Wastewater Treatment

Performance Report 2024 Version 2

Submitted June, 2025

Halton REGION

Table of Contents

Glossary Table

Average Daily Flow	ADF	Nitrogen Oxide	Nox
Aeration Basin	Aer	Out of Service	O/S
Aluminum Sulfate	Alum	Original Equipment Manufacturer	OEM
American Water Works Association	AWWA	Operator in Training	OIT
Building Automation System	BAS	Overall Responsible Operator	ORO
Belt Filter Press	BFP	Wastewater Pump Station	P.S.
W.A. Johnson Biosolids Management Centre	BMC	Primary Clarifier	PC
Biochemical Oxygen Demand	BOD5	Max flow rate for which the plant was designed	Peak Flow
Canadian Association for Laboratory Accreditation	CALA	Measurement of hydrogen ion concentration	pH
Carbonaceous Biochemical Oxygen Demand	cBOD5	Programmable Logic Controller	PLC
Colony Forming Units	CFU	Preventative/Planned Maintenance	PM
Communication	Comm	Ortho Phosphate	PO4-
Concentration	Conc.	Parts per million	ppm
Dissolved Oxygen	DO	Return Activated Sludge	RAS
Escherichia Coli	E.coli	Rain Derived Inflow and Infiltration	RDII
Environmental Compliance Approval	ECA	Rotating Drum Thickener	RDT
Environmental Compliance Hub Ontario	ECHO	Remote Programmable Unit	RPU
Equalization	EQ	Raw Sludge Pump	RS
Electrical Safety Authority	ESA	Raw Sewage Pump	RSP
Final Clarifiers	FC	Step Screen	S.S.
Ferric Chloride	Ferric	Spills Action Centre	SAC
Gas booster Compressors	GBC	Secondary Clarifiers	SC
Geometric Mean	GM	Supervisory Control and Data Acquisition	SCADA
Gas Recirculation Compressors	GRC	Scum Pump	SCP
Health and Safety	H&S	Sewage Lift Pump	SLP
Hydrogen Sulfide	H2S	Sewage Pumping Station	SPS
Human Module Interface	HMI	Total Ammonia Nitrogen	TAN
Heating, Ventilation, Air Conditioning	HVAC	Temperature	Temp
Sodium hypochlorite	Hypo	Total Kjeldahl Nitrogen	TKN
International Electrotechnical Commission	IEC	Total Phosphorus	TP
International Organization for Standardization	ISO	Total Suspended Solids	TSS
Key Performance Indicators	KPI	Technical Standards and Safety Authority	TSSA
Laboratory Information System	LIMS	Tertiary Treatment	TT
Limited Operational Flexibility	LOF	Uninterruptible Power Supply	UPS
Lock Out/Tag Out	LOTO	Ultraviolet Disinfection	UV
Cubic meter per day	m3	Ultraviolet Intensity	UVI
Maximum	max	Ultraviolet Transmittance	UVT
Motor Control Centre	MCC	Variable Frequency Drive	VFD
Ministry of the Environment, Conservation and Parks	MECP	Volatile Solids	VS
Mixed Liquior Suspended Solids	MLSS	Volatile Suspended Solids	VSS
Municipal Utility Monitoring Program	MUMP	Work Order	W.O.
Not Applicable	N/A	Work Request	W.R.
Un-Ionized ammonia	NH3	Wet Tonnes	w.t.
Total Ammonia - Nitrogen (ammonia + ammonium)	NH3-N	Waste Activated Sludge	WAS
Nitrite - nitrogen	NO2-	Wastewater Systems Effluent Regulations	WSER
Nitrate - nitrogen	NO3-	Wastewater Collection System	WWCS
Notice of Modification	NoM	Wastewater Treatment Plant	WWTP

1. Introduction

This report provides a performance summary for the period from January 1 to December 31, 2024 for Halton Region's wastewater treatment plants and its biosolids management center. Compliance with regulatory requirements, policies and the Environmental Compliance Approval (ECA) continues to be monitored through the supervisory controls systems, oversight by professional licensed operations staff, an accredited laboratory and regular reporting mechanisms.

1.1 Compliance and Process Analysis

1.1.1 Compliance Sampling Program

Halton Regional Laboratory performs the analysis on compliance samples from the wastewater treatment plants (WWTPs) and is accredited with the Canadian Association for Laboratory Accreditation (CALA) to ISO/IEC Standard 17025:2017. Halton Regional Laboratory also schedules sampling days for the Wastewater Treatment Plants (WWTP), ensuring a sampling schedule that is as random as possible given delivery, plant and laboratory coverage considerations, and are independent of WWTP input.

The compliance sampling program meets or surpasses the requirements of the Ministry of the Environment, Conservation and Parks (MECP). The overall result of the compliance sampling program is presented in Table 1.1-1

Table 1.1-1 Regional Lab Tests and Compliance

Wastewater Treatment Plants	Total Tests	Compliance Based Tests	Compliance*
Acton	319	114	100%
Georgetown	319	155	100%
Mid Halton	514	118	100%
Burlington Skyway	542	104	100%
Oakville Southeast	278	83	100%
Oakville Southwest	301	115	100%
Region Wide	**2,273**	**689**	**100%**

*Percent Compliance represents results based on unique compliance criteria for each parameter

1.1.2 Process Control Sampling Program

Each facility has its own process laboratory where samples are tested and analyzed to support effluent quality assurance and/or introduce performance control measures. The frequency and methodology used for analysis of process monitoring and control parameter control may not conform to the requirements of the MECP outlined in the Environmental Compliance Approval (ECA), therefore, this data is not included in the compliance summary results and averages.

1.1.3 Process Data

The data compiled in the Annual Wastewater Performance Report is provided by the Laboratory Information System (LIMS) database not the Municipal Utility Monitoring Program (MUMP) Reports which are submitted to the MECP. The LIMS data provides the Region with the appropriate significant digits and in some instances may not be identical to data submitted in the MUMP Reports due to limitations in the reporting of significant digits from LIMS.

1.2 Inflow/Infiltration Monitoring & Control Programs

Halton Region's Wastewater Collection System (WWCS) are all nominally separated sewer systems [1], affected to some degree by rain derived inflow and infiltration (RDII). Despite the hydraulic challenges caused by RDII, Halton Region continues to provide normal [2] level of treatment or higher to the majority of the wastewater volume received.

Table 1.2-1 Region Wide & Spatial Distribution, Percent Volume by Treatment Level

Systems	Normal or Higher (>2˚)	Partial (≤1˚)	Untreated
Halton Hills	99.98%	0.01%	0.02%
Acton	100%	0%	0%
Georgetown	99.97%	0.01%	0.02%
Central Halton	100%	0%	0%
Mid Halton	100%	0%	0%
South Halton	99.10%	0.85%	0.05%
Burlington Skyway	98.87%	1.13%	0%
Oakville Southeast	99.52%	0.10%	0.38%
Oakville Southwest	99.78%	0.22%	0.003%
Region Wide	99.48%	0.49%	0.03%
Region Wide Volume	89,039.515 ML	438.713 ML	24.875 ML

[1] F-5-1 Determination of Treatment Requirements for Municipal and Private Sewage Treatment Works. MECP: 2016.
[2] Guideline F-5: Levels of Treatment for Municipal and Private Sewage Treatment Works Discharging to Surface Waters MECP: 1994.

2. Acton Wastewater System

2.1. System Description

The Acton WWTP is located at 202 Churchill Road South in Halton Hills (Acton). The facility is a tertiary treatment plant consisting of screening, grit removal, flow splitting to primary clarification, nitrifying activated sludge, final clarification, continuous backwash sand filters, an aluminum sulphate dosing system for phosphorus removal, and dual stage anaerobic digestion. The final effluent is disinfected year-round using UV light before being discharged into Black Creek. The Acton WWTP system information is provided in Table 2.1-1.

Table 2.1-1 Acton System Information

Municipal Wastewater System Works Number	120001023
Classification	
Treatment Facility	Class 3
Certificate #	567
Collection System	Class 2
Certificate #	568

Environmental Compliance Approvals

Type	ECA Number	Date of Issue
Sewage Works	7158-CR7TWJ	July 18, 2023
Air & Noise	3390-AMEKEA	July 31, 2017

2.2 Condition 11 4.a – Influent Flow Monitoring

a summary and interpretation of all Influent, monitoring data and a review of the historical trend of the sewage characteristics and flow rates;

Influent sewage characteristics for this reporting period can be found in **Appendices A.1, A.2 & A.3**. Historical influent flow characteristics can be found in Table 2.2-1 below.

Table 2.2-1 Historical Data

Influent		2019	2020	2021	2022	2023
Total Flow	ML	2,455.496	1,895.256	1,294.643	1,174.770	1,354.848
Average Flow	MLD	6.727	5.178	3.547	3.219	3.712
BOD5*	mg/L	190	210	190	170	181
BOD5 Loading*	kg/day	1,227.4	1,004.0	683.5	531.6	647.6
Total Suspended Solids*	mg/L	256.7	280.8	247.5	214.2	227.5
TSS Loading*	kg/day	1,699.4	1,320.3	869.7	680.4	819.4
Total Kjeldahl Nitrogen*	mg/L	37.4	41.18	39.58	39.1	40.3
TKN Loading*	kg/day	260.08	201.05	141.05	124.2	144.3
Total Phosphorus*	mg/L	4.6	5.7	5.6	4.76	5.55
TP Loading*	kg/day	30.9	26.8	20.2	15.15	20.03

* Yearly Averages

2.3 Condition 11 4.b – Effluent Flow Monitoring

a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;

See **Appendices A.1, A.2 & A.3** for details on monthly wastewater effluent flows over the reporting period.

2.4 Condition 11 4.c - Operating Issues & Corrective Actions

a summary of all operating issues encountered and corrective actions taken;

Table 2.4-1 illustrates the operating issues and corrective actions taken by operations for this reporting period.

Table 2.4-1 Operating Issues & Corrective Actions

Issue	Date	Causes	Corrective Actions
Influent anomaly (white spill)	April 3 April 11	Local Arena in Acton	Contacted Halton's Industrial Waste group to come to the facility, samples taken. IW traced the source to an Arena and reviewed the bylaw with staff. Influent pH and Temperature recorded. No adverse effects on the facility were observed.
Regulatory Effluent Sample Parameter CBOD over objective.	February 6 March 6 May 1 October 2	Buildup of Algae/biofilm on sample intake equipment suspected. Rare Earth metal trial suspected for May 1st incident.	In all cases, sample bottle, probe, and intake tubing were either cleaned or replaced. May 1st sample was over the objective and most likely due to deteriorating plant conditions from Rare Earth Metal Trial. Operations monitored moving forward. Monthly average CBOD for Final Effluent remained compliant for all remaining months.
High Flow Events	May 7 July 16 December 10	Agnus Pump Station (May7 & Dec 10) Heavy Rain (July 16)	May 7: Manually opened UV gates due to a program malfunction. SCADA adjusted the setpoint program for proper operation during high flow. July 16: Monitored influent flows up to 14,000 m^3/day. December 10: Received call about issues at Agnus Pumping Station. Monitored plant flows. General Note: No overflow or bypass occurred.
Filter #3 Out of Service	August 26 September 3	Waste Valve Actuator failed	Filter drained and isolated. Waste valve actuator was replaced on September 3rd and filter put back in service.
Brennfloc Rare Earth metal coagulant trial	April 1 to May 2	Trial of rare earth metal coagulant for Phosphorous removal	Operational issues with higher suspended solids and turbidity in C2 train. Switched back to Alum after trial
Plant Power Outage	May 7	Thunderstorm caused generators to run	Operations reset plant equipment on site after generators had shut off and normal hydro was restored.

2.5 Condition 11 4.d - Maintenance

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;

The Water and Wastewater Treatment Division has developed a maintenance management program for plant works at the WWTP. This program is executed by treatment plant maintenance and SCADA staff. State of good repair work performed by the Plant Capital and Engineering staff is not reported.

Table 2.5-1 lists the number of normal activities, emergency repairs and maintenance activities completed by treatment plant maintenance and SCADA staff at the WWTP for the reporting period. The Water and Wastewater Division aligns current maintenance language with ECA language, as follows:

- Normal activities are all maintenance work that is planned through the Asset Care Process (all work order types)
- Emergency repairs are all breakdown work order types that result in downtime of a process area or the plant
- Maintenance activities are all planned and unplanned works, from all work order types

Table 2.5-1 Maintenance Work

Normal Activities	Emergency Repairs	Maintenance Activities
683	0	788

Due to the volume of workorders and related transactional data for the works, this information is not included as part of this report, however, the information is provided on a weekly basis to operational staff at each plant as part of the maintenance management, asset care management process.

2.6 Condition 11 4.e - Quality Assurance and Control Measures

a summary of any effluent quality assurance or control measures undertaken;

2.6.1 Quality Assurance

To ensure the quality of the data collected by operations, the following criteria are in place.

- Operations perform daily in house testing on the parameters set in the ECA
- Optimization sampling at every process
- A monitoring schedule is set up by the accredited Regional Lab
- Process data is collected electronically
- SCADA collects real time data, monitors and stores data for future analysis
- Participation in the AWWA Partnership for Clean Water program

2.6.2 Control Measures

The following control measures are in place at the Acton WWTP

- Daily reports are used to analyze trends and determine if changes are necessary
- Online analyzers to ensure complete treatment at various process stages
- Compliance instruments are calibrated to ensure accuracy

- Equipment redundancy throughout the plant to ensure treatment can be achieved in case of emergencies and breakdowns
- Thin clients are stationed throughout the plant to allow operations to access SCADA to control equipment and asses real time conditions
- Work instructions and standard operating procedures are developed to aid operations
- Phosphorus precipitation using Aluminum Sulphate

2.7 Condition 11 4.f – Calibration & Maintenance of Monitoring Equipment

a summary of the calibration and maintenance carried out on all Influent and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer;

The equipment used to monitor wastewater influent and effluent flows and key parameters must be maintained and checked throughout the year to ensure accurate readings. The equipment is calibrated yearly by the Region's maintenance staff. All the equipment was found to be within acceptable limits in 2024.

Table 2.7-1 shows the calibration date of the equipment below.

Table 2.7-1 Calibration

Instrument Description	SAP #	2024 Calibration	2023 Calibration
FLOW FINAL EFFLUENT PLANT B	200147	7/11/2024	09/25/2023
FLOW FROG POND - INFLUENT	225068 236027	7/11/2024	09/28/2023
PH EFFLUENT ANALYZER	235096	8/27/2024	09/27/2023
FLOW RAW SEWAGE	225702	7/9/2024	09/27/2023
FLOW FINAL EFFLUENT	235095	7/11/2024	09/25/2023
FLOW SECONDARY C1	235093	7/11/2024	09/25/2023
FLOW SECONDARY C2	235094	7/11/2024	09/25/2023
FLOW HILL SEWER - INFLUENT	233990 236028	7/12/2024	09/28/2023

2.8 Condition 11 4.g - Efforts Made to Achieve Design Objective

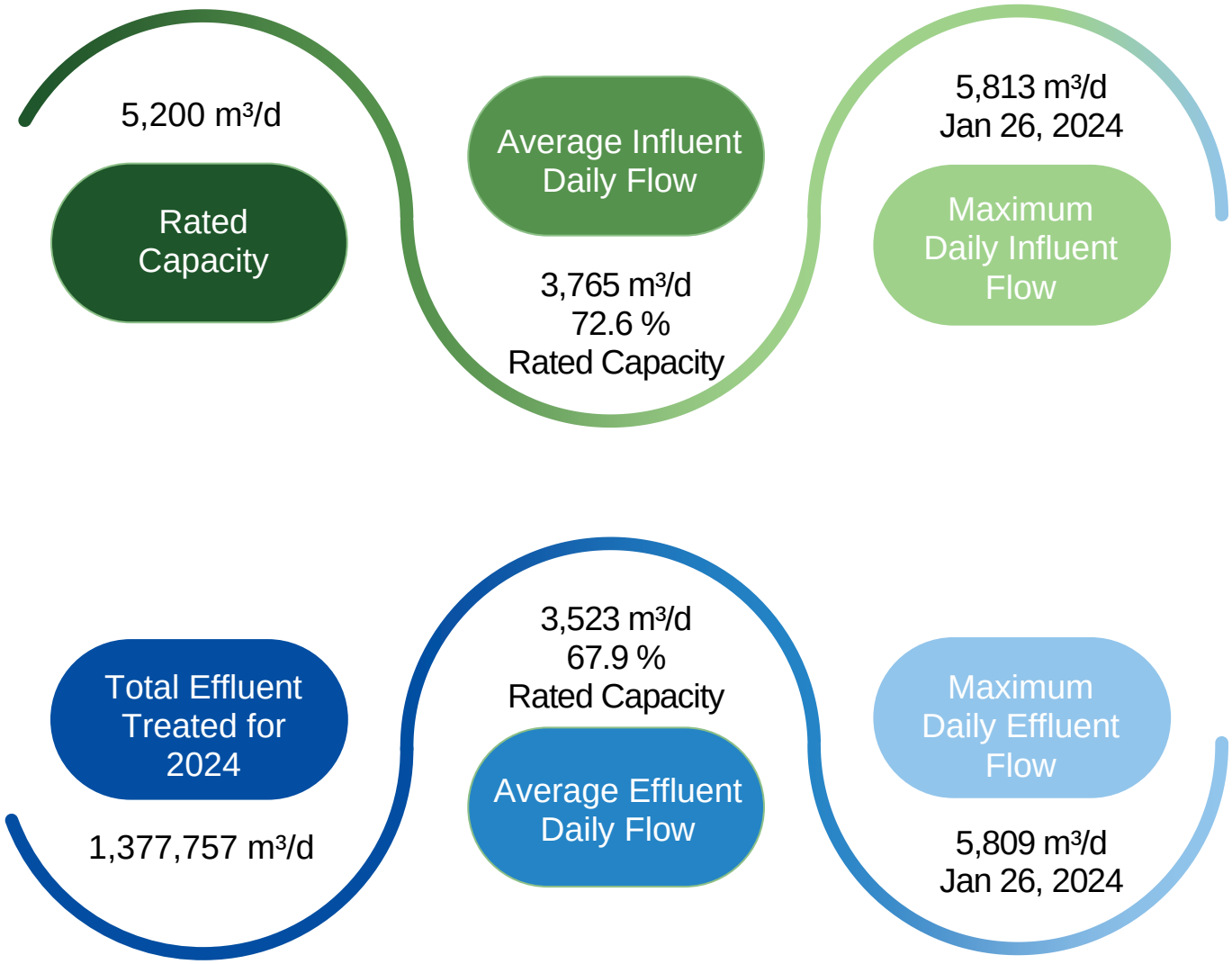
a summary of efforts made to achieve the design objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions if any are required under the following situations:

> *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;*

The annual influent and effluent flow summary are outlined in Figure 2.8-1. See **Appendix Acton 1** for

additional details on monthly influent and effluent wastewater flows over the reporting period.

Figure 2.8-1 Plant Influent & Effluent Flow Summary



2.8.1 Analytical Results

The monthly analysis results are provided in **Appendix Acton 2**.

Table 2.8-1 presents the annual summary of all the sample and analysis results that were performed for parameters which have defined compliance limits and objectives and demonstrates the adequacy of the works.

This data is not a reflection of how the facility met the objectives and limits using the prescribed averaging calculators. That data can be viewed in Table 1.1-1. Rather, **Table 2.8-1 provides an indication of how each effluent sample collected, analyzed and presented in Appendix Acton 3 compares to the compliance objectives and limits.**

Table 2.8-1 Annual Summary of Compliance Results

Results Within Limits*		Results Within Objectives**	
CBOD – 5.0 mg/L	100%	CBOD – 2.0 mg/L	92%
TSS – 5.0 mg/L	100%	TSS – 3.0 mg/L	100%
TP – 0.2 mg/L	100%	TP – 0.1 mg/L	100%
NH3-N – 2.0/4.0 mg/L***	100%	NH3-N – 0.5/1.0 mg/L***	100%
E.Coli – 150 CFU/100ml	100%	E.Coli – 100 CFU/100ml	100%
pH – 6.0 - 9.5†	100%	pH – 6.5 - 8.5†	100%

* Percent Compliance represents results based on unique compliance criteria for each parameter
** The operating authority "shall use their best effort to maintain" and does not represent non-compliance
*** NH_3-N Season: May to November – 2.0 mg/L(0.5mg/L), December to April – 4.0 mg/L(1.0mg/L)
†**The pH of the effluent shall be maintained within the limits outlined in the plant's ECA, at all times**

2.9 Condition 11 4.h - Biosolids

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;

The annual biosolids production and forecast for the following year is presented in Table 2.9-1. The biosolids are taken to the Biosolids Management Center (BMC) for temporary storage, blending and thickening prior to land application and/or dewatering.

Table 2.9-1 Acton Biosolids Production & Forecast

Material	Produced	2025 Forecasted
Biosolids (m^3)	4,905	5,304

2.10 Condition 11 4.i – Complaints

summary of any complaints received, and any steps taken to address the complaints;

There were no complaints received at the plant in 2024.

2.11 Condition 11 4.j – Partial Treatment Events

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;

The occurrence of a spill, by-pass or overflow results in the generation of an event report and entry into the operational log.

There were no partial treatment events in 2024.

2.12 Condition 11 4.k – Notices of Modifications

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 modifications.

Halton Region monitors, maintains, and replaces existing assets based on condition, age, risk and/or use as part of the state of good repair program or as identified in the master plan.

There were no Notice of Modifications submitted in 2024.

2.13 Condition 11 4.l Conformance with Procedure F-5-1

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 Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflows with estimated budget forecast for the year following that for which the report is submitted

As a nominally separated sewer system, details about current or future projects related to the sanitary sewer system within this plant's catchment area that relates to bypass/overflow elimination can be found in the Region's **Wastewater Collection Systems Performance Report 2024**.

2.14 Condition 11 4.m – Monitoring Schedule

a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year.

In 2024, there were no deviations from the current monitoring schedule. Table 2.14-1 shows the monitoring schedule for Acton WWTP.

Table 2.14-1 Monitoring Schedule

Sample	Frequency	Analysis Performed
Raw Sewage	Weekly	BOD5, TSS, TP, TKN
Final Effluent	Weekly	CBOD5, TP, TSS, NH3-N, NH3, E.Coli, pH*, Temp*

* pH and temperature of the Final Effluent shall be determined in the field at the time of sampling for Total Ammonia Nitrogen.

2.15 Condition 12 - Total Phosphorus (TP) Offset Implementation Program

Halton Region submitted a letter and report to the MECP on November 18, 2024, which outlines the basis and scope of a revised Total Phosphorus Offset Plan in compliance with condition No. 12. (4) b outlined in the Amended Environmental Compliance Approval 7158-CR7TWJ issued July 18, 2023 and revised subsections 12. (1) per MECP letter dated December 15, 2023 granting regulatory relief until December 31, 2024.

The Region is awaiting a response from the MECP on the acceptance of the proposed changes to the TP Offset program.

3. Georgetown Wastewater System

3.1 System Description

The Georgetown Wastewater Treatment Plant (WWTP) is located at 275 Mountainview Road in Halton Hills (Georgetown). The Georgetown WWTP is a tertiary treatment plant consisting of screening, raw sewage pumping, grit removal, primary clarification, nitrifying activated sludge, secondary clarification, tertiary filtration, and two stage anaerobic digestion. Ferric chloride is used for phosphorus removal. UV light is used for seasonal disinfection prior to the effluent discharging into Silver Creek. The Georgetown WWTP system information is provided in Table 3.1-1

Table 3.1-1 Georgetown System Information

Municipal Wastewater System Works Number	110000294
Classification	
Treatment Facility	Class 3
Certificate #	563
Collection System	Class 2
Certificate #	565

Environmental Compliance Approvals

Type	ECA Number	Date of Issue
Sewage Works	4783-BUCP6Y	October 29, 2020
S.20.18 Order	X-1000004824	February 09, 2015
Air & Noise	2061-9TFS58	July 15, 2015

3.2 Condition 11 4.a Influent Flow Monitoring

a summary and interpretation of all Influent monitoring data, and a review of the historical trend of the sewage characteristics and flow rates;

Influent sewage characteristics for this reporting period can be found in **Appendices B.1, B.2 & B.3**. Historical influent flow characteristics can be found in Table 3.2-1 below.

Table 3.2-1 Historical Data

Influent		2019	2020	2021	2022	2023
Total Flow	ML	5520.947	5507.544	4841.529	4817.424	5258.428
Average Flow	MLD	15.126	15.048	13.264	13.198	14.407
BOD5*	mg/L	273	223	239	244	243
BOD5 Loading*	kg/day	4068.0	3324.9	3185.8	3228.7	3494.5
Total Suspended Solids*	mg/L	390.8	303.3	310.8	308.3	355.0
TSS Loading*	kg/day	5823.9	4509.5	4127.1	4100.4	5096.6
Total Kjeldahl Nitrogen*	mg/L	49.2	40.4	43.9	42.7	42.1
TKN Loading*	kg/day	737.2	606.8	585.9	561.5	604.9
Total Phosphorus*	mg/L	6.91	6.41	7.11	7.47	7.29
TP Loading*	kg/day	103.29	95.22	93.99	98.58	104.56

* Yearly Averages

3.3 Condition 11 4.b Effluent Flow Monitoring

a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;

Refer to **Appendices B.1, B.2 & B.3** for comprehensive information on the monthly wastewater effluent flows, concentrations and loading rates throughout the reporting period.

3.4 Condition 11 4.c Monitoring Schedule

a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year;

In 2024, there were no deviations from the current monitoring schedule. Table 3.4-1 shows the monitoring schedule for Georgetown WWTP in 2025.

Table 3.4-1 Monitoring Schedule

Sample	Frequency	Analysis Performed
Raw Sewage	Weekly	BOD5, TSS, TP, TKN
Final Effluent	Weekly	CBOD5, TSS, TP, TAN, E.coli, pH*, Temp*, Unionized Ammonia**

*pH and temperature of the Final Effluent shall be determined in the field at the time of sampling for Total Ammonia Nitrogen.
**The concentration of un-ionized ammonia shall be calculated using the total ammonia concentration, pH and temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives" dated July 1994, as amended.

3.5 Condition 11 4.d Operating Issues & Corrective Actions

a summary of all operating issues encountered and corrective actions taken;

Table 3.5-1 illustrates the operating issues and corrective actions taken by operations.

Table 3.5-1 Operating Issues & Corrective Actions

Issue	Date	Causes	Corrective Actions
Excessively High Total Mass	March 20-May 31	Excessive solids loading and production, poor solids distribution	Redistributed sludge inventory and hauled RAS offsite.
Inaccurate Sludge Loading Volumes Recorded	February 20	Check valve on sludge loading line not holding. Volume loaded not registering correctly.	Work Request submitted to maintenance and subsequent repair completed
UV System Online	April 1	As per ECA	Confirmed system is operational and put online for disinfection season
2B and 2C Aeration Tanks Out of Service	April 20-November 19	Tanks removed from service for process optimization and inspection/cleaning	Power washed and cleaned the tank. Replaced diffuser O-rings, fouled stones and mud valve. Repaired broken air lines
Inconsistent RAS Distribution	May 17	Manual operation of RAS Valves	RAS valves placed into proportional flow mode, Minimum and maximum positioning set to adjusted based on theoretical
Increased Blanket depth on B1 S.C.	Multiple days from May 27 to August 28	Open limit of actuator gate not set correctly	Work notification submitted to maintenance. Manually controlled RAS withdrawal and inlet tank flow
Elevated Plant Flow	July 16	High Precipitation	Diverted flow to all available tanks. Maximized treatment capacity, adjusting plant process parameters. Event Report completed and submitted as required.
Effluent Total Phosphorus over Objective	July	High Secondary Effluent TSS and Sampler Issue	Adjusted plant processes, corrected sampler program, and replaced tubing
Above Target Mass	Multiple days from September to November	High Aeration Tank Mass. High Primary Clarifier blanket depths	Adjusted plant processes. Increased in house laboratory analysis. Weekly load of RAS hauled off-site
Poor Settleability in Primary Clarifier and Low Raw Sludge Total Solids Concentration	October 4	High solids loading. Increased Total Phosphorus	Adjusted Raw Sludge pumping. Implemented dual point ferric dosing (10% ‘front end’ and 90% ‘back end’) Monitored process and increased dosing to 20/80 split

Issue	Date	Causes	Corrective Actions
Decreased Filter Removal Efficiency and Filter Blinding During High Flows	October 22-December 13	Fouled Media	Filter Media Replacement Project
UV System Offline	November 1	As per ECA	Placed UV system in winterization mode for end of disinfection season.
Plugged Digester Overflow	November 12	Digester overflow line plugged with scum	Hosed down overflow and broke up scum. Confirmed HiHi level setpoints and alarm setpoints for continuous monitoring
Power Failure (No Generator or Utility Power)	December 12	Generator tripped during bi-weekly testing and PLC could not determine the proper power transfer sequence to re-establish Utility Power.	Contract electrician worked with maintenance to reset the system and restore power. Generator transfer/ switch over tested again for faults.

3.6 Condition 11 4.e Maintenance

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;

The Water and Wastewater Treatment Division has developed a maintenance management program for plant works at the WWTP. This program is executed by treatment plant maintenance and SCADA staff. State of good repair work performed by the Plant Capital and Engineering staff is not reported.

Table 3.6-1 lists the number of normal activities, emergency repairs and maintenance activities completed by treatment plant maintenance and SCADA staff at the WWTP for the year. The Water and Wastewater Division aligns current maintenance language with ECA language, as follows:

- Normal activities are all maintenance work that is planned through the Asset Care Process (all work order types)
- Emergency repairs are all breakdown work order types that result in downtime of a process area or the plant
- Maintenance activities are all planned and unplanned works, from all work order types

Table 3.6-1 Maintenance Work

Normal Activities	Emergency Repairs	Maintenance Activities
784	0	945

Due to the volume of workorders and related transactional data for the works, this information is not included as part of this report, however, the information is provided on a weekly basis to operational staff at each plant as part of the maintenance management, asset care management process.

3.7 Condition 11 4.f Quality Assurance and Control Measures

a summary of any effluent quality assurance or control measures undertaken;

3.7.1 Quality Assurance

To ensure the quality of the data collected by operations, the following criteria are in place.

- Operations perform daily in house testing on the parameters set in the ECA
- Optimization sampling at every process
- A monitoring schedule is set up by the accredited Regional Lab
- Process data is collected electronically
- SCADA collects real time data, monitors and stores data for future analysis
- Participation in the AWWA Partnership for Clean Water program

3.7.2 Control Measures

The following control measures are in place at the Georgetown WWTP

- Daily reports are used to analyze trends and determine if changes are necessary
- Online analyzers to ensure complete treatment at various process stages
- Compliance instruments are calibrated to ensure accuracy
- Equipment redundancy throughout the plant to ensure treatment can be achieved in case of emergencies and breakdowns
- Thin clients are stationed throughout the plant to allow operations to access SCADA to control equipment and asses real time conditions
- Work instructions and standard operating procedures are developed to aid operations
- Phosphorus precipitation is achieved through ferric chloride addition

3.8 Condition 11 4.g Calibration & Maintenance of Monitoring Equipment

a summary of the calibration and maintenance carried out on all Influent and Final Effluent monitoring equipment to ensure that the accuracy is within the tolerance of that equipment as required in this Approval or recommended by the manufacturer;

The equipment used to monitor wastewater influent and effluent flows, and key process parameters must be maintained and checked throughout the year to ensure accurate readings. The equipment is calibrated yearly by the Region's maintenance staff.

All the equipment was found to be within acceptable limits in 2024. Table 3.8-1 shows the calibration date of the equipment below.

Table 3.8-1 Calibration

Instrument Description	SAP #	2024 Calibration	2023 Calibration
TRANSMITTER PH INFLUENT	235071	8/23/2024	10/05/2023
TRANSMITTER FLOW FINAL EFFLUENT	209094	9/4/2024	10/06/2023
ANALYZER PH PLANT EFFLUENT	234746	8/23/2024	10/05/2023
TRANSMITTER FLOW RAW SEWAGE INLET	202411	9/3/2024	10/05/2023

3.9 Condition 11 4.h Efforts Made to Achieve Design Objective

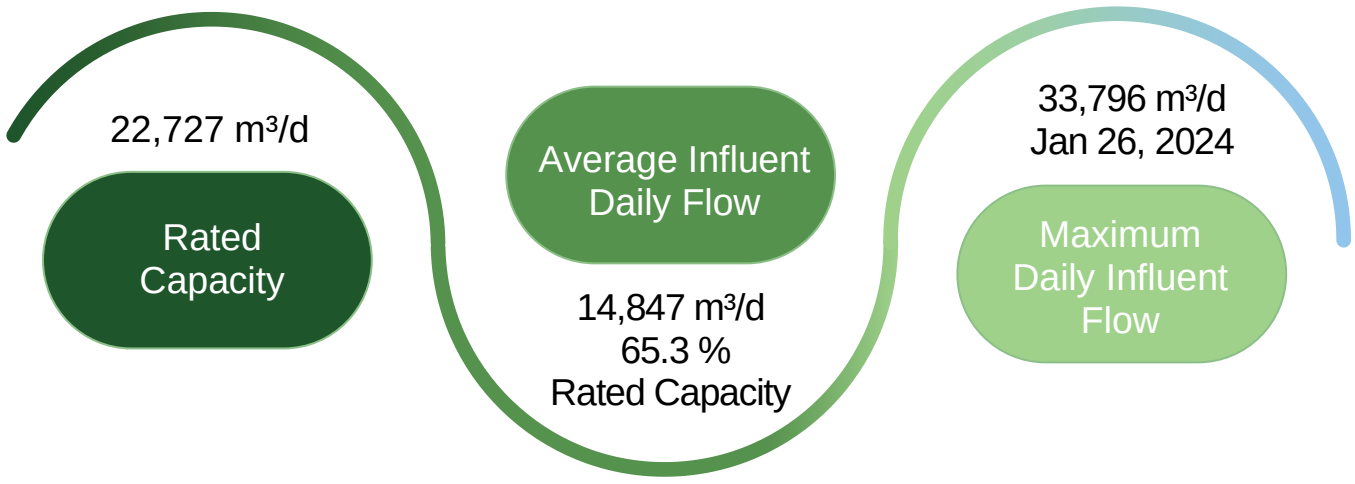
a summary of efforts made to achieve the design objectives in this Approval, including an assessment of the issues and recommendations for pro-active actions if any are required under the following situations:

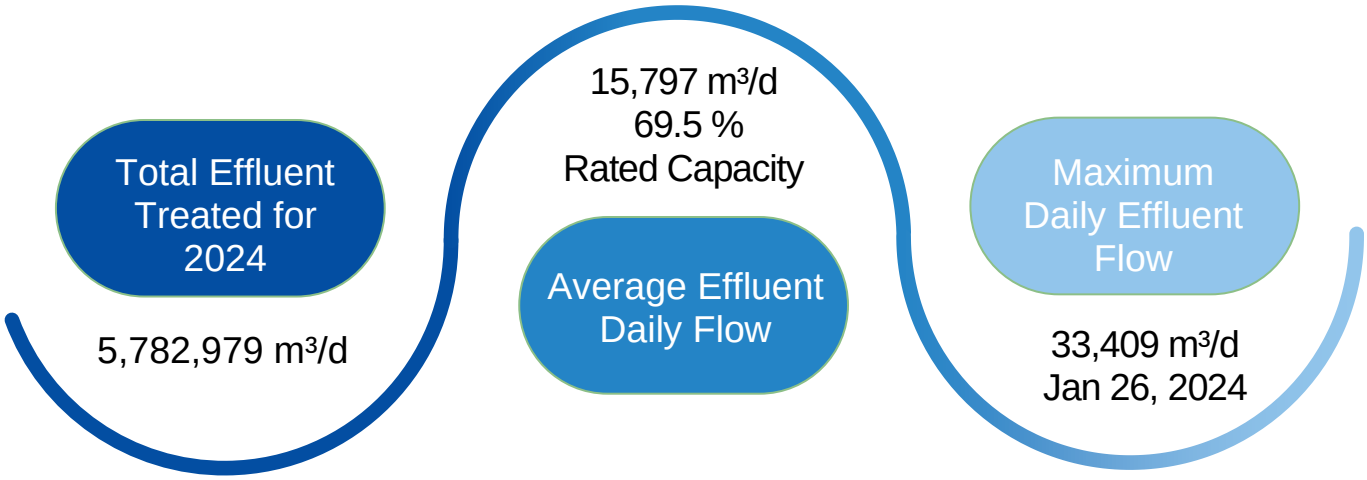
i. when any of the design objectives is not achieved more than 50% of the time in a year, or there is an increasing trend in deterioration of Final Effluent quality;

ii. when the Annual Average Daily Influent Flow reaches 80% of the Rated Capacity;

The annual influent and effluent flow summary are outlined in Figure 3.9-1. See **Appendix Georgetown 1** for additional details on monthly influent and effluent wastewater flows over the reporting period.

Figure 3.9-1 Plant Influent & Effluent Flow Summary





3.9.1 Analytical Results

The monthly analysis results are provided in **Appendix Georgetown 2.**

Table 3.9-1 presents the annual summary of all the sample and analysis results that were performed for parameters which have defined compliance limits and objectives and demonstrates the adequacy of the works.

This data is not a reflection of how the facility met the objectives and limits using the prescribed averaging calculators. That data can be viewed in Table 1.1-1. Rather, **Table 3.9-1 provides an indication of how each effluent sample collected, analyzed and presented in Appendix Georgetown 3 compares to the compliance objectives and limits.**

Table 3.9-1 Annual Summary of Compliance Results

Results Within Limits*	
CBOD – 5.0 mg/L	100%
TSS – 5.0 mg/L	100%
TP – 0.30 mg/L	98%
Un-ionized NH3 – 0.02 mg/L	100%
E.Coli – 200 CFU/100ml***	100%
pH – 6.0-9.5†	100%

Results Within Objectives**	
CBOD – 4.0 mg/L	100%
TSS – 4.0 mg/L	96%
TP – 0.25 mg/L	89%
Un-ionized NH3 – < 0.02 mg/L	100%
E.Coli – 150 CFU/100ml***	100%
pH – 6.5-9.0†	100%

* Percent Compliance represents results based on unique compliance criteria for each parameter
** The operating authority "shall use their best effort to maintain" and does not represent non-compliance
*** E.coli sampling and reporting occurs during the period of April 1 to October 31
†**The pH of the effluent shall be maintained within the limits outlined in the plant's ECA, at all times**

3.10 - Condition 11: 4.i - Biosolids

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;

The annual biosolids production and forecast for the following year is presented in Table 3.10-1. The biosolids are taken to the Region's Biosolids Management Center (BMC) for temporary storage, blending and thickening prior to land application and/or dewatering.

Table 3.10-1 Georgetown Annual Biosolids Production & Forecast

Material	Produced	2025 Forecasted
Biosolids (m^3)	69,086	62,856

Return Activated Sludge hauled off-site amounts are represented in Table 3.10-2

Table 3.10-2 RAS Hauled Off Site for Stabilization & Forecast

Material	Hauled Off-Site	To Mid Halton	2025 Forecasted
RAS (m^3)	2,140	2,140	2,288

3.11 Condition 11 4.j Complaints

a summary of any complaints received and any steps taken to address the complaints;

The complaints received at the Georgetown WWTP for this reporting period are summarized in Table 3.11-1 below. Plant Operations staff respond to each complaint with a thorough investigation and timely and appropriate corrective action.

Table 3.11-1 Complaints Summary

Date	Type	Description	Plant Actions
April 15	Noise	Loud, high-pitched noise during the day and night causing the homeowner to close their windows. **SAC/ECHO # 1-5VHT34**	The issue was suspected to be from a leaking air column on aeration train 2B, zone 2. Repair work can only be done once the aeration tank is empty. Air release is generated from the top due to a broken hose connection that runs from the bottom of the tank on the purge line. Operational staff opened purge line to release air and minimize restriction which was causing the high-pitched whistling. The high-pitched whistling lessened. Follow up with resident confirmed they could no longer hear the noise.

3.12 Condition 11 4.k Partial Treatment Events

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;

The occurrence of a spill, by-pass or overflow result in the generation of an event report and entry into the operational log. These event(s) are listed in the following table(s).

Table 3.12-1 Plant Spill Event(s)

Date	ECHO #	Type	Start Time HH:MM	Duration (Minutes)	Volume (m^3)	Disinfection (Y/N)	Cause Code
Feb 29	1-4Q0ZT3	Air	11:48	137	156.18	N/A	3
Mar 25	1-56H4P0	Water	07:30	4	12	N/A	8

Table 3.12-2 Plant Overflow Event(s)

Date	ECHO #	Type	Start Time HH:MM	Duration Mins	Volume (ML)	Disinfection (Y/N)	Cause Code
July 16	1-9037F6	Primary	12:32	174	0.5	N	1,7,8
July 16	1-8ZRQUF	Raw	12:51	256	1.2621	N	1,8

Cause Codes for Partial Treatment Events		
1 = Heavy Precipitation	4 = Equipment Maintenance	7 = Exceed Design
2 = Snow Melt	5 = Sewer Problems	8 = Other
3 = Equipment Failure	6 = Power Failure	

3.13 Condition 11 4.l Notices of Modification

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.

Halton Region monitors, maintains, and replaces existing assets based on condition, age, risk and/or use as part of the state of good repair program or as identified in the master plan.

There were no Notice of Modifications submitted in 2024.

3.14 Condition 11 4.m Conformance with Procedure F-5-1

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 Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflows with estimated budget forecast for the year following that for which the report is submitted.

As a nominally separated sewer system, details about current or future projects related to the sanitary collection system within this plant's catchment area that relates to bypass/overflow can be found in the **Wastewater Collection Systems Performance Report 2024**.

3.15 Condition 11 4.n Construction & Commissioning Schedule Updates

any changes or updates to the schedule for the completion of construction and commissioning operation of major process(es) / equipment groups in the Proposed Works.

There are no changes or updates to the schedule for completion of the Proposed Works as these were completed prior to the reporting period.

4. Mid-Halton Wastewater System

4.1 System Description

The Mid-Halton Wastewater Treatment Plant (WWTP) is located at 2195 North Service Road in Oakville. The Mid-Halton WWTP is an advanced secondary treatment plant consisting of screening, grit removal, primary clarification, anoxic/aerobic activated sludge, final clarification, two- stage anaerobic digestion, along with solids thickening and dewatering. Ferric chloride is used for phosphorus removal. Sodium hydroxide and magnesium hydroxide are used for pH and alkalinity adjustments respectively. UV light is used for seasonal disinfection of the final effluent from Mid-Halton prior to discharge to Lake Ontario. The Mid-Halton WWTP system information is provided in Table 4.1-1.

Table 4.1-1 Mid-Halton System Information

Municipal Wastewater System Works Number		120002282
Classification		
Treatment Facility	Class 4	
Certificate #	2626	
Collection System	Class 3	
Certificate #	554	

Environmental Compliance Approvals

Type	ECA Number	Date of Issue
Sewage Works	3636-BUCP2V	October 29, 2020
Sewage Works	7714-DBKUA6	December 13, 2024
Air & Noise	5280-9V5SK9	May 25, 2015

4.2 Condition 10 6.a – Effluent Flow Monitoring

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

The annual effluent flow summary is outlined in Figure 4.7-1. See **Appendix Mid-Halton 1** for additional details on monthly effluent wastewater flows over the reporting period.

Figure 4.7-1 Plant Effluent Flow Summary

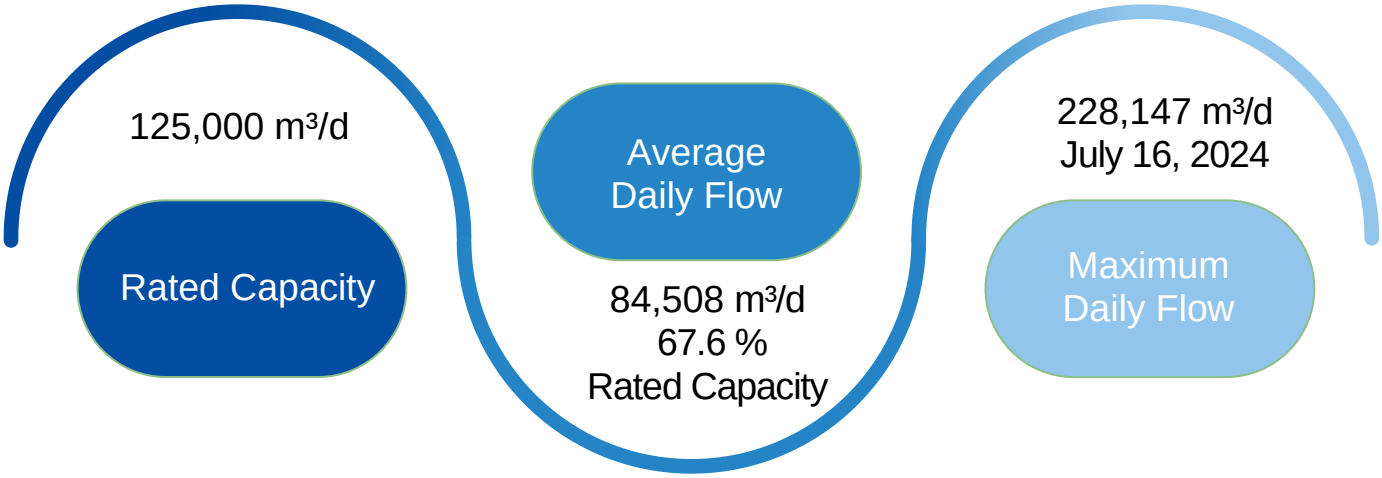


Table 4.2-1 presents the annual summary of all the sample and analysis results that were performed for parameters which have defined compliance limits and demonstrates the adequacy of the works.

This data is not a reflection of how the facility met the limits using the prescribed averaging calculators. That data can be viewed in Table 1.1-1. Rather, **Table 4.2-1 provides an indication of how each effluent sample collected, analyzed and presented in Appendix Mid-Halton 3 compares to the compliance limits.**

Table 4.2-1 Annual Summary of Compliance Results

Results Within Limits*	
CBOD – 25 mg/L	100%
TSS – 25 mg/L	100%
TP – 0.8 mg/L	100%
NH3-N – 10/20 mg/L**	100%
E.Coli – 200 CFU/100ml***	100%
pH – 6.0-9.5†	100%

* Percent Compliance represents results based on unique compliance criteria for each parameter
** NH_3-N Season: May to November – 10 mg/L(6 mg/L), December to April – 20 mg/L(10 mg/L)
*** E.coli sampling and reporting occurs during the period of May 1 to October 31
† **The pH of the effluent shall be maintained within the limits outlined in the plant's ECA, at all times**

4.3 Condition 10 6.b - Operating Issues & Corrective Actions

a description of any operating problems encountered and corrective actions taken;

Table 4.3-1 illustrates the operating issues and corrective actions taken by operations.

Table 4.3-1 Operating Issues & Corrective Actions

Issue	Date	Causes	Corrective Actions
Effluent Total Phosphorous elevated – Compliance Sampling	Multiple dates throughout the year	Plant loading issues to process.	Adjusted plant process and coagulant (Ferric Chloride) dosage to each train accordingly.
Elevated Plant Flow	Multiple dates throughout the year	High precipitation and snow melt	No adverse impact. Plant processes were monitored to ensure effective treatment.
Final Effluent Low pH	April 9, 2024	Plant effluent shutdown, the pH meter was taken off-line, because it would not be submerged in water, with the channel empty. When the pH meter was put back into the channel and the scan turned on, the pH read 5.74 at approximately 8:30am.	It was immediately taken off scan again, until effluent flow began to fill the channel and submerge probe. Note: the pH meter only displayed a low value because it had not yet reached submergence. When the effluent water flow filled the channel and the probe was taken off scan, it read 6.8
False Bypass – 3rd Line PS	November 20, 2024	False bypass reading during flowmeter PM calibration due to technician's instrument reading slightly above 4 mA.	Operations were in attendance while calibration was conducted. Instrument tech was instructed to re-zero the instrument to 3.96mA. This will avoid falsely accumulated flow values and nuisance alarms that could be had by minute fluctuating voltage/current.
Equipment out of service - North Pumping Station – Sewage Lift PUMP (SLP) #3	January 11, 2024 and September 13, 2024	Electrical failure with the soft starter and Variable Frequency Drive (VFD). Second electrical failure related to the VFH, phase indicator.	Work order issued and new soft starter installed. Tested and placed back in service, January 25th, 2024. Phase indicator repaired and placed back in service, September 18, 2024
Equipment out of service – Third Line Pumping Station – SLP #2	April 15, 2024	Taken out of service for maintenance repairs to check valve.	Check valve repaired and placed back in service, April 16, 2024.
Equipment out of service – Primary Clarifier #5 for expansion joint repairs.	May 13, 2024	Removed from service to repair expansion joints which were leaking in ground water.	Expansion joints repaired and tank was placed back into service, end of May 2024.

Issue	Date	Causes	Corrective Actions
Equipment out of service – Aeration Tank #9 due to major air diffuser break.	June 21, 2024	Major air leak in the tank due to broken diffuser piping.	Repaired the broken air piping and returned the aeration tank back to service, July 5, 2024.
Equipment out of service – Train B Aeration Channel for expansion joint repairs	July 2, 2024	Expansion joints in the channel (from aeration tanks #9 and #10 heavily deteriorated.	Diverted Train B flow to Trains A and C. Isolated AT #10, drained 2 feet of sludge into AT #9. Repairs to the channel expansion joints were completed and all tanks and channels were returned to service. July 5, 2024.
Green coloured raw sewage entered the facility from the North Pumping Station	June 27, 2024	Unknown source	Contacted industrial waste group to report. A Sample was collected at the inlet chamber and submitted to the Regional Lab for analysis. No source was found and no detrimental effects to the plant or process to report
Equipment out of service – Primary Clarifier #3	October 21, 2024	Broken cross collector boards.	Replaced the broken cross collector boards and placed back in service, October 24, 2024
Various Power Outages in facility for short durations.	Multiple days throughout the year	Blackout/Brownouts in Oakville from grid	Reset all equipment once power was restored to the facility.
Georgetown Return Activated Sludge (RAS) loads sent to the plant for treatment	Multiple days throughout the year	Georgetown wastewater treatment plant RAS very heavy and required unloading to assist with mass control in their facility.	RAS was transported by truck to the Biosolids Management Center (BMC) where it was dumped in the trunk sewer leading to Mid Halton and treated in the primary clarifiers as raw sludge.
Chemical trial on train C2 for phosphorus removal.	February 26 through to March 29, 2024	Full-scale side by side trial to Train C2, using a rare earth metal chloride vs Train C1, using Ferric Chloride, for phosphorus removal conducted to test out alternative phosphorus removal chemicals.	Conducted in-house laboratory analysis on various parameters for both trains each day to compare effectiveness of the rare earth metal chloride vs. ferric chloride. Made adjustments frequently in order to maintain effluent quality and compliance.

4.4 Condition 10 6.c - Maintenance

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

The Water and Wastewater Treatment Division has developed a maintenance management program for plant works at the WWTP. This program is executed by treatment plant maintenance and SCADA staff. State of good repair work performed by the Plant Capital and Engineering staff is not reported.

Table 4.4-1 lists the number of normal activities, emergency repairs and maintenance activities completed by treatment plant maintenance and SCADA staff at the WWTP for the year. The Water and Wastewater Treatment Division aligns current maintenance language with ECA language, as follows:

- Normal activities are all maintenance work that is planned through the Asset Care Process (all work order types)
- Emergency repairs are all breakdown work order types that result in downtime of a process area or the plant
- Maintenance activities are all planned and unplanned works, from all work order types

Table 4.4-1 Maintenance Work

Normal Activities	Emergency Repairs	Maintenance Activities
2,285	3	2,607

Due to the volume of workorders and related transactional data for the works, this information is not included as part of this report, however, the information is provided on a weekly basis to operational staff at each plant as part of the maintenance management, asset care management process.

4.5 Condition 10 6.d - Quality Assurance and Control Measures

a summary of any effluent quality assurance or control measures undertaken in the reporting period;

4.5.1 Quality Assurance

To ensure the quality of the data collected by operations, the following criteria are in place.

- Operations perform daily in house testing on the parameters set in the ECA
- Optimization sampling at every process
- A monitoring schedule is set up by the accredited Regional Lab
- Process data is collected electronically
- SCADA collects real time data, monitors and stores data for future analysis
- Participation in the AWWA Partnership for Clean Water program

4.5.2 Control Measures

The following control measures are in place at the Mid-Halton WWTP

- Daily reports are used to analyze trends and determine is changes are necessary
- Online analyzers to ensure complete treatment at various process stages
- Compliance instruments are calibrated to ensure accuracy
- Equipment redundancy throughout the plant to ensure treatment can be achieves in case of emergencies and breakdowns
- Thin clients are stationed throughout the plant to allow operations to access SCADA as to control equipment and asses real time conditions

- Work instruction and standard operating procedures are developed to aid operations
- Phosphorous precipitation is achieved using ferric chloride
- Magnesium hydroxide and sodium hydroxide are used for pH adjustment

4.6 Condition 10 6.e - Calibration & Maintenance of Monitoring Equipment

a summary of the calibration and maintenance carried out on all effluent monitoring equipment

The equipment used to monitor wastewater influent and effluent flows and key parameters must be maintained and checked throughout the year to ensure accurate readings. The equipment is calibrated yearly by the Region's maintenance staff.

All the equipment was found to be within the acceptable limits in 2024.Table 4.6-1 shows the calibration date of the equipment below.

Table 4.6-1 Calibration

Instrument Description	SAP #	2024 Calibration	2023 Calibration
TRANSMITTER PH UV INLET CHANNEL	233571	3/11/2024 11/7/2024	06/19/2023
TRANSMITTER FLOW SEC. CLAR.#1 EFFLUENT	210110	6/17/2024	07/4/2023
TRANSMITTER FLOW SEC. CLAR.#2 EFFLUENT	210111	6/17/2024	07/4/2023
TRANSMITTER FLOW SEC. CLAR.#3 EFFLUENT	210112	6/18/2024 10/22/2024	07/4/2023
TRANSMITTER FLOW SEC. CLAR.#4 EFFLUENT	210113	6/17/2024	06/19/2023
TRANSMITTER FLOW SEC. CLAR.#5 EFFLUENT	210114	6/17/2024	06/19/2023
TRANSMITTER FLOW SEC. CLAR.#6 EFFLUENT	210115	6/17/2024	06/19/2023
TRANSMITTER FLOW SECONDARY CLARIFIER #7	221870	6/17/2024	06/19/2023
TRANSMITTER FLOW SECONDARY CLARIFIER #8	235922	6/17/2024	06/19/2023
TRANSMITTER PARSHALL FLUME SEC. TANK 9	231760	6/17/2024	06/19/2023
TRANSMITTER PARSHALL FLUME SEC. TANK 10	231761	6/20/2024 10/7/2024	06/19/2023
TRANSMITTER PARSHALL FLUME SEC. TANK 11	231762	6/17/2024	06/19/2023
TRANSMITTER PARSHALL FLUME SEC. TANK 12	231763	6/17/2024	06/19/2023

4.7 Condition 10 6.f - Efforts Made to Achieve Effluent Objective

a description of efforts made and results achieved in meeting the Effluent Objectives of Condition 6.

See **Appendix Mid-Halton 1** for additional details on monthly effluent wastewater flows over the reporting period.

4.7.1 Analytical Results

The monthly analysis results are provided in **Appendix Mid-Halton 2**.

Table 4.7-1 presents the annual summary of all the sample and analysis results that were performed for parameters which have defined compliance objectives and demonstrates the adequacy of the works.

This data is not a reflection of how the facility met the objectives using the prescribed averaging calculators. That data can be viewed in Table 1.1-1. Rather, **Table 4.7-1 provides an indication of how each effluent sample collected, analyzed and presented in Appendix Mid-Halton 3 compares to the compliance objectives.**

Table 4.7-1 Annual Summary of Compliance Results

Results Within Objectives*	
CBOD – 15 mg/L	100%
TSS – 15 mg/L	100%
TP – 0.6 mg/L	81%
NH3-N – 6.0/10 mg/L**	100%
E.Coli – 150 CFU/100ml***	100%
pH – 6.5-9.0†	98%

* The operating authority "shall use their best effort to maintain" and does not represent non-compliance
** NH_3-N Season: May to November – 10 mg/L(6 mg/L), December to April – 20 mg/L(10 mg/L)
*** E.coli sampling and reporting occurs during the period of May 1 to October 31
† **The pH of the effluent shall be maintained within the limits outlined in the plant's ECA, at all times**

4.8 Condition 10 6.g - Biosolids

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;

The annual biosolids production and forecast for the following year is presented in Table 4.8-1. The dewatered biosolids were taken to agricultural land for crop production, sent to an approved processing facility prior to land application or sent to an approved reclamation facility.

Table 4.8-1 Mid-Halton Biosolids Production & Forecast

Material	Produced	2025 Forecasted
Biosolids (w.t.)	13,889	13,036

4.9 Condition 10 6.h - Complaints

a summary of any complaints received during the reporting period and any steps taken to address the complaints;

The complaints received at the Mid-Halton WWTP for this reporting period are summarized below in Table 4.9-1. Plant Operations staff responded to each complaint with a thorough investigation with a timely and appropriate corrective action.

Table 4.9-1 Complaints Summary

Date	Type	Description	Plant Actions
Oct 8	Odour	Odour complaint from a person who was driving by the facility on the North Service Road. ECHO # 1-BY1Q58	Plant was operating normally at the time of the complaint. Stand by operator came in for another issue and drove by the facility multiple times and did not notice any unusual odours. The headworks odor control unit was locked out for a belt replacement and inactive at the time Oct 9th, operations pumped down Third Line Pumping station, flushed out channels at the plant. Belt was replaced on the odor control unit and placed back in service. No abnormalities were found to contribute to the odours reported.

4.10 Condition 10 6.i - Partial Treatment Events

a summary of all By-pass, spill or abnormal discharge events;

The occurrence of a spill, by-pass or overflow result in the generation of an event report and entry into the operational log. These event(s) are listed in the following table(s).

There were no bypasses or overflows in 2024

Table 4.10-1 Plant Spill Event(s)

Date	ECHO #	Type	Start Time HH:MM	Duration (Minutes)	Volume (m^3)	Disinfection (Y/N)	Cause Code
July 16	1-903J2D	Water	12:00	20	2,000	N/A	1
July 16	1-904M4A	Land	12:25	25	560	N/A	1

Cause Codes for Partial Treatment Events		
1 = Heavy Precipitation	4 = Equipment Maintenance	7 = Exceed Design
2 = Snow Melt	5 = Sewer Problems	8 = Other
3 = Equipment Failure	6 = Power Failure	

4.11 Condition 10 6.j - Notices of Modifications

a copy of all Notice of Modifications submitted to the Water Supervisor as a result of Schedule B, Section 1, with a status report on the implementation of each modification;

Halton Region monitors, maintains, and replaces existing assets based on condition, age, risk and/or use as part of the state of good repair program or as identified in the master plan.

Completed and proposed works for the Mid-Halton WWTP during this reporting period are listed in

table 4.11-1 below.

Table 4.11-1 Notices of Modifications

Projects	Project ID	Approval Date
Mid-Halton WWTP Digester 1 Rehab	S3418A	07/05/2024

4.12 Condition 10 6.k – Modifications

a report summarizing all modifications completed as a result of Schedule B, Section 3;

Please refer to **Section 4.4 Condition 10 6.c – Maintenance** for addition information.

4.13 Condition 10 6.l – Other Information Requests

any other information the Water Supervisor requires from time to time.

The Mid-Halton WWTP responds to any requests for information from the Water Supervisor as soon as they are brought forth.

There were no requests for additional information in 2024

5. Oakville Southeast Wastewater System

5.1 System Description

The Oakville Southeast Wastewater Treatment Plant (WWTP) is located at 2477 Lakeshore Road East in the Town of Oakville. The Oakville Southeast WWTP is a secondary treatment plant consisting of screening, grit removal, primary clarification, activated sludge, final clarification, and two-stage anaerobic digestion. Ferric chloride is used for phosphorus removal and UV light for seasonal disinfection, before the final effluent is discharged into Lake Ontario. The Oakville Southeast WWTP system information is provided in Table 5.1-1.

Table 5.1-1 Oakville Southeast System Information

Municipal Wastewater System Works Number	120000998
Classification	
Treatment Facility	Class 4
Certificate #	555
Collection System	Class 2
Certificate #	554

Environmental Compliance Approvals

Type	ECA Number	Date of Issue
Sewage Works	7905-CBGS55	April 3, 2022
Air & Noise	1189-9XUJQZ	July 27, 2015

5.2 Condition 11 4.a - Influent Flow Monitoring & Imported Sewage

a summary and interpretation of all Influent and Imported Sewage monitoring data, and a review of the historical trend of the sewage characteristics and flow rates;

5.2.1 Interpretation of Influent Flow

Influent sewage characteristics for this reporting period can be found in **Appendices D.1, D.2 & D.3.** Historical data of the characteristics of the influent flow can be seen in table 5.2-1 below.

Table 5.2-1 Historical Data

Influent		2019	2020	2021	2022	2023
Total Flow	ML	6,750.823	5,883.442	5,689.612	5,628.285	6,363.746
Average Flow	MLD	18.495	16.075	15.588	15.420	17.435
BOD5*	mg/L	157	263	251	283	281
BOD5 Loading*	kg/day	2,830.0	4,136.5	3,901.5	4,230.0	4,762.6
Total Suspended Solids*	mg/L	181.5	320.0	310.0	388.3	357.5
TSS Loading*	kg/day	3,276.0	5,056.8	4,796.5	5,929.6	6,246.9
Total Kjeldahl Nitrogen*	mg/L	34.3	41.9	41.7	50.3	42.1
TKN Loading*	kg/day	622.4	661.7	645.6	753.7	713.4
Total Phosphorus*	mg/L	3.98	5.23	5.28	6.15	5.97
TP Loading*	kg/day	72.09	81.99	81.99	91.94	101.21

* Yearly Averages

5.2.2 Imported Sewage

The Southeast WWTP did not receive any imported sewage in 2024.

5.3 Condition 11 4.b – Effluent Flow Monitoring

a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;

5.3.1 Effluent Monitoring Data

See **Appendices D.1, D.2 & D.3** for details on monthly wastewater effluent flows, concentrations and loading rates over the reporting period.

5.4 Condition 11 4.c – Operating Issues & Corrective Actions

a summary of all operating issues encountered and corrective actions taken;

Table 5.4-1 illustrates the operating issues and corrective actions taken by operations.

Table 5.4-1 Operating Issues & Corrective Actions

Issue	Date	Causes	Corrective Actions
Uneven loading into facility: High TSS, TP and heavy FOG	Multiple days (Constant throughout the year)	Flat slope for incoming Gravity Sewers – Heavy industrial loading	Plant Process – Open bypass gates in the Distribution Chamber two (2) days a week on average to help reduce build up. Gravity Sewers – Initiated a gravity sewer flushing program to flush both gravity sewers on a scheduled monthly basis.
Major surfactant loading	Multiple days (Constant throughout the year). Notable dates: Jan 10, 29, March 2, Sept 26	Industrial loading	Plant processes were monitored to ensure effective treatment. Suppress foam by hosing. Samples collected and Industrial Waste was notified.
Digested sludge back flowed into Plant #3 Primary Tank	Feb 25	Debris stuck in Raw Sludge #6 check valve	Maintenance opened check valve and removed a piece of plastic that caused the flapper to remain open. Diverted majority of flow to Plant #2 and scheduled raw sludge haulage directly from primary tank for several days to bring down levels. Did not impact the final effluent quality leaving the plant.
Digester #1 Overfilled	April 22, 2024	Feed line plugged to Digester #1, so an alternative method was tried to feed and heat the sludge which caused it to overfill and overflow through the liquid release hatch. Sludge was contained on the roof of the digester	Digester #1 was isolated and liquid level brought down. Contractor was called to reinstall the hatch and seal the Digester. Sludge was hosed to the roof drains. New feed line was installed May 1.

Issue	Date	Causes	Corrective Actions
Low digester #1 recirculation line flow and associated pumps tripping on high pressures (Recirculation & Raw Sludge Pumps), which resulted in low digester temperatures and climbing sludge blankets	Jan, Feb, March 6, April 19, May 1	Vivianite accumulation in Digester #1 recirculation line	Water blasted and vacuumed Digester #1 recirculation line on March 6 with no improvement to flows. Noticed that Digester #1 feed line was plugged, installed a new Digester #1 feed line on May 1.
Elevated Plant Flow	Multiple days throughout the year	High precipitation and/or snow melt	No adverse impact to final effluent quality. Step feed was implemented, and Plant processes were monitored to ensure effective treatment.

5.5 Condition 11 4.d – Maintenance

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;

The Water and Wastewater Treatment Division has developed a maintenance management program for plant works at the WWTP. This program is executed by treatment plant maintenance and SCADA staff. State of good repair work performed by the Plant Capital and Engineering staff is not reported.

Table 5.5-1 lists the number of normal activities, emergency repairs and maintenance activities completed by treatment plant maintenance and SCADA staff at the WWTP for the year. The wastewater division aligns current maintenance language with ECA language, as follows:

- Normal activities are all maintenance work that is planned through the Asset Care Process (all work order types)
- Emergency repairs are all breakdown work order types that result in downtime of a process area or the plant
- Maintenance activities are all planned and unplanned works, from all work order types

Table 5.5-1 Maintenance Work

Normal Activities	Emergency Repairs	Maintenance Activities
861	1	1,180

Due to the volume of workorders and related transactional data for the works, this information is not included as part of this report, however, the information is provided on a weekly basis to operational staff at each plant as part of the maintenance management, asset care management process.

5.6 Condition 11 4.e – Quality Assurance and Control Measures

a summary of any effluent quality assurance or control measures undertaken;

5.6.1 Quality Assurance

To ensure the quality of the data collected by operations, the following criteria are in place.

- Operations perform daily in house testing on the parameters set in the ECA
- Optimization sampling at every process
- A monitoring schedule is set up by the accredited Regional Lab
- Process data is collected electronically
- SCADA collects real time data, monitors and stores data for future analysis
- Participation in the AWWA Partnership for Clean Water program

5.6.2 Control Measures

The following control measures are in place at the Southeast WWTP

- Daily reports are used to analyze trends and determine is changes are necessary
- Online analyzers to ensure complete treatment at various process stages
- Compliance instruments are calibrated to ensure accuracy
- Equipment redundancy throughout the plant to ensure treatment can be achieves in case of emergencies and breakdowns
- Thin clients are stationed throughout the plant to allow operations to access SCADA as to control equipment and asses real time conditions
- Work instruction and standard operating procedures are developed to aid operations
- Phosphorous precipitation is achieved by using Ferric Chloride

5.7 Condition 11 4.f – Calibration & Maintenance of Monitoring Equipment

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 this Approval or recommended by the manufacturer

The equipment used to monitor wastewater influent and effluent flows and key parameters must be maintained and checked throughout the year to ensure accurate readings. The equipment is calibrated yearly by the Region's maintenance staff. All the equipment was found to be within acceptable limits in 2024.

Table 5.7-1 shows the calibration date of the equipment below.

Table 5.7-1 Calibration

Instrument Description	SAP #	2024 Calibration	2023 Calibration
TRANSMITTER FLOW FINAL EFFLUENT PLANT #1	236243	6/12/2024	06/26/2023
TRANSMITTER FLOW FINAL EFFLUENT PLANT #2	234124	6/12/2024	06/19/2023
TRANSMITTER FLOW FINAL EFFLUENT PLANT #3	234158	6/12/2024	06/19/2023
TRANSMITTER FLOW PARSHALL FLUME FINALS	234207	6/13/2024	06/19/2023
XTR PH RAW SEWAGE	233246	6/16/2024	06/19/2023
ANALYZER FINAL EFFLUENT PH	216998	6/14/2024	06/19/2023

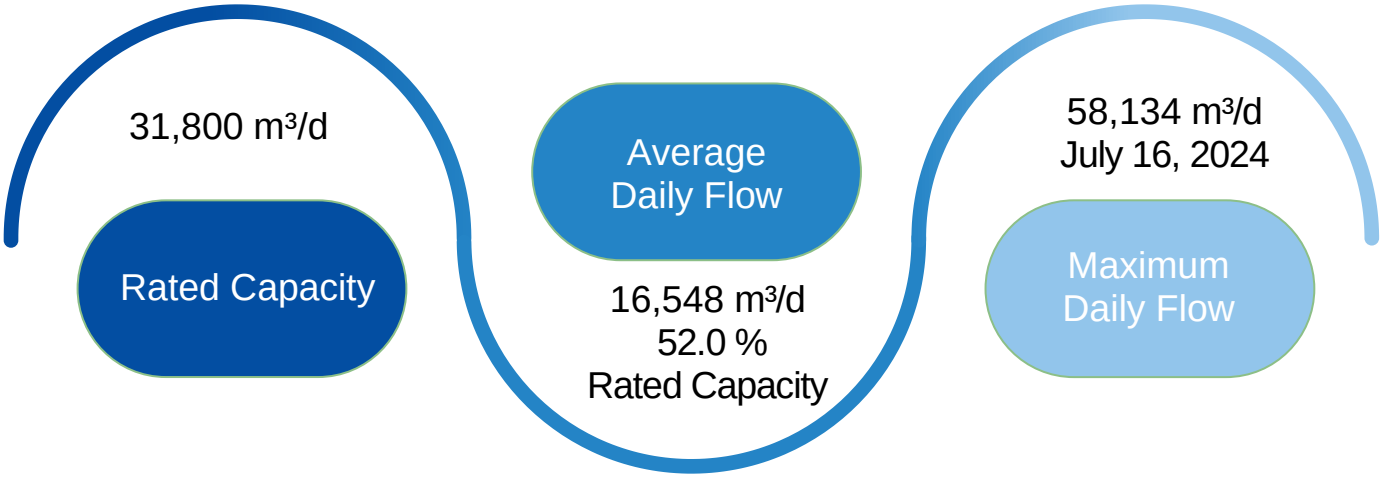
5.8 Condition 11 4.g – Efforts Made to Achieve Design Objective

a summary of efforts made to achieve the design objectives in this Approval, 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;*

The annual effluent flow summary is outlined in Figure 5.8-1. See **Appendix Southeast 1** for additional details on monthly influent and effluent wastewater flows over the reporting period.

Figure 5.8-1 Effluent Flow Summary



5.8.1 Analytical Results

The monthly analysis results are provided in **Appendix Southeast 2**.

Table 5.8-1 presents the annual summary of all the sample and analysis results that were performed for parameters which have defined compliance limits and objectives and demonstrates the adequacy of the works.

This data is not a reflection of how the facility met the objectives and limits using the prescribed averaging calculators. That data can be viewed in Table 1.1-1. Rather, **Table 5.8-1 provides an indication of how each effluent sample collected, analyzed and presented in Appendix Southeast 3 compares to the compliance objectives and limits.**

Table 5.8-1 Annual Summary of Compliance Results

Results Within Limits*	
CBOD – 25 mg/L	100%
TSS – 25 mg/L	100%
TP – 1.0 mg/L	100%
E.Coli – 200 CFU/100ml***	85%
pH – 6.0-9.5†	100%

Results Within Objectives**	
CBOD – 15 mg/L	100%
TSS – 15 mg/L	95%
TP – 0.8 mg/L	98%
E.Coli – 150 CFU/100ml***	73%
pH – 6.5-9.0†	96%

* Percent Compliance represents results based on unique compliance criteria for each parameter
** The operating authority "shall use their best effort to maintain" and does not represent non-compliance
*** E.coli sampling and reporting occurs during the period of May 1 to October 31
† **The pH of the effluent shall be maintained within the limits outlined in the plant's ECA, at all times**

5.9 Condition 11 4.h – Biosolids

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;

The annual biosolids production and forecast for the following year is presented in Table 5.9-1. The biosolids are taken to the BMC for temporary storage, blending and thickening prior to land application and/or dewatering. The volume of raw sludge hauled offsite for stabilization and the forecast for the following year are presented in Table 5.9-1

Table 5.9-1 Southeast Biosolids Production & Forecast

Material	Produced	2025 Forecasted
Biosolids (m^3)	49,577	48,040

Table 5.9-2 Raw Sludge Hauled Off-Site for Stabilization & Forecast

Material	Hauled Off-Site	Hauled To Skyway WWTP	2025 Forecasted*
Raw Sludge (m^3)	368	368	0

* Raw sludge haulage is not anticipated to be required for the 2025 reporting period

5.10 Condition 11 4.i –Complaints

a summary of any complaints received and any steps taken to address the complaints;

The complaints received at the Southeast WWTP for this reporting period are summarized in Table 5.10-1 below. Plant Operations staff respond to each complaint with a thorough investigation and appropriate corrective action.

Table 5.10-1 Complaints Summary

Date	Type	Description	Plant Actions
May 18 May 21 June 4 July 20 Aug 13 Sep 1	Odour	Odour complaint from nearby resident ECHO # 1-7ETVM7	Other than the warmer/humid conditions, nothing seemed to be out of the ordinary around the plant at that time of the event. Both odour control units are on and functioning properly. The odour mist unit is in auto and the parameters have been adjusted to run more frequently due to the warmer weather. The rest of the plant is performing as usual. Staff will increase flushing frequency for the gravity sewers throughout the summer/warmer months.

5.11 Condition 11 4.j – Partial Treatment Events

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;

The occurrence of a spill, by-pass or overflow result in the generation of an event report and entry into the operational log. These event(s) are listed in the following table(s).

Table 5.11-1 Plant Spill Event(s)

Date	ECHO #	Type	Start Time HH:MM	Duration (Minutes)	Volume (m^3)	Disinfection (Y/N)	Cause Code
Apr 22	1-626QNH	Air	12:35	45	300	N/A	3
June 19	1-7W7TFE	Water	08:30	5	2	N/A	8
Sept 26	1-BDD671	Water	06:00	150	250	N/A	8

Table 5.11-2 Plant Bypass Event(s)

Date	ECHO #	Type	Start Time HH:MM	Duration (Minutes)	Volume (ML)	Disinfection (Y/N)	Cause Code
June 23	1-81MQGK	Secondary	16:00	915	6	Y	6
July 15	1-8X21H4	Disinfection	09:22	9	0.009	N	3
July 16	1-902T84	Disinfection	11:20	360	8.5	N	1

Table 5.11-3 Plant Overflow Event(s)

Date	ECHO #	Type	Start Time HH:MM	Duration (Minutes)	Volume (ML)	Disinfection (Y/N)	Cause Code
July 15	1-8YME70	Raw	11:30	900	21.7632	N	1
July 16	1-902BZU	Raw	11:30	270	1.5	N	1

Cause Codes for Partial Treatment Events		
1 = Heavy Precipitation	4 = Equipment Maintenance	7 = Exceed Design
2 = Snow Melt	5 = Sewer Problems	8 = Other
3 = Equipment Failure	6 = Power Failure	

5.12 Condition 11 4.k – Notices of Modifications

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.

Halton Region monitors, maintains, and replaces existing assets based on condition, age, risk and/or use as part of the state of good repair program or as identified in the master plan.

There were no Notice of Modifications submitted in 2024.

5.13 Condition 11 4.l – Conformance with Procedure F-5-1

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 Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflows with estimated budget forecast for the year following that for which the report is submitted.

Upgrades for the Ninth Line Pumping Station have been underway as of December 2024. Project information can be found in the section below, 5.14 Condition 11 4.m – Completion of Construction & Commissioning.

There are no projects scheduled at the Ninth Line Pumping Station for 2025.

As a nominally separated sewer system, details about current or future projects related to the sanitary collection system within this plant's catchment area that relates to bypass/overflow can be found in the **Wastewater Collection Systems Performance Report 2024**.

5.14 Condition 11 4.m – Completion of Construction & Commissioning

any changes or updates to the schedule for the completion of construction and commissioning operation of major process(es) / equipment groups in the Proposed Works.

The Proposed Works below from the Southeast WWTP ECA has been completed and is in the commissioning stages as of December 2024.

Ninth Line Wastewater Pumping Station

replacement of two (2) existing vertical submersible sewage pumps with two (2) new horizontal submersible sewage pumps, rated for 215 L/s at 26 m Total Dynamic Head (TDH); and

replacement of two (2) existing vertical submersible sewage pumps with two (2) new horizontal submersible sewage pumps, rated for 308 L/s at 26 m Total Dynamic Head (TDH);

including all other mechanical system, electrical system, instrumentation and control system, stand-by power system, piping, pumps, valves and appurtenances essential for the proper, safe and reliable operation of the Works.

5.15 Condition 11 4.n – Monitoring Schedule

a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year.

In 2024, there were no deviations from the current monitoring schedule. Table 5.15-1 shows the monitoring schedule for Southeast WWTP.

Table 5.15-1 Monitoring Schedule

Sample	Frequency	Analysis Performed
Raw Sewage	Weekly	BOD5, TSS, TP, TKN
Final Effluent	Weekly	CBOD5, TSS, TP, TAN, E.coli, pH*, Temp*, Unionized Ammonia**
Imported Sewage	Weekly	BOD5, TSS, TP, TKN
Sludge/Biosolids	-	TS, TP, TAN, NO3-, Metal Scan

*pH and temperature of the Final Effluent shall be determined in the field at the time of sampling for Total Ammonia Nitrogen.
**The concentration of un-ionized ammonia shall be calculated using the total ammonia concentration, pH and temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives" dated July 1994, as amended.

6. Oakville Southwest Wastewater System

6.1 System Description

The Oakville Southwest Wastewater Treatment Plant (WWTP) is located at 1385 Lakeshore Road West, in the Town of Oakville. The Oakville Southwest WWTP is a conventional secondary treatment plant consisting of screening, raw sewage pumping, grit removal, primary clarification, activated sludge, and final clarification. Ferric chloride is used for phosphorus removal. UV light provides seasonal disinfection of the final effluent from Oakville Southwest before discharge into Lake Ontario. The Oakville Southwest WWTP system information is provided in Table 6.1-1.

Table 6.1-1 Oakville Southwest System Information

Municipal Wastewater System Works Number	120001005
Classification	
Treatment Facility	Class 4
Certificate #	556
Collection System	Class 2
Certificate #	554

Environmental Compliance Approvals

Type	ECA Number	Date of Issue
Sewage Works	4966-CKMJM5	February 8, 2023
Air & Noise	1156-86NL6J	June 10, 2016
Air & Noise	2786-D8DPM4	October 9, 2024

6.2 Condition 11 4.a - Influent Flow Monitoring & Imported Sewage

a summary and interpretation of all Influent and Imported Sewage monitoring data, and a review of the historical trend of the sewage characteristics and flow rates;

6.2.1 Interpretation of Influent Flow

Influent sewage characteristics for this reporting period can be found in **Appendices E.1, E.2 & E.3.** Historical data of the characteristics of the influent flow can be seen in table 6.2-1 below.

Table 6.2-1 Historical Data

Influent		2019	2020	2021	2022	2023
Total Flow	ML	9,601.148	8,910.731	8,604.724	7,693.766	9,173.936
Average Flow	MLD	26.305	24.346	23.575	21.079	25.134
BOD5*	mg/L	119	107	112	142	148
BOD5 Loading*	kg/day	3,063.4	2,533.9	2,630.3	2,953.3	3,605.8
Total Suspended Solids*	mg/L	155.0	133.6	150.0	192.5	192.5
TSS Loading*	kg/day	4,041.3	3,220.7	3,561.4	4,004.9	4,833.1
Total Kjeldahl Nitrogen*	mg/L	25.5	23.0	23.2	33.0	31.0
TKN Loading*	kg/day	665.2	548.8	545.7	692.6	751.9
Total Phosphorus*	mg/L	2.69	2.81	2.75	3.83	3.72
TP Loading*	kg/day	69.66	66.47	64.52	79.45	90.64

* Yearly Averages

6.2.2 Imported Sewage

The Southwest WWTP did not receive any imported sewage in 2024.

6.3 Condition 11 4.b – Effluent Flow Monitoring

a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;

6.3.1 Effluent Monitoring Data

See **Appendices E.1, E.2 & E.3** for details on monthly wastewater effluent flows, concentrations and loading rates over the reporting period.

6.4 Condition 11 4.c – Operating Issues & Corrective Actions

a summary of all operating issues encountered and corrective actions taken;

Table 6.4-1 illustrates the operating issues and corrective actions taken by operations.

Table 6.4-1 Operating Issues & Corrective Actions

Issue	Date	Causes	Corrective Actions
Elevated Plant Flow	Multiple dates Jan-July and December	High precipitation leading to high flow event	No adverse impacts. Step-feed, EQ tanks and Rebecca Storage Tanks utilized to reduce impact.

Issue	Date	Causes	Corrective Actions
High SVI and Filamentous	January-February, April, December	Low Water Temperature due to precipitation and snow melt	Increased Aeration Mass, Increased SRT and Increased Return Activated Sludge return rates
Effluent Total Phosphorous Elevated	Multiple dates throughout the year	Increased phosphorous loading into the plant as well as higher TSS than normal resulting in elevated effluent TP	Adjusted process and Increased Ferric Dose
Low pH issue	Multiple dates from June-November	Low raw sewage influent flow due to summer months and lack of precipitation	Reduce Aeration Mass to reduce nitrification. Removed Primary and Secondary tanks out of service to reduce HRT as well as to minimize low pH events, opened UV recycle drain valve
Tan colored Raw Sewage Sample	July	Raw Sewage sample with light tan color. Origin unknown	Grab sample sent to Regional Lab, nothing unusual, did not impact plant performance. Industrial Waste Contacted.
Amended Environmental Compliance Approval	October 9	Plant received amended ECA for C of Air quality	n/a
Digester heating and Raw Sludge pumping Issues	Multiple Dates throughout the year	Vivianite buildup causing reduced piping and pumping capacity and increased potential for plugs and blockages	Flushed, Drained and cleaned digester feed pipe and recirculation pipes. Also installed a secondary temporary feed lines until all trouble piping is replaced
UV Hydraulic Issue	March to August	Failed Hydraulic cylinders due to age of system causing failure on UV wiper system	Replaced Hydraulic Cylinders
High e-coli in secondary effluent	July 10, September 25	High flow event triggering step-feed operation	Increased UV dose and returned to dual UV bank operation from single UV bank operation
Secondary Tanks out of service	April to October	Taken out of service due to below average daily flows	Monitor average daily flows

Issue	Date	Causes	Corrective Actions
Disinfection Bypass	August 16	High Voltage PM shutdown of UV building leading to Generator Failure	Generator fuel gauge repaired and verified operation
Various Plant Process Shutdown	August 16	High Voltage PM generator tie in and shut down of various plant and process areas	Monitor process areas after H.V. PM for any process control issues

6.5 Condition 11 4.d – Maintenance

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;

The Water and Wastewater Treatment Division has developed a maintenance management program for plant works at the WWTP. This program is executed by treatment plant maintenance and SCADA staff. State of good repair work performed by the Plant Capital and Engineering staff is not reported.

Table 6.5-1 lists the number of normal activities, emergency repairs and maintenance activities completed by treatment plant maintenance and SCADA staff at the WWTP for the year. The Water and Wastewater Division aligns current maintenance language with ECA language, as follows:

- Normal activities are all maintenance work that is planned through the Asset Care Process (all work order types)
- Emergency repairs are all breakdown work order types that result in downtime of a process area or the plant
- Maintenance activities are all planned and unplanned works, from all work order types

Table 6.5-1 Maintenance Work

Normal Activities	Emergency Repairs	Maintenance Activities
997	3	1,241

Due to the volume of workorders and related transactional data for the works, this information is not included as part of this report, however, the information is provided on a weekly basis to operational staff at each plant as part of the maintenance management, asset care management process.

6.6 Condition 11 4.e – Quality Assurance and Control Measures

a summary of any effluent quality assurance or control measures undertaken;

6.6.1 Quality Assurance

To ensure the quality of the data collected by operations, the following criteria are in place.

- Operations perform daily in house testing on the parameters set in the ECA
- Optimization sampling at every process
- A monitoring schedule is set up by the accredited Regional Lab
- Process data is collected electronically
- SCADA collects real time data, monitors and stores data for future analysis
- Participation in the AWWA Partnership for Clean Water program

6.6.2 Control Measures

The following control measures are in place at the Southwest WWTP

- Daily reports are used to analyze trends and determine is changes are necessary
- Online analyzers to ensure complete treatment at various process stages
- Compliance instruments are calibrated to ensure accuracy
- Equipment redundancy throughout the plant to ensure treatment can be achieved in case of emergencies and breakdowns
- Thin clients are stationed throughout the plant to allow operations to access SCADA to control equipment and asses real time conditions
- Work instruction and standard operating procedures are developed to aid operations
- Phosphorous precipitation is achieved using ferric chloride

6.7 Condition 11 4.f – Calibration & Maintenance of Monitoring Equipment

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 this Approval or recommended by the manufacturer

The equipment used to monitor wastewater influent and effluent flows and key parameters must be maintained and checked throughout the year to ensure accurate readings. The equipment is calibrated yearly by the Region's maintenance staff. All the equipment was found to be within acceptable limits in 2024.

Table 6.7-1 shows the calibration date of the equipment below.

Table 6.7-1 Calibration

Instrument Description	SAP #	2024 Calibration	2023 Calibration
TRANSMITTER FLOW RAW SEWAGE INFLUENT	204113	6/7/2024	07/07/2023
TRANSMITTER FLOW FINAL EFF.PLANT 3 SOUTH	207106	6/5/2024	07/13/2023
TRANSMITTER FLOW FINAL EFF.PLANT 3 NORTH	207107	6/5/2024	07/15/2023
TRANSMITTER FLOW FINAL EFF.PLANT 4 SOUTH	207109	6/6/2024	07/15/2023
TRANSMITTER FLOW FINAL EFF.PLANT 4 NORTH	207110	6/6/2024	07/15/2023
TRANSMITTER FLOW SEC CLAR PLANT 1 NORTH	223664	6/3/2024	07/13/2023
TRANSMITTER FLOW SEC CLAR PLANT 2 SOUTH	223665	6/5/2024	07/13/2023
TRANSMITTER FLOW SEC CLAR PLANT 2 NORTH	223666	6/3/2024	07/13/2023
ANALYZER PH FINAL EFFLUENT PH & TEMP	227465	5/31/2024	07/07/2023
ANALYZER PH & TEMP RAW SEWAGE INFLUENT	229972	6/3/2024	07/07/2023

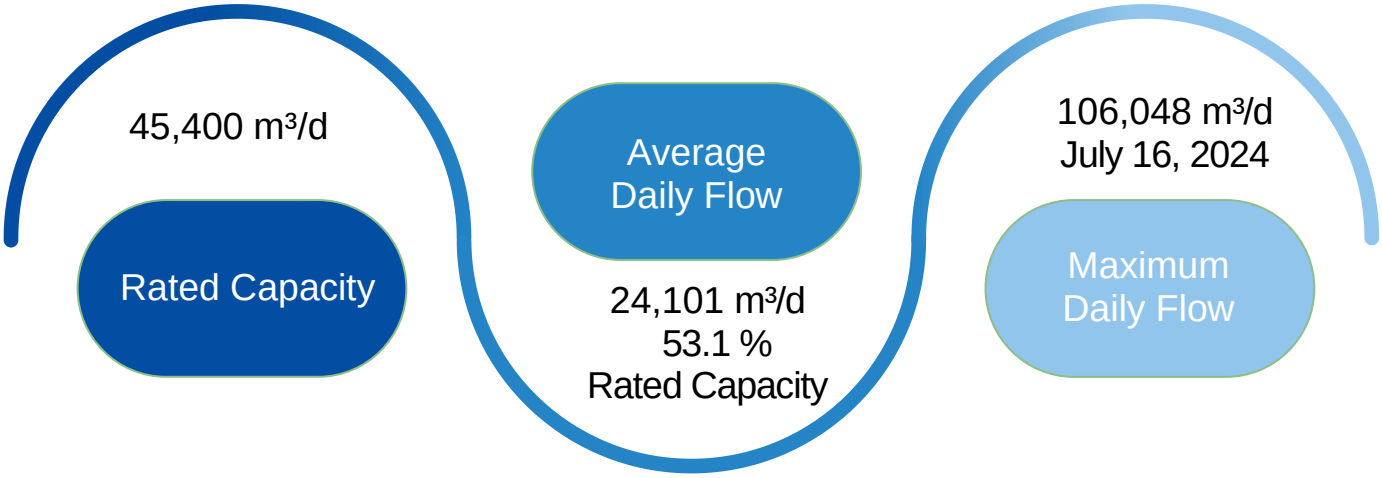
6.8 Condition 11 4.g – Efforts Made to Achieve Design Objective

a summary of efforts made to achieve the design objectives in this Approval, 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;*

The annual effluent flow summary is outlined in Figure 6.8-1. See **Appendix Southwest 1** for additional details on monthly influent and effluent wastewater flows over the reporting period.

Figure 6.8-1 Effluent Flow Summary



6.8.1 Analytical Results

The monthly analysis results are provided in **Appendix Southwest 2**.

Table 6.8-1 presents the annual summary of all the sample and analysis results that were performed for parameters which have defined compliance limits and objectives and demonstrates the adequacy of the works.

This data is not a reflection of how the facility met the objectives and limits using the prescribed averaging calculators. That data can be viewed in Table 1.1-1. Rather, **Table 6.8-1 provides an indication of how each effluent sample collected, analyzed and presented in Appendix Southwest 3 compares to the compliance objectives and limits.**

Table 6.8-1 Annual Summary of Compliance Results

Results Within Limits*	
CBOD – 25 mg/L	100%
TSS – 25 mg/L	100%
TP – 0.8 mg/L	100%
NH3-N – 10/20 mg/L***	100%
E.Coli – 200 CFU/100ml†	92%
pH – 6.0-9.5‡	100%

Results Within Objectives**	
CBOD – 15 mg/L	100%
TSS – 15 mg/L	100%
TP – 0.6 mg/L	98%
NH3-N – 6.0/10 mg/L***	100%
E.Coli – 150 CFU/100ml†	88%
pH – 6.5-9.0‡	100%

* Percent Compliance represents results based on unique compliance criteria for each parameter
** The operating authority "shall use their best effort to maintain" and does not represent non-compliance
*** NH_3-N Season: May to November – 10 mg/L(6 mg/L), December to April – 20 mg/L(10 mg/L)
† E.coli sampling and reporting occurs during the period of May 1 to October 31
‡ **The pH of the effluent shall be maintained within the limits outlined in the plant's ECA, at all times**

6.9 Condition 11 4.h – Biosolids

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;

The annual biosolids production and forecast for the following year is presented in Table 6.9-1. The biosolids are taken to the BMC for temporary storage, blending and thickening prior to land application and/or dewatering.

Table 6.9-1 Annual Biosolids Productions

Material	Produced	2025 Forecasted
Biosolids (m^3)	64,812	54,393

6.10 Condition 11 4.i –Complaints

a summary of any complaints received and any steps taken to address the complaints;

The complaints received at the Oakville Southwest WWTP for this reporting period are summarized in Table 6.10-1 below. Plant Operations staff respond to each complaint with a thorough investigation and timely and appropriate corrective action.

Table 6.10-1 Complaints Summary

Date	Type	Description	Plant Actions
March 19	Noise	Resident called to complain about the loud humming noise coming from the plant. Resident describes the noise as being louder and has started earlier than 7:00 AM recently. ECHO # 1-52SAS9	Oakville Southwest WWTP is currently in the process of Digester #2 rehabilitation project. The dewatering equipment used by the contractors to empty digester contents were being started in the morning which includes vacuum truck, pumps, generators, and belt filter press and continues during the workday to dewater the digester. Operation staff have spoken with the contractor and have advised them to start their work after 7:00 AM. Resident was also informed that this work is temporary and will be finished in next two weeks.

6.11 Condition 11 4.j – Partial Treatment Events

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;

The occurrence of a spill, by-pass or overflow result in the generation of an event report and entry into the operational log. These event(s) are listed in the following table(s).

Table 6.11-1 Plant Spill Event(s)

Date	ECHO #	Type	Start Time HH:MM	Duration (Minutes)	Volume (m^3)	Disinfection (Y/N)	Cause Code
June 21	1-7XN8CK	Air	06:47	31	59.5	N/A	6
July 15	1-8YW1IL	N/A	N/A	2	N/A	N/A	1
Aug 25	1-A8BY96	Air	15:00	N/A	N/A	N/A	8

Table 6.11-2 Plant Bypass Event(s)

Date	ECHO #	Type	Start Time HH:MM	Duration (Minutes)	Volume (ML)	Disinfection (Y/N)	Cause Code
Aug 15	1-9WPV44	Disinfection	09:38	18	0.42	N	3

Table 6.11-3 Plant Overflow Event(s)

Date	ECHO #	Type	Start Time HH:MM	Duration (Minutes)	Volume (ML)	Disinfection (Y/N)	Cause Code
July 15	1-8YWNZ5	Raw	13:30	217	0.2496	N	1
July 15	1-8YXE56	Raw	18:25	1230	19.32726	N	1

Cause Codes for Partial Treatment Events		
1 = Heavy Precipitation	4 = Equipment Maintenance	7 = Exceed Design
2 = Snow Melt	5 = Sewer Problems	8 = Other
3 = Equipment Failure	6 = Power Failure	

6.12 Condition 11 4.k – Notices of Modifications

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.

Halton Region monitors, maintains, and replaces existing assets based on condition, age, risk and/or use as part of the state of good repair program or as identified in the master plan.

Completed and proposed works for the Oakville Southwest WWTP during this reporting period are listed in table 6.12-1 below.

Table 6.12-1 Notices of Modifications

Projects	Project ID	Approval Date
Oakville Southwest WWTP Digester 2 Rehab and Tunnel Repair	S3423B	12/12/2024

6.13 Condition 11 4.l – Conformance with Procedure F-5-1

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 Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflows with estimated budget forecast for the year following that for which the report is submitted.

As a nominally separated sewer system, details about current or future projects related to the sanitary collection system within this plant's catchment area that relates to bypass/overflow can be found in the **Wastewater Collection Systems Performance Report 2024**.

7. Burlington Skyway Wastewater System

7.1 System Description

The Burlington Skyway Wastewater Treatment Plant (WWTP) is located at 1135 Lakeshore Road in the City of Burlington. The Skyway WWTP is a tertiary treatment plant consisting of screening, raw sewage pumping, de-gritting, primary clarification, activated sludge, final clarification, deep sand filters, two stage anaerobic digestion along with rotary drum thickening (RDT) for WAS thickening. Skyway WWTP also uses belt filter presses (BFP) and centrifuge for digested sludge dewatering. The final effluent is seasonally disinfected using UV light prior to discharge into Hamilton Harbour, Lake Ontario. The Burlington Skyway WWTP system information is provided below in Table 7.1-1.

Table 7.1-1 Burlington Skyway System Information

Municipal Wastewater System Works Number	110000070
Classification	
Treatment Facility	Class 4
Certificate #	560
Collection System	Class 3
Certificate #	562

Environmental Compliance Approvals

Type	ECA Number	Date of Issue
Sewage Works	1813-CR3S3S	October 11, 2023
Air & Noise	6119-9JEKDB	June 06, 2014

7.2 Condition 11 4.a - Influent Flow Monitoring & Imported Sewage

a summary and interpretation of all Influent and Imported Sewage monitoring data, and a review of the historical trend of the sewage characteristics and flow rates;

7.2.1 Interpretation of Influent Flow

Influent sewage characteristics for this reporting period can be found in **Appendix Skyway 1, Skyway 2 & Skyway 3.** Historical characteristics of the influent flow can be seen in table 7.2-1 below.

Table 7.2-1 Historical Data

Influent		2019	2020	2021	2022	2023
Total Flow	ML	35,670.822	33,672.188	33,316.566	32,029.434	37,902.482
Average Flow	MLD	97.728	92.001	91.278	87.752	103.842
BOD5*	mg/L	177	164	168	163	149
BOD5 Loading*	kg/day	16,673.1	14,979.5	15,074.6	13,764.5	15,144
Total Suspended Solids*	mg/L	230.8	197.5	195.8	183.3	191.7
TSS Loading*	kg/day	21,881.7	18,125.7	17,502.5	15,714.4	19,539.8
Total Kjeldahl Nitrogen*	mg/L	33.2	32.7	35.5	39.6	30.8
TKN Loading*	kg/day	3,175.5	2,952.5	3,189.3	3,424.4	3,111.4
Total Phosphorus*	mg/L	3.74	3.99	4.16	4.21	3.90
TP Loading*	kg/day	354.70	360.21	373.21	360.45	395.72

* Yearly Averages

7.2.2 Imported Sewage

Table 7.2-2 shows the volume of the Imported Sewage at the Skyway WWTP and the yearly average for the parameters under Schedule D.

Table 7.2-2 Imported Sewage Parameters

Imported Sewage Yearly Average	Units	2024
Total Volume	ML	10.38
BOD5	mg/L	2,100
Total Suspended Solids	mg/L	4,200
Total Phosphorus	mg/L	66.4
Total Kjeldahl Nitrogen	mg/L	648

7.3 Condition 11 4.b – Effluent Flow Monitoring

a summary and interpretation of all Final Effluent monitoring data, including concentration, flow rates, loading and a comparison to the design objectives and compliance limits in this Approval, including an overview of the success and adequacy of the Works;

7.3.1 Effluent Monitoring Data

See **Appendix Skyway 1** for details on monthly wastewater effluent flows, concentrations and loading rates over the reporting period.

7.4 Condition 11 4.c – Operating Issues & Corrective Actions

a summary of all operating issues encountered and corrective actions taken;

Table 7.4-1 illustrates the operating issues and corrective actions taken by operations.

Table 7.4-1 Operating Issues & Corrective Actions

Issue	Date	Causes	Corrective Actions
Bank 2A has been rebuilt with new lamps, sleeves, o rings, UVI, threaded caps, Active Gel, wiper grease and hydraulic hoses.	3/15/2024	Operational Wear & Tear	Rebuilt UV Bank for effective disinfection
Secondary Clarifier# 10 - emergency repairs to the internal sweep mechanism.	4/2/2024	Operational Wear & Tear	Adjusted flows and facility capacity set points, Maintenance Repairs
Bar Screen Glycol pump and Air Handling Unit #1 locked out for Active Mechanical HVAC project.	4/10/2024	Capital Work - Replacement	Ensured work was completed during warmer weather months - Job Completed in Fall
HPC/Vacuum services for annual maintenance on storm management	4/29/2024	ECA Requirement	Activity Completed without Issue
During a drain cleanout in the tunnels below secondary clarifiers 5-8, water started coming up the drain and in the drains inside RAS Gallery #2.	5/10/2024	Sub-Contractors not taking adequate precautions when working in older infrastructure / concrete slab under water table was punctured with high pressure tooling for drain cleaning	Contractors had portable pumps in the tunnels to mitigate the flooding. Contractor had to pump grout into the void of the drain system after concise planning with Operations to ensure the repair would not cause further flooding.
Foam event; air isolation valve to grit and primary system closed to mitigate foaming action but were later found seized shut	May 14 - 16, 2024	Industrial Spill / Operations Troubleshooting and Mitigating Issue	Maintenance Followed Up with Valve Repairs
Aeration tank #10 and Secondary Clarifier #14 were taken out of service.	5/24/2024	Operational Wear & Tear	Adjusted flows and facility capacity set points, Maintenance Repairs
Ongoing foam event	5/30/2024	Industrial Spill	Monitored, Adjusted Parameters, Reported, Samples Submitted, Operations utilizing Fire Hydrants plant wide to keep foam knocked down within the tanks and channels
Ongoing foam event	5/31/2024	Industrial Spill	Staff continue to monitor and hose/contain foam accordingly
Final Effluent sample submission was below pH objective (6.4).	6/5/2024	Alkalinity Deficient in Plant Final Effluent	Monitored, Adjusted Parameters

Issue	Date	Causes	Corrective Actions
Final Effluent submission was below objective (6.3).	6/19/2024	Alkalinity Deficient in Plant Final Effluent	Monitored, Adjusted Parameters
Bar Screen Compactor gear box making excessive grinding noise, also noticed oily sludge below drive.	6/20/2024	Operational Wear & Tear	Unit taken out of service. Maintenance Followed Up with Repairs
Generator alarm for battery charger which was fed through the lighting panel.	6/29/2024	Operational Wear / Tear & ECA Requirement	Maintenance followed up with replacement of Battery Charger for UPS System
Raw Sewage Pump MCC that was tripped. Sewage Pump 7 was powered off and locked out	6/29/2024	Operational Wear & Tear	Maintenance followed up with replacement of VFD Drive
High influent flows into the plant	July 10-17, 2024	Storm Event	Monitored, Adjusted Parameters, Reported, Samples Submitted
New VFD drives were installed for the centrifuge but main motor had dangerous vibration on start-up.	8/15/2024	Dewatering Equipment Issue	Maintenance with SCADA & Operations work out all minor issues during startup of new VFD Drives
Final Effluent Total Phosphorus monthly average for July	8/16/2024	Elevated Flows due to heavy precipitation	Monitored, Adjusted Parameters, Reported, Samples Submitted
Primary Clarifier #1 taken out of service due to low plant flows and high retention time	8/22/2024	Lower than normal influent flows	Monitored, Adjusted Parameters, Adjusted Plant Capacity Setpoints
Power Outage due to Racoon climbing electrical pole	9/11/2024	Plant-Wide Power Outage	Burlington Hydro with Operations and Maintenance restored power and equipment to ensure all functions in process units. Standby Generator carried plant load during outage
Primary Clarifier# 4 has been taken Out of Service for valve repairs	10/25/2024	Operational Wear & Tear	Maintenance completed repairs
Tertiary Lift Pump# 4 taken off site for maintenance repairs	11/25/2024	Operational Wear & Tear	Maintenance sent pump out for major repairs
Centrifuge bowl removed and taken by Alpha Laval for inspections and repairs.	12/2/2024	functionality	Alfa Laval completed repairs, back in service

7.5 Condition 11 4.d – Maintenance

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;

The Water and Wastewater Treatment Division has developed a maintenance management program for plant works at the WWTP. This program is executed by treatment plant maintenance and SCADA staff. State of good repair work performed by the Plant Capital and Engineering staff is not reported.

Table 7.5-1 lists the number of normal activities, emergency repairs and maintenance activities completed by treatment plant maintenance and SCADA staff at the WWTP for the year. The Water and Wastewater Division aligns current maintenance language with ECA language, as follows:

- Normal activities are all maintenance work that is planned through the Asset Care Process (all work order types)
- Emergency repairs are all breakdown work order types that result in downtime of a process area or the plant
- Maintenance activities are all planned and unplanned works, from all work order types

Table 7.5-1 Maintenance Work

Normal Activities	Emergency Repairs	Maintenance Activities
2,547	1	2,714

Due to the volume of workorders and related transactional data for the works, this information is not included as part of this report, however, the information is provided on a weekly basis to operational staff at each plant as part of the maintenance management, asset care management process.

7.6 Condition 11 4.e – Quality Assurance and Control Measures

a summary of any effluent quality assurance or control measures undertaken;

7.6.1 Quality Assurance

To ensure the quality of the data collected by operations, the following criteria are in place.

- Operations perform daily in house testing on the parameters set in the ECA
- Optimization sampling at every process
- A monitoring schedule is set up by the accredited Regional Lab
- Process data is collected electronically
- SCADA collects real time data, monitors and stores data for future analysis
- Participation in the AWWA Partnership for Clean Water program

7.6.2 Control Measures

The following control measures are in place at the Skyway WWTP

- Daily reports are used to analyze trends and determine if changes are necessary
- Online analyzers to ensure complete treatment in various process stages
- Compliance instruments are calibrated to ensure accuracy

- Equipment redundancy throughout the plant to ensure treatment can be achieved in case of emergencies and breakdowns
- Thin clients are stationed throughout the plant to allow operations to access SCADA to control equipment and asses real time conditions
- Work instruction and standard operating procedures are developed to aid operations
- Phosphorous precipitation is achieved at the plant by the use of ferric chloride
- pH adjustment is achieved by adding Sodium Hydroxide
- Overflow disinfection is achieved by using Sodium Hypochlorite

7.7 Condition 11 4.f – Calibration & Maintenance of Monitoring Equipment

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 this Approval or recommended by the manufacturer

The equipment used to monitor wastewater influent/effluent flows and key parameters must be maintained and checked throughout the year to ensure accurate readings. The equipment is calibrated yearly by the Region's maintenance staff. All the equipment was found to be within acceptable limits in 2024.

Table 7.7-1 shows the calibration date of the equipment below.

Table 7.7-1 Calibration

Instrument Description	SAP #	2024 Calibration	2023 Calibration
TRANSMITTER FLOW BANK #1 EFFLUENT	200660	8/26/2024	09/18/2023
XTR FLOW FINAL EFF CLAR.#13 FLUME #4	212567	8/27/2024	09/18/2023
TRANSMITTER FLOW FINAL EFFLUENT CLAR.#14	212581	8/27/2024	09/18/2023
TRANSMITTER FLOW BANK 2 EFFLUENT #5-#8	219400	10/5/2024	11/16/2023
TRANSMITTER FLOW BANK 3 EFFLUENT	224531	10/5/2024	11/16/2023
XTR PARSHALL FLOW SC 15-18 EFFLUENT	228557	10/5/2024	11/16/2023
ANALYZER PH RAW SEWAGE	231244	7/22/2024	09/20/2023
ANALYZER PH FINAL EFFLUENT	217005	7/22/2024	09/20/2023
TRANSMITTER FLOW SEPTAGE LANE #1 HSRS	234719	11/5/2024	12/21/2023

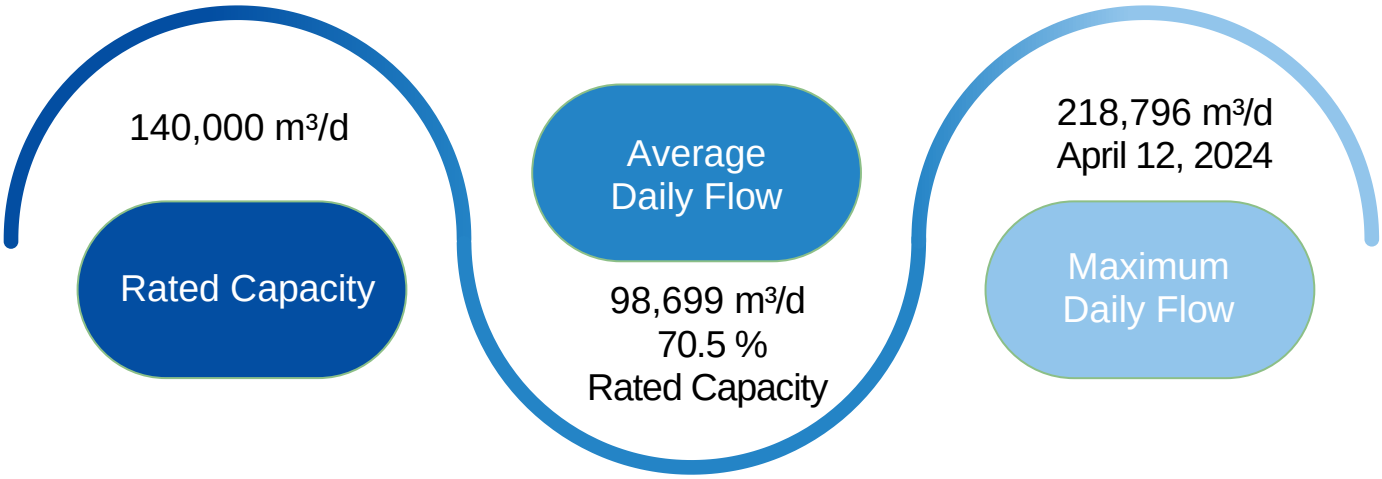
7.8 Condition 11 4.g – Efforts Made to Achieve Design Objective

a summary of efforts made to achieve the design objectives in this Approval, 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;*

The annual effluent flow summary is outlined in Figure 7.8-1. See **Appendix Skyway 1** for additional details on monthly influent and effluent wastewater flows over the reporting period.

Figure 7.8-1 Effluent Flow Summary



7.8.1 Analytical Results

The monthly analysis results are provided in **Appendix Skyway 2**.

Table 7.8-1 presents the annual summary of all the sample and analysis results that were performed for parameters which have defined compliance limits and objectives and demonstrates the adequacy of the works.

This data is not a reflection of how the facility met the objectives and limits using the prescribed averaging calculators. That data can be viewed in Table 1.1-1. Rather, **Table 7.8-1 provides an indication of how each effluent sample collected, analyzed and presented in Appendix Skyway 3 compares to the compliance objectives and limits.**

Table 7.8-1 Annual Summary of Compliance Results

Results Within Limits*		Results Within Objectives**	
CBOD – 10 mg/L	99%	CBOD – 8.0 mg/L	99%
TSS – 10 mg/L	99%	TSS – 5.0 mg/L	99%
TP – 0.2 mg/L	98%	TP – 0.12 mg/L	91%
NH3-N – 2.0/4.0 mg/L***	100%	NH3-N – 1.6/3.2 mg/L***	100%
E.Coli – 200 CFU/100ml †	100%	E.Coli – 150 CFU/100ml †	100%
pH – 6.0-9.5 ‡	100%	pH – 6.5-9.0 ‡	90%

* Percent Compliance represents results based on unique compliance criteria for each parameter
** The operating authority "shall use their best effort to maintain" and does not represent non-compliance
*** NH_3-N Season: May to September – 2.0 mg/L(1.6 mg/L), October to April – 4.0 mg/L(3.2 mg/L)
† E.coli sampling and reporting occurs during the period of April 1 to October 31
‡ **The pH of the effluent shall be maintained within the limits outlined in the plant's ECA, at all times**

7.9 Condition 11 4.h – Biosolids

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;

The annual dewatered production and forecast for the following year is presented in Table 7.9-1. The dewatered biosolids were taken to agricultural land for crop production, sent to an approved processing facility prior to land application or sent to an approved reclamation facility.

Liquid biosolids are taken to the Region's Biosolids Management Center (BMC) for temporary storage, blending and thickening prior to land application and/or dewatering. The annual volume of liquid biosolids hauled off site and forecasted for the following year are presented in Table 7.9-2

Table 7.9-1 Skyway Dewatered Biosolids Production & Forecast

Material	Produced	2025 Forecasted
Biosolids (w.t.)	11,645	12,208

Table 7.9-2 Liquid Biosolids Hauled Off-Site & Forecast

Material	Produced	2025 Forecasted
Liquid Biosolids (m^3)	296	0*

*Liquid Biosolids production is not anticipated for the 2025 reporting period

7.10 Condition 11 4.i –Complaints

a summary of any complaints received and any steps taken to address the complaints;

There were no complaints received at the Skyway WWTP in 2024.

7.11 Condition 11 4.j – Partial Treatment Events

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;

The occurrence of a spill, by-pass or overflow result in the generation of an event report and entry into the operational log. These event(s) are listed in the following table(s).

Table 7.11-1 Plant Spill Event(s)

Date	ECHO #	Type	Start Time HH:MM	Duration (Minutes)	Volume (m^3)	Disinfection (Y/N)	Cause Code
May 26	1-72JVFS	Air	13:20	366	2	N/A	3
May 30	1-77TW2U	N/A	12:00	600	N/A	N/A	8

Table 7.11-2 Plant Bypass Event(s)

Date	ECHO #	Type	Start Time HH:MM	Duration (Minutes)	Volume (ML)	Disinfection (Y/N)	Cause Code
July 12	1-8WX2L2	Primary	20:22	100	4.3581	Y	1,7
July 12	1-8WUXDH	Tertiary	22:50	570	0.085	Y	1,7
July 14	1-8YACU9	Primary	13:12	738	20	Y	1,7

Table 7.11-3 Plant Overflow Event(s)

Date	ECHO #	Type	Start Time HH:MM	Duration (Minutes)	Volume (ML)	Disinfection (Y/N)	Cause Code
Jan 9	1-4KOPA3	Primary	16:51	1100	16.507	Y	1
Jan 13	1-4KY6RR	Primary	07:21	534	5.4655	Y	1,2
Jan 26	1-4M786M	Primary	04:51	979	19.6947	Y	1,1
Mar 14	1-4ZNBTD	Primary	21:34	189	1.4579	Y	1
April 3	1-5DQYQG	Primary	19:50	222	0.6645	Y	1
April 11	1-5NJSXU	Primary	15:13	2245	35.213	Y	1
May 28	1-735LYY	Primary	11:30	259	3.3705	Y	1
June 21	1-7XAVUD	Primary	20:21	72	0.127	Y	1
June 23	1-7YTF7H	Primary	16:54	87	1.135	Y	1
July 10	1-8S23ZC	Primary	08:34	1442	14.5145	Y	1
July 12	1-8WX2PH	Primary	19:57	548	31.9034	Y	1
July 14	1-8XFXKS	Primary	14:56	494	6.2163	Y	1
July 15	1-8Y68NM	Primary	12:35	3549	211.9947	Y	1
Aug 18	1-9ZA5OM	Primary	18:23	73	0.7197	Y	1
Sept 23	1-B6TDKS	Primary	08:26	89	0.4581	Y	1,7
Dec 29	1-FC4IXM	Primary	14:26	860	39.0856	Y	1
Dec 29	1-FC8CJB	Secondary	18:26	61	6.7131	Y	1

Cause Codes for Partial Treatment Events		
1 = Heavy Precipitation	4 = Equipment Maintenance	7 = Exceed Design
2 = Snow Melt	5 = Sewer Problems	8 = Other
3 = Equipment Failure	6 = Power Failure	

7.12 Condition 11 4.k – Notices of Modifications

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.

Halton Region monitors, maintains, and replaces existing assets based on condition, age, risk and/or use as part of the state of good repair program or as identified in the master plan.

There were no Notices of Modifications submitted in 2024 for Skyway WWTP.

7.13 Condition 11 4.l – Conformance with Procedure F-5-1

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 Bypass/Overflow elimination including expenditures and proposed projects to eliminate Bypass/Overflows with estimated budget forecast for the year following that for which the report is submitted.

As a nominally separated sewer system, details about current or future projects related to the sanitary collection system within this plant's catchment area that relates to bypass/overflow can be found in the **Wastewater Collection Systems Performance Report 2024**.

7.15 Condition 11 4.m – Monitoring Schedule

a summary of any deviation from the monitoring schedule and reasons for the current reporting year and a schedule for the next reporting year.

In 2024, there were no deviations from the current monitoring schedule. Table 7.15-1 shows the monitoring schedule for Skyway WWTP in 2025.

Table 7.15-1 Monitoring Schedule

Sample	Frequency	Analysis Performed
Raw Sewage	Weekly	BOD5, TSS, TP, TKN
Final Effluent	Weekly	CBOD5, TSS, TP, TAN, E.Coli, pH*, Temp*, Unionized Ammonia**
Imported Sewage	Monthly	BOD5, TSS, TP, TKN

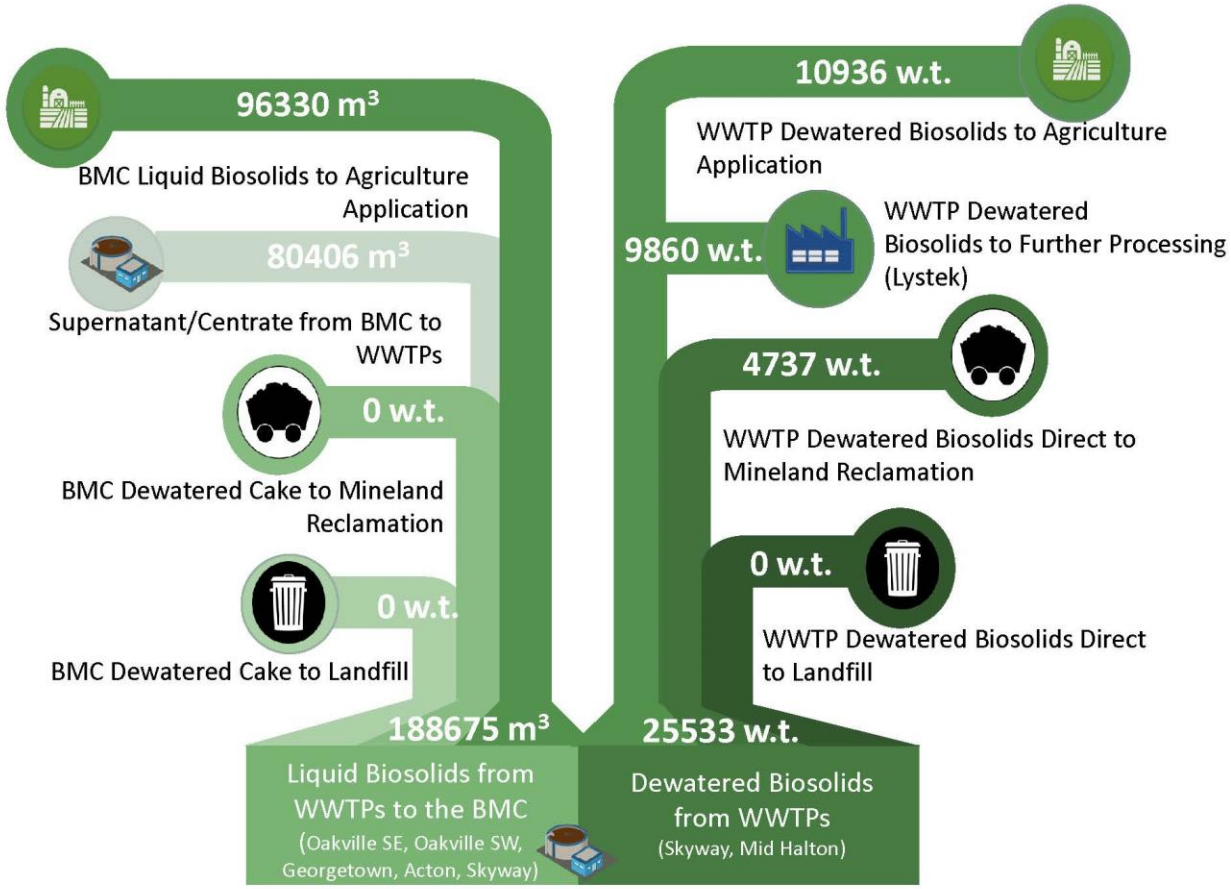
*pH and temperature of the Final Effluent shall be determined in the field at the time of sampling for Total Ammonia Nitrogen.
**The concentration of un-ionized ammonia shall be calculated using the total ammonia concentration, pH and temperature using the methodology stipulated in "Ontario's Provincial Water Quality Objectives" dated July 1994, as amended.

8. Biosolids Management Program

8.1 Biosolids Management Summary

All WWTP biosolids produced in Halton in 2024 were directed to either temporary storage, applied to agricultural land for crop production or sent to an approved reclamation facility. The annual volume or quantity directed to each of these options is presented in Figure 8-1.

Figure 8-1 2023 Biosolids Management Program Summary



8.2 Condition 18.1.i – Summary of Biosolids Received

A monthly summary of the Biosolids received at the Site, including cubic meters, source and type;

8.2.1 Biosolids Received at the BMC

The monthly summary of the liquid biosolids received at the BMC from the WWTP's for the reporting period is provided in Table 8-2

Table 8-2 Liquid Biosolids Received by the BMC from WWTP's (m^3)

Month	Skyway	Oakville SW	Oakville SE	Georgetown	Acton	Totals
January	0	5,368	4,332	5,392	441	15,533
February	0	5,008	4,484	5,480	397	15,369
March	0	5,740	4,161	5,872	394	16,167
April	0	6,288	4,380	5,452	394	16,513
May	0	6,156	4,511	5,036	428	16,131
June	40	5,060	3,705	5,132	389	14,326
July	0	4,620	4,169	5,468	385	14,642
August	0	4,752	3,967	5,041	382	14,142
September	0	5,280	4,953	5,784	430	16,447
October	0	5,324	3,900	6,475	434	16,133
November	0	5,676	3,736	7,008	395	16,815
December	256	5,540	3,278	6,946	438	16,458
Total	**296**	**64,812**	**49,577**	**69,086**	**4,905**	**188,675**

8.2.2 Outgoing Biosolids from BMC

The blended liquid biosolids temporarily stored at the BMC is seasonally applied on agricultural fields. Storage of liquid biosolids at the BMC also permits solids settling in the tanks and allows for the removal of the supernatant and return to Halton's WWTPs for re-treatment. The removal of supernatant from the BMC helps to increase storage capacity throughout the year. Supernating not only increases the storage capacity of the facility, it also increases the value of the product by concentrating the organic matter and nutrients in the biosolids. The BMC also has a dewatering unit on site to help manage storage tank capacity issues, if required. The resulting dewatered biosolids is hauled to mineland reclamation facilities or further processing facilities, while the centrate is returned to Halton's WWTPs for retreatment

8.3 Condition 18.1.ii – Summary of Biosolids Transported Off-Site

A monthly summary of Biosolids transported off-site, including the quantity in cubic meters or wet tonnes, destination and type;

A summary of the Biosolids, supernatant and centrate transferred off site can be found in Table 8-3.

Table 8-3 Outgoing Biosolids (Including Supernatant and Centrate) from BMC by Material Type and Destination

Month	Liquid Biosolids to Agricultural Fields (m^3)	Dewatered Biosolids to Mineland Reclamation (w.t.)	Dewatered Biosolids to Further Processing (w.t.)	Supernatant/Centrate to WWTP (m^3)
January	0	0	0	1,517
February	0	0	0	5,225
March	0	0	0	7,033
April	7,036	0	0	8,597
May	15,384	0	0	9,473
June	3,856	0	0	9,704
July	7,384	0	0	6,814
August	17,508	0	0	8,538
September	13,228	0	0	1,072
October	18,702	0	0	7,858
November	13,232	0	0	8,108
December	0	0	0	6,468
Totals	**96,330**	**0**	**0**	**80,406**

8.4 Condition 18.1.iii – Material Balance

An annual summary material balance of the waste received at and transported from the Site;

Please refer to **Figure 8-1** 2024 Biosolids Management Program Summary

8.5 Condition 18.1.iv – Recommendations for Minimize Environmental Impacts

Any recommendations to minimize environmental impacts from the operation of the Site and to improve Site operations and monitoring programs in this regard;

Halton Region retains an independent third-party environmental consultant to conduct an annual environmental monitoring program for the BMC. The 2024 BMC Environmental Monitoring Report made the following recommendations for the 2025 and 2030 monitoring years:

- Groundwater monitoring well levels should continue to be taken at all eighteen (18) existing monitoring wells.
- Groundwater monitoring well samples should continue to be collected bi-monthly for analysis and QA/QC purposes at the fourteen (14) existing monitoring wells.
- QA/QC sampling should continue to occur during the June sampling event for the SWQCP and five (5) existing MMHs.
- Field measurements should continue to be taken at all sampling locations and events.
- Groundwater samples should continue to be chemically analyzed for pH, NO2-N, NO3-N, TKN, NH3-N, Organic Nitrogen, TP, Hg, As, Cd, Cr, Cu, Pb, Se, Zn, Co, Fe, Mo, Ni.
- MMH samples should continue to be chemically analyzed for pH, NO2-N, NO3-N, TKN, NH3-N, Organic Nitrogen, TP, Hg, As, Cd, Cr, Cu, Pb, Se, Zn, Co, Fe, Mo, Ni.
- SWQCP samples should continue to be chemically analyzed for BOD5, TSS, TP.
- An additional water well reconnaissance survey should be completed in 2030, as recommended in the 2019 report. This will help identify and new residences or potable water systems that may have been constructed within a 1 km radius of the BMC.
- A copy of this report should be kept on-site.

8.6 Condition 18.1.v – Rejected Biosolids

A descriptive summary describing any rejected Biosolids including quantity, type, reasons for rejection and origin of the rejected Biosolids;

All biosolids received at the BMC in 2024 met the ECA's quality criteria for biosolids and were not rejected.

8.7 Condition 18.1.vi – Maintenance Summary

A descriptive summary of maintenance conducted during the previous calendar year;

Table 8.7-1 Maintenance Summary for the Reporting Period

2024 PM Plan	2024 Unplanned Repairs
MECHANICAL PM	**UNPLANNED MECHANICAL**
MIXERS	MIXER 12 WEAR ON IMPELLER/CRACKED CASING
SLUDGE LOADING PUMPS	MIXER 18 WEAR ON MIXER IMPELLER/O-RING
CRANES	CHAINFALL UNIT #09 LOAD CHAIN REPLACEMENT
LIFTING DEVICES, WINCHES, EME POSTS	CHAIN HOIST # 14 BRAKE MECHANISM
BIOSOLID DOME INSPECTION - TANKS 1-10	PUMP # 5 GUIDE MOUNT
OVERHEAD DOORS	CONDITION GRADE AND INSPECTION TANKS 1-10
	DOME VENT TANK # 4
	MOBILE DEWATERING UNIT CRANE #03
	CHAIN FALL ON TANK 4 PUMP
	INSTALL KNIFE GATE ON UNLOADING PIPE
	INSTALLATION OF MAN GATE ON TANK FARM SWING GATE
	INSTALL UNISTRUT IN GARAGE
	CONCRETE PAD DRAINAGE MODIFICATION
	DAVIT BASE TANK # 1
	SAFETY SIGN INSTALL
	TANK 1,4, AND 7 UNDER WATER INSPECTIONS
	TANK 5 HATCH 2
	TANK 5 HATCH 3 BROKEN LADDER HANDLE
	TANK 6 OVERHEAD LAMP
	STARTER AT HATCH 5 TANK 9
ELECTRICAL PM	**UNPLANNED ELECTRICAL**
ESA INSPECTION	MONITORING MANHOLE 2 LOW LEVEL FLOAT
HIGH VOLTAGE	ELECTRIC HOIST # 1 BRAKING
MIXERS	MIXER 13 OFF-SITE INSPECTION
SLUDGE LOADING PUMPS	MIXER 15 OFF-SITE INSPECTION
MOTOR DRIVES	MIXER 24 OFF-SITE INSPECTION
ELECTRIC HOISTS	MIXER 26 OFF-SITE INSPECTION
CONTROL PANELS	MIXER # 5 ELECTRICAL CABLE DAMMAGE
UPS'S	ALL MIXERS - MIXER TAG CABLE INSTALL
PLC'S	TANK ELECTRICAL PANELS VALIDATION
	PUMP #03 SUBMERSIBLE SLUDGE REFURBISHMENT
	TANK # 4 LAMP GFI
	ELECTRIC GATE
	CONTRACTOR BUILDING ENTRANCE FLOOD LIGHT
	SWQCP POND KNIFE GATE 2 CABLE REPAIR
	TANK 5 HATCH 1 MIXER PLUG

	ELECTRICAL OUTLET IN ATMO RELOCATION
	SWQCP AERATOR
	GENERAL FUSE REPLACEMENTS FOR TANK PANELS
	TANK 6 GFI's
	POWERLINE POLE OUTDATED EQUIPMENT
	DAMAGED POWERLINE CABLE AT MAIN POLE
INSTRUMENTATION PM	**UNPLANNED INSTRUMENTATION**
LEVEL TRANSMITTERS	BMC AUTODIALER TROUBLESHOOTING AND REPLACEMENT (ONGOING)
PRESSURE SWITCHES	SCADA - BIOSOLIDS COMMUNICATION FAILURE
FLOW TRANSMITTERS	HBMC SCADA SERVER UPGRADES
FLOW TRANSMITTERS	LEVELz SENSOR TANK # 1 REPLACEMENT
HVAC PM	**UNPLANNED HVAC**
AIR CONDITIONERS	ATMO HEAT PUMP CAPACITOR/ WIRING
HEATERS AND HEAT PUMPS	
CONDENSERS FANS	

8.8 Condition 18.1.vii – Statement of Compliance

A statement as to compliance with all Conditions of this Approval and with the inspection and reporting requirements of the Conditions herein;

The statement of compliance letter is provided in **Appendix Biosolids 1**

Appendices

2024 ACTON WASTEWATER TREATMENT PLANT
FLOW AND LOADING

		January	February	March	April	May	June	July	August	September	October	November	December	Total	Maximum	Average	Objective	Limits
INFLUENT FLOW																		
Total Influent Flow	10^3m^3	120.924	111.239	122.276	134.189	125.904	116.020	120.754	105.246	101.393	104.331	103.401	112.080	1,377.757				
Average Daily Flow[1]	10^3m^3	3.901	3.836	3.944	4.473	4.061	3.867	3.895	3.395	3.380	3.366	3.447	3.615			3.765		
Maximum Daily Flow	10^3m^3	5.813	4.476	4.529	5.361	5.081	4.414	5.326	3.827	3.817	3.684	3.841	4.583		5.813			
Minimum Daily Flow	10^3m^3	3.354	3.343	3.364	3.898	3.696	3.594	3.373	3.111	3.132	3.091	3.141	3.262					
EFFLUENT FLOW																		
Total Effluent Flow	10^3m^3	115.510	107.684	117.701	120.982	112.267	103.129	115.889	99.390	95.467	100.000	95.320	105.923	1,289.262				
Average Daily Flow[1]	10^3m^3	3.726	3.713	3.797	4.033	3.622	3.438	3.738	3.206	3.182	3.226	3.177	3.417			3.523		5.200
Maximum Daily Flow	10^3m^3	5.809	4.521	4.666	4.787	4.584	4.003	5.192	3.819	3.535	3.565	3.594	4.395		5.809			
Minimum Daily Flow	10^3m^3	2.907	3.221	3.162	3.353	3.252	3.081	3.192	2.883	2.916	2.888	2.957	3.081					
# of Days w/ Flow >90% of Design	#	5	5	5	13	2	0	6	0	0	0	0	2	38				
INFLUENT LOADING																		
BOD_5	mg/L	250	130	150	180	120	190	150	210	240	150	170	140			173.3		
BOD_5 Loading	kg/day	975.25	498.68	591.60	805.14	487.32	734.73	584.25	712.95	811.20	504.90	585.99	506.10			649.8		
Total Suspended Solids	mg/L	280	130	200	180	180	270	200	240	260	220	190	180			210.8		
TSS Loading	kg/day	1,092.28	498.68	788.80	805.14	730.98	1,044.09	779.00	814.80	878.80	740.52	654.93	650.70			789.9		
Total Kjeldahl Nitrogen	mg/L	48.8	33.6	40.9	34.5	31.9	40.8	33.5	44.1	50.9	40.3	43.4	37.2			40.0		
TKN Loading	kg/day	190.37	128.89	161.31	154.32	129.55	157.77	130.48	149.72	172.04	135.65	149.60	134.48			149.5		
Total Phosphorus	mg/L	6.16	3.33	4.58	4.15	3.37	5.11	3.73	5.61	5.72	3.88	4.64	3.99			4.52		
TP Loading	kg/day	24.03	12.77	18.06	18.56	13.69	19.76	14.53	19.05	19.33	13.06	15.99	14.42			16.94		
FINAL EFFLUENT LOADING																		
$CBOD_5$	mg/L	1.3	1.8	1.2	1.4	1.3	1.4	1.3	1.1	1.2	1.4	1.4	1.5			1.4	2.0	5.0
$CBOD_5$ Loading	kg/day	4.84	6.68	4.56	5.65	4.71	4.81	4.86	3.53	3.82	4.52	4.45	5.13			4.8		
Total Suspended Solids	mg/L	1.4	1.2	1.0	1.6	1.6	1.4	1.1	1.0	1.1	1.1	1.0	1.0			1.2	3.0	5.0
TSS Loading	kg/day	5.22	4.46	3.80	6.45	5.80	4.81	4.11	3.21	3.50	3.55	3.18	3.42			4.3		
Total Ammonia Nitrogen	mg/L	0.100	0.100	0.120	0.100	0.100	0.100	0.100	0.100	0.100	0.160	0.100	0.100			0.107	0.5, 1.0 [2]	2.0, 4.0 [2]
NH_3-N Loading	kg/day	0.373	0.371	0.456	0.403	0.362	0.344	0.374	0.321	0.318	0.516	0.318	0.342			0.375		
Total Phosphorus	mg/L	0.03	0.03	0.03	0.06	0.05	0.06	0.04	0.04	0.05	0.04	0.04	0.04			0.04	0.1	0.2
TP Loading	kg/day	0.11	0.11	0.11	0.24	0.18	0.21	0.15	0.13	0.16	0.13	0.13	0.14			0.15		0.56

[1] *"average daily flow "*means the total sewage flow to the sewage works during the periods of operation upon which the report is based, divided by the number of days during the same period of time.

[2] Seasonal Total Ammonia Nitrogen concentration criteria. Seasons are May 1 - Nov 30 and Dec 1 - April 30.

*The calculated yearly average loadings in some instances may not correspond to the data reporting in the Regional Laboratory summary. This discrepancy is due to rounding.

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Wastewater Analysis, Monthly Averages

Acton WWTP, 2024

Final Effluent

Sample Date (Month)	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
January 2024	178	1.3	1	17.0	0.01	<0.02	7.1	1.4	<0.10	0.7	0.03	<0.001
February 2024	190	1.8	1	18.8	0.01	<0.02	7.2	1.2	<0.10	0.7	0.03	<0.001
March 2024	179	1.2	1	19.3	<0.01	<0.02	7.2	<1.0	0.12	0.7	0.03	<0.001
April 2024	213	1.4	2	18.8	0.01	<0.02	7.3	1.6	<0.10	0.8	0.06	<0.001
May 2024	197	1.3	0	17.8	0.01	<0.02	7.1	1.6	0.10	0.7	0.05	<0.001
June 2024	193	1.4	1	16.5	0.01	0.02	7.2	1.4	0.10	0.9	0.06	<0.001
July 2024	196	1.3	0	15.0	<0.01	<0.02	7.2	1.1	<0.10	0.8	0.04	<0.001
August 2024	190	1.1	2	16.4	<0.01	0.03	7.2	<1.0	<0.10	1.0	0.04	<0.001
September 2024	174	1.2	0	17.5	0.02	0.02	7.2	1.1	<0.10	0.9	0.05	<0.001
October 2024	190	1.4	1	18.2	0.02	0.02	7.2	1.1	0.16	0.8	0.04	0.001
November 2024	192	1.4	0	18.0	0.01	0.04	7.2	<1.0	<0.10	0.8	0.04	<0.001
December 2024	182	1.5	1	17.5	0.01	0.02	7.2	1.0	<0.10	0.8	0.04	<0.001
Annual Average	189	1.3	1	17.5	0.01	0.02	7.2	1.2	0.11	0.8	0.04	0.001
Annual Minimum	134	<1.0	0	13.9	<0.01	<0.02	6.9	<1.0	<0.10	0.4	<0.02	<0.001
Annual Maximum	235	2.7	3	21.3	0.03	0.05	7.4	2.2	0.42	1.2	0.09	0.002
Annual Count	53	53	53	53	53	53	53	53	53	53	53	53
# Results Outside Limits	0	0	0	0	0	0	0	0	0	0	0	0
Month Average	190	1.4	1	17.6	0.01	0.02	7.2	1.2	0.11	0.8	0.04	0.001
% Results Within Limits	100	100	100	100	100	100	100	100	100	100	100	100
Limit	-/-	-/5	-/150	-/-	-/-	-/-	6.0/9.5	-/5	-/2	-/-	-/0.2	-/-

*Ammonia Nitrogen Limits are 2.0 (May - Nov) and 4.0 (Dec - Apr)

1. The detail section of this report displays the monthly averages, which are an arithmetic mean with the exception of E.coli, which is a geometric mean.
2. In order to calculate a geometric mean for the E.coli analysis, results of zero are first replaced with one.
3. The **Annual Average** in the summary section represents an average of every result for this facility. This is an annual geometric mean for E.coli.
4. If any result is less than the **Method Detection Limit**, then the detection limit is used in calculating the average. If all results are < MDL, then the average will also be reported as < MDL.
5. The **# Results Outside Limits** and **% Results Within Limits** represent statistics comparing individual results to the ECA limit. It does not necessarily represent non-compliance.

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Wastewater Analysis, Monthly Averages

Acton WWTP, 2024

Raw Sewage

Sample Date (Month)	Alkalinity	Ortho - Phosphates	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
January 2024	388	2.38	280	24.9	250	48.8	6.16
February 2024	383	1.40	130	19.9	130	33.6	3.33
March 2024	390	1.44	200	24.8	150	40.9	4.58
April 2024	385	1.44	180	18.7	180	34.5	4.15
May 2024	369	1.20	180	18.6	120	31.9	3.37
June 2024	392	1.85	270	21.9	190	40.8	5.11
July 2024	368	1.36	200	18.1	150	33.5	3.73
August 2024	388	1.86	240	23.4	210	44.1	5.61
September 2024	381	2.02	260	24.7	240	50.9	5.72
October 2024	307	1.24	220	23.0	150	40.3	3.88
November 2024	397	1.81	190	23.4	170	43.4	4.64
December 2024	371	1.54	180	21.2	140	37.2	3.99
Annual Average	375	1.62	210	21.8	170	39.8	4.49
Annual Minimum	45.2	<0.02	65	10.6	49	22.2	1.74
Annual Maximum	474	3.99	480	43.3	360	66.2	10.0
Annual Count	53	53	53	53	53	53	53
# Results Outside Limits	0	0	0	0	0	0	0
Month Average	377	1.63	210	21.9	170	40.0	4.52
% Results Within Limits	100	100	100	100	100	100	100
Limit	-/-	-/-	-/-	-/-	-/-	-/-	-/-

1. The detail section of this report displays the monthly averages, which are an arithmetic mean with the exception of E.coli, which is a geometric mean.
2. In order to calculate a geometric mean for the E.coli analysis, results of zero are first replaced with one.
3. The **Annual Average** in the summary section represents an average of every result for this facility. This is an annual geometric mean for E.coli.
4. If any result is less than the **Method Detection Limit**, then the detection limit is used in calculating the average. If all results are < MDL, then the average will also be reported as < MDL.
5. The **# Results Outside Limits** and **% Results Within Limits** represent statistics comparing individual results to the ECA limit. It does not necessarily represent non-compliance.

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Acton WWTP

Final Effluent

Sample Date Sample ID	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-01-04 | 24S-00007-02	134	1.1		18.4	<0.01	<0.02	6.9	1.4	<0.10	0.5	0.04	<0.001
2024-01-04 | 24S-00007-03			0									
2024-01-09 | 24S-00020-02	185	<1.0		16.3	0.01	<0.02	7.1	1.8	<0.10	0.9	0.03	<0.001
2024-01-09 | 24S-00020-03			0									
2024-01-17 | 24S-00072-10	206	1.1		15.9	<0.01	<0.02	7.4	1.4	<0.10	0.7	0.03	<0.001
2024-01-17 | 24S-00072-17			0									
2024-01-23 | 24S-00116-10	193	1.2		18.7	0.01	<0.02	7.2	1.2	<0.10	0.8	0.03	<0.001
2024-01-23 | 24S-00116-17			1									
2024-01-31 | 24S-00164-02	174	1.9		15.9	<0.01	<0.02	6.9	1.2	<0.10	0.7	0.02	<0.001
2024-01-31 | 24S-00164-03			2									
2024-02-06 | 24S-00219-10	209	2.1		15.6	<0.01	<0.02	7.2	1.2	<0.10	0.6	<0.02	<0.001
2024-02-06 | 24S-00219-17			0									
2024-02-14 | 24S-00261-10	177	1.4		20.1	0.01	<0.02	7.1	<1.0	<0.10	0.8	0.03	<0.001
2024-02-14 | 24S-00261-17			1									
2024-02-22 | 24S-00314-02	183	2.5		20.8	<0.01	<0.02	7.2	1.0	<0.10	0.5	0.03	<0.001
2024-02-22 | 24S-00314-03			0									
2024-02-27 | 24S-00353-02	190	<1.0		18.8	<0.01	<0.02	7.2	1.4	<0.10	0.9	0.03	<0.001
2024-02-27 | 24S-00353-03			0									
2024-03-05 | 24S-00393-02	177	1.5		19.3	<0.01	<0.02	7.2	<1.0	<0.10	0.5	0.03	<0.001
2024-03-05 | 24S-00393-03			0									
2024-03-13 | 24S-00438-10	160	<1.0		20.3	<0.01	<0.02	7.1	<1.0	<0.10	0.8	0.02	<0.001
2024-03-13 | 24S-00438-17			0									
2024-03-21 | 24S-00489-02	177	<1.0		21.3	<0.01	<0.02	7.1	<1.0	0.16	0.7	0.03	<0.001
2024-03-21 | 24S-00489-03			0									
2024-03-26 | 24S-00538-10	202	1.4		16.4	<0.01	<0.02	7.2	<1.0	<0.10	0.8	0.02	<0.001
2024-03-26 | 24S-00538-17			1									
2024-04-03 | 24S-00595-10	197	1.9		19.9	<0.01	<0.02	7.2	1.6	<0.10	1.1	0.05	<0.001
2024-04-03 | 24S-00595-17			1									
2024-04-09 | 24S-00627-02	235	<1.0		17.1	<0.01	<0.02	7.3	1.0	<0.10	0.9	0.04	<0.001
2024-04-09 | 24S-00627-03			0									
2024-04-17 | 24S-00668-02	207	1.5		18.5	<0.01	<0.02	7.3	2.0	<0.10	0.7	0.09	<0.001
2024-04-17 | 24S-00668-03			3									
2024-04-25 | 24S-00737-10	211	<1.0		19.7	0.01	<0.02	7.2	1.8	<0.10	0.5	0.05	<0.001

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Acton WWTP

Final Effluent

	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-04-25 | 24S-00737-17			2									
2024-05-01 | 24S-00812-02	203	2.1		18.2	<0.01	<0.02	7.2	2.2	<0.10	0.7	0.09	<0.001
2024-05-01 | 24S-00812-03			0									
2024-05-07 | 24S-00823-10	223	1.1		17.2	0.01	<0.02	7.2	1.0	<0.10	0.9	0.04	<0.001
2024-05-07 | 24S-00823-17			0									
2024-05-15 | 24S-00871-10	187	1.5		18.4	0.01	<0.02	7.1	1.8	<0.10	0.6	0.04	<0.001
2024-05-15 | 24S-00871-17			0									
2024-05-23 | 24S-00925-02	186	<1.0		19.3	0.01	<0.02	7.1	1.6	0.12	0.4	0.05	<0.001
2024-05-23 | 24S-00925-03			0									
2024-05-28 | 24S-00952-02	186	<1.0		15.9	0.01	<0.02	7.0	1.2	<0.10	0.8	0.05	<0.001
2024-05-28 | 24S-00952-03			0									
2024-06-05 | 24S-01006-10	202	1.1		17.3	0.01	<0.02	7.1	1.2	<0.10	0.6	0.05	<0.001
2024-06-05 | 24S-01006-17			1									
2024-06-11 | 24S-01042-02	200	1.7		14.1	<0.01	<0.02	7.2	1.8	<0.10	1.0	0.05	<0.001
2024-06-11 | 24S-01042-03			0									
2024-06-19 | 24S-01090-10	162	1.6		19.3	<0.01	<0.02	7.1	1.6	0.11	1.0	0.06	<0.001
2024-06-19 | 24S-01090-17			0									
2024-06-28 | 24S-01137-02	209	<1.0		15.3	0.01	0.03	7.2	<1.0	<0.10	1.0	0.08	<0.001
2024-06-28 | 24S-01137-03			0									
2024-07-03 | 24S-01172-02	197	1.5		15.3	<0.01	<0.02	7.3	1.0	<0.10	0.8	0.04	<0.001
2024-07-03 | 24S-01172-03			0									
2024-07-09 | 24S-01200-02	212	1.8		15.2	<0.01	<0.02	7.3	1.2	<0.10	1.1	0.05	<0.001
2024-07-09 | 24S-01200-03			0									
2024-07-17 | 24S-01267-10	166	<1.0		13.9	<0.01	<0.02	7.2	1.2	<0.10	0.5	0.05	<0.001
2024-07-17 | 24S-01267-17			0									
2024-07-25 | 24S-01353-02	195	<1.0		15.5	<0.01	<0.02	7.2	1.0	<0.10	0.8	0.03	<0.001
2024-07-25 | 24S-01353-03			0									
2024-07-30 | 24S-01411-10	211	<1.0		15.1	<0.01	<0.02	7.1	1.0	<0.10	0.7	0.03	<0.001
2024-07-30 | 24S-01411-17			0									
2024-08-08 | 24S-01464-02	197	1.3		16.5	<0.01	<0.02	7.1	<1.0	<0.10	1.0	0.03	<0.001
2024-08-08 | 24S-01464-03			3									
2024-08-13 | 24S-01490-10	192	1.1		15.7	<0.01	<0.02	7.2	<1.0	<0.10	1.0	0.03	<0.001
2024-08-13 | 24S-01490-17			0									

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Acton WWTP

Final Effluent

	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-08-21 | 24S-01543-02	190	<1.0		17.4	<0.01	0.03	7.2	<1.0	<0.10	1.0	0.05	<0.001
2024-08-21 | 24S-01543-03			0									
2024-08-27 | 24S-01578-10	181	<1.0		15.9	<0.01	0.03	7.2	<1.0	<0.10	1.0	0.04	<0.001
2024-08-27 | 24S-01578-17			2									
2024-09-04 | 24S-01626-02	185	1.0		17.7	0.01	<0.02	7.2	1.0	<0.10	1.0	0.05	<0.001
2024-09-04 | 24S-01626-03			0									
2024-09-10 | 24S-01649-10	174	1.4		16.1	0.01	<0.02	7.1	<1.0	<0.10	0.8	0.04	<0.001
2024-09-10 | 24S-01649-17			0									
2024-09-18 | 24S-01680-10	163	1.3		18.8	0.02	0.02	7.1	<1.0	<0.10	1.2	0.05	<0.001
2024-09-18 | 24S-01680-17			0									
2024-09-26 | 24S-01714-02	173	<1.0		17.2	0.03	0.02	7.2	1.2	<0.10	0.7	0.05	<0.001
2024-09-26 | 24S-01714-03			0									
2024-10-02 | 24S-01767-02	191	2.7		18.3	0.03	<0.02	7.3	<1.0	<0.10	0.7	0.05	<0.001
2024-10-02 | 24S-01767-03			0									
2024-10-08 | 24S-01787-10	188	<1.0		16.9	0.03	<0.02	7.3	<1.0	<0.10	0.9	0.05	<0.001
2024-10-08 | 24S-01787-17			0									
2024-10-17 | 24S-01829-10	192	<1.0		19.2	0.02	<0.02	7.2	<1.0	<0.10	0.7	0.03	<0.001
2024-10-17 | 24S-01829-17			0									
2024-10-22 | 24S-01866-02	202	1.3		16.5	0.02	0.02	7.2	<1.0	<0.10	1.0	0.04	<0.001
2024-10-22 | 24S-01866-03			0									
2024-10-30 | 24S-01910-02	177	<1.0		20.0	<0.01	<0.02	7.2	1.6	0.42	0.7	0.05	0.002
2024-10-30 | 24S-01910-03			1									
2024-11-05 | 24S-01942-02	193	1.2		17.2	<0.01	0.03	7.2	<1.0	<0.10	0.8	0.05	<0.001
2024-11-05 | 24S-01942-03			0									
2024-11-13 | 24S-01969-10	195	1.3		18.2	0.01	0.03	7.2	<1.0	<0.10	0.6	0.03	<0.001
2024-11-13 | 24S-01969-17			0									
2024-11-19 | 24S-01996-10	170	1.4		18.4	<0.01	0.05	7.2	<1.0	<0.10	0.8	0.04	<0.001
2024-11-19 | 24S-01996-17			0									
2024-11-28 | 24S-02038-02	211	1.6		18.0	<0.01	0.03	7.3	<1.0	<0.10	0.8	0.04	<0.001
2024-11-28 | 24S-02038-03			0									
2024-12-03 | 24S-02070-10	185	1.4		17.3	<0.01	0.03	7.1	<1.0	<0.10	0.8	0.04	<0.001
2024-12-03 | 24S-02070-17			0									
2024-12-10 | 24S-02094-10	190	1.3		16.0	<0.01	<0.02	7.1	1.0	<0.10	0.9	0.04	<0.001

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Final Effluent

	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-12-10 | 24S-02094-17			1									
2024-12-17 | 24S-02111-02	183	1.6		16.4	<0.01	<0.02	7.2	<1.0	<0.10	0.8	0.04	<0.001
2024-12-17 | 24S-02111-03			0									
2024-12-23 | 24S-02119-02	177	1.8		17.9	0.01	<0.02	7.2	<1.0	<0.10	0.8	0.03	<0.001
2024-12-23 | 24S-02119-03			0									
2024-12-30 | 24S-02129-02	174	1.6		20.1	<0.01	<0.02	7.2	1.2	<0.10	0.8	0.05	<0.001
2024-12-30 | 24S-02129-03			1									
Average	189	1.3	1	17.5	0.01	0.02	7.2	1.2	0.11	0.8	0.04	0.001
Minimum	134	<1.0	0	13.9	<0.01	<0.02	6.9	<1.0	<0.10	0.4	<0.02	<0.001
Maximum	235	2.7	3	21.3	0.03	0.05	7.4	2.2	0.42	1.2	0.09	0.002
Count	53	53	53	53	53	53	53	53	53	53	53	53

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Raw Sewage

Sample Date Sample ID	Alkalinity	Ortho - Phosphates	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
2024-01-04 | 24S-00007-01	397	2.91	340	30.3	310	66.2	8.74
2024-01-09 | 24S-00020-01	404	3.99	480	27.5	360	65.8	10.0
2024-01-18 | 24S-00072-01	399	1.57	270	25.1	160	41.4	4.05
2024-01-23 | 24S-00116-01	380	2.37	220	23.6	320	43.1	5.29
2024-01-31 | 24S-00164-01	362	1.08	95	17.8	110	27.6	2.70
2024-02-06 | 24S-00219-01	389	1.29	130	17.4	130	32.0	3.05
2024-02-14 | 24S-00261-01	338	0.72	120	16.2	130	27.7	3.06
2024-02-22 | 24S-00314-01	414	2.06	140	26.2	150	42.7	3.69
2024-02-27 | 24S-00353-01	391	1.54	120	19.7	100	32.0	3.51
2024-03-05 | 24S-00393-01	374	1.26	240	20.4	150	36.8	4.01
2024-03-13 | 24S-00438-01	334	0.88	150	14.8	130	29.0	3.10
2024-03-21 | 24S-00489-01	474	2.17	210	43.3	170	64.0	7.32
2024-03-26 | 24S-00538-01	377	1.44	180	20.7	140	33.9	3.89
2024-04-03 | 24S-00595-01	368	0.88	190	16.6	180	30.1	3.86
2024-04-09 | 24S-00627-01	403	1.59	210	20.1	200	39.0	4.60
2024-04-17 | 24S-00668-01	369	1.44	170	16.1	170	33.1	4.02
2024-04-25 | 24S-00737-01	401	1.83	150	22.1	160	35.6	4.12
2024-05-01 | 24S-00812-01	365	1.20	250	18.3	150	33.4	4.35
2024-05-07 | 24S-00823-01	384	1.22	120	17.4	110	29.2	3.07
2024-05-15 | 24S-00871-01	377	1.42	160	21.1	130	34.2	3.48
2024-05-23 | 24S-00925-01	379	1.41	290	20.1	140	39.6	4.20
2024-05-28 | 24S-00952-01	339	0.73	65	16.3	49	23.0	1.74
2024-06-05 | 24S-01006-01	399	1.71	230	20.3	190	37.7	4.82
2024-06-11 | 24S-01042-01	380	2.68	420	21.2	260	48.0	7.41
2024-06-19 | 24S-01090-01	424	1.74	190	29.5	160	44.2	4.26
2024-06-28 | 24S-01137-01	363	1.27	220	16.5	160	33.2	3.93
2024-07-03 | 24S-01172-01	374	1.14	140	17.8	130	29.8	3.41
2024-07-09 | 24S-01200-01	398	2.08	220	22.8	170	39.0	4.62
2024-07-17 | 24S-01267-01	334	0.79	120	10.6	91	22.2	2.39
2024-07-25 | 24S-01353-01	367	1.57	300	22.2	220	38.4	4.34
2024-07-30 | 24S-01411-01	368	1.20	220	17.1	150	38.1	3.88
2024-08-08 | 24S-01464-01	414	1.73	230	29.1	230	51.7	6.42
2024-08-13 | 24S-01490-01	389	1.80	200	22.6	210	39.9	4.59

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Raw Sewage

	Alkalinity	Ortho - Phosphates	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
2024-08-21 | 24S-01543-01	361	1.29	140	19.8	130	33.9	3.51
2024-08-27 | 24S-01578-01	387	2.61	380	22.2	270	50.9	7.91
2024-09-04 | 24S-01626-01	392	2.22	300	24.2	260	47.9	6.53
2024-09-10 | 24S-01649-01	371	2.26	360	21.2	310	49.4	8.01
2024-09-18 | 24S-01680-01	394	1.93	210	30.6	240	44.1	4.69
2024-09-26 | 24S-01714-01	366	1.66	150	22.6	130	62.2	3.66
2024-10-02 | 24S-01767-01	361	1.48	140	21.1	130	35.2	3.57
2024-10-08 | 24S-01787-01	357	1.25	140	20.1	100	31.5	3.45
2024-10-17 | 24S-01829-01	45.2	<0.02	450	21.5	160	44.5	4.24
2024-10-22 | 24S-01866-01	395	1.70	170	28.7	170	51.5	4.12
2024-10-30 | 24S-01910-01	378	1.74	190	23.6	180	39.0	4.00
2024-11-05 | 24S-01942-01	389	1.75	200	22.1	160	41.1	3.88
2024-11-13 | 24S-01969-01	391	1.88	220	19.6	220	51.2	5.85
2024-11-19 | 24S-01996-01	383	1.64	170	24.0	150	40.6	4.92
2024-11-28 | 24S-02038-01	425	1.97	150	27.9	150	40.5	3.90
2024-12-03 | 24S-02070-01	399	1.59	140	21.0	120	34.6	3.90
2024-12-10 | 24S-02094-01	358	1.64	140	22.0	130	39.0	3.79
2024-12-17 | 24S-02111-01	399	1.66	330	22.9	170	50.2	5.03
2024-12-23 | 24S-02119-01	363	1.43	130	22.7	150	34.3	3.60
2024-12-30 | 24S-02129-01	337	1.37	170	17.3	150	27.8	3.63
Average	375	1.62	210	21.8	170	39.8	4.49
Minimum	45.2	<0.02	65	10.6	49	22.2	1.74
Maximum	474	3.99	480	43.3	360	66.2	10.0
Count	53	53	53	53	53	53	53

2024 GEORGETOWN WASTEWATER TREATMENT PLANT
FLOW AND LOADING

		January	February	March	April	May	June	July	August	September	October	November	December	Total	Maximum	Average	Objective	Limits
INFLUENT FLOW																		
Total Influent Flow	10^3m^3	516.612	430.650	501.490	578.301	499.426	418.664	447.358	401.599	378.679	390.648	398.338	472.479	5,434.244				
Average Daily Flow[1]	10^3m^3	16.665	14.850	16.177	19.277	16.110	13.955	14.431	12.955	12.623	12.602	13.278	15.241			14.847		
Maximum Daily Flow	10^3m^3	33.796	21.225	23.013	32.178	26.192	16.094	32.412	17.567	18.283	14.930	14.998	25.268		33.796			
Minimum Daily Flow	10^3m^3	13.033	13.356	14.228	14.370	13.055	12.121	11.245	10.861	11.535	11.766	12.350	12.115					
EFFLUENT FLOW																		
Total Effluent Flow	10^3m^3	532.722	437.254	510.507	592.984	521.459	459.026	520.278	469.371	437.016	424.974	409.977	467.411	5,782.979				
Average Daily Flow[1]	10^3m^3	17.185	15.078	16.468	19.766	16.821	15.301	16.783	15.141	14.567	13.709	13.666	15.078			15.797		22.727
Maximum Daily Flow	10^3m^3	33.409	22.098	24.997	32.627	26.588	17.953	30.590	20.340	20.207	15.353	15.463	27.985		33.409			
Minimum Daily Flow	10^3m^3	12.255	12.875	12.524	13.973	12.975	13.129	13.400	11.893	12.612	12.810	12.092	12.134					
# of Days w/ Flow >90% of Design	#	5	1	1	9	2	0	4	0	0	0	0	2	24				
INFLUENT LOADING																		
BOD_5	mg/L	250	330	230	230	230	230	200	290	280	260	280	230			253.3		
BOD_5 Loading	kg/day	4,166.25	4,900.50	3,720.71	4,433.71	3,705.30	3,209.65	2,886.20	3,756.95	3,534.44	3,276.52	3,717.84	3,505.43			3,734.5		
Total Suspended Solids	mg/L	360	430	360	310	350	300	290	420	410	370	430	370			366.7		
TSS Loading	kg/day	5,999.40	6,385.50	5,823.72	5,975.87	5,638.50	4,186.50	4,184.99	5,441.10	5,175.43	4,662.74	5,709.54	5,639.17			5,401.9		
Total Kjeldahl Nitrogen	mg/L	39.9	49.7	46.1	34.9	32.8	41.6	36.1	54.1	49.3	44.1	40.1	40.1			42.4		
TKN Loading	kg/day	664.93	738.05	745.76	672.77	528.41	580.53	520.96	700.87	622.31	555.75	532.45	611.16			622.8		
Total Phosphorus	mg/L	7.56	7.74	6.62	5.65	6.73	6.39	6.68	9.05	8.94	7.63	8.66	6.72			7.36		
TP Loading	kg/day	125.99	114.94	107.09	108.92	108.42	89.17	96.40	117.24	112.85	96.15	114.99	102.42			107.88		
FINAL EFFLUENT LOADING																		
$CBOD_5$	mg/L	1.3	1.5	1.1	1.5	1.2	1.9	1.2	1.2	1.2	1.2	1.4	2.1			1.4	4.0	5.0
$CBOD_5$ Loading	kg/day	22.34	22.62	18.11	29.65	20.19	29.07	20.14	18.17	17.48	16.45	19.13	31.66			22.1		113.6
Total Suspended Solids	mg/L	1.2	1.4	1.2	2.0	2.0	3.2	2.8	2.0	1.7	1.1	1.4	2.6			1.9	4.0	5.0
TSS Loading	kg/day	20.62	21.11	19.76	39.53	33.64	48.96	46.99	30.28	24.76	15.08	19.13	39.20			29.9		113.6
Unionized Ammonia	mg/L	0.001	0.002	0.001	0.001	0.001	0.001	0.001	0.003	0.001	0.001	0.001	0.001			0.001	<0.02	0.02
Unionized Ammonia Loading	kg/day	0.017	0.030	0.016	0.020	0.017	0.015	0.017	0.045	0.015	0.014	0.014	0.015			0.020		
Total Phosphorus	mg/L	0.10	0.12	0.11	0.11	0.18	0.26	0.24	0.21	0.19	0.17	0.18	0.19			0.17	0.25	0.3
TP Loading	kg/day	1.72	1.81	1.81	2.17	3.03	3.98	4.03	3.18	2.77	2.33	2.46	2.86			2.68		6.8

[1]*"average daily flow "*means the total sewage flow to the sewage works during the periods of operation upon which the report is based, divided by the number of days during the same period of time.
*The calculated yearly average loadings in some instances may not correspond to the data reporting in the Regional Laboratory summary. This discrepancy is due to rounding.

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Wastewater Analysis, Monthly Averages

Georgetown WWTP, 2024

Final Effluent

Sample Date (Month)	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
January 2024	198	1.3		27.6	0.01	0.06	7.2	1.2	0.12	0.9	0.10	<0.001
February 2024	231	1.5		22.7	<0.01	0.06	7.2	1.4	0.23	1.0	0.12	0.002
March 2024	213	1.1		23.4	<0.01	0.06	7.1	1.2	<0.10	0.8	0.11	<0.001
April 2024	251	1.5	1	20.6	0.03	0.06	6.9	2.0	0.35	1.0	0.11	0.001
May 2024	233	1.2	1	16.3	0.36	0.12	7.1	2.0	0.17	1.2	0.18	0.001
June 2024	224	1.9	1	22.2	0.24	0.16	7.0	3.2	<0.10	1.1	0.26	<0.001
July 2024	226	1.2	2	18.6	0.13	0.16	7.1	2.8	0.12	1.2	0.24	0.001
August 2024	255	1.2	2	17.4	0.66	0.13	6.8	2.0	1.27	2.4	0.21	0.003
September 2024	195	1.2	1	23.2	0.03	0.13	7.0	1.7	<0.10	1.0	0.19	<0.001
October 2024	239	1.2	2	22.9	0.02	0.13	7.0	1.1	<0.10	0.9	0.17	<0.001
November 2024	206	1.4		22.9	0.01	0.15	7.0	1.4	<0.10	1.0	0.18	<0.001
December 2024	164	2.1		25.6	0.04	0.11	7.1	2.6	0.14	1.2	0.19	<0.001
Annual Average	219	1.4	1	21.9	0.13	0.11	7.0	1.9	0.23	1.1	0.17	0.001
Annual Minimum	134	<1.0	0	9.95	<0.01	0.03	6.6	<1.0	<0.10	0.5	0.08	<0.001
Annual Maximum	320	2.7	6	33.0	2.49	0.25	7.4	5.0	4.76	6.5	0.31	0.010
Annual Count	53	53	31	53	53	53	53	53	53	53	53	53
# Results Outside Limits	0	0	0	0	0	0	0	0	0	0	1	0
Month Average	220	1.4	1	22.0	0.13	0.11	7.0	1.9	0.24	1.1	0.17	0.001
% Results Within Limits	100	100	100	100	100	100	100	100	100	100	98	100
Limit	-/-	-/5	-/200	-/-	-/-	-/-	6.0/9.5	-/5.0	-/-	-/-	-/0.30	-/0.02

1. The detail section of this report displays the monthly averages, which are an arithmetic mean with the exception of E.coli, which is a geometric mean.
2. In order to calculate a geometric mean for the E.coli analysis, results of zero are first replaced with one.
3. The **Annual Average** in the summary section represents an average of every result for this facility. This is an annual geometric mean for E.coli.
4. If any result is less than the **Method Detection Limit**, then the detection limit is used in calculating the average. If all results are < MDL, then the average will also be reported as < MDL.
5. The **# Results Outside Limits** and **% Results Within Limits** represent statistics comparing individual results to the ECA limit. It does not necessarily represent non-compliance.

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Wastewater Analysis, Monthly Averages

Georgetown WWTP, 2024

Raw Sewage

Sample Date (Month)	Alkalinity	Carbonaceous BOD	Ortho - Phosphates	Soluble CBOD	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
January 2024	408	110	2.32	4.7	360	11.3	250	39.9	7.56
February 2024	443	220	2.44	37	430	19.5	330	49.7	7.74
March 2024	411	140	1.57	10	360	14.6	230	46.1	6.62
April 2024	403	120	1.46	3.4	310	9.74	230	34.9	5.65
May 2024	360	96	1.85	4.1	350	5.46	230	32.8	6.73
June 2024	420	210	1.81	5.8	300	14.3	230	41.6	6.39
July 2024	394	170	2.36	8.1	290	10.2	200	36.1	6.68
August 2024	449	210	2.61	14	420	21.5	290	54.1	9.05
September 2024	418	170	2.99	11	410	13.1	280	49.3	8.94
October 2024	418	170	2.11	12	370	14.0	260	44.1	7.63
November 2024	392	270	2.82	8.0	430	11.3	280	40.1	8.66
December 2024	358	190	2.32	5.9	370	11.9	230	40.1	6.72
Annual Average	404	170	2.22	10	370	12.8	250	42.0	7.34
Annual Minimum	267	96	1.04	3.4	96	3.20	69	16.1	3.25
Annual Maximum	475	270	3.72	37	620	27.2	440	61.8	11.8
Annual Count	53	12	53	12	53	53	53	53	53
# Results Outside Limits	0	0	0	0	0	0	0	0	0
Month Average	406	170	2.22	10	370	13.1	250	42.4	7.36
% Results Within Limits	100	100	100	100	100	100	100	100	100
Limit	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-

1. The detail section of this report displays the monthly averages, which are an arithmetic mean with the exception of E.coli, which is a geometric mean.
2. In order to calculate a geometric mean for the E.coli analysis, results of zero are first replaced with one.
3. The **Annual Average** in the summary section represents an average of every result for this facility. This is an annual geometric mean for E.coli.
4. If any result is less than the **Method Detection Limit**, then the detection limit is used in calculating the average. If all results are < MDL, then the average will also be reported as < MDL.
5. The **# Results Outside Limits** and **% Results Within Limits** represent statistics comparing individual results to the ECA limit. It does not necessarily represent non-compliance.

Regional Municipality of Halton
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Final Effluent

Sample Date	Sample ID	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
		mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-01-04	24S-00008-02	220	<1.0		25.9	<0.01	0.04	7.1	1.0	0.15	0.9	0.08	<0.001
2024-01-09	24S-00021-05	196	<1.0		33.0	0.01	0.06	7.1	1.4	<0.10	1.1	0.11	<0.001
2024-01-17	24S-00073-02	199	2.0		26.0	<0.01	0.05	7.2	1.4	0.14	0.7	0.09	<0.001
2024-01-23	24S-00117-05	176	<1.0		25.5	0.01	0.07	7.2	<1.0	<0.10	0.9	0.11	<0.001
2024-02-01	24S-00165-02	248	1.9		19.2	<0.01	0.04	7.2	2.0	<0.10	1.1	0.11	<0.001
2024-02-06	24S-00220-05	224	1.5		21.2	<0.01	0.05	7.2	1.4	<0.10	0.9	0.11	<0.001
2024-02-14	24S-00262-05	228	1.2		24.4	<0.01	0.07	7.3	1.2	0.74	1.0	0.12	0.004
2024-02-22	24S-00315-02	205	2.0		27.0	<0.01	0.06	7.2	1.2	<0.10	0.8	0.11	<0.001
2024-02-27	24S-00354-02	250	<1.0		21.8	<0.01	0.10	7.3	1.2	<0.10	1.0	0.13	<0.001
2024-03-05	24S-00395-05	211	1.3		24.0	<0.01	0.06	7.1	1.4	<0.10	0.8	0.12	<0.001
2024-03-13	24S-00439-02	212	1.1		24.6	<0.01	0.09	7.1	<1.0	<0.10	0.7	0.12	<0.001
2024-03-21	24S-00490-02	210	1.1		22.1	<0.01	0.04	7.2	1.4	<0.10	0.9	0.09	<0.001
2024-03-26	24S-00539-05	219	<1.0		23.0	<0.01	0.04	7.1	1.0	<0.10	0.7	0.09	<0.001
2024-04-03	24S-00596-02	245	1.2		23.3	0.06	0.06	6.9	1.2	0.91	1.8	0.12	0.002
2024-04-03	24S-00596-03			0									
2024-04-09	24S-00630-05	251	1.9		19.0	<0.01	0.03	7.0	<1.0	<0.10	1.0	0.08	<0.001
2024-04-09	24S-00630-10			0									
2024-04-17	24S-00669-05	259	2.0		18.6	0.02	0.06	6.9	2.8	0.29	0.5	0.11	<0.001
2024-04-17	24S-00669-10			1									
2024-04-25	24S-00738-02	247	<1.0		21.4	0.01	0.07	6.8	2.8	<0.10	0.7	0.14	<0.001
2024-04-25	24S-00738-03			1									
2024-05-01	24S-00813-05	199	1.6		14.3	0.05	0.08	6.6	3.0	<0.10	0.9	0.16	<0.001
2024-05-01	24S-00813-10			2									
2024-05-07	24S-00826-02	252	<1.0		17.4	0.25	0.09	7.1	1.6	<0.10	1.2	0.15	<0.001
2024-05-07	24S-00826-03			0									
2024-05-15	24S-00872-02	233	<1.0		20.8	0.27	0.10	7.2	1.6	0.44	1.4	0.16	0.002
2024-05-15	24S-00872-03			0									
2024-05-23	24S-00926-05	249	<1.0		19.0	0.83	0.12	7.4	1.6	<0.10	1.2	0.18	<0.001
2024-05-23	24S-00926-10			0									
2024-05-28	24S-00955-02	232	1.4		9.95	0.38	0.19	7.1	2.0	<0.10	1.1	0.27	<0.001
2024-05-28	24S-00955-03			2									
2024-06-05	24S-01007-02	241	1.2		18.5	0.31	0.20	7.1	3.2	<0.10	0.9	0.26	<0.001
2024-06-05	24S-01007-03			1									

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Final Effluent

	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-06-11 | 24S-01044-05	225	2.2		23.5	0.12	0.16	6.9	3.4	<0.10	1.2	0.29	<0.001
2024-06-11 | 24S-01044-10			0									
2024-06-19 | 24S-01091-05	199	1.9		25.2	0.38	0.12	6.9	1.6	<0.10	1.0	0.19	<0.001
2024-06-19 | 24S-01091-10			0									
2024-06-27 | 24S-01138-02	232	2.1		21.5	0.16	0.16	7.1	4.4	<0.10	1.4	0.29	<0.001
2024-06-27 | 24S-01138-03			0									
2024-07-03 | 24S-01173-02						0.17		2.2			0.25	
2024-07-04 | 24S-01173-03			2									
2024-07-04 | 24S-01173-04	238	1.3		20.9	0.08	0.17	7.2	2.6	<0.10	1.5	0.26	<0.001
2024-07-09 | 24S-01201-05	240	<1.0		22.4	0.16	0.16	7.2	3.8	<0.10	1.2	0.21	<0.001
2024-07-09 | 24S-01201-10			0									
2024-07-17 | 24S-01268-02	200	1.7		11.0	0.16	0.13	7.2	5.0	0.18	1.3	0.26	0.001
2024-07-17 | 24S-01268-03			6									
2024-07-25 | 24S-01354-02	239	<1.0		18.2	0.16	0.16	6.8	1.0	<0.10	1.2	0.24	<0.001
2024-07-25 | 24S-01354-03			0									
2024-07-30 | 24S-01412-05	214	<1.0		20.3	0.08	0.16	6.9	1.8	0.12	1.0	0.22	<0.001
2024-07-30 | 24S-01412-10			0									
2024-08-08 | 24S-01465-02	320	1.6		13.0	2.49	0.04	6.7	2.4	4.76	6.5	0.14	0.010
2024-08-08 | 24S-01465-03			3									
2024-08-13 | 24S-01493-05	217	<1.0		20.3	0.05	0.10	6.7	1.8	<0.10	1.2	0.19	<0.001
2024-08-13 | 24S-01493-10			6									
2024-08-21 | 24S-01544-05	244	<1.0		17.4	0.04	0.12	6.8	2.0	<0.10	1.1	0.18	<0.001
2024-08-21 | 24S-01544-10			0									
2024-08-27 | 24S-01581-02	240	1.2		18.9	0.05	0.25	6.8	1.6	<0.10	0.7	0.31*	<0.001
2024-08-27 | 24S-01581-03			0									
2024-09-04 | 24S-01627-05	194	<1.0		23.8	0.03	0.16	7.0	1.8	<0.10	1.0	0.22	<0.001
2024-09-04 | 24S-01627-10			0									
2024-09-10 | 24S-01652-02	189	1.5		23.3	0.02	0.12	7.0	1.8	<0.10	1.0	0.18	<0.001
2024-09-10 | 24S-01652-03			0									
2024-09-18 | 24S-01681-02	203	1.4		26.2	0.04	0.14	7.2	1.8	<0.10	1.3	0.19	<0.001
2024-09-18 | 24S-01681-03			0									
2024-09-26 | 24S-01715-05	195	<1.0		19.3	0.02	0.10	6.9	1.4	<0.10	0.8	0.15	<0.001
2024-09-26 | 24S-01715-10			1									

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Final Effluent

	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-10-02 | 24S-01768-05	227	1.3		24.5	0.02	0.12	7.2	1.0	<0.10	0.9	0.18	<0.001
2024-10-02 | 24S-01768-10			2									
2024-10-08 | 24S-01789-02	251	<1.0		19.5	0.03	0.13	6.9	1.4	<0.10	1.0	0.17	<0.001
2024-10-08 | 24S-01789-03			0									
2024-10-17 | 24S-01830-02	217	<1.0		25.9	0.01	0.12	6.9	1.0	<0.10	0.9	0.15	<0.001
2024-10-17 | 24S-01830-03			0									
2024-10-22 | 24S-01870-05	259	1.5		21.6	0.01	0.13	6.8	<1.0	<0.10	0.9	0.19	<0.001
2024-10-22 | 24S-01870-10			0									
2024-10-31 | 24S-01911-03			4									
2024-11-01 | 24S-01911-02	248	1.3		20.4	0.02	0.18	7.2	2.6	<0.10	1.1	0.23	<0.001
2024-11-05 | 24S-01945-02	251	1.2		21.0	<0.01	0.15	7.2	<1.0	<0.10	0.9	0.18	<0.001
2024-11-13 | 24S-01970-05	203	1.6		22.9	<0.01	0.13	6.8	1.0	<0.10	0.7	0.17	<0.001
2024-11-19 | 24S-01998-05	157	1.5		25.3	<0.01	0.16	7.2	1.2	<0.10	1.0	0.18	<0.001
2024-11-28 | 24S-02039-02	171	1.3		24.7	<0.01	0.11	6.7	1.2	<0.10	1.1	0.16	<0.001
2024-12-03 | 24S-02062-05	190	1.1		27.7	<0.01	0.10	6.8	1.8	<0.10	1.2	0.15	<0.001
2024-12-10 | 24S-02095-05	147	2.7		24.7	<0.01	0.10	7.1	4.0	<0.10	1.2	0.19	<0.001
2024-12-17 | 24S-02112-02	180	2.5		27.2	0.11	0.12	7.0	3.0	0.27	1.6	0.21	<0.001
2024-12-23 | 24S-02120-02	169	2.2		27.4	<0.01	0.08	7.2	2.6	0.15	1.0	0.17	<0.001
2024-12-30 | 24S-02130-02	134	2.0		21.0	0.08	0.13	7.2	1.6	<0.10	1.2	0.21	<0.001
Average	219	1.4	1	21.9	0.13	0.11	7.0	1.9	0.23	1.1	0.17	0.001
Minimum	134	<1.0	0	9.95	<0.01	0.03	6.6	<1.0	<0.10	0.5	0.08	<0.001
Maximum	320	2.7	6	33.0	2.49	0.25	7.4	5.0	4.76	6.5	0.31	0.010
Count	53	53	31	53	53	54	53	54	53	53	54	53

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Wastewater Performance Summary

2024

Georgetown WWTP

Raw Sewage

Sample Date	Sample ID	Alkalinity	Carbonaceous BOD	Ortho - Phosphates	Soluble CBOD	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
		mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
2024-01-04	24S-00008-01	428		1.52		300	12.5	240	36.0	6.90
2024-01-09	24S-00021-01	423	110	3.00	4.7	440	12.6	280	47.0	8.82
2024-01-17	24S-00073-01	395		2.18		330	10.0	210	37.4	6.44
2024-01-23	24S-00117-01	395		3.05		430	12.4	300	44.8	8.93
2024-01-31	24S-00165-01	401		1.85		310	8.92	240	34.3	6.69
2024-02-06	24S-00220-01	419		2.30		410	10.7	270	40.8	7.73
2024-02-14	24S-00262-01	440	220	2.82	37	460	22.3	310	54.0	7.33
2024-02-22	24S-00315-01	450		2.48		420	22.3	370	52.0	8.08
2024-02-27	24S-00354-01	463		2.14		440	22.8	350	52.1	7.81
2024-03-05	24S-00395-01	409	140	1.92	10	360	18.1	270	47.5	7.60
2024-03-13	24S-00439-01	419		1.76		430	15.5	230	50.6	6.85
2024-03-21	24S-00490-01	415		1.31		350	13.1	230	48.2	6.81
2024-03-26	24S-00539-01	401		1.29		300	11.7	180	38.2	5.23
2024-04-03	24S-00596-01	403		1.04		300	13.2	270	38.2	5.47
2024-04-09	24S-00630-01	401	120	1.62	3.4	250	7.97	180	27.3	4.68
2024-04-17	24S-00669-01	411		1.63		320	7.28	260	39.6	6.55
2024-04-25	24S-00738-01	397		1.54		380	10.5	220	34.3	5.88
2024-05-01	24S-00813-01	308	96	1.38	4.1	310	3.79	180	24.3	5.47
2024-05-07	24S-00826-01	379		1.94		380	6.36	280	31.6	7.63
2024-05-15	24S-00872-01	375		2.06		420	6.03	280	38.4	8.18
2024-05-23	24S-00926-01	374		1.90		540	4.72	320	53.6	9.13
2024-05-28	24S-00955-01	363		1.98		96	6.42	69	16.1	3.25
2024-06-05	24S-01007-01	408		1.77		360	14.7	270	46.0	6.48
2024-06-11	24S-01044-01	430	210	1.83	5.8	320	14.3	230	41.3	6.71
2024-06-19	24S-01091-01	421		1.65		280	15.1	190	38.5	6.06
2024-06-27	24S-01138-01	419		1.97		250	13.2	230	40.4	6.31
2024-07-03	24S-01173-01	413		2.76		390	15.9	300	52.7	8.35
2024-07-09	24S-01201-01	422	170	2.50	8.1	270	12.6	210	38.7	7.02
2024-07-17	24S-01268-01	315		1.86		170	3.20	110	21.6	4.98
2024-07-25	24S-01354-01	400		1.86		290	9.90	200	32.3	5.90
2024-07-30	24S-01412-01	420		2.80		330	9.51	190	35.1	7.16
2024-08-08	24S-01465-01	475		3.72		460	27.2	300	61.8	11.7
2024-08-14	24S-01493-01	474	210	2.07	14	360	26.0	270	57.5	7.85

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	Alkalinity	Carbonaceous BOD	Ortho - Phosphates	Soluble CBOD	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
2024-08-21 | 24S-01544-01	415		1.74		470	16.8	310	51.0	8.39
2024-08-27 | 24S-01581-01	430		2.90		380	15.8	260	45.9	8.26
2024-09-04 | 24S-01627-01	429	170	3.22	11	370	17.6	240	44.3	7.35
2024-09-10 | 24S-01652-01	405		3.20		530	6.89	340	58.4	10.5
2024-09-18 | 24S-01681-01	458		3.43		410	19.8	340	60.2	10.6
2024-09-26 | 24S-01715-01	381		2.11		330	7.99	200	34.4	7.31
2024-10-02 | 24S-01768-01	385	170	1.85	12	270	15.0	200	36.6	5.97
2024-10-08 | 24S-01789-01	454		2.37		400	16.8	340	55.4	8.74
2024-10-17 | 24S-01830-01	433		2.24		320	12.5	200	43.3	7.48
2024-10-22 | 24S-01870-01	412		2.35		390	12.7	280	38.7	7.59
2024-10-30 | 24S-01911-01	405		1.73		470	12.9	300	46.5	8.36
2024-11-05 | 24S-01945-01	423		2.17		360	11.8	210	31.8	6.51
2024-11-13 | 24S-01970-01	396	270	3.69	8.0	620	11.7	440	56.0	11.8
2024-11-19 | 24S-01998-01	360		2.81		340	10.6	220	35.0	7.17
2024-11-28 | 24S-02039-01	389		2.60		390	11.1	250	37.7	9.15
2024-12-03 | 24S-02062-01	414	190	2.92	5.9	500	12.4	240	46.5	8.57
2024-12-10 | 24S-02095-01	383		2.52		430	14.0	270	47.1	7.83
2024-12-17 | 24S-02112-01	392		2.71		330	13.1	240	41.2	7.00
2024-12-23 | 24S-02120-01	336		1.86		300	13.3	230	37.6	4.99
2024-12-30 | 24S-02130-01	267		1.57		300	6.75	190	27.9	5.21
Average	404	170	2.22	10	370	12.8	250	42.0	7.34
Minimum	267	96	1.04	3.4	96	3.20	69	16.1	3.25
Maximum	475	270	3.72	37	620	27.2	440	61.8	11.8
Count	53	12	53	12	53	53	53	53	53

2024 MID-HALTON WASTEWATER TREATMENT PLANT
FLOW AND LOADING

		January	February	March	April	May	June	July	August	September	October	November	December	Total	Maximum	Average	Objective	Limits
EFFLUENT FLOW																		
Total Effluent Flow	10^3m^3	2,884.561	2,193.121	2,581.576	2,946.013	2,528.106	2,549.916	3,108.295	2,440.774	2,375.464	2,350.172	2,323.519	2,664.386	30,945.903				
Average Daily Flow[1]	10^3m^3	93.050	75.625	83.277	98.200	81.552	84.997	100.268	78.735	79.182	75.812	77.451	85.948			84.508		125.0
Maximum Daily Flow	10^3m^3	160.523	101.682	129.057	180.148	119.997	109.991	228.147	109.469	119.349	84.764	94.694	156.938		228.147			
Minimum Daily Flow	10^3m^3	72.821	68.540	73.523	74.665	72.032	76.805	70.554	70.084	69.052	69.228	71.929	74.505					
# of Days w/ Flow >90% of Design	#	5	0	1	7	1	0	9	0	1	0	0	3	27				
FINAL EFFLUENT LOADING																		
$CBOD_5$	mg/L	1.6	1.8	1.6	2.1	1.4	2.0	1.6	1.8	1.5	1.8	1.8	2.0			1.8	15.0	25.0
$CBOD_5$ Loading	kg/day	148.9	136.1	133.2	206.2	114.2	170.0	160.4	141.7	118.8	136.5	139.4	171.9			148.1		
Total Suspended Solids	mg/L	7.5	6.3	6.8	6.4	5.7	6.9	7.5	8.3	8.4	7.0	6.3	7.2			7.0	15.0	25.0
TSS Loading	kg/day	697.9	476.4	566.3	628.5	464.8	586.5	752.0	653.5	665.1	530.7	487.9	618.8			594.0		
Total Ammonia Nitrogen	mg/L	1.04	0.37	0.22	0.29	0.16	0.33	0.60	1.11	0.29	1.43	0.33	0.36			0.54	6, 10 [2]	10, 20 [2]
NH_3-N Loading	kg/day	96.77	27.98	18.32	28.48	13.05	28.05	60.16	87.40	22.96	108.41	25.56	30.94			45.7		
Total Phosphorus	mg/L	0.44	0.51	0.55	0.61	0.51	0.50	0.43	0.44	0.40	0.51	0.59	0.56			0.50	0.6	0.8
TP Loading	kg/day	40.94	38.57	45.80	59.90	41.59	42.50	43.12	34.64	31.67	38.66	45.70	48.13			42.6		

[1] *"average daily flow "*means the total sewage flow to the sewage works during the periods of operation upon which the report is based, divided by the number of days during the same period of time.

[2]Seasonal Total Ammonia Nitrogen concentration criteria. May 1 - Nov 30 and Dec 1 - April 30.

*The calculated yearly average loadings in some instances may not correspond to the data reporting in the Regional Laboratory summary. This discrepancy is due to rounding.

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Wastewater Analysis, Monthly Averages

Mid-Halton WWTP, 2024

Final Effluent

Sample Date (Month)	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
January 2024	52.9	1.6		28.2	0.33	0.09	6.7	7.5	1.04	2.1	0.44	0.002
February 2024	42.1	1.8		31.9	0.24	0.15	6.6	6.3	0.37	1.2	0.51	<0.001
March 2024	61.7	1.6		27.9	0.18	0.07	6.8	6.8	0.22	1.7	0.55	<0.001
April 2024	57.5	2.1		30.9	0.23	0.14	6.7	6.4	0.29	1.6	0.61	<0.001
May 2024	56.5	1.4	14	27.0	0.17	0.15	6.8	5.7	0.16	1.1	0.51	<0.001
June 2024	39.0	2.0	25	31.8	0.52	0.11	6.7	6.9	0.33	1.4	0.50	0.001
July 2024	73.4	1.6	61	23.7	0.46	0.09	6.8	7.5	0.60	2.0	0.43	0.002
August 2024	54.1	1.8	59	25.3	0.50	0.10	6.9	8.3	1.11	2.5	0.44	0.005
September 2024	52.1	1.5	70	24.5	0.37	0.08	6.8	8.4	0.29	1.5	0.40	<0.001
October 2024	54.1	1.8	36	28.7	0.46	0.15	6.6	7.0	1.43	2.6	0.51	0.003
November 2024	40.2	1.8		30.4	0.34	0.21	6.6	6.3	0.33	1.6	0.59	0.001
December 2024	46.4	2.0		27.3	0.44	0.15	6.8	7.2	0.36	1.7	0.56	0.001
Annual Average	52.7	1.7	37	28.1	0.35	0.13	6.7	7.0	0.55	1.7	0.51	0.002
Annual Minimum	27.2	<1.0	8	11.4	0.07	<0.02	6.4	3.3	<0.10	0.8	0.34	<0.001
Annual Maximum	132	4.1	140	36.6	0.87	0.25	7.1	13	2.91	4.4	0.72	0.016
Annual Count	53	157	27	53	53	53	53	157	53	53	53	53
# Results Outside Limits	0	0	0	0	0	0	0	0	0	0	0	0
Month Average	52.5	1.8	44	28.1	0.35	0.12	6.7	7.0	0.54	1.8	0.50	0.002
% Results Within Limits	100	100	100	100	100	100	100	100	100	100	100	100
Limit	-/-	-/25	-/200	-/-	-/-	-/-	6.0/9.5	-/25	-/10	-/-	-/0.8	-/-

*Ammonia Nitrogen Limits are 10 (May - Nov) and 20 (Dec - Apr)

1. The detail section of this report displays the monthly averages, which are an arithmetic mean with the exception of E.coli, which is a geometric mean.
2. In order to calculate a geometric mean for the E.coli analysis, results of zero are first replaced with one.
3. The **Annual Average** in the summary section represents an average of every result for this facility. This is an annual geometric mean for E.coli.
4. If any result is less than the **Method Detection Limit**, then the detection limit is used in calculating the average. If all results are < MDL, then the average will also be reported as < MDL.
5. The **# Results Outside Limits** and **% Results Within Limits** represent statistics comparing individual results to the ECA limit. It does not necessarily represent non-compliance.

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Wastewater Analysis, Monthly Averages

Mid-Halton WWTP, 2024

Raw Sewage

Sample Date (Month)	Alkalinity	Ortho - Phosphates	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
January 2024	275	1.85	200	27.9	190	48.7	4.62
February 2024	302	2.32	240	33.7	200	55.4	5.31
March 2024	273	2.14	230	30.2	200	50.4	5.24
April 2024	285	2.14	190	28.6	190	45.7	4.68
May 2024	286	2.36	260	32.0	230	56.8	5.29
June 2024	283	2.44	260	32.3	230	51.9	5.68
July 2024	266	1.91	200	25.3	180	44.1	4.41
August 2024	280	2.43	260	31.7	220	53.1	5.71
September 2024	269	2.31	220	31.3	250	50.5	5.29
October 2024	288	2.45	250	34.8	230	57.1	5.75
November 2024	291	2.46	230	34.7	220	53.2	5.47
December 2024	261	2.14	280	29.8	230	52.1	5.14
Annual Average	279	2.23	230	30.9	210	51.6	5.20
Annual Minimum	214	0.61	100	6.84	63	16.4	1.89
Annual Maximum	319	3.06	350	40.4	430	65.7	6.44
Annual Count	53	53	53	53	53	53	53
# Results Outside Limits	0	0	0	0	0	0	0
Month Average	280	2.25	240	31.0	210	51.6	5.22
% Results Within Limits	100	100	100	100	100	100	100
Limit	-/-	-/-	-/-	-/-	-/-	-/-	-/-

1. The detail section of this report displays the monthly averages, which are an arithmetic mean with the exception of E.coli, which is a geometric mean.
2. In order to calculate a geometric mean for the E.coli analysis, results of zero are first replaced with one.
3. The **Annual Average** in the summary section represents an average of every result for this facility. This is an annual geometric mean for E.coli.
4. If any result is less than the **Method Detection Limit**, then the detection limit is used in calculating the average. If all results are < MDL, then the average will also be reported as < MDL.
5. The **# Results Outside Limits** and **% Results Within Limits** represent statistics comparing individual results to the ECA limit. It does not necessarily represent non-compliance.

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Mid-Halton WWTP

Final Effluent

Sample Date Sample ID	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-01-01 | 24S-00001-01		1.5						4.7				
2024-01-03 | 24S-00003-08	66.5	1.7		22.8	0.37	0.07	6.8	6.3	1.59	2.7	0.36	0.003
2024-01-05 | 24S-00009-01		1.8						8.1				
2024-01-08 | 24S-00018-01		1.7						7.1				
2024-01-10 | 24S-00022-02	58.6	1.4		28.5	0.57	0.16	6.6	9.0	2.19	3.6	0.55	0.003
2024-01-12 | 24S-00026-01		2.3						11				
2024-01-15 | 24S-00068-01		1.4						6.7				
2024-01-17 | 24S-00074-02	57.2	1.1		27.3	0.13	0.04	6.6	7.1	0.14	1.0	0.36	<0.001
2024-01-19 | 24S-00076-01		1.2						7.1				
2024-01-22 | 24S-00114-01		2.1						6.8				
2024-01-24 | 24S-00118-02	29.3	1.5		34.2	0.23	0.09	6.6	8.9	0.22	1.1	0.49	<0.001
2024-01-26 | 24S-00122-01		1.3						8.1				
2024-01-30 | 24S-00160-01		1.2						7.1				
2024-02-01 | 24S-00166-08	49.0	2.2		31.9	0.25	0.10	6.7	8.1	0.19	1.3	0.47	<0.001
2024-02-03 | 24S-00168-01		2.8						3.3				
2024-02-05 | 24S-00217-01		3.2						5.2				
2024-02-07 | 24S-00223-02	40.0	2.1		31.1	0.11	0.11	6.5	6.4	<0.10	0.9	0.41	<0.001
2024-02-09 | 24S-00225-01		1.2						8.1				
2024-02-12 | 24S-00255-01		1.2						5.7				
2024-02-14 | 24S-00264-02	39.2	1.4		36.6	0.21	0.17	6.5	7.1	0.53	0.8	0.51	<0.001
2024-02-16 | 24S-00268-01		1.7						6.3				
2024-02-19 | 24S-00308-01		1.6						5.8				
2024-02-21 | 24S-00310-08	45.7	2.1		24.8	0.08	0.14	6.6	5.7	0.11	1.3	0.48	<0.001
2024-02-23 | 24S-00316-01		1.6						7.2				
2024-02-26 | 24S-00351-01		<1.0						6.8				
2024-02-28 | 24S-00355-08	36.8	<1.0		34.9	0.57	0.22	6.5	6.8	0.92	1.9	0.70	<0.001
2024-03-01 | 24S-00359-01		<1.0						5.6				
2024-03-04 | 24S-00391-01		<1.0						6.0				
2024-03-06 | 24S-00396-02	46.6	1.2		30.4	0.11	0.10	6.8	5.6	<0.10	0.9	0.52	<0.001
2024-03-08 | 24S-00400-01		2.9						6.8				
2024-03-11 | 24S-00432-01		1.6						7.2				
2024-03-13 | 24S-00440-02	61.6	1.3		28.8	0.16	0.04	6.8	6.0	0.19	1.0	0.45	<0.001
2024-03-15 | 24S-00443-01		1.1						7.6				

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Final Effluent

	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-03-18 | 24S-00483-01		1.4						6.8				
2024-03-20 | 24S-00485-08	78.5	1.2		24.6	0.27	0.04	6.7	7.2	0.33	1.7	0.52	<0.001
2024-03-22 | 24S-00491-01		2.0						8.0				
2024-03-25 | 24S-00536-01		2.1						7.6				
2024-03-27 | 24S-00542-08	60.0	1.8		27.9	0.17	0.11	6.7	8.0	0.26	3.0	0.72	<0.001
2024-03-29 | 24S-00561-01		1.9						6.0				
2024-04-01 | 24S-00591-01		2.9						6.8				
2024-04-03 | 24S-00597-02	48.4	2.5		31.5	0.39	0.16	6.6	8.0	0.66	2.2	0.72	<0.001
2024-04-05 | 24S-00602-01		2.6						7.2				
2024-04-08 | 24S-00625-01		2.0						6.0				
2024-04-10 | 24S-00631-02	65.8	2.0		27.4	0.14	0.20	6.7	8.0	0.11	1.6	0.69	<0.001
2024-04-12 | 24S-00635-01		2.0						6.8				
2024-04-15 | 24S-00664-01		2.1						5.6				
2024-04-17 | 24S-00670-08	69.4	1.9		28.4	0.23	0.10	6.7	5.6	0.25	1.2	0.51	<0.001
2024-04-19 | 24S-00674-01		1.1						4.4				
2024-04-22 | 24S-00727-01		2.2						6.0				
2024-04-24 | 24S-00732-08	46.3	2.1		36.3	0.14	0.11	6.6	6.4	0.12	1.5	0.52	<0.001
2024-04-26 | 24S-00739-01		1.7						6.4				
2024-04-29 | 24S-00789-01		1.9						6.0				
2024-05-01 | 24S-00814-02	51.2	2.4		29.7	0.19	0.16	6.6	6.8	0.16	0.9	0.60	<0.001
2024-05-01 | 24S-00814-03			8									
2024-05-03 | 24S-00817-01		<1.0						5.6				
2024-05-06 | 24S-00821-01		1.8						5.2				
2024-05-08 | 24S-00863-08	52.8	1.6		26.8	0.07	0.17	6.8	5.2	0.13	0.8	0.55	<0.001
2024-05-08 | 24S-00863-09			16									
2024-05-10 | 24S-00831-01		<1.0						5.6				
2024-05-13 | 24S-00865-01		1.7						6.8				
2024-05-15 | 24S-00873-02	47.4	1.5		29.6	0.12	0.20	6.7	6.4	0.28	1.0	0.59	<0.001
2024-05-15 | 24S-00873-03			12									
2024-05-17 | 24S-00875-01		1.3						5.6				
2024-05-20 | 24S-00917-01		1.1						5.2				
2024-05-22 | 24S-00921-02	55.2	1.4		27.1	0.20	0.14	6.8	4.8	0.13	1.6	0.44	<0.001
2024-05-22 | 24S-00921-03			28									

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Final Effluent

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	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-05-24 | 24S-00927-01		1.8						6.0				
2024-05-27 | 24S-00950-01		<1.0						7.2				
2024-05-29 | 24S-00956-08	75.7	1.6		21.6	0.26	0.08	7.0	4.8	<0.10	1.0	0.37	<0.001
2024-05-29 | 24S-00956-09			12									
2024-05-31 | 24S-00960-01		<1.0						4.8				
2024-06-03 | 24S-01001-01		1.4						5.6				
2024-06-05 | 24S-01008-02	37.5	1.9		33.5	0.29	0.11	6.7	6.4	0.15	0.9	0.45	<0.001
2024-06-05 | 24S-01008-03			28									
2024-06-07 | 24S-01010-01		1.6						5.2				
2024-06-10 | 24S-01040-01		2.3						6.0				
2024-06-12 | 24S-01046-02	40.5	4.1		33.8	0.30	0.09	6.7	7.2	0.18	1.0	0.48	<0.001
2024-06-12 | 24S-01046-03			18									
2024-06-14 | 24S-01050-01		1.7						7.0				
2024-06-17 | 24S-01086-01		2.7						6.4				
2024-06-19 | 24S-01092-08	29.1	1.9		30.2	0.76	0.15	6.7	8.0	0.50	1.9	0.61	0.001
2024-06-19 | 24S-01092-09			22									
2024-06-21 | 24S-01096-01		1.8						7.2				
2024-06-24 | 24S-01129-01		1.6						6.8				
2024-06-26 | 24S-01135-08	49.0	2.0		29.8	0.71	0.07	6.8	8.4	0.50	1.6	0.46	0.001
2024-06-26 | 24S-01135-09			33									
2024-06-28 | 24S-01139-01		1.0						8.0				
2024-07-01 | 24S-01168-01		1.8						6.8				
2024-07-03 | 24S-01174-08	75.8	1.7		23.5	0.78	0.11	6.8	8.4	1.07	2.6	0.47	0.003
2024-07-03 | 24S-01174-09			64									
2024-07-05 | 24S-01179-01		1.5						8.4				
2024-07-08 | 24S-01198-01		2.9						6.8				
2024-07-10 | 24S-01202-02	33.5	2.2		30.5	0.11	0.07	6.5	9.2	0.10	1.7	0.49	<0.001
2024-07-10 | 24S-01202-03			140									
2024-07-12 | 24S-01206-01		1.6						5.2				
2024-07-15 | 24S-01261-01		<1.0						4.8				
2024-07-17 | 24S-01269-02	132	2.1		11.4	0.46	0.06	7.0	10	0.60	2.1	0.35	0.002
2024-07-17 | 24S-01269-03			34									
2024-07-19 | 24S-01271-01		1.6						9.2				

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Final Effluent

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	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-07-22 | 24S-01345-01		1.2						7.6				
2024-07-24 | 24S-01349-08	78.0	<1.0		25.5	0.24	0.03	6.8	7.2	0.10	1.5	0.36	<0.001
2024-07-24 | 24S-01349-09			84									
2024-07-26 | 24S-01355-01		1.7						7.2				
2024-07-29 | 24S-01409-01		<1.0						7.2				
2024-07-31 | 24S-01415-02	47.6	<1.0		27.6	0.72	0.16	6.7	7.2	1.12	2.3	0.50	0.003
2024-07-31 | 24S-01415-03			32									
2024-08-02 | 24S-01420-01		<1.0						7.6				
2024-08-05 | 24S-01454-01		3.6						7.2				
2024-08-07 | 24S-01460-08	47.2	4.0		22.5	0.37	0.13	6.8	7.2	0.34	1.5	0.44	<0.001
2024-08-07 | 24S-01460-09			34									
2024-08-09 | 24S-01466-01		1.9						8.4				
2024-08-12 | 24S-01488-01		2.0						7.6				
2024-08-14 | 24S-01494-02	47.9	<1.0		28.5	0.50	0.15	7.1	9.2	2.91	4.4	0.61	0.016
2024-08-14 | 24S-01494-03			126									
2024-08-16 | 24S-01498-01		1.2						9.6				
2024-08-19 | 24S-01537-01		1.6						7.6				
2024-08-21 | 24S-01545-02	79.6	1.4		21.4	0.59	0.05	6.9	8.0	0.91	2.2	0.34	0.003
2024-08-21 | 24S-01545-03			72									
2024-08-23 | 24S-01547-01		1.5						9.2				
2024-08-26 | 24S-01576-01		1.2						8.4				
2024-08-28 | 24S-01582-08	41.8	1.2		28.7	0.54	0.06	6.8	8.4	0.29	1.7	0.37	<0.001
2024-08-28 | 24S-01582-09			38									
2024-08-30 | 24S-01586-01		1.4						10				
2024-09-02 | 24S-01622-01		1.3						8.8				
2024-09-04 | 24S-01628-08	53.8	1.4		22.4	0.44	0.04	6.8	8.8	0.33	1.8	0.38	<0.001
2024-09-04 | 24S-01628-09			74									
2024-09-06 | 24S-01632-01		2.1						13				
2024-09-09 | 24S-01647-01		1.8						8.4				
2024-09-11 | 24S-01653-02	46.1	1.2		24.8	0.35	<0.02	6.9	9.6	0.25	1.5	0.37	<0.001
2024-09-11 | 24S-01653-03			68									
2024-09-13 | 24S-01657-01		<1.0						8.0				
2024-09-16 | 24S-01675-01		2.0						8.8				

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Final Effluent

	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-09-18 | 24S-01682-02	40.6	1.9		29.5	0.38	0.14	6.5	7.6	0.42	1.3	0.39	<0.001
2024-09-18 | 24S-01682-03			80									
2024-09-20 | 24S-01684-01		1.6						6.4				
2024-09-23 | 24S-01707-01		1.6						8.4				
2024-09-25 | 24S-01710-08	67.8	1.2		21.4	0.29	0.11	6.9	6.8	0.14	1.3	0.45	<0.001
2024-09-25 | 24S-01710-09			60									
2024-09-27 | 24S-01716-01		1.0						6.0				
2024-09-30 | 24S-01760-01		1.8						8.4				
2024-10-02 | 24S-01769-02	59.1	2.2		27.9	0.40	0.15	6.7	8.4	0.46	1.7	0.56	0.001
2024-10-02 | 24S-01769-03			28									
2024-10-04 | 24S-01771-01		1.1						7.2				
2024-10-07 | 24S-01785-01		1.6						6.0				
2024-10-09 | 24S-01790-02	47.9	1.6		28.1	0.43	0.14	6.6	7.2	1.66	3.9	0.51	0.003
2024-10-09 | 24S-01790-03			46									
2024-10-11 | 24S-01793-01		1.4						8.4				
2024-10-14 | 24S-01822-01		2.6						6.8				
2024-10-16 | 24S-01825-08	69.8	2.6		24.7	0.42	0.09	6.8	7.6	1.44	3.0	0.42	0.004
2024-10-16 | 24S-01825-09			38									
2024-10-18 | 24S-01831-01		1.9						7.2				
2024-10-21 | 24S-01864-01		2.4						6.4				
2024-10-23 | 24S-01873-08	44.7	1.5		31.7	0.47	0.15	6.6	6.0	0.69	1.7	0.49	0.001
2024-10-23 | 24S-01873-09			16									
2024-10-25 | 24S-01875-01		1.4						6.0				
2024-10-28 | 24S-01906-01		1.8						6.4				
2024-10-30 | 24S-01912-02	48.9	1.7		30.9	0.60	0.24	6.5	7.6	2.91	2.9	0.59	0.004
2024-10-30 | 24S-01912-03			74									
2024-11-01 | 24S-01916-01		2.2						10				
2024-11-04 | 24S-01940-01		2.0						5.2				
2024-11-06 | 24S-01946-08	31.6	1.6		33.0	0.09	0.15	6.8	6.0	0.12	1.2	0.52	<0.001
2024-11-08 | 24S-01950-01		1.6						6.8				
2024-11-11 | 24S-01963-01		2.2						6.0				
2024-11-13 | 24S-01971-02	54.8	1.8		26.7	0.77	0.25	6.7	6.0	0.89	2.2	0.62	0.002
2024-11-15 | 24S-01973-01		1.3						7.6				

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Final Effluent

	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-11-18 | 24S-01994-01		1.8						6.4				
2024-11-20 | 24S-02000-02	27.2	1.9		32.9	0.28	0.25	6.4	6.8	0.20	1.7	0.64	<0.001
2024-11-22 | 24S-02004-01		1.8						5.6				
2024-11-25 | 24S-02030-01		2.1						4.0				
2024-11-27 | 24S-02036-08	47.2	1.3		29.1	0.21	0.20	6.5	6.0	<0.10	1.1	0.57	<0.001
2024-11-29 | 24S-02040-01		1.3						5.6				
2024-12-02 | 24S-02069-01		1.2						6.8				
2024-12-04 | 24S-02072-08	31.3	1.2		34.4	0.10	0.23	6.6	7.6	0.10	1.3	0.65	<0.001
2024-12-06 | 24S-02074-01		1.9						8.0				
2024-12-09 | 24S-02092-01		2.3						7.2				
2024-12-11 | 24S-02096-08	40.6	2.5		28.4	0.29	0.11	6.7	7.2	0.38	1.9	0.49	<0.001
2024-12-13 | 24S-02100-01		2.0						6.8				
2024-12-16 | 24S-02109-02	51.1	2.0		22.6	0.38	0.13	6.9	7.2	0.27	1.9	0.51	<0.001
2024-12-18 | 24S-02115-01		2.0						7.6				
2024-12-20 | 24S-02117-01		1.5						6.0				
2024-12-23 | 24S-02121-02	37.6	1.6		27.9	0.57	0.09	6.9	6.8	0.36	1.2	0.54	<0.001
2024-12-25 | 24S-02125-01		2.1						8.0				
2024-12-27 | 24S-02127-01		2.2						6.4				
2024-12-30 | 24S-02131-02	71.2	3.0		23.2	0.87	0.19	6.8	7.8	0.69	2.4	0.63	0.001
Average	52.7	1.7	37	28.1	0.35	0.13	6.7	7.0	0.55	1.7	0.51	0.002
Minimum	27.2	<1.0	8	11.4	0.07	<0.02	6.4	3.3	<0.10	0.8	0.34	<0.001
Maximum	132	4.1	140	36.6	0.87	0.25	7.1	13	2.91	4.4	0.72	0.016
Count	53	157	27	53	53	53	53	157	53	53	53	53

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Raw Sewage

Sample Date Sample ID	Alkalinity	Ortho - Phosphates	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
2024-01-03 | 24S-00003-01	284	2.17	250	28.0	220	53.8	5.72
2024-01-10 | 24S-00022-01	247	1.29	170	23.5	140	41.1	3.73
2024-01-17 | 24S-00074-01	289	1.97	180	27.3	190	47.0	4.59
2024-01-24 | 24S-00118-01	291	2.26	200	34.2	230	55.9	5.14
2024-01-31 | 24S-00166-01	264	1.57	190	26.7	180	45.9	3.94
2024-02-07 | 24S-00223-01	315	2.12	210	32.1	200	55.2	5.12
2024-02-14 | 24S-00264-01	303	2.39	280	31.9	220	55.7	5.39
2024-02-21 | 24S-00310-01	301	2.51	220	37.3	210	56.0	5.78
2024-02-28 | 24S-00355-01	287	2.26	240	33.5	180	54.8	4.95
2024-03-06 | 24S-00396-01	280	2.23	250	32.1	200	53.0	5.40
2024-03-13 | 24S-00440-01	275	2.03	180	29.7	180	50.6	5.19
2024-03-20 | 24S-00485-01	259	2.09	230	28.2	210	46.8	5.14
2024-03-27 | 24S-00542-01	276	2.20	240	30.7	210	51.3	5.22
2024-04-03 | 24S-00597-01	288	2.30	240	32.6	210	54.5	5.13
2024-04-10 | 24S-00631-01	286	2.13	190	27.8	180	43.8	4.50
2024-04-17 | 24S-00670-01	268	1.97	190	25.0	190	43.5	4.60
2024-04-24 | 24S-00732-01	299	2.14	140	28.8	180	41.0	4.48
2024-05-01 | 24S-00814-01	276	2.22	280	26.7	270	64.6	5.28
2024-05-08 | 24S-00863-01	292	2.54	230	33.4	220	46.3	5.33
2024-05-15 | 24S-00873-01	319	3.06	300	40.4	250	65.7	6.34
2024-05-22 | 24S-00921-01	307	2.46	310	35.4	220	64.2	5.75
2024-05-29 | 24S-00956-01	238	1.53	160	24.2	170	43.3	3.76
2024-06-05 | 24S-01008-01	269	2.38	240	32.4	210	47.1	5.56
2024-06-12 | 24S-01046-01	267	2.45	240	33.1	240	48.2	5.37
2024-06-19 | 24S-01092-01	277	2.63	320	34.4	260	56.5	6.44
2024-06-26 | 24S-01135-01	318	2.30	230	29.2	210	55.8	5.33
2024-07-03 | 24S-01174-01	259	2.37	240	30.2	220	51.1	5.44
2024-07-10 | 24S-01202-01	283	2.49	260	31.4	240	53.1	5.75
2024-07-17 | 24S-01269-01	214	0.61	100	6.84	63	16.4	1.89
2024-07-24 | 24S-01349-01	293	1.71	170	27.8	160	42.0	3.39
2024-07-31 | 24S-01415-01	281	2.36	240	30.5	200	57.7	5.57
2024-08-07 | 24S-01460-01	304	2.69	230	35.9	240	56.4	6.25
2024-08-14 | 24S-01494-01	277	2.73	240	35.3	220	58.2	5.90

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Raw Sewage

	Alkalinity	Ortho - Phosphates	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
2024-08-21 | 24S-01545-01	271	1.91	270	28.4	200	47.7	4.76
2024-08-28 | 24S-01582-01	268	2.37	300	27.0	220	50.2	5.92
2024-09-04 | 24S-01628-01	284	2.54	280	31.3	430	55.4	6.10
2024-09-11 | 24S-01653-01	270	2.48	310	33.9	230	55.4	5.85
2024-09-18 | 24S-01682-01	281	2.62	140	36.9	190	53.8	5.61
2024-09-25 | 24S-01710-01	239	1.58	160	23.0	150	37.2	3.59
2024-10-02 | 24S-01769-01	279	2.38	240	32.5	230	55.1	5.66
2024-10-09 | 24S-01790-01	273	2.28	220	36.2	230	55.7	5.65
2024-10-16 | 24S-01825-01	279	2.53	260	36.0	240	62.3	5.92
2024-10-23 | 24S-01873-01	319	2.71	310	35.9	250	64.7	6.23
2024-10-30 | 24S-01912-01	289	2.36	220	33.3	200	47.7	5.31
2024-11-06 | 24S-01946-01	294	2.66	250	36.7	210	52.6	5.56
2024-11-13 | 24S-01971-01	314	2.49	220	32.3	220	55.5	5.41
2024-11-20 | 24S-02000-01	273	2.52	220	36.6	210	53.8	6.03
2024-11-27 | 24S-02036-01	284	2.15	210	33.0	220	50.9	4.87
2024-12-04 | 24S-02072-01	295	2.64	350	34.8	260	64.5	6.31
2024-12-11 | 24S-02096-01	260	1.95	230	31.4	240	53.5	5.09
2024-12-16 | 24S-02109-01	272	2.29	260	31.8	210	57.0	5.20
2024-12-23 | 24S-02121-01	258	2.44	330	32.0	280	54.3	5.69
2024-12-30 | 24S-02131-01	218	1.36	210	19.2	140	31.0	3.39
Average	279	2.23	230	30.9	210	51.6	5.20
Minimum	214	0.61	100	6.84	63	16.4	1.89
Maximum	319	3.06	350	40.4	430	65.7	6.44
Count	53	53	53	53	53	53	53

2024 OAKVILLE SOUTHEAST WASTEWATER TREATMENT PLANT
FLOW AND LOADING

		January	February	March	April	May	June	July	August	September	October	November	December	Total	Maximum	Average	Objective	Limits
EFFLUENT FLOW																		
Total Effluent Flow	10^3m^3	559.863	448.864	527.135	668.805	516.268	514.356	666.784	452.287	426.569	425.354	387.547	464.575	6,058.234				
Average Daily Flow[1]	10^3m^3	18.060	15.478	17.004	22.293	16.654	17.145	21.509	14.590	14.219	13.721	12.918	14.986			16.548		31.8
Maximum Daily Flow	10^3m^3	30.973	20.237	25.615	44.306	24.285	29.460	58.134	17.067	23.184	24.493	16.549	27.615		58.134			
Minimum Daily Flow	10^3m^3	13.753	13.194	14.112	15.063	13.674	13.714	13.543	13.062	12.158	11.278	11.256	12.112					
# of Days w/ Flow >90% of Design	#	1	0	0	4	0	1	5	0	0	0	0	0	11				
INFLUENT LOADING																		
BOD_5	mg/L	230	100	79	140	220	300	210	270	320	300	320	270			229.9		
BOD_5 Loading	kg/day	4,153.80	1,547.80	1,343.32	3,121.02	3,663.88	5,143.50	4,516.89	3,939.30	4,550.08	4,116.30	4,133.76	4,046.22			3,689.7		
Total Suspended Solids	mg/L	150	110	91	100	330	460	320	330	360	410	450	420			294.3		
TSS Loading	kg/day	2,709.00	1,702.58	1,547.36	2,229.30	5,495.82	7,886.70	6,882.88	4,814.70	5,118.84	5,625.61	5,813.10	6,294.12			4,676.7		
Total Kjeldahl Nitrogen	mg/L	31.1	27.3	29.2	34.5	42.4	43.2	37.3	41.2	41.9	52.2	55.3	48.1			40.3		
TKN Loading	kg/day	561.67	422.55	496.52	769.11	706.13	740.66	802.29	601.11	595.78	716.24	714.37	720.83			653.9		
Total Phosphorus	mg/L	3.83	2.94	3.01	4.82	5.54	6.01	4.75	5.50	5.66	6.89	6.80	6.32			5.17		
TP Loading	kg/day	69.17	45.51	51.18	107.45	92.26	103.04	102.17	80.25	80.48	94.54	87.84	94.71			84.05		
FINAL EFFLUENT LOADING																		
$CBOD_5$	mg/L	5.0	4.6	6.1	3.9	4.0	5.2	4.9	2.1	3.4	8.6	7.3	4.5			5.0	15.0	25.0
$CBOD_5$ Loading	kg/day	90.30	71.20	103.72	86.94	66.62	89.15	105.39	30.64	48.34	118.00	94.30	67.44			81.0		
Total Suspended Solids	mg/L	9.2	9.7	9.8	3.7	9.3	9.9	8.6	6.2	6.6	13.0	9.2	6.8			8.5	15.0	25.0
TSS Loading	kg/day	166.15	150.14	166.64	82.48	154.88	169.74	184.98	90.46	93.85	178.37	118.85	101.90			138.2		
Total Ammonia Nitrogen	mg/L	2.630	1.710	2.270	1.950	0.250	0.680	0.610	0.130	0.230	0.360	0.190	0.990			1.000		
NH_3-N Loading	kg/day	47.498	26.467	38.599	43.471	4.164	11.659	13.120	1.897	3.270	4.940	2.454	14.836			17.698		
Total Phosphorus	mg/L	0.41	0.48	0.50	0.38	0.47	0.51	0.43	0.42	0.55	0.71	0.49	0.45			0.48	0.8	1.0
TP Loading	kg/day	7.40	7.43	8.50	8.47	7.83	8.74	9.25	6.13	7.82	9.74	6.33	6.74			7.87		31.8

[1] *"average daily flow "*means the total sewage flow to the sewage works during the periods of operation upon which the report is based, divided by the number of days during the same period of time.
*The calculated yearly average loadings in some instances may not correspond to the data reporting in the Regional Laboratory summary. This discrepancy is due to rounding.

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Wastewater Analysis, Monthly Averages

S.E.Oakville WWTP, 2024

Final Effluent

Sample Date (Month)	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
January 2024	121	5.0		16.4	0.63	0.10	6.9	9.2	2.63	4.5	0.41	0.004
February 2024	98.9	4.6		18.8	0.75	0.12	7.1	9.7	1.71	3.3	0.48	0.006
March 2024	126	6.1		16.3	1.17	0.10	7.4	9.8	2.27	4.2	0.50	0.019
April 2024	145	3.9		15.9	1.19	0.15	7.1	3.7	1.95	3.7	0.38	0.007
May 2024	109	4.0	65	24.9	0.39	0.12	7.1	9.3	0.25	2.1	0.47	0.001
June 2024	94.6	5.2	38	20.2	0.35	0.13	7.2	9.9	0.68	2.1	0.51	0.006
July 2024	137	4.9	25	12.1	0.49	0.19	6.7	8.6	0.61	2.5	0.43	0.003
August 2024	96.1	2.1	49	18.7	0.23	0.21	7.0	6.2	0.13	2.0	0.42	0.001
September 2024	76.0	3.4	94	20.6	0.42	0.21	7.2	6.6	0.23	1.9	0.55	0.002
October 2024	63.9	8.6	97	24.5	0.44	0.26	7.1	13	0.36	3.3	0.71	0.002
November 2024	59.6	7.3		25.7	0.47	0.14	6.8	9.2	0.19	2.5	0.49	<0.001
December 2024	64.5	4.5		23.0	0.65	0.12	6.9	6.8	0.99	2.5	0.45	0.003
Annual Average	99.9	5.0	54	19.3	0.60	0.15	7.0	8.5	1.01	2.9	0.48	0.004
Annual Minimum	36.5	1.2	4	4.17	0.07	0.03	6.2	<1.0	<0.10	1.5	0.24	<0.001
Annual Maximum	182	15	400	34.3	1.80	0.42	7.8	20	5.55	8.4	0.87	0.039
Annual Count	53	56	26	55	55	53	56	56	56	55	56	56
# Results Outside Limits	0	0	4	0	0	0	0	0	0	0	0	0
Month Average	99.3	5.0	61	19.8	0.60	0.15	7.0	8.5	1.00	2.9	0.48	0.005
% Results Within Limits	100	100	85	100	100	100	100	100	100	100	100	100
Limit	-/-	-/25	-/200	-/-	-/-	-/-	6.0/9.5	-/25	-/-	-/-	-/1	-/-

1. The detail section of this report displays the monthly averages, which are an arithmetic mean with the exception of E.coli, which is a geometric mean.
2. In order to calculate a geometric mean for the E.coli analysis, results of zero are first replaced with one.
3. The **Annual Average** in the summary section represents an average of every result for this facility. This is an annual geometric mean for E.coli.
4. If any result is less than the **Method Detection Limit**, then the detection limit is used in calculating the average. If all results are < MDL, then the average will also be reported as < MDL.
5. The **# Results Outside Limits** and **% Results Within Limits** represent statistics comparing individual results to the ECA limit. It does not necessarily represent non-compliance.

Regional Municipality of Halton
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Halton Regional Laboratory

Wastewater Analysis, Monthly Averages

S.E.Oakville WWTP, 2024

Raw Sewage

Sample Date (Month)	Alkalinity	Ortho - Phosphates	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
January 2024	260	1.68	150	16.1	230	31.1	3.83
February 2024	259	1.24	110	17.0	100	27.3	2.94
March 2024	265	1.33	91	18.2	79	29.2	3.01
April 2024	320	2.47	100	16.2	140	34.5	4.82
May 2024	313	2.05	330	21.4	220	42.4	5.54
June 2024	264	1.96	460	20.3	300	43.2	6.01
July 2024	293	1.64	320	15.7	210	37.3	4.75
August 2024	282	2.20	330	19.2	270	41.2	5.50
September 2024	259	2.00	360	21.6	320	41.9	5.66
October 2024	295	2.34	410	27.7	300	52.2	6.89
November 2024	278	2.32	450	28.9	320	55.3	6.80
December 2024	276	2.49	420	25.0	270	48.1	6.32
Annual Average	281	1.99	290	20.6	230	40.3	5.17
Annual Minimum	196	0.17	40	6.55	52	14.0	1.15
Annual Maximum	384	3.76	670	33.3	500	65.9	8.27
Annual Count	52	52	52	52	52	52	52
# Results Outside Limits	0	0	0	0	0	0	0
Month Average	280	1.98	290	20.6	230	40.3	5.17
% Results Within Limits	100	100	100	100	100	100	100
Limit	-/-	-/-	-/-	-/-	-/-	-/-	-/-

1. The detail section of this report displays the monthly averages, which are an arithmetic mean with the exception of E.coli, which is a geometric mean.
2. In order to calculate a geometric mean for the E.coli analysis, results of zero are first replaced with one.
3. The **Annual Average** in the summary section represents an average of every result for this facility. This is an annual geometric mean for E.coli.
4. If any result is less than the **Method Detection Limit**, then the detection limit is used in calculating the average. If all results are < MDL, then the average will also be reported as < MDL.
5. The **# Results Outside Limits** and **% Results Within Limits** represent statistics comparing individual results to the ECA limit. It does not necessarily represent non-compliance.

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S.E.Oakville WWTP

Final Effluent

Sample Date Sample ID	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-01-03 | 24S-00005-02	93.3	1.8		23.1	0.11	0.04	7.3	6.0	<0.10	1.5	0.24	<0.001
2024-01-10 | 24S-00024-04	94.0	6.1		17.1	0.69	0.23	6.8	12	2.26	4.2	0.62	0.003
2024-01-16 | 24S-00070-02	141	5.6		15.6	0.75	0.07	6.9	9.0	2.00	3.1	0.37	0.003
2024-01-25 | 24S-00120-02	137	6.8		13.2	0.90	0.11	6.7	10	5.55	8.4	0.50	0.007
2024-01-30 | 24S-00162-04	141	4.5		12.8	0.71	0.05	6.7	9.2	3.25	5.4	0.33	0.004
2024-02-06 | 24S-00221-02	131	6.6		16.4	0.83	0.18	7.2	11	3.29	4.5	0.57	0.012
2024-02-13 | 24S-00259-04	108	4.6		19.2	0.84	0.12	7.1	9.5	1.55	3.8	0.52	0.005
2024-02-21 | 24S-00312-02	73.2	4.3		22.4	0.70	0.14	7.0	8.4	1.16	2.5	0.53	0.003
2024-02-29 | 24S-00357-04	83.4	3.0		17.2	0.62	0.03	7.0	10	0.83	2.3	0.29	0.002
2024-03-06 | 24S-00398-02	119	6.0		15.9	1.80	0.12	7.4	8.8	3.86	6.2	0.50	0.024
2024-03-12 | 24S-00436-04	145	7.7		14.0	1.54	0.05	7.8	10	2.90	5.0	0.40	0.039
2024-03-20 | 24S-00487-04	128	3.3		16.8	0.65	0.12	6.9	8.4	1.04	2.7	0.50	0.002
2024-03-26 | 24S-00540-02	110	7.5		18.5	0.70	0.11	7.5	12	1.26	2.8	0.58	0.009
2024-04-03 | 24S-00599-02	117	3.2		20.2	1.03	0.21	7.3	3.6	2.06	3.5	0.48	0.010
2024-04-10 | 24S-00633-04	150	3.7		14.8	1.18	0.10	6.9	4.0	1.97	3.5	0.28	0.004
2024-04-18 | 24S-00672-02	172	5.4		11.7	1.67	0.05	7.1	3.6	3.04	5.0	0.26	0.009
2024-04-24 | 24S-00734-02	149	3.2		17.0	0.91	0.16	7.2	2.8	1.06	2.3	0.35	0.004
2024-04-30 | 24S-00794-04	135	3.9		15.6	1.15	0.23	7.1	4.4	1.63	4.1	0.51	0.006
2024-05-08 | 24S-00829-04	107	4.1		20.9	0.25	0.14	7.3	12	0.34	2.0	0.54	0.002
2024-05-08 | 24S-00829-11			98									
2024-05-14 | 24S-00869-02	114	4.2		20.6	0.34	0.12	7.0	8.0	0.35	2.3	0.45	0.001
2024-05-14 | 24S-00869-03			214*									
2024-05-22 | 24S-00923-02	87.5	3.6		23.7	0.36	0.16	7.0	9.6	0.15	2.3	0.53	<0.001
2024-05-22 | 24S-00923-03			16									
2024-05-29 | 24S-00958-04	126	3.9		34.3	0.59	0.05	6.9	7.6	0.16	1.9	0.35	<0.001
2024-05-29 | 24S-00958-11			52									
2024-06-04 | 24S-01004-02	48.8	5.3		21.5	0.39	0.14	7.2	14	0.25	2.6	0.71	0.001
2024-06-04 | 24S-01004-03			14									
2024-06-12 | 24S-01048-04	93.8	5.7		22.0	0.09	0.10	6.9	8.4	<0.10	2.0	0.49	<0.001
2024-06-12 | 24S-01048-11			400*									
2024-06-19 | 24S-01094-02	85.7	2.7		22.1	0.19	0.21	7.3	8.4	<0.10	1.6	0.51	<0.001
2024-06-19 | 24S-01094-03			16									
2024-06-24 | 24S-01156-01		8.5					7.4	11	2.57		0.49	0.022

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Final Effluent

	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-06-25 | 24S-01133-04	150	3.8		15.0	0.71	0.08	7.4	7.6	0.36	2.2	0.37	0.003
2024-06-25 | 24S-01133-11			24									
2024-07-04 | 24S-01176-02	116	2.1		19.5	0.07	0.33	6.3	3.2	<0.10	1.5	0.51	<0.001
2024-07-04 | 24S-01176-03			4									
2024-07-10 | 24S-01204-04	94.7	2.8		18.9	0.18	0.16	6.9	5.2	0.14	1.9	0.39	<0.001
2024-07-10 | 24S-01204-11			18									
2024-07-16 | 24S-01336-01		<10		4.17	1.05		7.1	17	1.90	4.5	0.50	0.009
2024-07-16 | 24S-01336-02		<10		4.33	0.99		7.0	14	1.31	3.7	0.42	0.006
2024-07-17 | 24S-01263-02	182	6.1		5.10	0.75	0.04	6.2	9.6	0.33	2.1	0.30	<0.001
2024-07-17 | 24S-01263-03			184									
2024-07-24 | 24S-01351-02	171	1.7		12.9	0.21	0.15	6.7	5.6	0.25	2.0	0.38	<0.001
2024-07-24 | 24S-01351-03			28									
2024-07-30 | 24S-01413-04	120	1.4		19.8	0.19	0.27	6.7	5.6	0.26	2.1	0.48	<0.001
2024-07-30 | 24S-01413-11			24									
2024-08-07 | 24S-01462-02	95.6	3.7		19.4	0.21	0.34	6.8	12	0.15	2.5	0.66	<0.001
2024-08-07 | 24S-01462-03			54									
2024-08-14 | 24S-01496-04	74.9	2.0		19.1	0.29	0.04	6.6	6.8	0.14	1.9	0.27	<0.001
2024-08-14 | 24S-01496-11			116									
2024-08-20 | 24S-01541-04	118	1.2		16.8	0.23	0.22	7.8	2.8	0.11	1.7	0.39	0.002
2024-08-20 | 24S-01541-11			66									
2024-08-28 | 24S-01584-02	96.0	1.6		19.4	0.18	0.22	6.8	3.2	<0.10	1.7	0.37	<0.001
2024-08-28 | 24S-01584-03			14									
2024-09-05 | 24S-01630-02	73.6	3.1		23.3	0.26	0.42	7.2	4.4	0.13	1.5	0.67	<0.001
2024-09-05 | 24S-01630-03			42									
2024-09-11 | 24S-01655-04	77.1	3.6		19.6	0.47	0.16	7.3	6.4	0.19	1.9	0.55	0.001
2024-09-11 | 24S-01655-11			180									
2024-09-17 | 24S-01678-04	54.8	3.3		23.8	0.41	0.12	7.0	7.6	0.18	2.0	0.50	<0.001
2024-09-17 | 24S-01678-11			48									
2024-09-25 | 24S-01712-02	98.5	3.5		15.8	0.53	0.13	7.4	8.0	0.40	2.2	0.48	0.005
2024-09-25 | 24S-01712-03			218*									
2024-10-01 | 24S-01764-02	94.0	3.9		21.6	0.37	0.30	7.3	7.2	0.20	1.9	0.64	0.002
2024-10-01 | 24S-01764-03			178									
2024-10-09 | 24S-01792-04	76.6	15		22.8	0.23	0.28	7.0	7.6	0.13	2.9	0.61	<0.001

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Final Effluent

	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-10-09 | 24S-01792-11			60									
2024-10-16 | 24S-01827-02	44.7	7.9		28.8	0.24	0.25	7.0	20	0.22	3.1	0.80	<0.001
2024-10-16 | 24S-01827-03			72									
2024-10-22 | 24S-01871-04	64.0	8.4		25.1	0.55	0.39	7.1	12	0.15	3.4	0.87	<0.001
2024-10-22 | 24S-01871-11			212*									
2024-10-30 | 24S-01914-02	40.4	7.6		24.4	0.82	0.09	7.1	20	1.08	5.0	0.62	0.005
2024-10-30 | 24S-01914-03			54									
2024-11-06 | 24S-01948-02	82.1	11		27.0	0.32	0.14	7.1	14	<0.10	3.6	0.61	<0.001
2024-11-12 | 24S-01967-04	58.8	4.6		23.5	0.72	0.15	6.7	11	0.19	1.9	0.54	<0.001
2024-11-20 | 24S-02002-04	36.5	9.7		28.5	0.41	0.12	6.6	8.0	0.30	2.7	0.47	<0.001
2024-11-26 | 24S-02034-02	60.8	4.0		23.9	0.43	0.15	6.9	3.6	0.16	1.8	0.34	<0.001
2024-12-03 | 24S-02063-04	55.6	3.8		27.2	0.40	0.24	6.7	4.8	0.18	2.3	0.54	<0.001
2024-12-11 | 24S-02098-04	66.9	4.3		22.0	0.89	0.13	6.7	6.4	1.37	2.2	0.39	0.002
2024-12-17 | 24S-02113-02	50.5	4.5		25.1	0.69	0.12	6.6	12	0.30	2.3	0.51	<0.001
2024-12-23 | 24S-02123-02	54.3	3.7		24.9	0.53	0.05	7.2	10	0.59	1.6	0.40	<0.001
2024-12-30 | 24S-02133-02	95.4	6.1		15.9	0.72	0.06	7.3	<1.0	2.53	4.3	0.39	0.012
Average	99.9	5.0	54	19.3	0.60	0.15	7.0	8.5	1.01	2.9	0.48	0.004
Minimum	36.5	1.2	4	4.17	0.07	0.03	6.2	<1.0	<0.10	1.5	0.24	<0.001
Maximum	182	15	400	34.3	1.80	0.42	7.8	20	5.55	8.4	0.87	0.039
Count	53	56	26	55	55	53	56	56	56	55	56	56

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Wastewater Performance Summary

2024

S.E.Oakville WWTP

Raw Sewage

Sample Date Sample ID	Alkalinity	Ortho - Phosphates	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
2024-01-03 | 24S-00005-01	298	3.49	310	19.9	500	45.5	6.80
2024-01-10 | 24S-00024-01	266	2.14	180	18.4	260	37.1	4.53
2024-01-16 | 24S-00070-01	298	1.48	91	17.6	160	30.3	3.87
2024-01-25 | 24S-00120-01	196	0.17	50	7.70	110	14.0	1.15
2024-01-30 | 24S-00162-01	243	1.11	120	16.9	130	28.5	2.80
2024-02-06 | 24S-00221-01	265	2.01	110	20.9	150	35.0	4.06
2024-02-13 | 24S-00259-01	287	0.90	140	13.3	78	26.1	2.65
2024-02-21 | 24S-00312-01	256	0.84	88	17.5	71	21.5	1.97
2024-02-29 | 24S-00357-01	226	1.20	110	16.2	100	26.7	3.06
2024-03-06 | 24S-00398-01	258	1.78	110	21.5	100	33.9	3.84
2024-03-12 | 24S-00436-01	250	0.37	40	10.1	52	15.4	1.41
2024-03-20 | 24S-00487-01	293	1.54	94	19.8	88	33.2	3.45
2024-03-26 | 24S-00540-01	258	1.62	120	21.3	77	34.4	3.35
2024-04-03 | 24S-00599-01	305	1.90	60	23.3	130	34.8	4.03
2024-04-10 | 24S-00633-01	359	3.76	91	17.7	81	34.9	6.07
2024-04-18 | 24S-00672-01	384	2.48	73	8.18	310	27.1	5.61
2024-04-24 | 24S-00734-01	257	1.26	83	14.4	70	23.2	2.47
2024-04-30 | 24S-00794-01	295	2.97	200	17.2	91	52.6	5.93
2024-05-08 | 24S-00829-01	271	1.83	460	20.5	230	39.3	5.47
2024-05-14 | 24S-00869-01	333	3.32	340	25.8	290	51.4	7.05
2024-05-22 | 24S-00923-01	313	2.16	240	23.2	160	43.7	5.32
2024-05-29 | 24S-00958-01	333	0.87	270	16.2	180	35.3	4.31
2024-06-04 | 24S-01004-01	234	1.33	340	19.3	230	37.6	4.54
2024-06-12 | 24S-01048-01	273	1.64	430	19.8	320	38.2	5.37
2024-06-19 | 24S-01094-01	286	2.92	610	21.7	360	53.8	8.13
2024-07-04 | 24S-01176-01	290	2.26	240	17.7	190	43.2	5.11
2024-07-10 | 24S-01204-01	298	2.14	340	20.2	270	42.2	5.65
2024-07-16 | 24S-01263-01	256	0.79	210	6.55	120	18.3	2.61
2024-07-24 | 24S-01351-01	309	1.14	360	15.8	190	36.7	4.40
2024-07-30 | 24S-01413-01	310	1.87	450	18.1	300	46.2	6.00
2024-08-07 | 24S-01462-01	273	1.52	320	20.0	230	43.3	5.22
2024-08-14 | 24S-01496-01	291	2.74	630	18.2	450	46.3	6.24
2024-08-20 | 24S-01541-01	273	1.72	230	17.7	220	37.5	5.00

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Raw Sewage

	Alkalinity	Ortho - Phosphates	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
2024-08-28 | 24S-01584-01	289	2.83	130	20.9	190	37.8	5.52
2024-09-05 | 24S-01630-01	270	1.64	350	19.8	430	36.4	4.88
2024-09-11 | 24S-01655-01	253	2.06	360	21.4	270	46.0	6.75
2024-09-17 | 24S-01678-01	281	2.35	400	27.7	370	51.2	5.90
2024-09-25 | 24S-01712-01	232	1.95	310	17.6	210	34.1	5.11
2024-10-01 | 24S-01764-01	282	1.72	300	21.6	210	41.6	4.96
2024-10-09 | 24S-01792-01	289	2.26	530	28.9	400	53.5	7.93
2024-10-16 | 24S-01827-01	315	2.51	510	30.7	350	65.9	8.24
2024-10-22 | 24S-01871-01	306	2.42	470	27.5	340	47.5	7.62
2024-10-30 | 24S-01914-01	285	2.78	240	29.7	220	52.4	5.72
2024-11-06 | 24S-01948-01	294	2.59	540	30.7	330	57.3	7.17
2024-11-12 | 24S-01967-01	289	1.85	430	25.1	360	51.7	6.00
2024-11-20 | 24S-02002-01	257	3.01	460	33.3	340	60.8	7.45
2024-11-26 | 24S-02034-01	270	1.82	360	26.3	230	51.3	6.57
2024-12-03 | 24S-02063-01	333	3.76	220	33.1	180	52.3	6.84
2024-12-11 | 24S-02098-01	265	2.69	96	27.2	150	41.2	4.88
2024-12-17 | 24S-02113-01	267	2.20	510	23.5	280	51.4	6.79
2024-12-23 | 24S-02123-01	276	2.16	670	26.6	400	51.6	4.82
2024-12-30 | 24S-02133-01	238	1.66	610	14.4	330	44.0	8.27
Average	281	1.99	290	20.6	230	40.3	5.17
Minimum	196	0.17	40	6.55	52	14.0	1.15
Maximum	384	3.76	670	33.3	500	65.9	8.27
Count	52	52	52	52	52	52	52

2024 OAKVILLE SOUTHWEST WASTEWATER TREATMENT PLANT
FLOW AND LOADING

		January	February	March	April	May	June	July	August	September	October	November	December	Total	Maximum	Average	Objective	Limits
EFFLUENT FLOW																		
Total Effluent Flow	10^3m^3	882.552	612.517	775.999	1,073.086	688.740	687.063	1,047.995	605.961	604.714	576.870	594.192	674.994	8,824.683				
Average Daily Flow[1]	10^3m^3	28.469	21.121	25.032	35.770	22.217	22.902	33.806	19.547	20.157	18.609	19.806	21.774			24.101		45.4
Maximum Daily Flow	10^3m^3	65.189	35.899	49.423	94.569	40.259	37.711	106.048	29.932	49.148	25.407	28.359	52.745		106.048			
Minimum Daily Flow	10^3m^3	18.419	17.783	19.720	19.835	17.880	18.041	17.879	13.256	15.955	15.789	16.841	15.920					
# of Days w/ Flow >90% of Design	#	3	0	1	8	0	0	8	0	2	0	0	2	24				
INFLUENT LOADING																		
BOD_5	mg/L	120	140	170	140	160	230	120	160	150	180	170	180			160.0		
BOD_5 Loading	kg/day	3,416.28	2,956.94	4,255.44	5,007.80	3,554.72	5,267.46	4,056.72	3,127.52	3,023.55	3,349.62	3,367.02	3,919.32			3,775.2		
Total Suspended Solids	mg/L	160	160	190	160	210	210	180	240	200	220	210	250			199.2		
TSS Loading	kg/day	4,555.04	3,379.36	4,756.08	5,723.20	4,665.57	4,809.42	6,085.08	4,691.28	4,031.40	4,093.98	4,159.26	5,443.50			4,699.4		
Total Kjeldahl Nitrogen	mg/L	25.0	30.3	38.3	26.6	32.9	35.3	29.1	39.2	38.5	37.3	30.9	34.0			33.1		
TKN Loading	kg/day	711.73	639.97	958.73	951.48	730.94	808.44	983.75	766.24	776.04	694.12	612.01	740.32			781.1		
Total Phosphorus	mg/L	2.87	3.79	3.69	3.30	3.77	4.11	3.19	4.74	4.13	4.56	4.09	4.03			3.86		
TP Loading	kg/day	81.71	80.05	92.37	118.04	83.76	94.13	107.84	92.65	83.25	84.86	81.01	87.75			90.62		
FINAL EFFLUENT LOADING																		
$CBOD_5$	mg/L	2.7	2.6	2.5	3.1	1.4	2.5	1.7	3.1	1.5	1.6	2.7	3.3			2.4	15	25
$CBOD_5$ Loading	kg/day	76.87	54.91	62.58	110.89	31.10	57.26	57.47	60.60	30.24	29.77	53.48	71.85			58.1		
Total Suspended Solids	mg/L	6.7	5.1	5.1	6.0	4.8	8.6	8.4	7.1	6.4	7.4	6.9	6.5			6.6	15	25
TSS Loading	kg/day	190.74	107.72	127.66	214.62	106.64	196.96	283.97	138.78	129.00	137.71	136.66	141.53			159.3		
Total Ammonia Nitrogen	mg/L	0.60	0.33	0.21	0.14	0.10	0.10	0.13	0.11	0.18	0.21	0.18	0.45			0.23	6, 10 [2]	10, 20 [2]
NH_3N Loading	kg/day	17.08	6.97	5.26	5.01	2.22	2.29	4.39	2.15	3.63	3.91	3.57	9.80			5.52		
Total Phosphorus	mg/L	0.33	0.41	0.28	0.29	0.42	0.41	0.28	0.47	0.46	0.46	0.49	0.34			0.39	0.6	0.8
TP Loading	kg/day	9.39	8.66	7.01	10.37	9.33	9.39	9.47	9.19	9.27	8.56	9.70	7.40			8.98	27.2	27.2

[1] *"average daily flow "*means the total sewage flow to the sewage works during the periods of operation upon which the report is based, divided by the number of days during the same period of time.

[2]: Seasonal Total Ammonia Nitrogen concentration criteria. May - November, December - April

*The calculated yearly average loadings in some instances may not correspond to the data reporting in the Regional Laboratory summary. This discrepancy is due to rounding.

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Wastewater Analysis, Monthly Averages

S.W.Oakville WWTP, 2024

Final Effluent

Sample Date (Month)	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
January 2024	122	2.7		16.3	0.31	0.11	7.1	6.7	0.60	1.6	0.33	0.002
February 2024	102	2.6		18.5	0.28	0.21	7.1	5.1	0.33	1.6	0.41	0.002
March 2024	114	2.5		19.5	0.26	0.12	7.1	5.1	0.21	1.7	0.28	<0.001
April 2024	148	3.1		16.9	0.14	0.14	7.3	6.0	0.14	1.4	0.29	0.001
May 2024	115	1.4	23	19.1	0.06	0.28	7.6	4.8	<0.10	1.2	0.42	<0.001
June 2024	105	2.5	43	20.5	0.07	0.23	7.5	8.6	<0.10	1.5	0.41	<0.001
July 2024	142	1.7	48	14.9	0.05	0.13	7.6	8.4	0.13	1.5	0.28	0.002
August 2024	110	3.1	27	18.7	0.08	0.29	7.4	7.1	0.11	1.6	0.47	0.001
September 2024	97.8	1.5	27	19.3	0.07	0.28	7.0	6.4	0.18	1.4	0.46	0.002
October 2024	82.4	1.6	31	21.7	0.07	0.27	7.0	7.4	0.21	1.5	0.46	0.001
November 2024	70.6	2.7		21.4	0.02	0.29	7.3	6.9	0.18	1.4	0.49	0.002
December 2024	95.7	3.3		20.0	0.07	0.15	7.4	6.5	0.45	1.6	0.34	0.004
Annual Average	110	2.4	32	18.8	0.12	0.20	7.3	6.6	0.23	1.5	0.38	0.002
Annual Minimum	51.3	<1.0	8	6.60	<0.01	0.03	6.6	2.0	<0.10	1.0	0.17	<0.001
Annual Maximum	181	8.3	292	25.2	0.59	0.43	7.8	15	1.83	3.6	0.65	0.017
Annual Count	54	54	26	54	54	54	54	54	54	54	54	54
# Results Outside Limits	0	0	2	0	0	0	0	0	0	0	0	0
Month Average	109	2.4	33	18.9	0.12	0.21	7.3	6.6	0.23	1.5	0.39	0.002
% Results Within Limits	100	100	92	100	100	100	100	100	100	100	100	100
Limit	-/-	-/25	-/200	-/-	-/-	-/-	6.0/9.5	-/25	-/10	-/-	-/0.8	-/-

* Ammonia Nitrogen Limits are 10 (May - Nov) and 20 (Dec - Apr)

1. The detail section of this report displays the monthly averages, which are an arithmetic mean with the exception of E.coli, which is a geometric mean.
2. In order to calculate a geometric mean for the E.coli analysis, results of zero are first replaced with one.
3. The **Annual Average** in the summary section represents an average of every result for this facility. This is an annual geometric mean for E.coli.
4. If any result is less than the **Method Detection Limit**, then the detection limit is used in calculating the average. If all results are < MDL, then the average will also be reported as < MDL.
5. The **# Results Outside Limits** and **% Results Within Limits** represent statistics comparing individual results to the ECA limit. It does not necessarily represent non-compliance.

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Wastewater Analysis, Monthly Averages

S.W.Oakville WWTP, 2024

Raw Sewage

Sample Date (Month)	Alkalinity	Ortho - Phosphates	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
January 2024	240	0.73	160	13.5	120	25.0	2.87
February 2024	258	1.29	160	17.7	140	30.3	3.79
March 2024	268	1.32	190	16.9	170	38.3	3.69
April 2024	261	0.69	160	14.3	140	26.6	3.30
May 2024	267	1.36	210	18.2	160	32.9	3.77
June 2024	276	1.31	210	19.2	230	35.3	4.11
July 2024	270	1.12	180	15.6	120	29.1	3.19
August 2024	281	1.52	240	20.5	160	39.2	4.74
September 2024	264	1.46	200	22.0	150	38.5	4.13
October 2024	253	1.27	220	19.4	180	37.3	4.56
November 2024	214	0.97	210	15.7	170	30.9	4.09
December 2024	246	1.16	250	17.8	180	34.0	4.03
Annual Average	258	1.16	200	17.4	160	32.9	3.83
Annual Minimum	182	0.25	90	3.99	53	11.0	1.85
Annual Maximum	303	2.28	530	32.5	310	53.3	6.55
Annual Count	53	53	53	53	53	53	53
# Results Outside Limits	0	0	0	0	0	0	0
Month Average	258	1.18	200	17.6	160	33.1	3.86
% Results Within Limits	100	100	100	100	100	100	100
Limit	-/-	-/-	-/-	-/-	-/-	-/-	-/-

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S.W.Oakville WWTP

Final Effluent

Sample Date Sample ID	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-01-03 | 24S-00006-02	113	2.4		20.1	0.29	0.12	6.7	4.4	0.18	1.2	0.31	<0.001
2024-01-10 | 24S-00025-02	107	5.2		14.1	0.52	0.14	7.2	10	1.73	3.1	0.44	0.006
2024-01-16 | 24S-00071-04	151	2.6		15.6	0.19	0.06	7.2	5.2	0.62	1.3	0.23	0.002
2024-01-25 | 24S-00121-04	91.9	1.3		18.2	0.29	0.19	7.1	7.0	0.33	1.5	0.40	<0.001
2024-01-30 | 24S-00163-02	149	2.1		13.4	0.24	0.04	7.4	6.8	0.13	1.1	0.26	<0.001
2024-02-06 | 24S-00222-04	141	4.3		14.3	0.59	0.07	7.3	6.8	0.79	2.2	0.26	0.003
2024-02-13 | 24S-00260-02	95.8	2.1		21.0	0.16	0.30	6.9	3.2	0.32	1.7	0.46	<0.001
2024-02-21 | 24S-00313-04	81.7	2.1		22.8	0.16	0.26	7.0	4.8	0.10	1.2	0.48	<0.001
2024-02-29 | 24S-00358-02	91.3	1.7		16.0	0.21	0.21	7.1	5.6	0.11	1.3	0.45	<0.001
2024-03-06 | 24S-00399-04	84.5	1.8		24.1	0.48	0.16	6.9	4.8	0.42	1.3	0.35	<0.001
2024-03-12 | 24S-00437-02	113	2.1		18.4	0.21	0.12	7.1	4.0	0.12	1.3	0.24	<0.001
2024-03-20 | 24S-00488-04	145	3.0		16.5	0.27	0.09	7.2	6.0	0.19	3.1	0.28	<0.001
2024-03-26 | 24S-00541-02	112	3.1		18.8	0.09	0.09	7.1	5.6	<0.10	1.1	0.25	<0.001
2024-04-03 | 24S-00610-04	119	2.0		20.0	0.07	0.18	7.0	2.8	<0.10	1.4	0.30	<0.001
2024-04-10 | 24S-00634-02	157	1.7		17.4	0.12	0.08	7.2	2.8	<0.10	1.0	0.17	<0.001
2024-04-18 | 24S-00673-02	175	3.6		11.8	0.34	0.05	7.4	5.6	0.30	1.8	0.21	0.002
2024-04-24 | 24S-00735-02	158	5.8		17.1	0.09	0.18	7.6	15	<0.10	1.4	0.45	<0.001
2024-04-30 | 24S-00795-04	131	2.4		18.4	0.07	0.19	7.2	4.0	0.10	1.4	0.33	<0.001
2024-05-08 | 24S-00830-02	122	1.6		20.0	0.04	0.25	7.5	4.4	<0.10	1.1	0.42	<0.001
2024-05-08 | 24S-00830-03			20									
2024-05-14 | 24S-00870-04	107	1.4		21.0	0.07	0.32	7.2	2.0	<0.10	1.1	0.43	<0.001
2024-05-14 | 24S-00870-05			14									
2024-05-22 | 24S-00924-02	91.1	<1.0		21.5	0.08	0.35	7.8	4.8	<0.10	1.4	0.48	<0.001
2024-05-22 | 24S-00924-03			25									
2024-05-29 | 24S-00959-04	138	1.6		14.0	0.06	0.18	7.7	8.0	<0.10	1.3	0.35	<0.001
2024-05-29 | 24S-00959-05			38									
2024-06-04 | 24S-01005-04	95.5	2.2		21.9	0.04	0.36	6.8	10	<0.10	1.6	0.55	<0.001
2024-06-04 | 24S-01005-05			35									
2024-06-12 | 24S-01049-02	94.4	3.5		21.3	0.13	0.24	7.7	10	<0.10	1.3	0.46	<0.001
2024-06-12 | 24S-01049-03			61									
2024-06-19 | 24S-01095-02	88.9	2.4		21.4	0.06	0.21	7.5	8.0	<0.10	1.6	0.40	<0.001
2024-06-19 | 24S-01095-03			42									
2024-06-25 | 24S-01134-04	140	1.8		17.4	0.03	0.10	7.8	6.4	<0.10	1.4	0.22	<0.001

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Final Effluent

	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-06-25 | 24S-01134-05			38									
2024-07-04 | 24S-01177-04	116	1.5		18.7	0.03	0.13	7.3	6.8	<0.10	1.2	0.27	<0.001
2024-07-04 | 24S-01177-05			33									
2024-07-10 | 24S-01205-02	92.0	1.8		20.1	0.05	0.18	7.8	6.4	<0.10	1.6	0.34	<0.001
2024-07-10 | 24S-01205-03			272*									
2024-07-16 | 24S-01264-02	181	2.3		6.60	0.10	0.08	7.8	11	0.15	1.5	0.26	0.004
2024-07-16 | 24S-01264-03			172									
2024-07-24 | 24S-01352-04	178	1.5		11.8	0.04	0.04	7.8	8.0	<0.10	1.4	0.18	<0.001
2024-07-24 | 24S-01352-05			21									
2024-07-30 | 24S-01414-02	143	1.6		17.2	0.04	0.20	7.1	10	0.19	1.8	0.35	<0.001
2024-07-30 | 24S-01414-03			8									
2024-08-07 | 24S-01463-04	121	8.3		17.5	0.12	0.31	7.6	4.0	0.13	1.3	0.44	0.002
2024-08-07 | 24S-01463-05			14									
2024-08-14 | 24S-01497-02	95.5	1.6		20.7	0.05	0.34	7.3	8.8	<0.10	1.8	0.52	<0.001
2024-08-14 | 24S-01497-03			24									
2024-08-16 | 24S-01557-01	92.9	1.9		21.5	0.09	0.39	7.6	10	<0.10	1.1	0.65	<0.001
2024-08-20 | 24S-01542-04	148	1.6		12.3	0.06	0.17	7.7	6.4	<0.10	2.1	0.29	<0.001
2024-08-20 | 24S-01542-05			84									
2024-08-28 | 24S-01585-02	90.4	1.9		21.5	0.06	0.26	6.9	6.4	<0.10	1.5	0.43	<0.001
2024-08-28 | 24S-01585-03			20									
2024-09-05 | 24S-01631-02	77.1	1.5		23.1	0.06	0.32	6.9	6.8	<0.10	1.2	0.50	<0.001
2024-09-05 | 24S-01631-03			16									
2024-09-11 | 24S-01656-04	90.2	1.6		19.1	0.04	0.31	6.8	7.2	<0.10	1.4	0.53	<0.001
2024-09-11 | 24S-01656-05			11									
2024-09-17 | 24S-01679-04	74.0	1.4		23.0	0.05	0.34	6.8	5.6	<0.10	1.2	0.51	<0.001
2024-09-17 | 24S-01679-05			10									
2024-09-25 | 24S-01713-02	150	1.4		12.1	0.13	0.15	7.3	6.0	0.40	1.8	0.30	0.004
2024-09-25 | 24S-01713-03			292*									
2024-10-01 | 24S-01765-04	120	1.6		18.2	0.03	0.12	7.2	6.8	<0.10	1.4	0.27	<0.001
2024-10-01 | 24S-01765-05			16									
2024-10-09 | 24S-01795-02	84.3	1.8		22.5	0.08	0.31	6.9	6.8	<0.10	1.1	0.51	<0.001
2024-10-09 | 24S-01795-03			40									
2024-10-16 | 24S-01828-04	68.2	1.5		25.2	0.09	0.36	6.6	6.0	<0.10	1.4	0.57	<0.001

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Final Effluent

	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-10-16 | 24S-01828-05			16									
2024-10-22 | 24S-01872-02	73.1	1.2		22.4	0.04	0.35	7.3	3.2	<0.10	1.4	0.55	<0.001
2024-10-22 | 24S-01872-03			40									
2024-10-30 | 24S-01915-02	66.3	1.8		20.0	0.12	0.20	6.8	14	0.63	2.0	0.39	0.001
2024-10-30 | 24S-01915-03			72									
2024-11-06 | 24S-01949-02	51.3	1.4		20.4	<0.01	0.43	7.4	5.6	0.42	1.4	0.60	0.004
2024-11-12 | 24S-01968-04	82.3	2.1		20.0	0.02	0.24	7.4	5.2	<0.10	1.1	0.39	<0.001
2024-11-20 | 24S-02003-04	61.1	3.5		24.8	0.03	0.31	7.1	6.8	<0.10	1.7	0.53	<0.001
2024-11-26 | 24S-02035-02	87.5	3.9		20.4	0.03	0.16	7.2	10	<0.10	1.3	0.42	<0.001
2024-12-03 | 24S-02071-04	79.8	2.3		25.0	0.01	0.27	7.4	7.2	<0.10	1.1	0.46	<0.001
2024-12-11 | 24S-02099-04	89.3	2.3		20.3	0.06	0.16	7.3	6.0	<0.10	1.0	0.31	<0.001
2024-12-17 | 24S-02114-02	86.3	2.9		22.0	0.07	0.08	7.3	5.2	0.11	1.1	0.24	<0.001
2024-12-23 | 24S-02124-02	87.2	2.9		21.2	0.02	0.03	7.4	4.8	<0.10	1.0	0.19	<0.001
2024-12-30 | 24S-02134-02	136	6.2		11.5	0.19	0.21	7.6	9.2	1.83	3.6	0.49	0.017
Average	110	2.4	32	18.8	0.12	0.20	7.3	6.6	0.23	1.5	0.38	0.002
Minimum	51.3	<1.0	8	6.60	<0.01	0.03	6.6	2.0	<0.10	1.0	0.17	<0.001
Maximum	181	8.3	292	25.2	0.59	0.43	7.8	15	1.83	3.6	0.65	0.017
Count	54	54	26	54	54	54	54	54	54	54	54	54

Regional Municipality of Halton
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Halton Regional Laboratory

Wastewater Performance Summary

2024

S.W.Oakville WWTP

Raw Sewage

Sample Date Sample ID	Alkalinity	Ortho - Phosphates	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
2024-01-03 | 24S-00006-01	268	1.28	150	16.9	170	30.5	3.12
2024-01-10 | 24S-00025-01	201	0.85	170	11.6	95	24.9	2.91
2024-01-16 | 24S-00071-01	286	0.36	140	14.2	87	23.5	2.59
2024-01-25 | 24S-00121-01	198	0.83	150	13.0	95	22.7	2.58
2024-01-30 | 24S-00163-01	246	0.34	190	11.9	130	23.4	3.15
2024-02-06 | 24S-00222-01	279	1.24	130	16.9	140	30.0	3.30
2024-02-13 | 24S-00260-01	263	1.41	160	20.3	150	35.9	4.12
2024-02-21 | 24S-00313-01	266	1.71	210	21.4	190	35.4	4.35
2024-02-29 | 24S-00358-01	225	0.80	120	12.3	86	19.8	3.37
2024-03-06 | 24S-00399-01	254	1.29	200	17.0	150	29.0	3.25
2024-03-12 | 24S-00437-01	256	1.50	170	17.6	230	36.4	4.27
2024-03-20 | 24S-00488-01	265	0.73	180	11.4	140	46.2	2.87
2024-03-26 | 24S-00541-01	298	1.74	210	21.5	150	41.7	4.38
2024-04-03 | 24S-00610-01	271	0.54	200	18.3	170	33.9	3.97
2024-04-10 | 24S-00634-01	293	0.94	180	15.4	150	28.0	3.25
2024-04-18 | 24S-00673-01	241	0.32	110	9.25	110	21.2	2.79
2024-04-24 | 24S-00735-01	250	0.76	140	14.0	170	22.2	3.24
2024-04-30 | 24S-00795-01	252	0.88	170	14.7	98	27.8	3.25
2024-05-08 | 24S-00830-01	263	1.67	370	17.8	260	31.4	4.92
2024-05-14 | 24S-00870-01	286	1.87	170	21.5	150	39.4	3.94
2024-05-22 | 24S-00924-01	287	1.50	170	19.9	130	36.6	3.80
2024-05-29 | 24S-00959-01	233	0.38	140	13.4	110	24.3	2.40
2024-06-04 | 24S-01005-01	268	1.45	180	20.4	180	33.0	4.38
2024-06-12 | 24S-01049-01	266	1.41	230	19.9	220	35.6	4.33
2024-06-19 | 24S-01095-01	280	1.38	270	20.4	210	36.1	4.61
2024-06-25 | 24S-01134-01	288	0.98	160	16.0	290	36.4	3.11
2024-07-04 | 24S-01177-01	264	1.44	240	19.7	160	36.5	3.39
2024-07-10 | 24S-01205-01	279	1.73	190	21.7	150	35.6	4.05
2024-07-16 | 24S-01264-01	241	0.38	90	3.99	53	12.8	1.87
2024-07-24 | 24S-01352-01	288	0.62	150	14.0	100	22.8	2.61
2024-07-30 | 24S-01414-01	276	1.44	210	18.6	160	37.9	4.04
2024-08-07 | 24S-01463-01	287	1.36	190	19.8	170	36.1	3.85
2024-08-14 | 24S-01497-01	298	2.28	310	24.5	220	53.3	6.32

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S.W.Oakville WWTP

Raw Sewage

	Alkalinity	Ortho - Phosphates	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
2024-08-20 | 24S-01542-01	268	0.59	250	14.4	150	26.6	3.70
2024-08-28 | 24S-01585-01	269	1.85	210	23.4	110	40.7	5.08
2024-09-05 | 24S-01631-01	287	1.80	220	25.1	200	39.7	4.40
2024-09-11 | 24S-01656-01	262	1.21	190	19.6	170	43.2	3.81
2024-09-17 | 24S-01679-01	292	2.11	190	32.5	120	46.1	4.71
2024-09-25 | 24S-01713-01	215	0.72	190	10.8	110	24.9	3.58
2024-10-01 | 24S-01765-01	267	1.34	220	21.0	170	38.8	4.50
2024-10-09 | 24S-01795-01	284	1.44	200	21.9	190	40.5	6.07
2024-10-16 | 24S-01828-01	281	1.48	260	23.9	250	48.5	4.96
2024-10-22 | 24S-01872-01	235	1.62	200	17.6	160	34.8	4.54
2024-10-30 | 24S-01915-01	197	0.47	210	12.8	110	23.7	2.73
2024-11-06 | 24S-01949-01	238	1.76	300	17.1	250	36.7	6.38
2024-11-12 | 24S-01968-01	226	1.25	180	14.6	140	27.5	3.11
2024-11-20 | 24S-02003-01	182	0.25	160	16.0	130	30.4	3.32
2024-11-26 | 24S-02035-01	208	0.62	190	15.0	140	28.9	3.53
2024-12-03 | 24S-02071-01	303	2.18	530	27.1	310	53.2	6.55
2024-12-11 | 24S-02099-01	220	0.70	160	16.1	110	27.4	3.21
2024-12-17 | 24S-02114-01	260	1.20	260	20.1	180	39.7	4.62
2024-12-23 | 24S-02124-01	257	1.33	190	20.2	230	38.9	3.91
2024-12-30 | 24S-02134-01	188	0.39	100	5.26	63	11.0	1.85
Average	258	1.16	200	17.4	160	32.9	3.83
Minimum	182	0.25	90	3.99	53	11.0	1.85
Maximum	303	2.28	530	32.5	310	53.3	6.55
Count	53	53	53	53	53	53	53

2024 BURLINGTON SKYWAY WASTEWATER TREATMENT PLANT
FLOW AND LOADING

		January	February	March	April	May	June	July	August	September	October	November	December	Total	Maximum	Average	Objective	Limits
EFFLUENT FLOW																		
Total Effluent Flow	10^3m^3	3,659.090	2,647.070	3,142.780	3,690.280	2,986.460	3,068.896	3,904.946	2,684.012	2,724.320	2,487.781	2,374.880	2,767.766	36,138.281				
Average Daily Flow[1]	10^3m^3	118.035	91.278	101.380	123.009	96.337	102.297	125.966	86.581	90.811	80.251	79.163	89.283			98.699		140.0
Maximum Daily Flow	10^3m^3	197.661	115.025	154.918	218.796	141.131	129.471	208.910	101.940	140.268	94.560	92.940	168.146		218.796			
Minimum Daily Flow	10^3m^3	85.587	79.868	86.479	93.042	81.458	84.785	91.289	78.582	76.830	72.618	73.921	75.463					
# of Days w/ Flow >90% of Design	#	9	0	2	11	1	1	10	0	2	0	0	2	38				
INFLUENT LOADING																		
BOD_5	mg/L	160	170	150	170	180	190	130	210	170	210	210	160			175.8		
BOD_5 Loading	kg/day	18,885.60	15,517.26	15,207.00	20,911.53	17,340.66	19,436.43	16,375.58	18,182.01	15,437.87	16,852.71	16,624.23	14,285.28			17,088.0		
Total Suspended Solids	mg/L	220	200	200	210	250	230	190	250	220	250	320	210			229.2		
TSS Loading	kg/day	25,967.70	18,255.60	20,276.00	25,831.89	24,084.25	23,528.31	23,933.54	21,645.25	19,978.42	20,062.75	25,332.16	18,749.43			22,303.8		
Total Kjeldahl Nitrogen	mg/L	27.8	29.1	31.8	25.2	29.9	37.8	29.2	36.3	33.7	39.2	39.5	34.8			32.9		
TKN Loading	kg/day	3,281.37	2,656.19	3,223.88	3,099.83	2,880.48	3,866.83	3,678.21	3,142.89	3,060.33	3,145.84	3,126.94	3,107.05			3,189.2		
Total Phosphorus	mg/L	3.70	4.17	3.87	3.25	4.10	4.18	3.57	4.67	4.25	4.51	4.78	3.70			4.06		
TP Loading	kg/day	436.73	380.63	392.34	399.78	394.98	427.60	449.70	404.33	385.95	361.93	378.40	330.35			395.23		
FINAL EFFLUENT LOADING																		
$CBOD_5$	mg/L	1.2	1.1	1.1	1.6	1.2	2.0	4.4	1.2	1.3	1.2	1.5	1.8			1.6	8.00	10.00
$CBOD_5$ Loading	kg/day	141.64	100.41	111.52	196.81	115.60	204.59	554.25	103.90	118.05	96.30	118.74	160.71			168.5		1400.00
Total Suspended Solids	mg/L	1.9	1.6	1.0	1.1	1.2	2.0	4.1	1.8	2.0	2.2	1.7	2.0			1.9	5.00	10.00
TSS Loading	kg/day	224.27	146.04	101.38	135.31	115.60	204.59	516.46	155.85	181.62	176.55	134.58	178.57			189.2		1400.00
Total Ammonia Nitrogen	mg/L	0.58	0.37	0.47	0.35	0.51	0.33	0.18	0.26	0.92	1.52	1.43	0.45			0.61	1.6, 3.2 [2]	2.0, 4.0 [2]
NH_3N Loading	kg/day	68.46	33.77	47.65	43.05	49.13	33.76	22.67	22.51	83.55	121.98	113.20	40.18			56.66		280.0, 560.0 [3]
Total Phosphorus	mg/L	0.07	0.08	0.06	0.05	0.09	0.11	0.15	0.11	0.11	0.09	0.07	0.07			0.09	0.12	0.20
TP Loading	kg/day	8.26	7.30	6.08	6.15	8.67	11.25	18.89	9.52	9.99	7.22	5.54	6.25			8.76		17.20

[1] *"average daily flow "*means the total sewage flow to the sewage works during the periods of operation upon which the report is based, divided by the number of days during the same period of time.

[2]Seasonal Total Ammonia Nitrogen concentration criteria. May 1 - Sept 30 and Oct 1 - April 30.

[3]Seasonal Total Ammonia Nitrogen loading criteria. May 1 - Sept 30 and Oct 1 - April 30.

*The calculated yearly average loadings in some instances may not correspond to the data reporting in the Regional Laboratory summary. This discrepancy is due to rounding.

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Wastewater Analysis, Monthly Averages

Skyway WWTP, 2024

Final Effluent

Sample Date (Month)	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
January 2024	64.5	1.2		25.7	0.31	0.02	7.0	1.9	0.58	1.3	0.07	0.002
February 2024	31.3	1.1		33.3	0.48	0.03	6.7	1.6	0.37	0.9	0.08	<0.001
March 2024	48.6	1.1		29.4	0.35	0.02	6.8	1.0	0.47	0.7	0.06	0.001
April 2024	71.0	1.6	1	27.5	0.37	<0.02	6.9	1.1	0.35	0.7	0.05	0.001
May 2024	46.4	1.2	6	30.3	0.49	0.02	6.7	1.2	0.51	0.9	0.09	0.002
June 2024	37.3	2.0	3	30.4	0.42	0.03	6.5	2.0	0.33	0.8	0.11	<0.001
July 2024	76.3	4.4	2	22.5	0.08	0.04	6.9	4.1	0.18	1.0	0.15	0.001
August 2024	36.1	1.2	3	28.9	0.15	0.06	6.7	1.8	0.26	0.9	0.11	<0.001
September 2024	23.8	1.3	1	28.8	0.09	0.07	7.0	2.0	0.92	1.6	0.11	0.008
October 2024	14.1	1.2	3	33.0	0.09	0.03	7.6	2.2	1.52	2.0	0.09	0.053
November 2024	8.1	1.5		34.3	0.14	0.03	6.9	1.7	1.43	2.0	0.07	0.005
December 2024	25.2	1.8		29.1	0.29	0.03	6.9	2.0	0.45	1.1	0.07	0.003
Annual Average	40.7	1.7	2	29.3	0.27	0.03	6.9	1.9	0.55	1.2	0.10	0.006
Annual Minimum	<6.0	<1.0	0	10.3	0.01	<0.02	6.2	<1.0	<0.10	<0.3	0.04	<0.001
Annual Maximum	181	52	16	36.8	1.13	0.14	8.6	42	3.18	3.4	0.89	0.121
Annual Count	53	159	31	53	53	53	62	159	62	53	65	62
# Results Outside Limits	0	1	0	0	0	0	0	1	0	0	1	0
Month Average	40.2	1.6	3	29.4	0.27	0.03	6.9	1.9	0.61	1.2	0.09	0.007
% Results Within Limits	100	99	100	100	100	100	100	99	100	100	98	100
Limit	-/-	-/10	-/200	-/-	-/-	-/-	6.0/9.5	-/10	-/2.0	-/-	-/0.2	-/-

* Ammonia Nitrogen Limits are 2.0 (May - Nov) and 4.0 (Dec - Apr)

1. The detail section of this report displays the monthly averages, which are an arithmetic mean with the exception of E.coli, which is a geometric mean.
2. In order to calculate a geometric mean for the E.coli analysis, results of zero are first replaced with one.
3. The **Annual Average** in the summary section represents an average of every result for this facility. This is an annual geometric mean for E.coli.
4. If any result is less than the **Method Detection Limit**, then the detection limit is used in calculating the average. If all results are < MDL, then the average will also be reported as < MDL.
5. The **# Results Outside Limits** and **% Results Within Limits** represent statistics comparing individual results to the ECA limit. It does not necessarily represent non-compliance.

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Wastewater Analysis, Monthly Averages

Skyway WWTP, 2024

Raw Sewage

Sample Date (Month)	Alkalinity	Ortho - Phosphates	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
January 2024	225	1.27	220	13.1	160	27.8	3.70
February 2024	228	1.72	200	17.1	170	29.1	4.17
March 2024	224	1.47	200	13.8	150	31.8	3.87
April 2024	227	1.16	210	12.3	170	25.2	3.25
May 2024	227	1.50	250	15.1	180	29.9	4.10
June 2024	242	1.59	230	19.2	190	37.8	4.18
July 2024	230	1.14	190	13.9	130	29.2	3.57
August 2024	230	1.63	250	18.4	210	36.3	4.67
September 2024	210	1.63	220	19.6	170	33.7	4.25
October 2024	230	1.63	250	20.7	210	39.2	4.51
November 2024	235	1.97	320	22.6	210	39.5	4.78
December 2024	239	1.68	210	19.4	160	34.8	3.70
Annual Average	229	1.52	230	17.0	170	32.8	4.05
Annual Minimum	172	0.36	81	2.81	52	13.7	2.64
Annual Maximum	264	2.27	530	25.8	280	45.5	6.14
Annual Count	53	53	53	53	53	53	53
# Results Outside Limits	0	0	0	0	0	0	0
Month Average	229	1.53	230	17.1	180	32.9	4.06
% Results Within Limits	100	100	100	100	100	100	100
Limit	-/-	-/-	-/-	-/-	-/-	-/-	-/-

1. The detail section of this report displays the monthly averages, which are an arithmetic mean with the exception of E.coli, which is a geometric mean.
2. In order to calculate a geometric mean for the E.coli analysis, results of zero are first replaced with one.
3. The **Annual Average** in the summary section represents an average of every result for this facility. This is an annual geometric mean for E.coli.
4. If any result is less than the **Method Detection Limit**, then the detection limit is used in calculating the average. If all results are < MDL, then the average will also be reported as < MDL.
5. The **# Results Outside Limits** and **% Results Within Limits** represent statistics comparing individual results to the ECA limit. It does not necessarily represent non-compliance.

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Skyway WWTP

Final Effluent

Sample Date / Sample ID	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-01-01 | 24S-00002-01		<1.0						1.4				
2024-01-03 | 24S-00004-05	59.5	1.1		25.2	0.05	<0.02	6.8	2.2	0.11	0.9	0.08	<0.001
2024-01-05 | 24S-00010-01		1.3						2.2				
2024-01-08 | 24S-00019-01		1.3						1.8				
2024-01-10 | 24S-00023-02	45.6	1.1		26.1	0.33	<0.02	7.1	3.2	1.51	1.9	0.08	0.004
2024-01-12 | 24S-00027-01		1.1						1.4				
2024-01-15 | 24S-00069-01		1.2						1.2				
2024-01-17 | 24S-00075-02	87.2	<1.0		21.8	0.20	<0.02	7.3	1.4	0.18	0.3	0.04	<0.001
2024-01-19 | 24S-00077-01		1.1						1.6				
2024-01-22 | 24S-00115-01		1.5						1.8				
2024-01-24 | 24S-00119-02	38.3	<1.0		33.7	0.05	0.03	6.5	2.2	0.11	0.9	0.07	<0.001
2024-01-26 | 24S-00123-01		1.2						2.2				
2024-01-29 | 24S-00161-01		<1.0						2.4				
2024-01-31 | 24S-00167-05	91.7	1.6		21.8	0.94	0.02	7.2	1.4	0.99	2.4	0.08	0.005
2024-02-02 | 24S-00169-01		<1.0						1.4				
2024-02-05 | 24S-00218-01		1.5						1.2				
2024-02-07 | 24S-00224-02	59.0	1.2		30.2	0.43	0.02	6.7	2.0	0.19	1.1	0.07	<0.001
2024-02-09 | 24S-00226-01		<1.0						1.8				
2024-02-12 | 24S-00256-01		1.1						2.4				
2024-02-14 | 24S-00265-02	23.9	1.3		35.0	0.52	0.03	6.7	3.0	0.30	1.1	0.07	<0.001
2024-02-16 | 24S-00269-01		<1.0						1.2				
2024-02-19 | 24S-00309-01		<1.0						<1.0				
2024-02-21 | 24S-00311-05	26.1	1.1		32.5	0.49	<0.02	6.6	1.2	0.37	0.7	0.07	<0.001
2024-02-23 | 24S-00317-01		1.1						1.4				
2024-02-26 | 24S-00352-01		<1.0						1.6				
2024-02-28 | 24S-00356-05	16.0	<1.0		35.4	0.47	0.05	6.6	1.2	0.62	0.8	0.11	<0.001
2024-03-01 | 24S-00360-01		1.2						1.0				
2024-03-04 | 24S-00392-01		<1.0						<1.0				
2024-03-06 | 24S-00397-02	39.5	<1.0		32.5	0.03	0.02	6.8	<1.0	<0.10	0.5	0.08	<0.001
2024-03-08 | 24S-00401-01		1.1						<1.0				
2024-03-11 | 24S-00433-01		<1.0						<1.0				
2024-03-13 | 24S-00441-02	37.1	<1.0		30.5	0.26	<0.02	6.8	<1.0	0.12	<0.3	0.05	<0.001
2024-03-15 | 24S-00444-01		1.2						1.2				

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Skyway WWTP

Final Effluent

	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-03-18 | 24S-00484-01		<1.0						1.0				
2024-03-20 | 24S-00486-05	71.6	<1.0		23.7	0.63	<0.02	6.9	<1.0	0.94	1.1	0.05	0.002
2024-03-22 | 24S-00492-01		1.1						1.2				
2024-03-25 | 24S-00537-01		<1.0						<1.0				
2024-03-27 | 24S-00543-05	46.1	<1.0		30.7	0.48	<0.02	6.8	1.0	0.71	1.0	0.04	0.001
2024-03-29 | 24S-00560-01		1.3						<1.0				
2024-04-01 | 24S-00592-01		2.1						<1.0				
2024-04-03 | 24S-00598-02	44.8	1.7		32.2	0.48	<0.02	6.8	1.2	0.87	1.1	0.07	0.001
2024-04-03 | 24S-00598-04			0									
2024-04-05 | 24S-00603-01		1.9						<1.0				
2024-04-08 | 24S-00626-01		<1.0						<1.0				
2024-04-10 | 24S-00632-02	68.9	<1.0		28.2	0.12	<0.02	6.9	1.0	<0.10	0.5	0.04	<0.001
2024-04-10 | 24S-00632-04			2									
2024-04-12 | 24S-00636-01		1.7						2.0				
2024-04-15 | 24S-00665-01		1.7						<1.0				
2024-04-17 | 24S-00671-05	97.1	2.5		22.2	0.47	<0.02	7.0	<1.0	0.33	0.4	0.04	<0.001
2024-04-17 | 24S-00671-09			0									
2024-04-19 | 24S-00675-01		1.2						<1.0				
2024-04-22 | 24S-00728-01		1.5						<1.0				
2024-04-24 | 24S-00733-05	73.1	1.6		27.4	0.39	<0.02	7.0	<1.0	<0.10	0.7	0.05	<0.001
2024-04-24 | 24S-00733-09			1									
2024-04-26 | 24S-00740-01		1.0						<1.0				
2024-04-29 | 24S-00790-01		1.7						<1.0				
2024-05-01 | 24S-00816-02	46.3	1.6		30.9	0.37	<0.02	6.7	1.2	0.15	0.4	0.08	<0.001
2024-05-01 | 24S-00816-03			16									
2024-05-03 | 24S-00818-01		<1.0						<1.0				
2024-05-06 | 24S-00822-01		1.8						<1.0				
2024-05-09 | 24S-00828-02	48.8	<1.0		31.4	0.36	<0.02	6.6	1.4	0.14	0.6	0.07	<0.001
2024-05-09 | 24S-00828-04			1									
2024-05-11 | 24S-00832-01		<1.0						1.4				
2024-05-13 | 24S-00866-01		<1.0						1.0				
2024-05-15 | 24S-00874-02	25.0	<1.0		35.2	0.36	0.02	6.4	1.0	0.16	0.5	0.09	<0.001
2024-05-15 | 24S-00874-04			3									

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	Alkalinity	Carbonaceous BOD	E.Coli	Nitrate Nitrogen	Nitrite Nitrogen	Ortho - Phosphates	pH (Field Result)	Suspended Solids	Total Ammonia Nitrogen	Total Kjeldahl Nitrogen	Total Phosphorus	Unionized Ammonia (ECA)
	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-05-17 | 24S-00876-01		<1.0						1.0				
2024-05-20 | 24S-00918-01		<1.0						1.4				
2024-05-22 | 24S-00922-05	26.0	<1.0		34.8	0.47	0.04	6.8	1.2	0.16	0.5	0.11	<0.001
2024-05-22 | 24S-00922-09			16									
2024-05-24 | 24S-00928-01		1.4						1.4				
2024-05-27 | 24S-00951-01		1.1						2.0				
2024-05-29 | 24S-00957-05	86.1	1.4		19.2	0.90	<0.02	6.8	1.2	1.96	2.3	0.09	0.004
2024-05-29 | 24S-00957-09			10									
2024-06-01 | 24S-00961-01		5.5						4.4				
2024-06-03 | 24S-01002-01		2.0						1.2				
2024-06-05 | 24S-01009-02	44.4	<1.0		29.9	1.13	0.05	6.4	1.8	0.92	1.3	0.11	<0.001
2024-06-05 | 24S-01009-04			1									
2024-06-07 | 24S-01011-01		<1.0						1.4				
2024-06-10 | 24S-01041-01		2.1						2.2				
2024-06-12 | 24S-01047-02	35.2	2.7		31.9	0.20	<0.02	6.6	1.6	0.15	0.3	0.09	<0.001
2024-06-12 | 24S-01047-04			4									
2024-06-14 | 24S-01051-01		1.3						1.6				
2024-06-17 | 24S-01087-01		2.2						2.0				
2024-06-19 | 24S-01093-05	24.0	1.1		31.6	0.22	0.02	6.3	2.0	0.14	1.1	0.13	<0.001
2024-06-19 | 24S-01093-09			4									
2024-06-21 | 24S-01097-01		1.9						2.4				
2024-06-24 | 24S-01130-01		1.1						1.8				
2024-06-26 | 24S-01136-05	45.7	1.3		28.0	0.11	0.04	6.8	2.4	<0.10	0.5	0.11	<0.001
2024-06-26 | 24S-01136-09			4									
2024-06-28 | 24S-01140-01		3.2						1.2				
2024-07-01 | 24S-01169-01		1.3						1.4				
2024-07-03 | 24S-01175-05	42.2	<1.0		27.9	0.13	0.03	6.6	1.0	<0.10	0.5	0.08	<0.001
2024-07-03 | 24S-01175-09			0									
2024-07-05 | 24S-01180-01		1.2						1.0				
2024-07-08 | 24S-01199-01		1.1						<1.0				
2024-07-10 | 24S-01203-02	23.8	1.7		30.5	0.18	0.03	6.6	2.4	0.19	1.2	0.09	<0.001
2024-07-10 | 24S-01203-04			4									
2024-07-12 | 24S-01207-01		1.5						1.4				

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	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-07-13 | 24S-01308-02		52*					6.9	42*	1.08		0.89*	0.003
2024-07-15 | 24S-01262-01		<1.0						1.4				
2024-07-16 | 24S-01314-01		<1.0					7.0	3.2	<0.10		0.12	<0.001
2024-07-17 | 24S-01270-02	181	<1.0		10.3	0.04	0.07	7.1	3.2	<0.10	0.9	0.14	<0.001
2024-07-17 | 24S-01270-04			11									
2024-07-19 | 24S-01272-01		<1.0						<1.0				
2024-07-22 | 24S-01346-01		<1.0						1.4				
2024-07-23 | 24S-01389-01							7.3		<0.10		0.13	<0.001
2024-07-24 | 24S-01350-05	90.6	<1.0		19.7	0.04	0.05	6.9	1.4	<0.10	1.0	0.11	<0.001
2024-07-24 | 24S-01350-09			1									
2024-07-25 | 24S-01405-01							6.9		<0.10		0.11	<0.001
2024-07-26 | 24S-01356-01		3.3					7.2	1.4	<0.10		0.09	<0.001
2024-07-27 | 24S-01445-01							7.1		<0.10		0.09	<0.001
2024-07-28 | 24S-01446-01							7.2		<0.10		0.08	<0.001
2024-07-29 | 24S-01410-01		<1.0					7.0	1.0	<0.10		0.08	<0.001
2024-07-30 | 24S-01448-01							6.9		<0.10		0.08	<0.001
2024-07-31 | 24S-01416-02	44.1	<1.0		23.9	0.02	0.04	6.5	1.6	<0.10	1.3	0.07	<0.001
2024-07-31 | 24S-01416-03			0									
2024-08-02 | 24S-01421-01		<1.0						<1.0				
2024-08-05 | 24S-01455-01		2.1						2.4				
2024-08-07 | 24S-01461-05	39.5	1.4		28.5	0.28	0.05	6.7	3.4	0.40	1.5	0.12	<0.001
2024-08-07 | 24S-01461-09			0									
2024-08-09 | 24S-01467-01		1.6						1.8				
2024-08-12 | 24S-01489-01		1.3						2.8				
2024-08-14 | 24S-01495-02	24.8	<1.0		29.3	0.01	0.04	6.7	2.0	<0.10	0.5	0.09	<0.001
2024-08-14 | 24S-01495-03			4									
2024-08-16 | 24S-01499-01		<1.0						<1.0				
2024-08-19 | 24S-01538-01		1.0						1.8				
2024-08-21 | 24S-01546-02	46.2	<1.0		29.1	0.08	0.06	6.7	1.6	<0.10	0.4	0.10	<0.001
2024-08-21 | 24S-01546-03			0									
2024-08-23 | 24S-01548-01		<1.0						1.2				
2024-08-26 | 24S-01577-01		<1.0						1.6				
2024-08-28 | 24S-01583-05	33.7	1.3		28.6	0.24	0.08	6.6	1.4	0.43	1.2	0.13	<0.001

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	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-08-28 | 24S-01583-09			14									
2024-08-30 | 24S-01587-01		<1.0						2.0				
2024-09-02 | 24S-01623-01		1.0						2.0				
2024-09-04 | 24S-01629-05	18.0	<1.0		34.9	0.07	0.14	6.6	1.8	0.17	<0.3	0.20	<0.001
2024-09-04 | 24S-01629-09			1									
2024-09-06 | 24S-01633-01		<1.0						1.8				
2024-09-09 | 24S-01648-01		1.7						1.2				
2024-09-11 | 24S-01654-02	21.1	1.4		26.4	0.12	<0.02	7.4	2.0	1.75	2.5	0.09	0.019
2024-09-11 | 24S-01654-04			0									
2024-09-13 | 24S-01658-01		<1.0						2.0				
2024-09-16 | 24S-01676-01		1.8						2.2				
2024-09-18 | 24S-01683-02	12.2	1.8		32.4	0.10	0.06	7.3	2.0	1.35	2.1	0.12	0.012
2024-09-18 | 24S-01683-04			1									
2024-09-20 | 24S-01685-01		1.4						2.0				
2024-09-23 | 24S-01708-01		<1.0						3.2				
2024-09-25 | 24S-01711-05	43.8	<1.0		21.3	0.07	0.04	6.7	2.4	0.39	1.5	0.10	<0.001
2024-09-25 | 24S-01711-09			0									
2024-09-27 | 24S-01717-01		<1.0						1.8			0.09	
2024-09-29 | 24S-01762-01											0.08	
2024-09-30 | 24S-01761-01		1.3						2.0			0.08	
2024-10-02 | 24S-01770-02	17.2	1.4		32.2	0.06	0.02	6.7	1.8	0.38	0.6	0.07	<0.001
2024-10-02 | 24S-01770-04			0									
2024-10-04 | 24S-01772-01		<1.0						1.0				
2024-10-07 | 24S-01786-01		1.3						1.6				
2024-10-09 | 24S-01791-02	10.4	<1.0		33.5	0.07	0.03	7.8	2.6	1.18	2.1	0.11	0.031
2024-10-09 | 24S-01791-04			11									
2024-10-11 | 24S-01794-01		<1.0						3.2				
2024-10-14 | 24S-01823-01		1.5						2.0				
2024-10-16 | 24S-01826-05	15.6	1.5		33.7	0.07	0.02	8.6	2.2	0.76	1.9	0.08	0.104
2024-10-16 | 24S-01826-09			1									
2024-10-18 | 24S-01832-01		<1.0						2.4				
2024-10-21 | 24S-01865-01		1.6						1.8				
2024-10-23 | 24S-01874-05	16.3	<1.0		35.3	0.11	0.04	6.9	2.6	2.11	2.4	0.11	0.007

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	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
2024-10-23 | 24S-01874-09			3									
2024-10-25 | 24S-01876-01		<1.0						2.4				
2024-10-28 | 24S-01907-01		1.9						2.0				
2024-10-30 | 24S-01913-02	10.9	<1.0		30.4	0.15	0.03	8.0	3.0	3.18	2.9	0.09	0.121
2024-10-30 | 24S-01913-03			4									
2024-11-01 | 24S-01939-01		2.4						1.6				
2024-11-04 | 24S-01941-01		1.3						2.4				
2024-11-06 | 24S-01947-05	7.4	<1.0		36.6	0.16	0.03	7.0	1.6	2.37	2.6	0.07	0.009
2024-11-08 | 24S-01951-01		<1.0						2.0				
2024-11-11 | 24S-01964-01		2.5						2.2				
2024-11-13 | 24S-01972-02	9.2	1.3		32.0	0.10	0.04	6.5	1.4	0.19	1.3	0.08	<0.001
2024-11-15 | 24S-01974-01		1.2						2.2				
2024-11-18 | 24S-01995-01		1.3						1.8				
2024-11-20 | 24S-02001-02	<6.0	2.2		36.8	0.18	0.02	6.3	1.8	2.89	3.4	0.06	0.002
2024-11-22 | 24S-02005-01		1.6						1.6				
2024-11-25 | 24S-02031-01		1.5						<1.0				
2024-11-27 | 24S-02037-05	9.7	1.3		31.7	0.12	0.03	7.9	<1.0	0.26	0.7	0.06	0.007
2024-11-29 | 24S-02041-01		1.2						1.2				
2024-12-02 | 24S-02060-01		<1.0						1.0				
2024-12-04 | 24S-02073-05	8.1	1.5		36.5	0.08	0.05	7.6	2.6	0.19	0.5	0.07	0.002
2024-12-06 | 24S-02075-01		1.2						1.8				
2024-12-09 | 24S-02093-01		1.6						1.8				
2024-12-11 | 24S-02097-05	19.6	1.8		27.4	0.24	<0.02	7.4	1.8	0.83	1.6	0.07	0.007
2024-12-13 | 24S-02101-01		1.7						1.8				
2024-12-16 | 24S-02110-02	10.4	1.7		31.7	0.04	<0.02	6.2	1.6	<0.10	1.0	0.07	<0.001
2024-12-18 | 24S-02116-01		1.5						1.8				
2024-12-20 | 24S-02118-01		1.7						1.6				
2024-12-23 | 24S-02122-02	20.1	1.6		29.9	0.03	<0.02	6.3	3.0	<0.10	0.3	0.05	<0.001
2024-12-25 | 24S-02126-01		2.2						1.8				
2024-12-27 | 24S-02128-01		2.3						1.8				
2024-12-30 | 24S-02132-02	67.8	3.9		19.8	1.07	<0.02	6.8	4.0	1.01	2.2	0.11	0.002
Average	40.7	1.7	2	29.3	0.27	0.03	6.9	1.9	0.55	1.2	0.10	0.006
Minimum	<6.0	<1.0	0	10.3	0.01	<0.02	6.2	<1.0	<0.10	<0.3	0.04	<0.001

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	mg/L	mg/L	CFU/100mL	mg/L	mg/L	mg/L	-	mg/L	mg/L	mg/L	mg/L	mg/L
Maximum	181	52	16	36.8	1.13	0.14	8.6	42	3.18	3.4	0.89	0.121
Count	53	159	31	53	53	53	62	159	62	53	65	62

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Wastewater Performance Summary

2024

Skyway WWTP

Raw Sewage

Sample Date Sample ID	Alkalinity	Ortho - Phosphates	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
2024-01-03 | 24S-00004-01	239	1.59	250	16.0	200	37.8	4.25
2024-01-10 | 24S-00023-01	172	1.08	210	8.18	130	19.2	3.39
2024-01-17 | 24S-00075-01	246	1.17	230	11.2	160	24.6	3.81
2024-01-24 | 24S-00119-01	229	1.56	250	18.4	190	34.1	4.29
2024-01-31 | 24S-00167-01	238	0.95	140	11.8	130	23.2	2.75
2024-02-07 | 24S-00224-01	243	1.52	83	14.6	160	31.3	3.84
2024-02-14 | 24S-00265-01	235	1.67	250	17.6	170	23.9	3.86
2024-02-21 | 24S-00311-01	231	2.04	230	19.6	200	34.3	4.54
2024-02-28 | 24S-00356-01	203	1.66	220	16.5	160	26.7	4.44
2024-03-06 | 24S-00397-01	216	1.66	200	16.1	150	34.0	4.21
2024-03-13 | 24S-00441-01	224	1.62	210	15.7	160	32.5	4.19
2024-03-20 | 24S-00486-01	236	1.20	180	11.0	130	19.9	3.18
2024-03-27 | 24S-00543-01	220	1.40	200	12.3	170	40.9	3.91
2024-04-03 | 24S-00598-01	224	1.19	240	15.4	240	32.3	3.67
2024-04-10 | 24S-00632-01	235	1.04	180	11.9	140	22.2	3.01
2024-04-17 | 24S-00671-01	228	1.20	170	9.80	120	22.9	2.74
2024-04-24 | 24S-00733-01	221	1.21	230	12.1	170	23.3	3.56
2024-05-01 | 24S-00816-01	225	1.01	120	12.5	86	21.7	2.64
2024-05-08 | 24S-00828-01	219	1.60	240	14.5	210	27.0	3.48
2024-05-15 | 24S-00874-01	214	1.75	280	17.1	210	32.3	6.14
2024-05-22 | 24S-00922-01	222	1.81	450	17.3	230	37.7	5.00
2024-05-29 | 24S-00957-01	253	1.34	160	14.2	140	30.7	3.25
2024-06-05 | 24S-01009-01	232	1.48	230	19.4	200	35.7	3.87
2024-06-12 | 24S-01047-01	236	1.71	200	20.0	190	40.8	4.02
2024-06-19 | 24S-01093-01	249	1.80	260	20.1	210	40.4	4.66
2024-06-26 | 24S-01136-01	250	1.37	210	17.1	170	34.1	4.15
2024-07-03 | 24S-01175-01	207	1.28	280	16.4	180	31.5	4.09
2024-07-10 | 24S-01203-01	227	1.67	220	18.7	170	33.7	4.10
2024-07-17 | 24S-01270-01	226	0.36	100	2.81	52	13.7	2.84
2024-07-24 | 24S-01350-01	257	1.01	170	14.7	140	28.7	3.03
2024-07-31 | 24S-01416-01	235	1.36	180	17.1	120	38.2	3.77
2024-08-07 | 24S-01461-01	242	1.47	250	18.3	190	41.2	4.59
2024-08-14 | 24S-01495-01	230	1.99	240	19.7	200	37.5	5.00

Regional Municipality of Halton
1135 Lakeshore Rd
Burlington, ON L7S 1A8
Phone: 905-825-6000 x 3030
Halton Regional Laboratory

Skyway WWTP

Raw Sewage

	Alkalinity	Ortho - Phosphates	Suspended Solids	Total Ammonia Nitrogen	Total BOD	Total Kjeldahl Nitrogen	Total Phosphorus
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
2024-08-21 | 24S-01546-01	240	1.36	240	18.8	200	32.6	3.96
2024-08-28 | 24S-01583-01	208	1.70	260	16.6	230	33.7	5.11
2024-09-04 | 24S-01629-01	224	1.84	230	20.9	180	36.5	4.53
2024-09-11 | 24S-01654-01	207	1.68	240	20.4	160	34.0	4.04
2024-09-18 | 24S-01683-01	199	1.81	220	22.4	180	37.4	5.23
2024-09-25 | 24S-01711-01	209	1.18	200	14.7	140	27.0	3.21
2024-10-02 | 24S-01770-01	234	1.68	250	19.1	190	36.3	4.25
2024-10-09 | 24S-01791-01	230	1.55	230	22.2	180	41.2	4.58
2024-10-16 | 24S-01826-01	235	1.41	270	21.5	280	42.6	5.18
2024-10-23 | 24S-01874-01	243	2.18	240	22.6	210	45.5	4.97
2024-10-30 | 24S-01913-01	208	1.31	240	18.0	180	30.5	3.58
2024-11-06 | 24S-01947-01	242	2.27	270	25.8	240	41.7	5.03
2024-11-13 | 24S-01972-01	216	1.65	530	16.4	170	31.7	3.88
2024-11-20 | 24S-02001-01	218	1.96	280	24.8	240	43.2	5.60
2024-11-27 | 24S-02037-01	264	2.01	210	23.4	180	41.3	4.61
2024-12-04 | 24S-02073-01	260	1.56	320	20.2	180	35.1	3.49
2024-12-11 | 24S-02097-01	230	1.25	81	17.5	97	30.8	2.86
2024-12-16 | 24S-02110-01	217	2.15	310	22.2	220	45.3	5.01
2024-12-23 | 24S-02122-01	248	2.00	110	23.6	130	35.4	3.40
2024-12-30 | 24S-02132-01	238	1.43	250	13.6	170	27.5	3.74
Average	229	1.52	230	17.0	170	32.8	4.05
Minimum	172	0.36	81	2.81	52	13.7	2.64
Maximum	264	2.27	530	25.8	280	45.5	6.14
Count	53	53	53	53	53	53	53

Public Works Department
Water & Wastewater Treatment
1151 Bronte Road
Oakville ON L6M 3L1

March 18, 2025

To: FILE

RE: 2024 Statement of Compliance - Amended Environmental Compliance Approval No. A680210 dated January 22, 2019

The following statement of compliance is an annual requirement under the ***Amended Environmental Compliance Approval No. A680210*** dated January 22, 2019, for Halton's W. A. Bill Johnson Biosolids Management Centre (BMC):

"With the exception of "The Understated Total Phosphorus Results for Dewatered Biosolids" identified below and to the best of my knowledge, the Regional Municipality of Halton has complied with the terms and conditions of Amended Environmental Compliance Approval No. A680210 dated January 22, 2019, for the January 1 to December 31, 2024, operating period.

Halton provided a letter dated August 16, 2024, to Environmental Officer Valeria Spezzano providing written notification regarding "The Understated Total Phosphorus Results for Dewatered Biosolids". The notification letter addressed the events leading to the understated total phosphorus results and detailed the subsequent corrective actions undertaken by the Region. Upon submitting the notification letter to Officer Spezzano on August 16, 2024, the Region received a request for additional information, where Halton responded by submitting the requested information to the MECP on Monday, September 16, 2024."

Halton's notification letter addressed to Environmental Officer Valeria Spezzano, dated August 16th, is accessible through Halton's document control system by following the link below:

CORR-Halton/MECP-Understated TP Halton Dewatered Biosolids-August 2024 (Q-RD-5872)

Signed,

Dean Iamarino, B.Sc., CET,
Supervisor, Wastewater Biosolids Management Ext. 4494
Dean.Iamarino@halton.ca