

— Township of —

**SEVERN**

Collection System

**Westshore**

**2025 Annual Report**



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# Introduction

Township of Severn prepared the 2025 annual report for the Westshore 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 2025. This report is based on operating data collected and compiled by the Township of Severn. The Westshore wastewater collection system consists of eight sewage pump stations (SPS):

- Wood Ave SPS
- Timberline SPS
- Bayou SPS
- Main SPS
- Lakeside SPS
- Bramshott SPS
- Grayshott SPS
- Aldershott SPS
- Turnbull SPS

All sewage pump stations pump to the main pump station that delivers all wastewater to Westshore WTP. 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 allowing for communication with the Westshore Sewage Treatment Plant so that trending can be monitored and to also receive station alarms. The Westshore Sewage Treatment Plant has a Supervisory Control and Data Acquisition (SCADA) program to trend pump station operations.

# Generators

Only the main pump station has a backup generator which is powered from the main sewage treatment plant. All other 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: 2025 Monthly Raw Influent Quality**

| Month          | CBOD <sub>5</sub><br>(mg/L) | TSS<br>(mg/L) | Total Phosphorus<br>(mg/L) | TKN<br>(mg/L) |
|----------------|-----------------------------|---------------|----------------------------|---------------|
| January        | 141                         | 153           | 3.59                       | 35.1          |
| February       | 206                         | 216           | 4.8                        | 45.4          |
| March          | 86                          | 376           | 4.97                       | 42.2          |
| April          | 162                         | 418           | 2.20                       | 24.0          |
| May            | 172                         | 202           | 4.27                       | 42.4          |
| June           | 202                         | 183           | 4.08                       | 40.1          |
| July           | 261                         | 621           | 9.40                       | 64.0          |
| August         | 225                         | 463           | 9.00                       | 76.0          |
| September      | 278                         | 251           | 6.29                       | 30.0          |
| October        | 115                         | 241           | 3.67                       | 31.7          |
| November       | 115                         | 222           | 5.43                       | 43.7          |
| December       | 131                         | 181           | 5.51                       | 52.2          |
| <b>Average</b> | <b>175</b>                  | <b>294</b>    | <b>5.27</b>                | <b>43.9</b>   |

# Pump Station Capacity and Flow

**Wood** Avenue pump station has a 1.5 m diameter precast concrete wet well and valve chamber equipped with (2) submersible sewage pumps, each rated for 3.4 L/s at 4.3 m T.D.H. The pump station pumps through a 100 mm diameter force main to the sanitary maintenance hole on Bayou Road.



**Bayou** Pump station has a 1.5 m diameter precast concrete wet well and valve chamber equipped with (2) submersible sewage pumps, each rated at 11.0 L/s at 13.0 m T.D.H. The pump station pumps through a 150 mm diameter force main along Bayou Road to a maintenance hole at Hedgemere landing.

**Turnbull** pump station has an 1800 mm concrete wet well and is equipped with (2) 7.3 hp submersible sewage pumps, each rated for 13.6 L/s at 14.6 m TDH. The pump station pumps through a 150mm force main to a gravity sewer manhole chamber.

**Timberline** pump station has a 1.5 m diameter precast concrete wet well and valve chamber equipped with (2) submersible sewage pumps, each rated for 4.3 L/s at 9.3 m T.D.H. The pump station pumps through a 100 mm force main to a maintenance hole at Hedgemere Landing.

**Lakeside** pump station has a 1.5 m diameter precast concrete wet well equipped with (2) submersible sewage pumps, each rated at 3.5 L/s at 4.2 T.D.H. The pump station pumps through a 75 mm diameter force main to a maintenance hole at The Lane.

**Bramshott** pump station has a 1.5 m diameter precast concrete wet well and valve chamber equipped with (2) 11hp submersible sewage pumps, each rated at 20 L/s at 6.3 m T.D.H. The pump station pumps through a 150 mm diameter force main to a maintenance hole at Pleasant Road.

**Aldershott** pump station has a 1.8 m diameter precast concrete wet well equipped with (2) submersible sewage pumps, each rated at 6.5 L/s at 16.7 m T.D.H. The pump station pumps through a 100 mm diameter force main to a maintenance hole at Grayshott Drive.

**Grayshott** pump station has a 1.8 m diameter precast concrete wet well and valve chamber equipped with (2) submersible sewage pumps, each rated at 6.5 L/s at 16.7 m T.D.H. The pump station pumps through a 150 mm diameter force main to a maintenance hole at Brooks Lane.

**Main** pump station has a 2.4 m diameter precast concrete wet well and valve chamber equipped with (2) submersible sewage pumps, each rated at 42.5 L/s at 12.5 m T.D.H. The pump station pumps through a 250mm force main to the

Westshore WWTP inlet works.

## Influent Flows

The rated capacity of the Westshore WWTP is 1,390 m<sup>3</sup>/day (ADF - average daily flow), with a peak flow rate of 4,768 m<sup>3</sup>/day, as listed in the C of A.

**Table 2: Summary of Influent Flows**

| Month        | Total Monthly Flow (m <sup>3</sup> ) | Average Daily Flow (m <sup>3</sup> /day) | Average Daily Flow (% of Rated Capacity) | Peak Daily Flow (m <sup>3</sup> /day) | Peak Daily Flow (% of Rated Capacity) | Peak Daily Flow (% of Rated Peak Flow) |
|--------------|--------------------------------------|--|--|---------------------------------------|---------------------------------------|--|
| January      | 24539                                | 792                                      | 57%                                      | 1539                                  | 111%                                  | 32%                                    |
| February     | 19004                                | 679                                      | 49%                                      | 839                                   | 60%                                   | 18%                                    |
| March        | 43199                                | 1394                                     | 100%                                     | 2197                                  | 158%                                  | 46%                                    |
| April        | 36865                                | 1229                                     | 88%                                      | 2683                                  | 193%                                  | 56%                                    |
| May          | 25811                                | 833                                      | 60%                                      | 1142                                  | 82%                                   | 24%                                    |
| June         | 20752                                | 692                                      | 50%                                      | 852                                   | 61%                                   | 18%                                    |
| July         | 18744                                | 605                                      | 44%                                      | 767                                   | 55%                                   | 16%                                    |
| August       | 17213                                | 555                                      | 40%                                      | 630                                   | 45%                                   | 13%                                    |
| September    | 15159                                | 505                                      | 36%                                      | 630                                   | 45%                                   | 13%                                    |
| October      | 16188                                | 522                                      | 38%                                      | 654                                   | 47%                                   | 14%                                    |
| November     | 19046                                | 635                                      | 46%                                      | 909                                   | 65%                                   | 19%                                    |
| December     | 20766                                | 670                                      | 48%                                      | 813                                   | 58%                                   | 17%                                    |
| <b>Max</b>   |                                      | <b>1394</b>                              | <b>100%</b>                              | <b>2683</b>                           | <b>193%</b>                           | <b>56%</b>                             |
| <b>Total</b> | <b>277287</b>                        |  |  |                                       |                                       |  |

## Charts

Figure 1: Westshore WWTP 2025 average daily flow total values in cubic metres (m<sup>3</sup>).

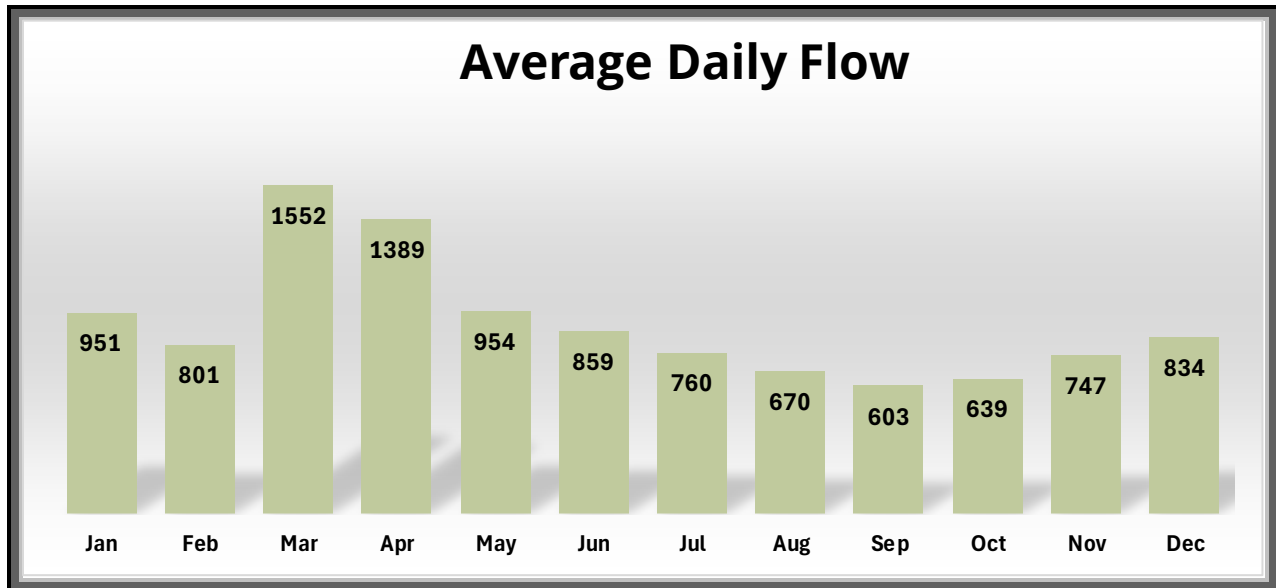
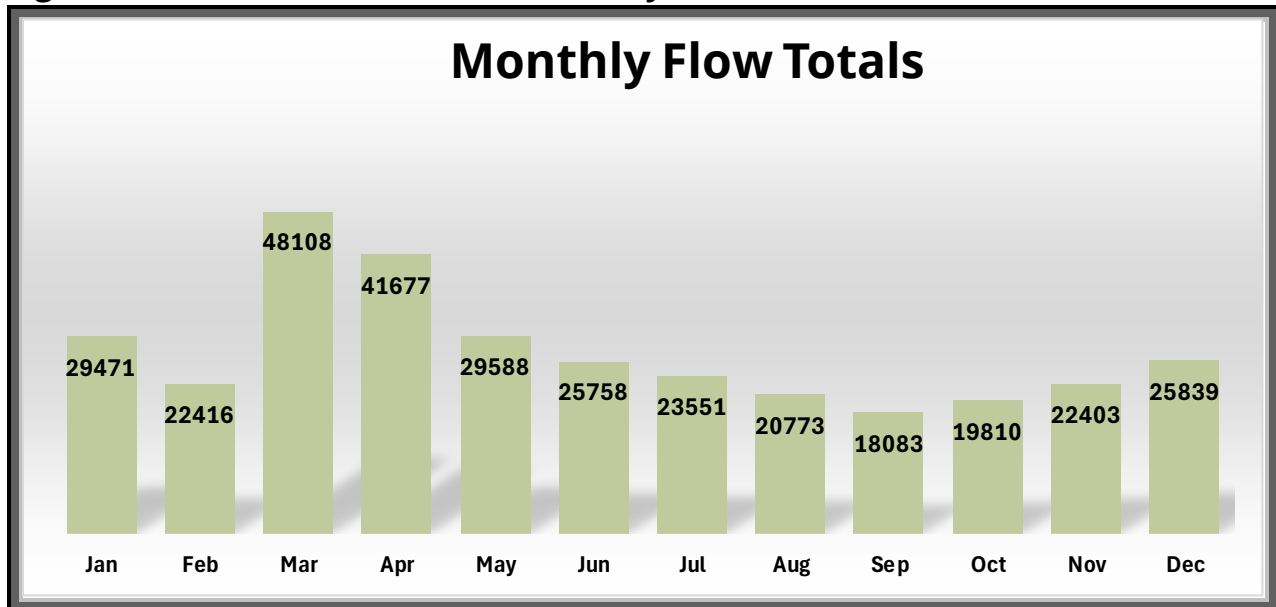


Figure 2: Westshore WWTP 2025 monthly flow total values in cubic metres (m<sup>3</sup>).



# Maintenance Summary

## Collection System

All maintenance in 2025 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 2025:

- 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.
- Repaired pump station as required.
- 16 manhole bowls installed.
- Grayshott PS chamber extensions installed.
- GAC odor control installed at Main PS and Bramshott PS.
- Aldershott PS replaced pump #2.
- Bayou PS replaced pump #1.

## Summary of Complaints

There were ten complaints in 2025 related to Municipal infrastructure:

- Two residential sewage back-ups.
- Eight odour complaints.



## **Summary of Calibration and Maintenance on Effluent Monitoring Equipment**

Magnetic flow meters calibrated by a certified technician on February 26, 2025. All in-house and collection system monitoring equipment is calibrated based on the manufacturer's recommendations.

## **Summary of By-Pass, Spills or Abnormal Discharge Events**

There were no bypasses, spills, or abnormal discharge events in 2025.

## **System Alterations**

There were no system alterations in 2025.