

# Merrickville Wastewater System

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## 2020 Annual Report

January 1, 2020 – December 31, 2020

Prepared By



**Ontario Clean Water Agency**  
**Agence Ontarienne Des Eaux**

This report has been prepared to meet the requirements set out in the facility Certificate of Approval #1121-7YRQLF issued January 18, 2010.

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## Compliance Report Card

Compliance Event	# of Events	Details
Ministry of Environment Inspections	0	No Inspection's during the reporting period
Ministry of Labour Inspections	0	No Inspection's during the reporting period
Effluent Parameter Exceedances	1	Total Suspended solids effluent limit February 2020
Bypass/Overflows	0	No Bypass or Overflows to report for this reporting period
Community Complaints	0	No community complaints for the reporting period
Spills	0	No Spills during the reporting period

## System/Process Description

The Merrickville Wastewater system utilizes an ISAM treatment system. This system incorporates a surge/anoxic mix tank as part of the tank to optimally control the process and provides rapid and complete treatment. The surge tank provides flow and nutrient equalization to optimally provide treatment at the full range of flows and loadings.

The secondary treatment process employs sequencing batch reactor (SBR) technology consisting of anaerobic tanks, anoxic tanks and a sequencing batch reactor. The Sequencing Batch Reactor incorporates an anaerobic selector chamber which provides consistent phosphorous removal by subjecting the recirculated biomass to anaerobic conditions, forcing the release of phosphorous, but also creates soluble carbon as a food source for phosphorous removal through anaerobic conversion of settle able BOD to soluble carbon. Additionally, anaerobic sludge digestion occurs in the anaerobic selector chamber, reducing waste solids production by up to 65% for the entire secondary process. Effluent is disinfected using Ultraviolet disinfection. Permanent Diesel generator is on-site to provide back-up power.

### Proposed Alterations, Extensions, or Replacement to Works

There are no proposed alterations, extensions or replacements that would affect the Certificate of Approval.

## Effluent Quality Assurance or Control Measures

The Village of Merrickville-Wolford facilities are part of OCWA's operational Mississippi Cluster. The facilities are supported by cluster, regional and corporate resources. Operational Services are delivered by OCWA staff that live and work in the community.

OCWA operates facilities in compliance with applicable regulations. The facility has comprehensive manuals detailing operations, maintenance, instrumentation, and emergency procedures. All procedures are treated as active documents, with annual reviews.

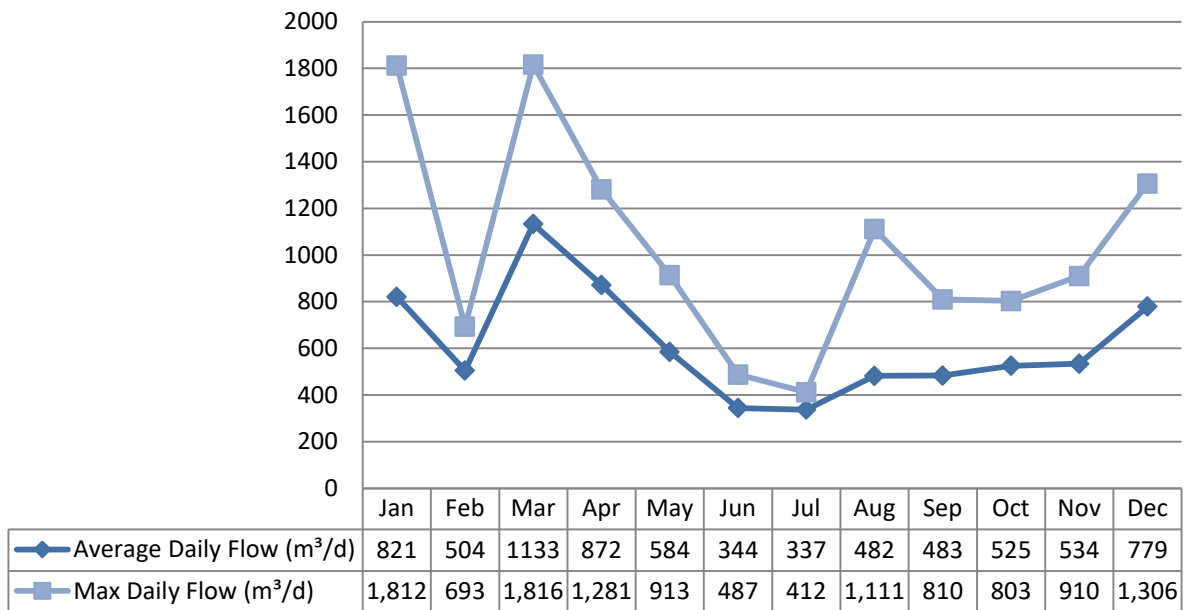
OCWA has additional "Value Added" and operational support services that the Village of Merrickville-Wolford benefits from including:

- Access to a network of operational compliance and support experts at the regional and corporate level, as well as affiliated programs that include the following:
  - Quality & Environmental Management System, Occupational Health & Safety System and an internal compliance audit system.
  - Process Data Collection (PDC) facility operating information repository, which consolidates field data, online instrumentation, and electronic receipt of lab test results for reporting, tracking and analysis.
  - Work Management System (WMS) that tracks and reports maintenance activity, and creates predictive and preventative reports.
  - Outpost 5 wide-area SCADA system allows for process optimization and data logging, process trending, remote alarming and optimization of staff time.
- Client reporting which includes operational data, equipment inventory, financial statements, maintenance work orders, and capital status reports
- Site-Specific Contingency Plans and Standard Operating Procedures
- Use of accredited laboratories
- Additional support in response to unusual circumstances, and extra support in an emergency.
- Use of sampling schedules for external laboratory sampling

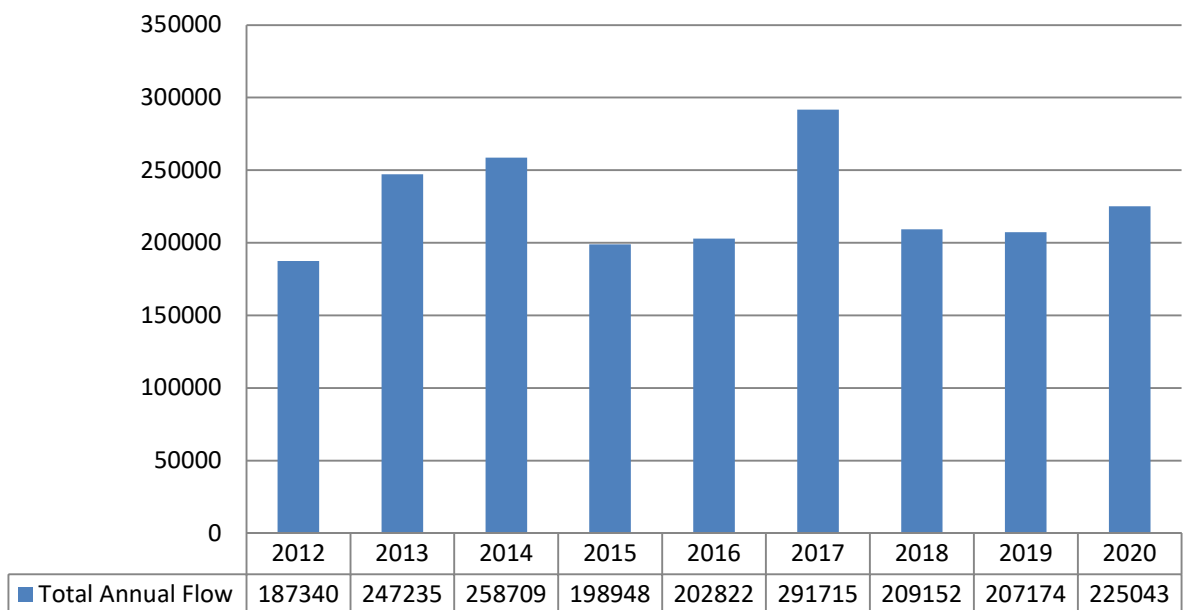
## Treatment Flows

### Raw Flow (m<sup>3</sup>/d)

Annual average flow for 2020 was 618.3 m<sup>3</sup>/d. The Average daily flow rated capacity is 800 m<sup>3</sup>/d. This is based on an annual average. A flow reduction plan was established for 2018.



### Annual Comparison (m<sup>3</sup>)



## Septage Volumes

Month	Septage Received (m <sup>3</sup> )
April	10.0
May	14.5
June	15.5
July	13.8
August	13.8
September	15.5
October	13.9
November	12.9
December	14.3

## Raw Sewage Quality

Results of raw sewage concentrations and loadings are available in the Facility Performance Assessment Report in Appendix A.

## Effluent Quality

The limits are based on current requirements in the facilities Environmental Compliance Approval. Laboratory samples are submitted to an accredited laboratory for regulatory analysis.

The Federal Government also regulates certain sewage effluent parameter under the Federal Fisheries Act. The results are submitted to Environment Canada (WESR) on a quarterly basis.

### Effluent Exceedance Summary Limit

Sample	Date	Parameter	Exceedance of	Limit	Value
Final Effluent	February 2020	Total Suspended Solids	ECA	15.0 mg/L	17.8.0 mg/L

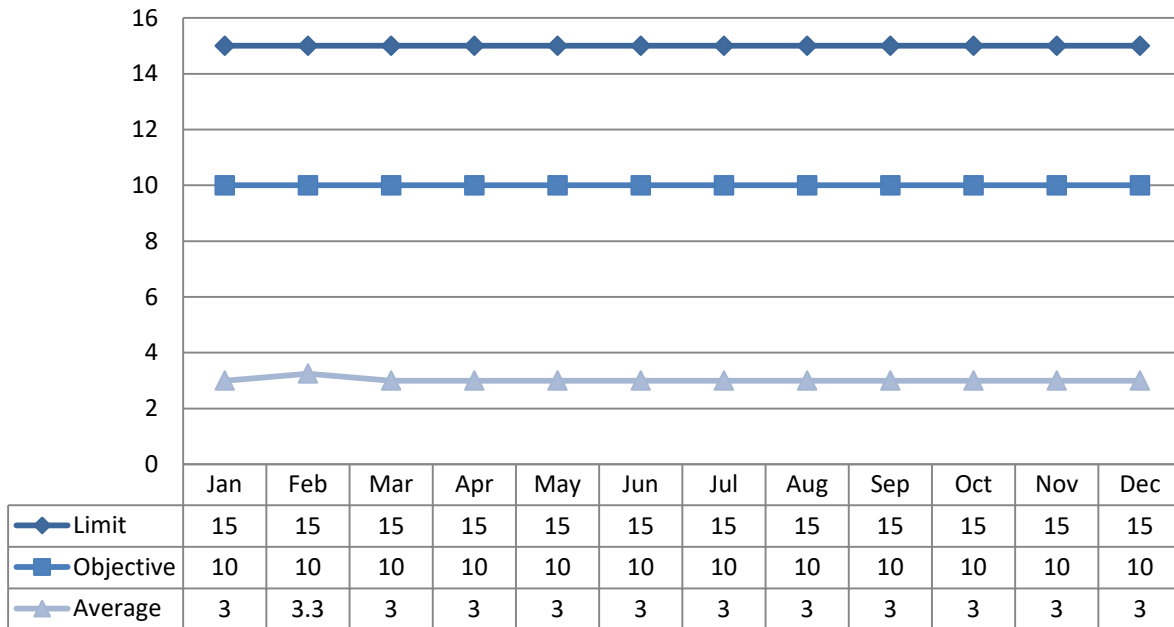
### Other Issues

There were no other issues during the reporting year.

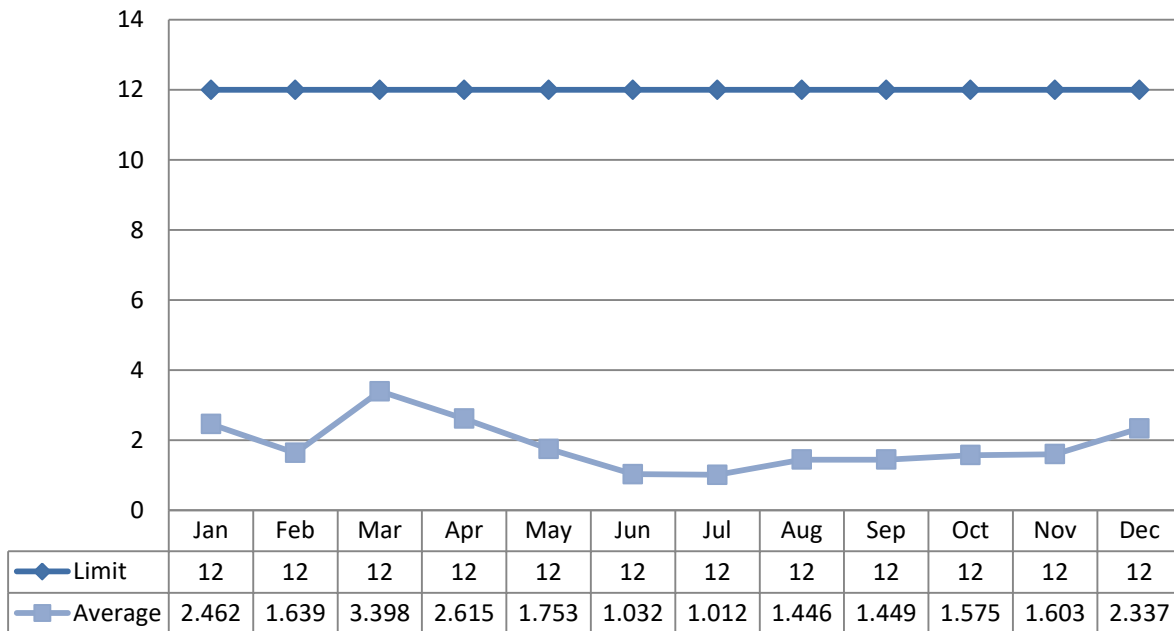
**Effluent Parameter Summary**

**Carbonaceous Biological Oxygen Demand (CBOD5)**

Concentration (mg/L)



Loading (kg/d)

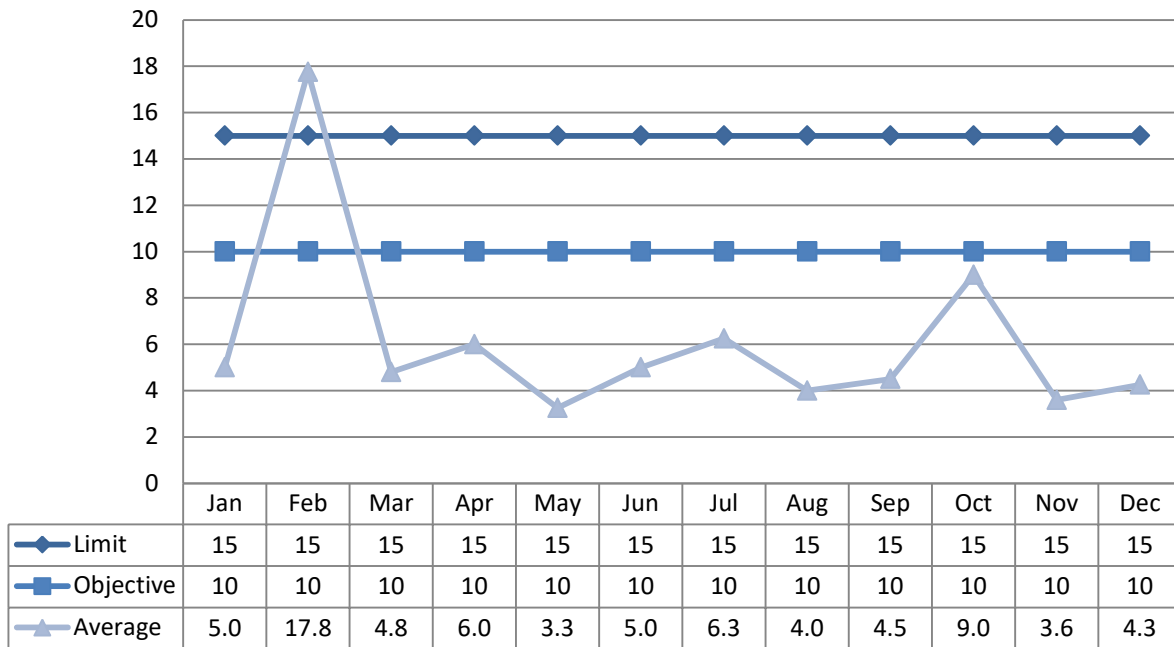




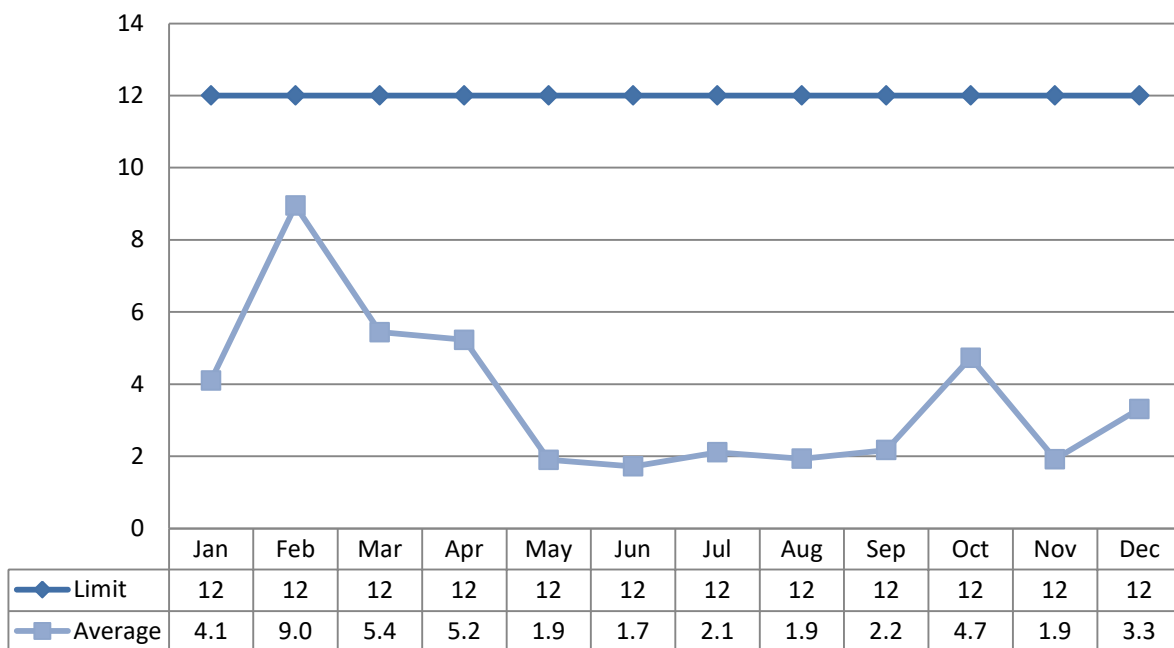
**Total Suspended Solids**

Concentration (mg/L)

Objective exceedances were a result of high flows during rain events. In February 2020, Total Suspended Solids exceeded the limit due to high flows caused by snow melt and rain events.

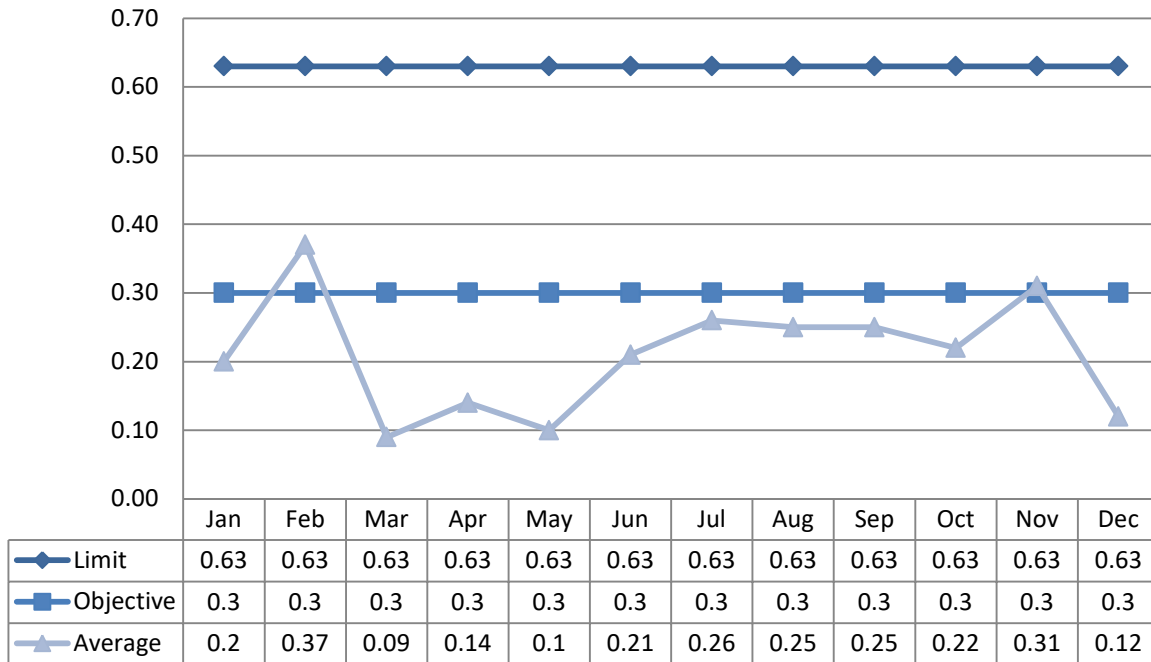


Loading (kg/d)

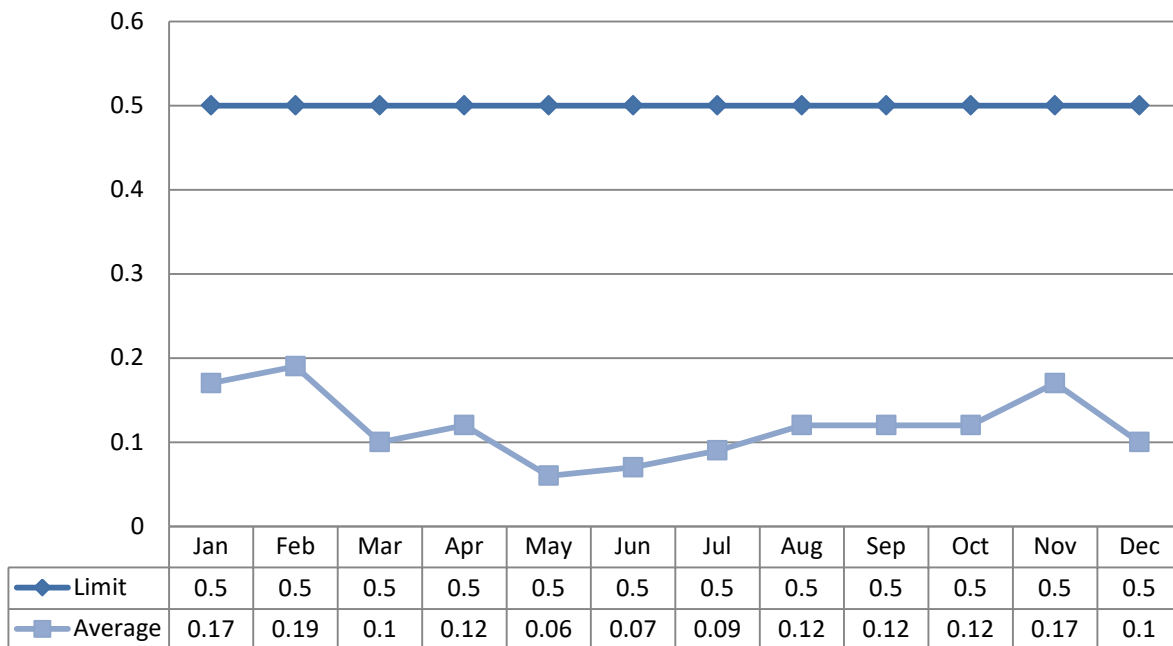


**Total Phosphorus**

Concentration (mg/L)



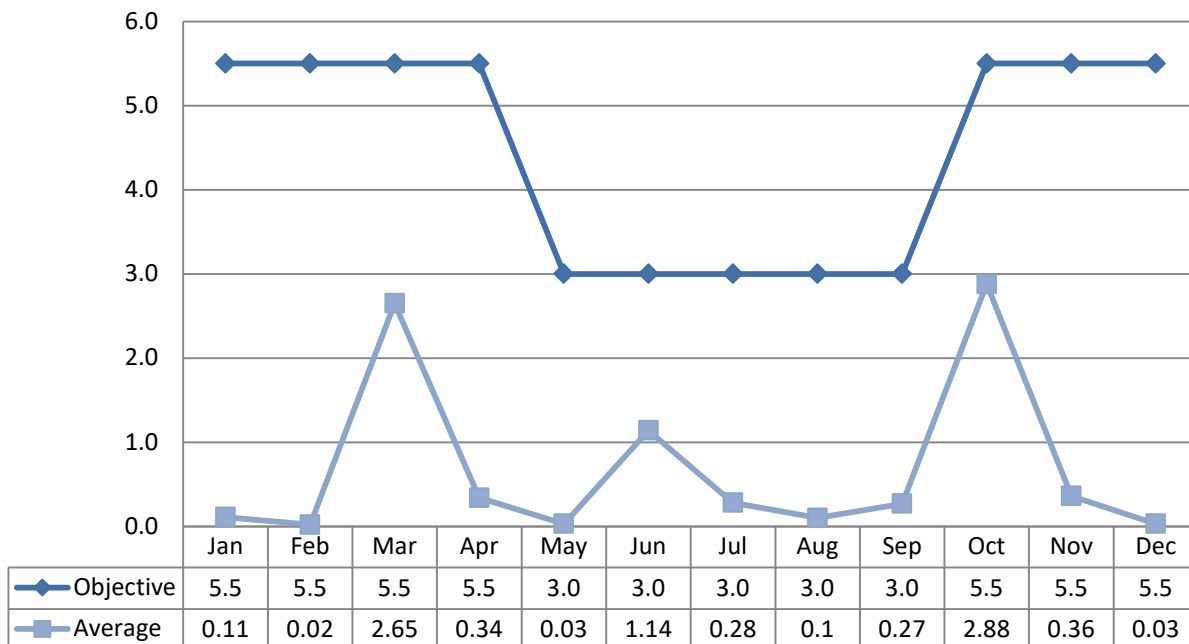
Loading (kg/d)



**Total Ammonia Nitrogen**

Limit is based on effluent being “Non-Acutely Lethal”. See Acute Lethality results below.

Concentration (mg/L)



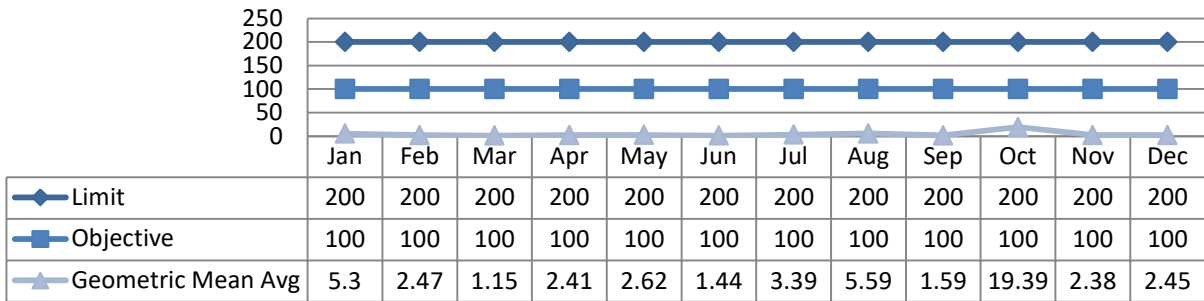
**Acute Lethality**

Semi-Annual sampling is required for acute lethality (Rainbow Trout and Daphnia Magna). Results are displayed as % mortality.

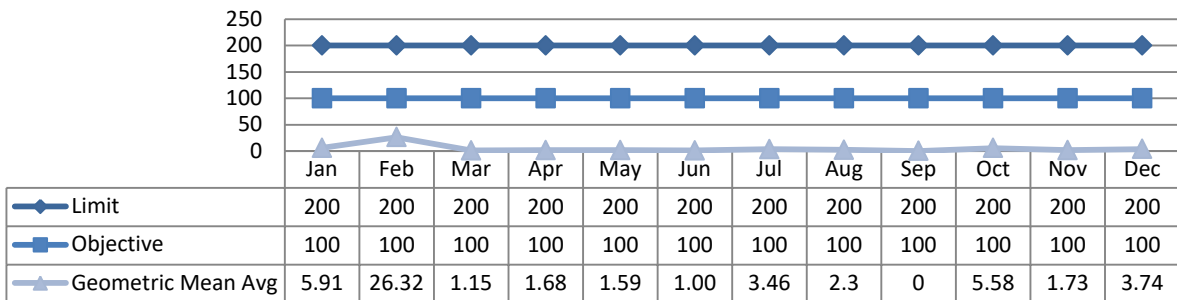
Date	Rainbow Trout	Daphnia Magna
March 3, 2020	0%	0%
September 17, 2020	0%	0%

**E-coli**

**SBR1**

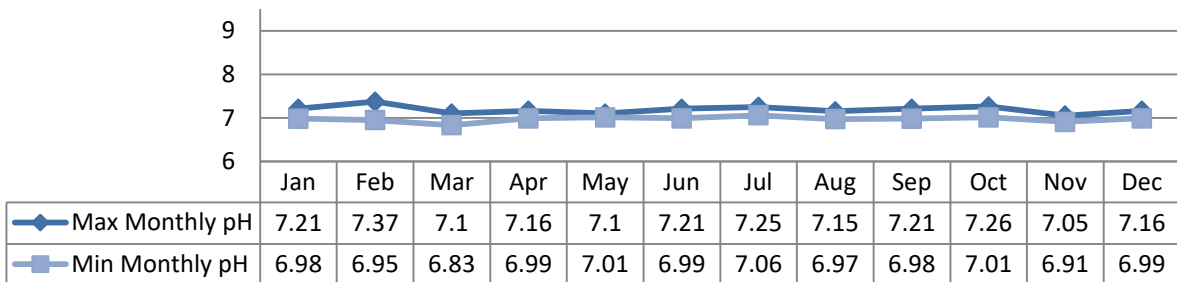


**SBR2**

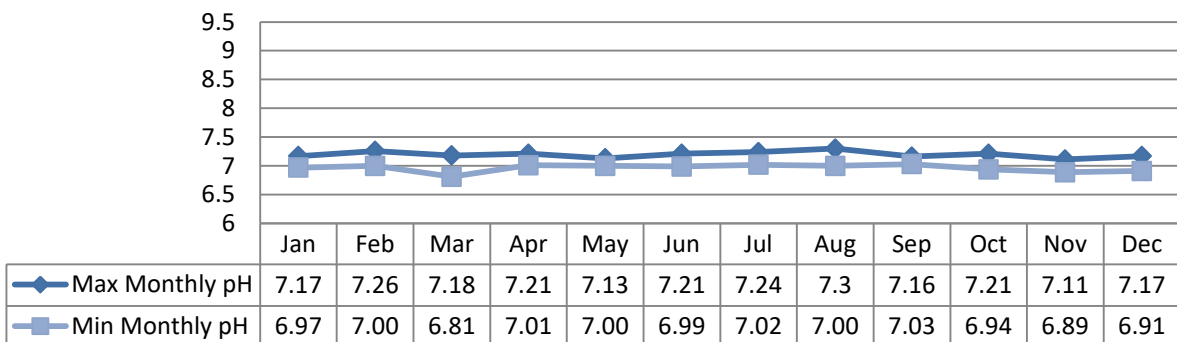


**pH**

**SBR 1**



**SBR 2**



## Biosolids

Sludge generated from the treatment plant was spread on agricultural land during the spreading season as per the Nutrient Management Act O.Reg 267/03. During the winter sludge is stored on-site until the Organic Soil Conditioning Sites are available for spreading.

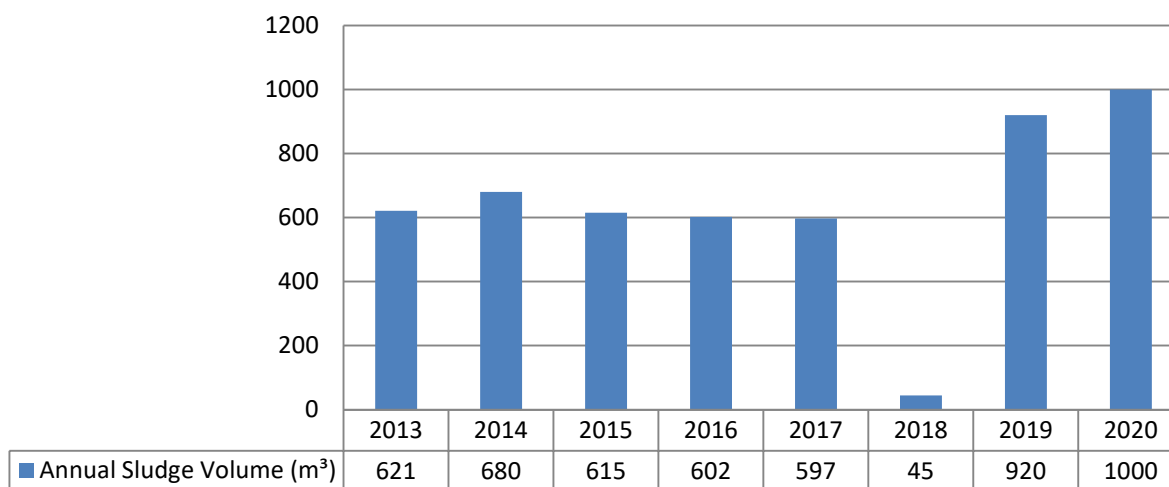
During the spreading season the operating authority contracts sludge haulage. Sludge haulage is contracted to Terrapure Environmental who maintains a bank of available sites for disposal of biosolids. Biosolids quality report in Appendix B.

### Biosolids Disposal Summary

For 2020, Terrapure hauled 1000 m<sup>3</sup> from the sludge holding tank.

Date	Site	NASM Plan number	Volume (m <sup>3</sup> )
January 2020	Third High Farms Facility	ECA A710174 ECA 5948-7JRMAJ	160
May 11 2020	Sunol Farms - James	22416	840
			1000

### Annual Comparison



Note: In 2018, extremely wet weather conditions resulted in limited hauling opportunities.

## Summary of Complaints

The following were received community complaints related to the operations of the Merrickville WPCP and Collection System.

Date	Location	Details	Corrective Action Taken
There were no Community Complaints during the reporting period.			

## Summary of Bypass/Overflows

Date	Location	Details	Corrective Action Taken
There were no Bypass' or Overflows during the reporting period.			

## Summary of Spills/Abnormal Discharges

Date	Location	Details	Corrective Action Taken
No spills or abnormal discharges during the reporting period			

## Maintenance

OCWA uses a risk-based preventative maintenance framework that ensures assets are maintained to manufacturer's and/or industry standards. Maintenance is completed using various tools and operational supports. The Eastern Regional Hub has specialized certified staff such as Millwrights, Electricians and Instrumentation Specialists to name a few.

OCWA uses a Workplace Maintenance System (WMS). WMS is a maintenance tracking system that can generate work orders as well as give summaries of completed and scheduled work. During the year, the operating authority at the facility generates scheduled work orders on a weekly, monthly and annual basis. The service work is recorded in the work order history. This ensures routine and preventive maintenance is carried out. Emergency and capital repair maintenance is completed and added to the system.

Capital projects are listed and provided to the Village of Merrickville-Wolford in the form of a "Capital Forecast". This list is developed by facility staff and provides recommendations for facility components requiring upgrading or improvement.

### Maintenance Highlights

WO #	Summary
1500655	Capital SBR Effluent train 2 valve replaced
1583784	Capital ABS2 blower replacement
1585837	Capital Replaced generator injection pump
1621760	Capital Head works screw auger repair
1662735	Capital ABS Blower repair
1663849	Capital Sewage Plant Control Replacement
1706625	Capital Replaced generator fuel pump

WO #	Summary
1748377	Capital Repaired Aspirator Pump Train 2 fail
1794317	Capital Change seal on jet pump
1833470	Capital Repaired leak in bathroom ceiling leaks
1836514	Capital Replace stainless steel lifting chain for various pumps
1918618	Capital Effluent plumbing flange install
1919095	Capital Replaced generator set coolant sensor at sewage pump station
1915466	Capital Replaced chemical pump
2000719	Capital Miscellaneous tools and materials

### Calibration

The flow meters were calibrated on May 7, 2020. Calibration Reports are attached in Appendix C. There is no on-line effluent monitoring equipment installed at this facility.

# Appendix A

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## Facility Performance Assessment Report





# Appendix B

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## Biosolids Quality Report

Ontario Clean Water Agency  
 Biosolids Quality Report - Liquid  
 Digester Type: AEROBIC  
**Solids and Nutrients**

Facility: MERRICKVILLE WASTEWATER TREATMENT FACILITY  
 Works: 1162  
 Period: 01/01/2020 to 12/01/2020

Facility Works Number: 1.10001729E8  
 Facility Name: MERRICKVILLE WASTEWATER TREATMENT FACILITY  
 Facility Owner: Municipality: The Village of Merrickville-Wolford  
 Facility Classification: Class 2 Wastewater Treatment  
 Receiver: Rideau River  
 Service Population:  
 Total Design Capacity: m3/day  
 Period Being Reported: 01/01/2020 12/01/2020

Note: all parameters in this report will be derived from the Bslq Station

Month	Total Sludge Hauled (m3)	Avg. Total Solids (mg/L)	Avg. Volatile Solids (mg/L)	Avg. Total Phosphorus (mg/L)	Ammonia (mg/L)	Nitrate (mg/L)	Nitrite (mg/L)	TKN (mg/L)	Ammonia + Nitrate (mg/L)	Potassium (mg/L)
Site	MERRICKVILLE WASTEWATER TREATMENT FACILITY									
Station	Bslq Station only									
Parameter Short Name	HauledVol	TS	VS	TP	NH3p_NH4p_N	NO3-N	NO2-N	TKN	calculation in report - no T/S	K
T/s	IH Month.Total	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean	Lab Published Month Mean		Lab Published Month Mean
Jan	161.000	64,100.000	37,400.000	1,510.000	332.000	1.700	1.000	3,620.000	166.850	38.600
Feb		37,700.000	22,600.000	871.000	266.000	0.200	0.100	1,970.000	133.100	35.400
Mar		52,200.000	30,400.000	1,380.000	212.000	1.000	1.000	295.000	106.500	38.600
Apr		67,000.000	40,200.000	834.000	189.000	0.200	0.100	3,480.000	94.600	32.200
May		57,800.000	34,000.000	1,570.000	277.000	1.000	1.000	3,430.000	139.000	50.500
Jun										
Jul		52,500.000	31,100.000	1,470.000	393.000	1.000	1.000	3,280.000	197.000	36.700
Aug		40,850.000	23,400.000	1,221.000	577.500	1.000	1.000	2,600.000	289.250	30.450







# Appendix C

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## Flow Meter Calibration Records

# CapitalControls

Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

10-830 Industrial Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

## **Town of Merrickville**

### **Calibration of Waste Water and Water Flow Meters**

**Report May 2020**

Prepared For: O.C.W.A. Merrickville

Calibration Date: May 7<sup>th</sup> 2020

Calibration Due: May 7<sup>th</sup> 2020

Verifications performed by: Tim Stewart

Report prepared by: Tim Stewart



# CapitalControls

Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

10-830 Industrial Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

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## 2 Equipment Used

The following equipment was used to perform the calibrations:

E and H Fieldcheck

## 3 Procedures Used

To verify the equipment standard verification procedures developed by the Township were used and standard industry practice.

### 3.1 Flowmeter Verification

*Verification, Magnetic Flow Meter:*

The verification of Endress & Hauser Flow measuring devices (the device under test) are checked for the following characteristic values:

1. Functionality and deviation in flow measurement.
2. Deviation in the current and frequency outputs in reference to the flow rate data determined by the measuring device.

**Measuring devices:** The verification system consists of the FlowCheck flow simulator, the Simubox and the appropriate connection cables.

**FieldCheck:** The FieldCheck flow simulator generates the flow simulation signals and processes the measured values sent back from the transmitter.

**Simubox:** The Simubox ensures that the FieldCheck simulation signal are correctly converted in the transmitter, by comparing the measurements returned from the transmitter to data stored within the Simubox for various parameters (Electromagnetic Field vs. Flow, Flow vs. Current, and various other parameters important in verifying the proper functionality of the device under test.

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## **4 Instrument Verification**

See the following pages of reports for individual equipment.

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## 4.1 FIT 305 Raw Sewage

DTM Version: 3.29.00

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### Flowmeter Verification Certificate Transmitter

Customer	Plant
Order code	FIT 305-
PROMAG 53 W DN150	Tao Name
Device type	1.0038 - 1.0038
DB09BB16000	K-Factor
Serial number	4
V2.02.00	Zero point
Software Version Transmitter	V1.05.03
05/07/2020	Software Version I/O-Module
Verification date	02:18 PM
	Verification time

### Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.55 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	


FieldCheck Details	Simubox Details
240223	8784351
Production number	Production number
1.07.10	1.00.01
Software Version	Software Version
03/2020	03/2020
Last Calibration Date	Last Calibration Date

..... Date Operator's Sign Inspector's Sign

#### Overall results:

The achieved test results show that the instrument is completely functional, and the measuring results lie within +/- 1% of the original calibration. <sup>1)</sup>  
The calibration of the Fieldcheck test system is fully traceable to national standards.

<sup>1)</sup> Pneumatics is an additional proof of electrode integrity with a high voltage test.

Endress+Hauser 

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Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

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## FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FT 305-
Device type	PROMAG S3 W DN150	K-Factor	1.0038 - 1.0038
Serial number	DB098816000	Zero point	4
Software Version Transmitter	V2.02.00	Software Version I/O-Module	V1.05.03
Verification date	05/07/2020	Verification time	02:18 PM

Verification Flow end value ( 100 % ): 70.686 l/s  
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	<b>Test Transmitter</b>			
✓	Amplifier	3.534 l/s (5%)	1.50 %	-0.40 %
✓		7.069 l/s (10.0%)	1.00 %	-0.04 %
✓		35.343 l/s (50.0%)	0.60 %	-0.07 %
✓		70.686 l/s (100%)	0.55 %	-0.01 %
✓	<b>Current Output 1</b>			
✓		4.000 mA (0%)	0.05 mA	-0.005 mA
✓		4.800 mA (5%)	0.05 mA	-0.005 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.018 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.006 mA
✓		20.000 mA (100%)	0.05 mA	-0.004 mA
—	<b>Pulse Output 1</b>	—	—	—
		<b>Start value</b>	<b>Limits range</b>	<b>Measured value</b>
✓	<b>Test Sensor</b>			
✓	Coil Curr. Rise	9.600 ms	0.000_21.500 ms	13.276 ms
✓	Coil Curr. Stability		—	—
✓	Electrode Integrity	mV	0.0_300.000 mV	3.285 mV

### Legend of symbols

✓	✗	—	?	!
Passed	Failed	not tested	not testable	Attention

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Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

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## FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	FTI 305-
Device type	PROMAG 53 W DN150	K-Factor	1.0038 - 1.0038
Serial number	DB098816000	Zero point	4
Software Version Transmitter	V2.02.00	Software Version I/O-Module	V1.05.03
Verification date	05/07/2020	Verification time	02:18 PM

Current Output	Assign	Current Range	Value 0 4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 l/s	100.00 l/s		
Pulse Output	Assign	Pulse Value	Output signal	Pulse width		
Terminal 24/25	VOLUME FLOW	18.027 l/P	Passive/Positive	100.00 ms		

Actual System Ident.

123.0

# CapitalControls

Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

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## 4.2 FIT 402 Final Effluent

DTM Version: 3.29.00

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### Flowmeter Verification Certificate Transmitter

Customer	Plant
Order code	FIT 402-
PROMAG 53 W DN250	Tag Name
Device type	1.249 - 1.249
DB00BC16000	K-Factor
Serial number	0
V2.02.00	Zero point
Software Version Transmitter	V1.05.03
05/07/2020	Software Version I/O-Module
Verification date	01:39 PM
	Verification time

### Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.55 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

<b>FieldCheck Details</b>	<b>Simubox Details</b>
240223	8784351
Production number	Production number
1.07.10	1.00.01
Software Version	Software Version
03/2020	03/2020
Last Calibration Date	Last Calibration Date


..... Date Operator's Sign Inspector's Sign .....

#### Overall results:

The achieved test results show that the instrument is completely functional, and the measuring results lie within +/- 1% of the original calibration. <sup>1)</sup>

The calibration of the Fieldcheck test system is fully traceable to national standards.

1) Prerequisite is an additional proof of electrode integrity with a high voltage test

Endress+Hauser 



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Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

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## FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FTT 402-
Device type	PROMAG 53 W DN250	K-Factor	1.243 - 1.243
Serial number	DB09BC16000	Zero point	0
Software Version Transmitter	V2.02.00	Software Version I/O-Module	V1.05.03
Verification date	05/07/2020	Verification time	01:39 PM

Verification Flow end value ( 100 % ): 196.350 l/s  
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	<b>Test Transmitter</b>			
	<b>Amplifier</b>			
✓		9.817 l/s (5%)	1.50 %	-0.32 %
✓		19.635 l/s (10.0%)	1.00 %	-0.34 %
✓		98.175 l/s (50.0%)	0.60 %	-0.04 %
✓		196.350 l/s (100%)	0.55 %	0.01 %
	<b>Current Output 1</b>			
✓		4.000 mA (0%)	0.05 mA	-0.004 mA
✓		4.800 mA (5%)	0.05 mA	-0.005 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.015 mA
✓		12.000 mA (50.0%)	0.05 mA	0.000 mA
✓		20.000 mA (100%)	0.05 mA	0.008 mA
	<b>Pulse Output 1</b>			
		---	---	---
		Start value	Limits range	Measured value
✓	<b>Test Sensor</b>			
✓	Coil Curr. Rise	14.600 ms	0.000..30.750 ms	20.219 ms
✓	Coil Curr. Stability		---	---
✓	Electrode Integrity	mV	0.0..300.000 mV	0.000 mV

### Legend of symbols

✓	✗	---	?	!
Passed	Failed	not tested	not testable	Attention

# CapitalControls

Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

10-830 Industrial Ave. Ottawa, ON K1G-4B8 Ph. 613 248-1999 Fax: 613 248-1997

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## FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	FIT 402-
Device type	PROMAG 53 W DN250	K-Factor	1.249 - 1.249
Serial number	DB098C16000	Zero point	0
Software Version Transmitter	V2.02.00	Software Version I/O-Module	V1.05.03
Verification date	05/07/2020	Verification time	01:39 PM

Current Output	Assign	Current Range	Value 0 4mA	Value 20 mA		
Terminal 28/27	VOLUME FLOW	4-20 mA activ	0.0 1/s	100.00 1/s		
Pulse Output	Assign	Pulse Value	Output signal	Pulse width		
Terminal 24/25	VOLUME FLOW	56.781 1/P	Passive/Positive	100.00 ms		

Actual System Ident.

121.0

# CapitalControls

Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

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## 4.3 FIT 701 Sludge

DTM Version: 3.29.00

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### Flowmeter Verification Certificate Transmitter

Customer	Plant
Order code	FIT-7-01
PROMAG 53 W DN100	Tag Name
Device type	1.2374 - 1.2374
K7081F16000	K-Factor
Serial number	-1
V2.03.00	Zero point
Software Version Transmitter	V1.06.00
05/07/2020	Software Version I/O-Module
Verification date	01:31 PM
	Verification time

### Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.55 %
Current Output 1	Passed	0.05 mA
Pulse Output 1	Not tested	0 P
Test Sensor	Passed	

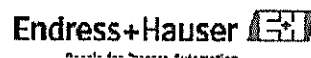
<b>FieldCheck Details</b>	<b>Simubox Details</b>
240223	8784351
Production number	Production number
1.07.10	1.00.01
Software Version	Software Version
03/2020	03/2020
Last Calibration Date	Last Calibration Date

..... Date Operator's Sign Inspector's Sign .....

#### Overall results:

The achieved test results show that the instrument is completely functional, and the measuring results lie within +/- 1% of the original calibration. <sup>1)</sup>  
The calibration of the Fieldcheck test system is fully traceable to national standards.

<sup>1)</sup> Prerequisite is an additional proof of electrode integrity with a high voltage test.



# CapitalControls

Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

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## FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FIT-7-01
Device type	PROMAG S3 W DN100	K-Factor	1.2374 - 1.2374
Serial number	K7081F16000	Zero point	-1
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.06.00
Verification date	05/07/2020	Verification time	01:31 PM

Verification Flow end value ( 100 % ): 31.416 l/s  
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	<b>Test Transmitter</b>			
✓	Amplifier	1.571 l/s (5%)	1.50 %	-0.30 %
✓		3.142 l/s (10.0%)	1.00 %	-0.29 %
✓		15.703 l/s (50.0%)	0.60 %	0.01 %
✓		31.416 l/s (100%)	0.55 %	0.06 %
	<b>Current Output 1</b>			
✓		4.000 mA (0%)	0.05 mA	-0.004 mA
✓		4.800 mA (5%)	0.05 mA	-0.005 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.019 mA
✓		12.000 mA (50.0%)	0.05 mA	0.001 mA
✓		20.000 mA (100%)	0.05 mA	0.010 mA
---	Pulse Output 1	---	---	---
		<b>Start value</b>	<b>Limits range</b>	<b>Measured value</b>
	<b>Test Sensor</b>			
✓	Coil Curr. Rise	5.000 ms	0.000..14.250 ms	6.400 ms
✓	Coil Curr. Stability		---	---
✓	Electrode Integrity	mV	0.0..300.000 mV	3.274 mV

Legend of symbols

✓	✗	---	?	!
Passed	Failed	not tested	not testable	Attention

# CapitalControls

Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

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## FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	FTT-7-01
Device type	PROMAG S3 W DN100	K-Factor	1.2374 - 1.2374
Serial number	K7081F16006	Zero point	-1
Software Version Transmitter	V2.03.00	Software Version I/O-Module	V1.06.00
Verification date	05/07/2020	Verification time	01:31 PM

Current Output	Assign	Current Range	Value 0 4mA	Value 20 mA		
Terminal 28/27	VOLUME FLOW	4-20 mA activ	0.0 l/s	25.00 l/s		
Pulse Output	Assign	Pulse Value	Output signal	Pulse width		
Terminal 24/25	VOLUME FLOW	7.571 lP	Passive/Positive	100.00 ms		

Actual System Ident.

121.0

# CapitalControls

Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

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## FieldCheck - Result Tab Transmitter

Customer		Plant	
Order code		Tag Name	FTT-S01
Device type	PROMAG 53 W DN150	K-Factor	0.998 - 0.998
Serial number	DB09BA16000	Zero point	6
Software Version Transmitter	V2.02.00	Software Version I/O-Module	V1.05.03
Verification date	05/07/2020	Verification time	02:01 PM

Verification Flow end value ( 100 % ): 70.686 l/s  
Flow speed 4.00 m/s

Passed / Failed	Test item	Simul. Signal	Limit Value	Deviation
	<b>Test Transmitter</b>			
✓	Amplifier	3.534 l/s (5%)	1.50 %	-0.38 %
✓		7.069 l/s (10.0%)	1.00 %	-0.06 %
✓		35.343 l/s (50.0%)	0.60 %	-0.05 %
✓		70.686 l/s (100%)	0.55 %	-0.02 %
✓	<b>Current Output 1</b>			
✓		4.000 mA (0%)	0.05 mA	-0.006 mA
✓		4.800 mA (5%)	0.05 mA	-0.006 mA
✓		5.600 mA (10.0%)	0.05 mA	-0.025 mA
✓		12.000 mA (50.0%)	0.05 mA	-0.003 mA
✓		20.000 mA (100%)	0.05 mA	0.004 mA
—	<b>Pulse Output 1</b>	—	—	—
		<b>Start value</b>	<b>Limits range</b>	<b>Measured value</b>
✓	<b>Test Sensor</b>			
✓	Coil Curr. Rise	9.600 ms	0.000..21.500 ms	16.938 ms
✓	Coil Curr. Stability		—	—
✓	Electrode Integrity	mV	0.0..300.000 mV	0.000 mV

### Legend of symbols

✓	✗	—	?	!
Passed	Failed	not tested	not testable	Attention

# CapitalControls

Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

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## 4.5 FIT 101 Well #1

DTM Version: 3.29.00

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### Flowmeter Verification Certificate Transmitter

Customer	Plant
Order code PROMAG 53 W DN50	Tax Name 0.8284 - 0.8284
Device type LA018218000	K-Factor -18
Serial number V2.03.00	Zero point V1.08.00
Software Version Transmitter 05/07/2020	Software Version I/O-Module 11:03 AM
Verification date	Verification time

### Verification result Transmitter: Passed

Test item	Result	Applied Limits
Amplifier	Passed	Basis: 0.55 %
Current Output 1	Passed	0.05 mA
Test Sensor	Passed	

<b>FieldCheck Details</b> 240223	<b>Simubox Details</b> 8784351
Production number 1.07.10	Production number 1.00.01
Software Version 03/2020	Software Version 03/2020
Last Calibration Date	Last Calibration Date

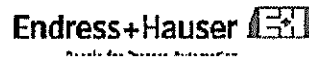
..... Date Operator's Sign Inspector's Sign .....

**Overall results:-**

The achieved test results show that the instrument is completely functional, and the measuring results lie within +/- 1% of the original calibration. <sup>1)</sup>

The calibration of the Fieldcheck test system is fully traceable to national standards.

1) Prerequisite is an additional proof of electrode integrity with a high voltage test



# CapitalControls

Electrical/Control Panels – PLC/SCADA Programming – Instrumentation Calibrations

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## FieldCheck: Parameters Transmitter

Customer		Plant	
Order code		Tag Name	
Device type	PROMAG 53 W DN50	K-Factor	0.8264 - 0.8264
Serial number	LA018216000	Zero point	-16
Software Version Transmitter	V2.03.00	Software Version I/C-Module	V1.06.00
Verification date	05/07/2020	Verification time	11:03 AM

Current Output	Assign	Current Range	Value 0 4mA	Value 20 mA		
Terminal 26/27	VOLUME FLOW	4-20 mA activ	0.0 l/s	12.63 l/s		

Actual System Ident.

125.0



**From:** [Alison O'Connor](#)  
**To:** [Charlie Primeau \(ENE\)](#); [Young, Sarah \(MECP\)](#)  
**Cc:** [Doug Robertson](#); [Vanessa Greatrix](#); [Andrew Trader](#)  
**Subject:** Merrickville 2020 Annual Wastewater Report  
**Date:** March-18-21 2:09:50 PM  
**Attachments:** [Merrickville STP-2020 Annual Report.pdf](#)  
[image002.png](#)

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Hello Everyone

Please find attached the 2020 Annual Wastewater Report for the Merrickville Sewage Treatment Plant. This report was completed in accordance with Condition 6 of the Environmental Compliance Approval No. 1121-7YRQLF.

If you have any questions or concerns, please feel free to discuss with me.

Thank you and stay safe!

Alison O'Connor | Process and Compliance Technician | Mississippi Cluster | Cell: 613-250-8012

