for the flowrate of water that flows into the treatment subsystem.

Table 5. Treated Water Annual and Monthly Average and Maximum Flows with Comparison to Rated Capacity and Total Volume for McGeorge Well Supply System in 2023

Treated Water Flow- McGeorge Well Supply System					
Timeframe	Average Flow (m³/day)	Percent of Rated Capacity	Maximum Flow (m³/day)	Percent of Rated Capacity	Total Volume (m³)
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May	-	-	-	-	-
June	-	-	-	-	-
July	-	-	-	-	-
August	-	-	-	-	-
September	-	-	-	-	-
October	-	-	-	-	-
November	-	-	-	-	-
December	-	-	-	-	-
2023	-	-	-	-	-

Note: McGeorge Well Supply System has been offline since June 11, 2022 and for the duration of 2023 for maintenance and inspection activities. Any flow displayed in 2023 was a result of flushing to waste. No raw water was sent to the treatment system, distribution or users from this pumphouse.

A review of flow information for the reporting period indicates that the McGeorge Well Supply System operated within the rated capacity specified in the MDWL (2,592 m³/day), for the maximum treated volume of treated water that flows from the treatment subsystem to the distribution system.

Table 6. Treated Water Annual and Monthly Maximum Flowrates for McGeorge Well Supply System in 2023

Treated Water Flowrate- McGeorge Well Supply System		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	-	-
February	-	-
March	-	-
April	-	-
May	-	-
June	-	-
July	-	-
August	-	-
September	-	-
October	-	-
November	-	-
December	-	-
2023	-	-

Note: McGeorge Well Supply System has been offline since June 11, 2022 and for the duration of 2023 for maintenance and inspection activities. No raw water was sent to the treatment system, distribution or users from this pumphouse.

A summary of flowrates of water that flows out of the McGeorge treatment subsystem to the distribution system can be found in the above table. A summary of flowrates of water that flows into the McGeorge treatment subsystem can be found in Tables 12 and 14. The applicable MDWL for the reporting period did not list a maximum allowable limit for the flowrate of water that flows into the treatment subsystem.

Table 7. Treated Water Annual and Monthly Average and Maximum Flows with Comparison to Rated Capacity and Total Volume for Brownley Well Supply System in 2023

Treated Water Flow- Brownley Well Supply System					
Timeframe	Average Flow (m ³ /day)	Percent of Rated Capacity	Maximum Flow (m ³ /day)	Percent of Rated Capacity	Total Volume (m ³)
January	933.31	21.96%	1,261.31	29.67%	28,932.75
February	1172.29	27.58%	2,159.16	50.79%	32,824.05
March	1077.71	25.35%	1,347.56	31.70%	33,409.12
April	1006.01	23.67%	1,359.41	31.98%	30,180.24
May ^{7A}	1355.68	31.89%	2,471.04	58.13%	42,026.17
June	1604.01	37.73%	2,549.61	59.98%	48,120.44
July	1369.28	32.21%	1,897.02	44.63%	42,447.65

Treated Water Flow- Brownley Well Supply System					
Timeframe	Average Flow (m³/day)	Percent of Rated Capacity	Maximum Flow (m³/day)	Percent of Rated Capacity	Total Volume (m³)
August	1464.05	34.37%	1,787.20	42.04%	45,385.41
September	1070.88	25.19%	1,869.06	43.97%	32,126.43
October	1008.76	23.73%	1,827.47	42.99%	30,262.93
November	887.84	20.89%	1,144.03	26.91%	26,635.23
December	923.98	21.74%	1,166.23	27.43%	28,643.52
2023	1156.15	27.20%	2,549.61	59.98%	42,0993.94

A review of flow information for the reporting period indicates that the Brownley Well Supply System operated within the rated capacity specified in the MDWL (4,251 m³/day), for the maximum treated volume of treated water that flows from the treatment subsystem to the distribution system.

Table 8. Treated Water Annual and Monthly Maximum Flowrates for Brownley Well Supply System in 2023

Treated Water Flowrate- Brownley Well Supply System		
Timeframe	Average Flowrate^{8A} (L/sec)	Maximum Flowrate (L/sec)
January	-	65.38
February	-	42.77
March	-	47.33
April	-	277.70
May	-	68.77
June	-	136.89
July	-	88.01
August	-	69.30
September	-	134.54
October	-	128.03
November	-	38.70
December	-	80.46
2023	-	277.70

^{8A}Average flow rates are not calculated for the Brownley Well Supply System. The MDWL does not list a maximum or average allowable flowrate limit of water that flows into the treatment subsystem.

A summary of maximum flowrates of water that flows out of the Brownley treatment subsystem to the distribution system can be found in the above table. A summary of flowrates of water that flows into the Brownley treatment subsystem can be found in Tables 16, 18 and 20. The applicable MDWL for the reporting period did not list a maximum allowable limit for the flowrate of water that flows into the treatment subsystem.

2.2 Raw Water

Permit to Take Water Number (PTTW):	0411-93LSQW 0244-CU4QCG
Allowable Maximum Raw Water Volume - Well #1: Mill Street	3,927.77 m ³ /day
Allowable Maximum Raw Water Flowrate - Well #1: Mill Street	2,728 L/Min (45.47 L/sec)
Allowable Maximum Volume of Raw Water - Well #2: Centre Street (McGeorge)	1,296.00 m ³ /day
Allowable Maximum Raw Water Flowrate – Well #2: Centre Street (McGeorge)	900 L/Min (15.00 L/sec)
Allowable Maximum Volume of Raw Water - Well #3: Centre Street (McGeorge)	1,296.00 m ³ /day
Allowable Maximum Raw Water Flowrate – Well #3 Centre Street (McGeorge)	900 L/Min (15.00 L/sec)
Allowable Maximum Volume of Raw Water - Well #4: Brownley	1,800.00 m ³ /day
Allowable Maximum Raw Water Flowrate – Well #4: Brownley	1,250.00 L/Min (20.83 L/sec)
Allowable Maximum Volume of Raw Water - Well #5: Brownley	654.62 m ³ /day
Allowable Maximum Raw Water Flowrate – Well #5: Brownley	455 L/Min (7.58 L/sec)
Allowable Maximum Volume of Raw Water - Well #6: Brownley	1,800.00 m ³ /day
Allowable Maximum Raw Water Flowrate – Well #6: Brownley	1,250 L/Min (20.83 L/sec)
Allowable Maximum Combined Raw Water Volume from Well #1, Well #2, Well #3, Well #4, Well #5 and Well #6:	9,585.00 m ³ /day

During the reporting period Angus Drinking Water System operated under two separate PTTWs:

- From January 1 to September 11, 2023: Angus DWS operated under PTTW #0411-93LSQW, which was set to expire on December 31, 2022. Under the approval of the MECP, PTTW #0411-93LSQW was to remain in effect until a determination on the PTTW renewal could be made.
- From September 12, 2023 to the end of the reporting period: Angus DWS operated under PTTW #0244-CU4QCG as the new PTTW was issued. Upon issuance, PTTW #0244-CU4QCG was backdated to December 31, 2022. There were no changes to the raw water allowable maximum volume takings or flowrates. There was no change in the allowable maximum combined raw water volume from all wells.

As per both PTTWs, water shall only be taken from the specified source(s) and at the rates and amounts taken as specified in the permit. Notwithstanding, the above maximum daily takings, the maximum daily taking of water from all wells identified is limited to 9,585.00 m³/day. See table 21 for a review of the combined maximum daily takings of water from all wells identified within the Angus Drinking Water System.

Table 9. Raw Water (Well #1- Mill Street) Monthly Average, Maximum Flow and Total Volume for 2023

Raw Water Flow – Mill Street Well #1					
Timeframe	Average Flow (m³/day)	Percent of Allowable Volume	Maximum Flow (m³/day)	Percent of Allowable Volume	Total Volume (m³)
January	1,203.81	30.65%	1,459.00	37.15%	37,318.00
February	1,059.82	26.98%	1,683.00	42.85%	29,675.00
March	1,145.10	29.15%	1,410.00	35.90%	35,498.00
April	1,315.37	33.49%	1,754.00	44.66%	39,461.00
May	1,845.81	46.99%	2,803.00	71.36%	57,220.00
June	2,224.37	56.71%	2,788.00	70.98%	66,731.00
July	1,831.48	46.63%	2,775.00	70.65%	56,776.00
August	1,420.16	36.16%	2,292.00	58.35%	44,025.00
September	2,071.90	52.75%	2,699.00	68.72%	64,229.00
October	1,630.68	41.52%	2,552.00	64.97%	50,551.00
November	1,419.10	36.13%	1,653.00	42.08%	42,573.00
December	1,426.55	36.32%	1,649.00	41.98%	44,223.00
2023	1,549.51	39.45%	2,803.00	71.36%	568,280.00

A review of flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable daily raw water volume for Well #1 (3,927.77 m³/day).

Table 10. Raw Water (Well #1- Mill Street) Annual and Monthly Average and Maximum Flowrates for 2023

Raw Water Flowrate – Mill Street Well #1		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	40.92	45.12
February	41.06	54.68 ^{10A}
March	41.21	49.97 ^{10A}
April	40.53	46.93 ^{10A}
May	40.13	44.75
June	39.42	43.53
July	39.48	44.72
August	40.17	49.69 ^{10A}
September	40.58	45.01
October	39.39	46.35 ^{10A}
November	40.67	48.94 ^{10A}
December	40.76	47.51 ^{10A}
2023	40.35	54.68^{10A}

A review of Mill Street Well #1 flow information for the reporting period indicates that the system operated within the PTTW’s maximum allowable raw water flowrate (45.47 L/sec) with the exception of:

- ^{10A}February, March, April, August, October, November and December 2023- flowrate exceedances were of very short duration and were a results of well pump start-up

Table 11. Raw Water (Well #2- Centre Street (McGeorge)) Monthly Average, Maximum Flow and Total Volume for 2023

Raw Water Flow – Centre Street (McGeorge) Well #2					
Timeframe	Average Flow (m ³ /day)	Percent of Allowable Volume	Maximum Flow (m ³ /day)	Percent of Allowable Volume	Total Volume (m ³)
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May	-	-	-	-	-
June	-	-	-	-	-
July	-	-	-	-	-
August	-	-	-	-	-
September	-	-	-	-	-
October	-	-	-	-	-
November	-	-	-	-	-

Raw Water Flow – Centre Street (McGeorge) Well #2					
Timeframe	Average Flow (m³/day)	Percent of Allowable Volume	Maximum Flow (m³/day)	Percent of Allowable Volume	Total Volume (m³)
December	-	-	-	-	-
2023	-	-	-	-	-

Note: McGeorge Well Supply System has been offline since June 11, 2022 and for the duration of 2023 for maintenance and inspection activities. No raw water was sent to the treatment system, distribution or users from this pumphouse.

A review of Well #2 flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable daily raw water volume (1,296.00 m³/day).

Table 12. Raw Water (Well #2- Centre Street (McGeorge)) Annual and Monthly Maximum Flowrates for 2023.

Raw Water Flowrate – Centre Street (McGeorge) Well #2	
January	-
February	-
March	-
April	-
May	-
June	-
July	-
August	-
September	-
October	-
November	-
December	-
2023	-

Note: McGeorge Well Supply System has been offline since June 11, 2022 and for the duration of 2023 for maintenance and inspection activities. No raw water was sent to the treatment system, distribution or users from this pumphouse.

A review of for Well #2 flow information for the reporting period indicates that the system operated within the PTTW's the maximum allowable raw water flowrate (15.00 L/sec).

Table 13. Raw Water (Well #3-Centre Street (McGeorge)) Monthly Average, Maximum Flow and Total Volume for 2023

Raw Water Flow – Centre Street (McGeorge) Well #3					
Timeframe	Average Flow (m ³ /day)	Percent of Allowable Volume	Maximum Flow (m ³ /day)	Percent of Allowable Volume	Total Volume (m ³)
January	-	-	-	-	-
February	-	-	-	-	-
March	-	-	-	-	-
April	-	-	-	-	-
May	-	-	-	-	-
June	-	-	-	-	-
July	-	-	-	-	-
August	-	-	-	-	-
September	-	-	-	-	-
October	-	-	-	-	-
November	-	-	-	-	-
December	-	-	-	-	-
2023	-	-	-	-	-

Note: McGeorge Well Supply System has been offline since June 11, 2022 and for the duration of 2023 for maintenance and inspection activities. No raw water was sent to the treatment system, distribution or users from this pumphouse.

A review of Well #3 flow information for the reporting period indicates that the system operated within the PTTW’s maximum allowable daily raw water volume (1,296.00 m³/day).

Table 14. Raw Water (Well #3-Centre Street (McGeorge)) Annual and Monthly Maximum Flowrates for 2023

Raw Water Flowrate – Centre Street (McGeorge) Well #3	
January	-
February	-
March	-
April	-
May	-
June	-
July	-
August	-
September	-
October	-
November	-
December	-
2023	-

Note: McGeorge Well Supply System has been offline since June 11, 2022 and for the duration of 2023 for maintenance and inspection activities. No raw water was sent to the treatment system, distribution or users from this pumphouse.

A review of Well #3 flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable raw water flowrate (15.00 L/sec).

Table 15. Raw Water (Well #4- Brownley) Monthly Average, Maximum Flow and Total Volume for 2023

Raw Water Flow – Brownley Well #4					
Timeframe	Average Flow (m ³ /day)	Percent of Allowable Volume	Maximum Flow (m ³ /day)	Percent of Allowable Volume	Total Volume (m ³)
January	387.49	21.53%	522.07	29.00%	12,012.21
February	511.19	28.40%	958.17	53.23%	14,313.43
March	446.25	24.79%	558.55	31.03%	13,833.61
April	417.60	23.20%	565.42	31.41%	12,527.86
May	561.28	31.18%	1,035.63	57.54%	17,399.59
June	658.06	36.56%	1,056.36	58.69%	19,741.67
July	585.69	32.54%	954.12	53.01%	18,156.45
August	623.31	34.63%	1,056.53	58.70%	19,322.64
September	444.22	24.68%	731.42	40.63%	13,326.54
October	438.21	24.35%	833.48	46.30%	13,584.36
November	364.38	20.24%	482.30	26.79%	10,931.49
December	377.40	20.97%	488.71	27.15%	11,699.54
2023	484.59	38.76%	1,056.53	58.70%	176,849.39

A review of Well #4 flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable daily raw water volume (1,800.00 m³/day).

Table 16. Raw Water (Well #4- Brownley) Annual and Monthly Average and Maximum Flowrates for 2022

Raw Water Flowrate – Brownley Well #4		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	16.70	18.30
February	16.72	18.31
March	16.70	18.20
April	16.72	18.22
May ^{16A}	16.62	18.53
June	16.60	18.26
July	16.65	18.03

Raw Water Flowrate – Brownley Well #4		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
August	16.69	18.03
September	14.39	34.90 ^{16A}
October	16.60	18.35
November	16.58	18.32
December	16.55	18.11
2023	16.46	34.90^{16A}

A review of Well #4 flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable raw water flowrate (20.83 L/sec) except for:

- ^{16A}September 2023 – Flowrate exceedances due to external third party flow measuring device verification and calibration.

Table 17. Raw Water (Well #5- Brownley) Monthly Average, Maximum Flow and Total Volume for 2023

Raw Water Flow – Brownley Well #5					
Timeframe	Average Flow (m³/day)	Percent of Allowable Volume	Maximum Flow (m³/day)	Percent of Allowable Volume	Total Volume (m³)
January	126.83	19.37%	174.71	26.69%	3,931.74
February	172.03	26.28%	330.04	50.42%	4,816.92
March	150.02	22.92%	186.50	28.49%	4,650.66
April	141.26	21.58%	190.58	29.11%	4,237.77
May	188.35	28.77%	342.76	54.36%	5,838.72
June	220.10	33.62%	345.67	52.80%	6,602.94
July	198.32	30.30%	318.91	48.72%	6,148.04
August	212.50	32.46%	372.85	56.96%	6,587.41
September	149.60	22.85%	243.72	37.23%	4,487.94
October	141.30	21.59%	268.23	40.97%	4,380.42
November	125.74	19.21%	170.00	25.97%	3,772.12
December	129.27	19.75%	166.84	25.49%	4,007.34
2023	162.94	24.89%	372.85	56.96%	59,462.02

A review of Well #5 flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable daily raw water volume (654.62 m³/day).

Table 18. Raw Water (Well #5- Brownley) Annual and Monthly Average and Maximum Flowrates for 2023

Raw Water Flowrate – Brownley Well #5		
Timeframe	Average Flowrate (L/sec)	Flowrate (L/sec)
January	5.64	6.49
February	5.65	6.56
March	5.64	6.52
April	5.68	6.53
May	5.62	7.65 ^{18A}
June	5.59	6.49
July	5.67	6.49
August	5.69	6.52
September	4.85	17.93 ^{18B}
October	5.72	6.59
November	5.79	6.5
December	5.71	6.55
2023	5.60	17.93^{18B}

A review of flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable raw water flowrate for Well #5 (7.58 L/sec), with the exception of:

- ^{18A}May 30, 2023, momentary flow exceedance on startup
- ^{18B}September 2023 – Flowrate exceedances due to external third party flow measuring device verification and calibration.

Table 19. Raw Water (Well #6- Brownley) Monthly Average, Maximum Flow and Total Volume for 2023

Raw Water Flow – Brownley Well #6					
Timeframe	Average Flow (m ³ /day)	Percent of Allowable Volume	Maximum Flow (m ³ /day)	Percent of Allowable Volume	Total Volume (m ³)
January	414.22	23.01%	561.04	31.17%	12840.88
February	486.87	27.05%	1,034.32	57.46%	13,632.23
March	478.27	26.57%	600.39	33.36%	14,826.45
April	447.20	24.84%	606.41	33.69%	13,415.92
May	602.62	33.48%	1,117.93	62.11%	18,681.36
June	671.66	37.31%	1,138.49	63.25%	20,149.69
July	628.69	34.93%	1,027.44	57.08%	19,489.45
August	617.29	34.29%	803.69	44.65%	19,135.91
September	476.54	26.47%	785.88	43.66%	14,296.06
October	421.32	23.41%	861.49	47.86%	13,061.04

Raw Water Flow – Brownley Well #6					
Timeframe	Average Flow (m³/day)	Percent of Allowable Volume	Maximum Flow (m³/day)	Percent of Allowable Volume	Total Volume (m³)
November	391.11	21.73%	518.54	28.81%	11,733.44
December	405.48	22.53%	525.79	29.21%	12,569.76
2023	503.44	27.96%	1,138.49	63.25%	183,832.19

A review of Well #4 flow information for the reporting period indicates the system operated within the PTTW's maximum allowable daily raw water volume (1,800.00 m³/day).

Table 20. Raw Water (Well #6- Brownley) Annual and Monthly Average and Maximum Flowrates for 2023

Raw Water Flowrate – Brownley Well #6		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	18.04	18.69
February	18.04	18.63
March	18.01	18.61
April	18.02	18.60
May	17.94	18.59
June	17.76	18.54
July	17.85	18.56
August	17.26	18.59
September	15.50	34.90 ^{20A}
October	17.89	18.76
November	17.92	18.48
December	17.87	18.45
2023	17.68	34.90^{20A}

A review of flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable raw water flowrate for Well #6 (20.83 L/sec) with the exception of:

- ^{20A}September -Flowrate exceedances due to external third party flow measuring device verification and calibration.

**Table 21. Combined Well (Well #1, Well #2, Well #3, Well #4, Well #5, Well #6)
 Annual and Monthly Flow and Annual Volume for 2023**

Combined Well Flow (Well #1, Well #2, Well #3, Well #4, Well #5 & Well #6)					
Timeframe	Average Flow (m ³ /day)	Percent of Allowable Volume	Maximum Flow (m ³ /day)	Percent of Allowable Volume	Total Volume (m ³)
January	2,132.35	22.24%	2,620.16	27.34%	66,102.83
February	2,229.91	23.26%	2,966.68	30.95%	62,437.58
March	2,220.24	23.26%	2,613.44	27.27%	68,827.57
April	2,321.84	24.22%	2,893.15	30.21%	69,655.07
May	3,198.59	33.37%	4,923.32	51.36%	99,156.36
June	3,774.18	39.38%	5,328.52	55.59%	11,3225.30
July	3,244.19	33.85%	4,707.47	49.11%	100,569.94
August	2,873.26	29.98%	3,869.47	40.37%	89,070.96
September	3,152.15	32.89%	4,235.21	44.19%	94,564.54
October	2,631.51	27.45%	4,067.03	42.43%	81,576.82
November	2,300.34	24.00%	2,817.96	29.40%	69,010.05
December	2,338.70	24.40%	2,828.86	29.51%	72,499.64
2023	2,703.28	28.20%	5,328.52	55.59%	986,696.66

A review of total well flow information for the reporting period indicates that the system operated within the PTTW's maximum allowable daily taking of water (9,585.00 m³/day).