



Hamilton

INFORMATION REPORT

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	May 16, 2022
SUBJECT/REPORT NO:	Biosolids Management Facility Update (PW11098(i)) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Deborah Goudreau (905) 546-2424 Ext. 4606
SUBMITTED BY:	Shane McCauley Acting Director, Water & Wastewater Operations Public Works Department
SIGNATURE:	

COUNCIL DIRECTION

N/A

INFORMATION

The Biosolids Management Project is a 30-year Public-Private-Partnership initiative for processing the City of Hamilton's (City) biosolids from the Woodward Avenue Wastewater Treatment Plant (WWTP). The biosolids are dried and pelletized into a pathogen free product that can be marketed as a fertilizer and/or sold as an alternate energy source. The Project Agreement between the City and Harbour City Solutions (HCS) was executed in March 2017 and construction of the new processing facility reached substantial completion in May 2020. With construction largely completed at this time, Synagro, the operating arm of HCS, began the 30-year Operations, Maintenance and Renewal (OMR) phase of the agreement.

Committee Report PW11098(h) sought Council agreement for the transfer of control of two (2) HCS partners to Synagro subject to final completion of all construction activity as per the Project Agreement. Final approval of this transfer was issued on April 11, 2022. As noted in Report PW11098(h) the Project Agreement requires the City to approve this transfer once all necessary conditions were satisfied.

OUR Vision: To be the best place to raise a child and age successfully.

OUR Mission: To provide high quality cost conscious public services that contribute to a healthy, safe and prosperous community, in a sustainable manner.

OUR Culture: Collective Ownership, Steadfast Integrity, Courageous Change, Sensational Service, Engaged Empowered Employees.

**SUBJECT: Biosolids Management Facility Update
(PW11098(i)) (City Wide) - Page 2 of 4**

The first two (2) years of the OMR phase have been challenging for Synagro. The facility has been subjected to numerous equipment and process failures, staffing shortages, odour complaints and prolonged operational shutdowns requiring Synagro to transport unprocessed biosolids offsite. The following table summarizes the significant operational events that have occurred since operations began.

Date	Issue	Resolution	Impact on City Operations
May 31, 2020	During commissioning overheated product (pellets) set off the fire alarm	Hamilton Fire responded; pellets cleaned up and removed offsite	Minimal
October 21, 2020	Overheated product damaged equipment	Hamilton Fire responded as a precaution; material removed, and equipment repaired	Minimal
November 18, 2020	Deflagration (explosive release of heat) event, significant damage to equipment. Facility offline until Jan 4, 2021	Responded to by Hamilton Fire and Ministry of Labour; root cause analysis completed, and facility repaired	Unprocessed Biosolids transported offsite during shutdown. Costs borne by Synagro.
October 20, 2021	Facility non-operational due to pump failures until November 5, 2021	1 of 4 pumps repaired	Unprocessed Biosolids transported offsite during shutdown. Costs borne by Synagro.
January 30, 2022	Facility non-operational due to pump failures until March 4, 2022	2 of 4 pumps repaired	Unprocessed Biosolids transported offsite during shutdown. Costs borne by Synagro.
March 21, 2022	Facility non-operational due to pump failures until March 28, 2022	1 of 4 pumps repaired	Unprocessed Biosolids transported offsite during shutdown. Costs borne by Synagro.

**SUBJECT: Biosolids Management Facility Update
(PW11098(i)) (City Wide) - Page 3 of 4**

In addition to the operational challenges described above, the City received 18 odour complaints over the course of 2020 and 2021 (seven (7) in 2020 and 11 in 2021) for the Woodward WWTP complex that staff attribute to the Synagro operation. The Ministry of Environment, Conservation and Parks (MECP) inspected the biosolids facility in the fall of 2021 and again in January 2022. The Inspector raised concerns and identified deficiencies with the operation of the facility that has likely contributed to the odour complaints. City staff have met with senior representatives from Synagro and the MECP Inspector to develop specific action plans to address the issues that were identified. As of March 31, 2022, all action plan items had been addressed.

The issues fell within three (3) categories including Engineering/Technical Deficiencies (e.g., malfunctioning air handling/scrubbing equipment), Maintenance/Housekeeping (e.g., spilled product within the facility and lack of preventative equipment maintenance), and Management Issues (e.g., lack of standard operating procedures and facility staff training, and inadequate staffing levels due to vacancies).

Now that outstanding action plan issues at the biosolids facility have been addressed, City staff are preparing to undertake a site-wide odour assessment for the Woodward WWTP Complex to confirm that odour concerns from the community have been effectively addressed. The assessment was not complete at the time this report was written; however, was scheduled to be completed the first week of May 2022.

In addition to the MECP inspector's concerns, and as a result of the process shutdown in October 2021 and odour complaints from the Community, City Staff demanded senior management at Synagro review operations at the City's facility and take all necessary steps to rectify technical and site management deficiencies. Experienced Managers, Engineers and Health and Safety professionals from other Synagro thermal drying facilities in the United States have been brought to the Hamilton facility to complete pumping and odour control equipment repairs. They are also currently undertaking engineering assessments to improve the reliability and maintainability of critical equipment.

To ensure these efforts are sustained and performance is improved, the performance requirements mandated in the Project Agreement have been enforced; and Synagro has been assessed a \$330,000 penalty for the November 2020 facility shutdown. Synagro is also on notice that applicable future penalties (e.g., penalties related to the October 2021, January 2022, and March 2022 shutdowns), will be assessed and enforced as warranted. Recognizing the importance of continued stringent oversight of the Synagro operations and Project Agreement, Hamilton Water has retained a third-party consultant to provide interim oversight of the Project Agreement. Council also approved a new Project Manager position as part of the 2022 Water, Wastewater and Storm Rate Budget. This position is actively being recruited and once a successful

**SUBJECT: Biosolids Management Facility Update
(PW11098(i)) (City Wide) - Page 4 of 4**

candidate has been hired and on-boarded, they will take over ongoing oversight of the Project Agreement.

APPENDICES AND SCHEDULES ATTACHED

Not Applicable