

SUMMARY REPORT

ONTARIO REGULATION 170/03
SECTION 22

ANGUS DRINKING WATER SYSTEM



**FOR THE PERIOD:
JANUARY 1, 2022 – DECEMBER 31, 2022**

*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, 2022 – December 31, 2022

1. Issue(s) of Non-Compliance

A Ministry of Environment, Conservation and Parks (MECP) Drinking Water System Inspection was conducted on May 10, 2022 for the period covering July 1, 2021 to May 10, 2022. On August 23, 2022 the Inspection Report was issued and 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 that were 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 2021/2022 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
N/A	N/A	N/A

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. These checks/verifications/calibrations are performed annually by a third party to ensure the flow measuring devices are within acceptable deviation limits.

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 2022

Treated Water Flow- Mill Street 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	1,551.10	39.45%	1,773.00	45.09%	48,084.00
February	1,684.32	42.84%	1,790.00	45.52%	47,161.00
March	1,533.84	39.01%	1,757.00	44.68%	47,549.00
April	1,734.00	44.10%	2,961.00	75.31%	52,020.00
May	2,750.93	69.96%	3,276.70	83.33%	85,278.70
June	2,357.83	59.97%	3,270.00	83.16%	70,735.00
July	2,129.84	54.17%	2,501.00	63.61%	66,025.00
August	1,948.90	49.57%	2,205.00	56.08%	60,416.00
September	1,728.63	43.96%	2,394.00	60.89%	51,859.00

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)
October	1,225.00	31.15%	1,686.00	42.88%	37,975.00
November	1,153.93	29.35%	1,452.00	36.93%	34,618.00
December	1,151.77	29.29%	1,455.00	37.00%	35,705.00
2022	1,745.84	44.40%	3,276.70	83.33%	637,425.70

A review of flow information for the reporting period indicates that the Mill Street Well Supply System operated within the rated capacity specified in the MDWL, for the maximum treated volume of treated water that flows from the treatment subsystem to the distribution system.

Table 4. Treated Water Annual and Monthly Average and Maximum Flowrates for Mill Street Well Supply System in 2022

Treated Water Flowrate- Mill Street Well Supply System		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	18.07	50.70
February	19.51	50.60
March	17.68	53.70
April	20.66	100.70
May	32.09	102.80
June	27.87	71.30
July	24.61	137.00
August	22.58	66.50
September	19.91	137.00
October	14.44	137.00
November	13.33	51.20
December	13.39	52.40
2022	20.35	137.00

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 2022

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	62.96	2.43%	135.26	5.22%	1,951.61
February	81.33	3.14%	113.32	4.37%	2,277.36
March	56.90	2.20%	93.38	3.60%	1,763.99
April	140.89	5.44%	582.73	22.48%	4,226.59
May	448.41	17.30%	701.72	27.07%	13,900.83
June	536.78	20.71%	842.50	32.50%	5,367.77
July ^{5A}	-	-	-	-	-
August	-	-	-	-	-
September	-	-	-	-	-
October	-	-	-	-	-
November	-	-	-	-	-
December	-	-	-	-	-
2022	221.21	8.50%	842.50	32.50%	29,488.15

^{5A}McGeorge Well Supply System has been offline since June 11, 2022 for maintenance and inspection activities.

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, 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 2022

Treated Water Flowrate- McGeorge Well Supply System	
January	18.11
February	10.68
March	11.03
April	20.00
May	20.00
June	18.57
July ^{6A}	-
August	-
September	-
October	-
November	-
December	-
2022	20.00

^{6A}McGeorge Well Supply System has been offline since June 11, 2022 for maintenance and inspection activities.

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 2022

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)
January	1,114.84	26.23%	1,460.40	34.35%	34,560.04
February	1,149.51	27.04%	1,446.20	34.02%	32,186.22
March	1,108.34	26.07%	1,400.00	32.93%	34,358.55
April	955.32	22.47%	1,219.40	28.69%	20,061.70
May ^{7A}	-	-	-	-	-
June	1,435.32	33.76%	1,959.90	46.10%	30,141.62
July	1,323.64	31.14%	1,963.00	46.18%	41,032.85
August	1,104.23	25.98%	1,657.60	38.99%	34,231.16
September	1,054.29	24.80%	1,764.89	41.52%	31,628.70
October	1,120.32	26.35%	1,485.58	34.95%	34,729.91

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)
November	1,010.02	23.76%	1,513.02	35.59%	30,300.66
December	1,053.80	24.79%	1,384.57	32.57%	32,667.65
2022	1,129.97	26.58%	1,963.00	46.18%	355,899.06

^{7A}*Brownley Well Supply System and Treated Water were offline from April 22 to June 9, 2022 for well inspections and maintenance activities.*

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, 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 2022

Treated Water Flowrate- Brownley Well Supply System	
January	44.47
February	42.54
March	55.15
April	47.03
May ^{8A}	-
June	72.20
July	277.70
August	58.79
September	85.46
October	127.05
November	43.39
December	59.76
2022	277.70

^{8A}*Brownley Well Supply System and Treated Water were offline from April 22 to June 9, 2022 for well inspections and maintenance activities.*

A summary of 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
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

As per the PTTW, 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 2022

Raw Water Flow – Mill Street Well #1					
Timeframe	Average Flow (m ³ /day)	Percent of Allowable Volume	Maximum Flow (m ³ /day)	Percent of Allowable Volume	Total Volume (m ³)
January	1,549.71	39.46%	1874.00	47.71%	48041.00

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)
February	1,713.54	43.63%	1,956.00	49.80%	47,979.00
March	1,557.77	39.66%	2,038.00	51.89%	48,291.00
April	1,661.07	42.29%	2,701.00	68.77%	49,832.00
May	2,667.51	67.91%	3,276.70	83.42%	82,692.70
June	2,364.17	60.19%	3,269.00	83.23%	70,925.00
July	2,069.03	52.68%	2,485.00	63.27%	64,140.00
August	1,901.39	48.41%	2,212.00	56.32%	58,943.00
September	1,681.57	42.81%	2,346.00	59.73%	50,447.00
October	1,189.10	30.27%	1,711.00	43.56%	36,862.00
November	1,118.83	28.49%	1,446.00	36.81%	33,565.00
December	1,116.58	28.43%	1,493.00	38.01%	34,614.00
2022	1,715.85	43.69%	3,276.70	83.42%	626,331.70

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.

Table 10. Raw Water (Well #1- Mill Street) Annual and Monthly Average and Maximum Flowrates for 2022

Raw Water Flowrate – Mill Street Well #1		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	39.88	55.00 ^{10A}
February	41.63	55.00 ^{10A}
March	41.69	55.00 ^{10A}
April	41.43	55.00 ^{10A}
May	40.72	45.17
June	41.29	46.62 ^{10A}
July	40.49	45.24
August	40.49	45.25
September	40.40	45.99 ^{10A}
October	40.66	49.34 ^{10A}
November	40.80	49.18 ^{10A}
December	40.87	49.05 ^{10A}
2022	40.86	55.00^{10A}

A review of flow information for the reporting period indicates that the system operated within the PTTW’s maximum allowable raw water flowrate for Mill Street Well #1 with the exception of: ^{10A}January, February, March, April, June, September, October, November and December 2022- flowrate exceedances were of very short duration and were a result of well pump start-up.

Table 11. Raw Water (Well #2- Centre Street (McGeorge)) Monthly Average, Maximum Flow and Total Volume for 2022

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	38.36	2.96%	78.50	6.06%	1,189.22
February	48.48	3.74%	64.23	4.96%	1,357.32
March	34.79	2.68%	55.88	4.31%	1,078.36
April	77.21	5.96%	303.07	23.39%	2,316.23
May	227.03	17.52%	351.05	27.09%	7,037.82
June	105.12	8.11%	432.25	33.35%	3,153.69
July ^{11A}	-	-	-	-	-
August	-	-	-	-	-
September	-	-	-	-	-
October	-	-	-	-	-
November	-	-	-	-	-
December	-	-	-	-	-
2022	88.50	6.83%	432.25	33.35%	16,132.64

^{11A}Well #2-Centre Street (McGeorge) has been offline since June 11, 2022 for maintenance and inspection activities.

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 #2.

Table 12. Raw Water (Well #2- Centre Street (McGeorge)) Annual and Monthly Maximum Flowrates for 2022

Raw Water Flowrate – Centre Street (McGeorge) Well #2	
January	7.71
February	7.58
March	7.65
April	9.28
May	13.68
June	8.90
July ^{12A}	-
August	-
September	-
October	-
November	-
December	-
2022	13.68

^{12A}Well #2 at Centre Street (McGeorge) has been offline since June 11, 2022 for maintenance and inspection activities.

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

Table 13. Raw Water (Well #3-Centre Street (McGeorge)) Monthly Average, Maximum Flow and Total Volume for 2022

Raw Water Flow – Centre Street (McGeorge) Well #3					
Timeframe	Average Flow (m³/day)	Percent of Allowable Volume	Maximum Flow (m³/day)	Percent of Allowable Volume	Total Volume (m³)
January	27.87	2.15%	56.76	4.38%	863.87
February	34.47	2.66%	51.49	3.97%	965.04
March	25.81	1.99%	40.30	3.11%	800.20
April	67.73	5.23%	292.94	22.60%	2,031.96
May	220.87	17.04%	348.44	26.895	6,847.05
June	89.98	6.94%	424.71	32.77%	2,699.35
July ^{13A}	-	-	-	-	-
August	-	-	-	-	-
September	-	-	-	-	-
October	-	-	-	-	-
November	-	-	-	-	-
December	-	-	-	-	-
2022	77.79	6.00%	424.71	32.77%	14,207.47

^{13A}Well #3 at Centre Street (McGeorge) has been offline since June 11, 2022 for maintenance and inspection activities.

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 #3.

Table 14. Raw Water (Well #3-Centre Street (McGeorge)) Annual and Monthly Maximum Flowrates for 2022

Raw Water Flowrate – Centre Street (McGeorge) Well #3	
January	8.30
February	8.28
March	9.15
April	10.96
May	12.55
June	8.36
July ^{12A}	-
August	-
September	-
October	-
November	-
December	-
2022	12.55

^{14A}Well #3 at Centre Street (McGeorge) has been offline since June 11, 2022 for maintenance and inspection activities.

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 #3.

Table 15. Raw Water (Well #4- Brownley) Monthly Average, Maximum Flow and Total Volume for 2022

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	466.18	25.90%	612.23	34.01%	14,451.65
February	466.95	25.94%	579.84	32.21%	13,074.55
March	452.93	25.16%	556.64	30.92%	14,040.84
April	248.10	13.78%	542.54	30.14%	7,443.00
May ^{15A}	-	-	-	-	-
June	454.98	25.28%	999.55	55.53%	13,649.53
July	546.92	30.38%	810.76	45.04%	16,954.45
August	455.88	25.33%	705.19	39.18%	14,132.21
September	434.74	24.15%	722.48	40.14%	13,042.20
October	463.27	25.74%	611.11	33.95%	14,361.28
November	417.31	23.18%	623.75	34.65%	12,519.37
December	427.62	23.76%	540.08	30.00%	13,256.10
2022	402.91	22.38%	999.55	55.53%	146,925.18

^{15A}Well #4 at Brownley was offline between April 22 to June 9, 2022 for well inspections and maintenance activities.

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 #4.

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	16.88	20.39
February	16.76	18.76
March	16.73	18.41
April	9.91	30.05 ^{16A}
May ^{16A}	-	-
June	15.63	18.34
July	16.71	34.91 ^{16B}
August	16.70	18.12
September	16.71	18.19
October	16.72	18.32
November	16.73	18.37
December	16.73	18.30
2022	14.67	34.91^{16B}

^{16A}Well #4 at Brownley was offline between April 22 to June 9, 2022 for well inspections and maintenance activities.

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 #4 with the exception of:

^{16A}April 2022 – Flowrate exceedances were of very short duration and were a result of well pump start-up.

^{16B}July 27, 2022 – 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 2022

Raw Water Flow – Brownley Well #5					
Timeframe	Average Flow (m ³ /day)	Percent of Allowable Volume	Maximum Flow (m ³ /day)	Percent of Allowable Volume	Total Volume (m ³)
January	147.18	22.48%	194.29	29.68%	4,562.48
February	152.06	23.23%	185.58	28.35%	4,257.55
March	156.35	23.88%	393.74	60.15%	4,846.72

Raw Water Flow – Brownley Well #5					
Timeframe	Average Flow (m ³ /day)	Percent of Allowable Volume	Maximum Flow (m ³ /day)	Percent of Allowable Volume	Total Volume (m ³)
April	93.43	14.27%	513.93	78.51%	2802.86
May ^{17A}	-	-	-	-	-
June	151.63	23.16%	331.46	50.63%	4,549.00
July	182.60	27.89%	268.95	41.08%	5,660.70
August	152.75	23.33%	234.98	35.90%	4,735.37
September	145.87	22.28%	242.93	37.11%	4,376.18
October	155.41	23.74%	204.61	31.26%	4,817.67
November	140.00	21.39%	208.54	31.86%	4,199.93
December	138.13	21.10%	353.38	53.98%	4,281.95
2022	134.62	20.56%	513.93	78.51%	49,090.41

^{17A}Well #5 at Brownley was offline between April 22 to June 9, 2022 for well inspections and maintenance activities.

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 #4.

Table 18. Raw Water (Well #5- Brownley) Annual and Monthly Average and Maximum Flowrates for 2022

Raw Water Flowrate – Brownley Well #5		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	5.33	6.45
February	5.36	7.79 ^{18A}
March	5.45	6.59
April	3.22	12.17 ^{18B}
May ^{18A}	-	-
June	5.21	6.67
July	5.62	17.93 ^{18C}
August	5.61	6.45
September	5.65	6.45
October	5.64	6.47
November	5.64	6.46
December	5.09	6.66
2022	4.81	17.93

^{18A}Well #5 at Brownley was offline between April 22 to June 9, 2022 for well inspections and maintenance activities.

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 with the exception of:

^{18A} February 2022 – Flowrate exceedances were of very short duration and were a result of well pump start-up

^{18B} April 2022 – Flowrate exceedances were of very short duration and were a result of well pump start-up

^{18C} July 27, 2022 – 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 2022

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	504.91	28.05%	667.83	37.10%	15,652.32
February	556.49	30.92%	1,379.53	76.64%	15,581.59
March	496.53	27.59%	611.50	33.97%	15,392.46
April	279.40	15.52%	597.39	33.19%	8,382.12
May ^{19A}	-	-	-	-	-
June	499.66	27.76%	1,091.42	60.63%	14,989.86
July	600.18	33.34%	894.82	49.71%	18,605.67
August	495.75	27.54%	769.22	42.73%	15,368.11
September	470.24	26.12%	778.74	43.26%	14,107.28
October	498.45	27.69%	660.35	36.69%	15,451.88
November	447.50	24.86%	669.53	37.20%	13,425.06
December	483.78	26.88%	849.30	47.18%	14,997.10
2022	444.41	24.69%	1,379.53	76.64%	161,953.45

^{19A} Well #6 at Brownley was offline between April 22 to June 9, 2022 for well inspections and maintenance activities.

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 #4.

Table 20. Raw Water (Well #6- Brownley) Annual and Monthly Average and Maximum Flowrates for 2022

Raw Water Flowrate – Brownley Well #6		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
January	18.40	31.64 ^{20A}
February	18.36	21.77 ^{20B}
March	18.34	18.85
April	10.98	18.84

Raw Water Flowrate – Brownley Well #6		
Timeframe	Average Flowrate (L/sec)	Maximum Flowrate (L/sec)
May ^{20A}	-	-
June	17.24	22.14 ^{20C}
July	18.48	34.90 ^{20D}
August	18.31	18.90
September	18.20	18.77
October	18.16	18.73
November	18.04	18.63
December	18.06	18.86
2022	16.03	34.90^{20D}

^{20A}Well #6-Brownley was offline between April 22 to June 9, 2022 for well inspections and maintenance activities.

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 with the exception of:

^{20A} January 2022 – Flowrate exceedances were of very short duration and were a result of well pump start-up.

^{20B} February 2022 – Flowrate exceedances were of very short duration and were a result of well pump start-up.

^{20C} June 2022 – Flowrate exceedances were of very short duration and were a result of well pump start-up.

^{20D} July 27, 2022 – 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 2022**

Combined Well Flow (Well #1, Well #2, Well #3, Well #4, Well #5 & Well #6)					
Timeframe	Average Flow (m³/day)	Percent of Allowable Volume	Maximum Flow (m³/day)	Percent of Allowable Volume	Total Volume (m³)
January	2,734.21	28.53%	3,483.61	36.34%	84,760.54
February	2,971.97	31.01%	3,910.91	40.80%	83,215.05
March	2,724.18	28.42%	3,478.89	36.30%	84,449.58
April	2,426.94	25.32%	4,612.03	48.12%	72,808.17
May	3,115.41	32.50%	3,976.19	41.48%	96,577.57
June	3,665.55	38.24%	6,548.39	68.32%	109,966.43
July	3,398.73	35.46%	4,459.53	46.53%	105,360.82
August	3,005.77	31.36%	3,921.39	40.91%	93,178.69
September	2,732.43	28.51%	4,090.15	42.67%	81,972.66
October	2,306.22	24.06%	3,187.07	33.25%	71,492.83

Combined Well Flow (Well #1, Well #2, Well #3, Well #4, Well #5 & Well #6)					
Timeframe	Average Flow (m³/day)	Percent of Allowable Volume	Maximum Flow (m³/day)	Percent of Allowable Volume	Total Volume (m³)
November	2,123.64	22.16%	2,947.82	30.75%	63,709.36
December	2,166.10	22.60%	2,826.45	29.49%	67,149.15
2022	2,780.93	29.01%	6,548.39	68.32%	1,014,640.85

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