Ontario Clean Water Agency
Agence Ontarienne Des Eaux

March 28, 2025

Pierre Adrien
Ministry of the Environment, Conservations and Parks
733 Exeter Road
London, ON N6E 1L3

Attention: Mr. Adrien

RE: 2024 Annual Report for the Rodney Wastewater Treatment Plant

The Ontario Clean Water Agency is the Operating Authority for the Rodney Wastewater Treatment Plant on behalf of the Municipality of West Elgin. The system is operated under Environmental Compliance Approval 3-0871-88-949. Please find attached the 2024 Annual Report for the Rodney Wastewater Treatment Plant.

Feel free to contact me should you require any additional information regarding the report. I can be reached at 519-312-0847.

Sincerely,

Terri-Lynn Thomson
Process and Compliance Technician,
Ontario Clean Water Agency

C.c. Robin Greenall, Municipality of West Elgin
Sam Sianas, OCWA's Regional Hub Manager
Sam Smith, OCWA's Senior Operations Manager
Maegan Garber, OCWA's Safety, Process and Compliance Manager

MUNICIPALITY OF WEST ELGIN

RODNEY WASTEWATER TREATMENT PLANT

2024 ANNUAL REPORT
January 1 to December 31, 2024

Environmental Compliance Approval # 3-0871-88-949

Prepared by:

Ontario Clean Water Agency
Agence Ontarienne Des Eaux

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Section 1: Overview

The wastewater treatment plant is operated under Environmental Compliance Approval 3-0871-88-949 dated April 12, 1994 with amendments September 24, 1998.

Collection System
The collection system contains gravity sewers that lead to the Main Pumping Station located on Furnival Road. It contains a wet well with two submersible pumps that pump to the treatment plant. Backup power is supplied by an onsite generator.

Plant Description
The Rodney Wastewater Treatment Plant is an extended aeration facility which consists of: extended aeration, settling, UV disinfection (seasonal), phosphorus removal, and filtration. The extended aeration process is designed to remove carbonaceous and nitrogenous organic compounds (BOD). Aluminum Sulphate is used for phosphorus removal. After the clarifier the effluent is filtered and seasonally disinfected using ultraviolet light, then discharged to Sixteen Mile Creek. Sludge is directed to the lagoon for storage and settling. Decant liquid off the lagoon is returned to the influent of the plant.

Process Details

- Wastewater is directed into the sewage lift station from the Village of Rodney by gravity. Wastewater is pumped from the sewage lift station located near the junction of Furnival Road and King Street by force main into a reinforced concrete splitter chamber, provided with a mechanical rake bar screen.
- The secondary treatment system consists of two aeration basins, one reinforced concrete clarifier tank and two return activated sludge pumps.
- The phosphorous removal system consists of one 30,000 L fiber reinforced tank with spills containment equipped with 2 diaphragm type metering pumps (1 duty and 1 standby).
- Three mechanical aerators in each aeration tank provide oxygen at a low pressure in the aeration tanks.
- The tertiary treatment system consists of four (4) continuous back wash 2 metre deep bed, granular single media sand filtration units housed in the filter building. Hydrogen peroxide is introduced for filter cleaning when necessary.
- The disinfection system consists of a ultra-violet (UV) unit through which the effluent is discharged seasonally.
- A concrete V-notch weir flow measuring chamber is installed between the clarifier and the filter building.
- Operations are controlled by a programmable logic controller (PLC). A data logging computer system with local monitoring capability is used to monitor, trend, and record select process parameters.
- Laboratory space is also located at the WWTP to allow for basic laboratory analyses to be conducted by the plant operator.
- Process control is monitored by SCADA.

Section 2: Summary of Monitory and Compliance Reports

There were no compliance reports required to be submitted during the reporting period as the treatment system met all effluent compliance limits identified in the ECA.

Section 3: Monitoring Data

Sample Collection and Testing

All samples are collected and tested as per the requirements of the Environmental Compliance Approval.

Raw sewage is sampled bi-weekly and tested for BOD_5, total suspended solids, total phosphorus, and total Kjeldahl nitrogen. The raw samples are collected as 24 hour composite samples.

Final effluent is sampled bi-weekly and tested for BOD_5, total suspended solids, total phosphorus, free ammonia nitrogen, total Kjeldahl nitrogen, nitrite, nitrate, pH and alkalinity. Samples are collected using an automatic composite sampler and collected over a twenty-four hour period. Grab samples for dissolved oxygen and temperature are collected bi-weekly. A grab sample for E. coli is also sampled bi-weekly during the disinfection period from April 15 to October 15.

In-house tests are conducted on a weekly basis on the final effluent, raw influent and the mixed liquor suspended solids at the plant to check plant performance and to make any operational changes required.

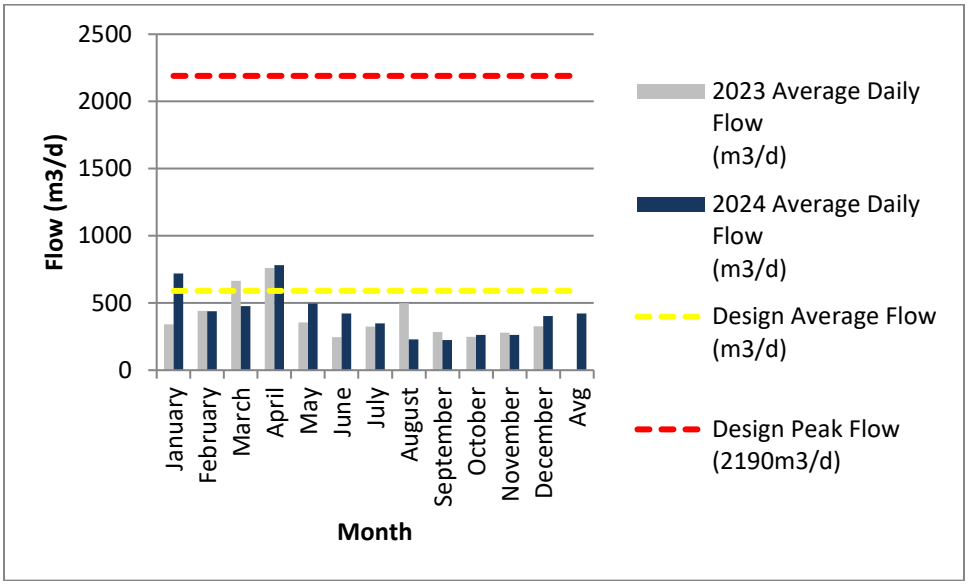
In 2024, all chemical and microbiological sample analyses were conducted by SGS Lakefield and SGS London. Temperature, pH and dissolved oxygen were conducted by staff at the treatment plant.

The receiving stream temperature is performed at Sixteen Mile Creek.

Flows

Detailed monthly flow information is summarized in Appendix A. The total flow treated in 2024 was 154,444.8m^3, which corresponds to a 6.4% increase from 2023 raw flows. The annual average daily flow for the reporting period was 422m^3/day, or 71.5% of the plant's rated design capacity of 590m^3/day (refer to Chart 1).

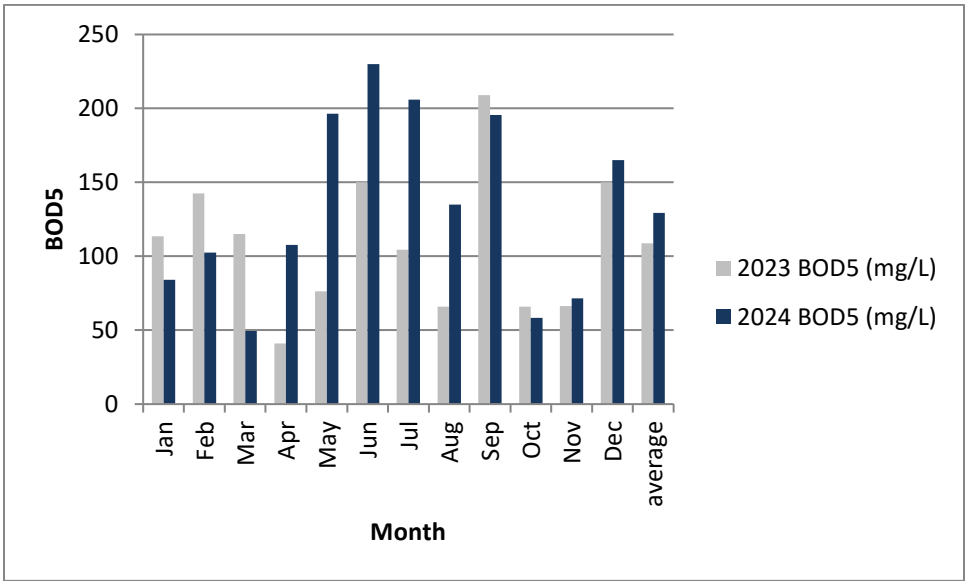
Chart 1. The average daily raw sewage flow to the plant in 2024 compared to 2023.



Raw Sewage Quality

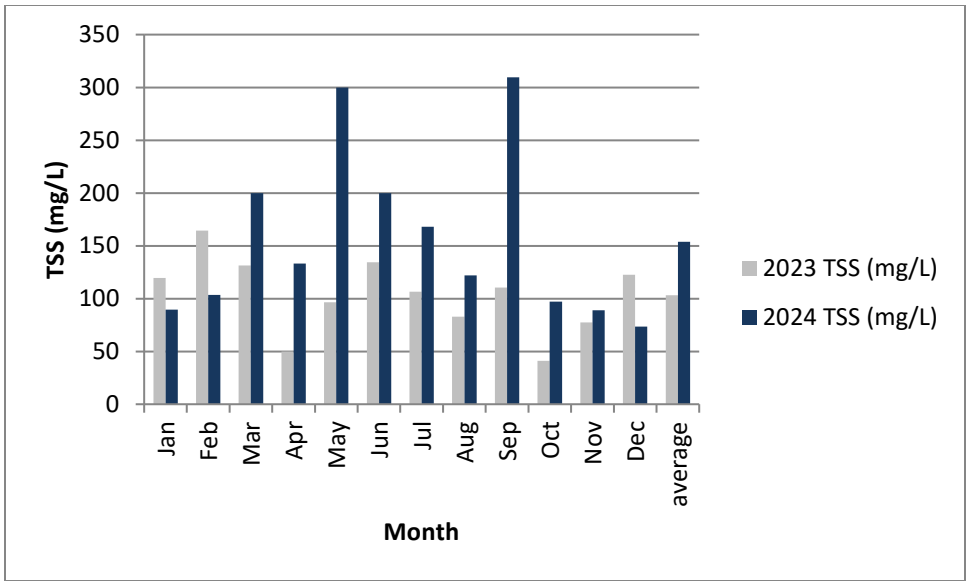
The annual average raw sewage BOD_5 concentration to the plant in 2024 was 129.35mg/L with a maximum concentration of 319mg/L. The annual average concentration of BOD_5 has increased 18.8% from 2023, refer to Chart 2.

Chart 2. Average monthly raw concentration of BOD_5 for 2024 compared to 2023.



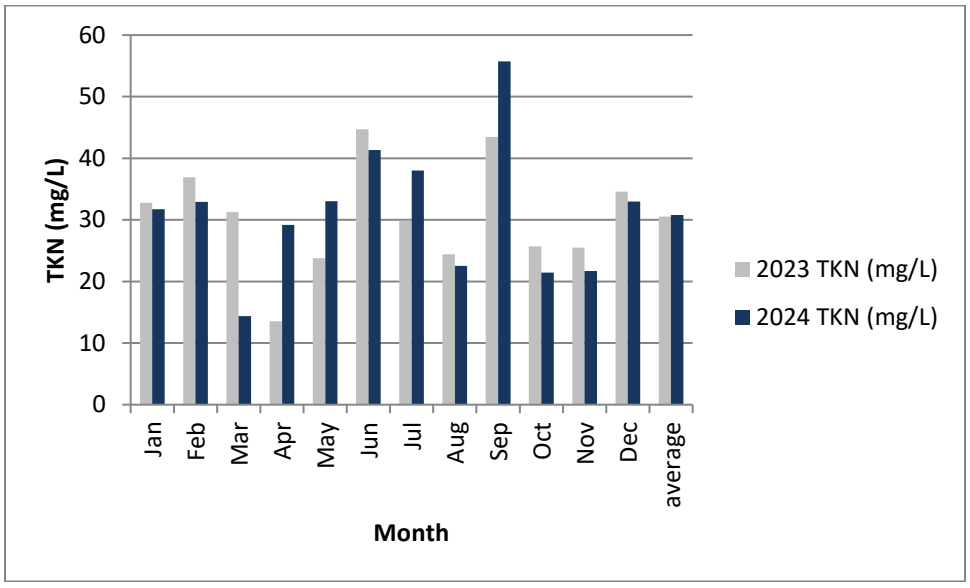
The annual average raw sewage total suspended solids (TSS) concentration to the plant in 2024 was 153.88mg/L, with a maximum of 411mg/L. The average concentration of TSS has increased 49% from 2023, refer to Chart 3.

Chart 3. Average monthly raw concentration of TSS for 2024 compared to 2023.



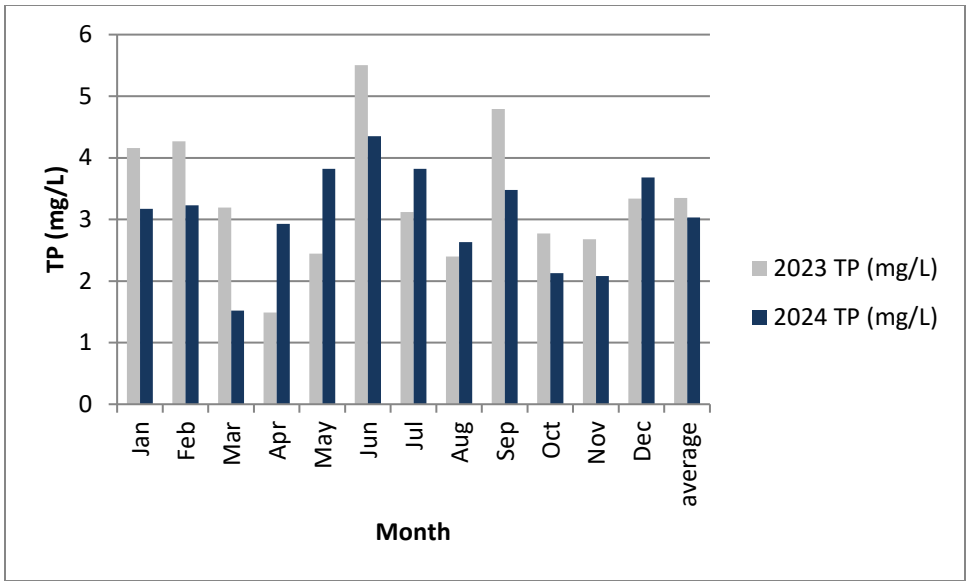
The annual average raw sewage Total Kjeldahl Nitrogen (TKN) concentration to the plant in 2024 was 30.8mg/L, with a maximum of 58.9mg/L. The average concentration of TKN has increased 0.9% from 2023, refer to Chart 4.

Chart 4. Average monthly raw concentration of TKN for 2024 compared to 2023.



The annual average raw sewage Total Phosphorus (TP) concentration to the plant in 2024 was 3.0mg/L, with a maximum of 5.74mg/L. The average concentration of TP has decreased 9.6% from 2023, refer to Chart 5.

Chart 5. Average monthly raw concentration of TP for 2024 compared to 2023.



Effluent Limits

Detailed analytical data is attached to this report as Appendix A. The following table provides a summary of the monthly average concentration and loading ranges compared to the limits set in the Environmental Compliance Approval.

Summary and Comparison of Compliance Data

Table 1. Monthly average concentration and loading ranges for 2024.

Parameter	Monthly Average Effluent Limit (mg/L)	Monthly Average Effluent Result Ranges (mg/L)	Monthly Average Loading Limit (kg/d)	Monthly Average Loading Result Ranges (kg/d)	Monthly Average Loading Results (kg/d)
BOD_5	10(a)	<2 – 3.67	6.9	0.50 – 2.9	1.2
	15(b)	2.5 – 4.0			
Suspended Solids	10(a)	2.3 – 8.3	6.9	0.95 – 6.5	1.96
	15(b)	<2.0 – 8.5			
Total Phosphorus	0.5(a)	0.06 - 0.25	0.4	0.02 -0.20	0.05
	1.0(b)	0.05 – 0.23			
Total (Ammonia + Ammonium) Nitrogen	3.0(a)	<0.1 – <0.1	2.2	0.02 – 1.2	0.09
	5.0(b)	<0.1 –1.7			
E. coli	200	1 – 49.89			
Unionized Ammonia*	0.1	0.000– 0.01			

NOTE: (a) limit applies during the non-freezing period
(b) limit applies during the freezing period
*single sample results

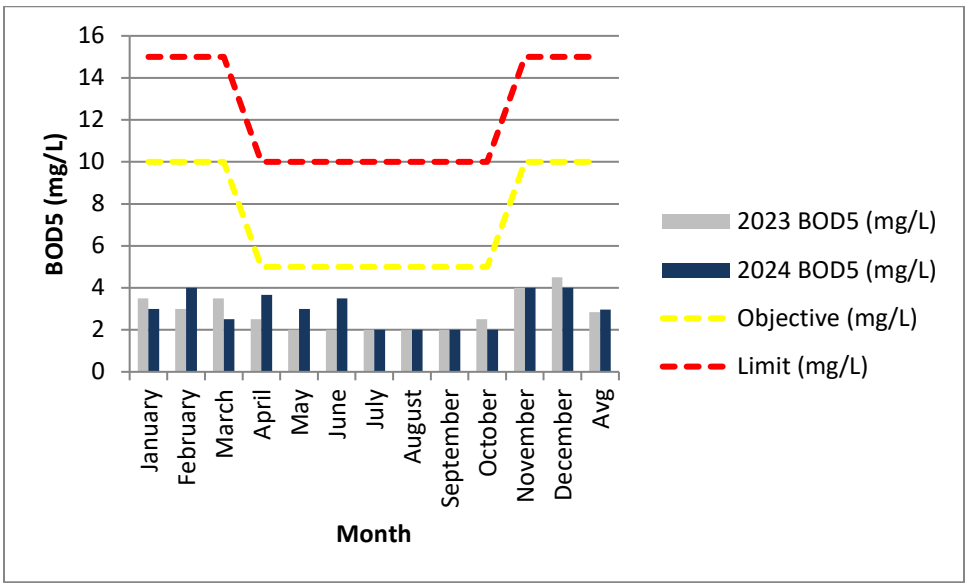
Based on the definition in the ECA, the monthly average loading limit is to be obtained by multiplying the average annual concentration with the average daily flow over the same period of time.

Discussion on Monitoring Data as Compared to the Effluent Limits

There were no non-compliances with Environmental Compliance Approval limits during the 2024 reporting year.

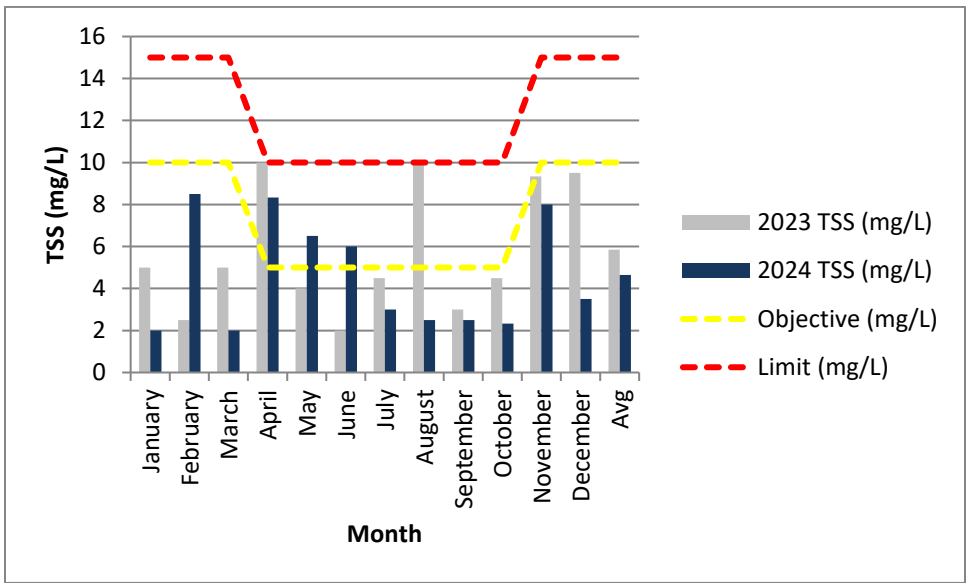
The annual average effluent BOD_5 for 2024 was 2.96mg/L, which is a 4% increase from 2023 (refer to Chart 6). The annual average loading of BOD_5 in 2024 was 1.2kg/d. Refer to Table 1 for a list of monthly average effluent limits and loading limits.

Chart 6. The effluent monthly average concentration of BOD_5 in 2024 compared to 2023 concentrations.



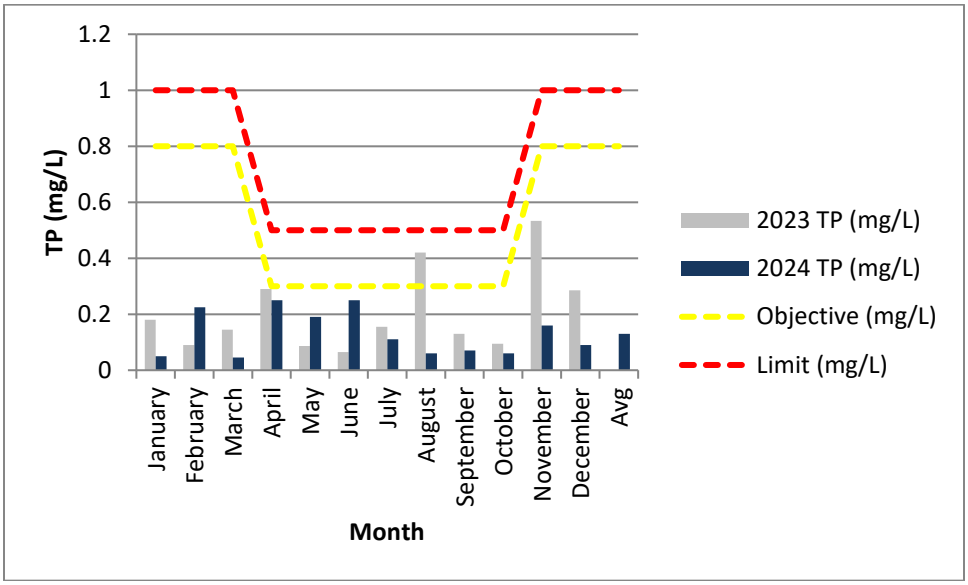
The annual average effluent Total Suspended Solids (TSS) for 2024 was 4.65mg/L, which is a 20.5% decrease from 2023 (refer to Chart 7). The annual average loading of TSS in 2024 was 1.96kg/d. Refer to Table 1 for a list of monthly average effluent limits and loading limits.

Chart 7. The effluent monthly average concentration of TSS in 2024 compared to 2023 concentrations.



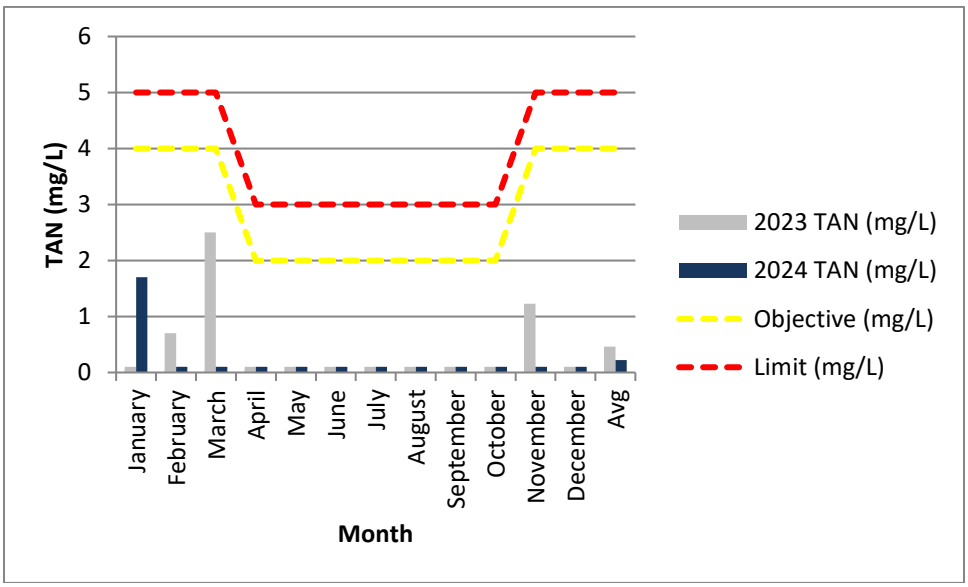
The annual average effluent Total Phosphorus (TP) for 2024 was 0.13mg/L, which is a 38% decrease from 2023 (refer to Chart 8). The annual average loading of TP in 2024 was 0.05kg/d. Refer to Table 1 for a list of monthly average effluent limits and loading limits.

Chart 8. The effluent monthly average concentration of TP in 2024 compared to 2023 concentrations.



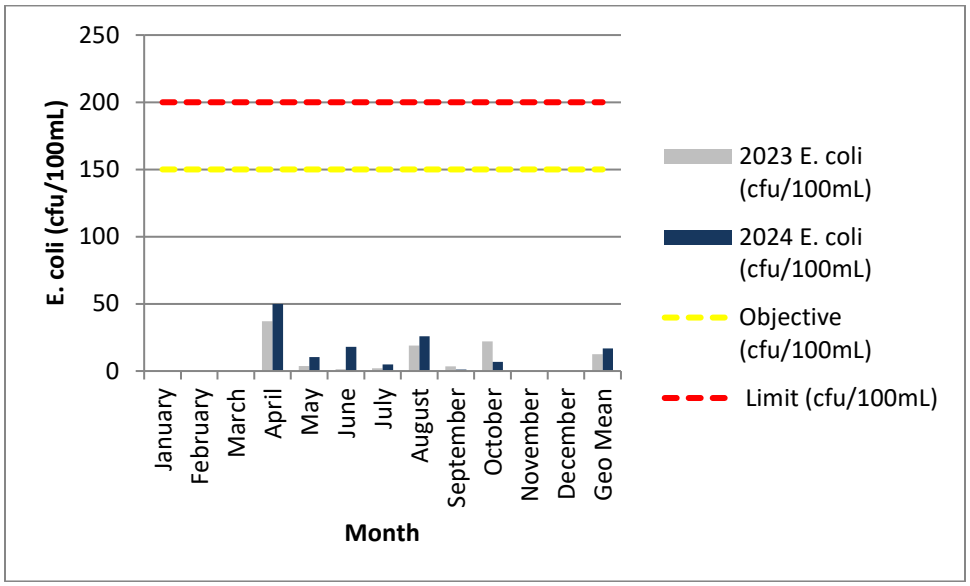
The annual average effluent Total Ammonia + Ammonium Nitrogen (TAN) for 2024 was 0.22mg/L, which is a 52% decrease from 2023 (refer to Chart 9). The annual average loading of TAN in 2024 was 0.09kg/d. Refer to Table 1 for a list of monthly average effluent limits and loading limits.

Chart 9. The effluent monthly average concentration of TAN in 2024 compared to 2023 concentrations.



The annual effluent geometric mean for E. coli in 2024 was 16.7cfu/100mL, which is a 32% increase from 2023, (refer to Chart 10). Refer to Table 1 for a list of monthly geometric mean effluent limits.

Chart 10. The effluent monthly geometric mean concentration of E. coli in 2024 compared to 2023 concentrations.



The Rodney WWTP performed well in 2024 meeting all compliance limits identified in the ECA.

Section 4: Effluent Quality Assurance

Effluent quality assurance is evaluated by monitoring parameters and changes throughout the plant processes. The operators monitor the aeration tanks by performing weekly tests on the mixed liquor. These tests include dissolved oxygen, pH, temperature, settling tests, Mixed Liquor Suspended Solids (MLSS), and Mixed Liquor Volatile Suspended Solids (MLVSS). As well, monitoring of the alum dosages, wasting volumes and Return Activated Sludge Suspended Solids is completed. Data collected from these tests provide information to the operator to make the appropriate adjustments in the treatment process and take corrective actions before the plant reaches its effluent limits.

Effluent Objectives

The following table shows the monthly average effluent concentration ranges and loadings compared to the effluent objectives outlined in the Environmental Compliance Approval.

Table 3. Monthly average effluent concentration and loadings compared to objectives.

Parameter	Average Monthly Effluent Objective (mg/L)	Average Monthly Effluent Result Ranges (mg/L)	Average Monthly Loading Objectives (kg/day)	Average Monthly Loading Result Ranges (kg/day)	**Monthly Average Loading Results (kg/d)**
BOD_5	5(a)	<2 – 3.67	3.9	0.50 – 2.9	1.2
	10(b)	2.5 – 4.0			
Suspended Solids	5(a)	2.3 – 8.3	3.9	0.95-6.5	1.96
	10(b)	<2.0 – 8.5			
Total Phosphorus	0.3(a)	0.06 - 0.25	0.28	0.02 -0.20	0.05
	0.8(b)	0.05 – 0.23			
Total (Ammonia + Ammonium) Nitrogen	2.0(a)	<0.1 – <0.1	1.57	0.02 – 1.2	0.09
	4.0(b)	<0.1 –1.7			
E. coli	150	1 – 49.89			
Dissolved Oxygen	5	7.64 – 10.48			

Discussion of Effluent Objectives

The Rodney WWTP met all the average loading objectives and monthly average concentration objectives in 2024 set out in the Environmental Compliance Approval with a few exceptions.

The TSS objective was exceeded in April, May and June. High influent flows were the reason for these exceedances. Wasting volumes and alum dosages were adjusted and closely monitored to ensure compliance with specified limits.
The annual average flow for 2024 was 422m^3/d, which is below the rated capacity of 590m^3/d.

Section 5: Maintenance

Regular scheduled monthly preventative maintenance is assigned and monitored using the Workplace Management System (WMS) program. The following is a summary of maintenance performed other than WMS work orders:

- Decant Pump
- RAS/WAS pump maintenance
- Flow meter repairs
- New Pump Station transducer
- Bar screen repairs
- Filter maintenance
- Mixer repairs
- Compressor maintenance

Section 6: Operating Problems and Corrective Actions

High influent flows were experienced throughout 2023, which continued into 2024. These high flow events resulted in solids carry over and thus elevated TSS concentrations in the effluent.

Additionally, cold temperatures have affected the treatment of the sewage, inhibiting the nitrification process. The mechanical surface aerators in the aeration tanks further lower the temperature of the mixed liquors thus affecting the nitrification process. Adjustments are made to the mixed liquor suspended solids concentrations in the aeration tanks during the winter months, which has ensured compliance with effluent limits however, during periods of extreme cold these corrective actions are not always adequate. A replacement of the surface aerators with mechanical aerators has been proposed. This will not only improve the treatment process but will also be more energy efficient.

The collection system on Third Street has required frequent monitoring due to sewage backing up. This area is routinely inspected and flushed.

Section 7: Proposed Alterations, Extensions or Replacements

Recommended capital upgrades to the system for 2025 (brought forward from 2021) include:

- clarifier overhaul,
- alum tank replacement (including building work),
- lagoon decant upgrade,
- dissolved oxygen analyzer,
- facility lighting,
- valve replacement,
- collection system flushing/inspection and pump station clean out.

A substantial funding application was approved to help fund the above upgrades. The design is underway.

Section 8: Sludge Volume and Handling Methods

The lagoon is used for sludge storage ad digestion as per the Environmental Compliance Approval. The waste activated sludge (WAS) is transferred to the lagoon for processing. The sludge is allowed to settle at the bottom of the lagoon and the liquid is pumped back to the head of the plant for treatment. In 2024, the amount of WAS transferred to the lagoon was approximately 1,460m^3. It is anticipated that a similar amount will be transferred in 2025.

Section 9: Calibration and Maintenance

Annual maintenance on the generator was completed by Albert's Generator Services in August.

Flowmetrix Technical Services Inc. performed the annual calibration on the flow meter in April.

In house meters for pH and dissolved oxygen are calibrated by OCWA operators as per manufacturer's instructions.

Section 10: Evaluation for the need of Modifications to the Works

Significant upgrades are proposed for the Works. See Section 7.

There were no by-pass events at the Rodney WWTP during 2024.

The Rodney Wastewater Treatment Plant can direct raw sewage from the pump station to the lagoon when there is a power failure resulting in an extended outage or if there are high flows to the plant.

Section 11: Summary

Overall, the Rodney Wastewater Treatment Plant provided effective treatment in 2024, with no non-compliances and very few objective exceedances. There were no community complaints received for the treatment system during the reporting period. Capital improvements to the system will ensure continued success in the operation of the plant and improve the effluent quality.

APPENDIX A

Analytical Data

						January 2024 Stream < 5°C		February 2024 Stream < 5°C		March 2024 Stream <5°C		April 2024 Stream >5oC		May 2024 Stream >5oC		June 2024 Stream >5oC		July 2024 Stream >5oC		August 2024 Stream >5oC		September 2024 Stream >5oC		October 2024 Stream >5oC		November 2024 Stream >5oC		December 2024 Stream <5oC		Summary	Annual Loading
		Objective Concentration	Objective Loading	Limits	Loading Limits	Results	Loading	Results	Loading	Results	Loading	Results	Loading	Results	Loading	Results	Loading	Results	Loading	Results	Loading	Results	Loading	Results	Loading	Results	Loading	Results	Loading		
Raw Flow (m3/d)	Avg	590		590 (ann)		720.32581		439.78621		477.36452		781.45		494.92		422.50		348.62		229.91		225.03		261.31		261.82		401.97		421.98	
	Max			2190		1279.5		1196.1		993.1		2604.4		742.7		530		467.4		371.6		303.2		295.1		312.9		683.4		2604.4	
	Min					403.8		80.6		100.8		110		377		46.7		218.6		1.3		24.6		242.6		122.3		146.1		1.3	
	Sum					22330.1		12753.8		14798.3		23443.6		15342.5		12674.92		10807.1		7127.2		6751		8100.7		7854.5		12461.1		154444.82	
Effluent Flow (m3/d)	Avg					720.32581		439.78621		477.36452		781.45		494.92		422.50		348.62		229.91		225.03		261.31		261.82		401.97		421.98	
	Max					1279.5		1196.1		993.1		2604.4		742.7		530		467.4		371.6		303.2		295.1		312.9		683.4		2604.4	
	Min					403.8		80.6		100.8		110		377		46.7		218.6		1.3		24.6		242.6		122.3		146.1		1.3	
	Sum					22330.1		12753.8		14798.3		23443.6		15342.5		12674.92		10807.1		7127.2		6751		8100.7		7854.5		12461.1		154444.82	
Raw BOD5 (mg/L)	Avg					84	60.51	102.5	45.1	49.5	23.6	107.67	84.1	196.5	97.3	230	97.2	206	71.8	135	31.0	192.5	43.3	58.33	15.2	71.5	18.7	165	66.3	129.35	54.6
	Max					100		139		77		134		254		319		261		221		201		93		107		224		319	
	Min					68		66		22		86		139		141		151		49		184		16		36		106		16	
Raw SS (mg/L)	Avg					89.5	64.47	103.5	45.5	200	95.5	133.33	104.2	300	148.5	200	84.5	168	58.6	122	28.0	309.5	69.6	97	25.3	89	23.3	73.5	29.5	153.88	64.9
	Max					100		135		269		179		411		257		184		180		327		159		110		94		411	
	Min					79		72		131		102		189		143		152		64		292		14		68		53		14	
Raw TKN (mg/L)	Avg					31.75	22.87	32.9	14.5	14.4	6.9	29.17	22.8	33.05	16.4	41.35	17.5	38	13.2	22.55	5.2	55.75	12.5	21.43	5.6	21.7	5.7	32.95	13.2	30.79	13.0
	Max					34.3		40.4		23.8		37		36.4		42.7		38		34.2		58.9		33		37.2		39.9		58.9	
	Min					29.2		25.4		5		15		29.7		40		38		10.9		52.6		2.9		6.2		26		2.9	
Raw TP (mg/L)	Avg					3.17	2.28	3.23	1.42	1.52	0.73	2.93	2.29	3.82	1.89	4.35	1.84	3.82	1.33	2.63	0.60	3.48	0.78	2.13	0.56	2.08	0.54	3.68	1.48	3.03	1.28
	Max					3.53		4.14		2.54		3.95		4.57		4.67		3.97		3.86		5.74		3.19		3.74		4.06		5.74	
	Min					2.81		2.32		0.49		1.19		3.06		4.03		3.66		1.39		1.21		0.14		0.42		3.29		0.14	
Effluent BOD5 (mg/L)	Avg	5 (10)	3.9	10 (15)	6.9	< 3	2.16	< 4	1.8	< 2.5	1.2	< 3.67	2.9	< 3	1.5	3.5	1.5	< 2	0.7	< 2	0.5	< 2	0.5	< 2	0.5	4	1.0	< 4	1.6	< 2.96	1.2
	Max					4		6		3		5		4		4		< 2		< 2		< 2		< 2		5		6		6	
	Min					< 2		< 2		< 2		< 2		< 2		3		< 2		< 2		< 2		< 2		3		< 2		< 2	
Effluent SS (mg/L)	Avg	5 (10)	3.9	10 (15)	6.9	< 2	1.44	< 8.5	3.74	< 2	0.95473	8.33	6.51	6.5	3.217	6	2.535	3	1.046	< 2.5	0.575	2.5	0.563	< 2.33	0.609	8	2.095	< 3.5	1.407	< 4.65	1.962
	Max					< 2		15		2		13		8		7		3		3		3		3		9		5		15	
	Min					< 2		< 2		< 2		2		5		5		3		< 2		2		< 2		7		< 2		< 2	
Effluent TAN (mg/L)	Avg	2 (4)	1.57	3.0 (5.0)	2.2	< 1.7	1.22	< 0.1	0.04	< 0.1	0.05	< 0.1	0.08	< 0.1	0.05	< 0.1	0.04	< 0.1	0.03	< 0.1	0.02	< 0.1	0.02	0.1	0.03	< 0.1	0.03	< 0.1	0.04	< 0.22	0.09
	Max					3.3		< 0.1		< 0.1		0.1		< 0.1		< 0.1		< 0.1		0.1		< 0.1		< 0.1		< 0.1		< 0.1		3.3	
	Min					< 0.1		< 0.1		< 0.1		< 0.1		< 0.1		< 0.1		< 0.1		< 0.1		< 0.1		< 0.1		< 0.1		< 0.1		< 0.1	
Effluent TKN (mg/L)	Avg					< 2.35	1.69	2.4	1.06	< 0.9	0.43	1.6	1.25	< 0.5	0.25	< 0.7	0.30	< 1.05	0.37	< 0.5	0.11	< 1.15	0.26	< 0.6	0.16	< 0.5	0.13	0.85	0.34	< 1.09	0.46
	Max					4.2		2.8		1.3		1.9		< 0.5		0.9		1.6		< 0.5		1.8		0.8		< 0.5		1		4.2	
	Min					< 0.5		2		< 0.5		1		< 0.5		< 0.5		< 0.5		< 0.5		< 0.5		< 0.5		< 0.5		0.7		< 0.5	
Effluent NO2 (mg/L)	Avg					2.37	1.71	4.77	2.10	0.36	0.17	< 0.03	0.02	< 0.03	0.01	< 0.03	0.01	< 0.03	0.01	< 0.04	0.01	0.06	0.01	< 0.03	0.01	< 0.03	0.01	< 0.03	0.01	< 0.6	0.25
	Max					4.49		5.14		0.66		0.04		0.03		< 0.03		< 0.03		0.05		0.07		< 0.03		< 0.03		< 0.03		5.14	
	Min					0.24		4.4		0.05		< 0.03		< 0.03		< 0.03		< 0.03		< 0.03		0.04		< 0.03		< 0.03		< 0.03		< 0.03	
Effluent NO3 (mg/L)	Avg					14.58	10.50	10.43	4.6	15.65	7.5	9.75	7.6	18.5	9.2	19.55	8.3	20.6	7.2	21.6	5.0	23.2	5.2	< 16.22	4.2	24.85	6.5	22.15	8.9	< 17.7	7.5
	Max					21.4		13.1		16.9		16.3		19.9		20.5		21.9		27.1		24.1		25.9		25.1		22.6		27.1	
	Min					7.76		7.75		14.4		< 0.06		17.1		18.6		19.3		16.1		22.3		< 0.06		24.6		21.7		< 0.06	
Effluent TP (mg/L)	Avg	0.3 (0.8)	0.28	0.5 (1.0)	0.4	0.05	0.04	0.23	0.10	0.05	0.02	0.25	0.20	0.19	0.09	0.25	0.11	0.11	0.04	0.06	0.01	0.07	0.02	0.06	0.02	0.16	0.04	0.09	0.04	0.13	0.05
	Max					0.06		0.3		0.06		0.46		0.2		0.27		0.12		0.09		0.09		0.08		0.17		0.14		0.46	
	Min					0.04		0.15		0.03		0.08		0.18		0.22		0.1		0.03		0.04		0.04		0.15		0.03		0.03	
Effluent pH	Avg					7.24		7.53		7.48		7.7		7.49		7.57		7.67		7.72		7.45		7.65		7.53		7.67		7.56	
	Max					7.77		8.04		7.93		8.07		7.79		7.83		8.11		8.03		7.77		8.25		7.73		8.15		8.25	
	Min					6.84		6.91		6.92		7.41		7.11		7.11		6.9		7.3		6.74		7.19		7.34		7.31		6.74	
Effluent Alkalinity (mg/L)	Avg					145		132		115		145		111.5		94.5		86.5		71		50.5		54		60.5		106		97.77	
	Max					162		157		135		171		115		103		93		82		60		58		70		128		171	
	Min					128		107		95		127		108		86		80		60		41		51		51		84		41	
Effluent E. coli (cfu/100	Geomean	150		200								49.89		10.39		18.11		4.9		25.92		1		6.93						16.73	
	Max											131		108		164		24		84		0		16						164	
	Min											19		0		2		0		8		0		3						0	
Effluent Temp. (oC)	Avg					6.75		6.33		7.27		9.89		15.06		18.23		19.99		19.72		19.53		13.36		12.33		5.74		13.03	
	Max					11.2		9.6		8.4		12.9		18.4		21.2		22		23.1		20.7		18.9		15.2		8.3		23.1	
	Min					2.7		4.1		6.2		7.2		12.6		15		16.4		16.1		18.7		10.4		9.6		2.7		2.7	
Effluent DO (mg/L)	Avg	5 (min)				9.87		9.71		9.09		9.11		8.09		7.84		7.72		8.01		7.64		8.54		8.55		10.48		8.7	
	Max					11.35		11.02		10.8		9.91		8.91		8.78		8.33		8.81		7.92		9.82		9.71		12.12		12.12	
	Min					8.82		8.11		7.87		8.09		7.24		7.21		7.43		7.29		7.22		7.36		7.49		8.79		7.21	
Eff	Avg					0.01		0		0		0		0		0		0		0		0		0		0		0		0	
Unionized Amm	Max	0.1		0.1		0.01		0		0		0		0		0		0		0		0		0		0		0		0.01	
	Min					0		0		0		0		0		0		0		0		0		0		0		0		0	