



Municipality Of Huron East
2015 Operations Report
Seaforth Wastewater Facilities
Reporting Period Jan-Dec 2015

1. Introduction

The treatment system consists of a mechanical extended aeration plant and three lagoon cells that operate as a 'Sutton System'. Wastewater flows from the Town of Seaforth wastewater collection system are directed by gravity flow to the Seaforth Pump Station located on Oak Street. Flows from this pump station are directed via force main to the treatment works. The Certificate of Approval was updated in October 2003 to permit the installation of a direct discharge line to the disinfection chamber, bypassing the lagoon system. This bypass line was to avoid instances of the production of hydrogen sulfide gas and elevated suspended solids in the lagoons during the winter months. The plant is normally operated in the 'the direct discharge mode' where flows from the mechanical plant are routed directly to the UV disinfection chamber and then to the outfall. During certain high flow conditions, excess flows from the treatment plant, are routed to lagoon cells #2 and #3. Lagoon cell #1 is used for the storage of waste activated sludge from the treatment plant. The final effluent is treated by UV disinfection before discharging to the Crozier Drain and then to the Bayfield River which is approximately 1.5 kms away.

Following is a list the facilities main treatment components.

- An inlet works consisting of a centrifuge grit removal system and a grit comminutor
- Two aeration tanks equipped with two surface aerators per tank.
- Two secondary clarifiers
- A return sludge pump station.
- Three facultative lagoon cells.
- An UV system rated for a total flow of 10,800 m³/day
- A weir and ultrasonic flow measurement device in the outlet channel.
- An alum storage tank and two metering pumps.

The sewage works, including the Oak Street pump station, are owned by the Corporation of the Municipality of Huron East and operated by CH2MHill . The waste water collection System is both owned and operated by the municipality of Huron East.



2. Regulatory Issues

CH2MHILL has made every effort during the reporting period to operate this wastewater system in accordance with applicable laws, certificates and regulations. To the best of our knowledge, the following report truthfully and accurately reflects any and all matters of non-compliance regarding the ownership and operation of the wastewater treatment plant during the reporting period.

During this period, the plant was operated in full compliance with applicable laws, regulations and the WWTP'S Certificate of Approval, save and except the following:

0	None during this period
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Requirement	Date of Failure	Measures to Correct the Failure
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3. Compliance with Quality/Quantity Criteria

Month	Average Volume/Day m ³ /d	Plant Utilization (based on Avg. Day)	Max Volume/Day m ³ /d
Jan	1571	82.7%	2208
Feb	1042	54.8%	1236
Mar	1774	93.4%	2532
April	2289	120.5%	2522
May	1102	58.0%	1781
June	2014	106.0%	2832
July	1190	62.6%	1641
Aug	1006	52.9%	1312
Sept	971	51.1%	1572
Oct	886	46.6%	1252
Nov	1774	93.4%	2351
Dec	2100	110.5%	2477

Plant Average Day Design Capacity is 1900 m³/d



4. Quality Assurance/Quality Control

- SGS Environmental conducts the required physical, chemical and biological testing of influent and effluent from each WWTP.

5. Maintenance Summary

Seaforth Pump Station

- Air release valve on force main was installed
- CT Environmental in to clean out wet well and pump intake sumps
- Raw pump #1 taken out of service to unplug impeller

Seaforth WPCP

- 2 UV banks were repaired (new lights, sleeves and wiring)
- Drain, clean, inspect and repair East clarifier sludge collector chains
- A bar-screen was installed just upstream of UV lights to remove debris

General

- Maintained Aerators, return pumps and sewage pumps and UV equipment
- Yearly inspections and test run all diesel generators monthly.
- Oil changes in Aerators and sludge collector drives
- Maintained all chemical pumps and injection systems.

6. Environmental/Operating Problems

- There were no unusual environmental/operating problems during 2015

7. Proposed Alterations, Extensions or Replacements

- None during this period

8. Calibration Procedures

- Flow meters and in house laboratory equipment were calibrated in 2015

9. Health & Safety Items

- Lifting equipment, Fire extinguishers, Gas monitors Monthly/Yearly inspections. Weekly Safety meeting along with Quarterly walk through completed for 2015

10. Status of Capital Projects

- Phase one of the Seaforth WWTP/Seaforth SPS is completed.

11. Other Items

Monitoring Data Summary

- Due to no regulatory issues in 2015, all effluent results were below effluent limits (as set in Condition 6 in the ECA). The wastewater treatment plant had



the necessary process steps to ensure all influent flows were adequately treated for all effluent parameters sampled for. Below is a chart stating the effluent parameters tested for and the current ECA limits for each:

PARAMETER	ECA Limit	2015 Max Concentration
CBOD5	25.0 mg/L	5.0 mg/L February 7, May 19
Total Suspended Solids	25.0 mg/L	21.0 mg/L June 8
Total Phosphorus	1.3 mg/L	1.19 mg/L March 2
Total Ammonia	6.0 mg/L	0.20 mg/L January 5, February 17, March 2, March 9, November 9

Effluent Quality Assurance

- Basic control measures like cleaning the clarifier weirs or raking the effluent bar screen prevents algae and other debris from entering the receiving stream.
- Daily visual checks of the UV system and outfall ensures proper working equipment of effluent components.

System By-passes

- There were no system by-passes to report in 2015. Either at the Wastewater Treatment Plant and the Oak St pump station. Proper visual checks/maintenance tasks and annual service of the generators ensured no loss of disinfection equipment when normal hydro was interrupted (automatic transfer equipment in effect). In addition, there were no major rain events/snow melts that caused the plant to by-pass.

Bio-Solids

- During the reporting period, there was approximately 2200 m³ of bio-solids created which was pumped into cell #1. There was no land application, dewatering, aeration etc. We anticipate about the same volume of bio-solids to be generated during the next reporting period.

Complaints

- There were no complaints received by the municipality or the operating authority in 2015.