

SUMMARY REPORT

ONTARIO REGULATION 170/03
SCHEDULE 22

WASAGA BEACH DRINKING WATER SYSTEM



**FOR THE PERIOD:
JANUARY 1, 2021 – DECEMBER 31, 2021**

*Prepared for the Corporation of the Town of Wasaga Beach
by the Ontario Clean Water Agency*



**ONTARIO CLEAN WATER AGENCY
AGENCE ONTARIENNE DES EAUX**

SCHEDULE 22
SUMMARY REPORTS FOR MUNICIPALITIES

Municipal: Large Residential
Small Residential

Application

22-1. This Schedule applies to the following drinking water systems:

1. Large municipal residential systems.
2. Small municipal residential systems.

Report

22-2. (1) The owner of a drinking water system shall ensure that, not later than March 31 of each year after 2003, a report is prepared in accordance with subsections (2) and (3) for the preceding calendar year and is given to,

- (a) in the case of a drinking water system owned by a municipality, the members of the municipal council;
- (b) in the case of a drinking water system owned by a municipal service board established under section 195 of the *Municipal Act, 2001*, the members of the municipal service board; or
- (c) in the case of a drinking water system owned by a corporation, the board of directors of the corporation.

(2) The report must,

- (a) list the requirements of the Act, the regulations, the system's approval, drinking water works permit, municipal drinking water licence, and any orders applicable to the system that were not met at any time during the period covered by the report; and
- (b) for each requirement referred to in clause (a) that was not met, specify the duration of the failure and the measures that were taken to correct the failure.

(3) The report must also include the following information for the purpose of enabling the owner of the system to assess the capability of the system to meet existing and planned uses of the system:

1. A summary of the quantities and flow rates of the water supplied during the period covered by the report, including monthly average and maximum daily flows.
2. A comparison of the summary referred to in paragraph 1 to the rated capacity and flow rates approved in the system's approval, drinking water works permit or municipal drinking water licence, or if the system is receiving all of its water from another system under an agreement pursuant to subsection 5 (4), to the flow rates specified in the written agreement.

(4) If a report is prepared under subsection (1) for a system that supplies water to a municipality under the terms of a contract, the owner of the system shall give a copy of the report to the municipality by March 31.

(5) Revoked: O. Reg. 253/05, s. 18.

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DRINKING-WATER SYSTEM NAME:	WASAGA BEACH
DRINKING-WATER SYSTEM NUMBER:	220002137
DRINKING-WATER SYSTEM CATEGORY:	LARGE MUNICIPAL RESIDENTIAL
MUNICIPAL DRINKING WATER LICENCE #:	131-101 (issued on March 16, 2021)
DRINKING-WATER WORKS PERMIT #:	131-201 (issued on March 06, 2021)
PERMIT TO TAKE WATER #:	8041-BFHJV2

1. REPORT

This report is a summary of water quantity data for the Wasaga Beach Drinking Water System (DWS) in the Town of Wasaga Beach written in accordance with Schedule 22 of Ontario's Drinking Water Systems Regulation for the reporting period of January 1, 2021 to December 31, 2021. The Wasaga Beach DWS is categorized as a Large Municipal Residential Drinking Water System. This report was prepared by the Ontario Clean Water Agency on behalf of the Corporation of the Town of Wasaga Beach.

2. ISSUES OF NON-COMPLIANCE

The following outlines any instances when the DWS failed to meet the requirements of the Act, Regulations, System Approval(s) and any Order during this reporting period and the measures taken to correct each failure.

1. August 18th, 2021 – Continuous Monitoring

Ontario Regulation 170/03 Requirement:

Schedule 6-5, Continuous Monitoring

Incident Description: On Wednesday August 18th at approximately 0940hrs, the Jenetta post-Cl₂ Analyzer was undergoing calibrations and had been placed in "Calibration Mode". Operations staff did not complete the calibration process, which locked in the current reading until it was discovered on August 19th at 1155hrs. The reading before the calibration was 1.36 mg/L and 1.66 mg/L once restored; during this period no chlorine related alarms were triggered. The pre-chlorine analyzer remained active during this time and did not lower past 2.53 mg/L. As well, the 24/7 distribution Cl₂ monitoring at the Wasaga Beach WWTP maintained an adequate chlorine residual throughout the incident.

Corrective Actions:

- Normal functions were immediately restored upon discovery
- OCWA explored the option of having a "Calibration Mode" to have a timeout such that it is restored to normal functions after a set period. At this time, the option was deemed not possible.
- Refreshers to Operations staff on calibration procedures

Status: Complete

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2. September 10th, 2021- Frequency of Sampling and Equipment Checks

Ontario Regulation 170/03 Requirement:

Schedule 6-1.1(3), Frequency of Sampling and Equipment Checks

Incident Description: On September 10th, 2021 while an operator was performing monthly data checks it was observed that both Turbidity and Raw Water Well levels were taken outside of the monthly requirement of 20 to 40 days. Powerline: Turbidity taken July 13 and August 24 - 42 days.

Corrective Actions: The Work Order has been altered to provide additional information on timelines of completion:

- The Work Order will now generate on a timeline of 20 days after the previous was completed instead of generated on the 1st of the month to be more “up front” about reminding the Operator that the time sensitive aspect has begun.
- The Work Order has been altered to include a descriptor “Must be completed in 20d”
- The Work Order will be marked in red to highlight it needs to be completed in a timely manner.
- A new “portlet” was made and tested testing, that summarizes all time-sensitive Work Orders for the Operations staff.

Status: Complete

Please refer to the Annual Report (Section 11) for the Wasaga Beach DWS for information regarding Adverse Water Quality Incident(s) that may have occurred during the reporting period.

3. SYSTEM PERFORMANCE

The following tables (Table 1 and Table 2) summarize the quantities and flow rates of the raw water taken and treated water supplied during the period covered by this report, including monthly average and maximum day flows, and daily instantaneous peak flow rates, as well as a comparison with the allowable maximum daily volume and flow rates for the system.

Table 1: Wasaga Beach DWS – Raw Water (RW) Summary for Reporting Period

Description	Powerline Road Pumphouse	Jenetta Street Pumphouse	Total
Maximum Daily Volume(m ³ /day)*	15,707.52	15,707.52	31,415.04
Maximum Flow Rate (L/s)**	181.8	181.8	-
Average Day Flow (m ³ /day)	4,838.05	3,144.45	7,982.5
% of Maximum Daily Volume*	30.8	20.0	25.41
Maximum Day Flow (m ³ /day)	10,489	7,819	18,308

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Description	Powerline Road Pumphouse	Jenetta Street Pumphouse	Total
% of Maximum Daily Volume*	66.8	49.8	58.3
Average Daily Flow Rate (L/s)	122.2	64.27	-
% of Approved Flow Rate**	67.2	35.4	-
Daily Instantaneous Peak Flow Rate (L/s)	195+	179	-
% of Approved Flow Rate**	107.3+	98.5	-
Total Annual Flow (m ³)	1,768,265	1,150,274	2,918,539

*As specified in the Permit to Take Water, where the “maximum daily volume” is expressed as the “Total Taking” in cubic metres per day.

**As specified in the Permit to Take Water, where the “maximum flow rate” is the “Maximum Taken per Minute” expressed in litres per minute and stipulated as 60.0 L/s per well. There are three well pumps at Powerline Road Pumphouse and three well pumps at the Jenetta Street Pumphouse. Note: Powerline well was decommissioned in 2021.

+Exceedances are due to power bumps, well pump start-ups, and their instantaneous flow rate measurements.

Table 2: Wasaga Beach DWS – Treated Water (TW) Summary for Reporting Period

Description	Powerline Rd. Pumphouse	Jenetta St. Pumphouse	Total
Rated Capacity (m ³ /day)*	15,707.52	15,707.52	-
Average Day Flow (m ³ /day)	4,862.7	3,144.45	7756.3
% of Rated Capacity*	31	20	-
Maximum Day Flow (m ³ /day)	10,754	7,819	18,527.0
% of Rated Capacity*	68.5	49.8	-
Total Annual Flow (m ³)	1,777,597	1,150,274	2,927,871

*As specified in the Municipal Drinking Water License, where the “rated capacity” is the “the maximum daily volume of treated water that flows from the treatment subsystem to the distribution system,” expressed in cubic metres per day.

A review of Wasaga Beach DWS flow information for the period of January 1, 2021 to December 31, 2021 indicates that there were no exceedances of the MDWL Rated Capacity at either Pumphouse, which also means there were no exceedances of the maximum daily volume as per the PTTW. The instances of exceeding the allowable PTTW maximum flow rate are explained by instantaneous flow rate measurements and

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well pump start-ups. Instantaneous flow rate exceedances do not result in non-compliances because the PTTW dictates daily and total water taking volumes only.

The following tables (Table 3 and Table 4) outline a more detailed flow summary for each Pumphouse.

Table 3: Wasaga Beach DWS – Facility Flow Summary for Powerline Road Pumphouse (RW)

Month	Monthly Flow Total (m ³ /month)	Daily Flow Average (m ³ /day)	Daily Flow Maximum (m ³ /day)	Daily Average Flow Rate (L/sec)	Daily Peak Flow Rate (L/sec)	Number of Days of Water Taking
Jan	83,493	2,693.32	4,040	117.9	192.8	31
Feb	99,850	3,566.07	8,419	128.0	181.5	28
Mar	108,523	3,500.74	4,302	131.1	172.8	31
Apr	123,302	4,110.07	7,748	131.3	179.1	30
May	173,732	5,604.26	8,900	124.0	177.8	31
Jun	227,420	7,580.67	10,489	128.2	195.0	30
Jul	191,572	6,179.74	8,410	117.3	170.4	31
Aug	247,636	7,988.26	10,269	118.4	168.3	31
Sep	165,353	5,511.77	7,306	115.5	170.0	30
Oct	125,621	4,052.29	5,150	117.3	178.2	31
Nov	107,620	3,587.33	4,235	120.8	179.3	30
Dec	114,143	3,682.03	4,220	117.9	166.8	31
Total	1,768,265	-	-	-	-	365
Avg.	-	4,838.05	-	122.2	-	-
Max.	-	-	10,489.00	-	195.0	-

Table 4: Wasaga Beach DWS – Facility Flow Summary for Jenetta Street Pumphouse (RW)

Month	Monthly Flow Total (m ³ /month)	Daily Flow Average (m ³ /day)	Daily Flow Maximum (m ³ /day)	Daily Average Flow Rate (L/sec)	Daily Peak Flow Rate (L/sec)	Number of Days of Water Taking
Jan	81,095.0	2615.97	6,225.0	74.08	177.80	31
Feb	57,622.0	2057.93	4,877.0	64.7	179.20	28
Mar	61,878.0	1996.06	3,550.0	58.11	123.80	31
Apr	65,907.0	2196.90	4,681.0	57.91	158.60	30
May	119,023.0	3839.45	6,122.0	56.99	117.40	31
Jun	169,778.0	5659.27	7,819.0	76.22	128.50	30
Jul	141,678.0	4570.26	6,651.0	66.5	127.50	31
Aug	161,982.0	5225.23	7,078.0	76.68	123.20	31
Sep	106,968.0	3565.60	6,435.0	67.95	124.90	30
Oct	70,040.0	2259.35	2,964.0	59.42	122.00	31

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Month	Monthly Flow Total (m ³ /month)	Daily Flow Average (m ³ /day)	Daily Flow Maximum (m ³ /day)	Daily Average Flow Rate (L/sec)	Daily Peak Flow Rate (L/sec)	Number of Days of Water Taking
Nov	55,934.0	1864.47	2,116.0	55.43	124.10	30
Dec	58,369.0	1882.87	2,142.0	57.35	123.50	31
Total	1,150,274.00	-	-	-	-	365
Avg.	-	3,151.44	-	64.27	-	-
Max.	-	-	7,819.00	-	179.20	-

For additional information on the treated water flows from the Wasaga Beach DWS, please refer to the following graphical representations:

- Graph 1: Treated Water Flows for 2021
- Graph 2: Treated Water Flows for 2019, 2020 and 2021
- Graph 3: Treated Water Flows for 2021 compared with 2007
- Graph 4: Average Day and Maximum Day Treated Water Flows from 2007 to 2021

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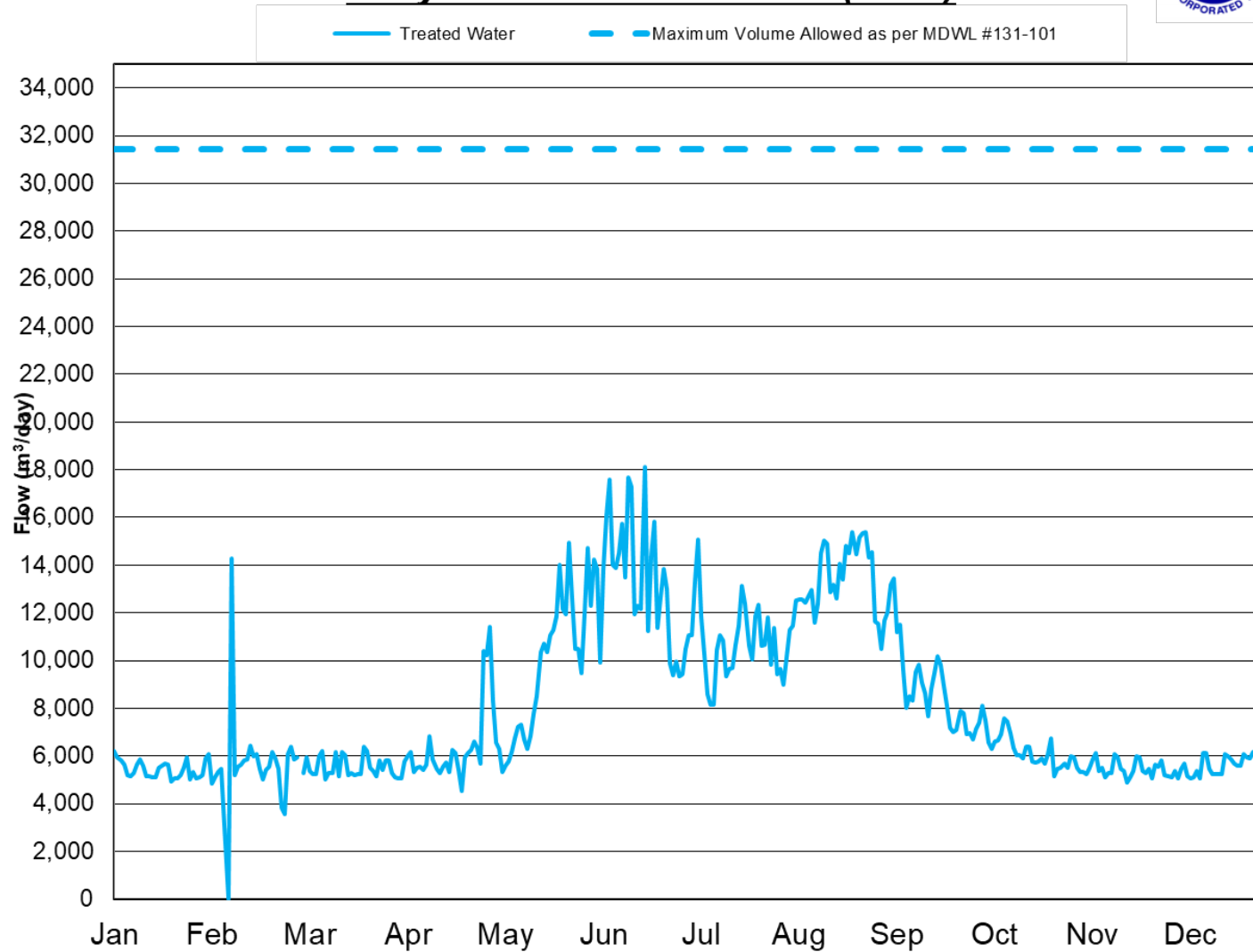
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Graph 1: Treated Water Flows for 2021



Wasaga Beach Well Supply System **Daily Treated Water Flows (2021)**



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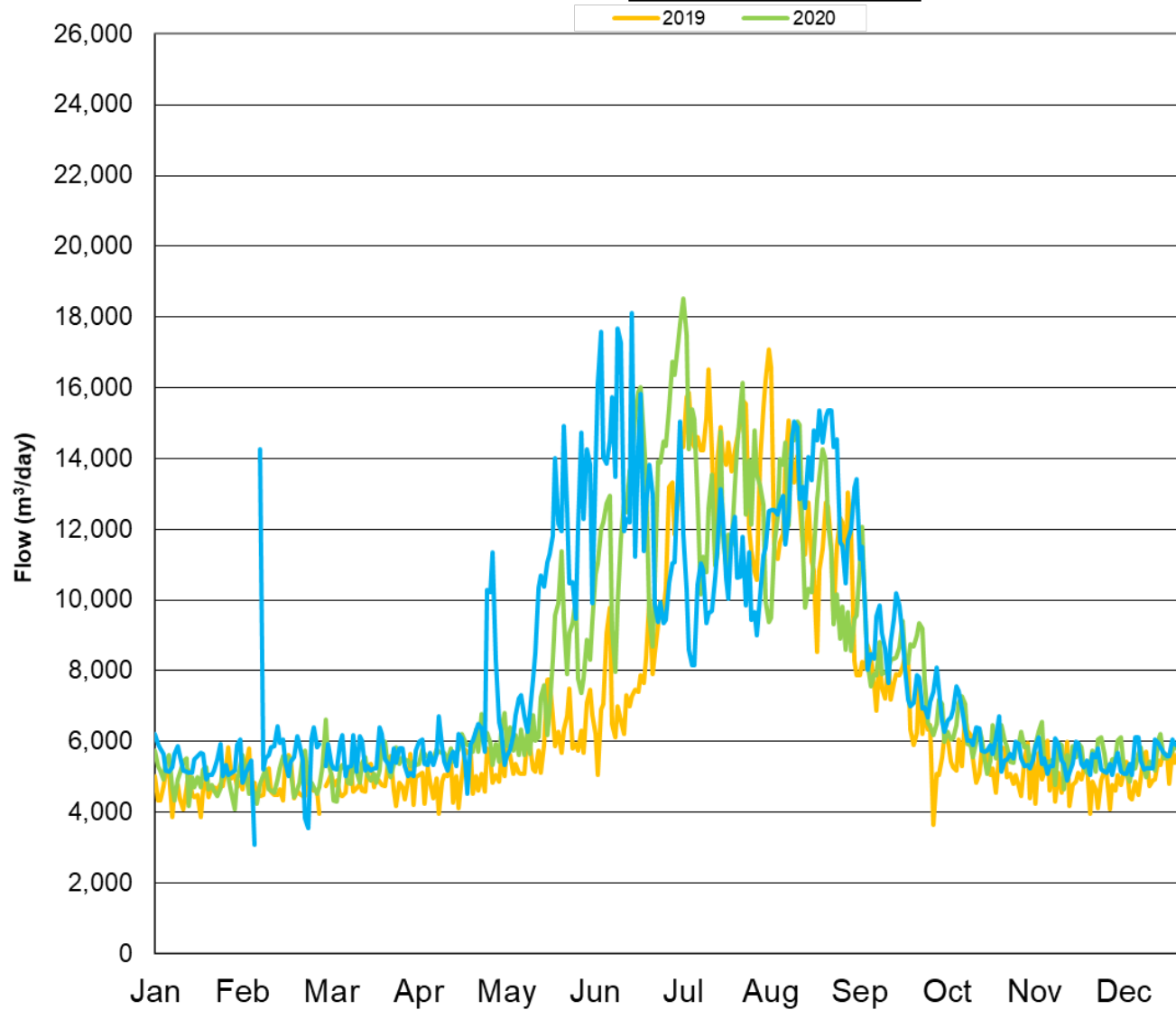
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Graph 2: Treated Water Flows for 2019, 2020 and 2021



Wasaga Beach DWS - Total Treated Flows (2019, 2020 & 2021)



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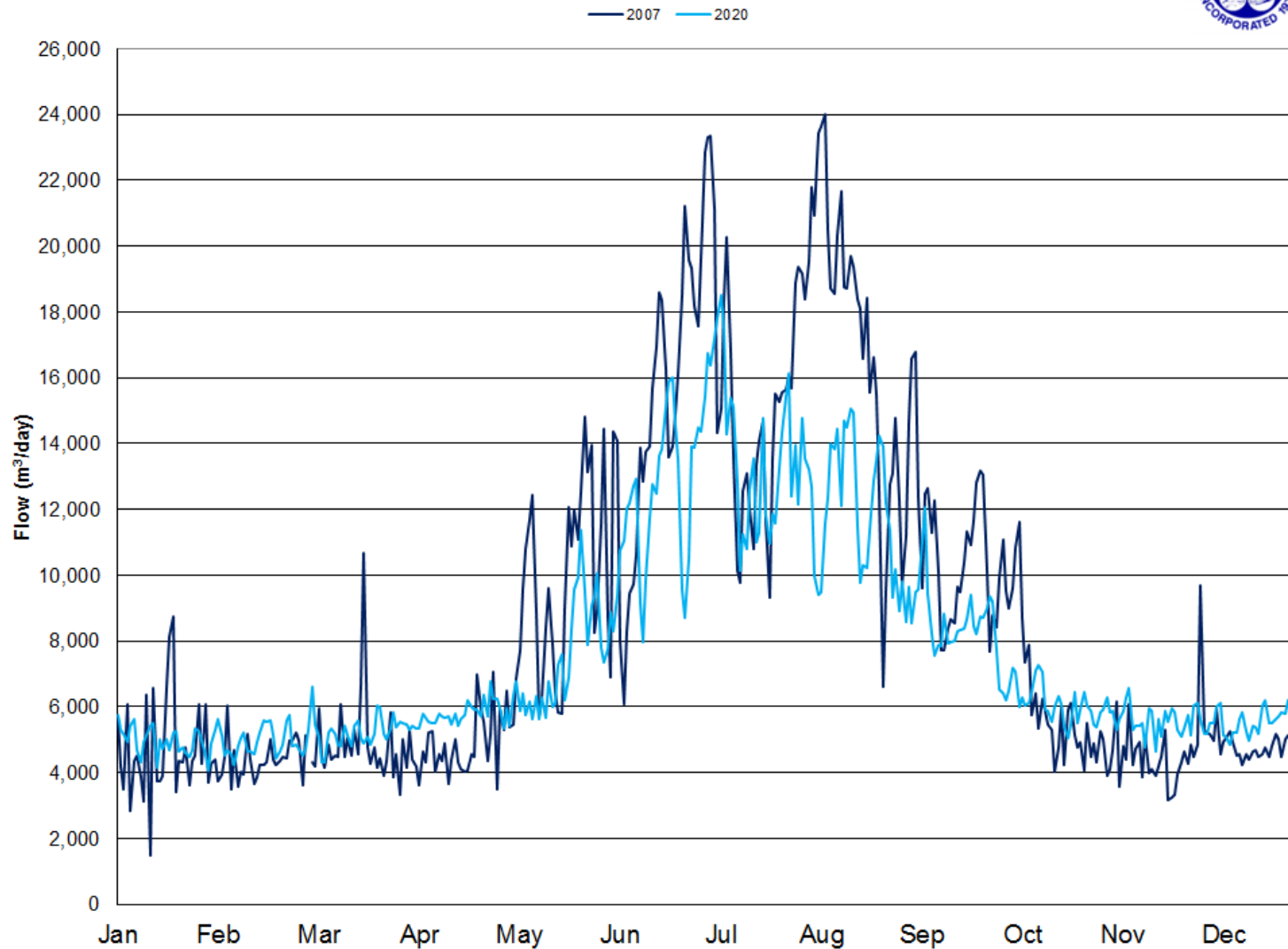
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Graph 3: Treated Water Flows for 2021 compared with 2007



Wasaga Beach DWS - Total Treated Flows (2007 vs 2020)



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Graph 4: Average Day and Maximum Day Treated Water Flows from 2007 to 2021

