

SYSTEM OVERVIEW

October 1st to December 31st, 2022

OPERATIONAL HIGHLIGHTS

Drinking Water System

- The water treatment system operated well during the fourth quarter.
- Annual generator service completed.

Wastewater Treatment

- The wastewater treatment system performed well during the fourth quarter.
- Meeting with municipal partners and vendor to discuss options for Clark Street sewage lift station replacement, such as a pre-fab “Barski Station”.
- Clark St Station had debris cleaned out.
- Annual generator service completed.
- Fall discharge complete, discharge began October 20 and ended November 17.

CAPITAL PLAN PROGRESS

Drinking Water System

- N/A

Wastewater Treatment Lagoon

- N/A

ASSET MANAGEMENT

See Appendix A - Work Order summary for water treatment plant (WTP)

See Appendix B - Work Order summary for wastewater treatment lagoon (WWTL)

CALL-OUT SUMMARY

See Appendix C - Call-out Report for WTP

No Call-out Reports for WWTL

REGULATORY

- All drinking water samples required under O. Regulation 170/03 were collected and tested in the fourth quarter of 2022 and all results fell within regulatory limits.
- Quarterly trihalomethanes (THM), haloacetic acids (HAA), Nitrate and Nitrite sampling completed October 11, 2022.
- Annual Capital and Major Maintenance Recommendations Report completed and submitted.
- Annual Hach instrument calibrations completed on November 15, 2022.
- THM running annual average below limit of 100 ug/L with a result of 6.05 ug/L in the past four quarters.
- HAA running annual average below the proposed limit of 80 ug/L (came into effect January 1, 2022) with a result of <5.3 ug/L.
- No Ministry of Labour (MOL) inspections conducted this quarter.
- DWQMS Management Review completed November 30, 2022.
- The Ministry of the Environment, Conservation and Parks (MECP) performed an annual inspection on October 6, 2022. The inspection included a physical assessment of the Powassan Water Treatment Plant and a document review. No findings with final rating of 100%.
- All required sewage samples required under the system’s Environmental Compliance Approval (ECA) were collected and tested in the fourth quarter of 2022.
- Lagoon fall discharge completed, all sample results were well below ECA limits, with one exception for Fall TSS Seasonal Average.
- 2022 Fall Seasonal Average TSS exceedance of 29.60 mg/L, seasonal ECA limit is 25 mg/L. TSS Sample results are as follows: Old Cell: Oct. 20, 24, 27, 31 and Nov. 4: results were 5, 6, 4, 15 and 20 mg/L respectively. South Cell: Nov. 4, 8, 10, 14 and 17: results were 47, 52, 70, 52 and 25 mg/L respectively. Seasonal average = 29.60 mg/L. Received November 17 sample on November 28, 2022. All other parameters were well within ECA limits. All sample results attached to email. Since the dredging of North and South lagoon cell TSS has been higher in those cells in recent years as compared to previous years. After dredging, we suspect there is no longer an adequate sludge blanket at the bottom of the lagoon to process the wastewater. Resolution: Lagoons will continue to be treated with Ferric Sulphate, as necessary, prior to release. Results will continue to be monitored. More ferric sulphate will be used in 2023 than usual to attempt to lower TSS. Ref # 8221-CLLN29.

INCIDENTS AND COMPLAINTS

Powassan Drinking Water System

Incident	n/a
Date	
Details	

Powassan Wastewater System

Incident	n/a
Date	
Details	

HEALTH AND SAFETY

- Staff training completed on lockout/tagout.
- Staff training completed on hearing protection.
- Staff training completed on “Near Miss” and “Don’t Walk By” Programs.

POWASSAN DRINKING WATER SYSTEM PERFORMANCE

See Appendix D – Performance Assessment Report Water

POWASSAN WASTEWATER TREATMENT LAGOON – WASTEWATER FLOW SUMMARY

See Appendix E – Performance Assessment Report Wastewater



Appendix A - Work Order Summary for WTP

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 6033*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3019441	0000235294	PANEL ALARM/ DIALER 01 POWASSAN GROUND WATER WELL	6033, Powassan WTP, Process, Lowlift, Well System	PM	Inspection	1	MONTHS	Critical Building Intrusion Alarm Testing (1m) 6033	COMP	10/1/22 12:00 AM	11/1/22 08:48 AM	11/1/22 08:48 AM	Critical Building Intrusion Alarm Testing (1m) 6033 -October 27, 2022. Dan Finnigan performed a test of the well supply building entrance door intrusion alarm by not disarming the alarm when entering the building. This caused an intrusion alarm, which True Steel Alarm Monitoring Service received and notified the on- call operator. This confirms that the building door intrusion alarm is working. DF
3030373	0000296004	GENERATOR NATURAL GAS GENSET McRae Road Reservoir	6033, Powassan WTP, Facility, Power Generation	PM	Refurbish/ Replace/Repair	1	MONTHS	Reservoir Natural Gas Generator Inspection/Functional Test (1m) 6033	COMP	10/1/22 12:00 AM	11/1/22 09:44 AM	11/1/22 09:44 AM	Reservoir Natural Gas Generator Inspection/Functional Test (1m) 6033 - October 28, 2022 by Dan Finnigan. The oil level was checked and found to be "full", and the air filter was checked and was clean. The main power to the building was disconnected and the generator started without any issues. Power was transferred to the generator a moment later, and all building functionality was returned. After the test period the power to the building was re-instated, and after a cool-down period the generator shut down.

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 6033*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3036690	0000235294	PANEL ALARM/ DIALER 01 POWASSAN GROUND WATER WELL	6033, Powassan WTP, Process, Lowlift, Well System	PM	Inspection	1	MONTHS	Critical Alarm/Dialer Testing (1m) 6033	COMP	10/1/22 12:00 AM	11/1/22 08:54 AM	11/1/22 08:54 AM	Critical Alarm/Dialer Testing (1m) 6033 -Critical Alarm/Dialer Testing (1m) 6033 was completed by Dan Finnigan on October 27, 2022. The Cl2 probe was pulled out of the sample cells to perform a monthly inspection and cleaning and to force an alarm condition for the monthly testing of the low chlorine alarm, the alarm dialer and the well pump interlock lockout. True Steel called to advise they had received an alarm notification re the low chlorine alarm. The Cl2 probe was placed back into the flow thru sample cell after it was inspected, cleaned and the electrolyte topped up. After low chlorine alarm cleared the well pump lockout was reset to resume normal operation of the well house. These actions verified proper operation of the low Cl2/instrument alarm, alarm dialer and well pump interlock.

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 6033*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3037120			6033, Powassan WTP	PM	Health and Safety	1	MONTHS	Health And Safety Inspection (1m) 6033	COMP	10/1/22 12:00 AM	11/1/22 08:49 AM	11/1/22 08:49 AM	Health And Safety Inspection (1m) 6033 -The monthly H&S Inspection was conducted on October 31, 2022 and consisted of checking/verifying the following items: 1. Chemical Apron 2. Face Shield 3. Spill Kit(s) X 2: all items were available 4. Chemical secondary containment (intact) 5. Safety Signage (all intact and visible) 6. First aid kit 7. Hearing protection earmuffs 8. Emergency lighting (all tested and working) 9. Emergency Eyewash (tested and working)
3037222			6033, Powassan WTP, Process, Process Control & Monitoring	PM	Calibration	1	MONTHS	Analyzer Chlorine Inspection/ Service (1m) 6033	COMP	10/1/22 12:00 AM	11/1/22 08:52 AM	11/1/22 08:52 AM	Analyzer Chlorine Inspection/ Service (1m) 6033 -October 27, 2022 by Dan Finnigan. During the monthly low chlorine critical alarm / lockout test the analyzer housing was flushed and inspected for damage and wear, and the electrolyte solution level was checked and topped up. The probe was re-inserted into the housing and a single point verification was conducted with the following results: Online analyzer: 1.94 mg/L Free Cl2 Handheld analyzer: 1.84 mg/L Free Cl2 The online analyzer required adjustment. The new slope after calibration was 2.79 mA/ppm (within spec).

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 6033*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3038713			6033, Powassan WTP	PM	Inspection	1	MONTHS	TPM Inspection/Maintenance (1m) 6033	COMP	10/1/22 12:00 AM	11/1/22 08:55 AM	11/1/22 08:55 AM	TPM Inspection/Maintenance (1m) 6033 -October 31, 2022. Reviewed trending to ensure both submersible well pump is operating within normal parameters. Started exhaust fan and observed motorized louvers operating properly. Verified chlorine pump on hand, as well as duty chlorine pump operating satisfactorily.
3038718	0000209142	GENERATOR DIESEL POWASSAN GROUND WATER WELL:	6033, Powassan WTP, Facility, Power Generation	PM	Refurbish/ Replace/Repair	1	MONTHS	Wellhouse Diesel Generator Inspection/Functional Test (1m) 6033	COMP	10/1/22 12:00 AM	11/1/22 09:40 AM	11/1/22 09:40 AM	Wellhouse Diesel Generator Inspection/Functional Test (1m) 6033 -October 27, 2022 by Dan Finnigan. All fluid levels were checked, belts inspected, battery charging system, etc. The generator was started and the electrical load was transferred to generator power successfully, and transferred back to shore power properly when the test was completed. While running, the system was observed for leaks or any other deficiencies. Electrical volts and amps were recorded, along with the following generator values: RPM's = 1791 Oil Level = Full Coolant Temp=172 Deg.F Battery Voltage= 13.7V Oil Pressure 61 psi Fuel level = approximately 6.25 inches Hrs at start: 6225 hr 53 min Hrs at stop: 6226 hr 42 min (approx..)

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 6033*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3040181			6033, Powassan WTP	OPER	Compliance	1	MONTHS	WISKI Review (1m) 6033	COMP	10/1/22 12:00 AM	10/26/22 12:33 PM	10/26/22 12:33 PM	WISKI Review (1m) 6033 -WISKI Review (1m) for the month of September 2022 was completed on October 19, 2022 by Dan Finnigan. All values were checked and entered, lab data entries were reviewed, WISKI Graphs corrected, and this Work Order closed off.
3050259	0000258571	ANALYZER CHLORINE AIT-601 RESERVOIR	6033, Powassan WTP, Process, Storage, Elevated Reservoir	PM	Calibration	1	MONTHS	Analyzer Chlorine Inspection/ Service (1m) 6033	COMP	10/1/22 12:00 AM	11/1/22 09:50 AM	11/1/22 09:50 AM	Analyzer Chlorine Inspection/ Service (1m) 6033 - Analyzer Chlorine Inspection/ Service (1m) at the Reservoir was performed by Dan Finnigan on October 28, 2022. Electrolyte levels were checked and filled, air was flushed from the analyzer housing, and readings checked against a pocket colorimeter. A single point calibration was conducted after placing the analyzer probe online. Online = 1.09 mg/L Tested = 1.27 mg/L The new slope after calibration was 1.28 mA/ppm (within spec).
3069351	0000235294	PANEL ALARM/ DIALER 01 POWASSAN GROUND WATER WELL	6033, Powassan WTP, Process, Lowlift, Well System	PM	Inspection	1	MONTHS	Critical Building Intrusion Alarm Testing (1m) 6033	COMP	11/1/22 12:00 AM	11/23/22 09:15 AM	11/23/22 09:15 AM	Critical Building Intrusion Alarm Testing (1m) 6033 -November 17, 2022. Dan Finnigan performed a test of the well supply building entrance door intrusion alarm by not disarming the alarm when entering the building. This caused an intrusion alarm, which True Steel Alarm Monitoring Service received and notified the on-call operator. This confirms that the building door intrusion alarm is working. DF
3072715	0000235295	VALVE BACKFLOW PREVENTOR SAMPLE SINK	6033, Powassan WTP, Process	PM	Refurbish/ Replace/Repair	1	YEARS	Backflow Preventer Inspection (1y) 6033	COMP	11/1/22 12:00 AM	12/19/22 11:44 AM	12/19/22 11:44 AM	

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 6033*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3072720	0000235296	VALVE BACKFLOW PREVENTOR BACKUP BACKFLOW	6033, Powassan WTP, Process	PM	Refurbish/ Replace/Repair	1	YEARS	Backflow Preventer Inspection (1y) 6033	COMP	11/1/22 12:00 AM	12/19/22 11:46 AM	12/19/22 11:46 AM	
3078539	0000296004	GENERATOR NATURAL GAS GENSET McRae Road Reservoir	6033, Powassan WTP, Facility, Power Generation	PM	Refurbish/ Replace/Repair	1	MONTHS	Reservoir Natural Gas Generator Inspection/Functional Test (1m) 6033	COMP	11/1/22 12:00 AM	11/23/22 09:02 AM	11/23/22 09:02 AM	Reservoir Natural Gas Generator Inspection/Functional Test (1m) 6033 -November 17, 2022 by Dan Finnigan. The oil level was checked and found to be "full", and the air filter was checked and was clean. The main power to the building was disconnected and the generator started without any issues. Power was transferred to the generator a moment later, and all building functionality was returned. After the test period the power to the building was re-instated, and after a cool-down period the generator shut down.
3084459	0000235294	PANEL ALARM/ DIALER 01 POWASSAN GROUND WATER WELL	6033, Powassan WTP, Process, Lowlift, Well System	PM	Inspection	1	MONTHS	Critical Alarm/Dialer Testing (1m) 6033	COMP	11/1/22 12:00 AM	11/23/22 09:10 AM	11/23/22 09:10 AM	Critical Alarm/Dialer Testing (1m) 6033 -Critical Alarm/Dialer Testing (1m) 6033 was completed by Dan Finnigan on November 17, 2022. The Cl2 probe was pulled out of the sample cells to perform a monthly inspection and cleaning and to force an alarm condition for the monthly testing of the low chlorine alarm, the alarm dialer and the well pump interlock lockout. True Steel called to advise they had received an alarm notification re the low chlorine alarm. The Cl2 probe was placed back into the flow thru sample cell after it was inspected, cleaned and the electrolyte topped up. After low chlorine alarm cleared the well pump lockout was reset to resume normal operation of the well house. These actions verified proper operation of the low Cl2/instrument alarm, alarm dialer and well pump interlock.

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 6033*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3084717			6033, Powassan WTP	PM	Health and Safety	1	MONTHS	Health And Safety Inspection (1m) 6033	COMP	11/1/22 12:00 AM	11/23/22 09:13 AM	11/23/22 09:13 AM	Health And Safety Inspection (1m) 6033 -The monthly H&S Inspection was conducted on November 17, 2022 and consisted of checking/verifying the following items: 1. Chemical Apron 2. Face Shield 3. Spill Kit(s) X 2: all items were available 4. Chemical secondary containment (intact) 5. Safety Signage (all intact and visible) 6. First aid kit 7. Hearing protection earmuffs 8. Emergency lighting (all tested and working) 9. Emergency Eyewash (tested and working)
3084819			6033, Powassan WTP, Process, Process Control & Monitoring	PM	Calibration	1	MONTHS	Analyzer Chlorine Inspection/ Service (1m) 6033	COMP	11/1/22 12:00 AM	11/23/22 09:12 AM	11/23/22 09:12 AM	Analyzer Chlorine Inspection/ Service (1m) 6033 -November 17, 2022 by Dan Finnigan. During the monthly low chlorine critical alarm / lockout test the analyzer housing was flushed and inspected for damage and wear, and the electrolyte solution level was checked and topped up. The probe was re-inserted into the housing and a single point verification was conducted with the following results: Online analyzer: 1.83 mg/L Free Cl2 Handheld analyzer: 1.79 mg/L Free Cl2 The online analyzer was within 0.04 mg/L Free Cl2 and therefore did not required adjustment.

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 6033*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3085879			6033, Powassan WTP	PM	Inspection	1	MONTHS	TPM Inspection/Maintenance (1m) 6033	COMP	11/1/22 12:00 AM	11/23/22 09:14 AM	11/23/22 09:14 AM	TPM Inspection/Maintenance (1m) 6033 -November 17, 2022. Reviewed trending to ensure both submersible well pump is operating within normal parameters. Started exhaust fan and observed motorized louvers operating properly. Verified chlorine pump on hand, as well as duty chlorine pump operating satisfactorily.
3085884	0000209142	GENERATOR DIESEL POWASSAN GROUND WATER WELL:	6033, Powassan WTP, Facility, Power Generation	PM	Refurbish/ Replace/Repair	1	MONTHS	Wellhouse Diesel Generator Inspection/Functional Test (1m) 6033	COMP	11/1/22 12:00 AM	11/23/22 09:08 AM	11/23/22 09:08 AM	Wellhouse Diesel Generator Inspection/Functional Test (1m) 6033 -November 17, 2022 by Dan Finnigan. All fluid levels were checked, belts inspected, battery charging system, etc. The generator was started and the electrical load was transferred to generator power successfully, and transferred back to shore power properly when the test was completed. While running, the system was observed for leaks or any other deficiencies. Electrical volts and amps were recorded, along with the following generator values: RPM's = 1779 Oil Level = Full Coolant Temp=176 Deg.F Battery Voltage= 13.7V Oil Pressure 64 psi Fuel level = approximately 6.0 inches Hrs at start: 6316 hr 35 min Hrs at stop: 6318 hr 09 min (approx..)

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 6033*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3086771			6033, Powassan WTP	OPER	Compliance	1	MONTHS	WISKI Review (1m) 6033	COMP	11/1/22 12:00 AM	11/8/22 10:02 AM	11/8/22 10:02 AM	WISKI Review (1m) 6033 -WISKI Review (1m) for the month of October 2022 was completed on November 01, 2022 by Dan Finnigan. All values were checked and entered, lab data entries were reviewed, WISKI Graphs corrected, and this Work Order closed off.
3094889	0000258571	ANALYZER CHLORINE AIT-601 RESERVOIR	6033, Powassan WTP, Process, Storage, Elevated Reservoir	PM	Calibration	1	MONTHS	Analyzer Chlorine Inspection/ Service (1m) 6033	COMP	11/1/22 12:00 AM	11/23/22 09:05 AM	11/23/22 09:05 AM	Analyzer Chlorine Inspection/ Service (1m) 6033 - Analyzer Chlorine Inspection/ Service (1m) at the Reservoir was performed by Dan Finnigan on November 17, 2022. Electrolyte levels were checked and filled, air was flushed from the analyzer housing, and readings checked against a pocket colorimeter. A single point calibration was conducted after placing the analyzer probe online. The online analyzer did not need calibration. to the hand held reading. Online = 1.23mg/L Tested = 1.22 mg/L
3109715	0000235294	PANEL ALARM/ DIALER 01 POWASSAN GROUND WATER WELL	6033, Powassan WTP, Process, Lowlift, Well System	PM	Inspection	1	MONTHS	Critical Building Intrusion Alarm Testing (1m) 6033	COMP	12/1/22 12:00 AM	12/21/22 09:13 AM	12/21/22 09:13 AM	Critical Building Intrusion Alarm Testing (1m) 6033 -December 13, 2022. Dan Finnigan performed a test of the well supply building entrance door intrusion alarm by not disarming the alarm when entering the building. This caused an intrusion alarm, which True Steel Alarm Monitoring Service received and notified the on-call operator. This confirms that the building door intrusion alarm is working. DF

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 6033*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3118698	0000296004	GENERATOR NATURAL GAS GENSET McRae Road Reservoir	6033, Powassan WTP, Facility, Power Generation	PM	Refurbish/ Replace/Repair	1	MONTHS	Reservoir Natural Gas Generator Inspection/Functional Test (1m) 6033	COMP	12/1/22 12:00 AM	12/21/22 09:18 AM	12/21/22 09:18 AM	Reservoir Natural Gas Generator Inspection/Functional Test (1m) 6033 - *Note: The generator took 15 cranking attempts and three manual restarts before starting. December 13, 2022 by Dan Finnigan. The oil level was checked and found to be "full", and the air filter was checked and was clean. The main power to the building was disconnected and the generator started. Power was transferred to the generator a moment later, and all building functionality was returned. After the test period the power to the building was re-instated, and after a cool- down period the generator shut down.
3125495	0000235294	PANEL ALARM/ DIALER 01 POWASSAN GROUND WATER WELL	6033, Powassan WTP, Process, Lowlift, Well System	PM	Inspection	1	MONTHS	Critical Alarm/Dialer Testing (1m) 6033	COMP	12/1/22 12:00 AM	12/21/22 09:10 AM	12/21/22 09:10 AM	Critical Alarm/Dialer Testing (1m) 6033 - Critical Alarm/Dialer Testing (1m) 6033 was completed by Dan Finnigan on December 13, 2022. The Cl2 probe was pulled out of the sample cells to perform a monthly inspection and cleaning and to force an alarm condition for the monthly testing of the low chlorine alarm, the alarm dialer and the well pump interlock lockout. True Steel called to advise they had received an alarm notification re the low chlorine alarm. The Cl2 probe was placed back into the flow thru sample cell after it was inspected, cleaned and the electrolyte topped up. After low chlorine alarm cleared the well pump lockout was reset to resume normal operation of the well house. These actions verified proper operation of the low Cl2/instrument alarm, alarm dialer and well pump interlock.

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 6033*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3125751			6033, Powassan WTP	PM	Health and Safety	1	MONTHS	Health And Safety Inspection (1m) 6033	COMP	12/1/22 12:00 AM	12/21/22 09:06 AM	12/21/22 09:06 AM	Health And Safety Inspection (1m) 6033 -The monthly H&S Inspection was conducted on December 13, 2022 and consisted of checking/verifying the following items: 1. Chemical Apron 2. Face Shield 3. Spill Kit(s) X 2: all items were available 4. Chemical secondary containment (intact) 5. Safety Signage (all intact and visible) 6. First aid kit 7. Hearing protection earmuffs 8. Emergency lighting (all tested and working) 9. Emergency Eyewash (tested and working)
3125853			6033, Powassan WTP, Process, Process Control & Monitoring	PM	Calibration	1	MONTHS	Analyzer Chlorine Inspection/ Service (1m) 6033	COMP	12/1/22 12:00 AM	12/21/22 09:08 AM	12/21/22 09:08 AM	Analyzer Chlorine Inspection/ Service (1m) 6033 -December 13, 2022 by Dan Finnigan. During the monthly low chlorine critical alarm / lockout test the analyzer housing was flushed and inspected for damage and wear, and the electrolyte solution level was checked and topped up. The probe was re-inserted into the housing and a single point verification was conducted

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 6033*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3126883			6033, Powassan WTP	PM	Inspection	1	MONTHS	TPM Inspection/Maintenance (1m) 6033	COMP	12/1/22 12:00 AM	12/21/22 09:11 AM	12/21/22 09:11 AM	TPM Inspection/Maintenance (1m) 6033 -December 13, 2022. Reviewed trending to ensure both submersible well pump is operating within normal parameters. Started exhaust fan and observed motorized louvers operating properly. Verified chlorine pump on hand, as well as duty chlorine pump operating satisfactorily.
3126888	0000209142	GENERATOR DIESEL POWASSAN GROUND WATER WELL:	6033, Powassan WTP, Facility, Power Generation	PM	Refurbish/ Replace/Repair	1	MONTHS	Wellhouse Diesel Generator Inspection/Functional Test (1m) 6033	COMP	12/1/22 12:00 AM	12/21/22 09:15 AM	12/21/22 09:15 AM	Wellhouse Diesel Generator Inspection/Functional Test (1m) 6033 -December 13, 2022 by Dan Finnigan. All fluid levels were checked, belts inspected, battery charging system, etc. The generator was started and the electrical load was transferred to generator power successfully, and transferred back to shore power properly when the test was completed. While running, the system was observed for leaks or any other deficiencies. Electrical volts and amps were recorded, along with the following generator values: RPM's = 1803 Oil Level = Full Coolant Temp=172 Deg.F Battery Voltage= 13.7V Oil Pressure 66 psi Fuel level = approximately 5.5 inches Hrs at start: 6365 hr 22 min Hrs at stop: 6366 hr 49 min (approx..)

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 6033*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3127682			6033, Powassan WTP	OPER	Compliance	1	MONTHS	WISKI Review (1m) 6033	COMP	12/1/22 12:00 AM	1/10/23 06:21 PM	1/10/23 06:21 PM	WISKI Review (1m) 6033 -WISKI Review (1m) for the month of November 2022 was completed on January 10, 2023 by Dan Finnigan. All values were checked and entered, lab data entries were reviewed, WISKI Graphs corrected, and this Work Order closed off.
3135458	0000258571	ANALYZER CHLORINE AIT-601 RESERVOIR	6033, Powassan WTP, Process, Storage, Elevated Reservoir	PM	Calibration	1	MONTHS	Analyzer Chlorine Inspection/ Service (1m) 6033	COMP	12/1/22 12:00 AM	12/21/22 09:20 AM	12/21/22 09:20 AM	Analyzer Chlorine Inspection/ Service (1m) 6033 -Analyzer Chlorine Inspection/ Service (1m) at the Reservoir was performed by Dan Finnigan on December 13, 2022. Electrolyte levels were checked and filled, air was flushed from the analyzer housing, and readings checked against a pocket colorimeter. A single point calibration was conducted after placing the analyzer probe online. Online = 1.51 mg/L Tested = 1.31 mg/L The new slope after calibration was 1.35 mA/ppm (within spec).



Appendix B - Work Order Summary for WWTL

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 5747*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3030357	0000296003	GENERATOR NATURAL GAS GENSET Clark Street	5747, Clark SPS, Facility	PM	Refurbish/ Replace/Repair	1	MONTHS	Diesel Generator Inspection/ Functional Test (1m) 5747	COMP	10/1/22 12:00 AM	11/1/22 09:59 AM	11/1/22 09:59 AM	Diesel Generator Inspection/ Functional Test (1m) 5747 -October 27, 2022. Dan Finnigan performed the monthly Generator/ Functional test.. All fluid levels were checked, belts inspected, battery charging system, etc. The generator transfer button was pressed and the start command to the generator was initiated. While running, the system was observed for leaks or any other deficiencies. The following generator values were recorded while running: Oil Level = Full Coolant Temp=165 Deg.F Battery Voltage= 11.9 V Oil Pressure 60 psi Hrs at start: 490.9 Hrs at stop: 491.4
3036589			5747, Powassan WWTL	PM	Health and Safety	1	MONTHS	Health And Safety Inspection (1m) 5747	COMP	10/1/22 12:00 AM	11/1/22 10:03 AM	11/1/22 10:03 AM	Health And Safety Inspection (1m) 5747 -Dan Finnigan conducted the monthly H&S Inspection on October 27, 2022 which consisted of checking/verifying the following items: 1. Spill Kit: all items were available 2. Safety Signage (all intact and visible) 3. First aid kit 4. Hearing protection earmuffs 5. Emergency lighting (was not working) 6. Emergency Eyewash (bottles are within use before date) 7. Fire Extinguisher 8. CO Monitor

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 5747*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3036626			5747, Powassan WWTL	PM	Inspection	1	MONTHS	TPM Inspection/Maintenance (1m) 5747	COMP	10/1/22 12:00 AM	11/1/22 10:05 AM	11/1/22 10:05 AM	TPM Inspection/Maintenance (1m) 5747 -Completed by Dan Finnigan on October 27, 2022. The operation of all sewage station lift pumps were visually and audibly observed at both St. Gregory's Lift Station and the Clark Street Lift station. Pump #1 at St. Gregory SLS seemed a little noisy but pump output was normal. The control panels were also checked for functionality with nothing unusual noted. Ventilation screens at the Clark Station were in good condition, and there was nothing else to report.
3036643			5747, Powassan WWTL	PM	Inspection	1	MONTHS	Critical Alarm/Dialer Testing (1m) 5747	COMP	10/1/22 12:00 AM	11/1/22 10:01 AM	11/1/22 10:01 AM	Critical Alarm/Dialer Testing (1m) 5747 - Conducted by Dan Finnigan on October 27, 2022. Both sewage pumps were turned off in "hand" and the wet well level was allowed to rise until the High Level alarm setpoint was reached. It was verified by True Steel that the alarm condition was met. The on-call operator received the alarm call-out in less than 5 minutes, and both pumps were turned back on to pump down the level. Both sewage pumps were shut off in Auto when the level returned to normal settings in less than 5 minutes of pumping.
3040207			5747, Powassan WWTL	OPER	Compliance	1	MONTHS	WISKI Review (1m) 5747	COMP	10/1/22 12:00 AM	10/26/22 12:12 PM	10/26/22 12:12 PM	WISKI Review (1m) 5747 -WISKI Review (1m) for the month of September 2022 was completed on October 19, 2022 by Dan Finnigan. All values were checked and entered, lab data entries were reviewed, and this Work Order closed off.

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 5747*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3067717			Powassan Wastewater Treatment Lagoon	CAP	Predictive Maintenance	0		Powassan Clark St Station Sludge Removal	COMP		10/26/22 03:28 PM	10/26/22 03:28 PM	Powassan Clark St Station Sludge Removal - Clark Street sewage lift station cleaned out and sludge removed.
3078523	0000296003	GENERATOR NATURAL GAS GENSET Clark Street	5747, Clark SPS, Facility	PM	Refurbish/ Replace/Repair	1	MONTHS	Diesel Generator Inspection/ Functional Test (1m) 5747	COMP	11/1/22 12:00 AM	11/16/22 10:51 AM	11/16/22 10:51 AM	Diesel Generator Inspection/ Functional Test (1m) 5747 - November 07, 2022. Dan Finnigan performed the monthly Generator/ Functional test.. All fluid levels were checked, belts inspected, battery charging system, etc. The generator transfer button was pressed and the start command to the generator was initiated. While running, the system was observed for leaks or any other deficiencies. The following generator values were recorded while running: RPM's=1825 Oil Level = Full Coolant Temp=165 Deg.F Battery Voltage= 12.2 V Oil Pressure 62 psi Hrs at start: 499.3 Hrs at stop: 499.6

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 5747*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3084398			5747, Powassan WWTL	PM	Health and Safety	1	MONTHS	Health And Safety Inspection (1m) 5747	COMP	11/1/22 12:00 AM	11/16/22 10:53 AM	11/16/22 10:53 AM	Health And Safety Inspection (1m) 5747 -Dan Finnigan conducted the monthly H&S Inspection on November 07, 2022 which consisted of checking/verifying the following items: 1. Spill Kit: all items were available 2. Safety Signage (all intact and visible) 3. First aid kit 4. Hearing protection earmuffs 5. Emergency lighting (was not working) 6. Emergency Eyewash (bottles are within use before date) 7. Fire Extinguisher 8. CO Monitor
3084411			5747, Powassan WWTL	PM	Inspection	1	MONTHS	TPM Inspection/Maintenance (1m) 5747	COMP	11/1/22 12:00 AM	11/16/22 10:54 AM	11/16/22 10:54 AM	TPM Inspection/Maintenance (1m) 5747 - Completed by Dan Finnigan on November 07, 2022. The operation of all sewage station lift pumps were visually and audibly observed at both St. Gregory's Lift Station and the Clark Street Lift station. Pump #1 at St. Gregory SLS seemed a little noisy but pump output was normal. The control panels were also checked for functionality with nothing unusual noted. Ventilation screens at the Clark Station were in good condition, and there was nothing else to report.

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 5747*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3084416			5747, Powassan WWTL	PM	Inspection	1	MONTHS	Critical Alarm/Dialer Testing (1m) 5747	COMP	11/1/22 12:00 AM	11/16/22 10:58 AM	11/16/22 10:58 AM	Critical Alarm/Dialer Testing (1m) 5747 -Conducted by Dan Finnigan on November 07, 2022. Both sewage pumps were turned off in "hand" and the wet well level was allowed to rise until the High Level alarm setpoint was reached. It was verified by True Steel that the alarm condition was met. The on-call operator received the alarm call-out in less than 5 minutes, and both pumps were turned back on to pump down the level. Both sewage pumps were shut off in Auto when the level returned to normal settings in less than 5 minutes of pumping.
3086776			5747, Powassan WWTL	OPER	Compliance	1	MONTHS	WISKI Review (1m) 5747	COMP	11/1/22 12:00 AM	1/10/23 03:02 PM	1/10/23 03:02 PM	WISKI Review (1m) 5747 -WISKI Review (1m) for the month of October 2022 was completed on January 05, 2022 by Dan Finnigan. All values were checked and entered, lab data entries were reviewed, and this Work Order closed off.

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 5747*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3118682	0000296003	GENERATOR NATURAL GAS GENSET Clark Street	5747, Clark SPS, Facility	PM	Refurbish/ Replace/Repair	1	MONTHS	Diesel Generator Inspection/ Functional Test (1m) 5747	COMP	12/1/22 12:00 AM	12/21/22 09:04 AM	12/21/22 09:04 AM	Diesel Generator Inspection/ Functional Test (1m) 5747 - *Note: It took 10 cranking attempts and three manual resets to start the generator. December 13, 2022. Dan Finnigan performed the monthly Generator/ Functional test.. All fluid levels were checked, belts inspected, battery charging system, etc. The generator transfer button was pressed and the start command to the generator was initiated. While running, the system was observed for leaks or any other deficiencies. The following generator values were recorded while running: RPM's= n/a (RPM gauge not working) Oil Level = Full Coolant Temp=150 Deg.F Battery Voltage= 12.2 V Oil Pressure 62 psi Hrs at start: 500.5 Hrs at stop: 500.9

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 5747*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3125436			5747, Powassan WWTL	PM	Health and Safety	1	MONTHS	Health And Safety Inspection (1m) 5747	COMP	12/1/22 12:00 AM	12/21/22 08:56 AM	12/21/22 08:56 AM	Health And Safety Inspection (1m) 5747 - Dan Finnigan conducted the monthly H&S Inspection on December 13, 2022 which consisted of checking/ verifying the following items: 1. Spill Kit: all items were available 2. Safety Signage (all intact and visible) 3. First aid kit 4. Hearing protection earmuffs 5. Emergency lighting (was not working) 6. Emergency Eyewash (bottles are within use before date) 7. Fire Extinguisher 8. CO Monitor
3125447			5747, Powassan WWTL	PM	Inspection	1	MONTHS	TPM Inspection/Maintenance (1m) 5747	COMP	12/1/22 12:00 AM	12/21/22 08:58 AM	12/21/22 08:58 AM	TPM Inspection/Maintenance (1m) 5747 -Completed by Dan Finnigan on December 13, 2022. The operation of all sewage station lift pumps were visually and audibly observed at both St. Gregory's Lift Station and the Clark Street Lift station. Pump #1 at St. Gregory SLS seemed a little noisy but pump output was normal. The control panels were also checked for functionality with nothing unusual noted. Ventilation screens at the Clark Station were in good condition, and there was nothing else to report.

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 5747*
 Work Order Type: CAP,CORR,OPER,PM
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3125452			5747, Powassan WWTL	PM	Inspection	1	MONTHS	Critical Alarm/Dialer Testing (1m) 5747	COMP	12/1/22 12:00 AM	12/21/22 09:00 AM	12/21/22 09:00 AM	Critical Alarm/Dialer Testing (1m) 5747 -Conducted by Dan Finnigan on December 13, 2022. Both sewage pumps were turned off in "hand" and the wet well level was allowed to rise until the High Level alarm setpoint was reached. It was verified by True Steel that the alarm condition was met. The on-call operator received the alarm call-out in less than 5 minutes, and both pumps were turned back on to pump down the level. Both sewage pumps were shut off in Auto when the level returned to normal settings in less than 5 minutes of pumping.
3127687			5747, Powassan WWTL	OPER	Compliance	1	MONTHS	WISKI Review (1m) 5747	COMP	12/1/22 12:00 AM	1/10/23 03:04 PM	1/10/23 03:04 PM	WISKI Review (1m) 5747 -WISKI Review (1m) for the month of November 2022 was completed on January 05, 2022 by Dan Finnigan. All values were checked and entered, lab data entries were reviewed, and this Work Order closed off.



Appendix C – Call-out Report for WTP

Workorder Summary Report

 Report Start Date: Oct 1, 2022 12:00 AM
 Report End Date: Dec 31, 2022 11:59 PM
 Location: 6033*
 Work Order Type: CALL,EMER
 Work Order Class:

				WorkOrder		PM Schedule		Workorder Details					
WO #	Asset ID	Asset Description	Location Description	Type	Class	FEQ	Units	Work Order Description	Status	Schedule Start	Actual Start	Actual Finsh	WorkLog Detail
3105321			6033, Powassan WTP, Facility	CALL	Inspection	0		6033 Powassan Well House Auxiliary 2 Power Outage Alarm	COMP		11/6/22 10:15 AM	11/6/22 11:15 AM	Powassan Well House Auxiliary 2 Power Outage Alarm - Received repeat Auxiliary 2 Power Outage Alarms with system restore. Inspection of equipment.



Appendix D - Performance Assessment Report Water

**Powassan Drinking Water System
Performance Assessment Report Water**

From: 01/10/2022 to 31/12/2022

Report extracted 01/10/2023 14:38

Facility: [6033] POWASSAN DRINKING WATER SYSTEM

Works: [220000576]

	10/2022	11/2022	12/2022	<--Total-->	<--Avg-->	<--Max-->	<--Min-->
Flows:							
Raw Flow: Monthly Total - Raw Well 1 (m³)	5946.47	5627.75	6036.72	17610.94			
Raw Flow: Monthly Total - Raw Well 2 (m³)	5914.03	5522.98	5942.27	17379.28			
Raw Flow: Monthly Avg - Raw Well 1 (m³/d)	191.82	187.59	194.73		191.38		
Raw Flow: Monthly Avg - Raw Well 2 (m³/d)	190.78	184.1	191.69		188.85		
Raw Flow: Monthly Max - Raw Well 1 (m³/d)	276.86	281.8	274			281.8	
Raw Flow: Monthly Max - Raw Well 2 (m³/d)	288.38	255.63	273.21			288.38	
Raw Flow: Monthly Total - Raw Water - Total (m³)	11860.5	11150.73	11978.99	34990.22			
Raw Flow: Monthly Avg - Raw Water - Total (m³/d)	382.6	371.69	386.42		380.24		
Raw Flow: Monthly Max - Raw Water - Total (m³/d)	493.57	404.73	469.19			493.57	
Turbidity:							
Raw: Max Turbidity - Raw Well 1 (NTU)	0.18	0.14	0.13			0.18	
Raw: Max Turbidity - Raw Well 2 (NTU)	1.11	0.15	0.13			1.11	
Chemical Parameters:							
Treated: Max Nitrite - TW1 (mg/L)	< 0.003				<	0.003	
Treated: Max Nitrate - TW1 (mg/L)	1.07					1.07	
Distribution: Max THM - Distribution (µg/l)	12					12	
Chlorine Residuals:							
Treated: Min Free Cl2 Resid - Treated Water (mg/L)	1.149	1.249	1.108				1.108
Treated: Max Free Cl2 Resid - Treated Water (mg/L)	2.92	2.445	2.301			2.92	
Dist: Min Free Cl2 Resid - Distribution (mg/L)	1.43	1.3	1.32				1.3
Dist: Max Free Cl2 Resid - Distribution (mg/L)	1.66	1.74	1.95			1.95	
Bacti Samples Collected:							
Raw Bacti: # of samples - Raw Well 1	5	4	4	13			
Raw Bacti: # of samples - Raw Well 2	5	4	4	13			
Treated Bacti: # of samples - TW1	3	1	2	6			
Treated Bacti: # of samples - TW2	2	3	2	7			
Dist Bacti: # of samples - Distribution	15	12	12	39			
Treated Bacti: # of TC exceedances - TW1	0	0	0	0			
Treated Bacti: # of TC exceedances - TW2	0	0	0	0			
Treated Bacti: # of EC exceedances - TW1	0	0	0	0			
Treated Bacti: # of EC exceedances - TW2	0	0	0	0			
Dist Bacti: # of TC exceedances - Distribution	0	0	0	0			
Dist Bacti: # of EC exceedances - Distribution	0	0	0	0			



Appendix E - Performance Assessment Report Wastewater

**Powassan Wastewater Treatment Lagoon
Performance Assessment Report Wastewater/Lagoon**

Report extracted 01/09/2023 12:39

From: 01/10/2022 to 31/12/2022

Facility: [5747] POWASSAN WASTEWATER TREATMENT LAGOON

Works: [110000613]

	10/2022	11/2022	12/2022	<-Total-->	<-Avg-->	<-Max-->
Flows:						
Raw Flow: Total - Raw (m³)	15367.60	12315.38	14819.10	42502.08		
Raw Flow: Total - St Gregory (m³)	592.00	596.18	540.70	1728.88		
Raw Flow: Total - Clark Street (m³)	14775.60	11719.20	14278.40	40773.20		
Raw Flow: Avg - Raw (m³/d)	495.73	410.51	478.04		461.43	
Raw Flow: Avg - St Gregory (m³/d)	19.10	19.87	17.44		18.80	
Raw Flow: Avg - Clark Street (m³/d)	476.63	390.64	460.59		442.62	
Raw Flow: Max - Raw (m³/d)	752.20	595.80	835.70			835.70
Raw Flow: Max - St Gregory (m³/d)	29.80	33.58	28.30			33.58
Raw Flow: Max - Clark Street (m³/d)	732.00	570.30	809.90			809.90
Eff. Flow: Total - Eff Old (m³)	22146.70	6740.30		28887.00		
Eff. Flow: Total - Eff South (m³)		55568.38		55568.38		
Eff. Flow: Avg - Eff Old (m³/d)	1845.56	1685.07			1765.32	
Eff. Flow: Avg - Eff South (m³/d)		3969.17			3969.17	
Eff. Flow: Max - Eff Old (m³/d)	1925.80	1925.80				1925.80
Eff. Flow: Max - Eff South (m³/d)		4274.49				4274.49
Carbonaceous Biochemical Oxygen Demand: CBOD:						
Eff: Avg cBOD5 - Eff Old (mg/L)	< 4.250	6.000			< 5.125	6.000
Eff: Avg cBOD5 - Eff South (mg/L)		11.800			11.800	11.800
Eff: # of samples of cBOD5 - Eff Old (mg/L)	4	1		5		
Eff: # of samples of cBOD5 - Eff South (mg/L)		5		5		
Loading: cBOD5 - Eff Old (kg/d)	< 7.844	10.110			< 8.977	10.110
Loading: cBOD5 - Eff South (kg/d)		46.836			46.836	46.836
Biochemical Oxygen Demand: BOD5:						
Raw: Avg BOD5 - Raw (mg/L)	173.000	127.000	136.000		145.333	173.000
Raw: # of samples of BOD5 - Raw (mg/L)	1	1	1	3		
Total Suspended Solids: TSS:						
Raw: Avg TSS - Raw (mg/L)	163.000	156.000	119.000		146.000	163.000
Raw: # of samples of TSS - Raw (mg/L)	1	1	1	3		
Eff: Avg TSS - Eff Old (mg/L)	7.500	20.000			13.750	20.000
Eff: Avg TSS - Eff South (mg/L)		49.200			49.200	49.200
Eff: # of samples of TSS - Eff Old (mg/L)	4	1		5		
Eff: # of samples of TSS - Eff South (mg/L)		5		5		
Loading: TSS - Eff Old (kg/d)	13.842	33.702			23.772	33.702
Loading: TSS - Eff South (kg/d)		195.283			195.283	195.283
Percent Removal: TSS - Eff Old (mg/L)	95.399	87.179				95.399
Percent Removal: TSS - Eff South (mg/L)		68.462				68.462
Total Phosphorus: TP:						
Raw: Avg TP - Raw (mg/L)	5.000	4.350	2.780		4.043	5.000
Raw: # of samples of TP - Raw (mg/L)	1	1	1	3		
Eff: Avg TP - Eff Old (mg/L)	0.415	0.570			0.492	0.570
Eff: Avg TP - Eff South (mg/L)		0.162			0.162	0.162
Eff: # of samples of TP - Eff Old (mg/L)	4	1		5		
Eff: # of samples of TP - Eff South (mg/L)		5		5		
Loading: TP - Eff Old (kg/d)	0.766	0.960			0.863	0.960
Loading: TP - Eff South (kg/d)		0.643			0.643	0.643
Percent Removal: TP - Eff Old (mg/L)	91.700	86.897				91.700
Percent Removal: TP - Eff South (mg/L)		96.276				96.276
Nitrogen Series:						
Raw: Avg TKN - Raw (mg/L)	36.000	45.600	21.400		34.333	45.600
Raw: # of samples of TKN - Raw (mg/L)	1	1	1	3		
Eff: Avg TAN - Eff Old (mg/L)	3.325	4.300			3.813	4.300
Eff: Avg TAN - Eff South (mg/L)		< 0.280			< 0.280	< 0.280
Eff: # of samples of TAN - Eff Old (mg/L)	4	1		5		
Eff: # of samples of TAN - Eff South (mg/L)		5		5		
Loading: TAN - Eff Old (kg/d)	6.136	7.246			6.691	7.246
Loading: TAN - Eff South (kg/d)		< 1.111			< 1.111	< 1.111
Disinfection:						
Eff: GMD E. Coli - Eff Old (cfu/100mL)	4.899	20.000			12.449	20.000
Eff: GMD E. Coli - Eff South (cfu/100mL)		24.258			24.258	24.258
Eff: # of samples of E. Coli - Eff Old (cfu/100mL)	4	1		5		
Eff: # of samples of E. Coli - Eff South (cfu/100mL)		5		5		