

STAFF REPORT: ENGINEERING AND PUBLIC WORKS DEPARTMENT



REPORT TO: **Infrastructure and Recreation Committee**
MEETING DATE: **September 8, 2009**
REPORT NO.: **EPW.09.022**
SUBJECT: **2008 Annual Operations Report –
Thornbury Wastewater Treatment Plant
and Craigleith Wastewater Treatment
Plant**

PREPARED BY: **John Caswell, Manager of Water &
Wastewater Services/Asst. Director**

A. Recommendations

THAT Council receives Report EPW.09.022 entitled “2008 Annual Operations Report – Thornbury Wastewater Treatment Plant and Craigleith Wastewater Treatment Plant” for their information.

B. Background

In accordance with the Certificate of Approval issued for the Thornbury Wastewater Treatment Plant and the Craigleith Wastewater Treatment Plant, the Owner is required to prepare and submit a performance report to the Ministry of the Environment District on an annual basis, no later than 90 days following the end of each calendar year. Both reports were submitted to the Ministry of the Environment District on February 27, 2009.

The report must contain the following information:

- a) Summary of all monitoring and compliance reports submitted in the reporting period, including an overview of the success and adequacy of the sewage treatment program;
- b) Comprehensive interpretation of all monitoring data and analytical data collected relative to the influent quality and quantity criteria;
- c) Summary of any effluent quality assurance or control measures undertaken during the reporting period;
- d) Summary of all maintenance carried out on any major structure, equipment, apparatus, mechanism or thing forming part of the works;
- e) Description of the operating problems encountered and the corrective action taken during the reporting period;
- f) Summary of any proposed alteration, extension or replacement to the process or operation of the works to be completed over the next reporting period which may require approval under the *Ontario Water Resources Act*;

- g) Calculation of the volume of the sludge generating in the reporting period and an outline of anticipated volumes to be generated over the next reporting period;
- h) Outline of the sludge handling method and disposal areas to be utilized over the next reporting period;
- i) Evaluation of the calibration and maintenance procedures conducted on all monitoring equipment;
- j) Evaluation of the need for modification to the works to improve performance and reliability and to minimize upsets and bypasses

For reference, a complete operations summary for the Thornbury Wastewater Treatment Plant and the Craigleith Wastewater Treatment Plant is appended to Report EPW.09.022

As noted in the attached reports, both the Thornbury and Craigleith Wastewater Treatment Plants (and associated collection systems) continue to operate under preventative maintenance programs in an attempt to prevent foreseeable problems from occurring.

Furthermore, as indicated by the effluent concentration and waste loading chart, the Thornbury and Craigleith Wastewater Treatment Plants continue to experience a high degree of removal efficiency. As a result, the facilities operated well within their Certificate of Approval design objective.

C. The Blue Mountains' Strategic Plan

The acceptance of this Report by Council furthers the Town Strategic Plan Goal # 2 "Addressing the Town Municipal Infrastructure Needs" and Goal # 6 "Providing a Strong, Well-Managed Municipal Government."

D. Environmental Impacts

The preparation of this report is to ensure that the Wastewater Treatment Plants operations run efficiently and adequately to guarantee the protection of water resources.

E. Budget Impact

None

F. Attached

1. 2008 Annual Operations Report Summary – Thornbury Wastewater Treatment Plant
2. 2008 Annual Operations Report Summary – Craigleith Wastewater Treatment Plant

Respectfully submitted,

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Thornbury Wastewater Treatment Plant
2008 Summary

The Thornbury Wastewater Treatment Plant is currently operating under Certificate of Approval # 6321-6EBJ2S.

The average daily flows increased in 2008 to 71% of design ADF from 54% in 2007.

Secondary effluent discharge locations for this reporting period were 43% of the year from Cell # 2 and 56% from Clarifier.

Daily effluent flows may vary considerably from corresponding influent as a result of buffering capabilities in active cells.

The Thornbury Wastewater Treatment Plant and Collection System continue to be operated under an extensive preventative maintenance program.

This facility did not experience any by-pass spill or abnormal discharge event. However, the peak daily influent flow exceeded design PDF by 20% in April as a result of heavy rain and snowmelt.

All flow monitoring equipment was inspected and calibrated on November 20 and 21 by Metcon Sales and Engineering of Concord, Ontario.

Bio-solid generation is per design criteria and accumulating in Cell # 1. Levels and consistency are monitored and are within acceptable limits. Disposal during the reporting period is not anticipated.

The Lora Bay Phase 1B Sewer Servicing project was completed with the commissioning of the Sunset SLS.

The Thornbury Wastewater Treatment Plant expansion design contract was completed to 90% by Stantec Engineering of Kitchener, Ontario. The scope of this design contract involves expansion of existing treatment technology to 5,330m³ ADF.

This facility was not inspected by the Ministry of the Environment in 2008.

Effluent quality assurance is controlled by monthly effluent concentration and waste loading calculations submitted to the Owen Sound Ministry of the Environment Office.

There were no serious operations problems encountered during this reporting period.

As indicated by the effluent concentrations and effluent waste loadings, the Thornbury Wastewater Treatment Plant facility continues to experience a high degree of treatment removal efficiency. As a result, this facility was operated well within its Certificate of Approval design objective.

Craigleith Wastewater Treatment Plant

2008 Summary

The Craigleith Wastewater Treatment Plant is currently operating under Certificate of Approval # 3-1027-92-006.

The influent flows in 2008 increased to 38% of ADF, an increase from 29% in 2007.

Influent loadings decreased to an average of 37% of design, a decrease from 54% in 2007.

The Craigleith Wastewater Treatment Plant and Collection System continues to operate under an extensive preventative maintenance program.

All flow monitoring equipment was inspected and calibrated on November 20 and 21, 2008 by Metcon Sales and Engineering, Concord, ON.

A total of 2,592 m³ of bio-solids were spread on agricultural land in August and October by Barrettes Disposal under Certificate of Approval # GRBM2007-1.

Bio-solid generation for 2008 continues in relation to organic loadings. Anticipated field application is approximately 3,000 to 3,500 m³. The bio-solid contract is currently under a re-tender process.

The facility did not experience any by-pass spill or abnormal discharge even during the reporting period.

Plant performance and reliability are at levels which indicate that major modifications and improvements are not required during the next reporting period.

There were no serious operational problems encountered during this period.

Effluent quality assurance is controlled by monthly effluent concentrations and waste loading calculations submitted to the Owen Sound Ministry of the Environment.

As indicated by the effluent concentration and waste loading chart, the Craigleith Wastewater Treatment Plant continues to experience a high degree of removal efficiency. As a result, this facility was operated well within its Certificate of Approval design objective.

This facility was not inspected by the Ministry of the Environment in 2008.