



City of Barrie

Sewage Collection System


2019 Annual Monitoring Report

Environmental Compliance Approval 5921-ATUKKR

Rec'd March 30 / 2020
12:10 HRS

March 27, 2020

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M E C P
Barrie

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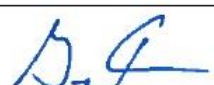


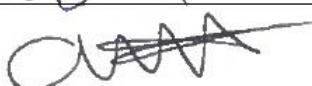
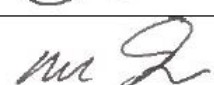
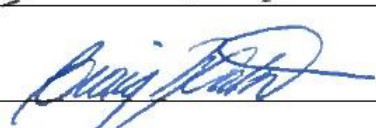


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Review and Sign-Off

Sewage Collection System 2019 Annual Report Reviewed by:	Signature	Date
A. Baker, Lead Hand, Wastewater Operations		23/03/20
G. Jorden, Supervisor, Wastewater Operations and Maintenance		Mar 20/20
K. Quigley, Supervisor, Operational Technology		20/03/20
J. Reid, Supervisor Technical, Stormwater and Rail Operations		25/03/20
A. Foster, Roads Operations Supervisor		Mar. 24, 2020.
M. Shaw, Supervisor of Technical Services		Mar, 19/20
S. Coulter, Manager of Wastewater Operations		20-03-19
C. Morton, Manager of Stormwater, Roads and Rail Operations		Mar 23, 2020
D. Friary, Director of Operations		Mar 23/20
B. Araniyasundaran, Director of Infrastructure		Mar 25/2020

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Overview

The City of Barrie owns and operates a wastewater collection system which terminates at the Wastewater Treatment Facility located at 249 Bradford Street. The collection system currently operates under Ministry of the Environment, Conservation and Parks (MECP) Amended Environmental Compliance Approval (ECA) No. 5921-ATUKKR dated January 10, 2018. A recent history of collection system system-wide ECA approvals is as follows:

Table 1 System-Wide ECA Approvals History

System-Wide ECA Number	Date of Issue	Reason for Issue
7639-ACYHUF	October 5, 2016	All individual pump station approvals transferred to system-wide approval
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

In 2019 the system operated under the last approval (5921-ATUKKR). This report is prepared in accordance with the requirements of section 2.6(3) of this ECA.

Each section of this report shall be discussed in terms of

- Pump Stations and Force Mains
- Gravity collection system

The numbering of each section in this report follows the numbering of the ECA s. 2.6(3) reporting sections (a) to (k). Appendix A contains a copy of ECA 5921-ATUKKR dated January 10, 2018.

Reporting section 2.6 (3) (a): Summary and Interpretation of Monitoring Data

This section discusses all monitoring data and includes an overview of the success and adequacy of the works. The City of Barrie uses computerized work order management systems to track work orders, inspections, repairs, repair costs and internal and external service requests. These systems are the source of data presented in this report.

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 Wastewater Treatment Facility, 249 Bradford Street, Barrie. Few pump stations have flow meters and, in general, smaller pump stations have less complex control and metering systems.

Station alarms will call out via telephone line or wireless network to an on-call operator 24/7/365. Alarms are annunciated at WwTF.

The following alarms are provided for all pump stations and will appear on a SCADA system until cleared. These alarms are “high priority” and, as a result, call-out to an on-call operator:

- HI Level
- HI HI Level
- LO Level
- Building or Panel Intrusion
- AC Fail, LO Temp
- Communication Failure

Each station can also have additional alarms and some of these may include the following:

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

All alarms are logged as well as operations actions and acknowledgments. There is one alarm file per day and daily reports are available upon request. The alarm system has proven to be effective and no overflows were experienced in 2019.

In addition to automated monitoring, inspections are routinely conducted by operators. Pump station inspections are performed 2- 3x week and generally consist of:

- Testing, cleaning (if necessary) and inspecting floats for proper operation (Once weekly)
- Test wet well alarms (Once weekly)
- Check intrusion alarm
- Pumping down the well to clean the well (Once weekly)
- Inspecting and recording pump hours for each pump in a pump hour logbook.
- Inspecting pump house or cabinet condition (as the case may be)
- Recording backup generator hours (if present) and inspect condition (oil levels, coolant etc.)
- Check all breakers and switches to ensure they are positioned correctly
- Check safety devices (fire extinguisher, eyewash station, emergency lighting etc.)
- Record all findings in the station log book and sign operator's name
- Snow clearing as needed
- Safety inspection twice yearly

Less frequent maintenance will generally consist of (depends on station):

- Bi-weekly generator inspection and exercise
- Quarterly entry into the wet well and inspection/cleaning
- Annual generator/transfer switch inspection at load, replenish fluid levels

Maintenance, repairs, service requests and inspections are tracked through work orders on two computerized maintenance management systems (CMMS).

Annual flow meter verification on pump stations is contracted out and was conducted in October and November 2019 as per Reporting section 2.6 (3) (d). Verification certificates are available upon request.

Three-year flow summaries are shown below except for two small stations; Perry Street and Innisfil Street.

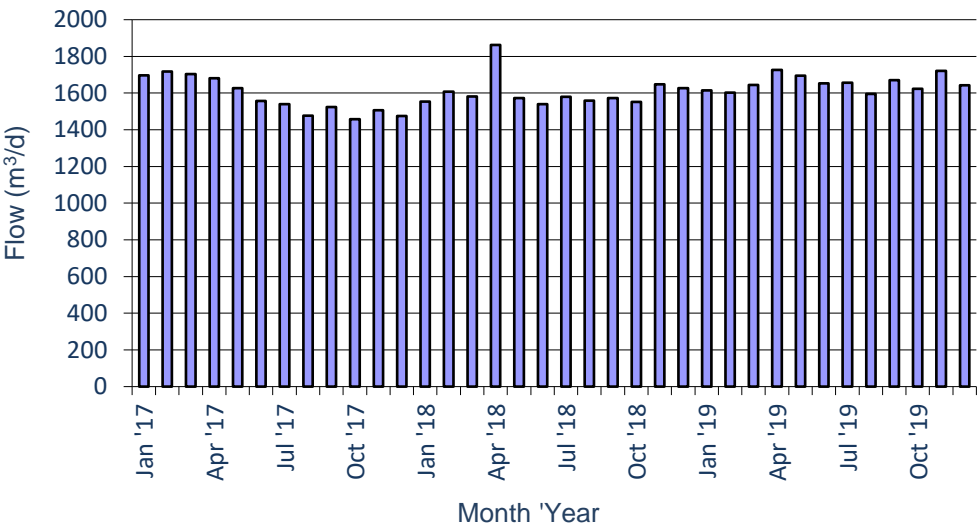


Figure 1 Grove Street SPS Monthly Average Daily Flows

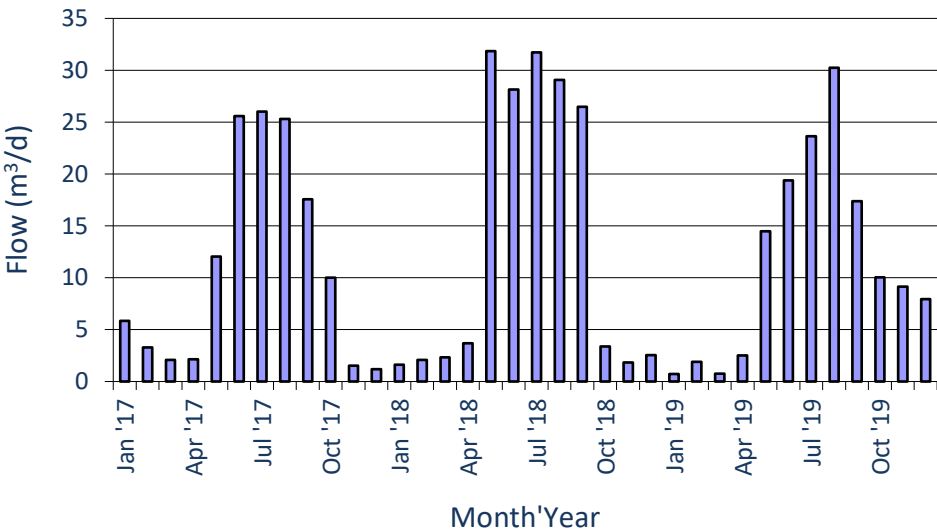


Figure 2 Heritage Park SPS Monthly Average Daily Flows

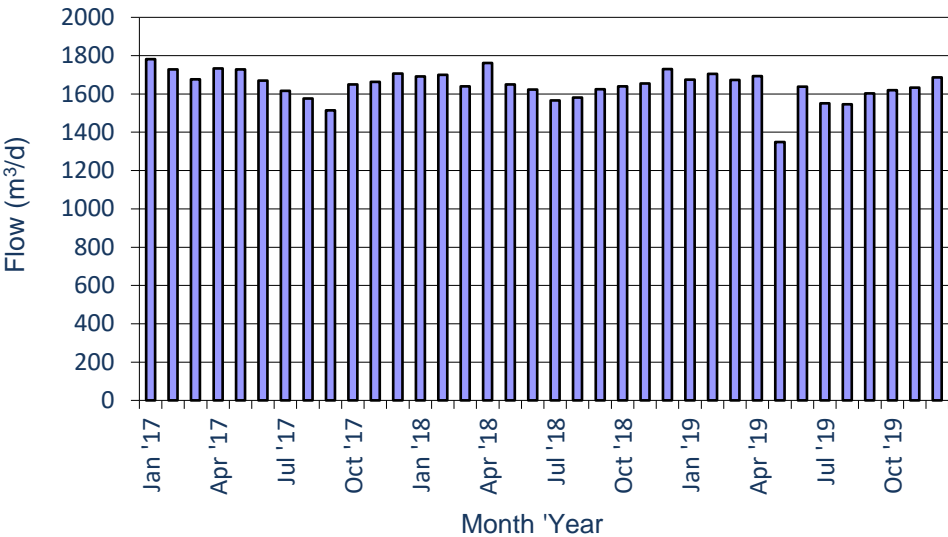


Figure 3 Holly SPS Monthly Average Daily Flows

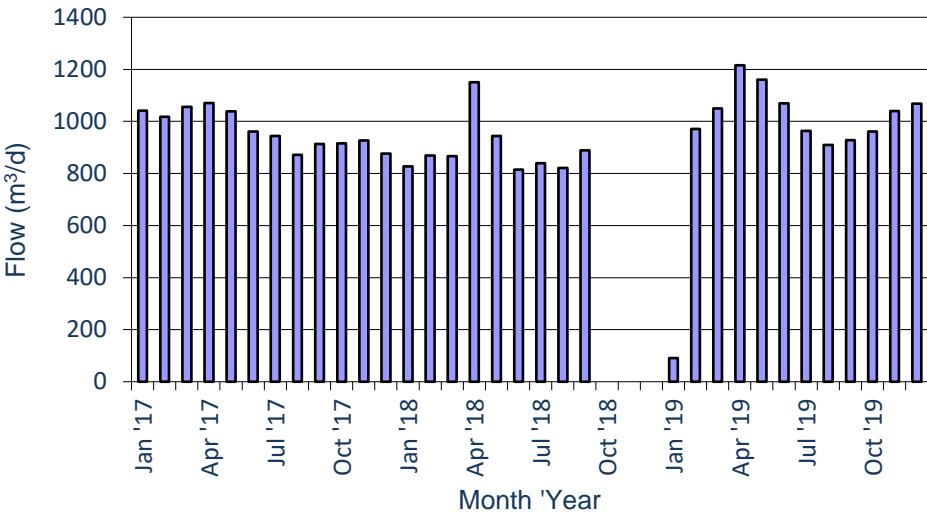


Figure 4 Little Lake SPS Monthly Average daily Flows

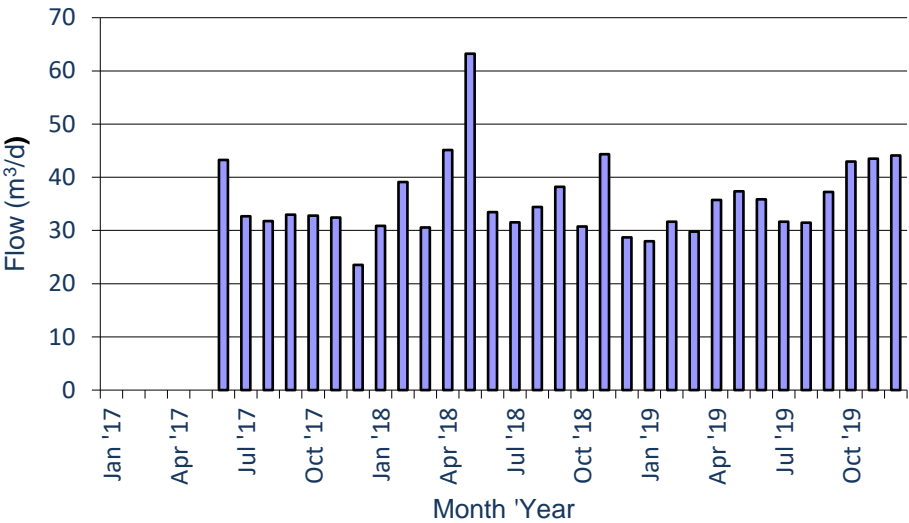


Figure 5 Lockhart SPS Monthly Average Daily Flows

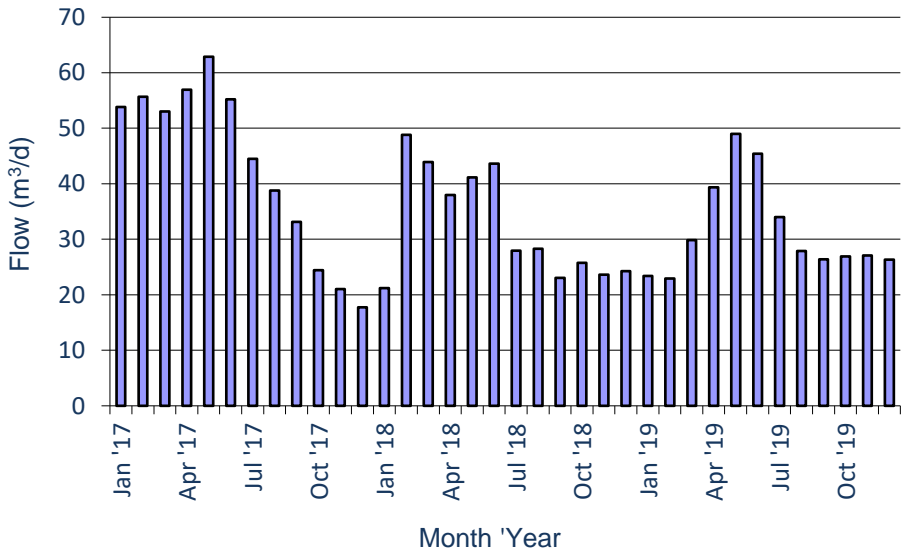


Figure 6 Minet's Point SPS Monthly Average Daily Flows

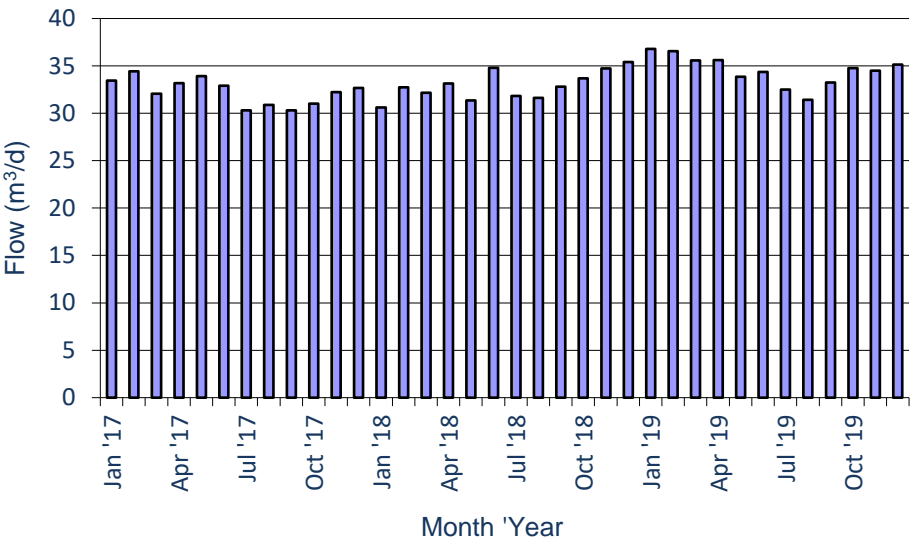


Figure 7 Mooregate SPS Monthly Average Daily Flows

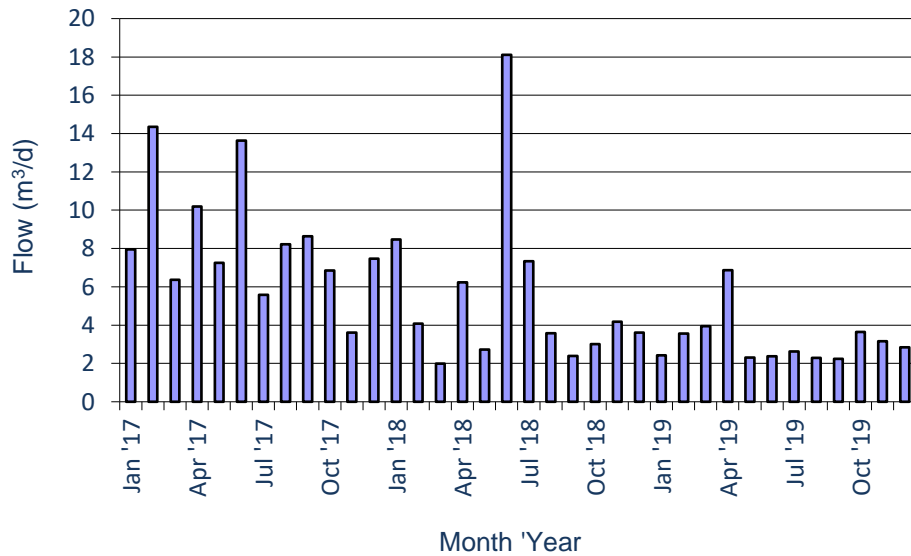


Figure 8 Splash Pond SPS Monthly Average Daily Flows

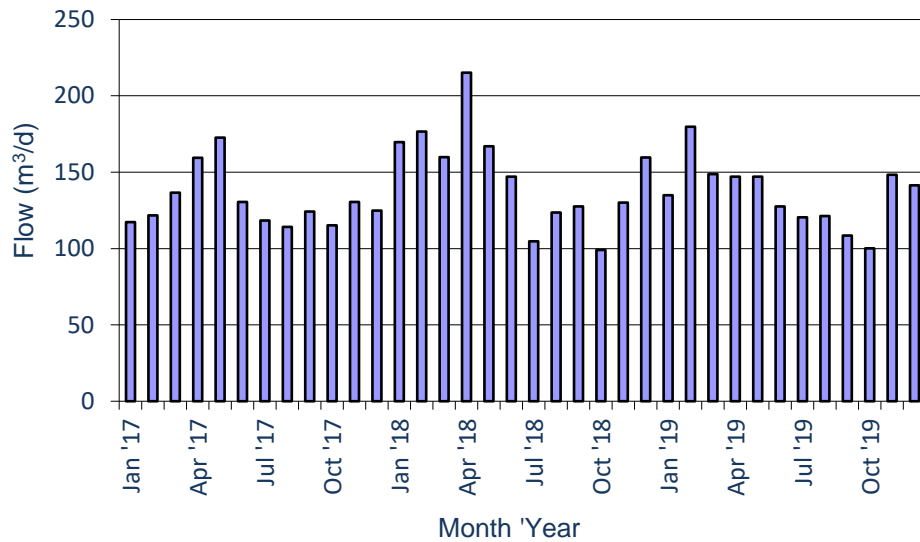


Figure 9 Tyndale Park SPS Monthly Average Daily Flows

Average daily flows for pump stations are estimated for 2019 as follows:

Table 2 Pump Station 2019 Average Daily Flow (m³/d)

Pump Station	Average Flow (m³/d)
Holly PS	1612
Tyndale PS	135
Splash Pond PS	2
Mooregate PS	34
Lockhart PS	36
Minet's Point PS	32
Heritage PS	12
Johnson's Beach PS	1
Grove St PS	1654
Little Lake PS	963
Total	4481

The adequacy of the existing system is generally sufficient. Recently completed, in-development or in-progress improvements are as follows:

- Capacity is being increased and construction was continued through 2019 at Holly SPS to accommodate annexed land as approved by the August, 2017 ECA. Contractual issues were experienced that delayed the project. The new station was not operational in 2019. The delays resulted in the need to haul sewage from Bear Creek Development to the wastewater treatment facility in Barrie (WwTF) in December, 2019.
- The existing generator at Holly SPS will not support two pumps simultaneously. A new larger generator is planned in 2020 as part of the Holly SPS upgrade project.
- A twin force main at Little Lake SPS was included in the original system-wide ECA but has not yet been tied into the existing sewer system. In 2019 the City of Barrie continued with the design of a new valve chamber and possibly other modifications as needed to tie in the second force main. The City will ensure that all approvals and applications for amendments are in place as required.
- Most pump stations do not have flow meters. Those that do are Holly, Tyndale, Splash Pond, Little Lake and Mooregate (2).
- Where there is no flow meter, flows are calculated based on volume change in the well when a pump is running. The City is developing a program to eventually equip all stations with flow meters with larger stations being the priority.
- Level measurement does not exist at Tyndale PS. A WWOB project commenced in 2019 resulted in installation of level measurement equipment at Tyndale but it was not commissioned in 2019.
- Heritage Park SPS dedicated force main became defective in 2018 and discharge from the pump station was re-routed to the alternate force main shared by the Splash Pond SPS in 2019. All plumbing was existing to make the change.
- Some wet wells (e.g. at Johnson's Beach SPS and Perry Street SPS) were identified as having unsatisfactory means of entrance. A new, safer ladder design was implemented at Johnson's Beach SPS in 2019 and Perry Street ladder will be completed in 2020.

Gravity Collection System

CCTV Inspection

The City of Barrie operates a closed circuit television (CCTV) sewer inspection program for sanitary sewers. In 2019, the City's contractor conducted inspections on approximately 80 km of sanitary sewers (approximately 14.6% of the total network).

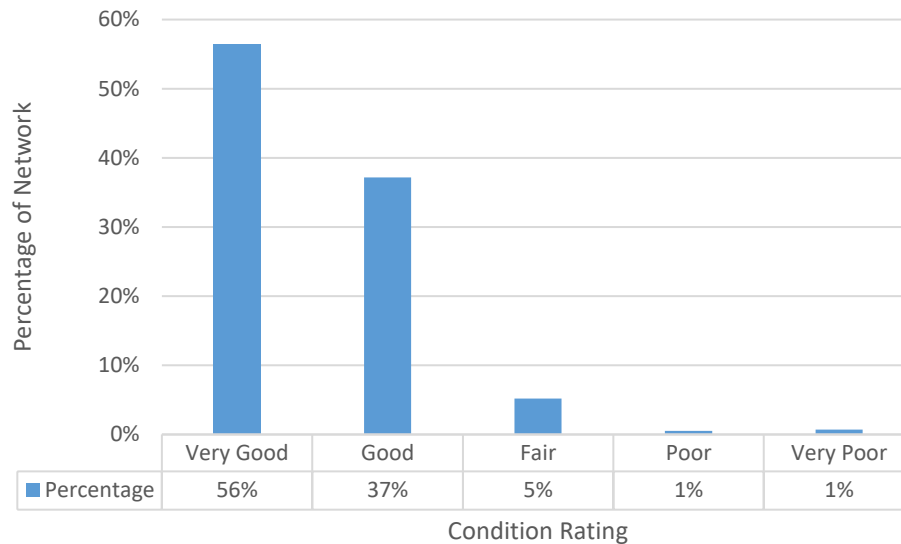


Figure 10 2019 Sanitary Sewer Condition Rating

Flow Monitoring

The City of Barrie does not conduct flow monitoring to measure the general performance of the gravity collection network at this time, however flow monitoring was conducted at four locations during 2019 and found the system to be performing adequately based on current demand at these locations. A summary of the results at these locations is provided below:

Table 3 2019 Flow Monitoring on Gravity Sewer System

Location	Size	Material	Average Flow (Hourly Average)	Peak Flow (Hourly Average)	Capacity
Ardagh Road East of Morrow	250mm (0.5% slope)	PVC	2.7 L/s	17.0 L/s	42 L/s
Ardagh Road West of Morrow	250mm (0.88% slope)	PVC	1.5 L/s	10.5 L/s	56 L/s
Dunsmore (south-west MH) SAL08156	375mm (0.25% slope)	PVC	6.7 L/s	28.2 L/s	88 L/s
Rosenfeld just east of Hickling Trail SAL08099	450mm (0.26% slope)	Concrete	20.9 L/s	41.91 L/s	145 L/s

Reporting section 2.6 (3) (b): Description of Operating Problems and Corrective Actions

Pump Stations and Force Mains

The Heritage Park sanitary pump station experienced an overflow in 2018 due to a pinched force main. In 2019 an isolation valve on the force main was closed and another valve which allows flow between Heritage Park SPS force main and Splash Pond SPS force main was opened. Hence, discharge from Heritage Park PS is now combined with the existing discharge from Splash Pond PS.

Access to the Johnson Beach SPS pump chamber and chamber entry was improved in 2019 by adding a new ladder.

A grinder pump at Little Lake SPS was replaced in 2019 with an identical non-grinding pump with non-clog impeller to match impellers installed at the other sewage pumping stations. Variable Frequency Drives (VFDs) were also replaced as existing units were undersized.

Wiring upgrades were done at Tyndale Park SPS and Grove Street SPS.

Grove Street SPS still receives excessive flushable /disposable solid waste from local commercial or institutional facilities.

Gravity Collection System

The City of Barrie operates an annual in-situ repair program for the gravity collection system. Repair locations are derived from annual CCTV inspections and issues arising from field operations. Issues are prioritized and repaired to optimize available budget. The locations repaired in 2019 are noted below:

Table 4 In-situ Repairs to Gravity System in 2019

Street Location	Pipe ID	Action
Lakeview Cres	101501398	Root and Deposit Cutting
Lakeview Cres	120083772	Root and Deposit Cutting
Rose St	101506759	Full-length CIPP Lining
Ottaway Ave	101505910	Deposit Cutting, Chemical Grouting, and Full-length CIPP Lining
Bothwell Cres	101505950	Deposit Cutting, Chemical Grouting, and Full-length CIPP Lining
Bothwell Cres	101505947	Deposit Cutting, Root Cutting, Chemical Grouting, and Full-length CIPP Lining

Reporting section 2.6 (3) (c): Maintenance Summary

Pump Stations and Force Mains

In addition to the repairs and modifications cited in sections 2.6 (3) (a) and (b) above, pump stations were inspected 3 times per week in 2019 which involved the following preventative maintenance activities:

- Testing, cleaning (if necessary) and inspecting floats for proper operation
- Test wet well alarms
- Check intrusion alarm
- Pumping down the well to clean the well
- Inspecting and recording pump hours for each pump in a pump hour log book.
- Inspecting pump house or cabinet condition (as the case may be)
- Recording backup generator hours (if present) and inspect condition (oil levels, coolant etc.)
- Check all breakers and switches to ensure they are positioned correctly
- Check safety devices (fire extinguisher, eyewash station, emergency lighting etc.)
- Record all findings in the station log book and sign operator's name
- Snow clearing as needed

Less frequent preventative maintenance consisted of (depending on station equipment):

- Bi-weekly generator inspection and exercise
- Quarterly or semi-annual wet well inspection/cleaning
- Safety inspection twice yearly
- Annual generator/transfer switch inspection at load, replenish fluid levels

Gravity Collection System

Sanitary sewer cleaning is undertaken by two City operated flushing crews. The goal is to clean each local sanitary pipe in the City of Barrie 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 pipe in working condition until the underlying problem can be addressed as part of our in-situ repair program, or as part of a larger Engineering project.

The following sewers were included in the weekly flushing program for 2019:

Table 5 Gravity Sewers on Weekly Flushing Program in 2019

Sewer ID	Location
SAL03136	Duckworth St.
SAN04142-SAN04141	Wellington St.
SAC07018-SAC07019	Glenwood Dr.
SAI06101-SAI06100	Cundles Rd.
SAC03026-SACC03025	Brookdale Dr.
SAL03034-SAL03032	Sophia St. E.
SAI02017-SAI02016	Sanford St.
SAB01021-SAB0109	Cumberland St.
SAE02001-SAE02002	Innisfil St.
SAE02010-SAE02011	Marcus St.

The City covers the cost of sanitary lateral replacements and critical repairs between the sewer main and home owners' property lines. The lateral on private property is still the home owner's responsibility. Below is a list of properties where laterals were repaired or replaced in 2019.

Table 6 2019 Lateral Repair and Replacement Locations

Location	Location	Location
57 Austen Lane	106 Strabane	287 Anne St N
114 Dundonald Street	16 Collette	136 Maple Ave
15 Springhome Rd	184 Wellington East	171 Mary
30 Regalia Way	369 Codrington	157 St. Vincent
134 Puget St.	8 Alexander	22 Edwards
73/75 Daphne Cres.	45 Downsview	130 Innisfil St
74 Melrose Ave	54 Letitia	120 Henry St
67 Christie	3 Castle	150 Esther Dr
55 Highland	5 Castle	15-17 East St
104 Daphne	6 Castle	85 Eccles St N
13 Maplehurst	8 Castle	103 Peel St
133 The Queensway	10 Castle	167A Rose St
6 Broadmore	14 Castle	268 Blake St
40 Alfred	16 Castle	11 Frances St S
85 Melrose	19 Castle	23 Kiplin Pl.
13 Steel	20 Castle	21 Garden Drive
40 Strabane	110 Melrose	114 Melrose
34 Marshall	76 Melrose	37 Mary
334 Innisfil	16 Holgate	94 Shanty Bay

In addition to the above, the following maintenance was conducted on the gravity collection system in 2019:

Table 7 Other Maintenance on Gravity Sewers in 2019

Work Order	Date Initiated	Location	Description
331543	10-28-2019 07:03		Alter Elevation of Frame and Lid
334941	12-3-2019 07:16		Check Sanitary Main
320089	07-12-2019 02:13	69 Moir Cres.	Check Sanitary Main

Work Order	Date Initiated	Location	Description
334830	12-2-2019 09:04	230 Innisfil St.	Check Sanitary Main
315014	06-4-2019 07:09		Clean Private Main
304516	02-15-2019 10:45	451 Bryne Dr.	Clear Blocked Lateral
312487	05-10-2019 08:04		Clear Blocked Sanitary Main
301221	01-9-2019 07:02		Clear Blocked Sanitary Main
302118	01-17-2019 10:24		Clear Blocked Sanitary Main
302392	01-21-2019 01:04		Clear Blocked Sanitary Main
317722	06-24-2019 07:16	68 Mary St.	Clear Blocked Sanitary Main
318813	07-3-2019 10:04	23 Prince William Way	Clear Debris/Obstruction in Maintenance Hole
320939	07-19-2019 12:20	68 Mary St.	Drain Backed Up - Check Main
302215	01-17-2019 08:03		Flat Flushing of Sanitary Main
314913	06-3-2019 07:11		Flat Flushing of Sanitary Main
309153	04-8-2019 07:07		Inspection for Contracted Repairs
314096	05-27-2019 07:10		Inspection for Contracted Repairs
324991	08-23-2019 07:30		Inspection for Contracted Repairs
311181	04-29-2019 07:17		Inspection for Contracted Repairs
311854	05-6-2019 07:33		Inspection for Contracted Repairs
309343	04-9-2019 07:19		Inspection for Contracted Repairs
309991	04-15-2019 07:14		Inspection for Contracted Repairs
312482	05-10-2019 07:11		Inspection for Contracted Repairs
313071	05-15-2019 07:23		Inspection for Contracted Repairs
310682	04-23-2019 07:22		Inspection for Contracted Repairs
309438	04-10-2019 07:24		Inspection for Contracted Repairs
326813	09-10-2019 07:10		Inspection for Contracted Repairs
325998	09-3-2019 07:27		Inspection of MH/CB for Contracted Repairs
320475	07-16-2019 03:11	28 Parkside Dr.	Investigate Blocked Lateral
331185	10-22-2019 02:11	4 Vine St.	Investigate Blocked Lateral
334564	10-9-2019 08:00	128 Wellington St. W	Investigate Blocked Lateral
328983	09-27-2019 07:17		Maintenance Hole - Inspection

Work Order	Date Initiated	Location	Description
330376	10-10-2019 02:07		Maintenance Hole - Inspection
328093	09-19-2019 09:34	Mary St.	Maintenance Hole - Inspection
312882	05-14-2019 07:17		Rebuild Structure
329113	09-30-2019 07:18		Rebuild Structure
308775	04-4-2019 07:25		Rebuild Structure
309511	04-11-2019 07:17		Rebuild Structure
320351	07-16-2019 06:58	Mapleview Dr. W.	Rebuild Structure
313068	05-15-2019 07:19		Rebuild Structure
328463	09-24-2019 07:18		Rebuild Structure
320541	07-17-2019 07:19	Ferndale Dr. S & Cuthbert St.	Rebuild Structure
317721	06-24-2019 07:12	158 Lillian	Rebuild Structure
319404	07-9-2019 08:14	Mary St & Simcoe St	Rebuild Structure
327551	09-16-2019 07:11		Rebuild Structure
313224	05-16-2019 07:21		Rebuild Structure
310769	04-24-2019 07:07	54 Larkin Dr.	Rebuild Structure
310029	04-15-2019 11:20		Rebuild Structure
310689	04-23-2019 08:00		Rebuild Structure
311444	05-2-2019 07:19		Rebuild Structure
307854	03-26-2019 07:11		Rebuild Structure
316398	06-12-2019 07:24	61 Srigley	Rebuild Structure
329590	10-3-2019 07:08		Rebuild Structure
335643	12-9-2019 07:03		Rebuild Structure
310028	04-15-2019 11:18		Rebuild Structure
314518	05-30-2019 07:18	Minet's Point just south of the tracks	Rebuild Structure
320542	07-17-2019 07:56	340 Big Bay Point Rd	Rebuild Structure
307600	03-22-2019 07:27		Rebuild Structure
327619	09-16-2019 11:33		Rebuild Structure
307361	03-20-2019 07:23	319 Johnson St	Rebuild Structure
307288	03-19-2019 07:19		Rebuild Structure

Work Order	Date Initiated	Location	Description
329507	10-2-2019 07:17		Rebuild Structure
308766	04-3-2019 07:43		Remove Obstruction from Sanitary Main
306618	03-11-2019 08:07		Repair by Contractor
305078	02-21-2019 02:38		Repair by Contractor
309261	04-8-2019 12:09		Repair by Contractor
325155	08-26-2019 07:21		Repair by Contractor
309262	04-8-2019 12:20		Repair by Contractor
309266	04-8-2019 01:23		Repair by Contractor
309263	04-8-2019 12:26		Repair by Contractor
305130	02-22-2019 08:14	Monarchy St.	Repair by Contractor
309388	04-9-2019 12:25		Repair by Contractor
309269	04-8-2019 02:08		Repair by Contractor
306614	03-11-2019 07:51		Repair by Contractor
309267	04-8-2019 01:43		Repair by Contractor
309496	04-10-2019 02:56		Repair by Contractor
310979	04-25-2019 07:14		Repair Damage by Others
328035	09-18-2019 02:24		Repair Damage by Others
311574	05-3-2019 07:28		Repair Damage by Others
321400	07-25-2019 07:16		Repair Damage by Others
311282	04-30-2019 07:19		Repair Damage by Others
303860	02-7-2019 09:06	55 Highland Ave.	Repair Defects by Others
312397	05-9-2019 07:18		Repair Defects by Others
304136	02-12-2019 06:56	30 Regalia Way	Repair Defects by Others
310694	04-23-2019 10:14	34 Marshall St.	Repair Defects by Others
328479	09-24-2019 08:38		Repair Lateral
318555	07-2-2019 07:22		Repair Noisy Lid
325999	09-3-2019 07:28	Blake St. & Johnson St.	Repair Noisy Lid
324620	08-21-2019 07:19		Repair Noisy Lid
305692	02-28-2019 11:18		Repair Sanitary Main
306120	03-4-2019 02:29		Repair Sanitary Main
306216	03-6-2019 10:25		Repair Sanitary Main
306075	03-4-2019 08:55		Repair Sanitary Main

Work Order	Date Initiated	Location	Description
305029	02-21-2019 12:17		Repair Sanitary Main
306219	03-6-2019 11:08		Repair Sanitary Main
305030	02-21-2019 01:13		Repair Sanitary Main
305140	02-22-2019 08:55		Repair Sanitary Main
306487	03-8-2019 11:21		Repair Sanitary Main
306095	03-4-2019 09:40		Repair Sanitary Main
306229	03-6-2019 12:27		Repair Sanitary Main
308588	04-1-2019 01:44		Repair Sanitary Main
305002	02-21-2019 10:47		Repair Sanitary Main
305037	02-21-2019 01:49		Repair Sanitary Main
309256	04-8-2019 11:57		Repair Sanitary Main
306152	03-4-2019 02:44		Repair Sanitary Main
306074	03-4-2019 08:40		Repair Sanitary Main
305027	02-21-2019 11:59		Repair Sanitary Main
306484	03-8-2019 10:55		Repair Sanitary Main
306094	03-4-2019 09:26		Repair Sanitary Main
306228	03-6-2019 12:15		Repair Sanitary Main
304974	02-21-2019 08:51		Repair Sanitary Main
305034	02-21-2019 01:25	Marshall St.	Repair Sanitary Main
306115	03-4-2019 01:02		Repair Sanitary Main
305020	02-21-2019 11:23		Repair Sanitary Main
305050	02-21-2019 02:24		Repair Sanitary Main
305144	02-22-2019 09:10		Repair Sanitary Main
306098	03-4-2019 10:01		Repair Sanitary Main
306230	03-6-2019 01:26		Repair Sanitary Main
308597	04-1-2019 02:32		Repair Sanitary Main
305010	02-21-2019 11:08		Repair Sanitary Main
301661	01-13-2019 07:34		Replace Frame
328853	09-26-2019 07:27		Replace Lid
330383	10-10-2019 03:01		Replace Lid
319259	07-8-2019 07:22		Replace Lid and Frame
302217	01-17-2019 08:07		Replace Lid and Frame
304406	02-14-2019 01:38	Alliance Blvd.	Replace Lid and Frame

Work Order	Date Initiated	Location	Description
305445	02-27-2019 07:34		Replace Lid and Frame
306844	03-13-2019 07:24		Replace Lid and Frame
301769	01-14-2019 08:10		Replace Lid and Frame
326476	09-6-2019 07:21	10 Riverwood Crt.	Replace Lid and Frame
305023	02-21-2019 11:41		Replace Sanitary Main
305038	02-21-2019 02:05		Replace Sanitary Main
306839	03-12-2019 08:46		Temporary Repair of Maintenance Hole

Reporting section 2.6 (3) (d): Summary of Calibration and Maintenance Program

This section summarizes calibration and maintenance on all monitoring equipment.

Pump Stations and Force Mains

Flow meter verifications were conducted in in October and November by Indus Controls as follows:

Table 8 Flow Meter Verifications

Tag ID	Description	Serial No.	Output Range	Mfr	Result	Date
PSBW_FIT100	Barrier Wall PS (West) 217 Dunlop	A0133714	13.6 m ³ /h	Krohne	Passed	Nov. 26, 2019
PSHO_FIT100	Holly PS 65 Logan Crescent	9412B21241B1	126.2 l/s	Fischer and Porter	Passed	Nov. 26, 2019
PSMO_FIT200	Moorgate PS 300 Kozlov St.	F7013916000	360 m ³ /hr	E+H	Passed	Oct. 18, 2019
PSMO_FIT201	Moorgate PS Discharge	F7015916000	360 m ³ /h	E+H	Passed	Oct. 18, 2019
PSSP_FIT100	Splash Pond PS 5 Lakeshore Drive	E60EC616000	90 m ³ /h	E+H	Passed	Oct. 18, 2019
PSTD_FIT100	Tyndale Park PS 45 Tyndale Road	F31BE719000	68.1 m ³ /h	E+H	Passed	Oct. 18, 2019
PSLL_FIT100	Little Lake PS 510 Duckworth	J30B8416000	500 m ³ /h	E+H	Passed	Oct. 18, 2019

Gravity Collection System

The City of Barrie does not maintain any monitoring equipment in the gravity collection system at this time. For the flow monitoring described above in section a, calibration of the flow monitoring equipment was the responsibility of the City's consultant in accordance with the contract terms.

Reporting section 2.6 (3) (e): Summary of Complaints and Responses

Pump Stations and Force Mains

On February 11, 2019 a noise complaint was received from a neighbour regarding the Holly pump station reconstruction on Logan Court. The complaint was in regard to a portable generator used on the construction project. The complainant received a response the same day and was advised that the generator was actively in the process of being replaced by an electrical feed.

Gravity Collection System

The City uses the Cityworks (computerized maintenance management system) to track all internal and external service requests as well as work orders generated from service requests. During the 2019 calendar year, the City of Barrie received 193 service requests related to the gravity collection system. They are broken down into the following categories:

Table 9 2019 Service Request Summary

Type of Service Request	Number of Requests
Miscellaneous Service Requests	9
Sanitary Lateral Problems	42
Sewer back up in basement	110
Sewer Smell	8
Maintenance Hole Cover off	10
Maintenance Hole Overflow	4
Maintenance Hole Sunken	10

All Service requests are investigated in the field by City of Barrie Staff and work is addressed as necessary. Below is a complete list of the service requests received by the City in 2019:

Table 10 2019 Service Request Details

Location	Description	Comments
MAPLEVIEW DR E	Maintenance Hole Cover Off	Manhole frame is below grade and loose. needs to be reset. Removed broken plastic ring and filled to grade with cold patch.
LIVINGSTONE ST W	Maintenance Hole Cover Off	Caller: UNKNOWN, ANITA: Q: Is it completely off? A: NO Q: Is it rattling or making noise? A: NO Q: Is it broken? A: NO
201 LIVINGSTONE ST W	Maintenance Hole Cover Off	confirmed address on Road Patrol report
438 DUNLOP ST W	Maintenance Hole Cover Off	Foreperson (R. Cowan) is aware
	Maintenance Hole Cover Off	made as a test - not an actual SR.
90 ANNE ST S	Maintenance Hole Cover Off	Lid was on, no action required.
ARDAGH RD	Maintenance Hole Cover Off	Replaced M/H lid with new one at 137 ARDAGH Road
13 STEEL ST	Maintenance Hole Cover Off	should go to Kimberly Martin, Engineering. Project to redo Steel St has just been completed by Coco Paving and this should be addressed under that project. Asked Amy from Service Barrie to pass along to Kimberly
MINET'S POINT RD & LAKESHORE DR	Maintenance Hole Cover Off	No M/H cover off. Drove truck over M/H and nothing seems to flip up. all good for now.
431 HURONIA RD	Maintenance Hole Cover Off	Notified foreperson
40 ALLIANCE BLVD	Maintenance Hole Overflow	Flushed main - did not resolve issue. Had enviro services attend as it was over land spill. - Doug Stewart.
68 MARY ST	Maintenance Hole Overflow	forwarded SR to S. Haughton as FYI
128 WELLINGTON ST W	Maintenance Hole Overflow	Area has all been flushed
165 WELLINGTON ST W	Maintenance Hole Overflow	notified rp
319 JOHNSON ST	Maintenance Hole Sunken	liveconnex: Date/Time of Message: 2019-02-09 18:12:01 Message Type: RoadEmergency Callers Name: Christy With Service Barrie Callers Phone: (705) 790-7306 Message Details: Sinking manhole cover. Location of Issue: North bound lane near 321 Johnson St
246 SUNNIDALE RD	Maintenance Hole Sunken	Manhole has not sunk, only about 1" lower than asphalt, asphalt has broken away around causing a large pothole. Asphalt dispatched to repair with cold patch. M/H structure is intact.
195 MAPLETON AVE	Maintenance Hole Sunken	
EMMS DR & COUGHLIN RD	Maintenance Hole Sunken	Needs re-paving will be put on list to be repaired.

Location	Description	Comments
123 ST VINCENT ST	Maintenance Hole Sunken	
ST VINCENT ST	Maintenance Hole Sunken	
201 GEORGIAN DR	Maintenance Hole Sunken	
MAPLEVIEW DR W & BRYNE DR	Maintenance Hole Sunken	
33 MOWAT CRES	Maintenance Hole Sunken	July 2/19. Frame and lid needs to be replaced, cracked frame. No sink hole.
450 BAYFIELD ST	Maintenance Hole Sunken	Nothing wrong, asphalt sloped correctly to C/B lid.
9 SUSAN PL	Miscellaneous Service Request	Manhole lid is fine.
PENVILL TRAIL	Miscellaneous Service Request	Caller: POLICE, BARRIE: Q: What is the problem? A:
45 BAYSHORE BLVD	Miscellaneous Service Request	Checked. No animal.
340 BIG BAY POINT RD	Miscellaneous Service Request	Caller: PERRY, CHRISTA: Q: What is the problem? A:
Meridian Place	Miscellaneous Service Request	July 30/2019 - Talked to Carrie about job she was going to contact water to see if Water Vac could do job.
3 TORONTO ST	Miscellaneous Service Request	Private property, not maintained by RPF
BROCK ST & INNISFIL ST	Miscellaneous Service Request	B. Marsh went down and flushed sewer main, No sewer backup. - Josh Henderson
56 HEMINGWAY CRES	Miscellaneous Service Request	Forwarded to foreperson
241 WARNICA RD	Miscellaneous Service Request	foreperson is aware
127 GUNN ST	Sanitary Lateral Problems	crews went out and flushed main and a large root ball came out. foreperson suspects the plumber had pushed the root to the main and it was stuck there. all should be fine now.
134 PUGET ST	Sanitary Lateral Problems	Spoke to son in law (Muhommad) of homeowner at 132 Puget who lives beside 134 Puget that had the work done to the lateral. HE called to inquire about status of work to be done to repair part of their interlocking driveway that was torn up when the wo
375 TOLLENDAL MILL RD	Sanitary Lateral Problems	Judy called again, wanting to talk to a council member, she said her water is off and she needs to talk to Jim Harris. I tried to help as this is not something a councilor can help with, offered to connect her to water ops and she refused my help sa
55 HIGHLAND AVE	Sanitary Lateral Problems	Cleaned up, added seed and topsoil. Swept curb.
114 DUNDONALD ST	Sanitary Lateral Problems	cheque req sent to finance Mar 4 for processing.
94 SHANTY BAY RD	Sanitary Lateral Problems	Cheque req/receipt attached
451 BRYNE DR	Sanitary Lateral Problems	confirmed with D. Stewart that these calls are not on RP report

Location	Description	Comments
28 BURBANK PL	Sanitary Lateral Problems	sewer back up in basement floor drain, had enercare out that repaired but found tree trunk in drain
50 ALFRED ST	Sanitary Lateral Problems	Mckever irrigation came in and thawed out ice in main.
75 HART DR	Sanitary Lateral Problems	confirmed with foreperson the main wouldn't be the issue if nothin else is backing up.
34 MARSHALL ST	Sanitary Lateral Problems	cheq req sent to AP 05/27
6 BROADMOOR AVE	Sanitary Lateral Problems	Yorkton Contracting Replaced old AC Lateral with PVC from property line to main.
16 HOLGATE ST	Sanitary Lateral Problems	cheq req and receipt attached
221 HICKLING TRAIL	Sanitary Lateral Problems	Not a city issue. - No action Required.
369 CODRINGTON ST	Sanitary Lateral Problems	forwarded to Foreperson for pickup
16 COLLETE CRES	Sanitary Lateral Problems	(Sep 10 2019) Rick Dobinson completed the sod. Asphalt will be replaced at the end of the month. - Josh Henderson.
15 OAKLEY PARK SQ	Sanitary Lateral Problems	(Aug 14, 2019) Talked to homeowner and she is going to provide us a video and we will go from there. Jim Chub called to say pipe on our side is PVC. No action required. - Josh Henderson.
184 WELLINGTON ST E	Sanitary Lateral Problems	Steve VanLeusen, Sanitary Foreman, has been to the home to investigate and has been trying to reach resident regarding the findings. If the resident has a secondary phone number to reach them please update in SR.
12 HIGHLAND AVE	Sanitary Lateral Problems	if there is issues with the main, they would be having a sewer back up. if roots are growing into her lateral, she needs a new lateral.
165 GROVE ST E	Sanitary Lateral Problems	email attached with video of lateral embedded. Notified Josh Henderson in absence of Steve Van Leusen
76 MELROSE AVE	Sanitary Lateral Problems	closed s/r as this should have been added to sr66750
136 MAPLE AVE	Sanitary Lateral Problems	advised Kim that resident is to supply the video, not the other way around. Asked Kim to contact resident to advise.
108 NELSON ST	Sanitary Lateral Problems	Called July 5 no answer. Have not heard back from homeowner July 22/19. - Josh Henderson
22 MARION CRES	Sanitary Lateral Problems	Called, left message to call back. July 5/19. Have not heard back July 22/19. - Josh Henderson
298 BROWNING TRAIL	Sanitary Lateral Problems	Main is fine. Interior issue.
171 MARY ST	Sanitary Lateral Problems	July 24 2019. - Talked to Homeowner and reviewed video, sewer lateral is full of grease. Needs to get cleaned out and get new video to see if problem is on are side.
69 GOWAN ST	Sanitary Lateral Problems	nothing for RPF to action.

Location	Description	Comments
23 KIPLING PL	Sanitary Lateral Problems	Peter Smits used camera on Sept 3/19, James Walsh reviewed video and there is a problem on the city side of property Sep 9/19. Yorkton is going to be doing the sewer lateral repair in the week of Sept 9 - 13/19 he will talk to homeowner.
22 EDWARDS DR	Sanitary Lateral Problems	cheq req sent to finance 10/17
7 NAPIER ST	Sanitary Lateral Problems	Foreperson notified and re-connection is in progress.
174 GROVE ST E	Sanitary Lateral Problems	Aug 30/19.Spoke with tenant, she needs to call owner of the building as there is a problem on there side. No action needed. James Walsh sent flushing crew to check main and was clear. - Josh Henderson.
LOUGHEED RD	Sanitary Lateral Problems	(August 2019)Talked to homeowner about sewer lateral, he said there was no problem on city side it was on homeowner side. No action needed. - Josh Henderson
85 ECCLES ST N	Sanitary Lateral Problems	Went to 85 Eccles st N to talk to Andrew about sewer lateral. The city will be replacing from property line to main is black pipe The homeowner wanted to lower his side of sewer line so we will be waiting to the end of October to replace are side. He
129 VANCOUVER ST	Sanitary Lateral Problems	Caller: RICHTIE, CARLA: Q: Are you having a sewer back up now or have you had one recently? A: No Q: Are you aware of the City's sanitary lateral repair/replacement program? A: Yes Q: Notify RPF Admin A: called james walsh as he is in bldg
75 QUEEN ST	Sanitary Lateral Problems	G. Allen went and looked at sewar main, was running clear. Left pamphlet in door way. No action needed.
167A ROSE ST	Sanitary Lateral Problems	Notified Foreperson, awaiting email with video.
103 PEEL ST	Sanitary Lateral Problems	resident called looking for his cheque and Natasha (Service BARrie) called AP to locate. AP has no record so resending cheq req today.
15 EAST ST	Sanitary Lateral Problems	as per foreperson: I'll contact him. It just closed the bidding for the job. It will be awarded today. And work will begin soon
104 PUGET ST	Sanitary Lateral Problems	Main was an internal issue, emailed resident asking him to call me. - Doug Stewart
136 ESSA RD	Sanitary Lateral Problems	believe this to be a potential sewer lateral issue
515 WELHAM RD	Sanitary Lateral Problems	Notified Foreperson
4 JONATHAN CRT	Sanitary Lateral Problems	as per S. Van Leusen, no need for SR.
104 DAPHNE CRES	Sewer back up in basement	city will camera lateral from main to property line - James is working out timelines with Steve and will call Emily back to advise
21 MARION CRES	Sewer back up in basement	notified Foreperson

Location	Description	Comments
50 JOHN ST	Sewer back up in basement	confirmed that RP attended, checked the main and it was running fine. Residents came to Service Barrie to add that water main work had been completed and they felt that the lateral may have been knicked and created a hole. (this info not shared with
20 FAIRVIEW RD	Sewer back up in basement	liveconnex: Date/Time of Message: 2019-01-05 22:28:36 Message Type: UrgentWater Callers Name: Cliff Weatherall Callers Phone: (705) 241-2312 Message Details: Sewer backup. Location of Issue: 20 Fairview Rd DIALOUT DATE/TIME: TO: () DISPOSITION: T
85 MELROSE AVE	Sewer back up in basement	cheq req and invoice attached
5 LONGMAN DR	Sewer back up in basement	notified road patrol
15 SPRINGHOME RD	Sewer back up in basement	Checked main it was flowing, going to flush section of main that services 15 Springhome. Just in case there is a blockage at the lateral connection to main. Advised Nancy that they need a plumber to snake their lateral an investigate problem.
40 STRABANE AVE	Sewer back up in basement	forwarded to Foreperson for followup with resident about whether she is approved for lateral replacement - please follow up with resident to advise
91 LETITIA ST	Sewer back up in basement	Caller: MAURO, CELIA: Q: Is water coming through the floor drain or laundry tub? A: YES Q: Does this happen only when you use water in the house? A: NO Q: Does it back up without you using any water? A: YES
67 DAVIDSON ST	Sewer back up in basement	notified Steve Van Leusen
5 REGINA RD	Sewer back up in basement	notified Foreperson
30 REGALIA WAY	Sewer back up in basement	liveconnex: Date/Time of Message: 2019-02-10 12:32:23 Message Type: SewersUrgent Callers Name: Denis Crossland Callers Phone: (416) 998-3149 Message Details: Sewer back up Location of Issue: 30 Regalia Way DIALOUT DATE/TIME: 2019-02-10 12:39:14 TO: D
56 KELL PL	Sewer back up in basement	Caller: POTTS, IVAN: Q: Is water coming through the floor drain or laundry tub? A: YES Q: Does this happen only when you use water in the house? A: NO Q: Does it back up without you using any water? A: YES
5 MCCUAIG CRT	Sewer back up in basement	notified Steve Van Leusen
108 SHANTY BAY RD	Sewer back up in basement	Main flowing fine on both ends.

Location	Description	Comments
57 AUSTEN LANE	Sewer back up in basement	notified foreperson
127 GUNN ST	Sewer back up in basement	Received online complaint submission from William Blakely @127 Gunn St Sunday Feb 24/19 @ 1:15pm willblakely3@gmail.com (preferred) 705-627-0173 "Hi, my basement keeps taking on water every time it rains or we receive snow melt. It comes up threw t
41 GOWAN ST	Sewer back up in basement	notified Foreperson
41 GOWAN ST	Sewer back up in basement	Flushed Main - preventative. (Not Blocked Main)
67 CHRISTIE CRES	Sewer back up in basement	cheq req and receipts attached - originals sent to Finance AP for processing
117 MADELAINE DR	Sewer back up in basement	Caller: CASEY, THOMAS: Q: Is water coming through the floor drain or laundry tub? A: YES Q: Does this happen only when you use water in the house? A: NO Q: Does it back up without you using any water? A: YES
45 DOWNSVIEW DR	Sewer back up in basement	cheq req attached
32 DORIS DR	Sewer back up in basement	Main was flushed @0900hrs Thurs, Mar 14/19. It appeared to be fine to begin with but flushed anyways.
8 PORRITT ST	Sewer back up in basement	Checked main and everything fine.
45 GLENWOOD DR	Sewer back up in basement	notified road patrol
133 THE QUEENSWAY	Sewer back up in basement	notified Foreperson
91 BROWN ST	Sewer back up in basement	notified Foreperson
13 MAPLEHURST CRES	Sewer back up in basement	forwarded to Foreperson for contact with James, the plumber
21 HUITEMA CRT	Sewer back up in basement	invoice attached
101 ECCLES ST N	Sewer back up in basement	Investigated by Brent Marsh, Main is OK. Spoke with homeowner and explained sanitary later program.
334 INNISFIL ST	Sewer back up in basement	Greg just called back. the plumber does not have camera footage and believes this is all on private property. disregard. Homeowner will be getting a plumbing permit to correct
129 DAPHNE CRES	Sewer back up in basement	Inspected by Matt Gibbons, not a city issue.

Location	Description	Comments
10 REBECCA CRT	Sewer back up in basement	Caller: UNKNOWN, SPENCER Q: Is water coming through the floor drain or laundry tub? A: YES Q: Does this happen only when you use water in the house? A: NO Q: Does it back up without you using any water? A: YES
16 HARDING AVE	Sewer back up in basement	Brian England Investigated, main is fine. Informed Homeowner of lateral program.
18 GRANVILLE ST	Sewer back up in basement	Spoke with home owner, I explained the sanitary lateral rebate program - no action required at this time.
106 STRABANE AVE	Sewer back up in basement	cheq req and receipt attached
57 GOLDEN MEADOW RD	Sewer back up in basement	Checked Main, Fine. Internal Issue - Doug Stewart.
130 HICKLING TRAIL	Sewer back up in basement	S. Van Leusen spoke with homeowner informed him of our sanitary lateral repair program - April 23/2019
13 STEEL ST	Sewer back up in basement	cheq req and invoice attached
4 BENNET RD	Sewer back up in basement	Water was Coming in through a basement window. Not a sanitary issue.
29 SPERLING DR	Sewer back up in basement	Road patrol notified commanding officer to get a hold of his facility manager to deal with issue - G. Board Apr 27/2019
11 WOODCREST RD	Sewer back up in basement	G. Board talked to homeowner, provided the pamphlet, and mentioned to him to get plumber to camera. Main was clear. - April 27/2019
27 CAPILANO CRT	Sewer back up in basement	Brent marsh investigated, main was okay and he explained the sanitary lateral program to the homeowner. No action required at this time.
35 LIVIA HERMAN WAY	Sewer back up in basement	Gord Allen checked main (fine) internal issue -left pamphlet at residence. - Doug Stewart.
219 ANNE ST N	Sewer back up in basement	Talked to home owner and gave him info booklet. Informed home owner he needed to call a plumber - J. Henderson
6 MARION CRES	Sewer back up in basement	Gave him a sewer info booklet. He knows he needs a video. - B. England
49 PEACOCK LANE	Sewer back up in basement	S. Van Leusen talked to home owner about sewer issues. Steve pickup video. May 29/2019
110 MELROSE AVE	Sewer back up in basement	Ella called wondering about blvd tree, told her (after confirming with RPF Admin) that locates will be done soon and then they will know if blvd tree has to be removed. She would like someone to call her when they are going out to the property.
188 OWEN ST	Sewer back up in basement	Talked to homeowner and they got a new plumber in. Could not rod pass 8ft but camera would go 22.5 ft so plumber was flushing line and is coming back June 6/19 to flush city side. Seems ok, looks like a lot of grease in lateral.
126 ESSA RD	Sewer back up in basement	Gord Allen and Trevor Bunn investigated and main is fine. Homeowner was told about the lateral rebate program.

Location	Description	Comments
79 FERRIS LANE	Sewer back up in basement	notified foreperson. **note to rpf, please print s/r when video is submitted
156 PENETANG ST	Sewer back up in basement	Completed
37 JOHNSON ST	Sewer back up in basement	M. Tomporowski spoke to homeowner and explained that our machine is broken right now and that she would have to call a plumber to inspect - June 24/2019 @ 4:20
126 ESSA RD	Sewer back up in basement	Gave homeowner advice to call plumber back or call specialist to rod sewer.
67 OREN BLVD	Sewer back up in basement	lead hand attended and after speaking with resident, it was actually their drinking water that was brown and it was not a sewer backup. spoke with water ops and they will contact resident to have it checked out.
69 MOIR CRES	Sewer back up in basement	July 26/19 Left message with homeowner for him to call back and to look at video as the line is full of grease, line needs to be flushed out. Called again July 30/19 at 2:00pm.
28 PARKSIDE DR	Sewer back up in basement	Caller: TSANG, LINDSAY: Q: Is water coming through the floor drain or laundry tub? A: YES Q: Does this happen only when you use water in the house? A: NO Q: Does it back up without you using any water? A: YES
198 INNISFIL ST	Sewer back up in basement	Notified R. Cowan in absence of S. Van Leusen
166 BERCZY ST	Sewer back up in basement	Catherine was in today Aug 29-19 to drop off the video. It's in the Service Barrie for pick up.
101 CUNDLES RD E	Sewer back up in basement	notified R. Cowan in absence of S. Van Leusen
101 CUNDLES RD E	Sewer back up in basement	duplicate concern to SR 69903
21 GARDEN DR	Sewer back up in basement	attached cheq req that was sent to finance 07/30
4 VINE ST	Sewer back up in basement	Foreperson spoke with homeowner and made them aware of the sanitary lateral program. Homeowner to bring in video. Main is fine, possible cross-bore.
58 JOHN ST	Sewer back up in basement	July 2019, Called homeowner and explained our program. Needs to call plumber to clean line and video. - Josh Henderson
8 ALEXANDER AVE	Sewer back up in basement	sewer Tech was going to reline sewer on Aug 15 2019 but the home owner canceled. He has not set and new appointment.
205 BLAKE ST	Sewer back up in basement	notified lead hand
287 ANNE ST N	Sewer back up in basement	July 24/19 Talked to Homeowner advised to get a video of sewer lateral and we can go from there.
114 MELROSE AVE	Sewer back up in basement	owner coming in to SB to do bldg permit july 26/19
157 ST VINCENT ST	Sewer back up in basement	Called Homeowner and set up to camera. P. Smits with Camera Aug 15/2019

Location	Description	Comments
23 WELDON ST	Sewer back up in basement	notified J. Walsh in absence of J. Henderson
143 Maple Ave	Sewer back up in basement	Back ups occurring in the tub, sink and toilets.
23 AGNES ST	Sewer back up in basement	Sewer Teck and Engineering are dealing with this complaint.
22 SYLVIA ST	Sewer back up in basement	Peter Smits went and looked at main and spoke with homeowner. Main was clear on our side. Peter gave the homeowner a pamphlet on our sewer program. - Josh Henderson.
128 NAPIER ST	Sewer back up in basement	Peter Smits investigated on Sep 6/19 at 10:00am and dropped off pamphlet. Called Homeowner at 2:00pm about sewer backup on Friday Sep 6/19. He Still has not spoke with plumber however, our end is running good. - No action required.
108 EMPIRE DR	Sewer back up in basement	Checked Main and is fine. Talked to home owner, she will call a plumber.
423 INNISFIL ST	Sewer back up in basement	Brent Marsh checked the main and our end was running great. No action needed on our side.
44 NEWTON ST	Sewer back up in basement	(Sept 2019) Gord went and checked Sewer main was running clear, No action needed. Talked to homeowner left pamphlet.
11 FRANCES ST S	Sewer back up in basement	cheq req attached
268 BLAKE ST	Sewer back up in basement	Trisan did a sewer dig from property line to main for me. Started Sept 26 2019. We had to use K-Line to hold to hydro pole for the day. Trisan finish job on Oct 1 2019 concrete is poured and asphalt and sod is laid.
21 THOMSON ST	Sewer back up in basement	Caller: FRECHETTE, RYAN: Q: Is water coming through the floor drain or laundry tub? A: YES Q: Does this happen only when you use water in the house? A: NO Q: Does it back up without you using any water? A: NO Q: Is it only backing up from one fixture
117 DAPHNE CRES	Sewer back up in basement	Sept 2019 - Spoke with Gord Allen at 10:30am, he went and investigated, sewer was clear. No action needed. Gord left a pamphlet in door way and confirmed all clear.
216 INNISFIL ST	Sewer back up in basement	Talk to homeowner this afternoon. He had a plumber in and was able to clear blockage. He say it full of roots. He is good to get me a video so we can looks see.
26 KEATS DR	Sewer back up in basement	Talk to Homeowner, She called sewer technologies, they will have to clean up mess. Peter Smits was on site and re-flushed, no problem and left pamphlet.
151 CLAPPERTON ST	Sewer back up in basement	confirmed this call is indicated on RP report and notified Foreperson

Location	Description	Comments
17 TEAL PL	Sewer back up in basement	Caller: COTE, BOBBY JOE: Q: Is water coming through the floor drain or laundry tub? A: YES Q: Does this happen only when you use water in the house? A: NO Q: Does it back up without you using any water? A: YES
9 WESLEY ST	Sewer back up in basement	confirmed with foreperson as there is no current issues, and lateral has been cleared, no need for staff to investigate
51 PRINCE OF WALES DR	Sewer back up in basement	Main is clear, flushed, advised homeowner to contact plumber.
6 JONATHAN CRT	Sewer back up in basement	J. Walsh has spoken to Dobson and to resident. City portion has been repaired and resident knows to speak with her contractor to make repairs to her side of lateral
7 KEMPENFELT DR	Sewer back up in basement	Forwarded to J Willis
150 ESTHER DR	Sewer back up in basement	Abdul called in for update, talked to Christa RPF that forwarded file to Steve VL for follow up, he would like a call back today as he has waited for mth for resolutions
334 LEACOCK DR	Sewer back up in basement	Notified D Magnusson
23 PARKDALE CRES	Sewer back up in basement	notified foreperson
165 WELLINGTON ST W	Sewer back up in basement	notified rp
94 CHRISTIE CRES	Sewer back up in basement	Notified D Stewart
94 BUCHANAN ST	Sewer back up in basement	Nov 21/19 Informed home owner of the sanitary lateral program.
13 FROST TRAIL	Sewer back up in basement	Confirmed that backup is on the second floor and advised resident this will be a private matter. Foreperson investigated Main earlier and confirmed there were no issues.
79 PENETANG ST	Sewer back up in basement	Peggy called to follow up. City inspector was at a neighbouring property conducting a building inspection and when Peggy asked what she should do, she was instructed her to contact James Willis directly to discuss. Spoke with RPF Admin and was told
9 WOOD ST	Sewer back up in basement	.
113 PUGET ST	Sewer back up in basement	cheque req sent to ap
26 EUGENIA ST	Sewer back up in basement	Note, resident emailed to request if the city does repair on the lateral to be cautious of the large elm tree on the property and to please maintain its integrity - email Dec 2, 2019

Location	Description	Comments
43 ALFRED ST	Sewer back up in basement	Good Morning, Our inspector is aware and has spoken to the contractor. The contractor will be making the repairs IF this is a result of a cross bore. Currently City Works is used by Roads. Rowa does not use City Works to see what has been submitted
120 HENRY ST	Sewer back up in basement	cheq req sent to finance
68 CAMPBELL AVE	Sewer back up in basement	from ROWA: Our inspector is aware and has spoken to the contractor. The contractor will be making the repairs IF this is a result of a cross bore.
18 NELSON SQ W	Sewer back up in basement	notified foreperson
162 CUNDLES RD E	Sewer back up in basement	sent to foreperson
5 JONATHAN CRT	Sewer back up in basement	cheq req/invoice attached
47 ALFRED ST	Sewer back up in basement	notified foreperson
130 INNISFIL ST	Sewer back up in basement	cheq req attached
24 AMBLER BAY	Sewer back up in basement	Caller: DURRWACHTER, ANDREW: Q: Is water coming through the floor drain or laundry tub? A: YES Q: Does this happen only when you use water in the house? A: NO Q: Does it back up without you using any water? A: YES
15 WINDSOR CRES	Sewer back up in basement	Caller: PARSONS, GLEN: Q: Is water coming through the floor drain or laundry tub? A: YES Q: Does this happen only when you use water in the house? A: NO Q: Does it back up without you using any water? A: YES
410 ESSA RD	Sewer Smell	Foreperson notified
29 HARROGATE CRT	Sewer Smell	Have staff attending location to check the sanitary system on Harrogate. Could be decomposition of natural foliage from wetland as there have been warmer temps as of late. Could also be dry P-Trap or blocked roof vents at residence that is contribut
185 CODRINGTON ST	Sewer Smell	resident poured water into drains to refill pea traps and will wait for smell to dissipate. confirmed with Markie that resident did not have any material backing up
76 MELROSE AVE	Sewer Smell	cheque req sent to AP 06/27
2 JOHNSON ST	Sewer Smell	message from Lenita: she will have the EO investigate
4 BENJAMIN LANE	Sewer Smell	Sent staff to investigate, they could not find anything wrong. No action needed. - Josh Henderson.

Location	Description	Comments
230 INNISFIL ST	Sewer Smell	Crew went out and checked main, all good. Left Pamphlet. Videoed the lateral, all good nothing wrong.
645 BIG BAY POINT RD	Sewer Smell	forwarded to foreperson

Reporting section 2.6 (3) (f): Summary of Pump Station Overflows

Pump Stations and Force Mains

There were no pump station or force main overflows in 2019. There were four (4) overflows/spills in the sanitary collection system which are highlighted in Table 10.

Reporting section 2.6 (3) (g): Copies of Sch. 'C' section (1) Notices of Modifications Including Status

This section contains the status of all Notices of Modifications which were in effect in 2019. Copies of these Notices are contained in Appendix B.

Pump Stations and Force Mains

No Notices of Modification were in effect in 2019.

Gravity Collection System

The Notices of Modification in Table 11 were in effect in 2019. The status as of Dec. 31, 2019 is indicated.

Table 11 Notices of Modifications & Status

Number	Description	Date Signed	Status as of Dec. 31/19	Well Head Protection Area
2018-02	Big Bay Pt. Rd./Bayview Dr. Intersection	Jun. 18/18	Construction Ongoing	Q2 WHPA-B
2018-03	Rodney St. - Kempenfelt Dr. to Blake St.	July 3/18	Substantially complete	WHPA-D
2018-04	Morrow Rd. Reconstruction - Patterson to Ardagh	Sept. 20/18	Substantially complete	WHPA-E
2018-05	Harvie Rd. to Big Bay Pt. Rd. – New Hwy 400 Xing	Dec. 11/18	Construction Ongoing	WHPA-D
2018-06	Duckworth St. – Melrose Ave. to St. Vincent St.	Dec. 19/18	Substantially Complete	Q1 WHPA
2019-02	Dunlop Street – Eccles to Toronto St.- replacement of local sewer & re-routing of Cundles trunk sewer.	Nov. 21/19	Construction to start early 2020	WHPA-B/C

Reporting section 2.6 (3) (h): Report Summary for Schedule C Section 1(3)

Pump Stations and Force Mains

No Notifications were issued in 2019 regarding Schedule C Section 1(3).

Gravity Collection System

No Notifications were issued in 2019 regarding Schedule C Section 1(3).

Reporting section 2.6 (3) (i): Modifications Posing a Significant Threat

This section discusses new modifications which may pose a significant threat to sources of drinking water.

Pump Stations and Force Mains

There were no Notifications of Modifications in effect in 2019.

Gravity Collection System

All modifications for which a Notice was issued were at least partly within the well head protection areas identified in Table 11. Limited information on each risk was included with the Notice and is contained in Appendix “B”.

Reporting section 2.6 (3) (j): Notices of Assumption

This section contains a copy of all Notices of Assumption per condition 2.9.

Pump Stations and Force Mains

There were no Notices of Assumption as per condition 2.9.

Gravity Collection System

There were no Notices of Assumption as per condition 2.9.

Reporting section 2.6 (3) (k): Other Info Required by the Water Supervisor

This section summarizes other info required by the Water Supervisor.

Pump Stations and Force Mains

There were no requests for information from the Water Supervisor.

Gravity Collection System

There were no requests for information from the Water Supervisor.

APPENDIX A: SYSTEM-WIDE ECA



Ministry of the Environment and Climate Change
Ministère de l'Environnement et de l'Action en
matière de changement climatique

AMENDED ENVIRONMENTAL COMPLIANCE APPROVAL

NUMBER 5921-ATUKKR
Issue Date: January 10, 2018

The Corporation of the City of Barrie
70 Collier Street
Post Office Box No. 400
Barrie, Ontario
L4M 4T5

Site Location: Municipal sanitary sewage collection system owned and operated by the City of Barrie servicing the Barrie Wastewater Treatment Facility, County of Simcoe.

You have applied under section 20.2 of Part II.1 of the Environmental Protection Act, R.S.O. 1990, c. E. 19 (Environmental Protection Act) for approval of:

system-wide municipal sanitary sewage Works serving the City of Barrie for the collection and transmission of sanitary sewage, connected to the Barrie Wastewater Treatment Facility;

The Environmental Compliance Approval includes the following:

Schedule	Contents
Schedule A	Description of Works
Schedule B	Terms and Conditions
Schedule C	Limited Operational Flexibility
Schedule D	Assumption of Ownership of Sewage Works
Schedule E	Supporting Documents

Schedule A: Description of Works

System Owner and Operator	The Corporation of the City of Barrie
System Name	Sanitary Collection System servicing the Barrie Wastewater Treatment Facility

The sanitary sewage collection system serving the Barrie Wastewater Treatment Facility consists of approximately 539 kilometres (km) of sanitary sewers and sanitary forcemains and twelve (12) sewage pumping stations (SPS). The sanitary sewage collection system also includes all other controls, electrical equipment, instrumentation, piping, pumps, valves and appurtenances that are essential for the proper operation of the Works. The sanitary sewage collection system serves the urban area of the City of Barrie.

Schedule A includes:

- 1.0 System-Wide Approval – Sanitary Sewage Collection System
- 2.0 System-Wide Approval – Sewage Pumping Stations
- 3.0 System-Wide Approval – Flow Regulators, Storage Tanks, and Pressure Release Valves

1.0 System Wide Approval – Sanitary Sewage Collection System

The main components of the Sanitary Sewage Collection System include the Mains and Forcemains described below:

1.1. Gravity sewer Mains and Forcemains included in Table 1:

Table 1. Sanitary Sewage Collection System	
Plan / Files	Revision Date
Sanitary Infrastructure Map - City of Barrie (not to scale)	March 2, 2016

Classification of the Sanitary Sewage Collection System at the date of issuance of this Approval by length:

Table 2. Sanitary Sewage Collection System by Length			
System Type	Pipe Diameter (mm)	Length (km)	System Total Length (km)
Sanitary sewers	0-250	408.77	530.23
	300-500	73.57	
	525-1,050	44.15	
	≥1,200	3.74	
Forcemains	0-250	2.20	9.00
	300-500	6.81	
	525-1,050	0.00	
	≥1,200	0.00	
Total length			539.23

2.0 System Wide Approval – Sewage Pumping Stations

2.1 Grove Street Sewage Pumping Station	
Location	238 Penetanguishene Road.
UTM Coordinates	607673.4 E, 4918006.8 N (UTM Nad83 Zone 17).
Description	Two (2) buildings, one (1) wet well and two (2) pumps.
Pumps	Two (2) pumps with a nominal rated capacity of approximately 157.8 L/s at 10.0m TDH, 26 kW (35 HP), connected to an approximately 254m long, 400mm diameter sanitary forcemain.
Standby Power	Provided.
Previous ECA	ECA No. 2403-5WFRH5 issued on February 25, 2004.
Notes	The drainage area is bounded in general by the City limit to the north and east, Grove Street East to the south, and Highway 400 to the west. The pumping station provides for the collection and transmission of sanitary sewage, servicing an area of approximately 177.6 ha comprised of a mixture of residential, commercial and industrial contributions. Overflow is received by a storm detention pond or ditch located north of the pumping station.

2.2 Minets Point Sewage Pumping Station	
Location	2 Lismer Boulevard.
UTM Coordinates	606188.4 E, 4914455.9 N (UTM Nad83 Zone 17).
Description	One (1) building, one (1) wet well and two (2) pumps.
Pumps	Two (2) pumps with a nominal rated capacity of approximately 61.34 L/s at 19.0m TDH, 22 kW (29 HP), connected to an approximately 401m long, 250mm diameter sanitary forcemain.
Standby Power	Provided.
Previous ECA	ECA No. 3-0200-85-006 issued on December 13, 1985 and 7739-893L2S issued on September 29, 2010, respectively.
Notes	The drainage area is bounded in general by Kempenfelt Bay to the north, Brennan Avenue to the east, Hurst Drive and Lakeshore Drive to the south, and Allandale Station Park to the west. The pumping station provides for the collection and transmission of sanitary sewage, servicing an area of approximately 21.3 ha comprised of a mixture of residential, commercial and industrial contributions. There is no engineered overflow.

2.3 Lockhart Road Sewage Pumping Station	
Location	799 Bayview Drive.
UTM Coordinates	605603.9 E, 4908831.1 N (UTM Nad83 Zone 17).
Description	One (1) building, one (1) wet well and two (2) pumps.
Pumps	Two (2) pumps with a nominal rated capacity of approximately 51.4 L/s at 17.5m TDH, 22 kW (29 HP) connected to an approximately 464m long, 200mm diameter sanitary forcemain.
Standby Power	Provided.
Previous ECA	ECA No. 3-0975-83-877 issued on June 2, 1987.
Notes	The drainage area is bounded in general by Saunders Drive to the north, Bayview Drive to the east, Lockhart Road to the south and Highway 400 to the west. The pumping station provides for the collection and transmission of sanitary sewage, servicing an area of approximately 32.0 ha comprised of a mixture of residential, commercial and industrial contributions. There is no engineered overflow.

2.4 Holly Sewage Pumping Station	
Location	65 Logan Court.
UTM Coordinates	600907.4 E, 4908353.1 N (UTM Nad83 Zone 17).
Description	One (1) building, two (2) wet well and four (4) pumps.
Pumps	Four (4) pumps with a nominal rated capacity of approximately 232 L/s at 51.2 m TDH, connected to an approximately 1,937m long, 350mm diameter sanitary forcemain and approximately 2000m long, 400mm diameter sanitary forcemain.
Standby Power	Provided.
Previous ECA	ECA No. 3-1547-94-006 issued on December 2, 1994 and 7639-ACYHUF, issued on October 5, 2016, respectively.
Notes	The drainage area is bounded in general by Ardagh Bluffs West and Mapleton Avenue to the north, Essa Road to the east, Loughheed Road and Columbia Road to the south, and County Road 27 to the west, and southern annexed lands. The pumping station provides for the collection and transmission of sanitary sewage, servicing an area of approximately 373 ha comprised of a mixture of residential, commercial and industrial contributions. Overflow is received by Bear Creek.

2.5 Little Lake Sewage Pumping Station	
Location	510 Little Lake Road.
UTM Coordinates	605638.9 E, 4919108.4 N (UTM Nad83 Zone 17).
Description	One (1) building, one (1) wet well and two (2) pumps.
Pumps	Two (2) pumps with a nominal rated capacity of approximately 110 L/s at 46.66m TDH, 66 kW (88 HP) connected to an approximately 742m long twin 450mm diameter sanitary forcemain.
Standby Power	Provided.
Previous ECA	ECA No. 3-1113-97-006 dated September 5, 1997.
Notes	The drainage area is bounded in general by the City Limit to the north, Little Lake Park East to the east, Cundles Road East, St. Vincent Street and Livingstone Street E to the south, and Bayfield Street to the west. The pumping station provides for the collection and transmission of sanitary sewage, servicing an area of approximately 165.0 ha comprised of a mixture of residential, commercial and industrial contributions. There is no engineered overflow.

2.6 Johnson's Beach Sewage Pumping Station	
Location	1 Johnson Street.
UTM Coordinates	606944.7 E, 4916433.8 N (UTM Nad83 Zone 17).
Description	No building, one (1) wet well and one (1) pump.
Pumps	One (1) pump with an unknown nominal rated capacity, approximately 4 kW (5 HP) connected to an approximately 100m long, 100mm diameter sanitary forcemain.
Standby Power	None.
Previous ECA	No approval record or historically unapproved equipment.
Notes	The drainage area is bounded in general by Shanty Bay Road to the north, Barrie Yacht Club to the east, Kempenfelt Bay to the south and Johnsons Beach Park to the west. The pumping station provides for the collection and transmission of sanitary sewage, servicing an area of 1.2 ha comprised of a mixture of residential, commercial and industrial contributions. There is no engineered overflow.

2.7 Perry Street Sewage Pumping Station	
Location	83 Perry Street.
UTM Coordinates	603403.5 E, 4915206.1 N (UTM Nad83 Zone 17).
Description	No building, one (1) wet well, two (2) pumps.
Pumps	Two (2) pumps with a nominal rated capacity of approximately 7.3 L/s at 9.0m TDH, 4 kW (5 HP) connected to an approximately 127m long, 100mm diameter sanitary forcemain.
Standby Power	None.
Previous ECA	ECA No. 2165-5VUL4Q issued on February 5, 2004.
Notes	The drainage area is bounded in general by Perry Street to the north, west and south, and Boys Street South to the east. The pumping station provides for the collection and transmission of sanitary sewage, servicing an area of 0.5 ha comprised of a mixture of residential, commercial and industrial contributions. There is no engineered overflow.

2.8 Innisfil Street Sewage Pumping Station	
Location	4 Innisfil Street.
UTM Coordinates	603705.4 E, 4915369.7 N (UTM Nad83 Zone 17).
Description	No building, one (1) wet well and one (1) pump.
Pumps	One (1) pump with an unknown nominal rated capacity, approximately 7 kW (9 HP).
Standby Power	None.
Previous ECA	No approval record or historically unapproved equipment.
Notes	The drainage area is bounded in general by Perry Street to the north, Innisfil Street to the east, Audrey Milligan Pond to the south and west. The pumping station provides for the collection and transmission of sanitary sewage, servicing an area of approximately 1.7 ha comprised of a mixture of residential, commercial and industrial contributions. Overflow is received by Bunker's Creek.

2.9 Tyndale Park Sewage Pumping Station	
Location	45 Tyndale Road.
UTM Coordinates	608005.6 E, 4914300.6 N (UTM Nad83 Zone 17).
Description	One (1) building, one (1) wet well, two (2) pumps.
Pumps	Two (2) pumps with a nominal rated capacity of approximately 10.6 L/s at 16.1m TDH, 8 kW (11 HP) connected to an approximately 372m long, 100mm diameter sanitary forcemain.
Standby Power	Provided.
Previous ECA	ECA No. 8061-6GFJ37 issued on September 23, 2005.
Notes	The drainage area is bounded in general by Kempenfelt Bay to the north, Plunkett Court to the east, Capps Drive, Turner Drive and Dock Road to the south, and Cox Mill Road to the west. The pumping station provides for the collection and transmission of sanitary sewage, servicing an area of 44.6 ha comprised of a mixture of residential, commercial and industrial contributions. There is no engineered overflow.

2.10 Heritage Park Sewage Pumping Station	
Location	5 Simcoe Street.
UTM Coordinates	604653.9 E, 4915784.8 N (UTM Nad83 Zone 17).
Description	No building, one (1) wet well and two (2) pumps.
Pumps	Two (2) pumps with a nominal rated capacity of approximately 3.9 L/s at 16.7m TDH, 4 kW (5 HP) connected to an approximately 147m long, 60mm diameter sanitary forcemain.
Standby Power	None.
Previous ECA	ECA No. 7-0188-91-006 issued on July 22, 1991.
Notes	The pumping station provides for the collection and transmission of sanitary sewage, servicing the Heritage Park washrooms. There is no engineered overflow.

2.11 Mooregate Sewage Pumping Station	
Location	300 Kozlov Street.
UTM Coordinates	601884.6 E, 4918687.7 N (UTM Nad83 Zone 17).
Description	One (1) building, one (1) wet well and two (2) pumps.
Pumps	Two (2) pumps with a nominal rated capacity of approximately 12 L/s at 20.7m TDH, 5 kW (7 HP) connected to an approximately 472m long, 100mm diameter sanitary forcemain.
Standby Power	Provided.
Previous ECA	ECA No. 0158-8G4PXX issued on May 4, 2011.
Notes	The drainage area is bounded in general by the City limit to the north and west, Bayfield Street to the east, and Pearcey Crescent and Hanmer Natural Area and Hanmer Park to the south. The pumping station provides for the collection and transmission of sanitary sewage, servicing an area of 12.3 ha comprised of a mixture of residential, commercial and industrial contributions. There is no engineered overflow.

2.12 Splash Pond Sewage Pumping Station	
Location	9 Simcoe Street.
UTM Coordinates	604685.7 E, 4915805.9 N (UTM Nad83 Zone 17).
Description	One (1) building, one (1) wet well and two (2) pumps.
Pumps	Two (2) pumps with a nominal rated capacity of approximately 8.7 L/s at 4.5m TDH, 4 kW (5 HP) connected to an approximately 113m long, 100mm diameter sanitary forcemain.
Standby Power	Provided.
Previous ECA	ECA No. 8001-8EQL3B issued on March 31, 2011.
Notes	The pumping station provides for the collection and transmission of water servicing the Heritage Park Water Facility. Normally discharges to Lake Simcoe.

3.0 System Wide Approval – Flow Regulators, Storage Tanks and Pressure Release Valves

3.1 Holly Sewage Pumping Station Pressure Release Valve	
Location	Mapleview Drive at Seymour Crescent.
UTM Coordinates	601479.3 E, 4908868.6 N (UTM Nad83 Zone 17).
Description	Pressure relief valve, 50mm diameter, 1,034 kPa (150 psi).

Schedule B: Terms and Conditions

System Owner and Operator	The Corporation of the City of Barrie
System Name	Sanitary Collection System servicing the Barrie Wastewater Treatment Facility

Schedule B includes:

- 1.0 Definitions
- 2.0 Terms and Conditions
- 3.0 Reasons

1.0 Definitions

For the purpose of this environmental compliance approval, the following definitions apply:

"Approval" means this entire document and any schedules attached to it, and the application;

"Assumed Works" means those portions of the sewage works whose ownership has been assumed by the Owner from a different previous owner;

"BOD5" (also known as TBOD₅) means five day biochemical oxygen demand measured in an unfiltered sample and includes carbonaceous and nitrogenous oxygen demand;

"Class Environmental Assessment Project" means an Undertaking that does not require any further approval under the EAA if the planning process set out in the class environmental assessment document is followed and successfully completed.

"CWA" means the Clean Water Act, R.S.O. 2006, c.22, as amended;

"Director" means a person appointed by the Minister pursuant to section 5 of the EPA for the purposes of Part II.1 of the EPA;

"Duty to Consult" pertains to the Crown's legal obligation to consult with Aboriginal peoples where it contemplates decisions or actions that may adversely impact asserted or established Aboriginal or treaty rights;

"*E. coli*" refers to the thermally tolerant forms of *Escherichia* that can survive at 44.5 degrees Celsius;

"EAA" means the Environmental Assessment Act, R.S.O. 1990, c. E.18, as amended;

"Emergency Situation" means a structural, mechanical or electrical failure that causes a temporary reduction in the capacity of the Sewage Pumping Station or an unforeseen flow condition that may result in:

- a) danger to the health or safety of any person; or
- b) injury or damage to any property, or serious risk of injury or damage to any property;

"EPA" means the Environmental Protection Act, R.S.O. 1990, c.E.19, as amended;

"Equivalent Equipment" means a substituted equipment or like-for-like equipment that meets the required quality and performance standards of a named equipment;

"Event" means an action or occurrence at the Sewage Pumping Station that causes a Sewage Pumping Station Overflow. An Event ends when there is no recurrence of a Sewage Pumping Station Overflow in the 12-hour period following the last Sewage Pumping Station Overflow. Two Events are separated by at least 12 hours during which there has been no recurrence of a Sewage Pumping Station Overflow;

"Limited Operational Flexibility" (LOF) means any modifications that the Owner is permitted to make to the Works under this Approval;

"Minister" means the Minister of the Environment and Climate Change;

"Ministry" means the ministry of the government of Ontario responsible for the EPA, CWA and OWRA and includes all officials, employees or other persons acting on its behalf;

"Notice of Assumption" means the form entitled "Notice of Assumption of Sewage Works";

"Notice of Modifications" means the form entitled "Notice of Modification to Sewage Works";

"Owner" means the Corporation of the City of Barrie, and includes its successors and assignees;

"OWRA" means the Ontario Water Resources Act, R.S.O. 1990, c. O.40, as amended;

"Part II Order" means an order issued by the Minister that makes a Class Environmental Assessment Project an Undertaking that is subject to Part II of the EAA;

"Professional Engineer" means a person entitled to practice as a Professional Engineer in the Province of Ontario under a licence issued under the Professional Engineers Act;

"Proposed Works" means those portions of the sewage works under Limited Operational Flexibility proposed as part of a Notice of Modifications;

"Significant Drinking Water Threat" has the same meaning as in the CWA;

"Significant Threat Policy(ies)" has the same meaning as in the CWA;

"Source Protection Plan" means a drinking water source protection plan prepared under the CWA;

"Rated Capacity" means the Average Daily Flow which the Works are approved to handle;

"Sewage Pumping Station Overflow" means any discharge from a Sewage Pumping Station to the environment that does not undergo any treatment or only receives partial treatment before it is discharged to the environment;

"Substantial Completion" has the same meaning as "substantial performance" in the Construction Lien Act;

"Undertaking" has the same meaning as in the EAA;

"Water Supervisor" means the Water Supervisor of the appropriate local office of the Safe Drinking Water Branch of the Ministry, where the Works are geographically located; and

"Works" means the sewage works described in the Owner's application, this Approval, Proposed Works and the modifications made under Limited Operational Flexibility.

2.0 Terms and Conditions

You are hereby notified that this environmental compliance approval is issued to you subject to the terms and conditions outlined below:

TERMS AND CONDITIONS

2.1 GENERAL CONDITIONS

- (1) The Owner shall ensure that any person authorized to carry out work on or operate any aspect of the Works is notified of this Approval and the conditions herein and shall take all reasonable measures to ensure any such person complies with the same.
- (2) Except as otherwise provided by these conditions, the Owner shall design, build, install, operate and maintain the Works in accordance with the description given in this Approval, and the application for approval of the Works.
- (3) Where there is a conflict between a provision of any document in the schedule referred to in this Approval and the conditions of this Approval, the conditions in this Approval shall take precedence, and where there is a conflict between the documents in the schedule, the document bearing the most recent date shall prevail.
- (4) Where there is a conflict between the documents listed in Schedule 'A' and the application, the application shall take precedence unless it is clear that the purpose of the document was to amend the application.
- (5) The conditions of this Approval are severable. If any condition of this Approval, or the application of any requirement of this Approval to any circumstance, is held invalid or unenforceable, the application of such condition to other circumstances and the remainder of this Approval shall not be affected thereby.

2.2 CHANGE OF OWNER

- (1) The Owner shall notify the Water Supervisor and the Director, in writing, of any of the following changes within thirty (30) days of the change occurring:
 - (a) change of Owner;
 - (b) change of address of the Owner;
 - (c) change of partners where the Owner is or at any time becomes a partnership, and a copy of the most recent declaration filed under the Business Names Act, R.S.O. 1990, c.B17 shall be included in the notification to the Water Supervisor; or

- (d) change of name of the corporation where the Owner is or at any time becomes a corporation, and a copy of the most current information filed under the Corporations Information Act, R.S.O. 1990, c. C39 shall be included in the notification to the Water Supervisor.
- (2) In the event of any change in ownership of the Works, other than a change to a successor municipality, the Owner shall notify in writing the succeeding owner of the existence of this Approval, and a copy of such notice shall be forwarded to the Water Supervisor and the Director.
- (3) The Owner shall ensure that all communications made pursuant to this condition refer to the number at the top of this Approval.

2.3 SEWAGE PUMPING STATION OVERFLOW

- (1) Any Sewage Pumping Station Overflow is prohibited, except:
 - (a) in an Emergency Situation; and
 - (b) where the Sewage Pumping Station Overflow is a direct and unavoidable result of a planned maintenance procedure, the Owner having notified the Water Supervisor at least fifteen (15) days prior to the occurrence of the Sewage Pumping Station Overflow and the Water Supervisor having given written consent of the Sewage Pumping Station Overflow.
- (2) The Owner shall forthwith notify the Spills Action Centre (SAC) and the Medical Officer of Health of all Events as soon as possible. This notice shall include, at a minimum, the following information:
 - (a) the date, time, and duration of the Event;
 - (b) the location of the Sewage Pumping Station Overflow and the receiver;
 - (c) the measured or estimated volume of the Event (unless the Event is ongoing); and
 - (d) the reason for the Event.
- (3) The Owner shall submit a summary report of the Sewage Pumping Station Overflow Events to the Water Supervisor on a quarterly basis, no later than each of the following dates for each calendar year: February 14, May 15, August 14, and November 15. The summary reports shall be in a format specified by the Ministry, which shall include, at a minimum, the following information on any Events that occurred during the preceding quarter:
 - (a) the date of the Event(s);

- (b) the measured or estimated volume of the Event(s);
 - (c) the duration of the Event(s);
 - (d) the location of the Sewage Pumping Station Overflow and the receiver;
 - (e) the reason for the Event(s); and
 - (f) the impact of the Event(s) on the receiver(s).
- (4) The Owner shall use best efforts to collect a representative sample consisting of a minimum of two (2) grab samples of the Sewage Pumping Station Overflow and have it analyzed for the parameters outlined in Condition 2.5 using the protocols specified in Condition 2.5, one at the beginning of the Event and the second approximately near the end of the Event, to best reflect the effluent quality of the Sewage Pumping Station Overflow.
- (5) The Owner shall maintain a logbook of all Sewage Pumping Station Overflows, which shall contain, at a minimum, the types of information set out in sub-conditions 2(a) to 2(d) in respect of each Sewage Pumping Station Overflow.

2.4 OPERATION AND MAINTENANCE

- (1) The Owner shall exercise due diligence in ensuring that, at all times, the Works and the related equipment and appurtenances used to achieve compliance with this Approval are properly operated and maintained. Proper operation and maintenance shall include effective performance, adequate funding, adequate operator staffing and training, including training in all procedures and other requirements of this Approval and the EPA and regulations, adequate laboratory services, process controls and alarms and the use of process chemicals and other substances used in the Works.
- (2) The Owner shall prepare an operations manual for facilities within twelve (12) months of the issuance date of this Approval, that includes or references, but is not necessarily limited to, the following information:
- (a) operating and maintenance procedures for routine operation of the Works;
 - (b) inspection programs, including frequency of inspection, for the Works and the methods or tests employed to detect when maintenance is necessary;
 - (c) inspection programs, to include closed-camera television inspection every 5 years, for sanitary sewers and related pipes within a vulnerable area where it would present a significant drinking water threat under the Clean Water Act and the methods or tests employed to detect when maintenance is necessary;
 - (d) repair and maintenance programs, including the frequency of repair and maintenance for

the Works;

- (e) procedures for the inspection and calibration of monitoring equipment;
 - (f) a spill prevention control and countermeasures plan, consisting of contingency plans and procedures for dealing with equipment breakdowns, potential spills and any other abnormal situations, including notification to the Spills Action Centre (SAC), the Medical Officer of Health, and the Water Supervisor; and
 - (g) procedures for receiving, responding and recording public complaints, including recording any follow-up actions taken.
- (3) The Owner shall maintain the operations manual current and have access to a copy for each sewage pumping station for the operational life of the station. Upon request, the Owner shall make the manual available to Ministry and Source Protection Authority staff.
 - (4) The Owner shall provide for the overall operation of the sewage pumping stations an operator who holds a licence that is applicable to that type of facility and that is of the same class as or higher than the class of the facility in accordance with Ontario Regulation 129/04.

2.5 MONITORING AND RECORDING

The Owner shall carry out the following monitoring program:

- (1) All samples and measurements taken for the purposes of this Approval are to be taken at a time and in a location characteristic of the quality and quantity of the Sewage Pumping Station Overflow stream over the time period being monitored.
- (2) Samples shall be collected at the following sampling points, at the frequency specified, by means of the specified sample type and analyzed for each parameter listed and all results recorded:

Table 3. Monitoring during a Sewage Pumping Station Overflow Event (Samples to be collected from the Sewage Pumping Station Overflow stream)	
Sample Type	Grab
Frequency	One sample at the beginning of the Event and the second sample approximately near the end of the Event
Parameters	BOD ₅ , Total Suspended Solids, Total Phosphorus, Total Ammonia Nitrogen, <i>E. coli</i> [†] , and pH

Note 1: Sampling and analysis shall be performed only for Events that occur between April 1 and October 31 inclusive

- (3) The methods and protocols for sampling, analysis and recording shall conform, in order of precedence, to the methods and protocols specified in the following:

- (a) the Ministry's Procedure F-10-1, "Procedures for Sampling and Analysis Requirements for Municipal and Private Sewage Treatment Works (Liquid Waste Streams Only)", as amended from time to time by more recently published editions;
- (b) the Ministry's publication "Protocol for the Sampling and Analysis of Industrial/Municipal Wastewater" (January 1999), ISBN 0-7778-1880-9, as amended from time to time by more recently published editions; and
- (c) the publication "Standard Methods for the Examination of Water and Wastewater" (21st edition), as amended from time to time by more recently published editions.

2.6 REPORTING

- (1) The Owner shall, upon request, make all manuals, plans, records, data, procedures and supporting documentation available to Ministry staff.
- (2) The Owner shall notify and consult with the Water Supervisor at least thirty (30) days prior to submitting a Notice of Modifications for Proposed Works that are subject to schedule B or schedule C of the Class Environmental Assessment process.
- (3) The Owner shall prepare and submit a performance report to the Water Supervisor on an annual basis, within ninety (90) days following the end of the period being reported upon. The first such report shall cover the first annual period following the issuance of this Approval and subsequent reports shall be submitted to cover successive annual periods following thereafter. The reports shall contain, but shall not be limited to, the following information:
 - (a) a summary and interpretation of all monitoring data, including an overview of the success and adequacy of the Works;
 - (b) a description of any operating problems encountered and corrective actions taken;
 - (c) a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the Works;
 - (d) a summary of the calibration and maintenance carried out on all monitoring equipment;
 - (e) a summary of any complaints received during the reporting period and any steps taken to address the complaints;
 - (f) a summary of all Sewage Pumping Station Overflows, spill or abnormal discharge events;
 - (g) a copy of all Notice of Modifications submitted to the Water Supervisor as a result of

Schedule C, Section 1(1), with a status report on the implementation of each modification;

- (h) a report summarizing all modifications completed as a result of Schedule C, Section 1(3);
 - (i) a report on any new modifications which could pose a significant threat to sources of drinking water as described in Schedule B, Section 2.8.
 - (j) a copy of all Notice of Assumptions submitted to the Water Supervisor as a result of Condition 2.9; and
 - (k) any other information the Water Supervisor requires from time to time.
- (4) The Owner shall, within thirty (30) calendar days of issuance of this Approval, submit a Municipal Wastewater System Profile Information Form, and shall resubmit the updated document every time a notification is provided to the Water Supervisor in compliance with requirements of change of ownership under this Approval.
- (5) The Owner shall retain for a minimum of five (5) years from the date of their creation, all records and information related to or resulting from the operation, maintenance and monitoring activities required by this Approval.

2.7 SOURCE WATER PROTECTION

- (1) The Owner shall ensure for the Works located within Wellhead Protection Areas (WHPAs), Intake Protection Zones (IPZ), Highly Vulnerable Aquifers (HVA) and Significant Groundwater Recharge Areas (SGRAs), where this activity has been identified as a Significant Drinking Water Threat, there is an operation and maintenance program in place that includes, but is not limited to, the following requirements:
- (a) regular maintenance and inspection;
 - (b) best management practices to be applied; and
 - (c) operational requirements as set out in the approved Standard Operating Policy for Sewage Works published on the Environmental Registry (Posting # 012-2968), as amended from time to time.
- (2) The Owner, upon request, shall make all reports and plans available to the Ministry or Source Protection Authority.
- (3) The Owner shall prepare a report within six (6) months of the issuance date of this Approval, that includes, but is not necessarily limited to:

- (a) an outline of the circumstances under which sewage Works pose a significant threat to sources of drinking water based on the Director's Technical Rules established under the Clean Water Act, 2006 as amended from time to time;
 - (b) a list of which components of the Works were found to be a significant drinking water threats;
 - (c) an outline of how the City screens the Works to identify drinking water threats under the Clean Water Act, as well as design considerations and mitigating measures taken during construction and operation of the Works to protect sources of drinking water.
- (4) The Owner shall maintain the report and have access to a copy for each location of the Works for the operational life of the Works. Upon request, the Owner shall make the report available to Ministry or Source Protection Authority staff.

2.8 LIMITED OPERATIONAL FLEXIBILITY

- (1) The Owner may make modifications to the Works in accordance with the terms and conditions of this Approval and subject to the Ministry's "Limited Operational Flexibility Criteria for Modifications to Municipal Sewage Works", included under Schedule C of this Approval, as amended.
- (2) Sewage works proposed under Limited Operational Flexibility shall adhere to the design guidelines contained within the Ministry's publication "Design Guidelines for Sewage Works 2008", as amended.
- (3) The Owner shall ensure at all times, that the Works, related equipment and appurtenances which are installed or used to achieve compliance are operated in accordance with all terms and conditions of this Approval.
- (4) For greater certainty, the following are not permitted as part of Limited Operational Flexibility:
 - (a) modifications to the Works that result in an increase of the approved Rated Capacity of the Works;
 - (b) modifications to the Works that may adversely affect the approved effluent quality criteria or the location of the discharge/outfall;
 - (c) modifications to the treatment process technology of the Works, or modifications that involve construction of new reactors (tanks) or alter the treatment train process design;
 - (d) modifications to activities mentioned in sub-section 9(1) of the EPA;
 - (e) modifications to the Works pursuant to an order issued by the Ministry;

- (f) modifications to Works that are part of an Undertaking for which a request to issue a Part II Order has been submitted to the Ministry;
 - (g) modifications to Works that are part of an Undertaking for which a Part II Order has been issued by the Minister; and
 - (h) modifications to Works that will trigger the Duty to Consult.
- (5) Implementation of Limited Operational Flexibility is not intended to be used for piecemeal measures that result in major alterations or expansions.
- (6) If the implementation of Limited Operational Flexibility requires changes to be made to the Emergency Response, Spill Reporting and Contingency Plan, the Owner shall, as deemed necessary in consultation with the Water Supervisor, provide a revised copy of this plan to the local fire services authority prior to implementing Limited Operational Flexibility.
- (7) For greater certainty, any modification made under the Limited Operational Flexibility may only be carried out after other legal obligations have been complied with, including those arising from the Environmental Protection Act, Environmental Assessment Act, Niagara Escarpment Planning and Development Act, Oak Ridges Moraine Conservation Act, Lake Simcoe Protection Act and Greenbelt Act.
- (8) At least thirty (30) days prior to implementing Limited Operational Flexibility, the Owner shall complete a Notice of Modifications describing any proposed modifications to the Works and submit it to the Water Supervisor.
- (9) The Owner shall ensure that an engineering assessment is completed for each Notice of Modifications prior to submitting the Notice of Modifications to the Water Supervisor. The engineering assessment shall be prepared by a Professional Engineer that was not involved in the design of the Proposed Works. The Owner shall abide by the recommendations made under the engineering assessment for the Proposed Works. The engineering assessment shall include, at minimum, the following:
- (a) description of the Proposed Works;
 - (b) the documentation and drawings that were reviewed;
 - (c) regulatory requirements applicable to the Proposed Works;
 - (d) technical criteria used to assess the Proposed Works;
 - (e) any issues that were identified during the engineering review of the Proposed Works;
 - (f) design considerations and mitigating measures taken during construction and operation

of the Works to protect sources of drinking water, including Design and Operational Requirements included in the approved Standard Operating Policy for Sewage Works published on the Environmental Registry (Posting # 012-2968), as amended from time to time; and

- (g) recommendations.
- (10) Upon the Substantial Completion of Proposed Works, the Owner shall prepare a statement, certified by a Professional Engineer, that the works are constructed in accordance with the Notice of Modifications, and upon request, shall make the written statement available for inspection by Ministry personnel.
- (11) Within twelve (12) months of the Substantial Completion of Proposed Works, a set of as-built drawings showing the Proposed Works "as constructed" shall be prepared. These drawings shall be kept up to date through revisions undertaken from time to time, and be made available upon Ministry request.

2.9 ASSUMPTION OF OWNERSHIP OF SEWAGE WORKS

- (1) The Owner may make modifications to the Works in accordance with the terms and conditions of this Approval and subject to sub-sections (2), (3) and (4) of this condition.
- (2) The Owner may add Assumed Works to this Approval, provided that:
 - (a) the transfer of the ownership of the sewage works to the Owner is complete;
 - (b) the previous owner of the sewage works has notified the Director of the change in ownership; and
 - (c) the Assumed Works are part of the municipal sanitary sewage Works utilized for the collection and transmission of sanitary sewage in the City of Barrie that are connected to the Barrie Wastewater Treatment Facility.
- (3) To add Assumed Works to this Approval, the Owner shall complete a Notice of Assumption and submit it to the Water Supervisor, along with a copy of the approval issued to the sewage works prior to the transfer of ownership.
- (4) Upon submission of the Notice of Assumption to the Water Supervisor, the terms and conditions of this Approval apply to the Assumed Works for which the Notice of Assumption has been submitted.

2.10 REVIEW OF APPROVAL

- (1) No later than six (6) months past the fifth anniversary of the date of issuance of this Approval, the Owner shall submit to the Director an application to have the Approval

reviewed. The application shall include, at minimum, the following information:

- (a) an updated description of the Works, including any modifications to the Works that were made during the five (5) year period in accordance with the terms and conditions of this Approval and subject to the Ministry's "Limited Operational Flexibility Criteria for Modifications to Municipal Sewage Works", included under Schedule C of this Approval, as amended;
- (b) a copy of all Notice of Modifications submitted to the Water Supervisor as a result of Schedule C, Section 1(1), with the engineering assessment for each Notice of Modifications;
- (c) a status report on the implementation of each modification;
- (d) a copy of all Notice of Assumptions submitted to the Water Supervisor as a result of Condition 2.9, along with a copy of the approval issued to each sewage works that were assumed;
- (e) a performance report on the operation and maintenance of the Works; and
- (f) the application form.

3.0 Reasons

The reasons for the imposition of these terms and conditions are as follows:

- 3.1 Condition 2.1 is imposed to ensure that the Works are constructed and operated in the manner in which they were described and upon which approval was granted. This condition is also included to emphasize the precedence of conditions in the Approval and the practice that the Approval is based on the most current document, if several conflicting documents are submitted for review.
- 3.2 Condition 2.2 is included to ensure that the Ministry records are kept accurate and current with respect to approved Works and to ensure that subsequent owners of the Works are made aware of the Approval and continue to operate the Works in compliance with it.
- 3.3 Condition 2.3 is included to indicate that Sewage Pumping Station Overflows are prohibited, except in circumstances where the failure to overflow could result in greater injury to the public interest than the Sewage Pumping Station Overflow itself. The notification and documentation requirements allow the Ministry to take action in an informed manner and ensure that the Owner is aware of the extent and frequency of Events.
- 3.4 Condition 2.4 is included to ensure that the Works are properly operated, maintained, funded, staffed and equipped such that the environment is protected and deterioration, loss, injury or damage to any person or property is prevented. The Condition also ensures that a comprehensive operations manual governing all significant areas of operation, maintenance and repair is prepared, implemented and kept up-to-date by the Owner and is made available to the Ministry. Such a manual is an integral part of the operation of the Works. Its compilation and use should assist the Owner in staff training, proper plant operation, and identification and planning for contingencies during abnormal conditions. The manual will also act as a benchmark for Ministry staff when reviewing the operation of the Works.
- 3.5 Condition 2.5 is included to provide additional details on the monitoring of Sewage Pumping Station Overflows.
- 3.6 Condition 2.6 is included to provide a performance record for future references, to ensure that the Ministry is made aware of problems as they arise, and to provide a compliance record for all the terms and conditions outlined in this Approval, so that the Ministry can work with the Owner in resolving any problems in a timely manner.
- 3.7 Condition 2.6 (3)(i), 2.7 and 2.8 (9)(f) is included to protect sources of drinking water and to conform with the Significant Threat Policies of the local Source Protection Plan, which requires that the Approval contain terms and conditions to protect sources of drinking water if the Works are a significant drinking water threat.
- 3.8 Condition 2.8 is included to ensure that the Works are operated in accordance with the application and supporting documentation submitted by the Owner, and not in a manner which the Director has not been asked to consider. These conditions are also included to ensure that a Professional Engineer has

reviewed the proposed modifications and attests that the modifications are in line with that of Limited Operational Flexibility, and provide assurance that the proposed modifications comply with the Ministry's requirements stipulated in the terms and conditions of this Approval, Ministry policies, guidelines, and industry engineering standards and best management practices.

- 3.9 Condition 2.9 is included to specify the requirements that need to be met by the Owner to add Assumed Works to this Approval.
- 3.10 Condition 2.10 is included to ensure that the Approval is updated on a regular basis by the Owner.

Schedule C: Limited Operational Flexibility

System Owner and Operator	The Corporation of the City of Barrie
System Name	Sanitary Collection System servicing the Barrie Wastewater Treatment Facility

Schedule C includes:

- 1.0 Limited Operational Flexibility Criteria for Modifications to Municipal Sewage Works
- 2.0 Notice of Modification to Sewage Works

1.0 Limited Operational Flexibility Criteria for Modifications to Municipal Sewage Works

1. The modifications to sewage works approved under an Environmental Compliance Approval (Approval) that are permitted under the Limited Operational Flexibility (LOF), are outlined below and are subject to the LOF conditions in the Approval, and require the submission of the Notice of Modifications. If there is a conflict between the sewage works listed below and the Terms and Conditions in the Approval, the Terms and Conditions in the Approval shall take precedence.

1.1 Sanitary Sewers and Sanitary Force mains

- a. Alteration, extension, enlargement or replacement of existing sanitary sewers and sanitary force mains or establishment of new sanitary sewers and sanitary force mains, provided that:
 - i. the nominal pipe diameter is not greater than a total of 1,200 millimetres;
 - ii. the sewers and mains are not combined sewers;
 - iii. the sewers and mains do not discharge directly to a sewage treatment plant;
 - iv. the design of the modification to or establishment of the sewers and mains has been prepared by a Professional Engineer;
 - v. the consent of the property owner has been obtained for the establishment of new sewers and mains; and
 - vi. if the sanitary sewers and force mains are located in an area where they would be a significant drinking water threat, the designs adhere to the Design and Operational Requirements specified in the approved Standard Operating Policy for Sewage Works published on the Environmental Registry (Posting # 012-2968), as amended from time to time.

1.2 Sewage Pumping Stations

- a. Alteration of pumping capacity by adding or replacing equipment where new equipment is located within an existing sewage pumping station site, provided that the modifications do not result in an increase of the pumping station's Rated Capacity and the existing flow process and/or treatment train are maintained, as applicable; and
- b. If the pumping station is located in an area where it would be a significant drinking water threat the designs, shall be prepared by a Professional Engineer and shall adhere to the Design and Operational Requirements specified in the approved Standard Operating Policy for Sewage Works published on the Environmental Registry (Posting # 012-2968), as amended from time to time.

1.3 Flow Regulators, Storage Tanks and Pressure Release Valves

- a. Alteration of capacity by adding or replacing equipment, structures or instrumentation in the sanitary sewage collection system, provided that the modifications do not result in an increase in the Rated Capacity of the sewage pumping station(s) and that the existing flow processes are maintained; and
- b. If the storage tanks are located in an area where it would be a significant drinking water threat the designs, shall be prepared by a Professional Engineer and shall adhere to the Design and Operational Requirements specified in the approved Standard Operating Policy for Sewage published on the Environmental Registry (Posting # 012-2968), as amended from time to time.


1.4 Pilot Systems

- a. Installation of pilot systems for new or existing technologies provided that:
 - i. any effluent from the pilot system is discharged to the inlet of the sewage pumping station or hauled off-site for proper disposal;
 - ii. any effluent from the pilot system discharged to the inlet of the sewage pumping station or sewage conveyance system does not significantly alter the composition/concentration of the influent sewage to be treated in the downstream process; and that it does not add any inhibiting substances to the downstream process;
 - iii. the pilot system's duration does not exceed a maximum of two (2) years; and a report with results is submitted to the Director and Water Supervisor three (3) months after the completion of the pilot project; and
 - vi. if the pilot systems are located in an area where it would be a significant drinking water threat, the designs, shall be prepared by a Professional Engineer and shall adhere to the Design and Operational Requirements specified in the approved Standard Operating Policy for Sewage published on the Environmental Registry (Posting # 012-2968), as amended from time to time.
- 2. Sewage works that are exempt from section 53 of the OWRA by O. Reg. 525/98 continue to be exempt and are not required to follow the notification process under this Limited Operational Flexibility.
- 3. Normal or emergency operational modifications
 - a. Normal or emergency operational modifications, such as repairs, reconstructions, or other improvements that are part of maintenance activities, including cleaning, renovations to existing approved sewage works equipment, provided that the modification is made with Equivalent Equipment, are considered pre-approved unless they are located in an area that where the works are is a significant drinking water threat; and
 - b. If the modifications include repairs, reconstruction or renovations to existing equipment in an area where the sanitary sewage works would be a significant drinking water threat, the design of the

modifications shall be prepared by a Professional Engineer and shall adhere to the Design and Operational Requirements specified in the approved Standard Operating Policy for Sewage published on the Environmental Registry (Posting # 012-2968), as amended from time to time.

4. The modifications noted in sub-section (3a) above are not required to follow the notification protocols under Limited Operational Flexibility, provided that the number of pieces and description of the equipment as described in the Approval does not change.

2.0 Notice of Modification to Sewage Works

 <p>Ontario Ministry of the Environment</p>	<p>Notice of Modification to Sewage Works</p>
<p>RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA AND SEND A COPY TO THE WATER SUPERVISOR (FOR MUNICIPAL) OR DISTRICT MANAGER (FOR NON-MUNICIPAL SYSTEMS)</p>	
<p>Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility <i>(Insert the ECA's owner, number, issuance date and notice number, which should start with "01" and consecutive numbers thereafter)</i></p>	
ECA Number	Issuance Date (mm/dd/yy)
Notice number (if applicable)	
ECA Owner	Municipality
<p>Part 2: Description of the modifications as part of the Limited Operational Flexibility <i>(Attach a detailed description of the sewage works)</i></p>	
<p>Description shall include:</p> <ol style="list-style-type: none"> 1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.) 2. Confirmation that the anticipated environmental effects are negligible. 3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.) 	
<p>Part 3 – Declaration by Professional Engineer</p>	
<p>I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:</p> <ol style="list-style-type: none"> 1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario; 2. Conforms with the Limited Operational Flexibility as per the ECA; 3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations. <p>I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.</p>	
Name (Print)	PEO License Number
Signature	Date (mm/dd/yy)
Name of Employer	
<p>Part 4 – Declaration by Owner</p>	
<p>I hereby declare that:</p> <ol style="list-style-type: none"> 1. I am authorized by the Owner to complete this Declaration; 2. The Owner consents to the modification; and 3. These modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA. <p>4. The Owner has fulfilled all applicable requirements of the <i>Environmental Assessment Act</i>.</p> <p>I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.</p>	
Name of Owner Representative (Print)	Owner representative's title (Print)
Owner Representative's Signature	Date (mm/dd/yy)


Schedule D: Assumption of Sewage Works

System Owner and Operator	The Corporation of the City of Barrie
System Name	Sanitary Collection System servicing the Barrie Wastewater Treatment Facility

Schedule D includes:

- 1.0 Notice of Assumption of Sewage Works

1.0 Notice of Assumption of Sewage Works

	Notice of Assumption of Sewage Works
RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA AND SEND A COPY TO THE WATER SUPERVISOR (FOR MUNICIPAL) OR DISTRICT MANAGER (FOR NON-MUNICIPAL SYSTEMS)	
Part 1 – System-Wide Environmental Compliance Approval (ECA)	
<i>(Insert the ECA's owner, number, issuance date and notice number, which should start with "01" and consecutive numbers thereafter)</i>	
ECA Number	Issuance Date (mm/dd/yy)
Notice number (if applicable)	
ECA Owner	Municipality
Part 2: Transfer of Ownership of Sewage Works	
Name of Previous Owner (Print)	ECA Number and Issuance Date of Sewage Works whose Ownership has been Transferred
Date of the Transfer of Ownership of Sewage Works (mm/dd/yy)	Confirmation that the Transfer of Ownership of Sewage Works is Complete (y/n)
Part 3: Description of the Assumed Works	
<i>(Attach a detailed description of the sewage works, e.g. sewage work component, location, size, equipment type/model, material, process name, etc.)</i>	
Part 4 – Declaration by Owner	
I hereby declare that: 1. I am authorized by the Owner to complete this Declaration; 2. The Owner consents to the addition of the Assumed Works to the System-Wide ECA; and 3. The Owner has fulfilled all applicable requirements of the Environmental Assessment Act. I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.	
Name of Owner Representative (Print)	Owner representative's title (Print)
Owner Representative's Signature	Date (mm/dd/yy)

Schedule E: Supporting Documents

System Owner and Operator	The Corporation of the City of Barrie
System Name	Sanitary Collection System servicing the Barrie Wastewater Treatment Facility

Schedule E includes:

- 1.0 Supporting Documents
- 2.0 Sanitary Infrastructure Map for the City of Barrie

1.0 Supporting Documents

1. Application for Environmental Compliance Approval for System-wide Municipal and Private Sewage Works, dated August 29, 2017, submitted by the Corporation of the City of Barrie;
2. Application for Environmental Compliance Approval for System-wide Municipal and Private Sewage Works, dated May 9, 2016, submitted by the Corporation of the City of Barrie;
3. Two (2) e-mails from Katie Thompson of the City of Barrie to the Ministry, dated September 16, 2016 and September 22, 2016, respectively;
4. E-mail from Tyler Adamson of the City of Barrie to the Ministry, dated September 27, 2016;
5. Two (2) e-mails from Katie Thompson of the City of Barrie to the Ministry, dated September 29, 2016;
6. E-mail from Bala Araniyasundaran of the City of Barrie to the Ministry, dated September 11, 2017; and
7. Detailed Description of Works, Sanitary Sewage Collection System: City of Barrie, dated September 29, 2016.

**Upon issuance of the environmental compliance approval, I hereby revoke Approval No(s).
7160-AQWSAX issued on September 11, 2017**

In accordance with Section 139 of the Environmental Protection Act, you may by written Notice served upon me and the Environmental Review Tribunal within 15 days after receipt of this Notice, require a hearing by the Tribunal. Section 142 of the Environmental Protection Act provides that the Notice requiring the hearing shall state:

- a. The portions of the environmental compliance approval or each term or condition in the environmental compliance approval in respect of which the hearing is required, and;
- b. The grounds on which you intend to rely at the hearing in relation to each portion appealed.

Pursuant to subsection 139(3) of the Environmental Protection Act, a hearing may not be required with respect to any terms and conditions in this environmental compliance approval, if the terms and conditions are substantially the same as those contained in an approval that is amended or revoked by this environmental compliance approval.

The Notice should also include:

1. The name of the appellant;
2. The address of the appellant;
3. The environmental compliance approval number;
4. The date of the environmental compliance approval;
5. The name of the Director, and;
6. The municipality or municipalities within which the project is to be engaged in.

And the Notice should be signed and dated by the appellant.

This Notice must be served upon:

The Secretary*
Environmental Review Tribunal
655 Bay Street, Suite 1500
Toronto, Ontario
M5G 1E5

AND

The Director appointed for the purposes of Part II.1 of
the Environmental Protection Act
Ministry of the Environment and Climate Change
135 St. Clair Avenue West, 1st Floor
Toronto, Ontario
M4V 1P5

*** Further information on the Environmental Review Tribunal's requirements for an appeal can be obtained directly from the Tribunal at: Tel: (416) 212-6349, Fax: (416) 326-5370 or www.ert.gov.on.ca**

The above noted activity is approved under s.20.3 of Part II.1 of the Environmental Protection Act.

DATED AT TORONTO this 10th day of January, 2018



Christina Labarge, P.Eng.
Director
appointed for the purposes of Part II.1 of the
Environmental Protection Act

RU/

c: DWMD Supervisor, MOECC Barrie
Sinclair Garner, GHD Limited

APPENDIX B: NOTICES OF MODIFICATIONS



Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA AND SEND A COPY TO THE WATER SUPERVISOR (FOR MUNICIPAL) OR DISTRICT MANAGER (FOR NON-MUNICIPAL SYSTEMS)

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility <i>(Insert the ECA's owner, number, issuance date and notice number, which should start with "01" and consecutive numbers thereafter)</i>		
ECA Number	Issuance Date (mm/dd/yy)	Notice number (if applicable)
5921-ATUKKR	January 10, 2018	2018-02
ECA Owner	Municipality	
The Corporation of the City of Barrie	Barrie	

Part 2: Description of the modifications as part of the Limited Operational Flexibility <i>(Attach a detailed description of the sewage works)</i>	
Refer to attached Engineering Assessment.	2018-002 T PART C SANITARY
Description shall include: 1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.) 2. Confirmation that the anticipated environmental effects are negligible. 3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required; but the listing of updated documents is (design brief, drawings, emergency plan, etc.)	

Part 3 – Declaration by Professional Engineer	
I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design: 1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario; 2. Conforms with the Limited Operational Flexibility as per the ECA; 3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act and other appropriate regulations. I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.	
Name (Print)	PEO License Number
BRYAN F. STANTON	90415795
Signature	Date (mm/dd/yy)
[Signature]	JUNE 19 2018
Name of Employer	
CCTATYAN ASSOCIATES LTD.	

Part 4 – Declaration by Owner	
I hereby declare that: 1. I am authorized by the Owner to complete this Declaration; 2. The Owner consents to the modification; and 3. These modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA. 4. The Owner has fulfilled all applicable requirements of the <i>Environmental Assessment Act</i> . I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.	
Name of Owner Representative (Print)	Owner representative's title (Print)
Robert Sutton, P.Eng.	Director of Engineering
Owner Representative's Signature	Date (mm/dd/yy)
[Signature] S. DIERGHT	26/06/18

**CITY OF BARRIE - ENGINEERING ASSESSMENT FOR
NOTICE OF MODIFICATION TO SEWAGE WORKS**

(Requirement of ECA No. 5921-ATUKKR, in accordance with Schedule "B", Section (1))

Project:

Bayview Drive sanitary sewer replacement (north of Big Bay Point Road); part of Contract 2018-002T "Part C" – Big Bay Point Road and Bayview Drive Intersection.

Description of Project (Summary):

The proposed works include the replacement of approximately 213m of 600mm dia. sanitary sewer at the intersection of Bayview Drive and Big Bay Point Road, including the installation of two (2) 1,500mm dia. maintenance holes.

This work is being undertaken to improve the existing municipal infrastructure at the intersection of Big Bay Point Road and Bayview Drive and to accommodate future growth.

Documentation Reviewed:

- City of Barrie Contract document 2018-002T "Part C" – Big Bay Point Road and Bayview Drive Intersection.
- Engineering plans forming part of Contract 2018-002T "Part C".

Regulatory Requirement:

This work is being carried out in accordance with the Municipal Class Environmental Assessment, October 2000, as amended in 2007, 2011, and 2015.

Permits will be obtained from the Lake Simcoe Region Conservation Authority (LSRCA) pursuant to Ontario Regulation 179/06, as Bayview Drive intersects with a LSRCA regulated reach of Whiskey Creek.

Technical Criteria Used to Assess the Application:

The following technical criteria were used to assess this application:

- Ministry of the Environment and Climate Change, Design Guidelines for Sewage Works, 2008;
- City of Barrie, Sanitary Sewage Collection System Policies and Design Guidelines, 2017.

Issues Identified:

No issues have been identified.

New/Modified Terms and Conditions:

None.

Source Water Protection:

The proposed road improvement works at the intersection of Bayview Drive and Big Bay Point Road are located within a significant groundwater recharge area (vulnerability score of 4) and a Q2 wellhead protection area.

Recommendation:

The proposed works are recommended for approval under the Limited Operational Flexibility, in accordance with Schedule "B", section (1) and (2).



Notice of Modification to Sewage Works

File: E01A-SR
704-2017-101

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA AND SEND A COPY TO THE WATER SUPERVISOR (FOR MUNICIPAL) OR DISTRICT MANAGER (FOR NON-MUNICIPAL SYSTEMS)

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility

(Insert the ECA's owner, number, issuance date and notice number, which should start with "01" and consecutive numbers thereafter)

ECA Number 5921-ATUKKR	Issuance Date (mm/dd/yy) January 10, 2018	Notice number (if applicable) 01- 2018-03
ECA Owner The Corporation of the City of Barrie	Municipality Barrie	

Part 2: Description of the modifications as part of the Limited Operational Flexibility

(Attach a detailed description of the sewage works)

ROANBY STREET 207-101T SANITARY

Description shall include:

1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.)
2. Confirmation that the anticipated environmental effects are negligible.
3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)

Part 3 – Declaration by Professional Engineer

I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:

1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario;
2. Conforms with the Limited Operational Flexibility as per the ECA;
3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.

Name (Print) Bryan Bolivar	PEO License Number 100017673
Signature 	Date (mm/dd/yy) 06/27/18
Name of Employer Skellton Bromwell & Associates	

Part 4 – Declaration by Owner

I hereby declare that:

1. I am authorized by the Owner to complete this Declaration;
2. The Owner consents to the modification; and
3. These modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.

Name of Owner Representative (Print) Robert Sutton, P.Eng.	Owner representative's title (Print) Sec Director of Engineering
Owner Representative's Signature 	Date (mm/dd/yy) 07/03/18
J. DIEMERT	

**CITY OF BARRIE - ENGINEERING ASSESSMENT FOR
NOTICE OF MODIFICATION TO SEWER WORKS**
(Requirement of ECA No. 5921 - ATUKKR, in accordance with Schedule "B", Section (1))

Project:

Rodney Street Improvements Blake Street to Kempenfelt Drive part of Contract 2017-101

Description of Project (Summary):

Removal of approx. 123m of existing Sanitary Sewer and services and installation of approx. 71 metres of new 250mm dia. PVC Sanitary main including installation of 6 new sanitary services for the existing residential houses. All within the municipal right-of-way

This work is being undertaken in order to upgrade the existing sanitary sewers, in order to achieve the minimum MOECC and Municipal standards.

Documentation Reviewed:

City of Barrie contract document 2017-101 – Rodney Street Improvements
Engineering plans forming part of Contract 2017-101 – Rodney Street Improvements

Technical Criteria Used to Assess the Application:

The following technical criteria were used to assess this application:

- Ministry of the Environment and Climate Change, Design Guidelines for Sewage Works, 2008;
- City of Barrie, Sanitary Sewage Collection System Policies and Design Guideline 2017.

Issues Identified:

No issues have been identified.

New/Modified Terms and Conditions:

None.

Source Water Protection:

The proposed work is located within WHPA-D.

The City of Barrie's Risk Management Official was consulted and confirms that the proposed works meet requirement SEWG(b)-2 of the Approved South Georgian Bay Lake Simcoe Source Protection Plan.

Recommendation: The proposed works are recommended for approval under the Limited Operational Flexibility, in accordance with Schedule "B", section (1) and (2).



Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA AND SEND A COPY TO THE WATER SUPERVISOR (FOR MUNICIPAL) OR DISTRICT MANAGER (FOR NON-MUNICIPAL SYSTEMS)

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility

(Insert the ECA's owner, number, issuance date and notice number, which should start with "01" and consecutive numbers thereafter)

ECA Number 5921-ATUKKR	Issuance Date (mm/dd/yy) January 10, 2018	Notice number (if applicable) 01- 2018-04
ECA Owner The Corporation of the City of Barrie		Municipality Barrie

Part 2: Description of the modifications as part of the Limited Operational Flexibility

(Attach a detailed description of the sewage works)

Morrow Road Reconstruction (Patterson Road to Ardagh Road) - install new 450mm PVC Sanitary Sewer from Patterson Road (SAI11024) to 200m South of Fraser Court (SAI12030)

Description shall include:

1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.)
2. Confirmation that the anticipated environmental effects are negligible.
3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)

Part 3 – Declaration by Professional Engineer

I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:

1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario;
2. Conforms with the Limited Operational Flexibility as per the ECA;
3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.

Name (Print) Drew C. Davidge	PEO License Number 100162350
Signature 	Date (mm/dd/yy) 09/12/18
Name of Employer R. J. Burnside and Associates Ltd.	

Part 4 – Declaration by Owner

I hereby declare that:

1. I am authorized by the Owner to complete this Declaration;
2. The Owner consents to the modification; and
3. These modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA.
4. The Owner has fulfilled all applicable requirements of the *Environmental Assessment Act*.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.

Name of Owner Representative (Print) Robert Sutton, P.Eng.	Owner representative's title (Print) Director of Engineering
Owner Representative's Signature 	Date (mm/dd/yy) 30/09/18

R.J. Burnside & Associates Limited 128 Wellington Street West Suite 301 Barrie ON L4N 8J6 CANADA
telephone (705) 797-2047 fax (705) 797-2037 web www.rjburnside.com



August 28, 2018

Via: Email

Adam Kiley, P.Eng.
Supervisor of Infrastructure Renewal
City of Barrie
Design - Engineering Department
70 Collier Street
Barrie ON L4M 4T5

Dear Mr. Kiley:

Re: **Morrow Road Reconstruction (Patterson Road to Ardagh Road)
Environmental Compliance Assessment (ECA) - Contract 2017-127T
Project No.: 300035820.0000**

R.J. Burnside & Associates Limited (Burnside) has completed an Engineering Assessment for the modification of Sanitary Sewers for the Morrow Road Reconstruction Project – Contract 2017-127T.

I have reviewed the engineering plans for the aforementioned project and certify that the design has been completed in general conformance with the applicable technical criteria and in accordance with good construction practices. My review of the design did not include the review of the upstream sanitary flows or catchment areas as this information was received from the City of Barrie and was used as provided.

Should you have any questions or require further information, please contact our office.

Yours truly,

R.J. Burnside & Associates Limited

Sam Webb, P.Eng.
Project Engineer
SW:jb



Enclosure(s) Engineering Assessment
Notice of Modification to Sewage Works

cc: Drew Davidge, Burnside (enc.) (Via: Email – drew.davidge@rjburnside.com)

Other than by the addressee, copying or distribution of this document, in whole or in part, is not permitted without the express written consent of R.J. Burnside & Associates Limited.

180828_ECA Sewage Works(Kiley)_035820.docx
28/08/2018 12:10 PM

**CITY OF BARRIE - ENGINEERING ASSESSMENT FOR
NOTICE OF MODIFICATION TO SEWAGE WORKS**

(Requirement of ECA No. 5921-ATUKKR, in accordance with Schedule "B", Section (1))

Project

Morrow Road Reconstruction (Patterson Road to Ardagh Road); Contract 2017-127T

Description of Project (Summary)

Removal of approx. 370 metres of existing 350 mm and 250 mm dia. sanitary sewer and installation of approx. 370 metres of new 450 mm dia. sanitary sewer, including installation of seven (7), 1,200 mm to 2,400 mm dia. maintenance hole, replacement of sanitary service laterals within the municipal right-of-way, and connections to the existing sanitary sewer.

This work is being undertaken in order to replace aging sanitary sewer infrastructure and increase the capacity of the sanitary sewer in order to accommodate upstream development at 300 Essa Road.

Documentation Reviewed:

- City of Barrie contract document 2017-127T – Morrow Road Reconstruction (Patterson Road to Ardagh Road); and
- Engineering plans forming part of Contract 2017-127T – Morrow Road Reconstruction (Patterson Road to Ardagh Road).

Regulatory Requirement

This work is being carried out in accordance with the Municipal Class Environmental Assessment, October 2000, as amended in 2007 & 2011.

Technical Criteria Used to Assess the Application

The following technical criteria were used to assess this application:

- Ministry of the Environment and Climate Change, Design Guidelines for Sewage Works, 2008; and
- City of Barrie, Sanitary Sewage Collection System Policies and Design Guideline, 2017.

Issues Identified

No issues have been identified.

New/Modified Terms and Conditions

None.



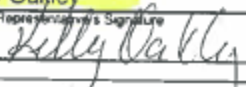
Source Water Protection:

The proposed work is located within WHPA-E.

The City of Barrie's Risk Management Official should be consulted to confirm that the proposed works meet requirement SEWG(b)-2 of the Approved South Georgian Bay Lake Simcoe Source Protection Plan.

Recommendation

The proposed works are recommended for approval under the Limited Operational Flexibility, in accordance with Schedule "B", Section (1) and (2).

		Notice of Modification to Sewage Works	
RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA AND SEND A COPY TO THE WATER SUPERVISOR (FOR MUNICIPAL) OR DISTRICT MANAGER (FOR NON-MUNICIPAL SYSTEMS)			
Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility <i>(Insert the ECA's owner, number, issuance date and notice number, which should start with "01" and consecutive numbers thereafter)</i>			
ECA Number	Issuance Date (mm/dd/yy)	Notice number (if applicable)	
5921-ATUKKR	01/10/18	2018-05	
ECA Owner		Municipality	
The Corporation of the City of Barrie		The Corporation of the City of Barrie	
Part 2: Description of the modifications as part of the Limited Operational Flexibility <i>(Attach a detailed description of the sewage works)</i>			
Refer to attached Engineering Assessment. Harvie Road to Big Bay Point - New Hwy 400 Crossing: Sanitary			
Description shall include: 1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.) 2. Confirmation that the anticipated environmental effects are negligible. 3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)			
Part 3 – Declaration by Professional Engineer			
I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design: 1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario; 2. Conforms with the Limited Operational Flexibility as per the ECA; 3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations. I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.			
Name (Print)		PEO License Number	
Peter Rüsck, P.Eng.		100073940	
Signature		Date (mm/dd/yy)	
		July 06, 2018	
Name of Employer			
Hatch Corporation			
Part 4 – Declaration by Owner			
I hereby declare that: 1. I am authorized by the Owner to complete this Declaration; 2. The Owner consents to the modification; and 3. These modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA. 4. The Owner has fulfilled all applicable requirements of the <i>Environmental Assessment Act</i> . I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.			
Name of Owner Representative (Print)		Owner representative's title (Print)	
Kelly Oakley		Director of Engineering (Acting)	
Owner Representative's Signature		Date (mm/dd/yy)	
		102/11/18 Dec 11/18	



Project Memo

H-353437

July 6, 2018

To: Todd Comfort – Colliers/City of Barrie From: Alberto Segura

cc: Biljana Rajlic – Hatch
Peter Rusch – Hatch
Andy Lambert – Hatch
Dave James – City of Barrie

City of Barrie
Harvie Road and Big Bay Point Road - New Highway 400 Crossing

Engineering Assessment for Notice of Modification to Sewage Works

1. Project

Sanitary Sewer Replacement for the New Highway 400 Crossing at Harvie Road and Big Bay Point Road from Essa Road to West of Bayview Drive.

2. Description of Project (Summary)

The proposed works includes the relocation and upgrade of approximately 157m of 450mm/600mm sanitary sewer and installation of approximately 1.2 km of new sanitary sewer including approximately 900m of 250mm dia., 115 m of 300 mm dia. and 176.5 m of 375 mm dia. This also includes installation of service connections, maintenance holes, and connections to the existing sanitary sewer system within the municipal right-of-way.

This work is being undertaken in order to improve the existing municipal infrastructure at Harvie Road and Big Bay Point Road to accommodate the new crossing of Highway 400 and future growth.

3. Documentation Reviewed

City of Barrie contract document 2018-002T – Harvie Road and Big Bay Point Road New Crossing – Highway 400
Engineering plans forming part of Contract 2018-002T – Harvie Road and Big Bay Point Road New Crossing – Highway 400

4. Regulatory Requirement

This work is being carried out in accordance with the Municipal Class Environmental Assessment, October 2000, as amended in 2007, 2011, and 2015.

If you disagree with any information contained herein, please advise immediately.
H353437-10-230-0004, Rev. A
Page 1



5. Technical Criteria Used to Assess the Application

The following technical criteria were used to assess this application:

- Ministry of the Environment and Climate Change, Design Guidelines for Sewage Works, 2008;
- City of Barrie, Sanitary Sewage Collection System Policies and Design Guidelines, 2017.

6. Issues Identified

No issues have been identified.

7. New/Modified Terms and Conditions

None.

8. Source Water Protection

A segment of the proposed works between Essa Road and west of Veterans Dr. is located within WHPA-D.

9. Recommendation

The proposed works are recommended for approval under the Limited Operational Flexibility, in accordance with Schedule "B", section (1) and (2).

A handwritten signature in black ink, appearing to read "Alberto Segura". The signature is written over a horizontal line.

Alberto Segura, M.Sc., P.Eng.

AS:tc

- MOECC Notice of Modification to Sewage Works



Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA AND SEND A COPY TO THE WATER SUPERVISOR (FOR MUNICIPAL) OR DISTRICT MANAGER (FOR NON-MUNICIPAL SYSTEMS)

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility

(Insert the ECA's owner, number, issuance date and notice number, which should start with "01" and consecutive numbers thereafter)

ECA Number 5921-ATUKKR Sanitary	Issuance Date (mm/dd/yy) January 10, 2018	Notice number (if applicable) 01- 2018-06
ECA Owner The Corporation of the City of Barrie	Municipality Barrie	

Part 2: Description of the modifications as part of the Limited Operational Flexibility

(Attach a detailed description of the sewage works)

Refer to attached Engineering Assessment - Contract 2018-102T

Description shall include:

1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.)
2. Confirmation that the anticipated environmental effects are negligible.
3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)

Part 3 – Declaration by Professional Engineer

I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:

1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario;
2. Conforms with the Limited Operational Flexibility as per the ECA;
3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s.53 of the Ontario Water Resources Act; and other appropriate regulations.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.

Name (Print) BRAD F. STANTON, P.ENG.	PEO License Number 90415795
Signature 	Date (mm/dd/yy) SEPTEMBER 7, 2018
Name of Employer C.C. TATUM & ASSOCIATES LTD.	

Part 4 – Declaration by Owner

I hereby declare that:

1. I am authorized by the Owner to complete this Declaration;
2. The Owner consents to the modification; and
3. These modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA.

4. The Owner has fulfilled all applicable requirements of the *Environmental Assessment Act*.

I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.

Name of Owner Representative (Print) Kelly Oakley	Owner representative's title (Print) Director of Engineering
Owner Representative's Signature 	Date (mm/dd/yy) December 19/18

**CITY OF BARRIE - ENGINEERING ASSESSMENT FOR
NOTICE OF MODIFICATION TO SEWAGE WORKS**

(Requirement of ECA No. 5921-ATUKKR, in accordance with Schedule "B", Section (1))

Project:

Duckworth Street sanitary sewer replacement (St. Vincent Street to 50 metres north of Melrose Avenue); part of Contract **2018-102T – Duckworth Street Improvements (Melrose Avenue to St. Vincent Street)**.

Description of Project (Summary):

Removal of approximately 566m of existing 250mm diameter sanitary sewer and installation of approximately 553m of 250mm dia. PVC sanitary sewer, including the installation of eleven (10) 1200mm dia. maintenance holes, one (1) 1500mm dia. maintenance hole, and replacement of new sanitary service laterals within the municipal right-of-way, and connection to the existing sanitary sewers and existing maintenance holes.

This work is being undertaken to replace the existing sanitary sewer which has reached the end of its service life and does not meet the current municipal standards. For the most part, the sanitary is being replaced at the same elevation and alignment. Where possible, the proposed sanitary sewer has been reconfigured to increase pipe slopes to increase flow velocities, as well as an increased depth of cover.

Documentation Reviewed:

- City of Barrie Contract document **2018-102T – Duckworth Street Improvements – Melrose Avenue to St. Vincent Street**.
- Engineering plans forming part of Contract **2018-102T – Duckworth Street Improvements – Melrose Avenue to St. Vincent Street**.

Regulatory Requirement:

This work is being carried out in accordance with the Municipal Class Environmental Assessment, October 2000, as amended in 2007, 2011, and 2015.

Technical Criteria Used to Assess the Application:

The following technical criteria were used to assess this application:

- Ministry of the Environment and Climate Change, Design Guidelines for Sewage Works, 2008;
- City of Barrie, Sanitary Sewage Collection System Policies and Design Guideline, 2017.

Issues Identified:

No issues have been identified.

New/Modified Terms and Conditions:

None.

Source Water Protection:

The proposed work is located within a Q1 wellhead protection area.

Recommendation:

The proposed works are recommended for approval under the Limited Operational Flexibility, in accordance with Schedule "B", section (1) and (2).



Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA AND SEND A COPY TO THE WATER SUPERVISOR (FOR MUNICIPAL) OR DISTRICT MANAGER (FOR NON-MUNICIPAL SYSTEMS)

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility <small>(Insert the ECA's owner, number, issuance date and notice number; which should start with "01" and consecutive numbers thereafter)</small>		
ECA Number 5921-ATUKKR	Issuance Date (mm/dd/yy) January 10, 2018	Notice number (if applicable) 01- 2019-02
ECA Owner The Corporation of the City of Barrie		Municipality Barrie

Part 2: Description of the modifications as part of the Limited Operational Flexibility <small>(Attach a detailed description of the sewage works)</small>
<p>The proposed works on Dunlop Street extend approximately 300m, east from the end of the previous reconstruction on Dunlop Street to Toronto Street and will include roadway reconstruction (granulars, asphalt, sidewalk, curb and gutter), traffic detection loops, street lighting and the replacement of underground infrastructure including watermain, sanitary and storm sewers.</p> <p>The sanitary sewer component of this project involves both the design of the replacement of the 195m long local sewer on Dunlop Street to 375mm and 450mm diameter concrete pipes and the rerouting of the 125m long Cundles Trunk Sanitary Sewer at High Street/Bradford Street and Dunlop Street to 450mm to 750mm diameter concrete pipes. The Cundles sanitary trunk sewer will be rerouted from High Street east along Dunlop Street and then south on Bradford Street to allow for the possible closure and redevelopment of High Street from Dunlop Street to Bradford Street.</p> <p>Description shall include:</p> <ol style="list-style-type: none"> 1. A detail description of the modifications and/or operations to the sewage works (e.g. sewage work component, location, size, equipment type/model, material, process name, etc.) 2. Confirmation that the anticipated environmental effects are negligible. 3. List of updated versions of, or amendments to, all relevant technical documents that are affected by the modifications as applicable, i.e. submission of documentation is not required, but the listing of updated documents is (design brief, drawings, emergency plan, etc.)

Part 3 – Declaration by Professional Engineer	
<p>I hereby declare that I have verified the scope and technical aspects of this modification and confirm that the design:</p> <ol style="list-style-type: none"> 1. Has been prepared or reviewed by a Professional Engineer who is licensed to practice in the Province of Ontario; 2. Conforms with the Limited Operational Flexibility as per the ECA; 3. Has been designed consistent with Ministry's Design Guidelines, adhering to engineering standards, industry's best management practices, and demonstrating ongoing compliance with s 53 of the Ontario Water Resources Act; and other appropriate regulations. <p>I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.</p>	
Name (Print) Drew Davidge, P.Eng	PEO License Number 100162350
Signature 	Date (mm/dd/yy) 11/19/19
Name of Employer R.J. Burnside & Associates Limited	

Part 4 – Declaration by Owner	
<p>I hereby declare that:</p> <ol style="list-style-type: none"> 1. I am authorized by the Owner to complete this Declaration; 2. The Owner consents to the modification; and 3. These modifications to the sewage works are proposed in accordance with the Limited Operational Flexibility as described in the ECA. 4. The Owner has fulfilled all applicable requirements of the <i>Environmental Assessment Act</i>. <p>I hereby declare that to the best of my knowledge, information and belief the information contained in this form is complete and accurate.</p>	
Name of Owner Representative (Print) Bala Araniyasundaran	Owner Representative's title (Print) Director of Engineering
Owner Representative's Signature 	Date (mm/dd/yy) 11/21/2019

**CITY OF BARRIE - ENGINEERING ASSESSMENT FOR
NOTICE OF MODIFICATION TO SEWAGE WORKS**

(Requirement of ECA No. 5921-ATUXXR, in accordance with Schedule "B", Section (1))

Project:

Dunlop Street Road Reconstruction (Eccles Street to Toronto Street)

Description of Project (Summary):

The proposed works on Dunlop Street extend approximately 300m, east from the end of the previous reconstruction on Dunlop Street to Toronto Street and will include roadway reconstruction (granulars, asphalt, sidewalk, curb and gutter), traffic detection loops, street lighting and the replacement of underground infrastructure including watermain, sanitary and storm sewers.

The proposed sanitary sewer work of this project involves both the design of the replacement of the 195m long local sewer on Dunlop Street to 375mm and 450mm diameter concrete pipes and the rerouting of the 125m long Cundles Trunk Sanitary Sewer at High Street/Bradford Street and Dunlop Street to 450mm to 750mm diameter concrete pipes. The Cundles sanitary trunk sewer will be rerouted from High Street east along Dunlop Street and then south on Bradford Street to allow for the possible closure and redevelopment of High Street from Dunlop Street to Bradford Street.

The proposed storm component of this project involves a proposed concrete rigid frame structure under Dunlop Street and open channel through the lands formerly occupied by Barrie Central Collegiate Institute which will ultimately be connected to the existing concrete box culvert under Simcoe Street east of Bradford Street. These drainage improvements would replace the existing 1,200 x 1,700mm concrete box culvert extending from the hotel/restaurant property on the north side of Dunlop Street easterly to Bradford Street.

There is a proposed precast concrete rigid frame structure to convey Kidd's Creek from Bradford Street to the existing Simcoe Street culvert. The proposed storm sewer is designed to convey the 5-year storm event as per the City of Barrie Storm Drainage and Stormwater Management Policies and Design Guidelines and will meet MOE and LSRCA criteria. The storm sewer network includes four oil-grit separator to address quality control. The natural channel design will improve fish habitat and no barriers to fish movement will be created based on the proposed design of the new culverts. The Storm component of this work being reviewed under the City's MOECC Transfer of Review Process.

Documentation Reviewed:

City of Barrie contract document FIN2019-145T – Dunlop Street West Reconstruction – 2019
Engineering plans forming part of Contract FIN2019-145T – Dunlop Street West Reconstruction – 2019

Regulatory Requirement:

This work is being carried out in accordance with the Municipal Class Environmental Assessment, October 2000, as amended in 2007, 2011 & 2015.

Technical Criteria Used to Assess the Application:

The following technical criteria were used to assess this application:

- Ministry of the Environment and Climate Change, Design Guidelines for Sewage Works, 2008;
- City of Barrie, Sanitary Sewage Collection System Policies and Design Guidelines, 2017.

Issues Identified:

No issues have been identified.

New/Modified Terms and Conditions:

None.

Source Water Protection:

The proposed work is located within a Wellhead Protection Zone.

The proposed works are replacing existing pipes and all sewage will continue to flow to the City of Barrie Wastewater Treatment Facility. This work should be in conformance with requirement SEWG(b)-2 of the Approved South Georgian Bay Lake Simcoe Source Protection Plan.

Recommendation:

The proposed works are recommended for approval under the Limited Operational Flexibility, in accordance with Schedule "B", section (1) and (2).

R.J. Burnside & Associates Limited 128 Wellington Street West Suite 301 Barrie ON L4N 8J6 CANADA
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November 19, 2019

Via: Email

Dave James, P.Eng.
Senior Project Engineer
City of Barrie
Engineering Department
70 Collier Street
Barrie ON L4M 4T5

Dear Mr. James:

**Re: Dunlop Street Reconstruction (Eccles Street to Toronto Street) Environmental Compliance Assessment (ECA) – Contract # FIN2019-145T
Project No.: 300034241.0000**

R.J. Burnside & Associates Limited (Burnside) has completed an Engineering Assessment for the modification of a Sanitary Sewer for the Dunlop Street Reconstruction (Eccles Street to Toronto Street) Project – Contract # FIN2019-145T.

Per Schedule B: "Limited Operational Flexibility Criteria for Modification to Sanitary Sewage Works", I have completed an Engineering Assessment for Modification to Sanitary Sewage Works as described in the Engineering Assessment for Notice of Modification to Sewage Works enclosed.

I have reviewed the engineering plans for the aforementioned project and certify that the design has been completed in general conformance with the applicable technical criteria and in accordance with good construction practices. My review of the design does not include the review of the upstream sanitary flows or catchment areas as this information was supplied by the City of Barrie and was used as provided.

Should you have any questions or require further information, please contact our office.

Yours truly,

R.J. Burnside & Associates Limited

Ernie Groskopf, P.Eng.
Senior Design Lead
EG:sc
Enclosure(s) ECA Engineering Assessment
Notice of Modification to Sewage Works

cc: Drew Davidge, Burnside (enc.) (Via: Email – drew.davidge@rjburnside.com)

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