



MUNICIPALITY OF

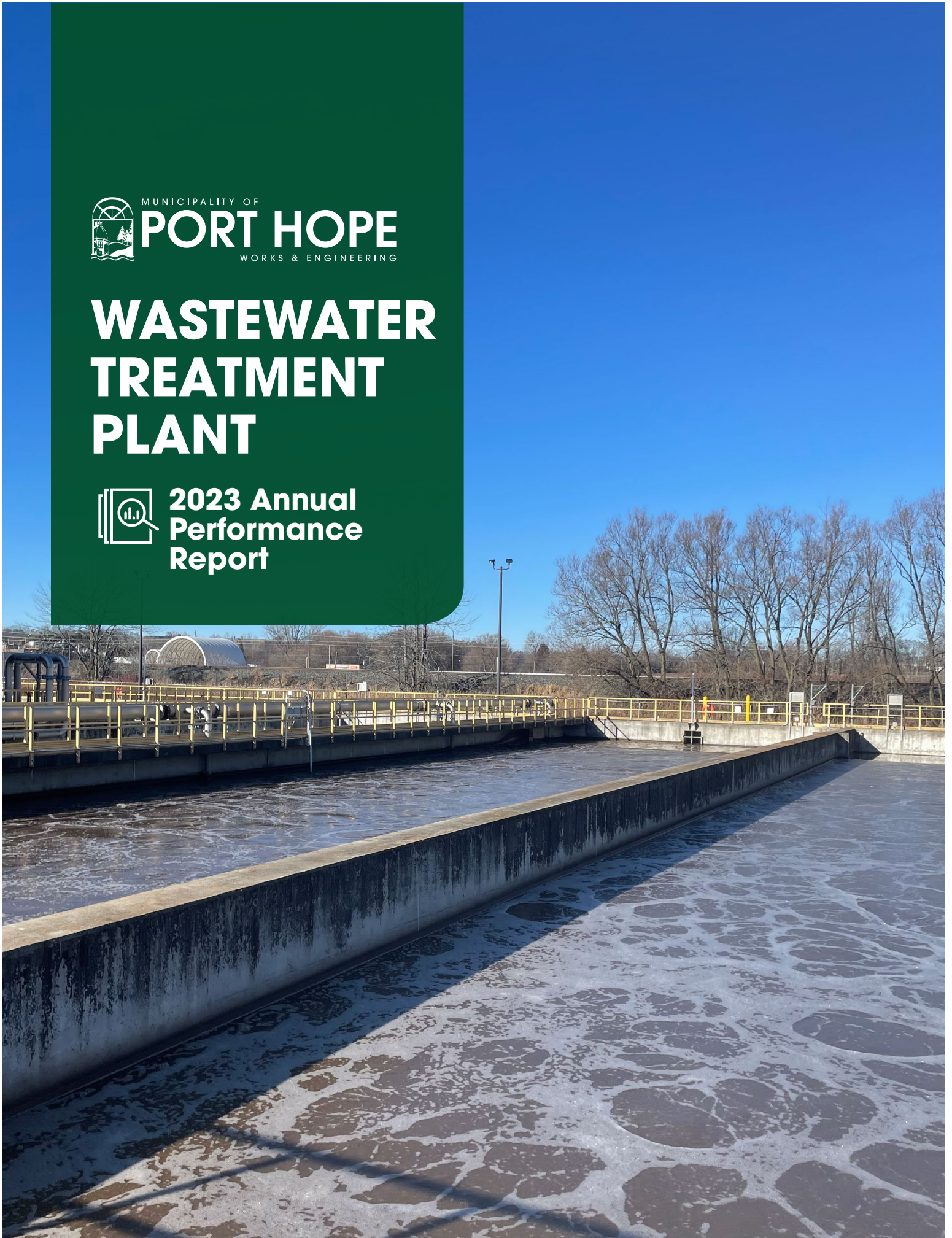
PORT HOPE

WORKS & ENGINEERING

WASTEWATER TREATMENT PLANT



**2023 Annual
Performance
Report**





TOWN HALL
56 Queen Street
Port Hope, ON L1A 3Z9

t: 905.885.4544
f: 905.885.7698

adminporthope.ca
www.porthope.ca

January 30, 2024

Municipality of Port Hope
56 Queen Street
Port Hope, ON
L1A 3Z9

Re: 2023 Annual Performance Report - Port Hope Wastewater Treatment Plant

Dear Mrs. Candice White,

We are pleased to provide the 2023 Annual Performance Report for the Municipality of Port Hope's **Wastewater Treatment Plant**, located at 100 Lake Street, Port Hope, Ontario. This report has been completed in accordance with the Environmental Compliance Approval #8519-BKNN7C, Section 11 (4), dated March 26, 2020, and issued to The Corporation of the Municipality of Port Hope.

The report covers the period from January 1, 2023, to December 31, 2023.

Sincerely,

Kevin Yule
Manager, Wastewater
Municipality of Port Hope

Contents

Executive Summary	4
2023 Annual Performance Report – Wastewater Treatment Plant.....	4
(a) Influent and Imported Sewage Monitoring Program Summary	5
(b) Final Effluent Monitoring Program Summary	8
(c) Operating Problems and Corrective Actions	11
(d) Summary of Major Maintenance Activities	12
(e) Effluent Quality Assurance/Control Measures	12
(f) Calibration and Maintenance on Monitoring Equipment.....	12
(g) Summary of Efforts Made to Achieve Design Objectives.....	13
(h) Summary of Sludge Generation.....	14
(i) Summary of Complaints Received	16
(j) Summary of all By-passes, Spills or Abnormal Discharge Events	17
(k) Notice of Modifications	17
(l) Efforts to Achieve Conformance with Procedure F-5-1 - Determination of Treatment Requirements for Municipal and Private Sewage Treatment Works	17
(m) Summary of Maintenance, Inspections and Monitoring Details	18

Tables

Table A - Summary of Monthly Average Influent Concentrations.....	6
Table B – Summary of Influent Flows.....	6
Table C - Imported Sewage (Septage Receiving) Monitoring Data.....	7
Table D - Summary of Monthly Final Effluent Concentrations.....	9
Table E - Port Hope Wastewater Treatment Plant Performance Assessment	10
Table F – Summary of Final Effluent Flows.....	11
Table G - Summary of Operating Problems Encountered and Corrective Actions Taken	11
Table H - Summary of Calibration and Maintenance of Monitoring Equipment.....	13
Table I - Aerobic Digested Sludge Generated.....	14
Table J - Aerobic Digester Sludge Solids/Nutrient Analysis	15
Table K - Aerobic Digested Sludge Metal Analysis	16
Table L - Incidents of By-passes, Spills or Abnormal Discharges including Maximum Sampling Results During Event, if applicable.....	17

Figures

Figure 1 - Historical Flow Comparison 7

Appendices

APPENDIX A – Copy of Notice of Modification to Sewage Works.....18

Executive Summary

The Port Hope Wastewater Treatment Plant (WWTP) is located at 100 Lake Street, in the Municipality of Port Hope, and services the community of Port Hope with a population of approximately 16,800. The facility is owned and operated by the Municipality of Port Hope in accordance with Environmental Compliance Approval (ECA) # 8519-BKNN7C, issued March 26, 2020. The WWTP is a Class III Wastewater Treatment Plant and has a rated capacity of 11,300 m³/day.

The facility is described as an extended aeration activated sludge treatment plant with aerobic digestion. The facility is equipped with a septage receiving station, which receives raw sewage and septic wastes from hauler trucks. The headworks equipment provides for screening and grit removal and is present to protect the mechanical equipment downstream from damage by removing solid particles contained in the raw sewage as well as providing preliminary treatment. By gravity, the screened and dewatered wastewater, from the headworks, flows into three (3) aeration tanks, on a flow displacement basis. The mixed liquor from the aeration tanks flows into the three (3) rectangular secondary clarifiers, on a flow displacement basis. In the clarifiers, the solids are settled to the bottom of the tank and the clarified liquid at the top of the tank overflows into several rectangular weirs located at the discharge end of the clarifiers. This clarified liquid (secondary effluent) is then conveyed to the chlorine contact tanks for disinfection. Final effluent is then dechlorinated with sodium bisulphite, prior to being discharged to Lake Ontario.

During the Reporting Period (January 1st - December 31st, 2023), no bypass or overflow events occurred, and no customer complaints were reported for the WWTP. One (1) reportable incident (see Table G and Table L below for more details), involving a spill, was observed during the Reporting Period. Corrective actions were implemented, and the incident was reported to the Ministry of the Environment, Conservation and Parks (MECP).

No MECP inspection occurred during the Reporting Period.

2023 Annual Performance Report – Wastewater Treatment Plant

In accordance with the ECA #8519-BKNN7C, Section 11 (4) - REPORTING, the Municipality of Port Hope, as the Owner of the Port Hope Wastewater Treatment Plant, shall prepare a performance report on a calendar year basis and submit to the MECP by March 31 of the calendar year following the period being reported upon.

Section 11(4) - REPORTING requires the Performance Report to contain the following:

- (a) a summary and interpretation of all Influent, monitoring data, and a review of the historical trend of the sewage characteristics and flow rates.
- (b) a summary and interpretation of all final effluent monitoring data, including concentration, flow rates, and a comparison to the design objectives and compliance limits, including an overview of the success and adequacy of the Works.

- (c) a summary of all operating issues encountered, and corrective actions taken.
- (d) a summary of all normal and emergency repairs and maintenance activities carried out on any major structure, equipment, apparatus, or mechanism forming part of the Works.
- (e) a summary of any effluent quality assurance or control measures undertaken.
- (f) a summary of the calibration and maintenance carried out on all influent, imported sewage and final effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in the ECA or recommended by the manufacturer.
- (g) a summary of efforts made to achieve the design objectives, including an assessment of the issues and recommendations for pro-active actions if any are required under the following situations:
 - i. when any of the design objectives is not achieved more than 50% of the time in a year, or there is an increasing trend in deterioration of final effluent quality,
 - ii. when the annual average daily influent flow reaches 80% of the rated capacity.
- (h) a tabulation of the volume of sludge generated, an outline of anticipated volumes to be generated in the next Reporting Period and a summary of the locations to where the sludge was disposed,
- (i) a summary of any complaints received, and any steps taken to address the complaints,
- (j) a summary of all bypasses, overflows, other situations outside normal operating conditions and spills within the meaning of Part X of EPA and abnormal discharge events,
- (k) a summary of all Notice of Modifications to Sewage Works completed under Paragraph 1.d. of Condition 10, including a report on status of implementation of all modification,
- (l) a summary of efforts made to achieve conformance with Procedure F-5-1 including but not limited to projects undertaken and completed in the sanitary sewer system that result in overall by-pass/overflow elimination including expenditures and proposed projects to eliminate by-pass/overflows with estimated budget forecast for the year following that for which the report is submitted, and
- (m) a summary of maintenance, inspections, and monitoring details.

The following report was generated from the records maintained by the Municipality of Port Hope for the Port Hope Wastewater Treatment Plant for the calendar year 2023:

(a) Influent and Imported Sewage Monitoring Program Summary

The following Tables A, B and C, list a summary of influent and imported sewage (septage receiving) monitoring data, including current and historic sewage characteristics and flows.

Table A - Summary of Monthly Average Influent Concentrations

	Biochemical Oxygen Demand (BOD ⁵) (mg/L)	Total Suspended Solids (TSS) (mg/L)	Total Phosphorus (TP) (mg/L)	Total Kjeldahl Nitrogen (TKN) (as N mg/L)
January	133	132	2.1	20.04
February	212	209	2.5	22.23
March	144	146	2.0	18.03
April	175	210	2.6	21.73
May	160	199	2.5	19.80
June	200	215	2.8	22.80
July	178	311	3.3	29.20
August	218	237	3.3	29.00
September	254	277	3.6	30.78
October	350	336	4.7	35.00
November	222	336	5.0	37.95
December	191	159	2.7	28.38
Average	203	231	3.1	26.24
3-year Average	207	246	3.0	25.53
5-year Average	204	247	2.9	24.78

Table B – Summary of Influent Flows

	Monthly Total Flow (m ³)	Average Daily Influent Flow (m ³ /day)	Max Daily Influent Flow (m ³ /day)
January	203,169	6,554	17,032
February	193,562	6,913	15,996
March	239,136	7,714	13,336
April	236,940	7,898	17,035
May	191,318	6,171	10,742
June	137,880	4,596	6,557
July	131,053	4,227	6,439
August	129,341	4,172	5,000
September	111,445	3,715	4,526
October	105,356	3,399	3,737
November	108,078	3,603	4,770
December	133,497	4,306	6,430

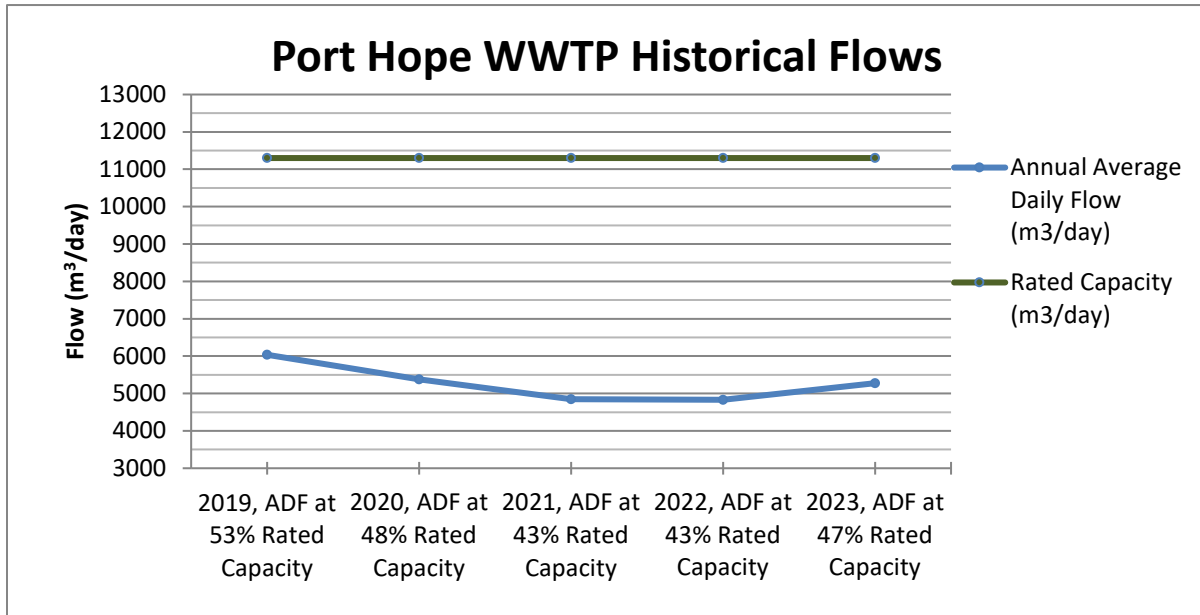
2023 Total Influent Flow = 1,906,775 m³/year

2023 Annual Average Daily Influent Flow (ADF) = 5,272 m³/day

2023 Maximum Daily Influent Flow = 17,035 m³/day

On average, the facility operates at 47% of Rated Capacity throughout Reporting Period.

Figure 1 - Historical Flow Comparison



Rated Capacity of Port Hope Wastewater Treatment Plant = 11,300 m³/day
3-year Average Daily Flow = 5,273 m³/day (47% of Rated Capacity)
5-year Average Daily Flow = 4,985 m³/day (44% of Rated Capacity)

Table C - Imported Sewage (Septage Receiving) Monitoring Data

	Total Volume (m ³)	Monthly Average BOD ⁵ (mg/L)	Monthly Average TSS (mg/L)	Monthly Average TP (mg/L)	Monthly Average TKN (as N mg/L)
January	349	1270	455	20	91
February	266	1450	7830	23	120
March	466	2350	10800	54	283
April	217	1990	13500	52	488
May	839	927	3130	12	90
June	827	6060	34500	488	1230
July	825	1250	3200	38	245
August	953	2410	3880	18	148
September	765	5590	54700	27	190
October	1012	3030	10000	79	539
November	732	560	2380	23	241
December	505	1090	2980	36	243
Total	7755				
Average	646	2331	12280	73	326
3-year Average	9578	2233	8638	70	344

	Total Volume (m ³)	Monthly Average BOD ⁵ (mg/L)	Monthly Average TSS (mg/L)	Monthly Average TP (mg/L)	Monthly Average TKN (as N mg/L)
5-year Average	9026	2509	8596	103	337

(b) Final Effluent Monitoring Program Summary

The following Tables D, E, and F list a summary of final effluent concentration results in comparison to final effluent objectives and limits as per Schedule B and Schedule C, a tabulation of un-ionized ammonia monthly average calculations, and a performance assessment of raw influent - final effluent removal efficiencies.

Effluent grab samples are collected and analyzed for acute lethality to rainbow trout and daphnia magna. With approval from the MECP, as per Condition 5, monitoring frequency in respect of acute lethality to rainbow trout and daphnia magna can be reduced to annually, if desired. In 2023, semi-annual grab samples were collected and analyzed. Both samples resulted in a 0% mortality rate for both rainbow trout and daphnia magna.

In determining compliance with total chlorine residual limits the following data is analyzed: DPD colorimeter grab sample results.

Table D - Summary of Monthly Final Effluent Concentrations

	Carbonaceous Biochemical Oxygen Demand (CBOD ⁵) (mg/L)	TSS (mg/L)	TP (mg/L)	Geometric Mean Density of E. Coli (cfu/100ml)	Monthly MIN pH	Monthly MAX pH	Total Ammonia Nitrogen ¹ (TAN) (mg/L)	Calculated Monthly Average Unionized Ammonia (mg/L)	Maximum Total Chlorine Residual (mg/L)
Design Objective	15.0	15.0	0.8	100			MAY 1 to NOV 30: 6.0 DEC 1 to APR 30: 12.0	20	Non-Detectable
Compliance Limit(s)	25.0	25.0	1.0	200	6.0-9.5	6.0-9.5	No Limit	No Limit	>0.02
January	2.8	7.8	0.2	7	7.19	7.86	0.10	0.24	0.02
February	3.0	11.3	0.2	3	6.31	8.21	0.10	0.55	0.02
March	2.3	6.3	0.2	6	6.17	8.15	0.10	0.39	0.02
April	2.3	8.5	0.2	5	6.41	8.43	0.10	0.37	0.02
May	3.2	8.6	0.3	4	7.05	8.68	0.10	2.21	0.02
June	3.8	20.8	0.6	2	6.84	7.95	0.10	1.71	0.02
July	2.5	9.8	0.2	2	6.78	8.42	0.10	0.96	0.02
August	2.8	6.2	0.1	3	6.57	8.16	0.12	0.85	0.02
September	2.8	7.0	0.3	2	6.56	7.11	0.13	0.19	0.02
October	2.4	6.2	0.2	4	6.35	6.95	0.10	0.08	0.02
November	2.8	6.5	0.2	2	6.32	6.97	0.10	0.08	0.02
December	2.8	7.3	0.2	3	6.28	7.18	0.10	0.04	0.02
Average	2.8	8.8	0.2	4			0.10	0.64	0.01
Minimum	2.3	6.2	0.1	2	6.17		0.10	0.04	
Maximum	3.8	20.8	0.6	7		8.68	0.13	2.21	0.02

¹ The results of the total ammonia concentration, pH and temperature, at the time of sampling, were used for the calculation of the un-ionized ammonia.

Table E - Port Hope Wastewater Treatment Plant Performance Assessment

	BOD ⁵ Influent (mg/L)	CBOD ⁵ Effluent (mg/L)	TSS Influent (mg/L)	TSS Effluent (mg/L)	TSS %Removal	TP Influent (mg/L)	TP Effluent (mg/L)	TP %Removal
January	133	2.8	132	7.8	94.1%	2.08	0.18	91.3%
February	212	3.0	209	11.3	94.6%	2.50	0.21	91.7%
March	144	2.3	146	6.3	95.7%	1.97	0.15	92.4%
April	175	2.3	210	8.5	95.9%	2.61	0.23	91.2%
May	160	3.2	199	8.6	95.7%	2.50	0.34	86.3%
June	200	3.8	215	20.8	90.4%	2.84	0.56	80.2%
July	178	2.5	311	9.8	96.9%	3.31	0.18	94.7%
August	218	2.8	237	6.2	97.4%	3.29	0.14	95.7%
September	254	2.8	277	7.0	97.5%	3.61	0.27	92.6%
October	350	2.4	336	6.2	98.2%	4.73	0.23	95.2%
November	222	2.8	336	6.5	98.1%	4.99	0.22	95.5%
December	191	2.8	159	7.3	95.4%	2.72	0.19	92.9%
Average	254	2.7	277	6.7	95.8%	4.01	0.23	91.6%

Table F – Summary of Final Effluent Flows

	Monthly Total Flow (m ³)	Average Daily Final Effluent Flow (m ³ /day)	Max Daily Final Effluent Flow (m ³ /day)
January	175,247	5,653	13,647
February	158,554	5,663	13,383
March ²	199,603	6,439	11,336
April	183,658	6,122	12,325
May	156,592	5,051	8,846
June	117,400	3,913	5,521
July	109,051	3,518	5,175
August	105,095	3,390	4,065
September	93,069	3,102	3,510
October	94,684	3,054	3,497
November	95,076	3,169	4,328
December	119,070	3,841	5,407

2023 Total Final Effluent Flow = 1,607,097 m³/year

(c) Operating Problems and Corrective Actions

Table G - Summary of Operating Problems Encountered and Corrective Actions Taken

Date	Operating Problem	Corrective Action Taken
March 23, 2023	Final effluent flow meter stopped working.	Operations staff investigated. External contractor hired to investigate further. Flow meter temporarily fixed March 30, 2023. Contractor completed final repairs on April 19, 2023. Final effluent flow estimated from March 23 to March 30, 2023, using influent flow values.
April 18, 2023	Spill/Pollutant discharge of headwork bin debris to WWTP grounds.	Regulatory agencies were notified of the spill/pollutant discharge. Absorbent pads/spill socks were deployed to prevent spill from entering nearby stormwater catch basins. Vacuum truck called in to assist cleanup of WWTP grounds. Coaching completed with waste hauler company.

² Final effluent flow meter stopped working from March 23, 2023, to March 30, 2023. Final effluent flow estimated during time frame.

Date	Operating Problem	Corrective Action Taken
July 22, 2023	Diesel Fuel Spill (approx. 1 Litre) to sewage collection system	Approximately one (1) litre of diesel fuel spilled into sewage collection system on private property. Raw influent sample taken at WWTP by a wastewater operator.

(d) Summary of Major Maintenance Activities

The Municipality maintains an active maintenance management program, for general maintenance and repair, to ensure that the facilities are maintained in a fit state of repair. In addition to this program, major works were upgraded or replaced as follows.

1. January 24, 2023 - Process building HVAC major maintenance and repairs.
2. February 28, 2023 - Process building HVAC major maintenance and repairs.
3. March 29, 2023 - Main gas meter for WWTP major maintenance and repairs.
4. May 1, 2023 - WWTP fire alarm panel upgrades.
5. June 15, 2023 - Alum pump #3 major maintenance and repairs.
6. July 5, 2023 - Centrifuge major maintenance and repairs.
7. August 17, 2023 - Septage trough drain major maintenance and repairs.
8. September 6, 2023 - Headworks screw conveyor major maintenance and repairs.
9. December 12, 2023 - Onsite pump station new flow meter installed.
10. December 22, 2023 - WWTP final effluent pipe re-lined.

All maintenance was performed on behalf of the Owner, by licenced Operators or qualified contracted services providers who exercise due diligence in ensuring the Works and the related equipment are properly operated and maintained to achieve compliance with the Approval. Daily rounds of the WWTP and pumping stations are conducted by the Operators and any observations are being recorded.

(e) Effluent Quality Assurance/Control Measures

Final effluent quality assurance is maintained by utilizing accredited laboratories (SGS Environmental Services and Nautilus Environmental) for analysis of all final effluent parameters. Sampling requirements are issued to plant personnel that denote required parameters and frequency of sampling. A spreadsheet is used to track in-house lab results to perform several calculations used to monitor and measure the effectiveness of the plant performance.

(f) Calibration and Maintenance on Monitoring Equipment

Calibration of the flow meters, lab equipment and analyzers were conducted as per regular annual maintenance. Cleaning of effluent monitoring equipment is performed on a regular routine basis. Accuracy of effluent monitoring equipment operation was confirmed by onsite lab effluent samples analysis and offsite third-party accredited laboratory analysis.

Table H - Summary of Calibration and Maintenance of Monitoring Equipment

Analyzer	Location	Date Calibrated/Service	Calibrated/Service by Whom
Influent flow meter – vortex #1	WWTP	August 9, 2023	Franklin Empire, Mitch Manley
Influent flow meter – vortex #2	WWTP	August 9, 2023	Franklin Empire, Mitch Manley
Septage flow meter	WWTP	August 9, 2023	Franklin Empire, Mitch Manley
Bypass flow meter	WWTP	August 9, 2023	Franklin Empire, Mitch Manley
Centrifuge	WWTP	August 9, 2023	Franklin Empire, Mitch Manley
RAS to aeration flow meter	WWTP	August 9, 2023	Franklin Empire, Mitch Manley
Polymer	WWTP	August 9, 2023	Franklin Empire, Mitch Manley
WAS to aeration flow meter	WWTP	August 9, 2023	Franklin Empire, Mitch Manley
Final effluent flow meter	WWTP	April 19, 2023	Tower Electronics Canada Inc., Dan Matchett
Gas detector	WWTP	August 9, 2023	Franklin Empire, Mitch Manley
Dissolved oxygen (DO)	WWTP	May 3, 2023	Cancoppas, James Griffin
Lab equipment, portable pH, turbidimeter, spectrophotometer, colorimeter, portable DO	WWTP	June 5, 2023	Nichol Water Services, Randy Nichol
ORPs – pre and post dechlorination	WWTP	August 9, 2023	Franklin Empire, Mitch Manley
Composite samplers	WWTP	August 10, 2023	Avensys Solutions, Artem Lefymenko

(g) Summary of Efforts Made to Achieve Design Objectives

Municipal staff put forth all efforts to operate the plant at maximum removal efficiencies and within the rated capacity of the facility. The final effluent design objectives in Schedule B were consistently met for CBOD⁵, total phosphorus, e. coli, total suspended solids, total ammonia nitrogen, toxicity to rainbow trout and daphnia magna, and total residual chlorine. See Table D of this report for a summary of monthly final effluent concentrations.

No overflow or bypass events occurred within the Reporting Period and the average day influent flows were well within the rated capacity of the wastewater treatment plant.

Final effluent was observed to be essentially free of floating and settable solids and did not appear to contain oil or any other substance in amounts sufficient to create a visible film or sheen or discolouration of the receiving waters.

(h) Summary of Sludge Generation

The following Tables I, J and K list the volume of sludge generated, total suspended solids, nutrient and metal analysis. The anticipated volume for the next Reporting Period is not expected to be appreciably different from this Reporting Period. No change is expected from the current sludge handling methods, Wakely Transportation Services (C. of A. A840183) and Don Oliver’s Excavating (C. of A. A841032). The sludge disposal area utilized in 2023 was to a private contractor ECA #0031-7UTRSS.

Table I - Aerobic Digested Sludge Generated

	Volume (m ³)
January	1384
February	1224
March	1385
April	1451
May	2063
June	959
July	788
August	1313
September	1083
October	1182
November	604
December	879
Total Volume	14315
Average	1193
3-year Average Total Volume	14756
5-year Average Total Volume	14207

Table J - Aerobic Digester Sludge Solids/Nutrient Analysis

	Total Solids (mg/L)	TP (mg/L)	Ammonia + Ammonium (N) (as N mg/L)	Nitrite + Nitrates (as N) (mg/L)	TKN (as N mg/L)	E. Coli (cfu/1g dried weight)
January	16800	370	4	69	959	83333
February	16700	480	4	83	714	62147
March	6920	135	6	3	426	1574586
April	18100	499	6	3	928	101124
May	18600	449	4	1	875	35928
June	8940	181	8	3	488	841220
July	17600	443	112	3	690	9942
August	175000	434	3	3	488	88889
September	19500	505	4	3	699	23196
October	19700	630	4	3	431	26056
November	18800	499	32	3	793	35000
December	21300	587	4	54	1030	42995
Average	29830	434	16	19	710	243701

Table K - Aerobic Digested Sludge Metal Analysis

	As	Cd	Co	Cr	Cu	Hg	Mo	Ni	Pb	TP	Se	U	Zn
January	0.2	0.013	0.04	0.27	11	0.018	0.15	0.25	0.4	370	0.10	0.7	9.0
February	0.2	0.013	0.04	0.31	11	0.015	0.16	0.24	0.5	480	0.10	0.8	8.0
March	0.1	0.005	0.01	0.10	3	0.003	0.05	0.09	0.1	135	0.10	0.1	2.0
April	0.2	0.009	0.04	0.34	10	0.140	0.13	0.27	0.4	499	0.10	0.7	6.0
May	0.1	0.008	0.04	0.33	10	0.008	0.13	0.26	0.3	449	0.10	0.5	6.0
June	0.1	0.005	0.01	0.13	4	0.003	0.06	0.10	0.1	181	0.10	0.2	3.0
July	0.1	0.010	0.03	0.29	10	0.010	0.12	0.23	0.3	443	0.10	0.5	7.0
August	0.1	0.011	0.04	0.34	11	0.008	0.13	0.27	0.3	434	0.10	0.4	10.0
September	0.1	0.013	0.05	0.36	12	0.010	0.13	0.30	0.5	505	0.10	0.4	13.0
October	0.1	0.016	0.05	0.44	14	0.018	0.16	0.33	0.8	630	0.10	0.5	16.0
November	0.1	0.018	0.04	0.34	12	0.012	0.14	0.29	0.6	499	0.10	0.4	13.0
December	0.1	0.021	0.05	0.39	14	0.160	0.20	0.32	0.6	587	0.10	0.4	15.0
Average	0.1	0.012	0.04	0.30	10	0.034	0.13	0.25	0.4	434	0.10	0.5	9.0

Note: As is Arsenic; Cd is Cadmium; Co is Cobalt; Cr is Chromium; Cu is Copper; Hg is Mercury; Mo is Molybdenum; Ni is Nickel; Pb is Lead; TP is Total Phosphorus; Se is Selenium; U is Uranium; Zn is Zinc. All values expressed in mg/L unless otherwise specified.

(i) Summary of Complaints Received

The number of complaints received during the Reporting Period, January 1-December 31, 2023, regarding the Wastewater Treatment Plant and On-site Pumping Station was zero (0).

Date of Complaint	Address	Complaint	Steps Taken to Address Complaint

(j) Summary of all By-passes, Spills or Abnormal Discharge Events

There was one (1) environmental incident, such as by-passes, spills, or abnormal discharges, to be reported for 2023. The incidents were recorded, and the appropriate agencies were notified.

Table L - Incidents of By-passes, Spills or Abnormal Discharges including Maximum Sampling Results During Event, if applicable

Date	Approx. Duration (hours)	Type of Bypass/Overflow/Spill, Abnormal Discharge Event	Volume	CBOD ⁵	TSS	Total Cl ₂ ³	TP	E. coli (cfu/100mL)	pH (no unit)
April 18, 2023	4 hours, 10 minutes	Spill/Pollutant discharge of headwork bin debris to WWTP grounds.	75 L						

(k) Notice of Modifications

The number modifications completed as a result of paragraph 1.d. of Condition 10, including a report on status of implementation of all modifications totals one (1). If applicable, completed modifications are itemized below with a corresponding status report on the implementation of each modification.

Date Initiated	Description of Modification	Status	Date Completed/Expected Completed
August 1, 2023	Installation of new influent chamber including twin 600 mm influent sewers connecting the new influent chamber to WWTP headworks and installation of 450 mm forcemain connecting to existing on-site raw sewage pumping station.	In Progress	March 2024

(l) Efforts to Achieve Conformance with Procedure F-5-1 - Determination of Treatment Requirements for Municipal and Private Sewage Treatment Works

During the 2023 Reporting Period, there were no incidents of a bypass or overflow at the Port Hope Wastewater Treatment Plant and therefore no proposed projects to eliminate bypasses or overflows are forecasted for the 2024 Reporting Period.

³ Total Cl₂ is Total Chlorine Residual. All values expressed in mg/L unless otherwise specified.

(m) Summary of Maintenance, Inspections and Monitoring Details

No additional information to report.

No MECP Inspection occurred during the Reporting Period.

**APPENDIX A –
Copy of Notice of Modification to Sewage Works**



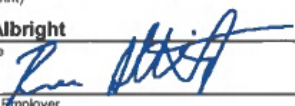
Ministry of the
Environment,
Conservation and
Parks

Notice of Modification to Sewage Works

RETAIN COPY OF COMPLETED FORM AS PART OF THE ECA ON-SITE PRIOR TO THE SCHEDULED IMPLEMENTATION DATE.

Part 1 – Environmental Compliance Approval (ECA) with Limited Operational Flexibility <i>(Insert the ECA's owner, number and issuance date and notice number, which should start with "01" and consecutive numbers thereafter)</i>		
ECA Number 8519-BKNN7C	Issuance Date (mm/dd/yy) 03/23/20	Notice number (if applicable) 2023-02
ECA Owner The Corporation of the Municipality of Port Hope		Municipality Port Hope

Part 2: Description of the modifications as part of the Limited Operational Flexibility <i>(Attach a detailed description of the sewage works)</i>
<p>The proposed sanitary sewer works within the limits of the facilities included under the Port Hope Wastewater Treatment Plant (WWTP) ECA include the following:</p> <p>Removals</p> <ol style="list-style-type: none"> 1. Removal of the existing inlet chamber (influent dispersion chamber) and the existing overflow diversion structure (SAN MH #376) 2. Removal of ±27.3 and ±25.0m of each of the twin 600mm dia. influent sewers located downstream of the existing inlet chamber (part way to the headworks) 3. Abandonment of ±30.2m of existing 450mm dia. forcemain between the existing on-site raw sewage pumping station and the existing inlet chamber including the removal of the existing forcemain gate valve. <p>New Construction</p> <ol style="list-style-type: none"> 1. Installation of a proposed influent chamber located south of the existing inlet chamber 2. Installation of ±21.3 and ±25.5m of proposed twin 600mm dia. ductile iron influent sewers connecting the new influent chamber to the WWTP headworks via the remaining portions of the existing influent sewers 3. Installation of ±12.2m of proposed 450mm dia. forcemain connecting the existing on-site raw sewage pumping station to the proposed new influent chamber <p>All proposed sewage works do not change the discharge location with all flows continuing to be routed to the Port Hope WWTP headworks through connections to existing sewers and will have negligible environmental effects.</p> <p>The design of the above noted works is illustrated in detail on the drawings included as part of Contract 42-ENG-2023-B Lake Street Trunk Sewer Replacement Issued and is documented in the Lake Street Sewer Replacement Design Brief prepared by CIMA+ dated March 16, 2022. The Municipality's existing Wastewater Collection System Map (Version 015) should be updated to reflect the modifications described herein and the As-Constructed drawings should be retained as part of the Municipality's records.</p>

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. Has been designed in accordance with the Limited Operational Flexibility as described in 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) Ron Albright	PEO License Number 90420050
Signature 	Date (mm/dd/yy) 07/19/23
Name of Employer CIMA Canada Inc. (CIMA+)	

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. This 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)	Owner representative's title (Print)
Jeanette Davidson	Director, Works and Engineering
Owner Representative's Signature	Date (mm/dd/yy)
<i>Jeanette Davidson</i>	08/01/23

EAPB Form July 26, 2018