



2019 ANNUAL REPORT

River St. Pumping Station, Collingwood CSO and Orchard CSO

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REPORT CHECK LIST

Annual report submitted for River St. Pumping Station certificate of approval number 3237-9EFN85, Collingwood CSO certificate of approval number 2414-63TQET, and Orchard CSO certificate of Approval number 1172-64EMDR.

Each annual report shall contain at least the following information:

- Summary and interpretation of all monitoring data and an overview of the success and adequacy of the works.
- Description of any operating problems encountered and corrective actions taken.
- Summary of all maintenance carried out on any major structure, equipment, apparatus mechanism or thing forming part of works.
- Summary of the calibration and maintenance carried out on all effluent monitoring equipment.
- Summary of any complaints received during the reporting period and any steps taken to address the complaints.
- Summary of all By-pass, spill or abnormal discharge events.
- Summary of any incidents where the fine screen in the overflow chamber has become completely clogged or blinded, resulting in emergency overflow. (River St. Pumping Station only)
- Any other information the District Manager requires from time to time.

EXECUTIVE SUMMARY

The River St. Pumping Facility operates under a Ministry of the Environment, Conservation and Parks Certificate of Approval, #3237-9EFN85. For the reporting year 2019 the facility was in compliance with all conditions outlined in condition 7 of the above mentioned Certificate of Approval and are briefly described in the following sections of this report.

The total flow through the facility in 2019 was 24,771,235 m³.

The facility saw no bypass events in the 2019 reporting year therefore no debris has clogged the overflow screen. It is still visually inspected from time to time.

On June 6, 2019 one of the forcemains leaving the facility failed resulting in the building being flooded and significant damage to electrical and mechanical systems. This failure resulted in a sewage spill that was reported to the MECP. Despite the significant damage, the facility was able to be brought back into service the same day using a number of temporary measures. Replacement of damaged equipment took place over the course of the following months.

The facility was upgraded in 2013 and finished in 2014. Improvements were made in the grit removal system, air treatment, and corrosion control by means of installing a hydrogen peroxide injection system which is operated by U.S. Peroxide.

The Orchard St. (Emma Martin) CSO system operates under the Ministry of the Environment, Conservation and Parks Certificate of Approval #1172-64EMDR.

The total flow through this system in 2019 was 71,709m³ with 1 bypass occurring with the volume of 18,000m³ on June 6/19.

No repairs had to be done to this system in 2019 and no operating problems were encountered. There was a tank cleanout to remove collected debris.

The Collingwood CSO system operates under the Ministry of the Environment, Conservation and Parks Certificate of Approval #2414-63TQET.

The total flow to sanitary from this system for 2019 was 152,156.8 m³.

The total flow to the Lake was 42575.8 m³ during bypasses.

There were 5 bypass events from this system in 2019. Please see Table 1 & 2.

The holding tank was cleaned out this year to remove collected debris.

EQUIPMENT CALIBRATIONS

All of the facility flow meters are calibrated annually by third party contractors. As a result of this proactive approach, the facility saw limited downtime of major equipment and saw very few mechanical or electrical failures this year.

COMPLAINTS

There have been no official complaints about all three facilities for the year 2019.

BYPASS SUMMARY

Table 1 summarizes the locations, volumes and durations of bypass events for the reporting year 2019. Table 2 summarizes the test results from samples taken during the 2019 bypass events.

Table 1: Bypass Events

Bypass Event Record						
Date mm/dd/yyyy	Location	Start Time	End Time	Volume (m ³)	Reason For Bypass	Precip. (mm)
03/31/2019	King-Collingwood CSO	00:25	22:07	17513.62	Heavy rain	33.2
04/20/2019	King-Collingwood CSO	7:10	22:40	2492	Heavy rain	28.9
05/23/2019	King-Collingwood CSO	19:14	19:40	0.001	rain	7.8
10/27/2019	King-Collingwood CSO	07:52	15:25	3196	Heavy rain	46.8
10/31/2019 to 11/1/2019	King-Collingwood CSO	18:01	17:19	13046.125	Heavy rain	52.4
06/06/2019	Orchard St. CSO	12:45	19:00	18000	Forcemain failure at River St.	14.5

Table 2: Bypass Sampling Results

Bypass Event Sampling Results For Collingwood And Orchard CSO		
Parameter	Units	King-Collingwood and Orchard CSO Annual Avg.
Total Coliform	Cfu/100ml	1349761
E coli	Cfu/100ml	158452
HPC	Cfu/ml	843809
CBOD ₅	mg/l	9.2
TSS	mg/l	75
TP	mg/l	0.46
TKN	mg/l	3.5

BYPASS RESULT INTERPRETATIONS

All bypass discharges have a higher bacteria count due to no disinfection occurring. CBOD₅, TP & TKN results are much lower than typical raw sewage influent to the sewage plant due to the dilution of rain water during these events. All efforts are made to contain any debris in these discharges to the lake. After each bypass event, shoreline inspections near discharge points are done to monitor any debris that may come ashore. Clean up is done if debris is found.