

**THE TOWN OF RAINY RIVER  
2023 ANNUAL SEWAGE REPORT**

**For The Period:**

**January 1, 2023, to December 31, 2023**

**Prepared For:**

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**MOE**

**Mr. Aaron Causyn  
Provincial Water Wastewater Inspector  
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**Leroy Hancharyk  
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The Town of Rainy River**

**Prepared February 2024 by:**

**Leroy Hancharyk  
ORO  
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Rainy River, Ontario  
POW 1LO  
Tel. (807) 852-4485**

**2023 Annual Sewage Report  
Town of Rainy River**

**Certificate of Approval # 9581-7EVR3S – Dated June 26, 2008.**

January 2023

One sample is taken at the beginning of each month.

Total Flow	10,419	m <sup>3</sup>
Average Daily Flow	336	m <sup>3</sup>
Max Daily Flow	429	m <sup>3</sup>
BOD Carbonaceous		mg/L
BOD's	303	mg/L
Suspended Solids	160	mg/L
Total Phosphorus	9.15	mg/L
TKN	58.6	mg/L

February 2023

One sample is taken at the beginning of each month.

Total Flow	8,960	m <sup>3</sup>
Average Daily Flow	320	m <sup>3</sup>
Max Daily Flow	369	m <sup>3</sup>
BOD Carbonaceous		mg/L
BOD's	298	mg/L
Suspended Solids	422	mg/L
Total Phosphorus	10.6	mg/L
TKN	73.7	mg/L

March 2023

One sample is taken at the beginning of each month.

Total Flow	10,098	m <sup>3</sup>
Average Daily Flow	326	m <sup>3</sup>
Max Daily Flow	461	m <sup>3</sup>
BOD Carbonaceous	95.4	mg/L
BOD's	126	mg/L
Suspended Solids	111	mg/L
Total Phosphorus	4.84	mg/L
TKN	46.0	mg/L

April 2023

One sample is taken at the beginning of each month.

Total Flow	28,563	m <sup>3</sup>
Average Daily Flow	952	m <sup>3</sup>
Max Daily Flow	2,118	m <sup>3</sup>
BOD Carbonaceous		mg/L
BOD's	52.0	mg/L
Suspended Solids	99.6	mg/L
Total Phosphorus	3.19	mg/L
TKN	27.0	mg/L

May 2023

Total Flow	21,051	m <sup>3</sup>
Average Daily Flow	679	m <sup>3</sup>
Max Daily Flow	1,328	m <sup>3</sup>
BOD Carbonaceous	62.6	mg/L
BOD's	68.5	mg/L
Suspended Solids	78.6	mg/L
Total Phosphorus	2.87	mg/L
TKN	26.0	mg/L

One sample is taken at the beginning of each month.

June 2023

Total Flow	18,566	m <sup>3</sup>
Average Daily Flow	619	m <sup>3</sup>
Max Daily Flow	1,453	m <sup>3</sup>
BOD Carbonaceous	48.1	mg/L
BOD's	53.3	mg/L
Suspended Solids	48.7	mg/L
Total Phosphorus	2.67	mg/L
TKN	23.6	mg/L

One sample is taken at the beginning of each month.

July 2023

Total Flow	16,434	m <sup>3</sup>
Average Daily Flow	530	m <sup>3</sup>
Max Daily Flow	1,203	m <sup>3</sup>
BOD Carbonaceous	15.3	mg/L
BOD's	19.1	mg/L
Suspended Solids	19.7	mg/L
Total Phosphorus	1.88	mg/L
TKN	18.3	mg/L

One sample is taken at the beginning of each month.

August 2023

Total Flow	11,030	m <sup>3</sup>
Average Daily Flow	356	m <sup>3</sup>
Max Daily Flow	495	m <sup>3</sup>
BOD Carbonaceous	59.0	mg/L
BOD's	45.6	mg/L
Suspended Solids	59.7	mg/L
Total Phosphorus	5.41	mg/L
TKN	45.9	mg/L

One sample is taken at the beginning of each month.

September 2023

Total Flow	10,512	m <sup>3</sup>
Average Daily Flow	350	m <sup>3</sup>
Max Daily Flow	519	m <sup>3</sup>
BOD Carbonaceous	86.9	mg/L
BOD's	85.3	mg/L
Suspended Solids	102	mg/L

One sample is taken at the beginning of each month.

Total Phosphorus	4.88	mg/L
TKN	50.2	mg/L

October 2023

One sample is taken at the beginning of each month.

Total Flow	15,024	m <sup>3</sup>
Average Daily Flow	485	m <sup>3</sup>
Max Daily Flow	830	m <sup>3</sup>
BOD Carbonaceous	116	mg/L
BOD's	102	mg/L
Suspended Solids	82.5	mg/L
Total Phosphorus	5.72	mg/L
TKN	45.4	mg/L

November 2023

One sample is taken at the beginning of each month.

Total Flow	18,712	m <sup>3</sup>
Average Daily Flow	624	m <sup>3</sup>
Max Daily Flow	998	m <sup>3</sup>
BOD Carbonaceous	20.2	mg/L
BOD's	26.7	mg/L
Suspended Solids	29.8	mg/L
Total Phosphorus	3.27	mg/L
TKN	12.8	mg/L

December 2023

One sample is taken at the beginning of each month.

Total Flow	12,431	m <sup>3</sup>
Average Daily Flow	401	m <sup>3</sup>
Max Daily Flow	549	m <sup>3</sup>
BOD Carbonaceous	82.7	mg/L
BOD's	93.5	mg/L
Suspended Solids	93.8	mg/L
Total Phosphorus	4.70	mg/L
TKN	44.6	mg/L

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**Yearly Average 2023**

Total Flow	15,150	m <sup>3</sup>	<b>Total Flow for 2023</b>	<b>181,800</b>	<b>m<sup>3</sup></b>
Average Daily Flow	498	m <sup>3</sup>			
Max Daily Flow	896	m <sup>3</sup>			
BOD Carbonaceous	65.0	mg/L			
BOD's	106	mg/L			
Suspended Solids	109	mg/L			
Total Phosphorus	5.0	mg/L			
TKN	35.0	mg/L			

## 2023 Final Effluent

### June 2023

### Effluent Limits

Total EFFL Volume to Watercourse	112,677 m <sup>3</sup>	CBO5	30.0 mg/L
Flow Duration	504 hours	Total Suspended Solid	40.0
Cell Depth	1.6 m	pH	6.0 – 9.5
BOD's	3.0 mg/L		
Suspended Solids	4.0 mg/L		
Ammonia and Ammonium	0.25 mg/L		
Total Phosphorus	0.25 mg/L		
Number of Samples During Flow Duration	4		
BOD Carbonaceous	3.0 mg/L		
Average pH	8.0		

### Final Effluent

### October 2023

Total EFFL Volume to Watercourse	79,652 m <sup>3</sup>
Flow Duration	360 hours
Cell Depth	1.6 m
BOD's	2.0 mg/L
Suspended Solids	4.0 mg/L
Ammonia and Ammonium	1.0 mg/L
Total Phosphorus	0.16 mg/L
Number of Samples During Flow Duration	3
BOD Carbonaceous	2.0 mg/L
Average pH	8.0

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### Yearly Average 2023

BOD's	3.0 mg/L	<b>Total Final Effluent</b>	<b>192,329 m<sup>3</sup></b>
Suspended Solids	4.0 mg/L		
Ammonia and Ammonium	0.42 mg/L		
Total Phosphorus	0.14 mg/L		
CBOD	3.0 mg/L		
pH	8.0		

**(b) Operating Problems Encountered and Corrective Actions Taken;**

- New policy – change UPS every two years.

**(c) Summary of All Maintenance Carried Out on Any Major Structure, Equipment, Apparatus, Mechanism or Thing Forming Part of The Works;**

- Alarm and generator set and tested weekly.
  - Calibrated influent flow meters.
  - Change batteries – UPS.
- (d) A Summary of Any Effluent Quality Assurance or Control Measures Undertaken in the Reporting Period;**
- Content sample taken before discharge.
- (e) Summary of the Calibration and Maintenance Carried Out on All Effluent Monitoring Equipment;**
- pH meter calibrated by Lakeside July 2023.
- (f) A Description of Efforts Made and Results Achieved in Meeting the Effluent Objectives of Condition 5;**
- 6 month holding time – content sample before discharge.
- (g) Tabulation of the Volume of Sludge Generated in the Reporting Period, An Outline of Anticipated Volumes to Be Generated in the Next Reporting Period and a Summary of the Locations to Where the Sludge Was Disposed;**
- Not Applicable.
- (h) A Tabulation of the Quantity of Septage Deposited to the Sewage Lagoon for Co-Treatment During the Reporting Period;**
- Tabulation of the quantity of septage deposited to the sewage lagoon for co-treatment during the reporting period 34.0 m<sup>3</sup> was deposited in 2023.
- (i) A Summary of Any Complaints Received During the Reporting Period and Any Steps Taken to Address the Complaints;**
- (j) A Summary of All By-Pass, Overflow, Spill or Abnormal Discharge Events;**
- No bypass.