



PLYMPTON-WYOMING MUNICIPAL SEWAGE COLLECTION SYSTEM

ECA # 035-W601

2024 ANNUAL REPORT OF OPERATIONS

Managed, Operated and Maintained by:

Jacobs

March 2025

Ontario Ministry of Environment, Conservation and Parks
1094 London Road,
Sarnia, Ontario
N7S 1P1

MECP District Manager,

On behalf of the Corporation of the Town of Plympton-Wyoming in Lambton County, OMI (Jacobs) is pleased to submit to you the annual compliance report for the Plympton-Wyoming Municipal Sewage Collection System. Please feel free to contact the undersigned if you have any questions regarding this report.

Respectfully Submitted,

Christopher Toulouse

A handwritten signature in black ink, appearing to read 'Chris Toulouse', written in a cursive style.

Jacobs - Lead Operator

cc: Paul daSilva, Director of Public Works, Town of Plympton-Wyoming

Joe Bloomfield, Jacobs, Project Manager

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Introduction:

The Plympton-Wyoming Sewage Collection System is divided into two separate areas, Plympton Area and Wyoming Area.

OMI (Jacobs) is the Operating Authority for collections system on behalf of The Corporation of the Town of Plympton-Wyoming.

Pump Stations & Collection System:

The Wyoming Area sewage collection system consists of one main station and 2 sub stations. The Main SPS located 810m from the Wyoming STP receives flow from the O'Brien Station and Radcliffe (Silver Springs) Station. This main station is equipped with a single duty pump with two larger backup pumps to assist with high flow events and can convey a maximum of 52.6 L/s.

The Plympton Area collection system now consists of 13 pumping stations which pump to the dedicated onsite sewage pump station at the Plympton STP. The system is equipped with two main stations (Pump Station 2 and Pump Station 5) which collect all sanitary sewage from the remaining 11 pump stations. Pump Station 2 at 3430 Queen St receives flow from SPS's 3, 4, 10, 12, 13, 14 and is equipped with three pumps capable of conveying 107 L/s of raw sewage. Pump Station 5 at 7166 Bonnie Doone Rd receives flow from SPS's 6, 7, 8, 8a, 11 and is equipped with three pumps capable of conveying 65 L/s. The collection system pump stations also receive flow from 36 residential grinder pumps at cottages located along Lake Huron. These grinder pumps are owned by the Town of Plympton-Wyoming and are operated and maintained by the Operating Authority.

Pump stations are checked on a weekly basis and have alarm monitoring capabilities 24 hr/day. Pump run time hours are documented during the weekly checks. All pump stations are equipped with a standby emergency generator in the case of a power outage.

SECTION A

A summary of all required monitoring data along with an interpretation of the data and any conclusion drawn from the data evaluation about the need for future modifications to the Authorized System or system operations.

There is no required monitoring data currently.

The Operating Authority has however started collecting rainfall data in 2023 and combining it with the Authorized Sewage Treatment Plants effluent flow totals to correlate the relationship between rainfall amounts and effluent flow rates. Rainfall data is collected from the neighboring City of Sarnia, as no known rainfall data is present for the Township of Plympton-Wyoming. The graphs in Appendix A of this report have shown the need complete I&I studies in the Plympton-Wyoming area. The start of this I&I study is outlined in Section G of this report.

SECTION B

A summary of any operating problems encountered, and corrective actions taken.

The Operating Authority is starting to see an influx on grinder pump failures among the 36 grinder pits it operates and maintains for the Town and its cottages. Pump, float and electrical failures were a large expense in the 2024 reporting year. A total of twenty (20) grinder pit call outs were received during the reporting year, with three (3) of them requiring a full pump replacement.

SECTION C

A summary of all calibration, maintenance, and repairs carried out on any major structure, equipment, apparatus, mechanism, or thing forming part of the Municipal Sewage Collection System.

The Town of Plympton-Wyoming and the Operating Authority work together yearly to complete sanitary sewer flushing and CCTV work through the Sewage Collections System. This work helps to identify any areas of concern and identifies infrastructure deteriorations before major issues arise. In the 2024 reporting year, a total of 18,409 m of sanitary sewer collection mains were flushed and 5,314 m had CCTV work completed. Additionally, several locations had CCTV work completed for engineering phases of reconstruction and developments.

As a result of the Sanitary Collection System CCTV work, several deficiencies were identified and trenchless repairs made GFL Environmental including leak patching, infiltration stops, etc.

A total of 10 sanitary sewer cleanout caps were replaced or repaired during the 2024 reporting year and 2 manhole cover lids were replaced due to deterioration. The Operating Authority and Town Staff have continued to work together to identify infrastructure deficiencies requiring repair and maintenance throughout the Plympton-Wyoming Sewage Collection System.

SECTION D

A summary of any complaints related to the Sewage Works received during the reporting period and any steps taken to address the complaints.

WYOMING AREA

The collections system had a total of 2 complaints for sanitary sewer backups. All complaints were responded to, with most issues being on private property where homeowners were instructed to call a plumber for remediation. Additionally, there were many complaints on July 16th, 2024, due to several days of heavy rain causing a widespread sanitary collection system flood. All calls were reported to, with most calls being related to storm water flooding.

PLYMPTON AREA

The collections system had a total of 3 complaints for sanitary sewer backups. All complaints were responded to, with most issues being on private property where homeowners were instructed to call a plumber for remediation. The Plympton area also received 20 grinder pit call outs as discussed in Section B of this report.

SECTION E

A summary of all Alterations to the Authorized System within the reporting period that are authorized by this Approval including a list of Alterations that pose a Significant Drinking Water Threat.

There is nothing to report for the 2024 reporting year.

SECTION F

A summary of all Collection System Overflow(s) and Spill(s) of Sewage.

On January 9th, 2024, a spill occurred at Pump Station 5 (7162 Boonie Doone Rd.) caused by a leaking check valve in the valve chamber. The event lasted 3.25 hours with an estimated volume of 2m³ being spilt. Operations isolated the leaking check valve and made the necessary repairs to stop the leak. All applicable parties were notified of the event with a reference number 1-4KLJUB.

Date/Location: January 9 th , 2024 – Pump Station 5		
Parameter	Start	End
BOD	73	77
TSS	61	54
TP	2.48	2.26
Ammonia	22.8	22.0
E. Coli	3000000 UAL	3000000 UAL

On January 26th, 2024, an overflow occurred at Pump Station 2 (3430 Queen St.) due to a heavy rain event with heavy snow melt. The event lasted 5.3 hours with an estimated volume of 200 m3 being discharged to Errol Creek. All applicable parties were notified of the event with a reference number 1-4M8BYJ

Date/Location: January 26 th , 2024 – Pump Station 2		
Parameter	Start	End
BOD	55	55
TSS	115	106
TP	1.42	0.77
Ammonia	9.1	3.3
E. Coli	1340000	1100000

On May 9th, 2024, a spill had occurred in front of 7126 Boonie Doone Rd due to a faulty air relief valve. The valve was isolated to stop the leak until repairs could be made. The event lasted 1.4 hours with an estimated volume of 10 m3. All applicable parties were notified of the event with a reference number 1-6MF9PN.

Date/Location: May 9 th , 2024 – 7126 Boonie Doone Rd		
Parameter	Start	End
BOD	141	212
TSS	205	208
TP	3.07	3.77
Ammonia	24.9	31.8
E. Coli	9600000	8300000

On July 16th, 2024, Wyoming had received 54.7mm of rain, after receiving 26.9mm on July 15th, resulting in a Town wide sanitary backup. The Wyoming Main Pump station was not able to keep up with the flows being received and had overflowed to the Stonehouse Drain. A total estimated flow of 300m³ of raw sewage had overflowed over the 5.4-hour event. All applicable parties were notified with a reference number of 1-8ZTNRU.

Date/Location: July 16 th , 2024 – Wyoming Main PS			
Parameter	Upstream	Source	Downstream
BOD	9	244	5
TSS	175	355	131
TP	0.18	0.93	0.18
TKN	<0.5	4.8	<0.5
E. Coli	39000	740000	42000

On December 31st, 2024, a spill had occurred at Pump Station 2 (3430 Queen St.) caused by a leaking check valve in the valve chamber. The event lasted 1.2 hours with an estimated volume of 10 m3 being spilt. All applicable parties were notified of the event with a reference number 1-FF4TV2.

Date/Location: December 31 st , 2024 – Pump Station 2	
Parameter	GRAB
BOD	47
TSS	128
TP	1.24
Ammonia	14.2
E. Coli	1180000

SECTION G

A summary of efforts made to reduce Collection System Overflows, Spills, STP Overflows, and/or STP Bypasses.

A SmartCover was purchased by the Town of Plympton-Wyoming and put in upstream of the Main Pump Station to allow for remote monitoring and 24/7 alarm capability of the level in the collections system. The system was placed in service on June 9th, 2023, to undergo a trial period with the Operating Authority to fully understand its capabilities. This system was purchased with the intent to implement I&I studies throughout the Plympton-Wyoming Municipal Sewage Collections System to help identify areas of concern as it pertains to Overflows, Spills, and Bypasses.

The Town of Plympton-Wyoming has developed and put out Cross-Connectional bylaws and has put together a grant program to assist homeowners with the separation of sump pumps from the sanitary sewer system and installation of a Back Flow Preventor. This program developed by the Town has had great feedback with the public and is designed to help reduce the overall flow that the Sewage Collections System receives during both normal seasonal weather and abnormal rainfall events. It appears that it will take several years to fully see the affects the stated program has on the treatment plant.

APPENDIX A























