

## 2024 Sanitary Collection System Annual Report

Environmental Compliance Approval 014-W601



March 26, 2025

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Review and Sign-Off

| 2024 Sanitary Collection System<br>Annual Report Approved by: | Signature                                                                                                                                     |
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## Overview

The City of Barrie owns and operates a wastewater collection system which terminates at the Wastewater Treatment Facility (WwTF) located at 249 Bradford Street. In 2024, the collection system operated under Ministry of the Environment, Conservation and Parks (MECP) Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA) No. 014-W601 dated February 15, 2023. A recent history of collection system ECA approvals is as follows:

Table 1 System-Wide ECA Approvals History

| System-Wide ECA Number | Date of Issue      | Reason for Issue                                           |
|------------------------|--------------------|------------------------------------------------------------|
| 2883-AKUJQZ            | August 16, 2017    | Approved Holly PS upgrade                                  |
| 7160-AQWSAX            | September 11, 2017 | Corrected error re: Minet's Point PS flow capacity         |
| 5921-ATUKKR            | January 10, 2018   | Decommissioning of Huronia Pump Station PS-3               |
| 014-W601               | February 15, 2023  | New approval format for Consolidated Linear Infrastructure |

This report has been prepared in accordance with the requirements of section 4.6 of Schedule E of CLI-ECA 014-W601.

## Reporting Section 4.6.3: Summary and Interpretation of Monitoring Data

This section discusses all monitoring data and includes an overview of how the collection system works. Five-year (5) flow summaries are shown below for each sewage pumping station (SPS) except for Perry Street SPS which does not have a flow meter or level sensor to allow for flow measurement or calculation. In March 2020, communication upgrades at Innisfil SPS enabled the transmission of flow data back to the data server located at the WwTF allowing data to be graphed below. Little Lake SPS underwent internal process upgrades resulting in unreliable flow measurements during testing and commissioning in the months of November and December.

Pump Stations Monthly Average Daily Flows

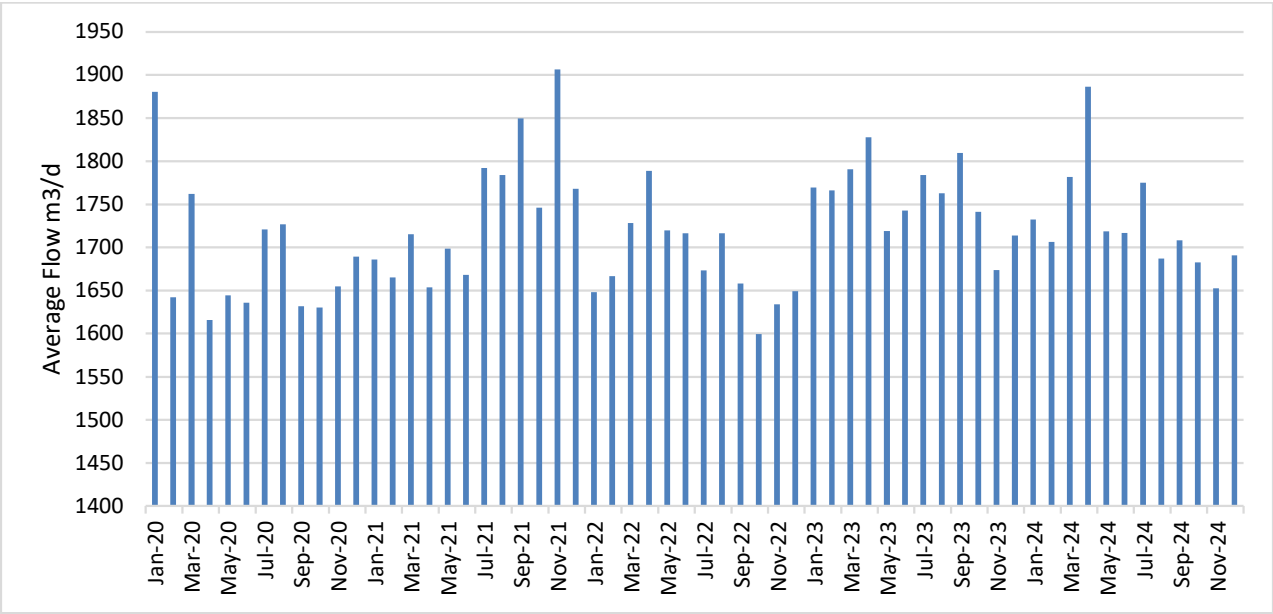


Figure 1 Grove Street SPS Monthly Average Daily Flows

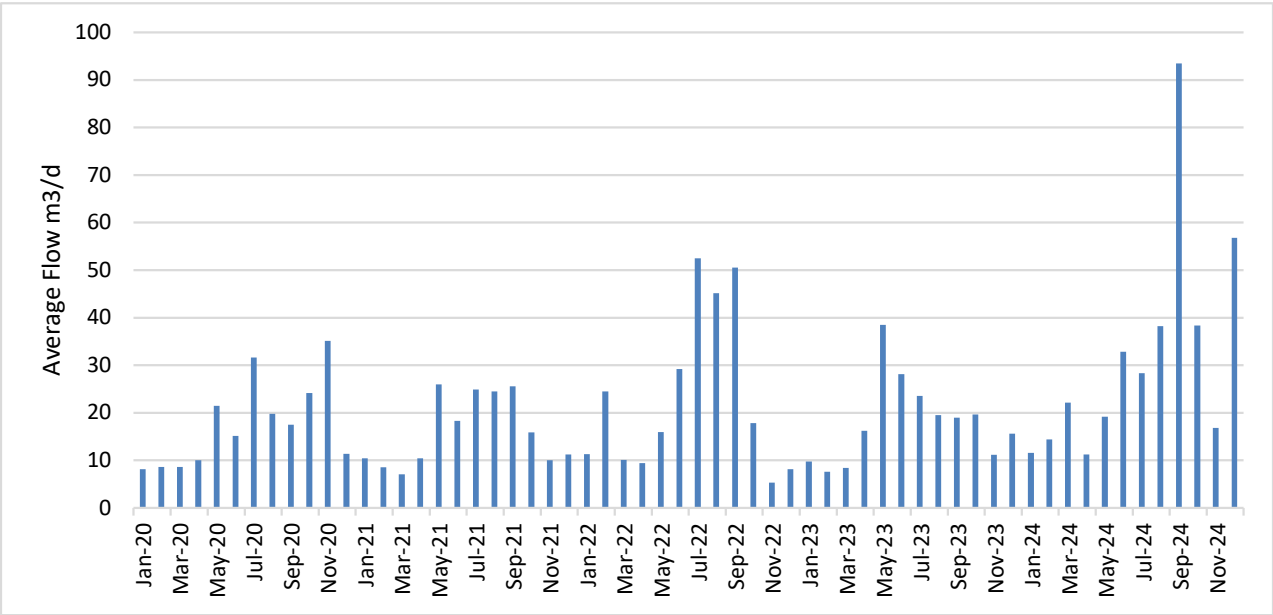


Figure 2 Heritage Park SPS Monthly Average Daily Flows

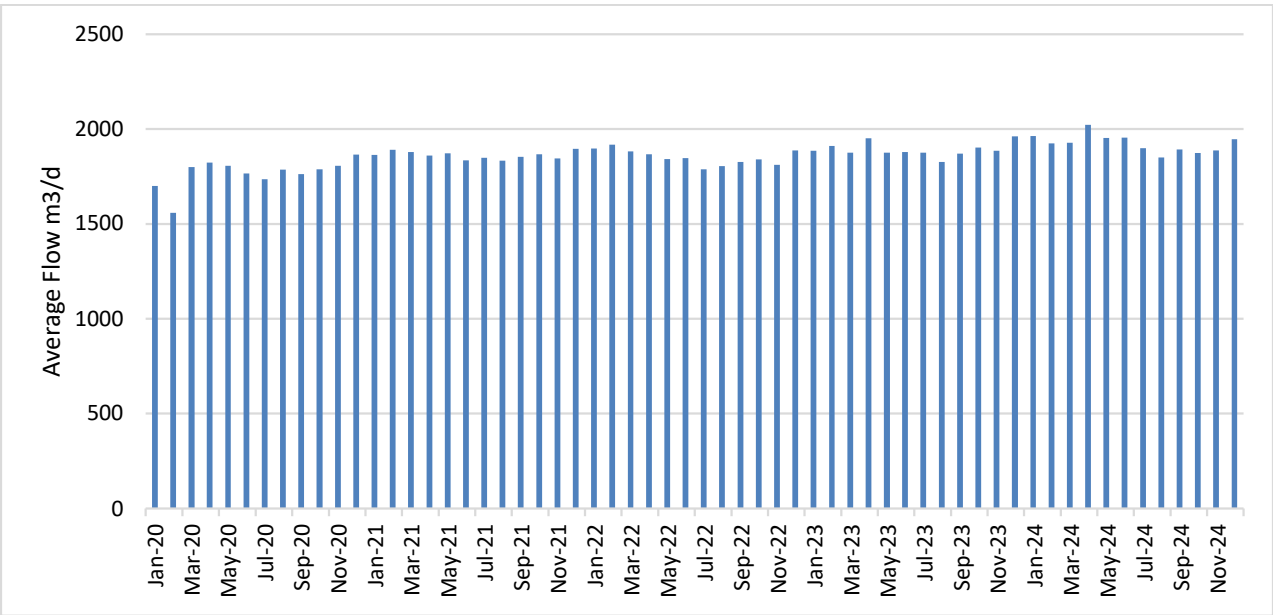


Figure 3 Holly SPS Monthly Average Daily Flows

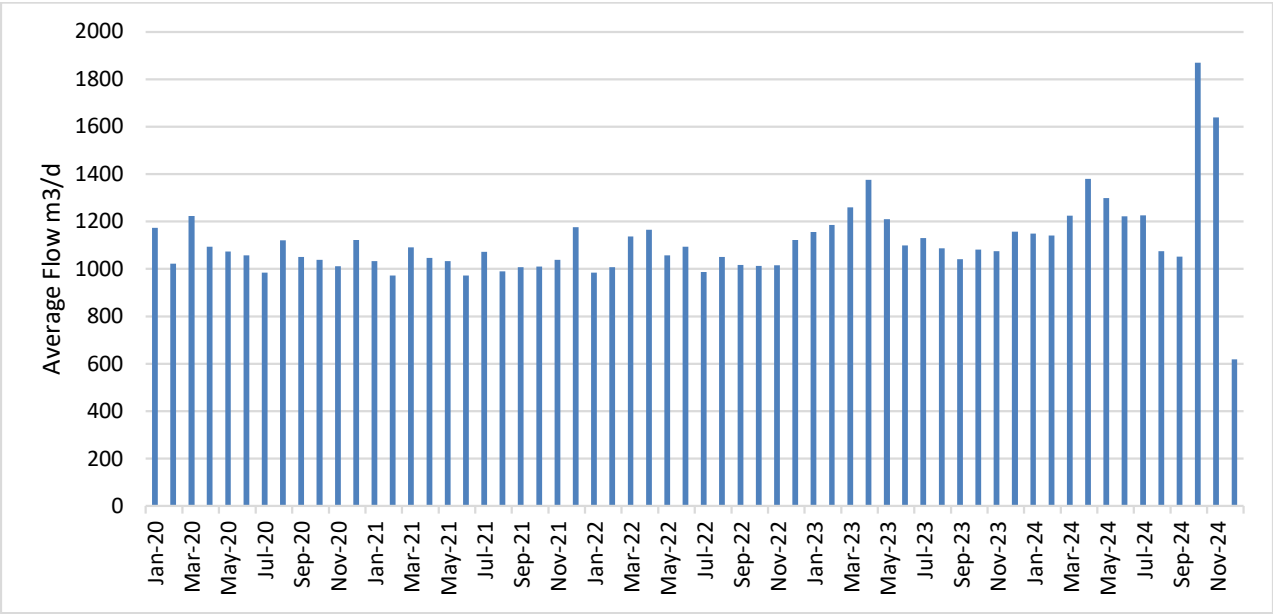


Figure 4 Little Lake SPS Monthly Average Daily Flows

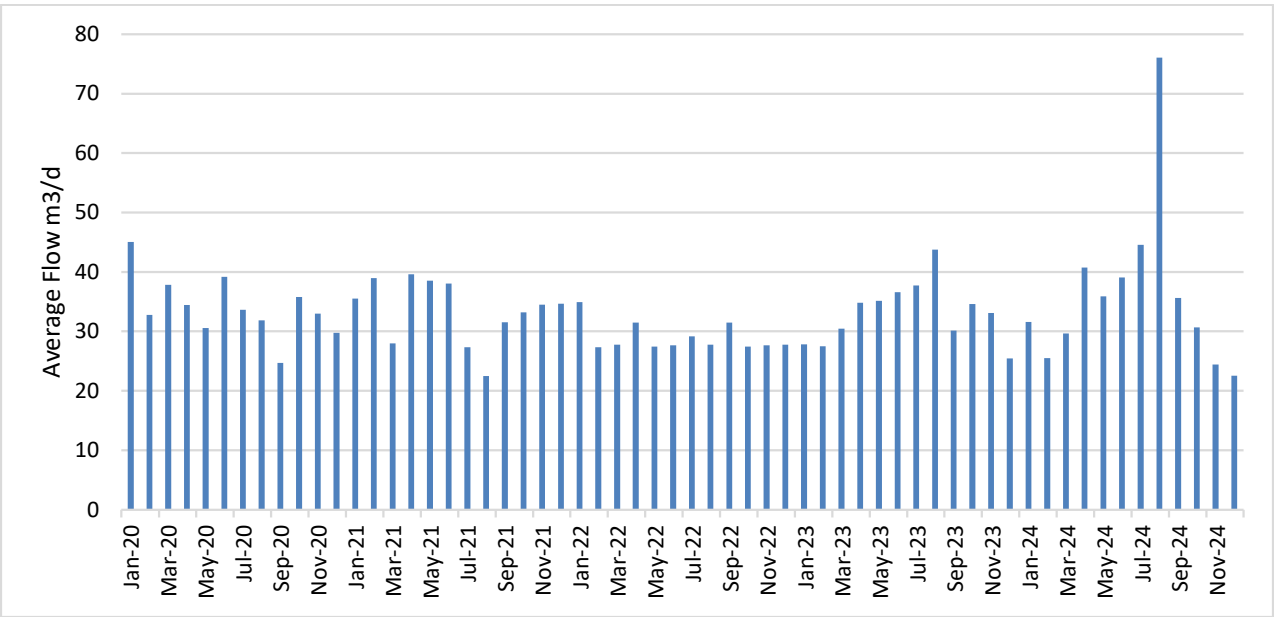


Figure 5 Lockhart SPS Monthly Average Daily Flows

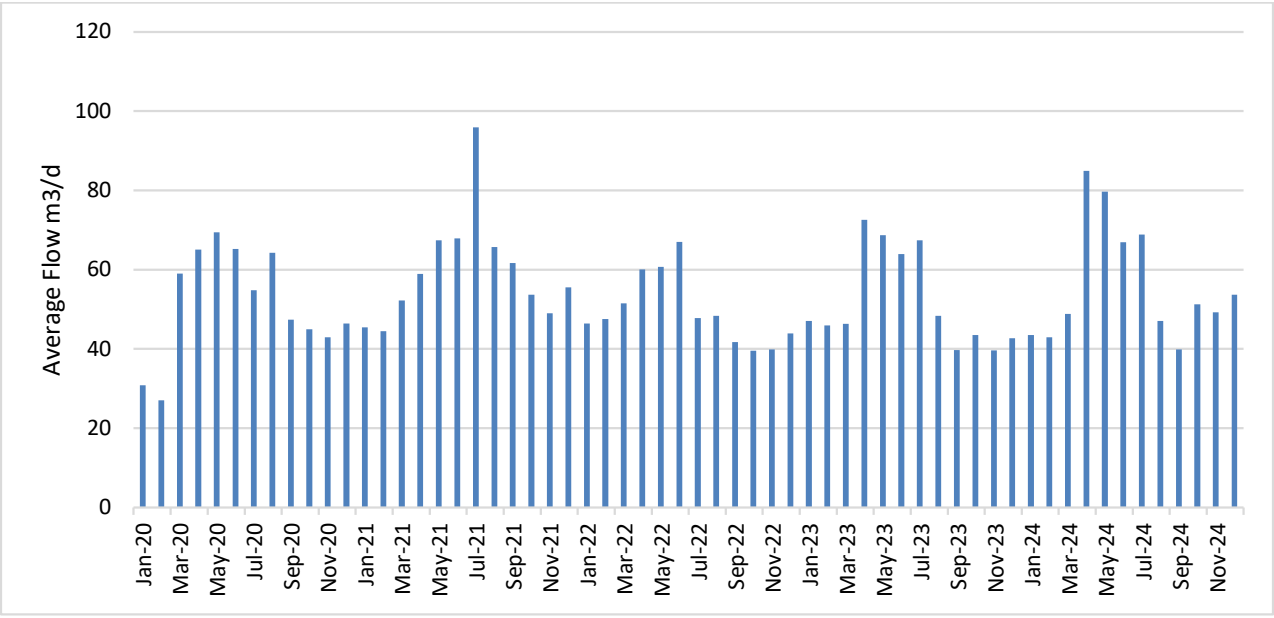


Figure 6 Minet's Point SPS Monthly Average Daily Flows

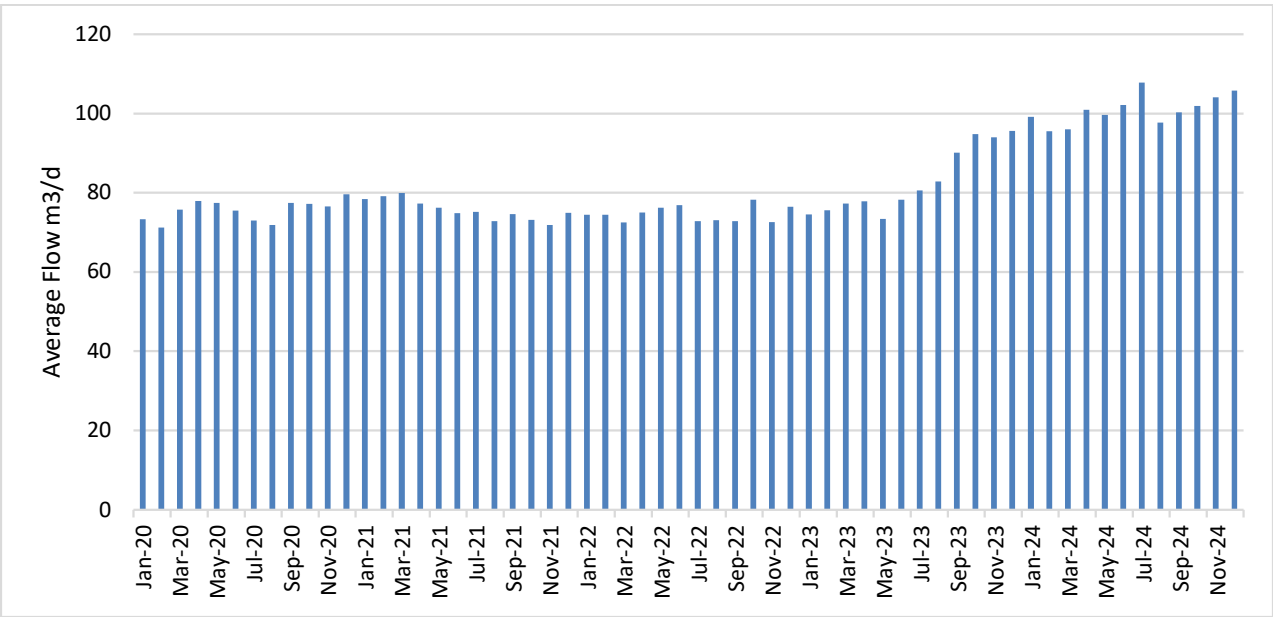


Figure 7 Mooregate SPS Monthly Average Daily Flows

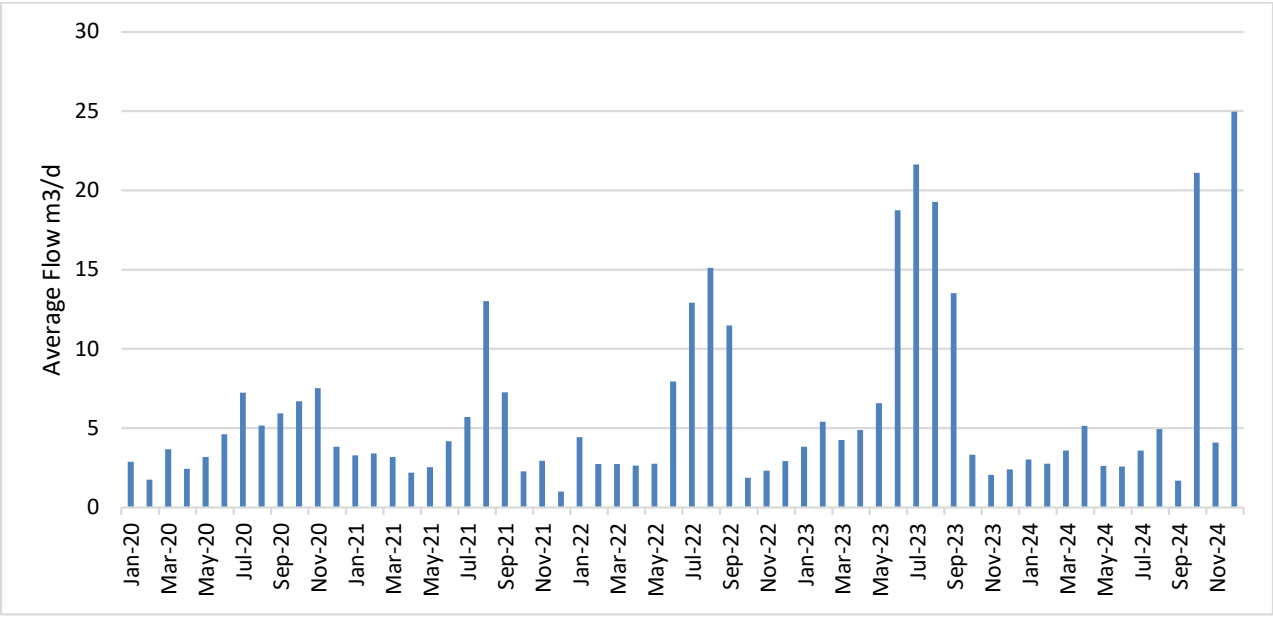


Figure 8 Splash Pond SPS Monthly Average Daily Flows

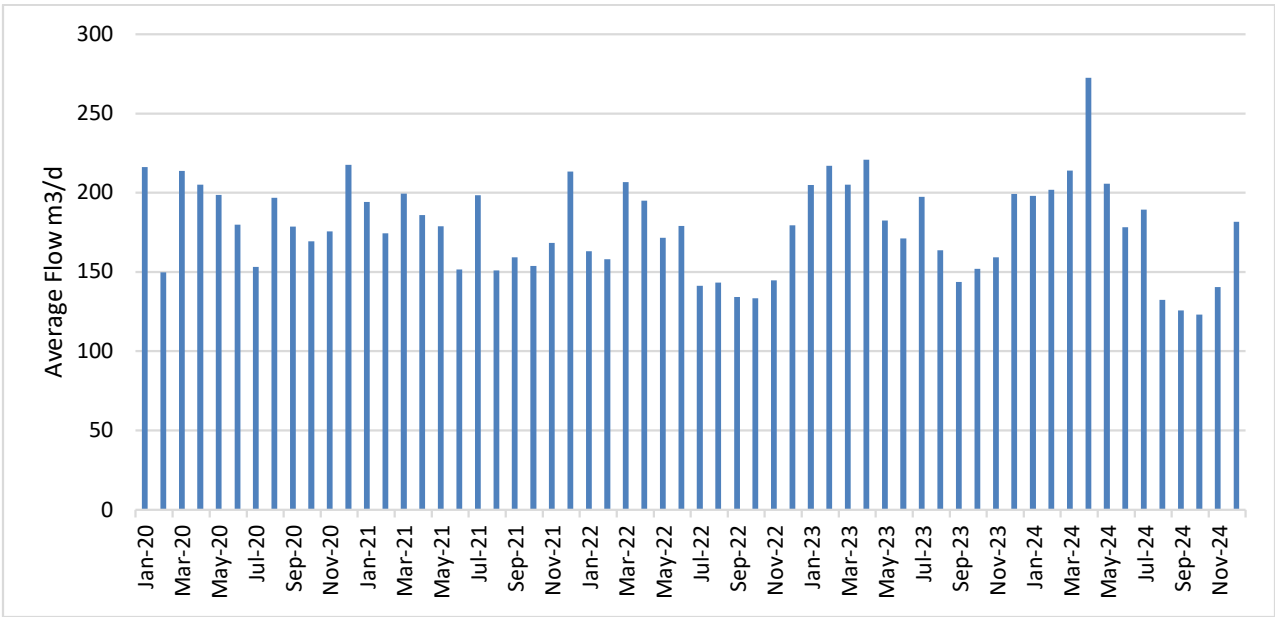


Figure 9 Tyndale Park SPS Monthly Average Daily Flows

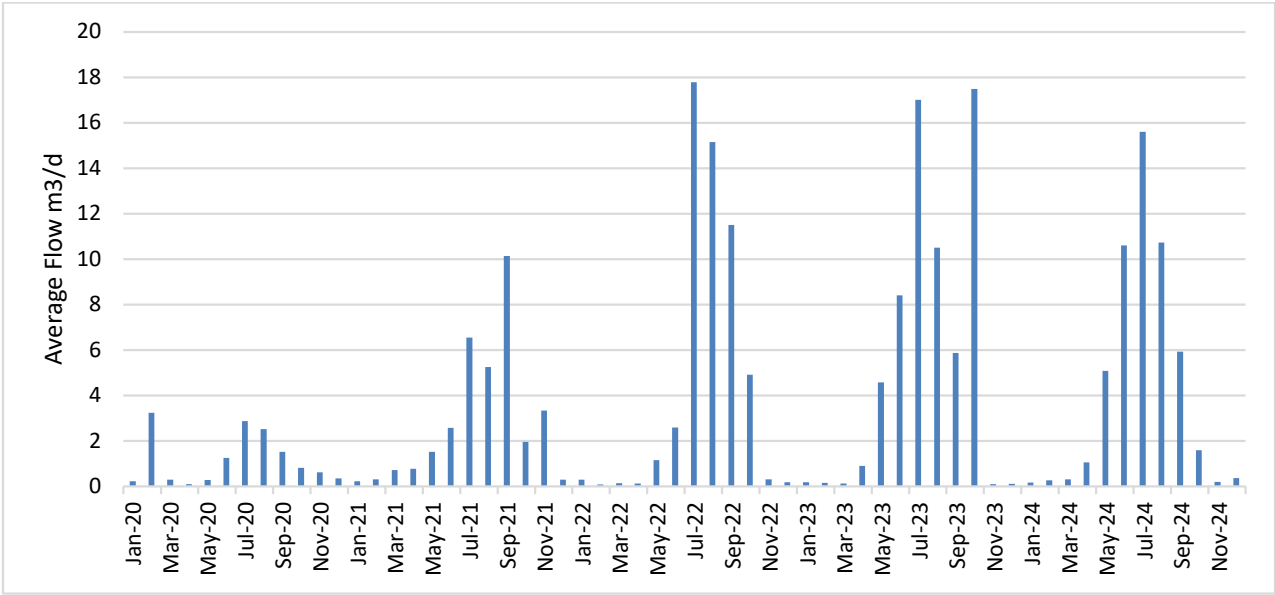


Figure 10 Johnson's Beach SPS Monthly Average Daily Flows

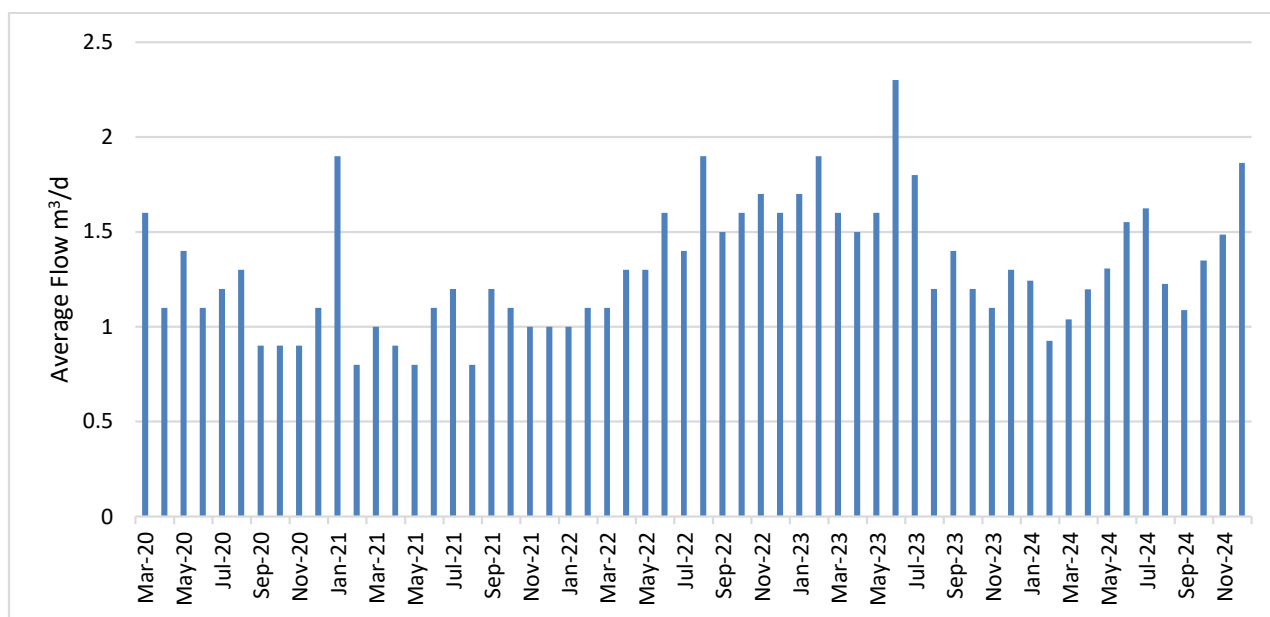


Figure 11 Innisfil SPS Monthly Average Daily Flows

Yearly average daily flows for pump stations over the past five (5) years are presented in the chart below:

Table 2 Pump Station Yearly Average Daily Flow (m³/d)

| Pump Station        | Average Flow (m³/d) |      |      |      |      |
|---------------------|---------------------|------|------|------|------|
|                     | 2020                | 2021 | 2022 | 2023 | 2024 |
| Holly SPS           | 1768                | 1862 | 1851 | 1892 | 1925 |
| Tyndale Park SPS    | 188                 | 177  | 162  | 185  | 180  |
| Splash Pond SPS     | 5                   | 4    | 6    | 9    | 7    |
| Mooregate SPS       | 76                  | 76   | 75   | 83   | 101  |
| Lockhart SPS        | 42                  | 33   | 30   | 33   | 36   |
| Minet's Point SPS   | 52                  | 60   | 50   | 52   | 56   |
| Heritage Park SPS   | 18                  | 16   | 23   | 18   | 32   |
| Johnson's Beach SPS | 1                   | 3    | 5    | 6    | 4    |
| Grove Street SPS    | 1687                | 1745 | 1683 | 1758 | 1728 |
| Little Lake SPS     | 1082                | 1038 | 1054 | 1155 | 1274 |
| Innisfil SPS        | 1                   | 1    | 1    | 2    | 1    |
| Total               | 4882                | 5015 | 4940 | 5193 | 4707 |

The adequacy of the existing system is sufficient from a compliance standpoint, despite rising flows at some stations. Over the past five (5) years development and population growth, as well as an increase in multi-unit dwellings being built within the City, have driven the increase in flows. Mooregate SPS has experienced

a rise in flow as a result of intensified activity within the SPS collection zone driven by high-rise developments. In September, Heritage Pumping Station experienced increased flows because of transmission watermain flushing during which flows were directed into the pumping station to prevent discharge into Lake Simcoe. Lockhart SPS experienced abnormally high flows from August 26<sup>th</sup> to 31<sup>st</sup>. Despite a thorough review of system data and equipment inspections, operations were unable to determine the exact cause of the increase. Lockhart receives most of its flow from industrial facilities, and these sources may have contributed to the increased flows due to maintenance activities. Moving forward, operations staff will more closely monitor the station for any anomalies.

During the months of October and November, the internal piping system at Little Lake SPS was upgraded by a capital construction project. The internal process piping within the wet well was replaced including a connection to the second 450mm forcemain, previously installed. During this time flows were monitored by the contractor on a weekly basis and reported to the City.

The City intends to outfit all stations with flow meters, if possible. Where there is no flow meter, flows are calculated based on volume change in the well when a pump is running. Flows are calculated at the following pump stations: Grove Street, Heritage, Lockhart, Minet's Point, Johnson's Beach, and Innisfil.

## Reporting Section 4.6.4: Description of Operating Problems and Corrective Actions

The City of Barrie uses a computerized maintenance management system (CMMS) to track work orders, inspections, repairs, repair costs and internal and external service requests. These systems are the source of asset and maintenance data presented in this report.

### Pump Stations and Force Mains

A list of Work Orders issued and completed for pump station repairs conducted as follows:

**Table 3 Pump Station and Forcemain Repairs Completed in 2024**

| Date               | Repair Detail                                                                                                                                                                                               | Resolution and Closing Comments                                                                                                                                  | Pump Station |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| March 29, 2024     | Pump #4 failed to start twice - switched to manual and stand-by.                                                                                                                                            | Issues with the contactors on the starter. Contacts were changed and returned to service.                                                                        | Holly        |
| May 16, 2024       | Station pumped itself down too far into LO alarm at 03:55 May 16 <sup>th</sup> , 2024. Investigation as to why on trends looks like it only pumped 0.05m past the pump stop level to 0.65m (stop is 0.70m). | Level sensor not reading properly due to debris in wet well. Cleaned wet well and removed debris.                                                                | Johnsons     |
| July 31, 2024      | Pump #1 has gone into alarm for fail to start twice. Once at 11:15 and 12:05. Pump #3 has been coming on in response and seems to be functioning fine.                                                      | Ordered a new input/output card and tried to change the coil of coil relay 2. New card installed, repairs complete.                                              | Holly        |
| August 15, 2024    | Pump #2 keeps locking out                                                                                                                                                                                   | Installed temporary relay just to start pump. VFD issue traced back to start command. Waiting for VFD to arrive or alternate solution. Station working properly. | Grove        |
| September 23, 2024 | Remove rags from inlet gate for construction project                                                                                                                                                        | Rags were removed from the inlet gate.                                                                                                                           | Little Lake  |

| Date             | Repair Detail      | Resolution and Closing Comments                                                                                                                                                   | Pump Station |
|------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| October 29, 2024 | Repair pump #2     | Pump failed to start and lockout status. Pump shows a leak detection alarm and there's no power going to the hour meter. Installed spare pump and sent original pump for repairs. | Tyndale      |
| December 6, 2024 | Install spare pump | Removed and replaced pump #2.                                                                                                                                                     | Mooregate    |

## Report Section 4.6.5: Summary of Calibration and Maintenance Program

### Pump Stations and Force Mains

Normal pump station operation is unmanned and automated by use of electronics, electro-mechanical devices and programmable logic controllers. Real-time condition data is monitored by a Supervisory Control and Data Acquisition (SCADA) system and recorded on a data server ("Historian") located at the WwTF. Five pump stations have flow meters.

Station alarms will call out via telephone line or wireless network to operations staff 24/7/365. Alarms are also annunciated at the WwTF.

The following alarms are available at all pump stations and will appear on the SCADA system until cleared. These alarms are "high priority" and, as a result, call-out to an on-call operator:

- Wet well HI Level
- Wet well HI HI Level
- Wet well LO Level
- Building or Panel Intrusion
- AC Fail, LO Temp
- Communication Failure
- Pumps Not in Auto
- Pump Fault

Each station may also have additional alarms including:

- Generator Running
- Generator Fault
- Generator Not in Auto
- Generator Louver Fault
- Load Transfer Switch Not in Auto

All alarms and acknowledgments are logged as well as actions by operators. There is one alarm file per day and daily reports are available upon request.

In addition to automated monitoring, inspections are routinely conducted by wastewater operations staff. Pump station inspections are performed 2 times per week and generally consist of:

- Inspecting and recording pump hours for each pump in a pump hour logbook
- Inspecting pump house or cabinet condition (depending on station)
- Recording backup generator hours (if applicable) and inspect condition (oil levels, coolant etc.)
- Recording all findings in the station logbook

Depending on the station and its requirements, less frequent maintenance will generally consist of:

- Weekly pump down of the well for cleaning
- Weekly testing, cleaning, if necessary, inspect floats for proper operation and alarm
- Weekly check intrusion alarm
- Bi-weekly generator inspection and exercise
- Quarterly entry into the wet well and inspection/cleaning
- Semi-Annual generator/transfer switch inspection at load, replenish fluid levels
- Safety inspections conducted twice yearly
- Snow clearing as needed

Maintenance, repairs, service requests and inspections are tracked through work orders in CMMS.

Over the reporting period, 1,359 work orders were completed for inspections and maintenance at pump stations. Most work orders were for routine preventative maintenance and inspections, and all are tracked in CMMS. A list of all completed work orders is available upon request.

Flow meters at pump stations are verified annually by a Certified Calibration Contractor. This was completed in February and July in accordance with Reporting section 4.6.5. Flow meter verification information is presented in the chart below:

**Table 4 2024 Flow Meter Verifications**

| Tag ID         | Description                      | Serial No.         | Flow Range             | Mfr     | Result | Date                 |
|----------------|----------------------------------|--------------------|------------------------|---------|--------|----------------------|
| PSMGFIT201 P2  | Mooregate PS<br>300 Kozlov St.   | F7015916000        | 360 m <sup>3</sup> /hr | E+H     | Passed | July 07, 2024        |
| PSMG_FIT200 P1 | Mooregate PS<br>300 Kozlov St.   | F7013916000        | 360 m <sup>3</sup> /hr | E+H     | Passed | July 29, 2024        |
| PSHO_FIT100    | Holly PS<br>65 Logan Cr.         | 3K6720182909<br>56 | 400.90 l/s             | ABB     | Passed | July 31, 2024        |
| PSHO_FIT200    | Holly PS<br>65 Logan Cr          | 3K6720182909<br>58 | 400.90 l/s             | ABB     | Passed | July 31, 2024        |
| PSSP_FIT100    | Splash Pond PS<br>5 Lakeshore Dr | E60EC616000        | 90 m <sup>3</sup> /h   | E+H     | Passed | July 29, 2024        |
| PSTD_FIT100    | Tyndale Park PS<br>45 Tyndale Rd | F31BE719000        | 68.1 m <sup>3</sup> /h | E+H     | Passed | July 29, 2024        |
| PSLL_FIT100    | Little Lake PS<br>510 Duckworth  | J30B8416000        | 500 m <sup>3</sup> /h  | E+H     | Passed | February 08,<br>2024 |
| PSLL-FIT101    | Little Lake PS<br>510 Duckworth  | 694541H264         | 900 m <sup>3</sup> /h  | Siemens | Passed | August 5, 2024       |
| PSLL-FIT102    | Little Lake PS<br>510 Duckworth  | 964641H264         | 900 m <sup>3</sup> /h  | Siemens | Passed | August 5, 2024       |

## Gravity Collection System

### *CCTV Inspection*

The City administers a closed-circuit television (CCTV) sewer inspection program for sanitary sewers. The City's contractor conducted inspections on approximately 52 km of sanitary sewers. Please refer to Appendix A for a map of Sanitary Flushing and CCTV. The sanitary mains that were inspected ranged in age from 25 to 50 years old. Despite the age of the pipes, the CCTV results revealed that the pipe conditions were generally rated as very good condition. The use of CCTV technology allows a thorough examination of the sanitary collection system to ensure early and effective detection of any potential issues such as damaged pipes, inflow, infiltration and potential blockages. The information garnered from the CCTV inspections feed into the flushing and insitu repair programs described below. The inspected sewers had an 84% very good condition rating, indicating that the CCTV program has effectively provided staff with information to complete proactive and preventative maintenance within the system. These efforts have preserved the integrity of the pipes, contributing to the overall functionality and longevity of the sanitary collection system. The condition rating of the sanitary sewer collection system in its entirety is shown in the figure below:

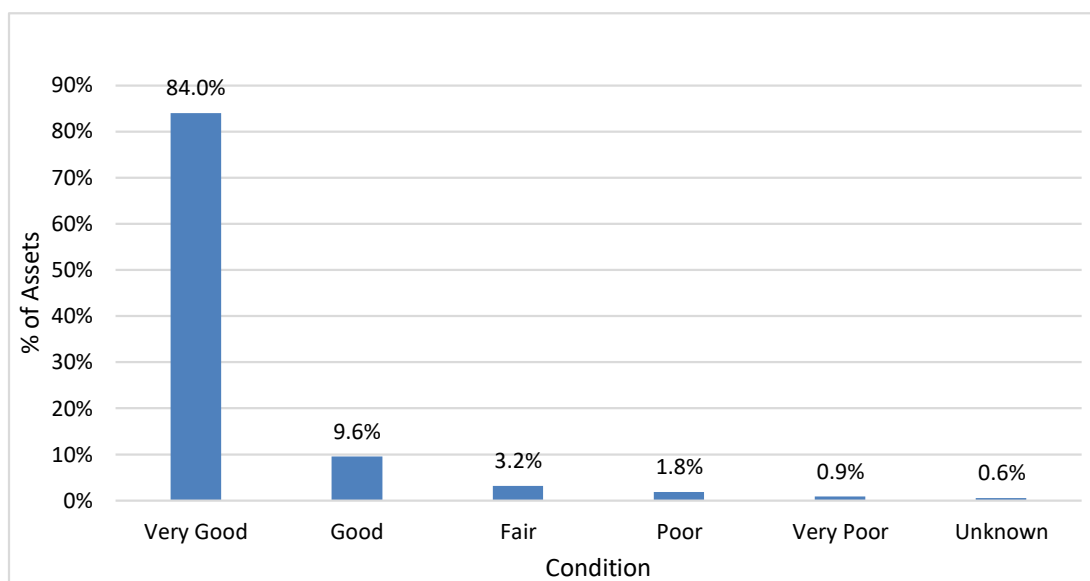


Figure 12 2024 Sanitary Sewer Condition Rating

### *Flow Monitoring*

The City conducted flow monitoring at six (6) locations within the gravity sanitary sewer system from October to December. Temporary monitors were installed to allow City staff to identify areas with significant inflow and infiltration (I&I), providing critical data to guide fieldwork and mitigation measures.

### *In-Situ Repair*

The City administers an annual in-situ repair program for the gravity collection system. Repair locations are derived from CCTV inspections and issues noted by field operations staff. Issues are prioritized based on structural deficiencies and sources of I&I, and repairs are scheduled to optimize the available annual budget. This resulted in thirty-one (31) locations were identified and repaired with a full cured in place pipe (CIPP) lining. A map showing the locations of sanitary CIPP relining is in Appendix B.

### *Sanitary Flushing*

Local sanitary sewer cleaning is undertaken by a City operated flushing crew. Efforts are made to clean each local sanitary pipe every 2 to 3 years. Problem areas, usually in older parts of the City, are put on a weekly flushing list. The weekly flushing program keeps the sewer in working condition until the underlying problem can be addressed as part of our in-situ repair program, or as part of a larger capital project. Additionally, the Wastewater Operations Branch (WWOB) oversees a flushing contractor who performs flushing of the larger trunk mains. The City's contractor flushed a total of 12 km of sanitary trunk mains. The following sewers were included in the weekly flushing program:

**Table 5 Gravity Sewers on Weekly Flushing Program**

| Sewer ID          | Location       |
|-------------------|----------------|
| SAI02023-SAI02021 | Frederick St.  |
| SAN04142-SAN04141 | Wellington St. |
| SAC07018-SAC07019 | Glenwood Dr.   |
| SAI06101-SAI06100 | Cundles Rd.    |
| SAC03026-SAC03025 | Brookdale Dr.  |
| SAE02002-SAE12064 | Caroline St.   |
| SAI02017-SAI02016 | Sanford St.    |
| SAB01021-SAB0109  | Cumberland St. |
| SAE02010-SAE02011 | Marcus St.     |

### *Sanitary Lateral Repair and Replacement*

The City is responsible for sanitary lateral replacements and critical repairs between the sewer main and homeowners' property line if the repairs are a result of a structural deficiency in the lateral. Repairs due to misuse of the sewer system resulting in a blockage of the lateral (i.e. disposal of grease down the drain) are the responsibility of the homeowner. The lateral on private property is also the homeowner's responsibility. Below is a list of properties where laterals were repaired or replaced:

**Table 6 2024 Lateral Repair and Replace Lateral Locations**

| WO#    | Description                         | Date       | Address          |
|--------|-------------------------------------|------------|------------------|
| 560311 | Repair/Replace Lateral (Contractor) | 2024-01-11 | 97 Codrington St |
| 568579 | Repair/Replace Lateral (Contractor) | 2024-03-01 | 191 Anne St S    |
| 568580 | Repair/Replace Lateral (Contractor) | 2024-03-01 | 59 Melrose Ave   |
| 568634 | Repair/Replace Lateral (Contractor) | 2024-03-01 | 77 Melrose Ave   |
| 568637 | Repair/Replace Lateral (Contractor) | 2024-03-01 | 110 Strabane Ave |
| 568639 | Repair/Replace Lateral (Contractor) | 2024-03-01 | 189 Grove St E   |
| 568640 | Repair/Replace Lateral (Contractor) | 2024-03-01 | 107 Strabane Ave |
| 568641 | Repair/Replace Lateral (Contractor) | 2024-03-01 | 108 Strabane Ave |
| 568674 | Repair/Replace Lateral (Contractor) | 2024-03-01 | 1 Ryan Court     |
| 568675 | Repair/Replace Lateral (Contractor) | 2024-03-01 | 40 Queen St      |
| 568676 | Repair/Replace Lateral (Contractor) | 2024-03-01 | 97 Codrington St |

| WO#    | Description                         | Date       | Address              |
|--------|-------------------------------------|------------|----------------------|
| 568678 | Repair/Replace Lateral (Contractor) | 2024-03-01 | 30 Alfred St         |
| 568679 | Repair/Replace Lateral (Contractor) | 2024-03-01 | 32 Alfred St         |
| 568683 | Repair/Replace Lateral (Contractor) | 2024-03-01 | 65 Queen St          |
| 568684 | Repair/Replace Lateral (Contractor) | 2024-03-01 | 38 Strabane Ave      |
| 568685 | Repair/Replace Lateral (Contractor) | 2024-03-01 | 59 Mary St           |
| 571474 | Repair/Replace Lateral (Contractor) | 2024-03-18 | 29 Campbell Ave      |
| 571584 | Repair/Replace Lateral (Contractor) | 2024-03-19 | 185 Anne St S        |
| 571585 | Repair/Replace Lateral (Contractor) | 2024-03-19 | 13 Drury Lane        |
| 571586 | Repair/Replace Lateral (Contractor) | 2024-03-19 | 69 Steel St          |
| 572526 | Repair/Replace Lateral (Contractor) | 2024-03-25 | 34 Bothwell Crescent |
| 575895 | Repair/Replace Lateral (Contractor) | 2024-04-16 | 26 Northpark Rd      |
| 575927 | Repair/Replace Lateral (Contractor) | 2024-04-16 | 112 Johnson St       |
| 578593 | Repair/Replace Lateral (Contractor) | 2024-04-24 | 132 Sovereign's Gate |
| 579256 | Repair/Replace Lateral (Contractor) | 2024-04-29 | 236 St Vincent St    |
| 580005 | Repair/Replace Lateral (Contractor) | 2024-05-02 | 39 Davies Crescent   |
| 580553 | Repair/Replace Lateral (Contractor) | 2024-05-06 | 121 Daphne Crescent  |
| 581768 | Repair/Replace Lateral (Contractor) | 2024-05-13 | 27 Janice Dr         |
| 581770 | Repair/Replace Lateral (Contractor) | 2024-05-13 | 185 Anne St S        |
| 581774 | Repair/Replace Lateral (Contractor) | 2024-05-13 | 27 Baker Crescent    |
| 581775 | Repair/Replace Lateral (Contractor) | 2024-05-13 | 372 Yonge St         |
| 581778 | Repair/Replace Lateral (Contractor) | 2024-05-13 | 112 Strabane Ave     |
| 581783 | Repair/Replace Lateral (Contractor) | 2024-05-13 | 12 Donald St         |
| 581954 | Repair/Replace Lateral (Contractor) | 2024-05-14 | 27 Thomson St        |
| 585152 | Repair/Replace Lateral (Contractor) | 2024-05-31 | 63 Morrow Rd         |
| 587380 | Repair/Replace Lateral (Contractor) | 2024-06-10 | 17 Marion Crescent   |
| 587563 | Repair/Replace Lateral (Contractor) | 2024-06-11 | 326 Codrington St    |
| 588145 | Repair/Replace Lateral (Contractor) | 2024-06-13 | 57 Pae Dr            |
| 600494 | Repair/Replace Lateral (Contractor) | 2024-08-16 | 96 Lillian Crescent  |
| 600764 | Repair/Replace Lateral (Contractor) | 2024-08-19 | 236 St Vincent St    |
| 601194 | Repair/Replace Lateral (Contractor) | 2024-08-21 | 151 Cundles Rd E     |
| 601278 | Repair/Replace Lateral (Contractor) | 2024-08-21 | 326 Codrington St    |
| 601647 | Repair/Replace Lateral (Contractor) | 2024-08-22 | 57 Pae Dr            |
| 602730 | Repair/Replace Lateral (Contractor) | 2024-08-28 | 75 Melrose Ave       |
| 608331 | Repair/Replace Lateral (Contractor) | 2024-09-23 | 85 Shanty Bay Rd     |
| 608339 | Repair/Replace Lateral (Contractor) | 2024-09-23 | 78 Patterson Rd      |
| 611099 | Repair/Replace Lateral (Contractor) | 2024-10-08 | 42 Glenwood Dr       |
| 618544 | Repair/Replace Lateral (Contractor) | 2024-11-19 | 6 Brookdale Dr       |
| 618545 | Repair/Replace Lateral (Contractor) | 2024-11-19 | 67 Briar Rd          |
| 623886 | Repair/Replace Lateral (Contractor) | 2024-12-16 | 60 Queen St          |

| WO#    | Description                 | Date       | Address             |
|--------|-----------------------------|------------|---------------------|
| 568677 | Reline Lateral (Contractor) | 2024-03-01 | 38 Grove St E       |
| 568681 | Reline Lateral (Contractor) | 2024-03-01 | 204 Toronto St N    |
| 575928 | Reline Lateral (Contractor) | 2024-04-16 | 82 Sophia St E      |
| 621268 | Reline Lateral (Contractor) | 2024-12-03 | 84 Penetang St      |
| 560154 | Repair/Replace Lateral      | 2024-01-10 | 10 Weldon Crescent  |
| 563361 | Repair/Replace Lateral      | 2024-01-29 | 177 Wellington St E |
| 566058 | Repair/Replace Lateral      | 2024-02-14 | 46 Eccles St N      |
| 568680 | Repair/Replace Lateral      | 2024-03-01 | 10 Weldon Crescent  |
| 568682 | Repair/Replace Lateral      | 2024-03-01 | 177 Wellington St E |
| 569093 | Repair/Replace Lateral      | 2024-03-04 | 16 Burton Ave       |
| 570474 | Repair/Replace Lateral      | 2024-03-11 | 27 Penetang St      |
| 570867 | Repair/Replace Lateral      | 2024-03-14 | 88 Sophia St E      |
| 572446 | Repair/Replace Lateral      | 2024-03-25 | 112 Shanty Bay Rd   |
| 572605 | Repair/Replace Lateral      | 2024-03-26 | 112 Shanty Bay Rd   |
| 575747 | Repair/Replace Lateral      | 2024-04-15 | 2 Frances St S      |
| 575929 | Repair/Replace Lateral      | 2024-04-16 | 143 Burton Ave      |
| 578773 | Repair/Replace Lateral      | 2024-04-25 | 146 Penetang St     |
| 579933 | Repair/Replace Lateral      | 2024-05-02 | 42 Downsview Dr     |
| 584610 | Repair/Replace Lateral      | 2024-05-28 | 62 Innisfil St      |
| 595324 | Repair/Replace Lateral      | 2024-07-19 | 65 Puget St         |
| 607691 | Repair/Replace Lateral      | 2024-09-19 | 77 Wellington St E  |
| 616255 | Repair/Replace Lateral      | 2024-11-06 | 15 Wood St          |

Additionally, the following table summarizes all maintenance activity on the gravity collection system:

**Table 7 Summary of Other Maintenance on Gravity Sewers in 2024**

| Description                              | Number of Work Orders |
|------------------------------------------|-----------------------|
| Benching in Maintenance Hole             | 2                     |
| Check Sanitary Main                      | 9                     |
| Clear Blocked Lateral                    | 5                     |
| Clear Blocked Sanitary Main              | 9                     |
| Clear Debris/Obstruction                 | 7                     |
| Inspect Lateral (CCTV)                   | 88                    |
| Inspect Main (CCTV)                      | 2                     |
| Maintenance Hole - Inspection            | 1                     |
| Perform Sanitary Flushing                | 203                   |
| Reline Lateral (Contractor)              | 4                     |
| Reline/Repair Sanitary Main (Contractor) | 4                     |

| Description                               | Number of Work Orders |
|-------------------------------------------|-----------------------|
| Repair/Replace Lateral                    | 18                    |
| Repair/Replace Lateral (Contractor)       | 50                    |
| Repair/Replace Sanitary Main              | 2                     |
| Sanitary Maintenance Hole Repair          | 1                     |
| Check Float at Loughheed Maintenance Hole | 46                    |
| Weekly Cleaning of Sanitary Main          | 37                    |
| <b>Total</b>                              | <b>489</b>            |

A detailed list of individual work orders can be supplied upon request.

## Reporting Section 4.6.6: Summary of Complaints and Responses

### Pump Stations and Force Mains

No complaints were received relating to sewage pumping stations or forcemains.

### Gravity Collection System

The City uses a CMMS to track internal and external service requests, along with work orders related to the gravity collection system. During the reporting period, the City received 128 service requests from the public for this system. These requests are categorized and compared to previous years' data in Table 8 below.

To enhance efficiency and reduce redundancies in Cityworks data collection, the *Miscellaneous Service Request* and *Sanitary Lateral Problems* categories have been discontinued and integrated into other categories. Consequently, these fields are now greyed out in the table.

Table 8 Service Request Summary

| Type of Service Request        | Number of Service Requests |      |      |      |      |
|--------------------------------|----------------------------|------|------|------|------|
|                                | 2020                       | 2021 | 2022 | 2023 | 2024 |
| Miscellaneous Service Requests | 10                         | 9    | 2    |      |      |
| Sanitary Lateral Problems      | 51                         | 25   | 10   | 4    |      |
| Maintenance Hole Overflow      | 51                         | 25   | 10   | 4    | 1    |
| Sewer back up in basement      | 102                        | 85   | 98   | 128  | 120  |
| Sewer Smell                    | 10                         | 10   | 14   | 8    | 7    |

## Reporting Section 4.6.7: Alterations/Notices of Modifications Including Status

This section contains the status of all alterations that require Notices of Modifications.

## Pump Stations and Force Mains

No Notices of Modification were issued or in effect.

## Gravity Collection System

There were four (4) Notices of Modification issued. The status of recent Notices of Modification is provided in the table below.

Table 9 Notices of Modifications & Status

| Number       | Description                                                                                                                                                                                                                                                                                                                                           | Date Signed     | Status as of Dec. 31, 2024                                                                                             | Well Head Protection Area |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Not assigned | Sanitary sewer modifications on Owen Street between Dunlop Street and Sophia Street. Relocation and upsizing of existing sanitary sewers, removal of existing sanitary sewers and transfer of sanitary laterals.                                                                                                                                      | March 3, 2024   | Project was awarded in October 2024, preparation work started. Construction is anticipated to begin in spring of 2025. | N/A                       |
| Not assigned | The proposed works include new sanitary sewers to be installed for Phase 1 of the Sandy Creek Estates Subdivision Development, on Mapleview Drive East in the City of Barrie. Sanitary sewers to be constructed on Terry Fox Drive and Harbourview Drive. Design includes installation of 221m of sanitary sewers and 4 sanitary junction structures. | August 23, 2024 | Project anticipated to be available for contractor bid in 2025                                                         | N/A                       |
| Not assigned | Two sanitary sewers to be constructed on Walker Street, one sanitary sewer to be constructed on Pura Vida Trail, and another sanitary sewer to be constructed on Da Vinci Avenue within the Watersand Residential Subdivision                                                                                                                         | June 6, 2024    | Project currently on hold                                                                                              | N/A                       |
| Not assigned | Sanitary sewer addition for the Mattamy Lockhart Subdivision Phase 2. Sanitary sewers to be constructed on Greer Street, Lower Street, Yorkshire Drive, McBride Trail, Gretzky Avenue, Fleetwood Street, Vinewood Crescent, Ivory Road, Lewis Road, and Reddit Crescent.                                                                              | March 26, 2024  | Sanitary sewers were installed in 2024.                                                                                | N/A                       |

## Reporting Section 4.6.8: Summary of all Collection System Overflow(s) and Spill(s) of Sewage

### Pump Stations and Force Mains

There were no overflows from pump stations.

### Gravity Collection System

There were seven (7) reportable incidents that occurred in the gravity collection system. A summary of events and City responses, as reported by the City's Environmental Risk Management and Compliance team (ERMC), are provided in the following table:

Table 10 2024 Collection System Overflows and Spills

| Incident No. | Date and location                                | Volume or Duration     | Sample Results       | Disinfection provided                                                                      | Cause                                                                                                                                          | Adverse impacts and corrective actions                                                                                                                                                                                      |
|--------------|--------------------------------------------------|------------------------|----------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EIR-028-2024 | March 21, 2024<br>428 Codrington St., Barrie, ON | Estimated 9,000 liters | No samples collected | A bleach water mixture was applied to the impacted roadway.                                | Broken piece of clay pipe created a blockage in the sewer main which resulted in wastewater flowing out of the top of a Maintenance hole.      | The blockage was removed by City's Collections team flow restored. The storm catch basins on Puget St between Blake St and Shanty Bay Rd were vacuumed out as a precaution.                                                 |
| EIR-088-2024 | June 10, 2024<br>55 Lakeshore Dr., Barrie ON     | Unknown                | No samples collected | No disinfection provided                                                                   | Private-side Issue: The holding tank at the City of Barrie Marina, where boats offload waste, leaked near the base of the pump when activated. | Marina was instructed to stop using tank. Private plumbers were called to locate and fix the leak. An e-mail was sent to all boaters to let them know they are temporarily shut down. Leak was found and repairs completed. |
| EIR-115-2024 | July 13 2024<br>240 Big Bay Point Rd, Barrie On  | Unknown                | No samples collected | Sprayed bleach mixture onto the impacted areas from the sewage spill to disinfect the area | Private-side Issue: Overland sewage spill due to blocked sanitary lateral at restaurant.                                                       | City's Collections team completed sanitary lateral flushing and cleaning. The lateral was flowing at this point in time. The grassy area where the sewage had spilled was cleaned up with the vac truck and water.          |

**City of Barrie**  
**Sewage Collection System**  
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| Incident No. | Date and location                                  | Volume or Duration | Sample Results                                                                    | Disinfection provided                                                    | Cause                                                                                                                                        | Adverse impacts and corrective actions                                                                                                                                                                                                                                                                                    |
|--------------|----------------------------------------------------|--------------------|-----------------------------------------------------------------------------------|--------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| EIR-125-2024 | July 22, 2024, Bayview Drive Sewage Spill          | Unknown            | TSS 3.0mg/L<br>BOD 2.0mg/L<br>TP 0.002mg/L<br>TKN 0.05 mg/L<br>E.Coli 1 CFU/100ml | No disinfection provided                                                 | Sewer main was hit during construction on Bayview Drive just south of Little Ave.                                                            | Wastewater spilled into Whiskey Creek. Sandbags were placed inside the trench to hold back the wastewater until by-pass pumping was set up to divert flow back to sewer. Contractor requested a City vac truck to help remediate the impacted creek area and to remain on stand-by in case the sandbag berm was breached. |
| EIR-161-2024 | September 13, 2024, 407 Cundles Rd. E., Barrie On. | Approx. 50L        | No samples collected                                                              | Sprayed bleach onto the areas of visible dampness on the asphalt surface | Private-side Issue: A spill occurred in the parking lot of a restaurant. A small amount of liquid was visible running into two storm drains. | City staff cleaned out both catch basins as well as the sanitary lateral from the restaurant to remove any blockage and restore flow.                                                                                                                                                                                     |
| EIR-163-2024 | September 22, 2024, 18 Cundles Rd. E., Barrie On.  | Unknown            | No samples collected                                                              | No disinfection provided                                                 | Private-side Issue: Sewage spill at car wash on Cundles Rd. E. Wastewater spilled into storm catch basin.                                    | Plaza sanitary sewer cleared by City staff, who also flushed the sanitary sewer from Cundles Rd E to the intersection where restaurant is located.                                                                                                                                                                        |
| EIR-222-2024 | December 6, 2024, 647 Welham Rd., Barrie, ON       | Approx. 3 weeks    | No samples collected                                                              | Sprayed down affected area with bleach                                   | Private-side Issue: Sewage injector failed inside maintenance hole on private property.                                                      | Sewage spilled from a private maintenance hole into a catch basin that flows to a ravine. City staff vacuumed out catch basin to stop flow of sewage into the ravine. Property owner to complete repairs to the pump in the private Maintenance Hole                                                                      |

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## Reporting Section 4.6.9: Summary of Efforts Made to Reduce Overflows and Spills

The ERMC team has successfully completed the "stop treating toilets like garbage dumps" outreach program targeting residents and businesses. The outreach focused on preventing the disposal of unwanted materials into sinks and drains, particularly fats, oils, and grease (FOG), as well as hygiene products. By raising awareness of the risk and damages associated with improper disposal, the initiative aims to reduce sanitary blockages and mitigate the possibility of environmental spills.

The City's Corporate Assessment Management team retained a consultant to complete Phase 2 of the ongoing I&I study. Phase 2 included flow monitoring for high I&I sewersheds to isolate areas of significant I&I flow. Results were used to inform the scope of field work and mitigation opportunities. The overall flow monitoring program for the study has been finalized. In 2025, field work (FOG testing, dye testing, inspections, etc.) will be completed.

Additionally, the WWOB performs routine maintenance in the gravity collection system through flushing, annual CCTV inspection, and in-situ repair programs. These programs provide insight into the performance and overall functionality of the sanitary collection system and allow staff to identify and address issues early to ensure that potential spills or overflows are avoided.

**APPENDIX A: Sanitary Flushing and CCTV for 2024**

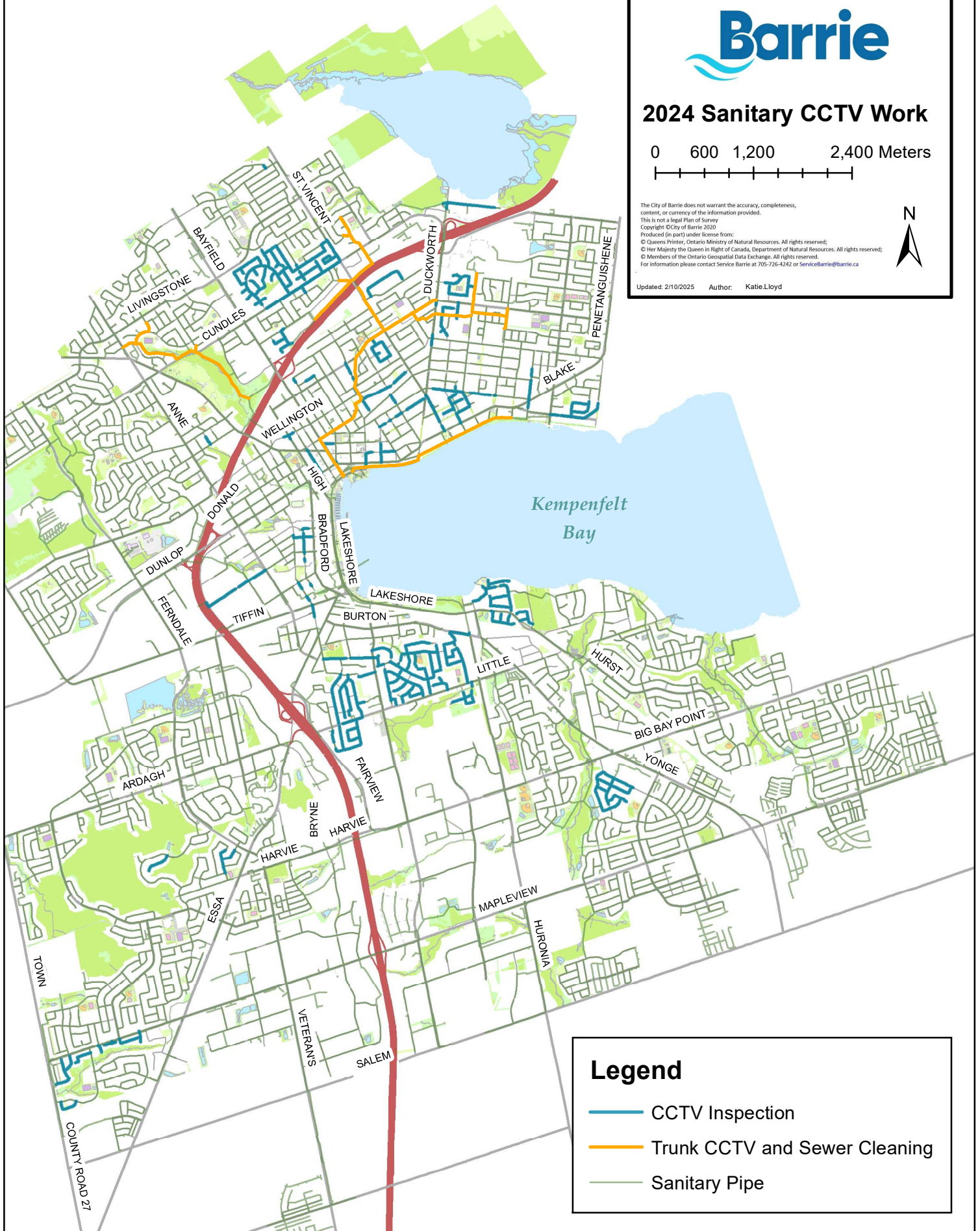


## 2024 Sanitary CCTV Work

0 600 1,200 2,400 Meters

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For information please contact Service Barrie at 705-726-4242 or [ServiceBarrie@barrie.ca](mailto:ServiceBarrie@barrie.ca)

Updated: 2/10/2025 Author: Katie Lloyd



### Legend

- CCTV Inspection
- Trunk CCTV and Sewer Cleaning
- Sanitary Pipe

## **APPENDIX B: Sanitary CIPP Relining for 2024**

Midhurst



## In-Situ Repairs and Relining on Sanitary Sewers (2024)

0 0.5 1 2 Kilometres



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GIS Branch, 1/24/2025

Kempfenfelt Bay

Barrie

Pain'swick

Stroud

### Legend

— In situ Repairs

#### Road Segments

— Highway

— Ramp

— Major Road

— Local Road

— Private Road

Sources: NRCan, Esri Canada, and Canadian Community Maps contributors.