



Ministry of the Environment and Climate Change

WW ST MARYS WPCP

Inspection Report

Site Number:	110001275
Inspection Number:	1-G73GJ
Date of Inspection:	Dec 07, 2017
Inspected By:	Jessica Roy

OWNER INFORMATION:

Company Name:	ST. MARYS, TOWN OF	Unit Identifier:	
Street Number:	175		
Street Name:	QUEEN St E		
City:	ST. MARYS		
Province:	ON	Postal Code:	N4X 1B6

CONTACT INFORMATION

Type:	Owner	Name:	Dave Blake
Phone:	(519) 284-2340 x209	Fax:	(519) 284-0902
Email:	dblake@town.stmarys.on.ca		
Title:	Supervisor of Environmental Services		

Type:	Operating Authority	Name:	Renee Hornick
Phone:	(519) 274-0997	Fax:	(519) 236-9942
Email:	rhornick@ocwa.com		
Title:	Senior Operations Manager		

INSPECTION DETAILS:

Site Name:	WW ST MARYS WPCP
Site Address:	309 THOMAS Street ST. MARYS ON N4X 1B6
County/District:	ST. MARYS
MOECC District/Area Office:	London District
Health Unit:	PERTH DISTRICT HEALTH UNIT
Conservation Authority:	
MNR Office:	
Site Number:	110001275
Inspection Type:	Announced
Inspection Number:	1-G73GJ
Date of Inspection:	Dec 07, 2017
Date of Previous Inspection:	Jul 04, 2012

COMPONENTS DESCRIPTION

INSPECTION SUMMARY:

Introduction

- The primary focus of this inspection is to confirm compliance with Ministry of the Environment and Climate Change (MOECC) legislation as well as evaluating conformance with ministry policies and guidelines during the inspection period. This wastewater treatment and collection system is subject to the legislative requirements of the Ontario Water Resources Act (OWRA) and the Environmental Protection Act (EPA) and regulations made therein. This inspection has been conducted pursuant to Section 15 of the OWRA and Section 156 of the EPA. This inspection report does not suggest that all applicable legislation and regulations were evaluated. It remains the responsibility of the owner to ensure compliance with all applicable legislative and regulatory requirements.

The St. Marys Wastewater Treatment Plant is a Class 3 Wastewater Treatment System, located at 309 Thomas Street, St. Marys, within the County of Perth. The St. Marys WWTP is owned by the Corporation of the Separated Town of St. Marys, and operated by the Ontario Clean Water Agency (OCWA), in accordance with the terms and conditions of Amended Certificate of Approval #4934-AH9S98, issued February 24, 2017, by the Ministry of the Environment and Climate Change (Ministry).

The St. Marys WWTP is designed to treat wastewater at a rated capacity of 5,560 cubic metres per day (m³/d), and a peak flow rate of 14,250 m³/d. The Corporation of the Separated Town of St. Marys is referred to as the Owner, and/or Municipality, and OCWA is referred to as the Operator for the purposes of this inspection report.

Prior to the December 7, 2017 wastewater inspection, to which this inspection report pertains, the Ministry last inspected the St. Marys WWTP on July 4, 2012.

This December 7, 2017 wastewater inspection included: a physical inspection of the wastewater treatment equipment and facilities; interview with the Operator; and, a review of relevant documents from the period of January 1, 2017 to the date of the inspection (herein referred to as the "inspection review period"). An assessment of the St. Marys WWTP operational performance was also undertaken by the Ministry, based on the information reported by the Municipality in the 2016 Annual Performance Report submitted to the Ministry.

This December 7, 2017 inspection was focused on the wastewater treatment plant facility, but did not include an assessment of compliance with any of the outstations, i.e. sewage pumping stations, during this treatment plant inspection.

OCWA representatives present during the inspection included: Renee Hornick, Senior Operation Manager; and, Adam McClure, Operator. Also present for the interview portion of the inspection was Dave Blake, Environmental Services Supervisor with the Town of St. Marys.

Authorizing/Control Documents

- The owner had a valid Environmental Compliance Approval for the sewage works.

Amended Compliance Approval #4934-AH9S98, issued February 24, 2017 by the Ministry of the Environment and Climate Change is considered the main approval governing the use and operation of the St. Marys WWTP, and will herein be referred to and referenced as the Environmental Compliance Approval or the ECA for the purposes of this inspection report.

Capacity Assessment

- The annual average daily flow was approaching the rated capacity of the sewage works.

Capacity Assessment

- The owner of the sewage works had prepared a written statement certified by a Professional Engineer confirming that the proposed works were constructed in accordance with the Environmental Compliance Approval.
- Flow measuring devices were installed, calibrated and maintained in accordance with the requirements of the Environmental Compliance Approval.

Condition 9(6) of the ECA, requires the Municipality to install and maintain a sufficient number of continuous flow measuring devices with an accuracy to within plus or minus 5% of the actual flow rate for the entire design range of the flow measuring device, and record the flow rate at a daily frequency.

To comply with the flow monitoring conditions, the Municipality has installed flow meters to measure the influent and effluent at the plant. The flow meters are linked to the Supervisory Control and Data Acquisition (SCADA) where instantaneous effluent flow rates are trended and totalized on a daily basis. Totalized daily flows are also transcribed to record keeping mechanisms for reporting purposes.

The Operator ensures the flow measuring devices are calibrated once annually at a minimum. Records were provided confirm that the flow measuring devices are being calibrated/verified for the entire design range of the flow measuring devices, in accordance with the ECA.

Treatment Processes

- All monitoring equipment other than flow monitoring devices were installed, calibrated and maintained in accordance with any Environmental Compliance Approval.
- The owner had ensured that all equipment/components associated with the works was installed in accordance with the Environmental Compliance Approval.
- The sewage works effluent was essentially free of foreign substances on the day of the inspection.

Effluent Quality and Quantity

- The sewage works effluent sample results did not meet the effluent objectives stated in the Environmental Compliance Approval.

Condition 6 of the ECA, establishes effluent quality objectives that the Municipality is obligated to use best efforts to meet on an ongoing basis. The objectives are to be used as a mechanism to promote continuous improvement in the operation of the works and to trigger corrective action proactively and voluntarily before environmental impairment occurs.

The ECA establishes the following effluent objectives:

- CBOD5: Monthly Average Concentration < 10.00 mg/L
- TSS: Monthly Average Concentration < 10.00 mg/L
- TP: Monthly Average Concentration < 0.7 mg/L
- TAN: Monthly Average Concentration < 2.5 mg/L
- Dissolved Oxygen: Monthly Average Concentration > 4.0 mg/L
- Effluent pH: 6.0 – 8.5 (at all times)
- E.Coli.: May 01 to November 30 (monthly geometric mean) less than 100 cfu/100ml
- E.Coli.: December 01 to April 30 (monthly geometric mean) less than 200 cfu/100ml

Based on the information contained in the 2016 Annual Performance Report, the St. Mary's WWTP reportedly met the effluent limits and objectives set out in the ECA, during the 2016 operating year, with the exception of the

Effluent Quality and Quantity

following: The phosphorus limit was exceeded once in March, 2016 and once in July, 2016. The daily ammonia limit was exceeded once, in September 2016

Records provided for this inspection also confirm that the St. Marys WWTP met most of the effluent limits and objectives set out in the ECA, for the inspection review period, with the exception of total phosphorus, which exceeded the monthly average concentration effluent objectives in July, 2017. The sample results for total phosphorus met the effluent limits.

Monitoring Requirements

- **All sewage works effluent sampling requirements prescribed by the Environmental Compliance Approval were met.**

Condition 9 (3) of the ECA, requires the final effluent sampling and monitoring be completed as follows:

- CBOD5: Weekly 24 hour composite
- Total Suspended Solids: Weekly 24 hour composite
- Total Phosphorus: Weekly 24 hour composite
- Total Ammonia Nitrogen: Weekly 24 hour composite
- E.Coli.: Weekly grab
- Dissolved Oxygen: Daily grab
- Alkalinity: Weekly 24 hour composite
- Total Chlorine Residual (when chlorine is used for disinfection): Daily grab
- pH: Daily grab/probe
- Temperature: Daily grab/probe

All samples and measurements taken for the purposes of the ECA are to be taken at a time and a location characteristic of the quality and quantity of the effluent stream over the time period being monitored, and for the purposes of Condition 9 of the ECA, weekly means once every week and daily means once every day.

Records reviewed and reports made would indicate that the Operator has ensured that the effluent monitoring was being conducted as prescribed by the ECA. Results of all testing is tabulated on spreadsheets forming part of the record keeping mechanisms.

A refrigerated composite sampler is used to collect the 24 hour time composite effluent samples.

- **All sewage works influent (raw sewage) sampling requirements prescribed by the Environmental Compliance Approval were met.**

Condition 9 (3) of the ECA, requires the raw sewage influent sampling and monitoring be completed as follows:

- BOD5: Weekly 24 hour composite
- Total Suspended Solids: Weekly 24 hour composite
- Total Phosphorus: Weekly 24 hour composite
- Total Kjeldahl Nitrogen: Weekly 24 hour composite
- Total Ammonia Nitrogen: Weekly 24 hour composite
- Alkalinity: Weekly 24 hour composite

All samples and measurements taken for the purposes of the ECA are to be taken at a time and a location characteristic of the quality and quantity of the effluent stream over the time period being monitored, and for the purposes of Condition 9 of the ECA, weekly means once every week.

Records reviewed and reports made would indicate that the Operator has ensured that the influent monitoring was being conducted as prescribed by the ECA. Results of all testing is tabulated on spreadsheets forming part of the

Monitoring Requirements

record keeping mechanisms.

A refrigerated composite sampler is used to collect the 24 hour time composite influent samples.

- **The owner had maintained the monitoring records for the period prescribed by the Environmental Compliance Approval.**

Complying with Condition 9(7) of the ECA, the Municipality reportedly ensures all records and information related to, or resulting from, monitoring activities required by the ECA are being retained for a minimum of three years.

Biosolids Management

- **The facility has a program in place to manage biosolids.**

All sludge produced at the St. Marys WWTP is treated on site in the Lystek sludge treatment system, in accordance with ECA #4934-AH9S98. The biosolids are transferred by Bartels Environmental Services Inc. for land application or storage.

- **The records confirm that biosolids were transferred to a Ministry approved facility by Ministry approved haulers.**

Biosolids were transferred by Bartels Environmental Services Inc. Currently Kenneth M. Feltz is the hauler, however, this hauler was not used during the inspection review period. Both haulers are approved by the Ministry to haul biosolids. Hauling, land application and storage is facilitated by Lystek on behalf of the Town of St. Marys

- **Testing for biosolids required by legislation was conducted by accredited laboratories.**

Testing for biosolids is conducted by SGS Lakefield.

Certification and Training

- **Only operators with the appropriate level of licence made adjustments to the wastewater treatment and collection system equipment.**

The St. Marys WWTP is a Class 3 Wastewater Treatment Plant, Certificate #4961 issued September 7, 2017. Records reviewed and reports made indicated that the Operator has ensured that all operations making adjustments to the process equipment possess the appropriate level of wastewater treatment certification.

- **All operators have the appropriate level of training and or experience for the wastewater treatment and collection facilities in accordance with the requirements of the Environmental Compliance Approval.**
- **The overall responsible operator had been designated for the wastewater treatment and collection works.**

Logbooks

- **The logs and record keeping mechanisms for the sewage works complied with the record keeping requirements.**

A review of the Facility Logbook confirmed that entries were made, by the operator-in-charge, of all adjustments made to the treatment process.

Operations Manuals

- **The operations and maintenance manuals met the requirements of the Environmental Compliance Approval.**

Operations Manuals

- The operations and maintenance manuals contained up-to-date plans, drawings and process descriptions sufficient for the safe and efficient operation of the system.

Contingency/Emergency Planning

- Spill containment was provided for the process chemicals and/or standby power generator fuel.
- The owner had provided security measures for the facility.

NON-COMPLIANCE WITH REGULATORY REQUIREMENTS AND ACTIONS REQUIRED

This section provides a summary of all non-compliance with regulatory requirements identified during the inspection period, as well as actions required to address these issues. Further details pertaining to these items can be found in the body of the inspection report.

Not Applicable

SUMMARY OF RECOMMENDATIONS AND BEST PRACTICE ISSUES

This section provides a summary of all recommendations and best practice issues identified during the inspection period. Details pertaining to these items can be found in the body of the inspection report. In the interest of continuous improvement in the interim, it is recommended that owners and operators develop an awareness of the following issues and consider measures to address them.

1. The sewage works effluent sample results did not meet the effluent objectives stated in the Environmental Compliance Approval.

Recommendation:

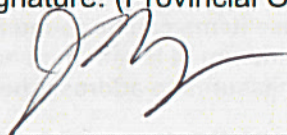
It is recommended that the Municipality and Operator identify the cause of the effluent objective exceedances and make best efforts to operate the plant within the effluent objectives set out in the ECA.

SIGNATURES

Inspected By:

Jessica Roy

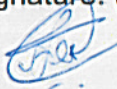
Signature: (Provincial Officer)



Reviewed & Approved By:

Jatinbhai Patel

Signature: (Supervisor)



Review & Approval Date:

2018/03/29

Note: This inspection does not in any way suggest that there is or has been compliance with applicable legislation and regulations as they apply or may apply to this facility. It is, and remains, the responsibility of the owner and/or operating authority to ensure compliance with all applicable legislative and regulatory requirements.