



— Township of —

SEVERN

Collection System

Washago
2023 Annual Report

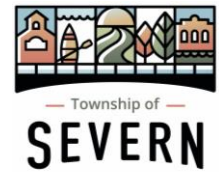


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Introduction

Township of Severn prepared the 2023 annual report for the Washago Wastewater Collection System in compliance with the Environmental Compliance Approval (ECA Number 148-W601, Issue 1, dated May 19, 2023). This report summarizes notable operating events, repair and maintenance, non-compliance issues, Influent quality, and flow data for 2023. This report is based on operating data collected and compiled by the Township of Severn.

The Washago Wastewater Collection System consists of 3 sewage pump stations.

- Muskoka Street SPS#1
- Albany Street SPS#2
- Muskoka Street SPS#3

All sewage pump stations have a control panel for pump and level controls. Two (2) submersible pumps are installed at each station and are run as lead lag.

Each station is equipped with a level transducer with float back-ups (lead and lag start) and a high-level float. In this system all stations are equipped with UPS battery backups and TOSIBOX for remote access and allows for communication with the Washago Water Treatment Plant so that trending can be monitored and to also receive station alarms. The Washago Water Treatment Plant has a SCADA program to trend pump stations.

Generators

Washago collection system has no stand-alone generators. All stations have the capability to have portable generators connected for power outages in the system.

Raw Sewage Quality

Table 1 illustrates the monthly and annual average raw sewage quality results.

Table 1: 2023 Monthly Raw Influent Quality

Month	CBOD ₅ (mg/L)	TSS (mg/L)	Total Phosphorus (mg/L)	TKN (mg/L)
January	170	155	2.30	23.4
February	266	279	5.45	45.2
March	215	176	4.68	39.7
April	26	185	0.78	8.8
May	172	128	4.92	38.5
June	238	227	3.99	40.0
July	123	120	2.73	30.0
August	329	249	3.75	31.6
September	163	191	4.08	39.8
October	165	73	2.76	23.2
November	98	139	2.38	22.2
December	140	177	2.02	17.3

Flow

Muskoka Street (Main) pump station is equipped with (2) submersible sewage pumps, with a pumping capacity of 14.4 L/s at 15.6 m T.D.H.

Albany Street pump station is equipped with (2) submersible sewage pumps, each rated at 6.28 L/s at 8.3 m T.D.H.

Muskoka Street pump station is equipped with (2) submersible sewage pumps. Each rated for 6.76 L/s at 9.0 m T.D.H.

Muskoka and Albany pump stations pump to gravity maintenance hole, which feeds the Main pump station. The main pump station pumps through a force main to Washago lagoon system.

Influent Flows

The rated capacity of the Washago lagoon is 47,800 m³, as listed in the C of A.

Table 2 shows daily and monthly average influent flows.

Table 2: Summary of Influent Flows

Month	Total Monthly Flow (m ³)	Average Daily Flow (m ³ /day)
January	4819	115
February	2827	100
March	3245	105
April	6662	222
May	4270	137
June	3330	111
July	4820	160
August	3208	103
September	3058	102
October	3621	116
November	2972	99
December	4952	150

Charts

Figure 1: Washago Lagoon 2023 average monthly inlet flow total values are in (m³)

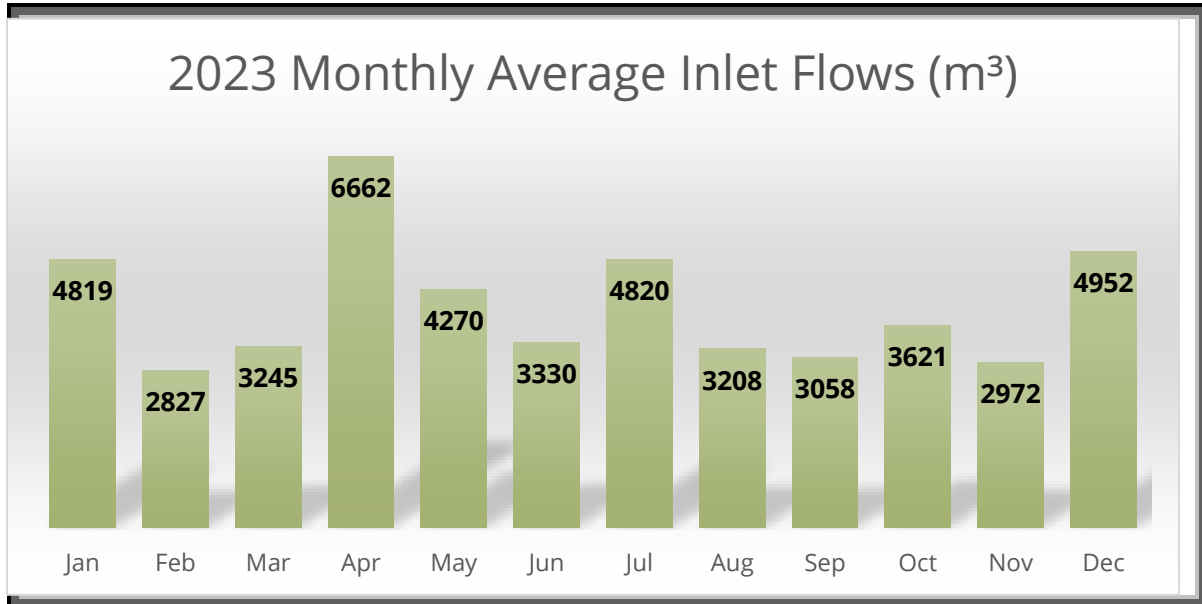
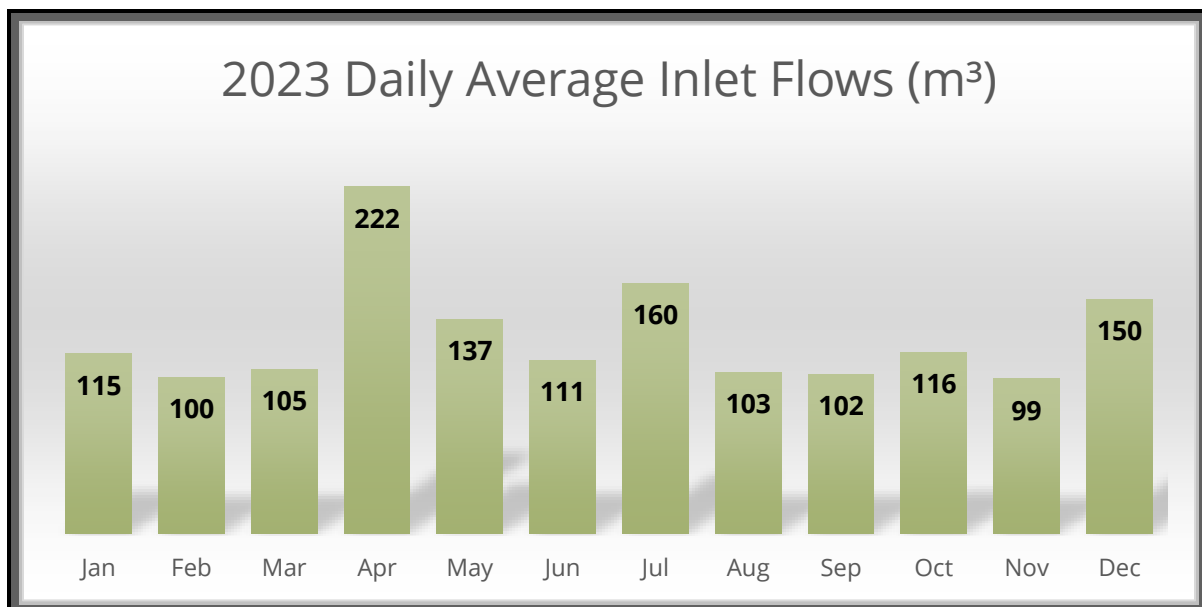


Figure 2: Washago Lagoon 2023 average daily inlet flow total values are in (m³)



Maintenace Summary

Collection System

All maintenance in 2023 on major structures, apparatus and/or mechanical equipment is summarized below. The following is a list of preventative and emergency maintenance completed on the sewer system in 2023:

Sewage Pump stations cleaned to remove grease, grit, and other debris.

All sewage pumping station alarms were tested monthly.

All floats in the sewage pumping stations were inspected and cleaned monthly.

Debris removed from pumps in the sewage pumping stations as warranted.

Approximately 25% of maintenance holes were inspected.

All generators were serviced.

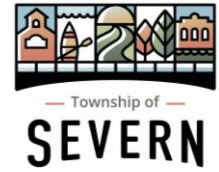
- Flushed approximately 1018 m of sewer main.
- Inspected 411 m of sewer main by video camera to identify necessary repairs.

Summary of Complaints

There were no complaints in 2023 related to Municipal infrastructure.

Summary of Calibration and Maintenace on Effluent Monitoring Equipment

Magnetic flow meters calibrated by a certified technician on April 13&19, 2023. All in-house and collection system monitoring equipment is calibrated based on manufacturer's recommendations.



Summary of By-Pass, Spills or Abnormal Discharge Events

There were no bypasses, spills, or abnormal discharge events in 2023.

System Alterations

There were no system alterations in 2023.