

# 2021 Schedule 22 Annual Summary Report

## Terrace Bay Drinking-Water System

February 2022

Prepared by the



**Ontario Clean Water Agency**  
**Agence Ontarienne Des Eaux**

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## ***Section 1: Introduction***

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This report is a summary of water quality information for the Terrace Bay Drinking-Water System, published in accordance with Schedule 22 of Ontario’s Drinking-Water Systems Regulation for the reporting period of January 1st to December 31st 2021. The Terrace Bay Drinking-Water System is categorized as a Large Municipal Residential Drinking Water System.

This report is prepared by The Ontario Clean Water Agency on behalf of the Corporation of the Township of Terrace Bay. A copy of the Summary Report is to be provided to the members of the municipal council by March 31st 2022.

## ***Section 2: What Does This Report Contain?***

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“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.”

- O. Reg. 170/03 s. 22 (2)

“The report must also include the following information for the purpose of enabling the owner of the system to assess the rated capability of their 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.”

- O. Reg. 170/03 s. 22 (3)

### Section 3: Daily Flow Rates

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In accordance with the *Municipal Drinking Water Licence 237-101 Schedule C: System – Specific Conditions 1.0 Performance Limits*, the Terrace Bay drinking-water system shall not be operated to exceed the rated capacity for maximum flow rate from the treatment subsystem to the distribution system of **3888 m<sup>3</sup> / day**.

The drinking-water system may be operated temporarily at a rate above the rated capacity where necessary for:

- i) the purposes of fighting a large fire or,
- ii) the maintenance of the drinking-water system

The Terrace Bay Drinking-Water facility operated below the rated capacity of 3888 m<sup>3</sup> / day in 2021. The average monthly raw flow rate was 48745.72m<sup>3</sup>; the average raw daily flow rate was 1715.03m<sup>3</sup>, with a maximum raw daily flow rate of 3022.00m<sup>3</sup>.

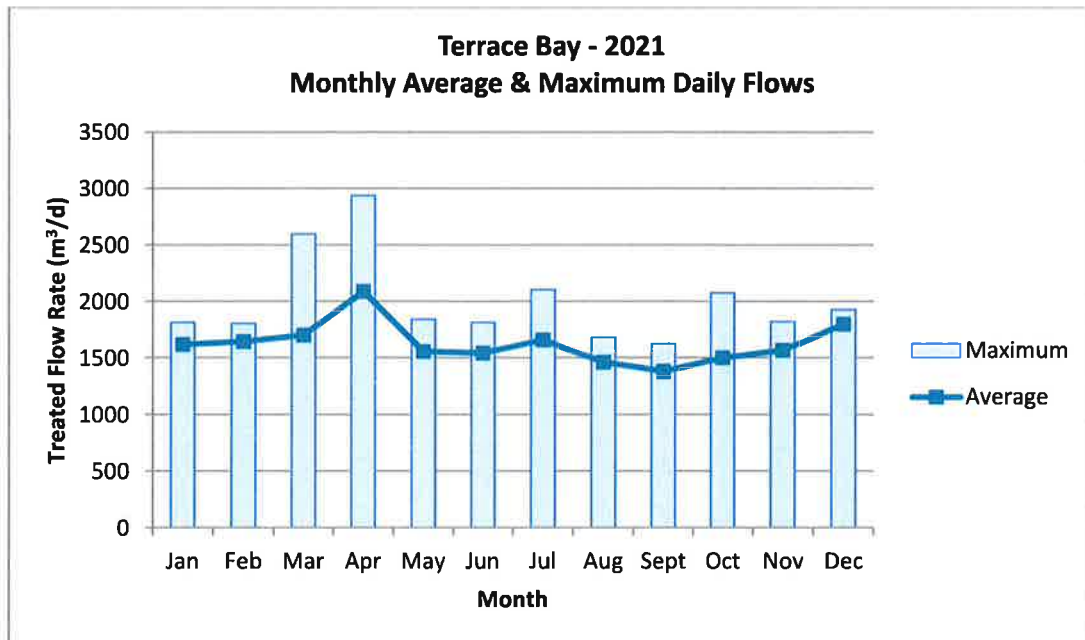
In 2021, the average monthly treated flow rate was 49514.46m<sup>3</sup>; the average daily treated flow rate was 1628.21m<sup>3</sup>; and the maximum daily treated flow rate for the year was 2937.39m<sup>3</sup> representing 75.55% of the allowable daily volume.

A summary of raw and treated flows, including maximum raw flow into the treatment system as well as treated average, maximum and total flow rates are included in the tables below.

The quantity of raw water supplied during the reporting period did not exceed the terms and conditions of the *Permit to Take Water* nor did the flows directed to the treatment system exceed the rated capacity for this system.

### Monthly Raw & Treated Flow Rates for 2021

Month	Average Daily Raw Flow Rate (m <sup>3</sup> /d)	Maximum Daily Raw Flow Rate (m <sup>3</sup> /d)	Average Daily Treated Flow Rate (m <sup>3</sup> /d)	Maximum Daily Treated Flow Rate (m <sup>3</sup> /d)	Total Monthly Treated Flow Rate (m <sup>3</sup> /month)
January	1626.81	2035.00	1620.05	1815.90	50221.70
February	1656.79	2106.00	1645.70	1805.30	46079.50
March	1715.29	2600.00	1703.92	2596.30	52821.60
April	2108.67	3022.00	2090.25	2937.40	62707.50
May	1559.16	1846.00	1558.33	1842.00	48308.10
June	1584.43	1613.63	1544.54	1815.10	46336.07
July	1909.73	2503.43	1659.60	2106.13	51447.47
August	1684.68	2100.41	1464.79	1685.59	45408.50
September	1513.25	1719.59	1382.63	1629.37	41478.87
October	1620.94	2321.64	1502.32	2076.73	46571.94
November	1671.50	2138.89	1567.56	1819.74	47026.86
December	1929.14	2372.20	1798.89	1927.61	55765.53
2021 Total Treated Flows (m <sup>3</sup> )				<b>594173.64</b>	



## Section 4: System Failures and Correction

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The Ministry of Environment conducted an *announced* inspection of the Terrace Bay Drinking Water System on November 23 2021. The final inspection report identified one non-conformance as summarized in the table below.

The 2021 final Terrace Bay Drinking Water System rating has not been published yet.

Item	Non-Compliance Identified	Compliance Date	Action Being Taken to Address item	Status
1	<p>It is a requirement of O. Reg. 170/03, Schedule 6(2), that treated water chlorine readings be taken and recorded at least once every 5 minutes. The intent of recording this information is to demonstrate that primary disinfection is being achieved as water is directed to users.</p> <p>During the time of the inspection, trending associated with the water treatment plant was reviewed. The review confirmed both Wonderwear and SCADA were operating in the prescribed format. The Wonderwear program recorded filter effluent turbidity and treated water chlorine residual data every second, and the SCADA system recorded this information every minute, with the exception of the following loss of data:</p> <p>On November 4th, 2020, there was a total loss of data in both Wonderwear and SCADA from 11:56 - 12:14 (18 minutes) and 12:27 - 12:36 (9 minutes). Operators reported that the loss of data occurred while technicians were doing upgrades to the programming. During this period of time, operators attempted to back up data, however, there was some lag time. Operators confirmed that the alarm system was fully functional and were not triggered at this time. Operators also confirmed that the treatment process was not operation (i.e. effluent filters were not in operation), however the plant was maintaining distribution water supply to consumers via the treated water reservoir (i.e. water was still being directed to users). As a result, the DWS did not meet the minimum frequency of 5 minutes for treated chlorine, as specified in the Table in Schedule 6 of O. Reg. 170/03.</p>	Feb 22 2022	<p>During the inspection, it was discussed with the undersigned inspector, that in the future, operators will verify that the backup trending system is operating before PLC and Scada system backup is performed and if backup trending has issues at same time, operators will perform handheld chlorine residuals as required.</p>	Complete

## Section 5: Conclusion

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In the reporting year of 2021, there were four adverse water quality incident (AWQI) reports filed as summarized in the table below.

Incident Date	Parameter	Result	Unit of Measure	Corrective Action	Corrective Action Date
April 8 2021	Adverse Lead exceedance at Hydrant 35- Terrace Heights	0.0207	mg/L	resample	April 21 2021
5-Jul-21	Loss of distribution pressure - lightning hit transformer			resample & boil water advisory	July 9 2021
22-Jul-21	Lead - 79 Hudson	26.6	mg/L	-	-
2-Dec-21	Loss of pressure due to power outage			BWO & resample	December 4 2021

For the operating year of 2021, the Terrace Bay Drinking-Water System was able to meet the demand of water use within the town without exceeding the Municipal Drinking Water Licence and Permit to Take Water.

February 2022

Mayor Jody Davis and Council  
The Corporation of the Township of Terrace Bay  
P.O. Box 40  
TERRACE BAY, Ontario.  
P0T 2W0

**Re: 2021 Annual Summary Report for the Terrace Bay Drinking-Water System**

Ontario's Drinking-Water Systems Regulation (O.Reg.170/03), made under the *Safe Drinking Water Act, 2002*, requires that the owner of a drinking water system prepare an annual summary for municipalities on the operation of the system and the quality of its water.

The annual summary must cover the period of January 1<sup>st</sup> to December 31<sup>st</sup> in a year and must *be prepared not later than March 31<sup>st</sup>* of the following year. Pursuant to the legislative requirements, enclosed for your records is the 2021 Annual Summary for the Terrace Bay Drinking-Water System.

Pursuant to the legislative requirements, *Schedule 22 Summary Reports for Municipalities*, the annual summary 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."

- O. Reg. 170/03 s. 22 (2)

"The report must also include the following information for the purpose of enabling the owner of the system to assess the rated capability of their 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."

-O. Reg. 170/03 s. 22 (3)



In addition, Section 12 (1) - 4 - gives the direction that a copy of the annual summary for the system is given, without charge, to every person who requests a copy and be made available for inspection by any member of the public during normal business hours. The reports should be made available at the office of the municipality, or at a location that is accessible to the users of the water system.

This report was prepared by the Ontario Clean Water Agency on behalf of the Township of Terrace Bay and is based on information kept on record by OCWA at the Terrace Bay WTP. The report covers the period January 1<sup>st</sup> to December 31<sup>st</sup> 2021.

Yours truly,

*Patrick Couture*

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Operations Staff – Terrace Bay WTP