



PLYMPTON - LAKESHORE AREA SEWAGE TREATMENT PLANT

Works #120002610

2024 ANNUAL REPORT OF OPERATIONS

Managed, Operated and Maintained by:

Jacobs

March 2025

Ontario Ministry of Environment, Conservation and Parks
1094 London Road,
Sarnia, Ontario
N7S 1P1

MECP District Manager,

On behalf of the Corporation of the Town of Plympton-Wyoming in Lambton County, OMI (Jacobs) is pleased to submit to you the annual compliance report for the Plympton Lakeshore Area Sewage Treatment Plant. Please feel free to contact the undersigned if you have any questions regarding this report.

Respectfully Submitted,

Christopher Toulouse

A handwritten signature in black ink, appearing to read 'Chris Toulouse', written in a cursive style.

Jacobs - Lead Operator

cc: Paul daSilva, Director of Public Works, Town of Plympton-Wyoming

Joe Bloomfield, Jacobs, Project Manager

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Introduction:

The Plympton-Wyoming Lakeshore Area Sewage Treatment Plant (STP) was constructed in 1995 to replace existing septic systems along the shores of Lake Huron.

The STP is classified as a Class II treatment with a Class II collection system. The system operates under ECA # 7216-ABBPRD, issued July 18th, 2016.

OMI (Jacobs) is the Operating Authority for the treatment plant, collection system pump stations and residential grinder pumps, on behalf of the Corporation of the Town of Plympton-Wyoming. The plant has a design capacity of 3,300 m³/day with a peak flow rate of 10,500 m³/day. Total annual Effluent flow was 488,363 m³ with an average of 1,334.33 m³/day or 40.43 % of capacity.

The STP is a secondary extended aeration plant with grit removal, fine bubble aeration, clarification, and ultraviolet disinfection.

The STP is equipped with a back-up power generator to maintain operations of the plant during power emergencies.

Pump Stations & Collection System:

The collection system now consists of 14 pumping stations.

The collection system pump stations also receive flow from 36 residential grinder pumps at cottages located along Lake Huron.

Pump stations are checked on a weekly basis and have alarm monitoring capabilities 24 hr/day. Pump run time hours are documented during the weekly checks.

On-site standby generators are installed at all the pumping stations. This has eliminated the use of portable generators and eliminated the risks associated with power outages.

SECTION A

A summary and interpretation of all monitoring data and a comparison to the effluent limits outlined in Effluent Limits Condition, including an overview of the success and adequacy of the Works.

The Treated Effluent discharges through a 300 mm outfall pipe into Lake Huron. The end of effluent pipe is located approximately 300 m offshore and is equipped with a diffuser fitted with fourteen (14) diffuser risers. The Effluent sampling point is located downstream of the UV system and upstream of the effluent Parshall flume.

In accordance with Section 7 and 9 of the ECA, a 24-hour composite sample of the Final Effluent is collected weekly and analyzed by SGS Laboratories for the parameters: CBOD₅, TSS, Total Phosphorous, and TAN. A weekly grab sample is also collected and analyzed for E-coli by SGS Laboratories. The onsite operator completes analysis of pH, temperature, and reactive phosphorous.

The monthly Lab Data Sheets for the reporting year can be found in Appendix A. Flow vs Precipitation data was collected and developed during the reporting year and can be found in Appendix B.

Effluent Parameter	Effluent Design Objective	Effluent Design Limits
CBOD ₅	10 mg/L	15 mg/L
Total Suspended Solids	10 mg/L	15 mg/L
Total Phosphorous	0.50 mg/L	1.0 mg/L
Total Ammonia Nitrogen	4.0 mg/L (Dec 1 – April 30)	5.0 mg/L (Dec 1 – April 30)
Total Ammonia Nitrogen	2.0 mg/L (May 1 – Nov 30)	3.0 mg/L (May 1 – Nov 30)
E-coli	100 organisms per 100 mL	200 organisms per 100 mL
pH	6.5 – 8.5 inclusive	6.0 – 9.5 inclusive

Figure 1: Monthly / Yearly Average Results

2024 MONTHLY/YEARLY AVERAGE RESULTS

Plympton S.T.P.

Operations Number: 120002610

YEAR: 2024

Operating Authority: Jacobs

Town of Plympton-Wyoming

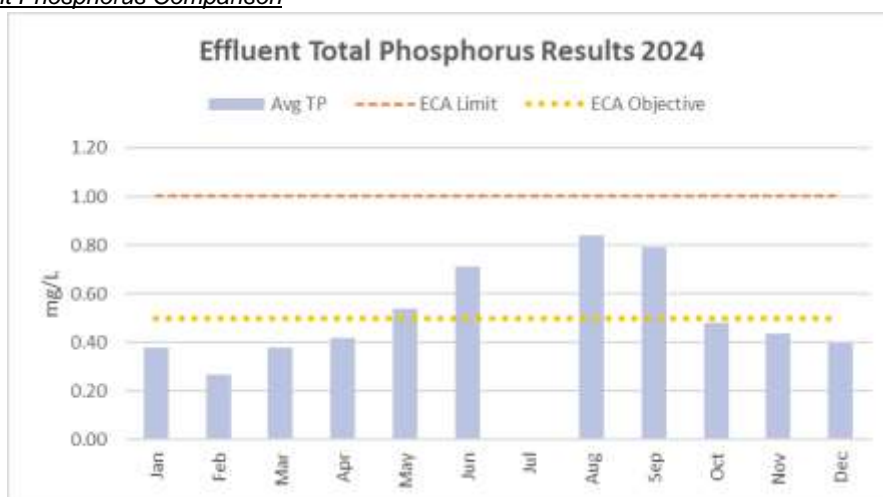
	Raw Influent				Final Effluent							
	BOD ₅ mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	CBOD ₅ mg/L	S. S. mg/L	Total P mg/L	Ammonia NH ₃ mg/L	Unionized Ammonia mg/L	E-Coli Per 100 mL	Reactive P mg/L	pH
January	42	80	20.50	2.00	2.20	11.60	0.38	0.10	0.0002	46.0	0.28	7.01
February	136	140	23.30	2.40	2.50	10.30	0.27	0.10	0.0003	28.0	0.18	7.06
March	154	240	40.90	4.10	2.80	8.80	0.38	0.10	0.0002	70.0	0.33	6.78
April	122	163	33.60	3.60	2.80	9.20	0.42	1.48	0.0032	70.0	0.34	6.91
May	174	164	30.80	3.50	2.00	9.50	0.54	0.10	0.0003	89.0	0.51	6.81
June	155	258	34.20	3.80	2.00	11.30	0.71	0.10	0.0002	79.0	0.64	6.62
July	275	336	43.60	5.20	5.60	448.20	15.96	0.38	0.0031	88.0	0.84	6.94
August	164	220	22.60	2.87	2.00	5.80	0.84	0.55	0.0016	48.0	0.76	6.88
September	185	257	45.10	4.74	2.00	6.50	0.79	0.10	0.0003	23.0	0.69	6.81
October	166	159	43	4.61	2.00	6.00	0.48	0.10	0.0004	63.0	0.41	6.97
November	201	225	45.30	4.45	2.00	6.25	0.44	0.10	0.0007	9.6	0.39	7.33
December	185	225	41.9	4.81	3.00	8.60	0.40	0.16	0.0011	129.2	0.29	7.41
Min	42.0	80.0	20.50	2.00	2.00	5.80	0.27	0.10	0.000	9.6	0.18	6.62
Max	275.0	336.0	45.30	5.20	5.60	448.20	15.96	1.48	0.003	129.2	0.84	7.41
Yearly Average	163.3	205.6	35.40	3.84	2.58	45.17	1.80	0.28	0.001	61.9	0.47	6.96

*July E.Coli Result unreliable. SGS Reported that July 16th sample was Overgrown (NDOGEC)

Figure 2: Removal Efficiencies

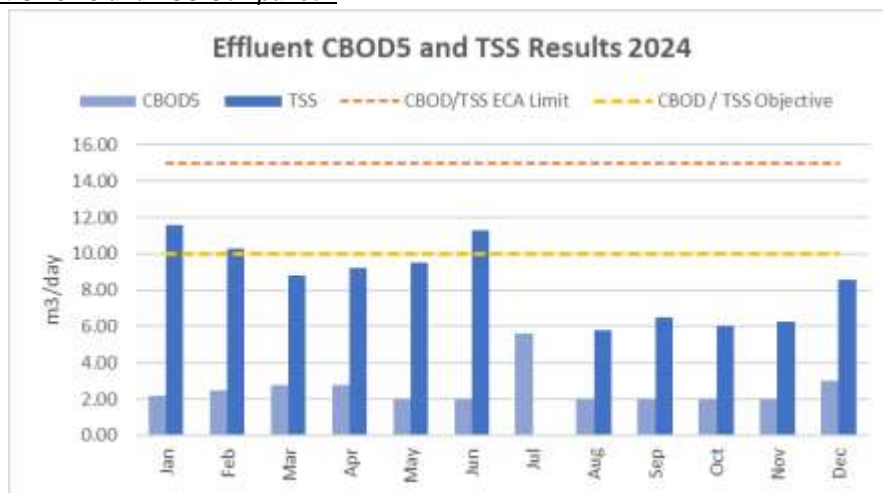
Removal Efficiency						
	Influent S.S. mg/L	Final S.S. mg/L	Removal Efficiency %	Influent Total P mg/L	Final Total P mg/L	Removal Efficiency %
Jan	80	11.60	85.50	2.00	0.38	81.00
Feb	140	10.30	92.64	2.40	0.27	88.75
Mar	240	8.80	96.33	4.10	0.38	90.73
Apr	163	9.20	94.36	3.60	0.42	88.33
May	164	9.50	94.21	3.50	0.54	84.57
Jun	258	11.30	95.62	3.80	0.71	81.32
Jul	336	448.20	-33.39	5.20	15.96	-206.92
Aug	220	5.80	97.36	2.87	0.84	70.73
Sept	257	6.50	97.47	4.74	0.79	83.33
Oct	159	6.00	96.23	4.61	0.48	89.59
Nov	225	6.25	97.22	4.45	0.44	90.22
Dec	225	8.60	96.18	4.81	0.40	91.73
		Min	-33.39		Min	-206.92
		Max	97.47		Max	91.73
		Average	84.14		Average	61.12

Figure 3: Effluent Phosphorus Comparison



*July Total Phosphorus Result of 15.96mg/L removed to allow proper charting

Figure 4: Effluent CBOD5 and TSS Comparison

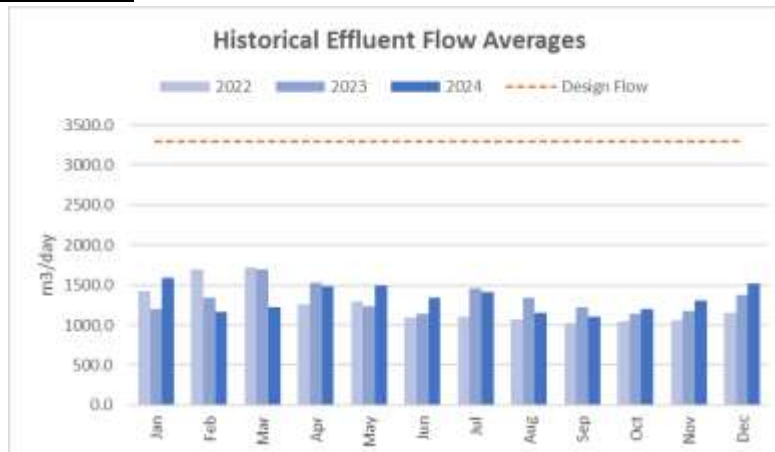


*July Total Suspended Solids Result of 448.2mg/L removed to allow proper charting

Figure 5: Effluent Flows

JACOBS OMI Plympton STP 2024 EFFLUENT FLOW REPORTS													
DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	
1	1495	1573	1070	1213	1375	1456	1,287	1048	1285	1081	1117	1349	m³/d
2	1385	1450	1,124	1317	1300	1524	1,222	1071	1,227	1,052	1,136	1261	m³/d
3	1344	1420	1130	1533	1650	1399	1,215	1120	1,089	1,053	1,190	1251	m³/d
4	1291	1377	1022	1346	1516	1347	1,209	1107	1,052	1,051	1,128	1290	m³/d
5	1270	1270	1116	1326	1478	1448	1,237	1111	1,089	1,082	1,124	1262	m³/d
6	1272	1205	1099	1312	1339	1414	1,293	1373	1,079	1,135	1,156	1245	m³/d
7	1270	1219	1045	1315	1351	1356	1,270	1151	1,485	1,068	1,087	1288	m³/d
8	1135	1184	1135	1240	1420	1512	1,199	1096	1,264	1,057	1,125	1310	m³/d
9	1532	1146	1844	1217	1329	1553	1,201	1091	1,101	1,074	1,173	1709	m³/d
10	1898	1201	1497	1184	1301	1410	2,300	1137	1,059	1,043	1,468	1550	m³/d
11	1588	1199	1340	1927	1544	1362	1,618	1133	1,030	1,076	1,293	1449	m³/d
12	1834	1089	1262	2832	1484	1329	1,389	1046	1,109	1,127	1,171	1357	m³/d
13	2363	1119	1243	2107	1367	1320	1359	1023	1,112	1,230	1,183	1336	m³/d
14	1728	1073	1290	1703	1314	1323	1,367	1018	1,093	1,437	1,308	1359	m³/d
15	1506	1104	1317	1460	1290	1356	2,378	995	1,112	1,793	1,303	1407	m³/d
16	1379	1082	1301	1384	1261	1344	3,521	1270	1,041	2,083	1,292	1398	m³/d
17	1306	1051	1275	1707	1638	1306	1,999	1306	1,022	1,394	1,306	1407	m³/d
18	1251	1147	1194	1674	1527	1283	1,579	1383	1,085	1,233	1,185	1400	m³/d
19	1204	1097	1183	1638	1495	1204	1,421	1191	1,049	1,232	1,207	1381	m³/d
20	1214	1043	1147	1548	1530	1297	1,402	1116	1,054	1,228	1,700	1382	m³/d
21	1213	1043	1111	1487	1476	1283	1,409	1129	1,044	1,148	1,558	1452	m³/d
22	1184	1051	1134	1376	1439	1303	1,167	1096	1,146	1,133	1,573	1424	m³/d
23	1237	1041	1203	1333	1382	1324	1,079	1086	1,075	1,134	1,757	1428	m³/d
24	1731	1073	1213	1291	1360	1204	1,095	1139	1,053	1,110	1,503	1488	m³/d
25	2135	1111	1148	1293	1409	1246	1,055	1138	1,065	1,154	1,426	1529	m³/d
26	3892	1003	1325	1265	1557	1194	1,064	1068	1,016	1,146	1,426	1599	m³/d
27	2151	1013	1320	1298	2428	1189	1,100	1203	998	1,203	1,351	1787	m³/d
28	1830	1180	1220	1354	2111	1215	1,106	1175	1,072	1,141	1,309	1847	m³/d
29	1588	1081	1253	1370	1694	1453	1,096	1105	1,109	1,171	1,285	2574	m³/d
30	1495		1291	1497	1530	1302	1,107	1401	1,036	1,115	1,333	2778	m³/d
31	1589		1265		1436		1,054	1444		1109		1975	m³/d
TOTAL	49,310	33,645	38,117	44,547	46,331	40,256	43,798	35,770	33,051	37,093	39,173	47,272	m³/d
MIN.	1135	1003	1022	1184	1261	1189	1054	995	998	1043	1087	1245	m³/d
MAX.	3892	1573	1844	2832	2428	1553	3521	1444	1485	2083	1757	2778	m³/d
AVG.	1590.65	1160.17	1229.58	1484.90	1494.55	1341.87	1412.84	1153.87	1101.70	1196.55	1305.77	1524.90	m³/d
% Cap	48.20%	35.16%	37.26%	45.00%	45.29%	40.66%	42.81%	34.97%	33.38%	36.26%	39.57%	46.21%	
Yearly Average:				1334.33	m³/d				Yearly Total:	488,363			m³
Design Capacity:				3,300	m³/d								
% of Design Capacity:				40.43%									

Figure 6: Historical Effluent Flows



SECTION B

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

The Plympton STP has continued to struggle with its removal efficiencies in recent years due to rain events and high level of developments. The Operating Authority is continuing to work with the Town to plan for capital improvements that will benefit the STP. Engineering has been brought in to help develop a long-term plan for the facility and its works.

No major operating problems were encountered at the Plympton STP for the reporting year outside its normal age-related mechanical problems.

SECTION C

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

Jacobs utilizes a computerized maintenance management system (CMMS) to track preventative and corrective maintenance activities. Preventative maintenance activities are carried out on a regular basis predetermined by the allocation and issuance of work orders including but not limited to equipment greasing, oil changes, and equipment inspections. The predetermined activities help to ensure optimal performance of the Works equipment and ensure the availability of equipment in emergency situations.

SECTION D

A summary of any effluent quality assurance or control measures undertaken in the reporting period.

The final effluent quality determines the efficiency of the treatment facility and if the standards set out in Section 6, 7 and 9 of the ECA are being met. The effluent quality is monitored on a regular basis by the Operating Authority for both legal and operational requirements. Proper sampling techniques and analysis are utilized to ensure that the Plympton-Lakeshore Area STP is operating efficiently and without impact to the environment. All records of process data are kept onsite at the Plympton-Lakeshore Area STP and electronic copies made available in the case of an emergency. The Operating Authority continues to improve upon the Standard Operating Procedures set out to ensure the integrity of the facility is maintained.

SECTION E

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

All flow meter calibrations are completed by Pierce Services and Solutions Inc. All calibration sheets are kept at the Plympton-Lakeshore Area STP and electronic copies kept as a backup.

The pH meter and probe used at the Plympton-Lakeshore Area STP undergoes a daily calibration and calibration verification as per manufacturer specifications. All data is recorded and kept at the Plympton-Lakeshore Area STP.

SECTION F

A description of efforts made, and results achieved in meeting the objectives of Design Objectives Condition.

The Plympton-Lakeshore Area Sewage Treatment Plant historically has struggled with meeting objectives for Total Suspended Solids and Total Phosphorus in the Effluent Stream. Operations continues to work with the facility as its flow characteristics change with recent high levels of development. The operations group continues to adjust return rates and chemical dosing rates to achieve adequate results. The facilities UV system channel and clarifier flights and chains undergo weekly cleaning to ensure that solids are not released into the stream.

In January, the objective for TSS was not achieved. The monthly average was 11.60 mg/L while the objective is 10.00 mg/L.

In February, the objective for TSS was not achieved. The monthly average was 10.30 mg/L while the objective is 10.00 mg/L.

In May, the objective for TP was not achieved. The monthly average was 0.54 mg/L while the objective is 0.50 mg/L.

In June, the objectives for TSS and TP were not achieved. The monthly averages were 11.30 mg/L and 0.71 mg/L respectfully, while the objectives are 10.00 mg/L and 0.50 mg/L.

In July, the ECA Limits for TSS, TP and E. Coli were not achieved. The area experienced a heavy precipitation storm the morning of a weekly sample resulting in elevated readings across the board. The event could not be avoided and was reported to all applicable parties as a monthly limit exceedance.

In August, the objective for TP was not achieved. The monthly average was 0.84 mg/L while the objective is 0.50 mg/L.

In September, the objective for TP was not achieved. The monthly average was 0.79 mg/L while the objective is 0.50 mg/L.

In December, the objective for E.Coli was not achieved. The monthly geomean average was 129.2 mpn/100mL while the objective is 100 mpn/100mL.

The Town of Plympton-Wyoming has developed and put out Cross-Connectional bylaws and has put together a grant program to assist homeowners with the separation of sump pumps from the sanitary sewer system and installation of a Back Flow Preventor. This program developed by the Town has had great feedback with the public and is designed to help reduce the overall flow that the Plympton-Lakeshore Area STP receives during both normal seasonal weather and abnormal rainfall events. It appears that it will take several years to fully see the affects the stated program has on the treatment plant.

SECTION G

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.

Waste activated sludge (WAS) is stored in aerobic digesters with the capacity to decant and transfer the supernatant back to the Headworks for further treatment. The decanted sludge is then transferred to one of two sludge storage lagoons onsite at the STP with a total capacity of 1500m³. A grab sample of the sludge is collected quarterly and analyzed by SGS Laboratories. A copy of the sludge analysis can be found in Appendix C of this report.

For the year 2025, it is anticipated that the volume of sludge and concentrations produced will increase slightly as new residential and business development within the area continues.

Sludge is currently hauled off site by Saul Farms and land applied in the neighboring farm fields. For the 2024 reporting year, a total volume of 1620 m³ was hauled off site for land application. This amount is slightly less than the 2023 volume, as mechanical breakdowns did not allow for complete draining of the sludge storage lagoons.

SECTION H

A summary of any complaints received during the reporting period and any steps taken to address the complaints.

No complaints were received regarding the Plympton-Lakeshore Area STP for the 2024 reporting year.

The collections system had a total of 3 complaints for sanitary sewer backups. All complaints were responded to, with most issues being on private property where homeowners were instructed to call a plumber for remediation.

SECTION I

A summary of all Bypass, Overflow, spill, or abnormal discharge events.

On January 9th, 2024, a spill occurred at Pump Station 5 (7162 Boonie Doone Rd.) caused by a leaking check valve in the valve chamber. The event lasted 3.25 hours with an estimated volume of 2m³ being spilt. Operations isolated the leaking check valve and made the necessary repairs to stop the leak. All applicable parties were notified of the event with a reference number 1-4KLJUB.

On January 26th, 2024, an overflow occurred at Pump Station 2 (3430 Queen St.) due to a heavy rain event with heavy snow melt. The event lasted 5.3 hours with an estimated volume of 200 m3 being discharged to Errol Creek. All applicable parties were notified of the event with a reference number 1-4M8BYJ.

On May 9th, 2024, a spill had occurred in front of 7126 Boonie Doone Rd due to a faulty air relief valve. The valve was isolated to stop the leak until repairs could be made. The event lasted 1.4 hours with an estimated volume of 10 m3. All applicable parties were notified of the event with a reference number 1-6MF9PN.

On December 31st, 2024, a spill had occurred at Pump Station 2 (3430 Queen St.) caused by a leaking check valve in the valve chamber. The event lasted 1.2 hours with an estimated volume of 10 m3 being spilt. All applicable parties were notified of the event with a reference number 1-FF4TV2.

SECTION J

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.

Nothing to report.

SECTION K

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

Nothing to report.

SECTION L

Any information the Water Supervisor requires from time to time.

Additional information is in the Appendix's and all other information is kept at the Plympton-Lakeshore Area Sewage Treatment Plant.

APPENDIX A

2024 WEEKLY ANALYTICAL AND MONTHLY AVERAGE RESULTS

Plympton S.T.P.

Operations Number: 120002610

Operating Authority: O.M.I. Canada Inc.

Municipality: Town of Plympton-Wyoming

January

2024

Doug Marsh

		AERATION M.L.S.S	RAW INFLUENT				FINAL EFFLUENT								Lab Report Received	
Test # Date	East Aeration S.S.	West Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia mg/L	E-Coli Per 100ml	Reactive P mg/L	pH -log[H] ⁺	Date	Init.
1 3-Jan		4432	42	80	20.5	2.0	2.0	17.0	0.69	0.10	0.0002	40	0.72	6.94	11-Jan	DM
2 9-Jan		4072					2.0	9.0	0.38	0.10	0.0002	34	0.29	6.83	17-Jan	CT
3 16-Jan		4300					2.0	13.0	0.28	0.10	0.0003	134	0.15	7.19	22-Jan	CT
4 23-Jan		4484					3.0	10.0	0.29	0.10	0.0002	22	0.17	7.08	29-Jan	CT
5 30-Jan		3254					2.0	9.0	0.25	0.10	0.0002	52	0.08	7.01	5-Feb	CT
ECA Limits							15.0	15.0	1.00			200				
Number of Tests			1	1	1	1	5	5	5	5	5	5	5	5		
Monthly Average:			42	80	20.5	2.01	2.2	11.6	0.38	0.10	0.0002	46	0.28	7.01		
Monthly Min:			42	80	20.5	2.0	2.0	9.0	0.25	0.10	0.0002	22	0.08	6.83		
Monthly Max:			42	80	20.5	2.0	3.0	17.0	0.69	0.10	0.0003	134	0.72	7.19		

Comments: Total Ammonia Nitrogen-3.0 mg/L May 1- Nov.30
Total Ammonia Nitrogen-5.0 mg/L Dec. 1- Apr.30

2024 WEEKLY ANALYTICAL AND MONTHLY AVERAGE RESULTS

Plympton S.T.P.

Operations Number: 120002610

Operating Authority: O.M.I. Canada Inc.

Municipality: Town of Plympton-Wyoming

February

2024

Doug Marsh

		AERATION M.L.S.S	RAW INFLUENT				FINAL EFFLUENT								Lab Report Received	
Test # Date	East Aeration S.S.	West Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia mg/L	E-Coli Per 100ml	Reactive P mg/L	pH -log[H] ⁺	Date	Init.
1 6-Feb		3576	136	140	23.3	2.4	3.0	12.0	0.24	0.10	0.0003	40	0.19	7.20	21-Feb	LT
2 13-Feb		3642					3.0	10.0	0.22	0.10	0.0002	44	0.18	7.01	21-Feb	LT
3 21-Feb		3868					2.0	11.0	0.30	0.10	0.0005	42	0.12	7.39	28-Feb	DM
4 26-Feb		3884					2.0	8.0	0.32	0.10	0.0001	8	0.21	6.62	4-Mar	DM
5																
ECA Limits							15.0	15.0	1.00			200				
Number of Tests			1	1	1	1	4	4	4	4	4	4	4	4		
Monthly Average:			136	140	23.3	2.42	2.5	10.3	0.27	0.10	0.0003	28	0.18	7.06		
Monthly Min:			136	140	23.3	2.4	2.0	8.0	0.22	0.10	0.0001	8	0.12	6.62		
Monthly Max:			136	140	23.3	2.4	3.0	12.0	0.32	0.10	0.0005	44	0.21	7.39		

Comments: Total Ammonia Nitrogen-3.0 mg/L May 1- Nov.30
Total Ammonia Nitrogen-5.0 mg/L Dec. 1- Apr.30

2024 WEEKLY ANALYTICAL AND MONTHLY AVERAGE RESULTS

Plympton S.T.P.
 Operations Number: 120002610
 Operating Authority: O.M.I. Canada Inc.
 Municipality: Town of Plympton-Wyoming

March

2024

Doug Marsh

	AERATION M.L.S.S		RAW INFLUENT				FINAL EFFLUENT								Lab Report Received	
Test # Date	East Aeration S.S.	West Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia mg/L	E-Coli Per 100ml	Reactive P mg/L	pH -log[H] ⁺	Date	Init.
1 5-Mar		4260	154	240	40.9	4.1	3.0	9.0	0.34	0.10	0.0001	28	0.27	6.62	13-Mar	DM
2 12-Mar		4172					2.0	13.0	0.34	0.10	0.0002	4400	0.31	6.89	19-Mar	DM
3 19-Mar		4192					4.0	6.0	0.36	0.10	0.0002	4	0.32	6.87	27-Mar	DM
4 26-Mar		4488					2.0	7.0	0.49	0.10	0.0001	50	0.41	6.72	2-Apr	DM
5																
ECA Limits							15.0	15.0	1.00			200				
Number of Tests			1	1	1	1	4	4	4	4	4	4	4	4		
Monthly Average:			154	240	40.9	4.12	2.8	8.8	0.38	0.10	0.0002	70	0.33	6.78		
Monthly Min:			154	240	40.9	4.1	2.0	6.0	0.34	0.10	0.0001	4	0.27	6.62		
Monthly Max:			154	240	40.9	4.1	4.0	13.0	0.49	0.10	0.0002	4400	0.41	6.89		

Comments: Total Ammonia Nitrogen-3.0 mg/L May 1- Nov.30
 Total Ammonia Nitrogen-5.0 mg/L Dec. 1- Apr.30

2024 WEEKLY ANALYTICAL AND MONTHLY AVERAGE RESULTS

Plympton S.T.P.
 Operations Number: 120002610
 Operating Authority: O.M.I. Canada Inc.
 Municipality: Town of Plympton-Wyoming

April

2024

Doug Marsh

	AERATION M.L.S.S		RAW INFLUENT				FINAL EFFLUENT								Lab Report Received	
Test # Date	East Aeration S.S.	West Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia mg/L	E-Coli Per 100ml	Reactive P mg/L	pH -log[H] ⁺	Date	Init.
1 2-Apr		4912	122	163	33.6	3.6	2.0	8.0	0.37	0.10	0.0003	30	0.26	7.09	12-Apr	DM
2 8-Apr		4492					2.0	4.0	0.29	0.10	0.0002	18	0.21	6.89	15-Apr	DM
3 16-Apr		4604					2.0	8.0	0.36	0.10	0.0002	22	0.30	6.87	22-Apr	DM
4 23-Apr		4704					4.0	14.0	0.47	0.60	0.0010	98	0.39	6.83	30-Apr	DM
5 30-Apr		4740					4.0	12.0	0.59	6.50	0.0141	1410	0.53	6.88	7-May	DM
ECA Limits							15.0	15.0	1.00			200				
Number of Tests			1	1	1	1	5	5	5	5	5	5	5	5		
Monthly Average:			122	163	33.6	3.56	2.8	9.2	0.42	1.48	0.0032	70	0.34	6.91		
Monthly Min:			122	163	33.6	3.6	2.0	4.0	0.29	0.10	0.0002	18	0.21	6.83		
Monthly Max:			122	163	33.6	3.6	4.0	14.0	0.59	6.50	0.0141	1410	0.53	7.09		

Comments: Total Ammonia Nitrogen-3.0 mg/L May 1- Nov.30
 Total Ammonia Nitrogen-5.0 mg/L Dec. 1- Apr.30

2024 WEEKLY ANALYTICAL AND MONTHLY AVERAGE RESULTS

Plympton S.T.P.
 Operations Number: 120002610
 Operating Authority: O.M.I. Canada Inc.
 Municipality: Town of Plympton-Wyoming

May
 2024
 Doug Marsh

		AERATION M.L.S.S		RAW INFLUENT				FINAL EFFLUENT								Lab Report Received	
Test # Date		East Aeration S.S.	West Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia mg/L	E-Coli Per 100ml	Reactive P mg/L	pH -log[H] ⁺	Date	Init.
1 7-May			5140	174	164	30.8	3.5	2.0	8.0	0.38	0.10	0.0004	104	0.34	7.18	14-May	DM
2 14-May			5444					2.0	8.0	0.41	0.10	0.0002	22	0.39	6.68	22-May	DM
3 22-May			4664					2.0	10.0	0.73	0.10	0.0002	60	0.70	6.64	31-May	DM
4 28-May			4784					2.0	12.0	0.65	0.10	0.0002	460	0.60	6.74	4-Jun	DM
5																	
ECA Limits								15.0	15.0	1.00			200				
Number of Tests				1	1	1	1	4	4	4	4	4	4	4	4		
Monthly Average:				174	164	30.8	3.50	2.0	9.5	0.54	0.10	0.0003	89	0.51	6.81		
Monthly Min:				174	164	30.8	3.5	2.0	8.0	0.38	0.10	0.0002	22	0.34	6.64		
Monthly Max:				174	164	30.8	3.5	2.0	12.0	0.73	0.10	0.0004	460	0.70	7.18		

Comments: Total Ammonia Nitrogen-3.0 mg/L May 1- Nov.30
 Total Ammonia Nitrogen-5.0 mg/L Dec. 1- Apr.30

2024 WEEKLY ANALYTICAL AND MONTHLY AVERAGE RESULTS

Plympton S.T.P.
 Operations Number: 120002610
 Operating Authority: O.M.I. Canada Inc.
 Municipality: Town of Plympton-Wyoming

June
 2024
 Doug Marsh

		AERATION M.L.S.S		RAW INFLUENT				FINAL EFFLUENT								Lab Report Received	
Test # Date		East Aeration S.S.	West Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia mg/L	E-Coli Per 100ml	Reactive P mg/L	pH -log[H] ⁺	Date	Init.
1 4-Jun			4720	155	258	34.2	3.8	2.0	10.0	0.59	0.10	0.0002	36	0.60	6.66	11-Jun	DM
2 11-Jun			4344					2.0	13.0	0.71	0.10	0.0002	270	0.62	6.68	17-Jun	DM
3 18-Jun			4400					2.0	11.0	0.71	0.10	0.0001	80	0.65	6.50	25-Jun	DM
4 25-Jun			4060					2.0	11.0	0.82	0.10	0.0002	50	0.67	6.64	3-Jul	DM
5																	
ECA Limits								15.0	15.0	1.00			200				
Number of Tests				1	1	1	1	4	4	4	4	4	4	4	4		
Monthly Average:				155	258	34.2	3.80	2.0	11.3	0.71	0.10	0.0002	79	0.64	6.62		
Monthly Min:				155	258	34.2	3.8	2.0	10.0	0.59	0.10	0.0001	36	0.60	6.50		
Monthly Max:				155	258	34.2	3.8	2.0	13.0	0.82	0.10	0.0002	270	0.67	6.68		

Comments: Total Ammonia Nitrogen-3.0 mg/L May 1- Nov.30
 Total Ammonia Nitrogen-5.0 mg/L Dec. 1- Apr.30

2024 WEEKLY ANALYTICAL AND MONTHLY AVERAGE RESULTS

Plympton S.T.P.
 Operations Number: 120002610
 Operating Authority: O.M.I. Canada Inc.
 Municipality: Town of Plympton-Wyoming

July
 2024
 Doug Marsh

	AERATION M.L.S.S		RAW INFLUENT				FINAL EFFLUENT								Lab Report Received	
Test # Date	East Aeration S.S.	West Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia mg/L	E-Coli Per 100ml	Reactive P mg/L	pH -log[H] ⁺	Date	Init.
1 3-Jul		4364	275	336	43.6	5.2	2.0	11.0	0.82	0.10	0.0002	116	0.74	6.75	10-Jul	DM
2 9-Jul		4396					2.0	16.0	1.10	0.10	0.0003	130	0.93	6.78	17-Jul	DM
3 16-Jul		4296					20.0	2200.0	76.20	1.40	0.0142		0.91	7.40	25-Jul	DM
4 23-Jul		4352					2.0	6.0	0.67	0.10	0.0004	56	0.68	6.95	30-Jul	DM
5 30-Jul		4380					2.0	8.0	1.03	0.20	0.0006	70	0.94	6.83	7-Aug	DM
ECA Limits							15.0	15.0	1.00			200				
Number of Tests			1	1	1	1	5	5	5	5	5	5	5	5		
Monthly Average:			275	336	43.6	5.22	5.6	448.2	15.96	0.38	0.0031	88	0.84	6.94		
Monthly Min:			275	336	43.6	5.2	2.0	6.0	0.67	0.10	0.0002	56	0.68	6.75		
Monthly Max:			275	336	43.6	5.2	20.0	2200.0	76.20	1.40	0.0142	130	0.94	7.40		

Comments: Total Ammonia Nitrogen-3.0 mg/L May 1- Nov.30
 Total Ammonia Nitrogen-5.0 mg/L Dec. 1- Apr.30

2024 WEEKLY ANALYTICAL AND MONTHLY AVERAGE RESULTS

Plympton S.T.P.
 Operations Number: 120002610
 Operating Authority: O.M.I. Canada Inc.
 Municipality: Town of Plympton-Wyoming

August
 2024
 Doug Marsh

	AERATION M.L.S.S		RAW INFLUENT				FINAL EFFLUENT								Lab Report Received	
Test # Date	East Aeration S.S.	West Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia mg/L	E-Coli Per 100ml	Reactive P mg/L	pH -log[H] ⁺	Date	Init.
1 7-Aug		4864	164	220	22.6	2.9	2.0	2.0	1.00	1.80	0.0052	50	0.76	6.86	19-Aug	DM
2 13-Aug		4704					2.0	6.0	0.90	0.10	0.0002	48	0.85	6.72	21-Aug	DM
3 20-Aug		4936					2.0	8.0	0.63	0.10	0.0004	56	0.64	7.02	27-Aug	DM
4 27-Aug		4896					2.0	7.0	0.83	0.20	0.0007	38	0.78	6.93	4-Sep	DM
5																
ECA Limits							15.0	15.0	1.00			200				
Number of Tests			1	1	1	1	4	4	4	4	4	4	4	4		
Monthly Average:			164	220	22.6	2.87	2.0	5.8	0.84	0.55	0.0016	48	0.76	6.88		
Monthly Min:			164	220	22.6	2.9	2.0	2.0	0.63	0.10	0.0002	38	0.64	6.72		
Monthly Max:			164	220	22.6	2.9	2.0	8.0	1.00	1.80	0.0052	56	0.85	7.02		

Comments: Total Ammonia Nitrogen-3.0 mg/L May 1- Nov.30
 Total Ammonia Nitrogen-5.0 mg/L Dec. 1- Apr.30

2024 WEEKLY ANALYTICAL AND MONTHLY AVERAGE RESULTS

Plympton S.T.P.
 Operations Number: 120002610
 Operating Authority: O.M.I. Canada Inc.
 Municipality: Town of Plympton-Wyoming

September

2024

Doug Marsh

Test # Date	AERATION M.L.S.S		RAW INFLUENT				FINAL EFFLUENT								Lab Report Received	
	East Aeration S.S.	West Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia mg/L	E-Coli Per 100ml	Reactive P mg/L	pH -log[H] ⁺	Date	Init.
1 3-Sep		5368	185	257	45.1	4.7	2.0	6.0	0.89	0.10	0.0004	22	0.84	6.88	11-Sep	DM
2 10-Sep		4916					2.0	7.0	0.76	0.10	0.0004	56	0.61	6.97	17-Sep	DM
3 17-Sep		5123					2.0	6.0	0.79	0.10	0.0002	6	0.69	6.60	24-Sep	DM
4 24-Sep		5044					2.0	7.0	0.70	0.10	0.0003	35	0.60	6.79	1-Oct	DM
5																
ECA Limits							15.0	15.0	1.00			200				
Number of Tests			1	1	1	1	4	4	4	4	4	4	4	4		
Monthly Average:			185	257	45.1	4.74	2.0	6.5	0.79	0.10	0.0003	23	0.69	6.81		
Monthly Min:			185	257	45.1	4.7	2.0	6.0	0.70	0.10	0.0002	6	0.60	6.60		
Monthly Max:			185	257	45.1	4.7	2.0	7.0	0.89	0.10	0.0004	56	0.84	6.97		

Comments: Total Ammonia Nitrogen-3.0 mg/L May 1- Nov.30
 Total Ammonia Nitrogen-5.0 mg/L Dec. 1- Apr.30

2024 WEEKLY ANALYTICAL AND MONTHLY AVERAGE RESULTS

Plympton S.T.P.
 Operations Number: 120002610
 Operating Authority: O.M.I. Canada Inc.
 Municipality: Town of Plympton-Wyoming

October

2024

Doug Marsh

Test # Date	AERATION M.L.S.S		RAW INFLUENT				FINAL EFFLUENT								Lab Report Received	
	East Aeration S.S.	West Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia mg/L	E-Coli Per 100ml	Reactive P mg/L	pH -log[H] ⁺	Date	Init.
1 1-Oct		4828	166	159	43.0	4.6	2.0	8.0	0.56	0.10	0.0002	340	0.46	6.55	9-Oct	DM
2 8-Oct		5126					2.0	5.0	0.44	0.10	0.0002	8	0.38	6.82	16-Oct	DM
3 16-Oct		5448					2.0	7.0	0.50	0.10	0.0004	260	0.41	7.09	23-Oct	DM
4 22-Oct		4836					2.0	5.0	0.47	0.10	0.0006	22	0.39	7.24	29-Oct	DM
5 29-Oct		5188					2.0	5.0	0.43	0.10	0.0005	40	0.42	7.16	5-Nov	DM
ECA Limits							15.0	15.0	1.00			200				
Number of Tests			1	1	1	1	5	5	5	5	5	4	5	5		
Monthly Average:			166	159	43.0	4.61	2.0	6.0	0.48	0.10	0.0004	63	0.41	6.97		
Monthly Min:			166	159	43.0	4.6	2.0	5.0	0.43	0.10	0.0002	8	0.38	6.55		
Monthly Max:			166	159	43.0	4.6	2.0	8.0	0.56	0.10	0.0006	340	0.46	7.24		

Comments: Total Ammonia Nitrogen-3.0 mg/L May 1- Nov.30
 Total Ammonia Nitrogen-5.0 mg/L Dec. 1- Apr.30

2024 WEEKLY ANALYTICAL AND MONTHLY AVERAGE RESULTS

Plympton S.T.P.
 Operations Number: 120002610
 Operating Authority: O.M.I. Canada Inc.
 Municipality: Town of Plympton-Wyoming

November

2024

Doug Marsh

		AERATION M.L.S.S		RAW INFLUENT				FINAL EFFLUENT								Lab Report Received	
Test # Date		East Aeration S.S.	West Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia mg/L	E-Coli Per 100ml	Reactive P mg/L	pH -log[H] ⁺	Date	Init.
1 5-Nov			5148	201	225	45.3	4.5	2.0	6.0	0.34	0.10	0.0005	8	0.34	7.14	12-Nov	DM
2 13-Nov			4456					2.0	6.0	0.44	0.10	0.0004	10	0.38	7.18	20-Nov	DM
3 19-Nov			4748					2.0	7.0	0.49	0.10	0.0009	26	0.42	7.46	26-Nov	DM
4 26-Nov			5140					2.0	6.0	0.47	0.10	0.0010	4	0.40	7.53	3-Dec	DM
5																	
ECA Limits								15.0	15.0	1.00			200				
Number of Tests				1	1	1	1	4	4	4	5	5	4	4	4		
Monthly Average:				201	225	45.3	4.45	2.0	6.3	0.44	0.10	0.0007	10	0.39	7.33		
Monthly Min:				201	225	45.3	4.5	2.0	6.0	0.34	0.10	0.0004	4	0.34	7.14		
Monthly Max:				201	225	45.3	4.5	2.0	7.0	0.49	0.10	0.0010	26	0.42	7.53		

Comments: Total Ammonia Nitrogen-3.0 mg/L May 1- Nov.30
 Total Ammonia Nitrogen-5.0 mg/L Dec. 1- Apr.30

2024 WEEKLY ANALYTICAL AND MONTHLY AVERAGE RESULTS

Plympton S.T.P.
 Operations Number: 120002610
 Operating Authority: O.M.I. Canada Inc.
 Municipality: Town of Plympton-Wyoming

December

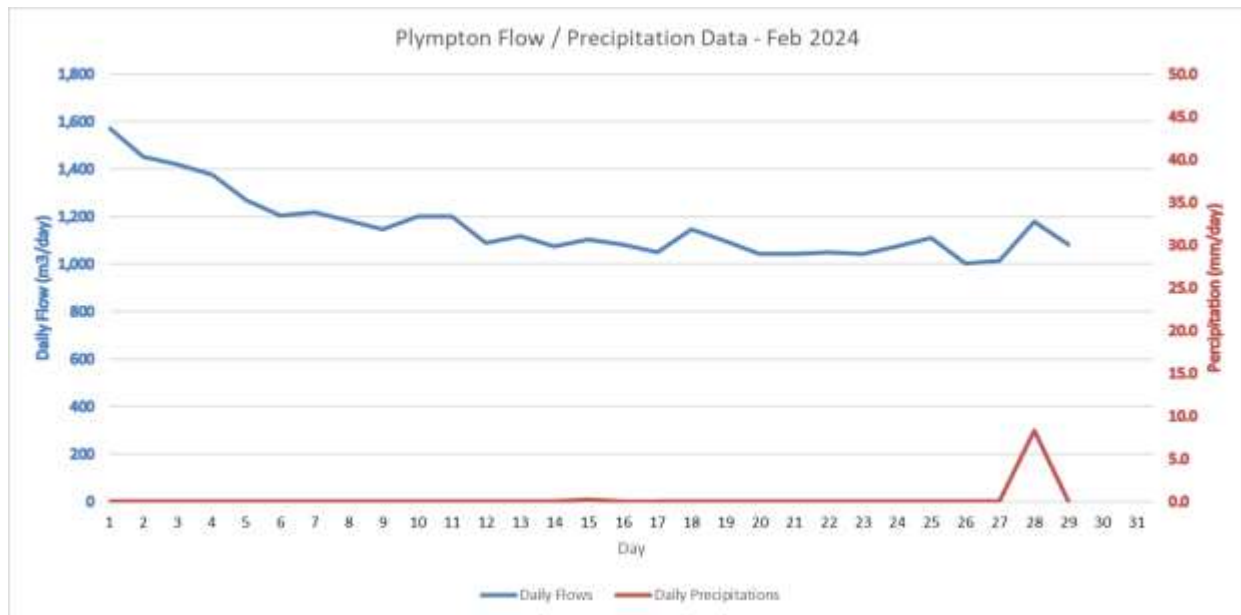
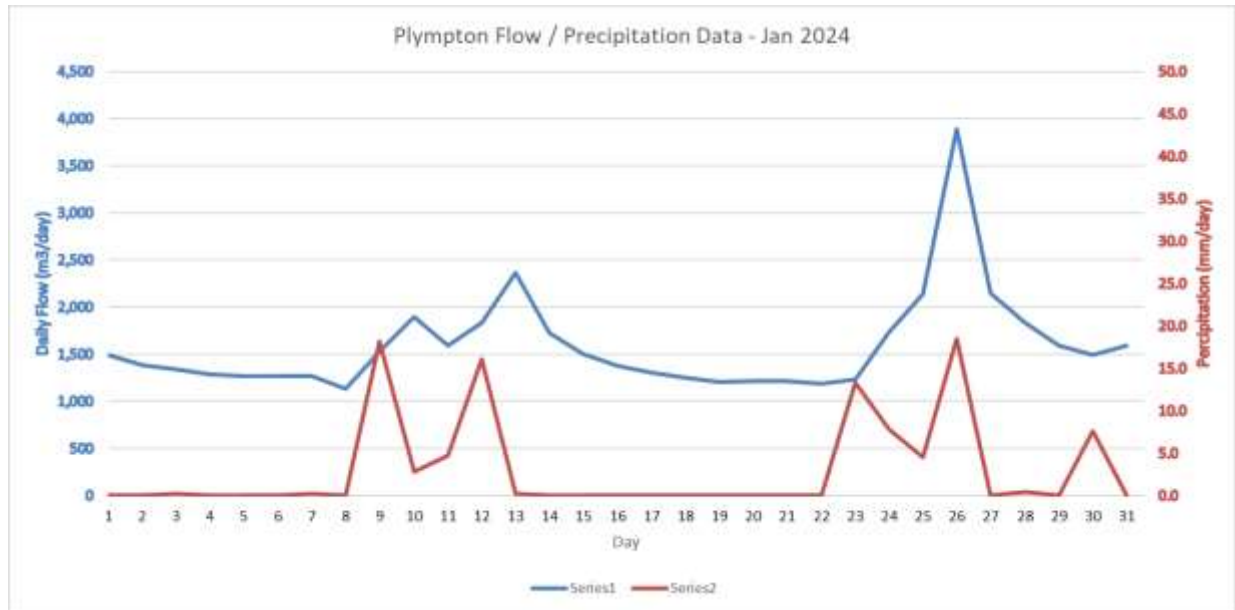
2024

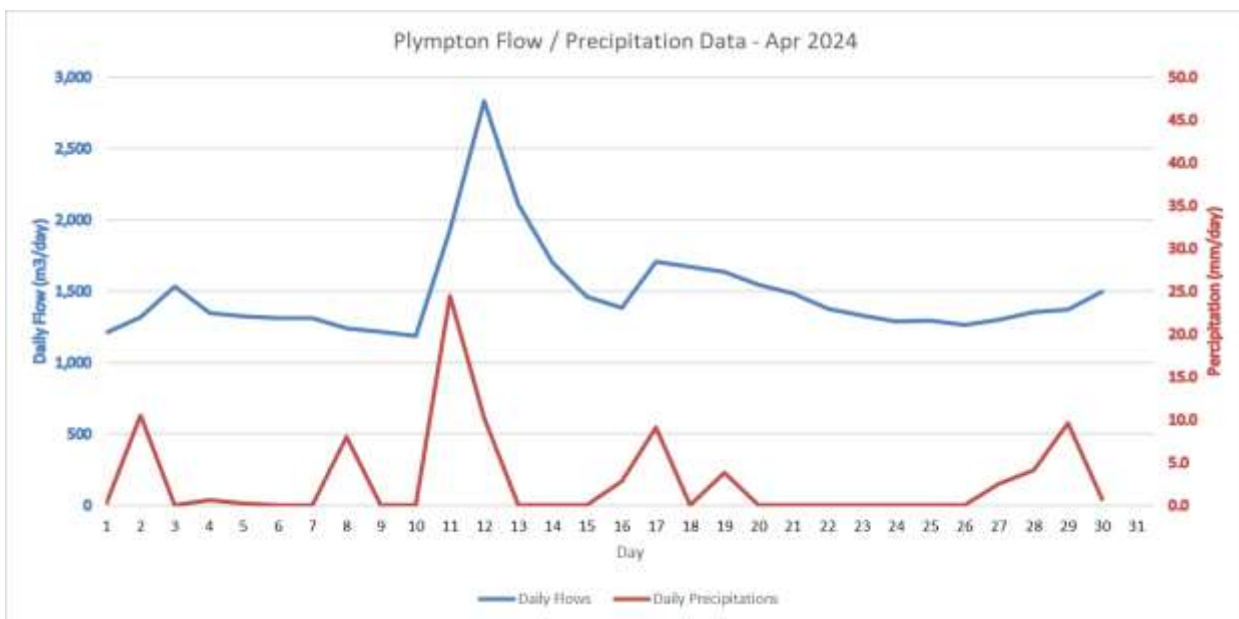
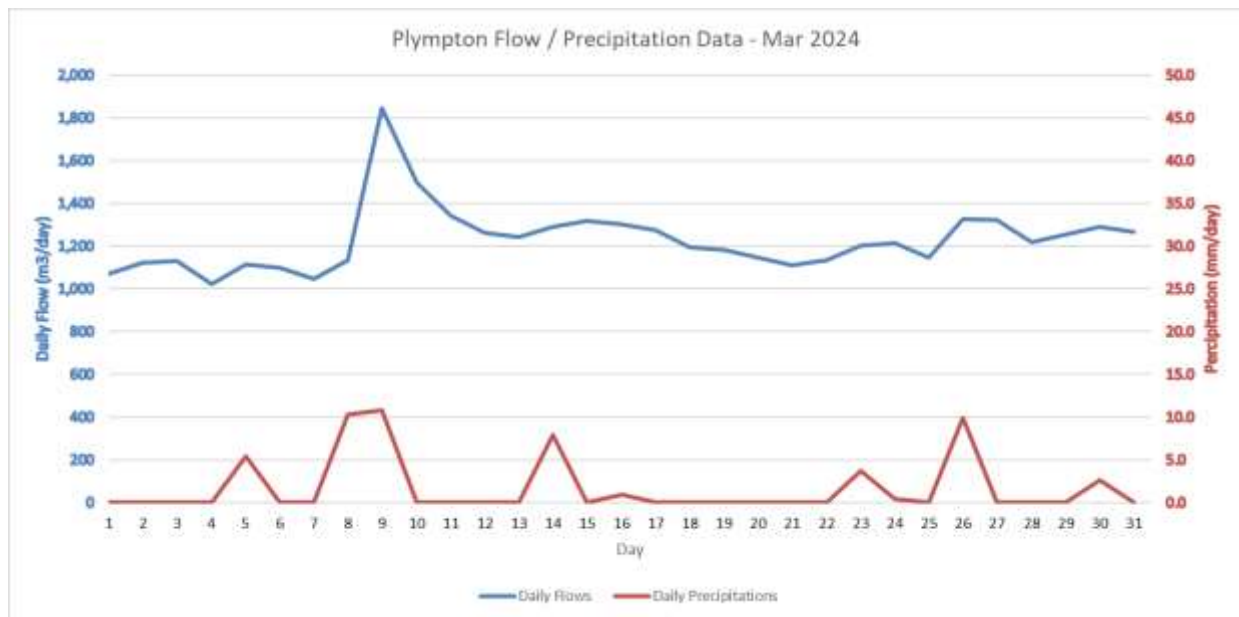
Doug Marsh

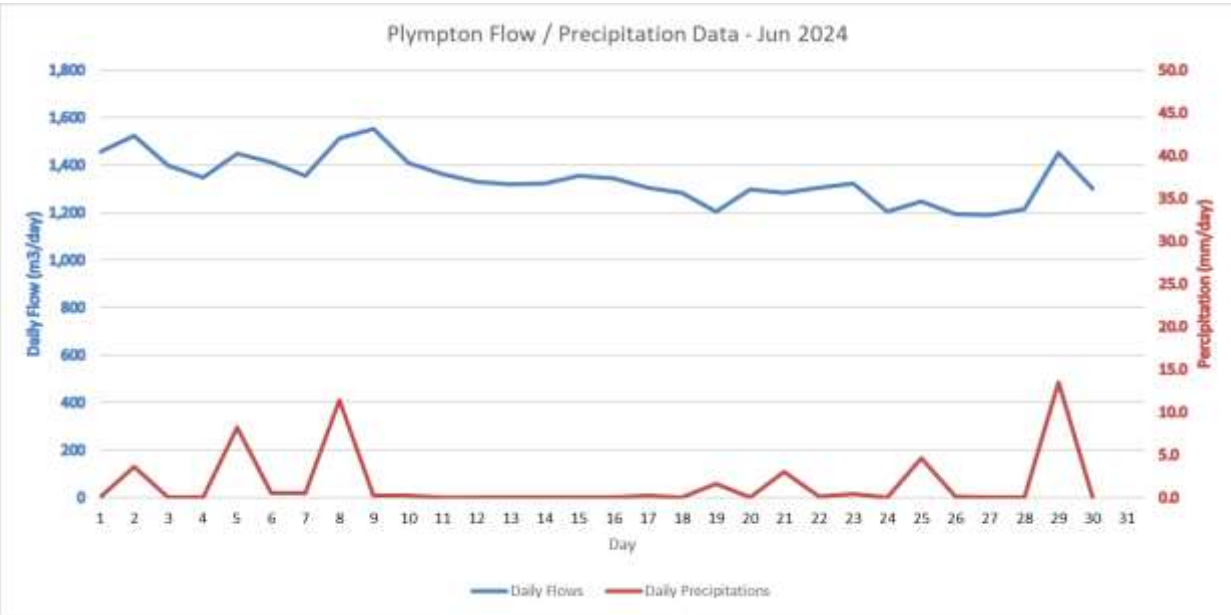
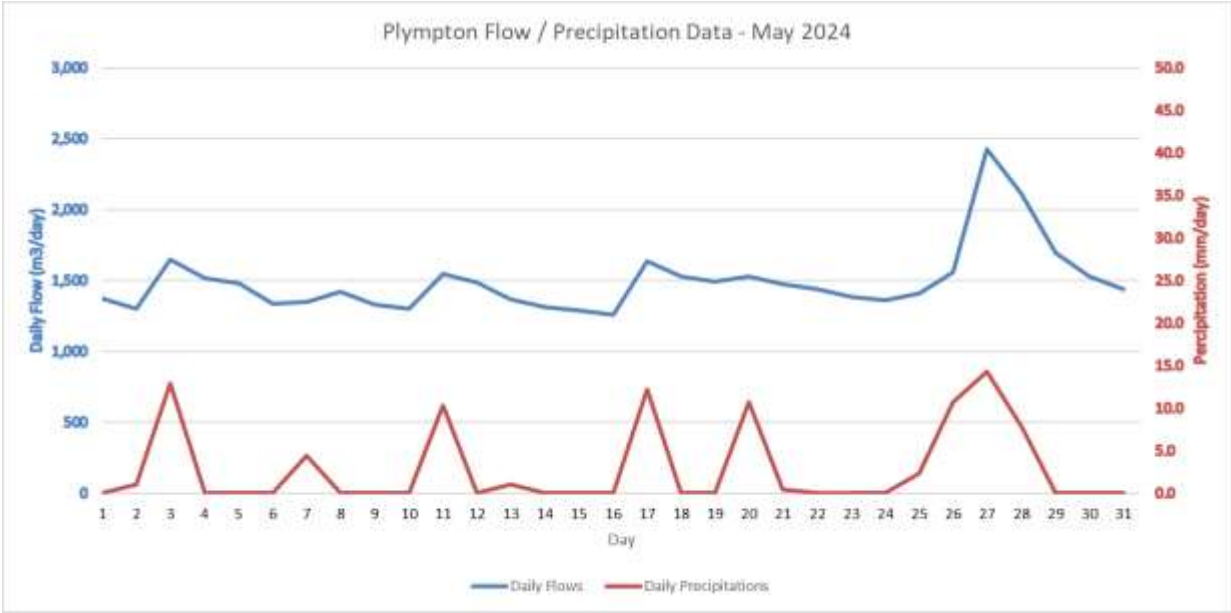
		AERATION M.L.S.S		RAW INFLUENT				FINAL EFFLUENT								Lab Report Received	
Test # Date		East Aeration S.S.	West Aeration S.S.	BOD5 mg/L	S. S. mg/L	TKN mg/L	Total P mg/L	CBOD5 mg/L	S. S. mg/L	Total P mg/L	Ammonia NH3 mg/L	Unionized Ammonia mg/L	E-Coli Per 100ml	Reactive P mg/L	pH -log[H] ⁺	Date	Init.
1 3-Dec			5224	185	225	41.9	4.8	2.0	5.0	0.35	0.10	0.0009	6	0.27	7.50	10-Dec	DM
2 10-Dec			5396					4.0	12.0	0.47	0.40	0.0024	290	0.32	7.32	16-Dec	DM
3 16-Dec			5100					3.0	6.0	0.40	0.10	0.0006	250	0.30	7.35	23-Dec	DM
4 23-Dec								3.0	14.0	0.38	0.10	0.0006	230	0.25	7.37	31-Dec	DM
5 30-Dec			3524					3.0	6.0	0.39	0.10	0.0010	360	0.31	7.53	7-Jan	DM
ECA Limits								15.0	15.0	1.00			200				
Number of Tests				1	1	1	1	5	5	5	5	5	5	5	5		
Monthly Average:				185	225	41.9	4.81	3.0	8.6	0.40	0.16	0.0011	129	0.29	7.41		
Monthly Min:				185	225	41.9	4.8	2.0	5.0	0.35	0.10	0.0006	6	0.25	7.32		
Monthly Max:				185	225	41.9	4.8	4.0	14.0	0.47	0.40	0.0024	360	0.32	7.53		

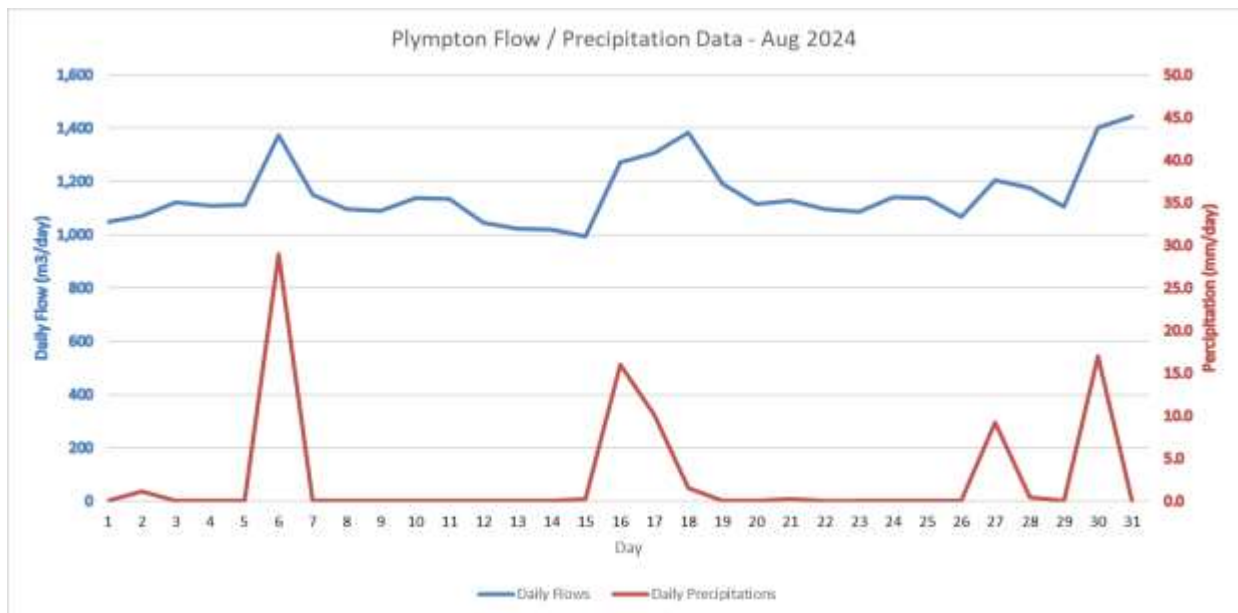
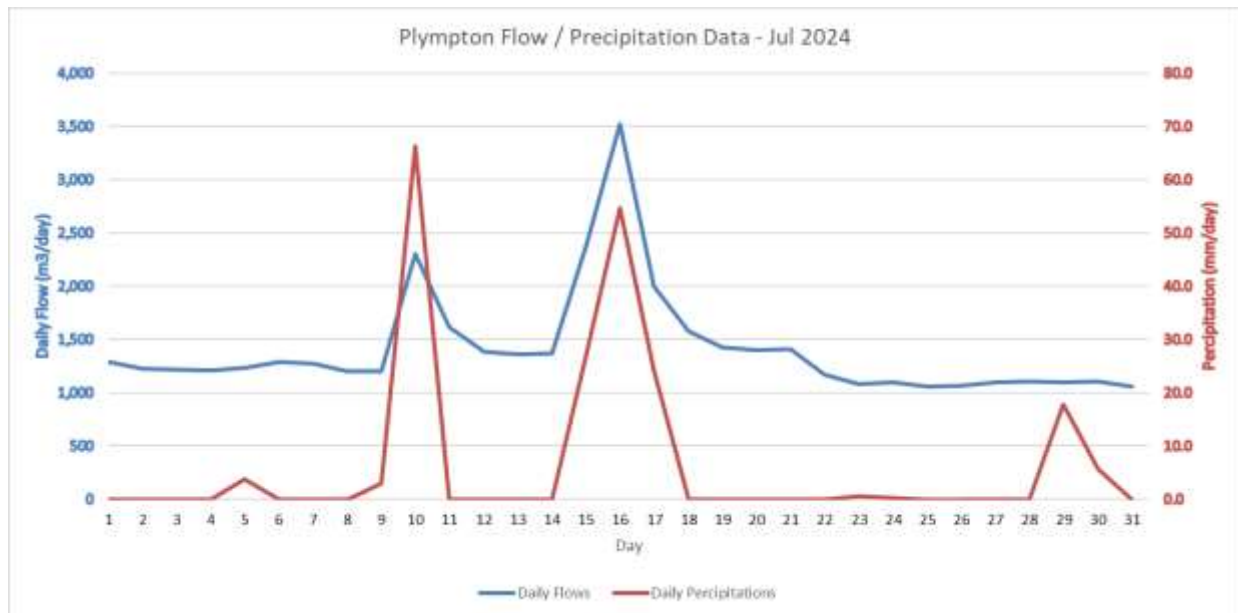
Comments: Total Ammonia Nitrogen-3.0 mg/L May 1- Nov.30
 Total Ammonia Nitrogen-5.0 mg/L Dec. 1- Apr.30

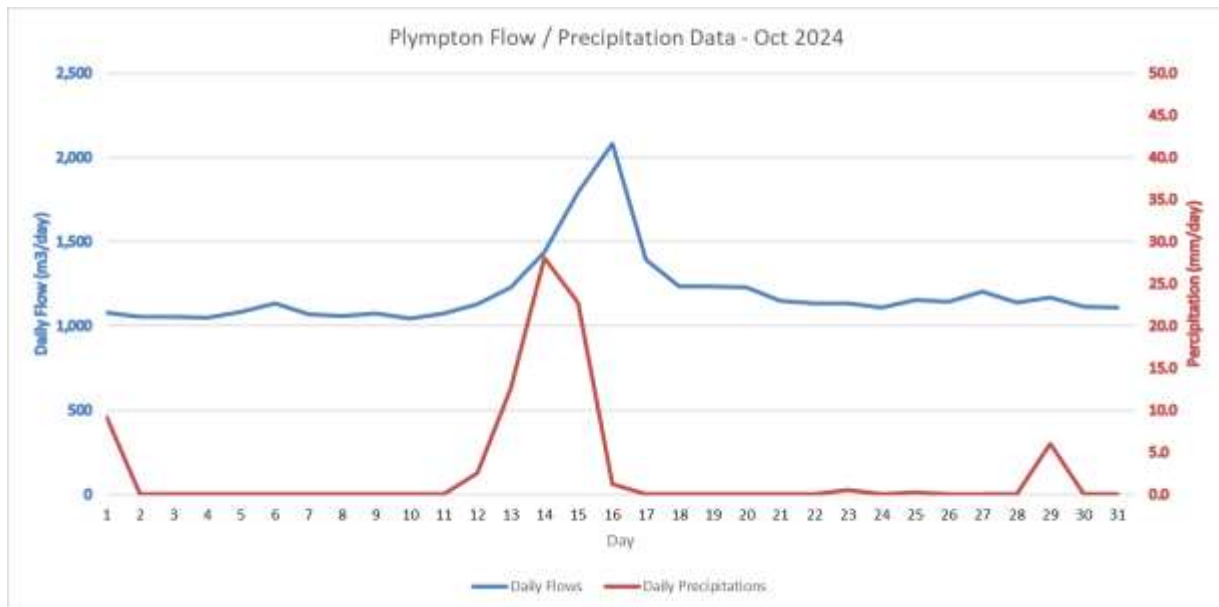
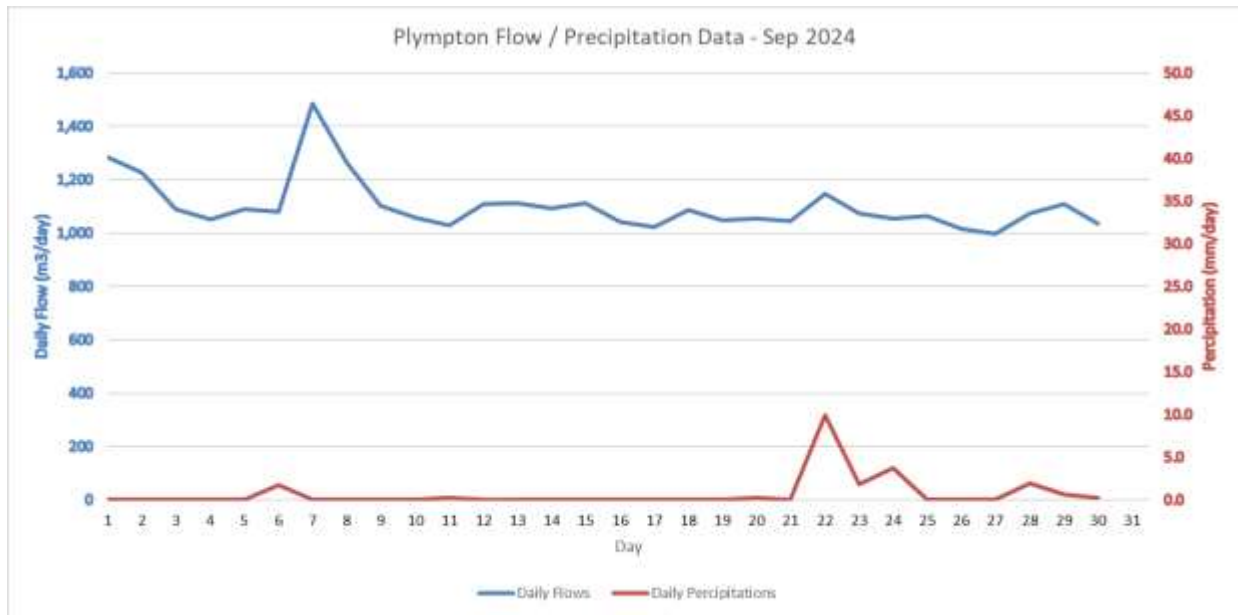
APPENDIX B

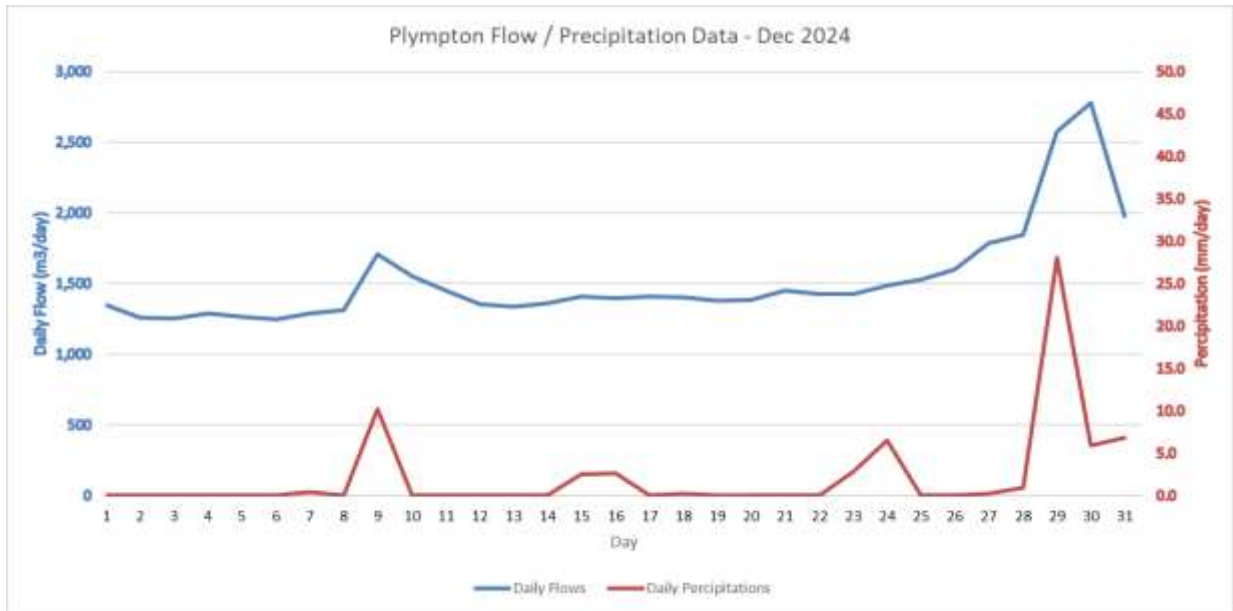
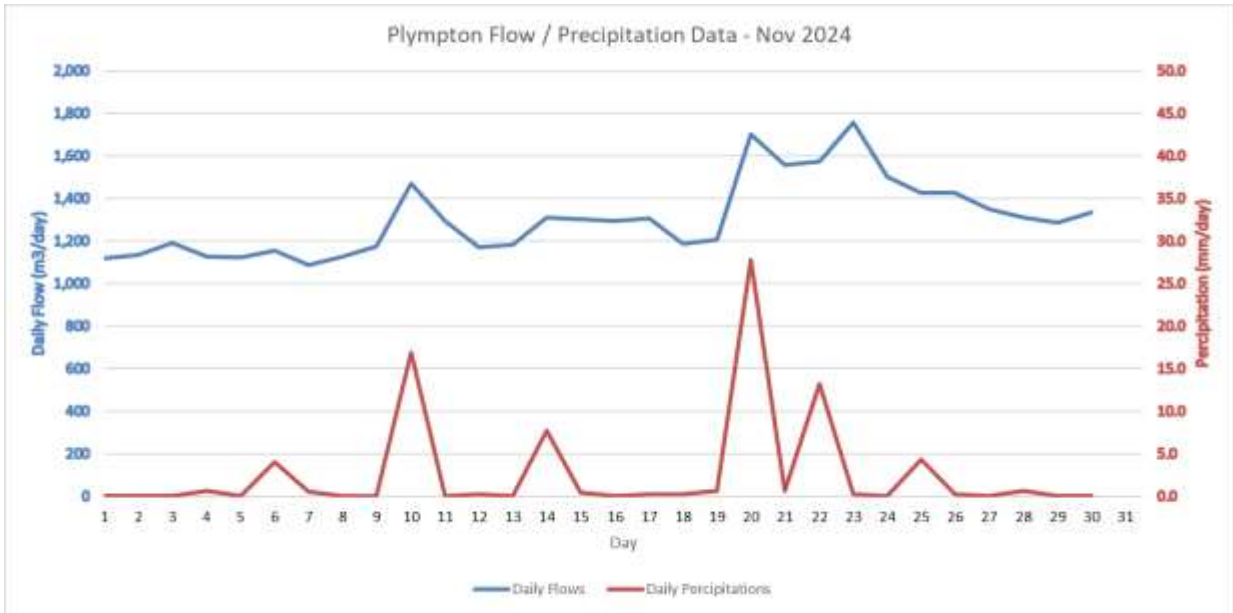












APPENDIX C



SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

O.M.I. Canada Inc.(Plympton WPCP)
Attn : Doug Marsh

7550 Brush Rd., Box 659
Forest, ON
N0N 1J0, Canada

Phone: On Call Operator 1-888-399-1643
Fax: excel (SMP), pdf

Works #: 120002610
Project : PO#145004557

26-March-2024

Date Rec. : 19 March 2024
LR Report: CA30365-MAR24
Reference: Project Name/Number:
668953 Richard Marsh

Copy: #1

CERTIFICATE OF ANALYSIS Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Plympton WWTP-Sludge (grab)
Sample Date & Time					18-Mar-24 16:05
Temperature Upon Receipt [at Lakefield Lab °C]	---	---	---	---	9.0
Total Solids [mg/L]	21-Mar-24	20:46	25-Mar-24	08:45	30200
Total Solids (ASH) [mg/L]	21-Mar-24	20:46	25-Mar-24	08:45	9070
Total Solids (LOI) [mg/L]	21-Mar-24	20:46	25-Mar-24	08:45	21100
Total Kjeldahl Nitrogen [as N mg/L]	21-Mar-24	14:37	25-Mar-24	11:58	1110
Ammonia+Ammonium (N) [as N mg/L]	20-Mar-24	18:38	21-Mar-24	12:49	8.5
Nitrite (as N) [mg/L]	22-Mar-24	13:54	25-Mar-24	14:58	< 3
Nitrate (as N) [mg/L]	22-Mar-24	13:54	25-Mar-24	14:58	< 3
Nitrate + Nitrite (as N) [mg/L]	22-Mar-24	13:54	25-Mar-24	14:58	< 3
Arsenic [mg/L]	22-Mar-24	23:24	26-Mar-24	14:14	0.1
Cadmium [mg/L]	22-Mar-24	23:24	26-Mar-24	14:14	0.017
Cobalt [mg/L]	22-Mar-24	23:24	26-Mar-24	14:14	0.07
Chromium [mg/L]	22-Mar-24	23:24	26-Mar-24	14:14	0.28
Copper [mg/L]	22-Mar-24	23:24	26-Mar-24	14:14	4.7
Mercury [mg/L]	22-Mar-24	23:24	26-Mar-24	14:14	0.004
Potassium [mg/L]	22-Mar-24	23:24	26-Mar-24	14:14	72
Molybdenum [mg/L]	22-Mar-24	23:24	26-Mar-24	14:14	0.17
Nickel [mg/L]	22-Mar-24	23:24	26-Mar-24	14:14	0.33
Phosphorus (Total) [mg/L]	22-Mar-24	23:24	26-Mar-24	14:14	570
Lead [mg/L]	22-Mar-24	23:24	26-Mar-24	14:14	0.2
Selenium [mg/L]	22-Mar-24	23:24	26-Mar-24	14:14	< 0.1
Zinc [mg/L]	22-Mar-24	23:24	26-Mar-24	14:14	11
E. Coli [cfu/1g dried wgt]	19-Mar-24	18:35	22-Mar-24	11:48	36424
E.Coli [cfu/100mL]	19-Mar-24	18:35	22-Mar-24	11:48	110000
Temperature Upon Receipt [at London Lab °C]	---	---	---	---	2.7

Note: Metals and mercury were analyzed on the as-received sample.
The E.coli value reported in CFU/1g dried weight was calculated using Total Solids and CFU/100ml.
Note: E.Coli analysis was completed at the SGS London Laboratory.



SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-852-2000 FAX: 705-852-6365

Works #: 120002610
Project : PO#145004557

02-May-2024

O.M.I. Canada Inc.(Plympton WPCP)
Attn : Doug Marsh

Date Rec. : 23 April 2024
LR Report: CA30493-APR24
Reference: Project Name/Number:
668953 Richard Marsh

7550 Brush Rd., Box 659
Forest, ON
N0N 1J0, Canada

Copy: #1

Phone: On Call Operator 1-888-399-1643
Fax: excel (SMP), pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Plympton WWTP - Sludge (grab)
Sample Date & Time					23-Apr-24 10:30
Temperature Upon Receipt [°C]	---	---	---	---	9.0
Total Solids [mg/L]	25-Apr-24	20:27	29-Apr-24	09:34	18800
Total Solids (ASH) [mg/L]	25-Apr-24	20:27	29-Apr-24	09:34	5520
Total Solids (LOI) [mg/L]	25-Apr-24	20:27	29-Apr-24	09:34	13300
Total Kjeldahl Nitrogen [as N mg/L]	25-Apr-24	16:34	29-Apr-24	12:56	1110
Ammonia+Ammonium (N) [as N mg/L]	25-Apr-24	17:44	29-Apr-24	12:38	14.5
Nitrite (as N) [mg/L]	29-Apr-24	09:10	01-May-24	19:59	< 3
Nitrate (as N) [mg/L]	29-Apr-24	09:10	01-May-24	19:59	< 3
Nitrate + Nitrite (as N) [mg/L]	29-Apr-24	09:10	01-May-24	19:59	< 3
Arsenic [mg/L]	29-Apr-24	14:48	30-Apr-24	12:12	< 0.1
Cadmium [mg/L]	29-Apr-24	14:48	30-Apr-24	12:12	0.009
Cobalt [mg/L]	29-Apr-24	14:48	30-Apr-24	12:12	0.03
Chromium [mg/L]	29-Apr-24	14:48	30-Apr-24	12:12	0.14
Copper [mg/L]	29-Apr-24	14:48	30-Apr-24	12:12	2.6
Mercury [mg/L]	29-Apr-24	14:48	30-Apr-24	12:12	0.002
Potassium [mg/L]	29-Apr-24	14:48	30-Apr-24	12:12	64
Molybdenum [mg/L]	29-Apr-24	14:48	30-Apr-24	12:12	0.10
Nickel [mg/L]	29-Apr-24	14:48	30-Apr-24	12:12	0.15
Phosphorus (Total) [mg/L]	29-Apr-24	14:48	30-Apr-24	12:12	360
Lead [mg/L]	29-Apr-24	14:48	30-Apr-24	12:12	< 0.1
Selenium [mg/L]	29-Apr-24	14:48	30-Apr-24	12:12	< 0.1
Zinc [mg/L]	29-Apr-24	14:48	30-Apr-24	12:12	6
E. Coli [cfu/1g dried wt]	24-Apr-24	18:45	28-Apr-24	12:29	191489
E. Coli [cfu/100mL]	24-Apr-24	18:45	28-Apr-24	12:29	360000
Temperature Upon Receipt [at London Lab °C]	---	---	---	---	6.1

Note: Metals and mercury were analyzed on the as-received sample.
The E.coli value reported in CFU/1g dried weight was calculated using Total Solids and CFU/100mL.
Note: E.Coli analysis was completed at the SGS London Laboratory.

Online LIMS

4/19/24/000



SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-6365

Works #: 120002610
Project : PO#145004557

01-August-2024

O.M.I. Canada Inc.(Plympton WPCP)
Attn : Doug Marsh

Date Rec. : 23 July 2024
LR Report: CA30597-JUL24
Reference: Project Name/Number
668953 - Richard Marsh

7550 Brush Rd., Box 659
Forest, ON
N0N 1J0, Canada

Copy: #1

Phone: On Call Operator 1-888-399-1643
Fax: excel (SMP), pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Plympton WWTP -Sludge (grab)
Sample Date & Time					23-Jul-24 09:00
Temperature Upon Receipt [at Lakefield Lab °C]	—	—	—	—	19.0
Total Solids [mg/L]	24-Jul-24	21:45	28-Jul-24	09:24	10700
Total Solids (ASH) [mg/L]	24-Jul-24	21:45	28-Jul-24	09:24	2540
Total Solids (LOI) [mg/L]	24-Jul-24	21:45	28-Jul-24	09:24	8120
Total Kjeldahl Nitrogen [as N mg/L]	28-Jul-24	12:03	30-Jul-24	14:28	745
Ammonia+Ammonium (N) [as N mg/L]	25-Jul-24	12:10	28-Jul-24	10:58	159
Nitrite (as N) [mg/L]	28-Jul-24	08:49	29-Jul-24	13:28	< 3
Nitrate (as N) [mg/L]	28-Jul-24	08:49	29-Jul-24	13:28	< 3
Nitrate + Nitrite (as N) [mg/L]	28-Jul-24	08:49	29-Jul-24	13:28	< 3
Arsenic [mg/L]	31-Jul-24	14:30	01-Aug-24	12:31	< 0.1
Cadmium [mg/L]	31-Jul-24	14:30	01-Aug-24	12:31	0.011
Cobalt [mg/L]	31-Jul-24	14:30	01-Aug-24	12:31	0.04
Chromium [mg/L]	31-Jul-24	14:30	01-Aug-24	12:31	0.18
Copper [mg/L]	31-Jul-24	14:30	01-Aug-24	12:31	4.1
Mercury [mg/L]	31-Jul-24	14:30	01-Aug-24	12:31	0.003
Potassium [mg/L]	31-Jul-24	14:30	01-Aug-24	12:31	74
Molybdenum [mg/L]	31-Jul-24	14:30	01-Aug-24	12:31	0.15
Nickel [mg/L]	31-Jul-24	14:30	01-Aug-24	12:31	0.19
Phosphorus (Total) [mg/L]	31-Jul-24	14:30	01-Aug-24	12:31	500
Lead [mg/L]	31-Jul-24	14:30	01-Aug-24	12:31	0.1
Selenium [mg/L]	31-Jul-24	14:30	01-Aug-24	12:31	< 0.1
Zinc [mg/L]	31-Jul-24	14:30	01-Aug-24	12:31	10
E. Coli [cfu/1g dried wgt]	23-Jul-24	18:40	25-Jul-24	18:07	140187
E. Coli [cfu/100mL]	23-Jul-24	18:40	25-Jul-24	18:07	150000
Temperature Upon Receipt [at London Lab °C]	—	—	—	—	7.7

Note: Metals and mercury were analyzed on the as-received sample.
The E.coli value reported in CFU/1g dried weight was calculated using Total Solids and CFU/100mL.

Note: E.Coli analysis was completed at the SGS London Laboratory.

SGS 300472

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SGS Canada Inc.
P.O. Box 4300 - 185 Concession St.
Lakefield - Ontario - K0L 2H0
Phone: 705-652-2000 FAX: 705-652-8365

Works #: 120002610
Project : PO#145004557

10-October-2024

O.M.I. Canada Inc.(Plympton WPCP)
Attn : Doug Marsh

7550 Brush Rd., Box 659
Forest, ON
N0N 1J0, Canada

Date Rec. : 02 October 2024
LR Report: CA30113-OCT24
Reference: Project Name/Number:
668953 Richard Marsh

Copy: #1

Phone: On Call Operator 1-888-399-1643
Fax: excel (SMP), pdf

CERTIFICATE OF ANALYSIS

Final Report

Analysis	1: Analysis Start Date	2: Analysis Start Time	3: Analysis Completed Date	4: Analysis Completed Time	5: Plympton WWTP - Sludge (grab)
Sample Date & Time					01-Oct-24 14:00
Temperature Upon Receipt [at Lakefield Lab °C]	---	---	---	---	9.0
Total Solids [mg/L]	04-Oct-24	21:19	08-Oct-24	09:20	20000
Total Solids (ASH) [mg/L]	04-Oct-24	21:19	08-Oct-24	09:20	7510
Total Solids (LOI) [mg/L]	04-Oct-24	21:19	08-Oct-24	09:20	12500
Total Kjeldahl Nitrogen [as N mg/L]	07-Oct-24	13:08	10-Oct-24	09:58	928
Ammonia+Ammonium (N) [as N mg/L]	08-Oct-24	18:48	10-Oct-24	09:48	10.0
Nitrite (as N) [mg/L]	05-Oct-24	07:51	08-Oct-24	16:07	< 3
Nitrate (as N) [mg/L]	05-Oct-24	07:51	08-Oct-24	16:07	140
Nitrate + Nitrite (as N) [mg/L]	05-Oct-24	07:51	08-Oct-24	16:07	140
Arsenic [mg/L]	07-Oct-24	15:17	09-Oct-24	16:42	< 0.1
Cadmium [mg/L]	07-Oct-24	15:17	09-Oct-24	16:42	0.013
Cobalt [mg/L]	07-Oct-24	15:17	09-Oct-24	16:42	0.05
Chromium [mg/L]	07-Oct-24	15:17	09-Oct-24	16:42	0.21
Copper [mg/L]	07-Oct-24	15:17	09-Oct-24	16:42	3.8
Mercury [mg/L]	07-Oct-24	15:17	09-Oct-24	16:42	0.004
Potassium [mg/L]	07-Oct-24	15:17	09-Oct-24	16:42	53
Molybdenum [mg/L]	07-Oct-24	15:17	09-Oct-24	16:42	0.14
Nickel [mg/L]	07-Oct-24	15:17	09-Oct-24	16:42	0.23
Phosphorus (Total) [mg/L]	07-Oct-24	15:17	09-Oct-24	16:42	450
Lead [mg/L]	07-Oct-24	15:17	09-Oct-24	16:42	0.1
Selenium [mg/L]	07-Oct-24	15:17	09-Oct-24	16:42	< 0.1
Zinc [mg/L]	07-Oct-24	15:17	09-Oct-24	16:42	10
E. Coli [cfu/1g dried wgt]	02-Oct-24	18:15	04-Oct-24	09:36	71500
E. Coli [cfu/100mL]	02-Oct-24	18:15	04-Oct-24	09:36	143000
Temperature Upon Receipt [at London Lab °C]	---	---	---	---	12.1

Note: Metals and mercury were analyzed on the as-received sample.
The E.coli value reported in CFU/1g dried weight was calculated using Total Solids and CFU/100mL.
Note: E.Coli analysis was completed at the SGS London Laboratory.

04/06/2025

04/06/2025