

**Wastewater Services Division
2019 Annual Report**

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Accessible version of this document available by contacting Wastewater Services at 519-837-5627 or TTY 519-826-9771

Acronyms and Abbreviations

ADF	Average daily flow
TBOD	5 day biochemical oxygen demand
CALA	Canadian Association for Laboratory Accreditation
BOD5	Biochemical Oxygen Demand 5 day
CPE	Comprehensive Performance Evaluation
CCP	Composite Correction Program
CFU	Colony-forming unit
ECA	Environmental Compliance Approval (formerly called Certificate of Approval)
EPA	US Environmental Protection Agency
GRCA	Grand River Conservation Authority
I/I	Inflow/Infiltration
ISO/IEC	International Organization for Standardization (ISO) and the International Electrotechnical Commission
MLD	Millions Litres per Day
MOECC	Ontario Ministry of the Environment and Climate Change
NH ₃	Ammonia
NO ₃ – N	Nitrate - Nitrogen
NO ₂ – N	Nitrite - Nitrogen
OCWA	Ontario Clean Water Agency
P _{tot}	Total Phosphorous
PH	Scale of Acidity 0-14
RBC	Rotating biological contactors
SCADA	Supervisory Control and Data Acquisition System
SBR	Sodium Bisulphite Residual
TAN	Total ammonia nitrogen
TBOD	Total 5-day biochemical oxygen demand
TCR	Total Chlorine Residual
TKN	Total Kjeldahl nitrogen
TP	Total phosphorus
TSS	Total suspended solids
TWAS	Thickened Waste Activated Sludge
WWOP	Watershed-wide Wastewater Optimization Program
WWTP	Wastewater treatment plant

Executive Summary

The Annual Performance Report is prepared in accordance with Amended Environmental Compliance Approval (ECA) number 8835-9QJKSD, Condition 10 Reporting Subsection (6) for the City of Guelph Wastewater Treatment Plant (WWTP) for submission to the Ministry of Environment, Conservation and Parks (MECP). The secondary purpose of this 2019 Performance Report is to keep the Owner (Council) informed regarding the general operation, maintenance and facility compliance regarding solids and liquid handling and disposal as per the ECA. Each year it is a requirement that the owner prepares and submits an annual Performance Report for the previous calendar year which must contain the following information:

- a summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Condition 7, including an overview of the success and adequacy of the Works;
- a description of any operating problems encountered and corrective actions taken;
- a summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the works;
- a summary of any effluent quality assurance or control measures undertaken in the reporting period;
- a summary of the calibration and maintenance carried out on all effluent monitoring equipment;
- a description of efforts made and results achieved in meeting the Effluent Objectives of Condition 6.
- a tabulation of the volume of sludge generated in the reporting period, 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;
- a summary of any complaints received during the reporting period and any steps taken to address the complaints;
- a summary of all by-pass, spill or abnormal discharge events;
- a copy of all Notice of Modifications submitted to the Water Supervisor (MECP) as a result of Schedule 'A', Section 1, with a status report on the implementation of each modification;
- a report summarizing all modifications completed as a result of Schedule 'A', Section 3; and
- any other information the Water Supervisor (MECP) requires from time to time.

In addition, this Annual Performance Report must be forwarded to the MECP no later than March 31st. The WWTP must comply with all the requirements and criteria contained in the ECA, along with all Acts, Regulations and F-Series Procedures made with regards to operation of facilities, licensing of facilities, licensing of operators and legislation that pertains to the Sustaining of Water and Sewerage Facilities. All efforts have been made to ensure the information presented in this report is as accurate as possible. If you have any questions or comments concerning the report, please contact the City of Guelph at the address and phone number listed below or by email at wastewaterservices@guelph.ca

Introduction

This Annual Performance Report is for the period from January 1st to December 31st; which is a legislative requirement under Condition 10 (6) of ECA number 8835-9QJKSD and Condition 8, subsection 4 of Certificate of Approval (C of A) #0510-7MKTNA. This Annual Performance Report must also be forwarded to the Ministry of Environment, Conservation and Parks (MECP) no later than March 31th.

A key component of a Comprehensive Performance Evaluation (CPE) is to perform a process loading assessment. This evaluation examines the measured flow and mass loading for the population and compares it to typical per capita contributions.

As seen by the table below the City of Guelph WWTP was overall slightly above typical in terms of process loading for 2019.

Parameter	Actual	Typical
Per Capita Flows and Loads	-	-
Per Capita Wastewater Flow	415 L/d per person	350-500 L/d per person
Per Capita BOD ₅ Loading	105 g/d per person	80 g/d per person
Per Capita TSS Loading	113 g/d per person	90 g/d per person
Per Capita TKN Loading	17 g/d per person	13 g/d per person
Ratios	-	-
Flows: Peak Day/Annual Average	1.49	2.5-4.0
Raw: TSS/BOD ₅	1.07	0.8-1.2
Raw: TKN/BOD ₅	.16	0.1-0.2

Another important part of the CPE is to conduct a Sludge Accountability assessment on the process. Sludge accountability compares measured sludge production from the data collected and compares it to projected sludge production results. This comparison, which has a best practice acceptable range of plus/minus 15%, is valuable in measuring the reliability of the data being collected to properly represent the facility performance. Contributing factors to successful sludge accountability include accurate sampling and knowledgeable facility staff to take care of the day to day process requirements.

For 2019, the City of Guelph sludge accountability assessment resulted in a -6.9% data accuracy which is within the acceptable variability and therefore validates the reliability of the data collection and analysis.

Reported Sludge	kg/d
Intentional Wasting	12,528.1
Unintentional Wasting	132.1
Sidestream	1,469
Total	11,192
Projected Sludge	-
Primary Sludge Production	4,967
Biological Sludge Production	4,659
Chemical Sludge Production	839
Total	10,465
Sludge Accountability	-6.9 %

Note: plus/minus 15% is best practice

Recognition

In 2019, the facility was honoured to be recognized by the Grand River Watershed Wide Optimization Program with a silver level award for the efforts in process control to improve the quality of the Grand River.

The demonstrated commitment of wastewater services to the optimization of all aspects of the process control has made the facility known as one of the leading wastewater treatment plants along the Grand River Watershed. The main objective of an optimization program is to work with staff, regulatory agencies, external partners and stakeholders to achieve exemplary, sustainable and economical performance from physical and human assets.

A copy of the letter received from Grand River Conservation Authority in 2019 to recognize the Guelph WWTP for the 2018 Performance is included as Appendix E.

Wastewater Flow

A Parshall flume complete with secondary instrumentation is provided immediately downstream of the facilities chlorine contact chamber. The effluent flow rate through the flume is continuously measured, integrated and totalized on a daily basis in the facilities Supervisory Control and Data Acquisition System (SCADA). This daily data is manipulated electronically in spreadsheet software to calculate and report the average total daily flow and maximum total daily flow for each month. Flow data for the 2019 reporting period is included as Table 1 of this report as well as represented in chart 1. A comparison of total flow per month between 2018 and 2019 can be seen in Chart 2.

The average total daily flow for the year 2019 is 56.679 MLD. A maximum total daily flow of 84.549 ML was recorded on May 01, 2019.

2018	Average Total Daily Flow ML	Maximum Total Daily Flow ML
January	55.780	61.019
February	54.715	64.308
March	58.992	74.760
April	69.722	82.122
May	69.963	84.549
June	59.148	68.265
July	51.852	58.938
August	48.341	52.587
September	50.920	75.165
October	51.729	70.997
November	55.649	65.398
December	53.328	64.659
Annual Average	56.679	X
Winter Average	57.382	X
Summer Average	55.694	X

Chart 1, 2019 Average Daily Flow and Maximum Daily Flow

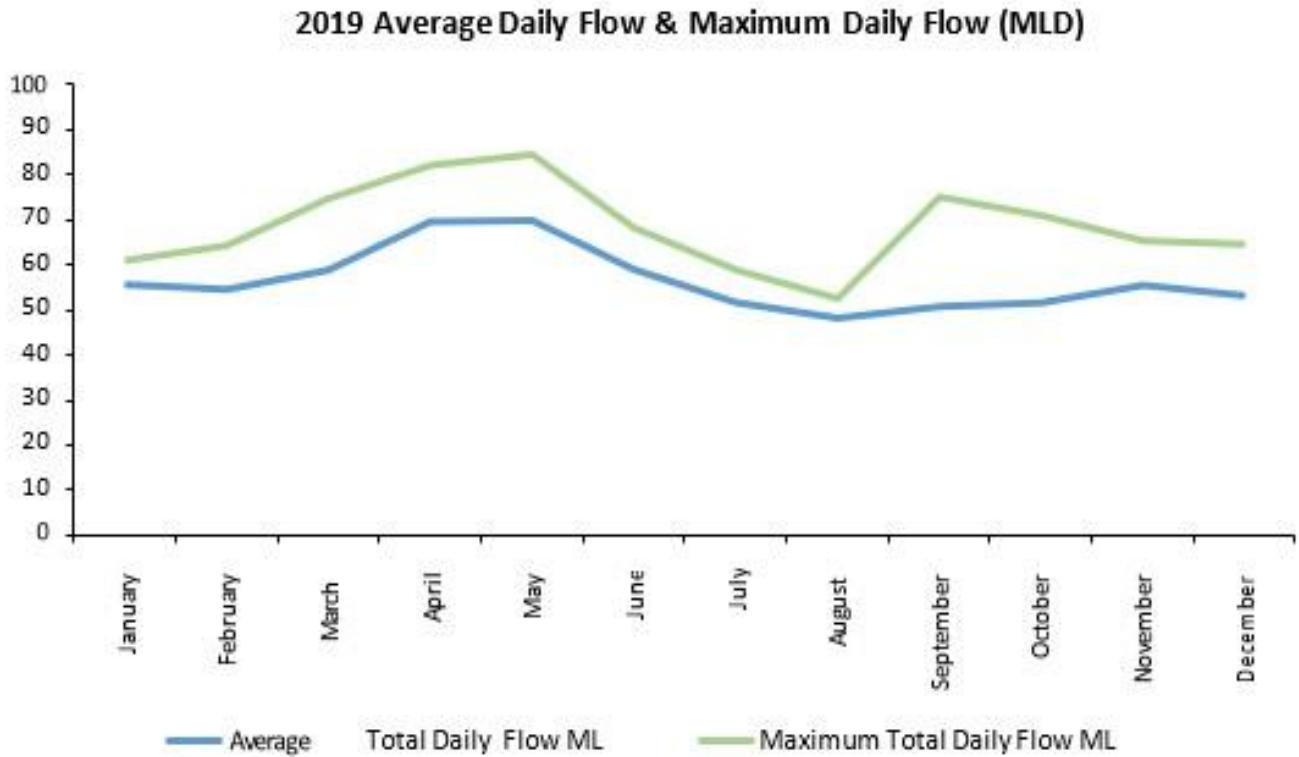
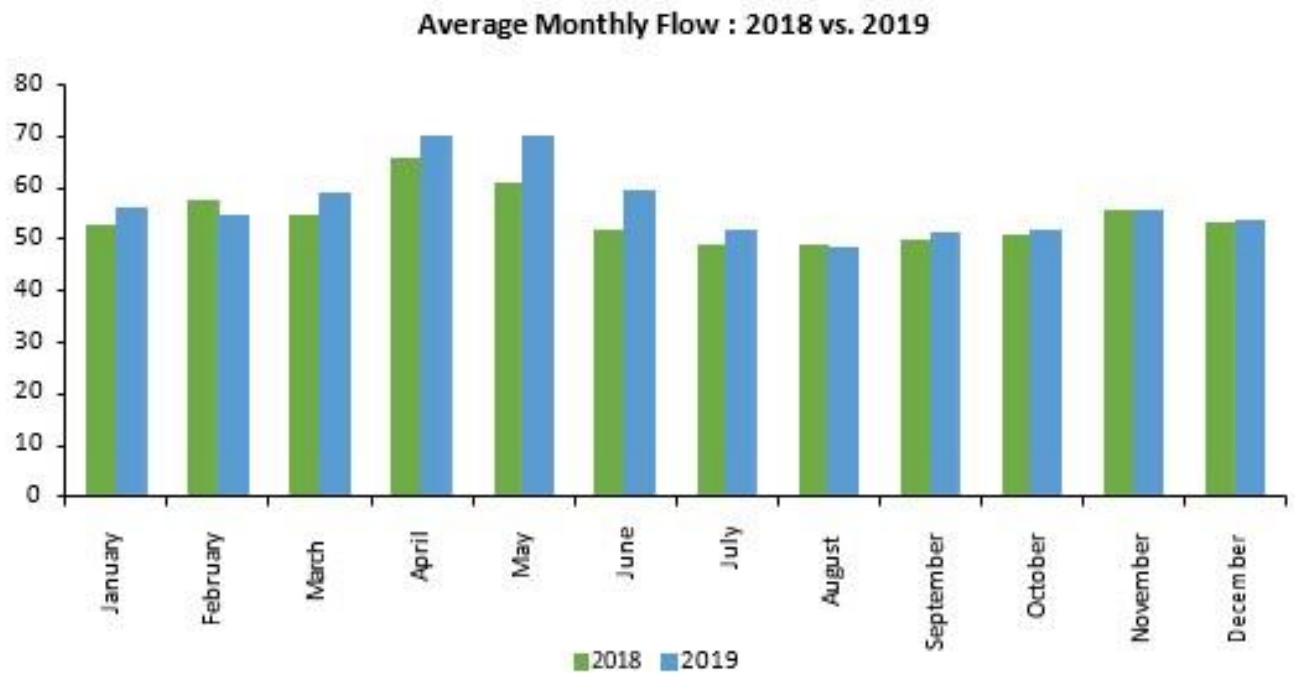


Chart 2, Average Monthly Flow



Raw Influent Wastewater Quality

Considerable effort is undertaken in monitoring the characteristics of WWTP influent, effluent and intermediate process streams to provide the necessary data for process optimization by plant staff and meet ECA, Condition 9 monitoring and reporting requirements. Twenty-four hour flow proportional composite samples are routinely collected and analyzed. The raw influent wastewater data analyzed by the Guelph WWTP and Guelph Environmental Laboratory (GEL), which is ISO 17025 accredited by the Canadian Association for Laboratory Accreditation (CALA) is combined and a monthly summary is presented in Table 2.

2018	pH	¹ cBOD ₅ (mg/L)	BOD ₅ (mg/L)	TSS (mg/L)	P _{Tot} (mg/L)	TKN (mg/L)	TAN (mg/L)
January	7.6	186	266	249	5.09	42.6	27.4
February	7.5	195	200	272	5.51	48.5	28.9
March	7.5	174	163	209	5.22	45.0	26.2
April	7.6	144	150	209	3.90	32.2	18.8
May	7.6	150	152	248	3.47	30.3	15.7
June	7.6	156	178	267	4.75	39.0	18.5
July	7.6	220	254	277	5.38	34.8	20.7
August	7.6	210	223	338	5.38	39.2	22.6
September	7.5	228	228	312	5.99	47.2	26.3
October	7.5	238	238	295	5.29	44.1	25.2
November	7.5	282	282	260	5.03	44.7	26.3
December	7.5	203	203	326	5.22	40.0	25.7
Annual Average	7.5	195	211	272	5.02	40.6	23.5
Winter Average	7.5	200	223	263	5.21	44.2	26.9
Summer Average	7.5	191	203	278	4.88	38.1	21.1

Final Effluent Quality

Primary sedimentation and secondary activated sludge treatment is provided by four separate treatment trains namely Plants 1, 2, 3 and 4. Plants 1, 2, and 3 incorporate conventional activated sludge with the secondary effluent from each of these three plants directed to a common pump well. The combined secondary effluent is lifted by vertical turbine pumps to the rotating biological contactors (RBC) influent distribution channel and evenly split to each of the four RBC trains. Each of the four RBC trains consists of eight shafts in series. The process objective of the RBC's is to provide additional biological treatment for the oxidation of ammonia. Effluent from the RBC trains is discharged to a common sand filter influent channel and distributed to the sand filters for additional suspended solids capture. The Plant 4 treatment train incorporates extended aeration activated sludge and is capable of complete nitrification. As such plant 4 secondary effluent can be directed to a separate pump well which discharges to the common sand filter influent channel for distribution to the sand filters for additional suspended solids capture. Plant 4 secondary effluent can also be directed through the RBC's as plants 1, 2 and 3.

The final treated effluent passes through a Parshall flume and is measured by an ultrasonic transmitter. The transmitter is calibrated yearly to ensure accuracy of total flows. A Plant Flow Diagram is included as Appendix A.

Effluent quality requirements as specified in the ECA differ for summer and winter conditions. These limits and performance charts can be reviewed in Appendix B and the calibration records can be found in Appendix C.

An automatic sampling system collects a series of flow paced aliquots from the chlorine contact chamber and combines them in a container within a refrigerated compartment to produce a 24- hour flow proportional composite sample of the treated WWTP effluent. This composite sample is then analyzed by the Guelph Environmental Laboratory (GEL), which is ISO 17025 accredited by the Canadian Association for Laboratory Accreditation (CALA). The results from the GEL are tabulated in Table 3. This table provides a monthly summary of final effluent quality data.

Residual chlorine and sodium bisulphite are constantly monitored in the chlorine contact chamber in keeping with the year round requirement for disinfection. Both sodium hypochlorite and sodium bisulphite application and control is provided by ORP instrumentation. The objective of 200 E. Coli CFU/100mL of sample was met. Performance data is presented in Table 3.

As mandated by Environment Canada, the facility has optimized the disinfection/de-chlorination system to reduce the total residual chlorine to the speed river to 0.02 mg/L or less.

In 2014, the Guelph Environmental Laboratory received formal ISO/IEC 17025 Accreditation by CALA (certificate A3222) and has maintained this accreditation which is shown in Appendix D. The fulfillment of the requirements of ISO/IEC 17025 means the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results.

Table 3 Final Effluent Quality Data, 2019

2019	Average pH	Temp °C	cBOD ₅ Concentration mg/L	cBOD ₅ Loading kg/d	BOD ₅ Concentration mg/L	BOD ₅ Loading kg/d	TSS Concentration mg/L	TSS Loading kg/d	TP kg/d Concentration mg/L	TP kg/d Loading kg/d	TKN mg/L	TAN Concentration mg/L	TAN Loading kg/d	NO ₃ -N mg/L	NO ₂ -N mg/L	E. Coli CFU/100 mL	TCR mg/L
January	13.5	2.50	144	2.00	113	2.00	133	0.11	6	1.92	0.64	35	24.5	0.37	13	0.00	1.63
February	12.7	2.10	113	2.30	122	2.00	112	0.10	5	4.46	2.91	165	26.5	0.27	10	0.00	1.09
March	12.6	2.10	122	2.20	127	2.00	126	0.16	9	3.05	1.58	98	26.6	0.27	10	0.00	1.34
April	12.1	2.20	148	2.20	148	2.00	143	0.09	6	2.10	0.87	63	23.2	0.33	10	0.00	1.24
May	13.7	2.00	143	2.10	149	2.00	152	0.09	6	1.75	0.24	18	22.4	0.11	17	0.00	1.47
June	17.0	2.00	120	2.00	120	2.00	130	0.11	6	1.49	0.10	6	22.8	0.07	10	0.00	2.00
July	19.4	2.00	103	2.20	115	3.00	131	0.17	9	1.62	0.20	10	22.4	0.10	16	0.01	1.49
August	21.0	2.90	141	3.30	159	3.00	137	0.14	7	1.56	0.20	10	22.9	0.15	29	0.00	2.31
September	20.8	2.00	98	2.20	110	3.00	129	0.16	8	1.49	0.11	6	26.0	0.08	14	0.00	2.12
October	19.3	2.00	107	2.00	107	3.00	135	0.13	7	1.91	0.30	18	23.8	0.21	13	0.00	2.02
November	16.8	2.00	111	2.60	144	2.00	136	0.09	5	2.23	0.64	37	23.1	0.19	14	0.00	1.90
December	14.2	2.20	116	2.20	121	2.00	128	0.12	6	2.14	0.94	54	23.5	0.23	14	0.00	1.73
Annual Average	16.09	2.17	122.03	2.28	127.85	2.33	132.57	0.12	6.83	2.14	0.73	43.28	23.96	0.20	14.17	0.00	1.70
Winter Average	13.96	2.18	121.06	2.26	125.44	2.00	126.70	0.12	6.42	2.76	1.34	77.60	24.81	0.27	12.20	0.00	1.54
Summer Average	17.61	2.16	122.71	2.29	129.57	2.57	136.76	0.13	7.11	1.70	0.29	18.77	23.35	0.15	15.57	0.00	1.81

Notes:

1. All cBOD₅ and BOD₅ analysis is conducted by independent CA ERL accredited laboratory only.
2. SBR, Sodium bisulphite residual
3. All analyses based on 24-hour flow paced composite samples.
4. The Summer period is April 1 to October 31. The Winter period is November 1 to March 31.
5. Escherichia Coli values are calculated geometric means.

Solids Handling and Disposal

The raw sludge produced at the WWTP is thickened in the primary clarifiers and pumped to the anaerobic digestion system which consists of four primary digesters and one secondary digester. The waste activated sludge from all plants are thickened in a rotary drum thickener and then transferred to one of the primary digesters.

Following stabilization by anaerobic digestion, biosolids are transferred from the secondary digester to the dewatering facility. The dewatering facility consists of four belt filter presses and associated auxiliary equipment. Dewatering filtrate is treated in the Anammox process before being returned to headworks. Stabilized biosolids are either dewatered and removed from site as a cake to a non-landfill destination or further treated on site through the Lystek process. The Lystek material is then land applied as a fertilizer as per the Canadian Food Inspection Agency (CFIA) fertilizer registration. This results in a complete environmentally sustainable model to manage biosolids.

A simplified solids flow diagram of the WWTP is presented in Appendix A. The latest CFIA approved certification is presented in Appendix F.

A summary of solids production, handling and disposal is presented Table 4.

The Rotary Drum Thickener (to thicken Waste Activated Sludge) is automated to run 24hrs/day, provided sufficient waste activated sludge is available. The unit used a combination of cationic and anionic polymers at a ratio of approximately 1.32:1 to assist in thickening the waste activated sludge to 3.32% solids. Table 5 will reveal in more detail the monthly totals.

During the reporting period 3,721 dry tonnes of dewatered biosolids were generated. This reporting period resulted in 100% biosolids diversion from landfill. The majority of dewatered biosolids were land applied during land application season or stored and processed for land application. The facility anticipates a higher quantity of biosolids generation for the next reporting period.

Table 4 Solid Handling and Disposal

Month	Avg. Digested Total Solids %	Digested Solids Pumped to Dewatering m ³ /month	Average Dewatered Cake Total Solids %	Cake production wet tonnes	Cake production dry tonnes	Avg. Lystek Total Solids %	Lystek to Land Application m ³	Cake to Dundalk wet tonne
Jan	2.02*	24,583	18.50	1,487.26	275.14	--	--	1,487.26
Feb	1.97*	22,027	20.03	1,465.15	293.47	--	--	1,465.15
Mar	1.52	27,754	20.05	1,659.07	332.64	--	--	1,659.07
April	1.38	25,404	20.90	1,513.21	316.26	--	--	1,513.21
May	1.80	26,322	21.94	1,420.50	311.66	--	--	1,420.50
June	2.03*	21,408	21.52	1,365.23	289.03	--	22.12	1,343.11
July	2.09*	20,404	21.70	1,369.5	297.18	13.7	--	1,369.5
Aug	1.63	21,810	23.20	1,471.79	337.22	13.7	76.12	1,395.67
Sept	1.90	18,758	23.00	1,475.59	328.86	--	113.16	1,362.43
Oct	2.20*	24,799	20.30	1,673.91	339.80	--	--	1,673.91
Nov	1.95	26,022	19.89	1,650.53	328.29	--	--	1,650.53
Dec	1.70	22,852	19.20	1,415.10	271.70	--	--	1,415.10
Average	1.84	23,647	20.85	1,497.24	310.10	13.7	70.38	1,479.63
Total		260,116		17,966.84	3,721.25		211.14	17,755.54

Notes:

*Value was taken from on-line total solids meter

Total Volume for Land Application =17,966.84 Wet Tonnes

Dundalk - Lystek International, 191 Eco Park Way, Dundalk, ON N0C 1B0

Table 5 Thickened Waste Activated Sludge (TWAS)

Month	Volume to TWAS m³	Volume from TWAS m³	Reduction %	Solids % D.S.	Polymer Consumption Cationic m³	Polymer Consumption Anionic m³
Jan	20,840	3,687	82	4.35	146	92
Feb	14,932	3,783	75	2.96*	105	72
Mar	17,035	5,673	67	1.11	115	92
Apr	10,497	5,254	50	4.10	75	77
May	15,799	4,508	71	3.73	113	86
Jun	18,092	2,968	84	3.31	84	82
Jul	16,804	1,260	93	3.20**	79	80
Aug	21,602	1,103	95	3.08	82	97
Sep	22,203	2,485	89	3.35	136	94
Oct	4,100	1,417	65	2.17*	31	19
Nov	8,074	2,427	70	3.70	69	36
Dec	2,961	873	71	2.54*	29	12
Average	-	-	76	3.13	-	-
Totals	97,195	32,138	-	-	1,064	839

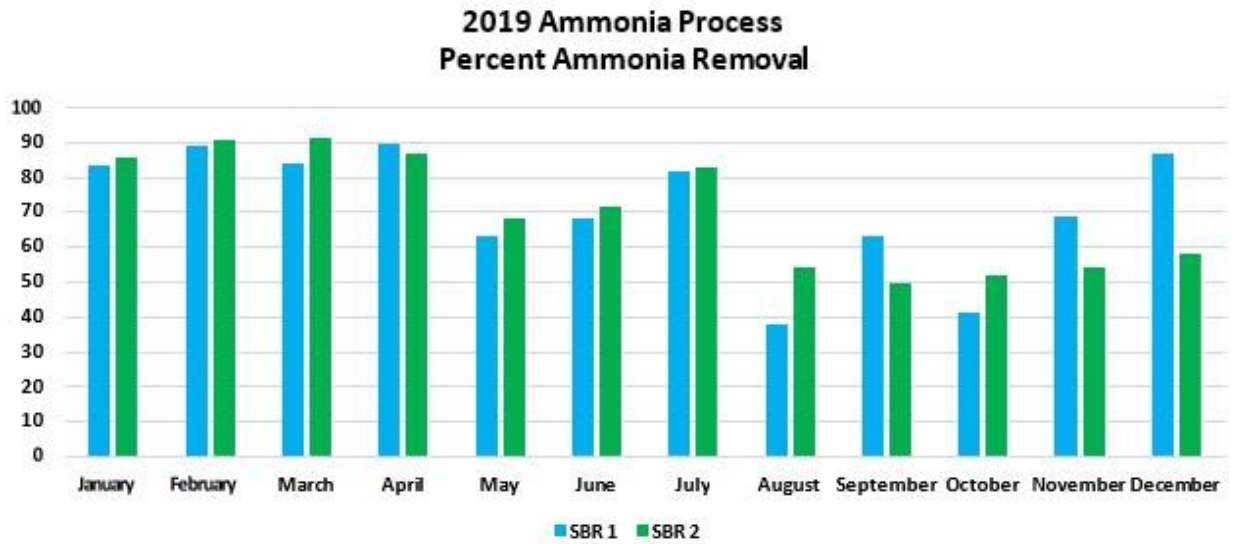
* Calculated value.

** Interpolated value.

Side Stream Treatment

The Anammox process is a side stream treatment of filtrate from solids dewatering consisting of two Sequencing Batch Reactors (SBR). Each is designed to remove 173 kg/day of ammonia from the side stream filtrate. The annual average percent removal by SBR 1 is 71% and SBR 2 is 70%. Chart 3 represents the percent removed per month in each SBR.

Chart 3 Anammox



Unusual Events/Process Upsets

The facility has no provision for primary treatment or raw sewage bypass directly to the Speed River. The facility does have provision for secondary treatment bypass, complete tertiary bypass or partial tertiary bypass. During this reporting period there was one (1) partial sandfilter bypass and two (2) disinfection event as reported below in Table 6. These events were reported to the MECP Spills Action Centre as per standard operating protocol.

Table 6 Bypass Summary

Date	Occurrence Number	Duration hrs:min	m ³	cBOD ₅ mg/L	TSS mg/L	NH ₃ -N mg/L	TP mg/L	Partial or Full Tertiary Bypass	Chlorinated
2019-01-02	5085-BA836-CG	3:55	197	9	2	4.48	0.06	Partial	Yes
2019-07-10	8564-BDXMLP	14:15	30,000	-	-	-	-	-	No
2019-07-12	2685-BDZJL2	5:25	8,300	-	-	-	-	-	Yes

Partial Sandfilter Bypass

All effluent receives Rotating Biological Contactor treatment, is chlorinated and de-chlorinated. The volumes listed indicated that amount that did not receive full sandfilter treatment.

Full Sandfilter Bypass

All effluent receives secondary treatment, is chlorinated. The volumes listed indicate the amount that did not receive tertiary treatment.

WWTP Projects and Upgrades

The following is a summary of Capital Projects, upgrades and major maintenance conducted during the reporting period.

Capital Project Summary, Year 2019

Project	Status
Cogeneration Engines – Header Replacement	Completed
Weather Station Installation	Completed
Topographic Mapping and Subsurface utility mapping	Completed

Maintenance Project Summary, Year 2019

Project	Status
Installing Hydroflow instrument (struvite preventer) at dewatering building, on Press-1- sludge inlet to press	Completed
Installing 2 flow meters, one at chlorination pump another one at De-chlorination pump	Completed
Installing 2 new 600v pinch valves at plant 3 waste sludge pumps	Completed
Additional support for Lystek tanks to prevent vibration	Completed
Installed 8 level sensors at Lystek Baker tanks, to be shown on new HMI, Lystek Basement	Completed
Installed new KOH level meter at KOH tank, Lystek Basement	Completed
Updated Grit tank auger system, by adding additional bearing to the drive shaft	Completed
Upgrade to our CMMS and WAM system	Ongoing

Sewage Pumping Stations

All sewage pumping stations performed adequately and as designed throughout the reporting period. The following are the flow values for Sewage Pumping Stations with flow tracking meters as part of the Certificate of Approval requirements.

Chart 4 Kortright East SPS Monthly Flow

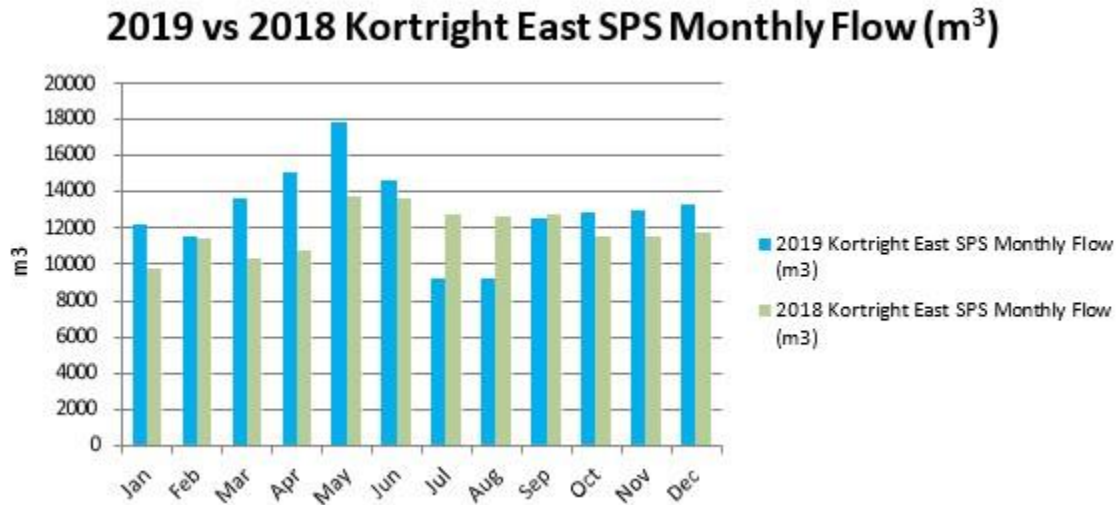
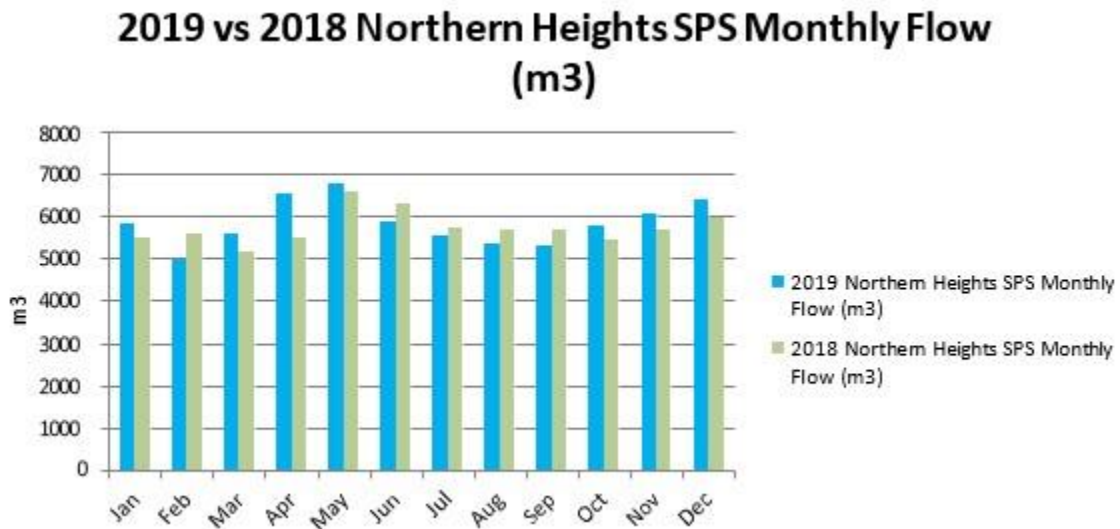


Chart 5, Northern Heights SPS Monthly Flow



A description of any operating problems encountered, and corrective actions taken:

Location	Operating Problems	Resolution
Northern Heights SPS	Block heater failure on generator	Replaced block heater
Northern Heights SPS	Exhaust fan failure	Replaced motor
Northern Heights SPS	High level float Failure	Replaced float
Northern Heights SPS	Pump # 2 fault	Reset soft starter
Northern Heights SPS	Pump fault	Reset soft starter
Northern Heights SPS	Pump #2 stop float failure	Replace stop float
Northern Heights SPS	Low building temperature	Replace heater
Northern Heights SPS	Low level float failure	Replace low level float
Kortright SPS	Odour control unit belt broke	Replaced belt
Kortright SPS	Pump # 1 Fail to operate	Power interruption
Kortright SPS	Low level float failure	Replaced float
Kortright SPS	Pump # 3 Stop float failure	Replaced float

A summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism, or thing forming part of the Works:

On September 16, 2019, flow was diverted via gravity sanitary sewers away from Gordon Sewage Pumping Station, to allow for station decommissioning.

Location	Maintenance Performed
Northern Heights SPS	Replaced lifting chains, chain and handle connectors on Pump #1 and Pump #2
Northern Heights SPS	Performed Bi Annual Intermediate Service on Pump #1 and Pump #2
Kortright SPS	Performed annual generator maintenance and load bank testing
Northern Heights SPS	Performed annual generator maintenance and load bank testing
Northern Heights SPS	Calibrated flow meters
Kortright SPS	Calibrated flow meters
Northern Heights SPS	Inspected and exercised all valves
Kortright SPS	Inspected and exercised all valves
Northern Heights SPS	Cleaned and vacuumed wetwell
Kortright SPS	Cleaned and vacuumed wetwell

A summary of spill or abnormal discharge events:

Date	Event Description	SAC Reference Number
2019-02-17	Sanitary sewer overflow due to bypass pump failure	7365-B9KHB4
2019-02-20	Sanitary sewer overflow due to bypass pump failure	8357-B9GM25
2019-06-19	Sanitary sewer bypass hose leaked, and a second spill occurred when pump lost prime and spilled out of the pump	4113-BDAHFC
2019-08-11	Sanitary sewer bypass hose became uncoupled	5251-BETRJ2
2019-08-14	Private property sanitary sewer overflow to storm caused by blockage on private property	6545-BF2NY4
2019-08-20	Odour complaint related to industrial discharge to sanitary sewer	2362-BG7SEU
2019-08-25	Private property sanitary sewer overflow to storm caused by blockage on private property	7604-BFDLK3
2019-09-12	Sanitary sewage spill from main in open excavation	2772-BFNQF
2019-11-04	Sanitary sewer spill from cleanout cap due to blockage in lateral	3804-BHLPYR
2019-11-28	Sanitary lateral broken and leaking into storm sewer	6330-BJCKDN
2019-12-05	Cross connection of sanitary lateral service to storm sewer	7511-BJKUZ8
2019-12-10	Sanitary sewer overflow from maintenance hole due to blockage in line	8875-BJQL3S
2019-12-13	Sanitary sewer overflow at property line maintenance hole	8670-BJTS9Y

No complaints were received that needed to be addressed during this reporting period

Appendices

Appendix A – Plant Flow Diagram

Appendix B – ECA and C of A's

Appendix C – Calibration Records

Appendix D – GEL – Accreditation Certificate

Appendix E – GRCA recognition letter

Appendix F – CFIA Certification

Appendix G - Summary of Existing Works

Appendix H - Facility Performance Charts

Appendix I – Sludge Accountability Calculations

Accessible versions of these appendices are available by contacting Wastewater Services at 519-837-5627 or TTY 519-826-9771