

**THE TOWN OF RAINY RIVER
MUNICIPAL WATER SYSTEM
SUMMARY REPORT
O. Reg. 170/03, Schedule 22**

For The Period:

January 1, 2023, to December 31, 2023

Received by Municipal Office March 6, 2024

Prepared For:

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Prepared March 6, 2024, By:

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**Summary Report
Rainy River Water System 2023**

Drinking Water Works Permit # 296-201 – Dated January 10, 2021

Municipal Drinking Water Licence # 296-201 – Dated January 10, 2021

Permit to Take Water # 8271-BJJBC – Dated December 4, 2019

**Rate of taking shall not exceed a maximum of 1,715 litres per
minute and 2,473,024 litres per day.**

Permit is valid until December 4, 2029

All sampling and analysis requirements have been met for the year 2023 in accordance with Reg. 170/03.

Microbiological

Reg. 169/03
Amended to O. Reg. 17/04

Volatile Organics

Reg. 169/03
Amended to O. Reg. 17/04

Inorganics

Reg. 169/03
Amended to O. Reg. 17/04

Pesticides and PCB

Reg. 169/03
Amended to O. Reg. 17/04

Reporting, Notification and Corrective Action

NON-COMPLIANCE WITH REGULATORY REQUIREMENTS	ACTIONS REQUIRED	ACTIONS TAKEN
<p>1. Do the operations and maintenance manuals meet the requirements of the DWWP and MDWL issued under Part V of the SDWA?</p> <p>The operations and maintenance manuals did not meet the requirements of the Drinking Water Works Permit and Municipal Drinking Water Licence issued under Part V of the SDWA.</p> <p>INSPECTOR OBSERVATIONS: Upon review of the Rainy River DWS maintenance manual SOP “Inactivation of Giardia Cysts and Viruses in Drinking Water”, the undersigned water inspector noted that the SOP does not reflect the log inactivation/removal requirements of Schedule E of the MDWL. Specifically, the SOP states “2.5-log inactivation of giardia cysts and 2-log inactivation of viruses has been achieved...”, while Schedule E of the MDWL states the minimum log removal/inactivation required at the Rainy River WTP is 2-log cryptosporidium, 3-log giardia cysts and 4-log viruses.</p>	<p>CORRECTIVE ACTION: By Friday, September 29, 2023, the Town of Rainy River must update the above noted SOP to accurately reflect Schedule E of the MDWL. By the same date, a copy of the SOP must be provided to the undersigned water inspector.</p>	
<p>2. Does the owner have a harmful algal bloom monitoring plan in place that meets the requirements of the MDWL?</p>	<p>CORRECTIVE ACTION: By Friday, September 29, 2023, the Town of Rainy River must provide documentation to the</p>	

<p>The owner did not have a harmful algal bloom monitoring plan in place.</p> <p>INSPECTOR OBSERVATIONS: The harmful algal bloom (HAB) plan that is in place is not being followed. There is no documentation/records to confirm that the operators are receiving the annual training on the HAB monitoring plan prior to June 1st of the current year as per their Municipal Drinking Water Licence (MDWL). Condition 6.1.3 states “the owner must train all relevant drinking water system staff of the plan prior to the beginning of each warm season, as described in Condition 6.1.2; Section 6.3.6 states “up-to-date records that document staff training on the HAB monitoring, reporting, and sampling procedures”. This criteria is also described in Rainy River’s Appendix L Algae Plan Procedure Description 14.0 “Train staff on monitoring, reporting, and sampling on an annual basis and before June 1.”</p>	<p>undersigned water inspector, which shows that operators have been trained on the HAB monitoring plan.</p>	
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Capacity Assessment

The maximum rated capacity of the Plant is 28.6 L/S. In 2023, the maximum flow of water through the Water Treatment Plant was 28.2 L/S (i.e., 2,204 m³ per day) or 1% under the rated capacity.

In 2023 the annual average daily flow was 7.0 L/S (i.e., 554 m³ per day) or 25% of the capacity of the Plant.

Month	Flows	Highest Instantaneous Peak Flow	Average Daily Instantaneous Peak Flow	Percent of the Rated Capacity 28.6 L/S
January	9,963 m ³	6.73 L/S	5.85 L/S	29% of rated capacity
February	9,086 m ³	7.1 L/S	5.95 L/S	27% of rated capacity
March	10,007 m ³	13.14 L/S	6.07 L/S	47% of rated capacity
April	9,216 m ³	10.74 L/S	5.97 L/S	40% of rated capacity
May	10,038 m ³	15.7 L/S	7.38 L/S	52% of rated capacity
June	10,531 m ³	10.24 L/S	7.24 L/S	38% of rated capacity
July	11,692 m ³	15.39 L/S	10.97 L/S	51% of rated capacity
August	10,707 m ³	12.71 L/S	9.93 L/S	45% of rated capacity
September	9,573 m ³	11.76 L/S	6.0 L/S	43% of rated capacity
October	8,514 m ³	7.05 L/S	5.0 L/S	25% of rated capacity
November	8,075 m ³	13.93 L/S	6.0 L/S	49% of rated capacity
December	8,569 m ³	28.29 L/S	6.0 L/S	99% of rated capacity
Total Flows	115,971 m ³		<u>Yearly Average Instantaneous Peak Flow</u>	
Average Monthly Flow	9,664 m ³		7.0 L/S or 25% of rated capacity	45% of the rated capacity

The total flow for 2023 was 115,971 m³. The average monthly flow for 2023 was 9,664 m³. The average daily instantaneous peak flow rate was 7.0 L/S which is 25% of the plant's rated capacity.

The highest daily instantaneous peak flow rate was 28.29 L/S (hydrant flushing). This instantaneous flow was 1% under the rated capacity of the plant.

Sodium results tested January 19, 2021	26.0 ug/L
Fluoride results tested February 19, 2021	< 0.020 ug/L
October 2023 running average for THM's was	80.65 ug/L