



CITY OF HAMILTON
PUBLIC WORKS DEPARTMENT
Operations Division

TO:	Chair and Members Public Works Committee
COMMITTEE DATE:	May 30, 2016
SUBJECT/REPORT NO:	Central Composting Facility Capital Improvements (PW16049) (City Wide)
WARD(S) AFFECTED:	City Wide
PREPARED BY:	Dong Deng 905-546-2424 Extension 5714 Joel McCormick 905-546-2424 Extension 4345
SUBMITTED BY:	Betty Matthews-Malone, P.Eng. Director, Operations Division Public Works Department
SIGNATURE:	

RECOMMENDATIONS

- (a) That Maple Reinders Construction Limited, contracted operator of the City of Hamilton's Central Composting Facility, be retained to complete capital improvements to the Central Composting Facility in order to meet regulatory requirements under the Ministry of the Environment and Climate Change's new Ontario Compost Quality Standards;
- (b) That Maple Reinders Construction Limited be authorised to execute the required capital improvements at a cost not to exceed the Project ID 5121349002 and 5121449002 allocations, funded through approved Capital funds;
- (c) That Contract C11-105-03 for the operations and maintenance of the Central Composting Facility be amended to reflect recommendation (a);
- (d) That the Mayor and City Clerk, and or delegate, be authorized and directed to execute all necessary documents to implement recommendation (a) and (b) with content acceptable to the General Manager of Public Works and in a form acceptable to the City Solicitor.

EXECUTIVE SUMMARY

The Central Composting Facility (CCF) is owned by the City of Hamilton (City) and is currently operated under contract by Maple Reinders Construction Limited (MRCL). The CCF processes Source Separated Organics (SSO) collected from the City's residential Green Cart program. In addition, the CCF also accepts and processes residential SSO from the Regional Municipality of Halton and the County of Simcoe.

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The CCF has been operating since 2006. Compost from the CCF is marketed to agricultural customers, including local farmers who use the compost as a valuable soil amendment.

In 2012, the MOECC introduced the new Ontario Compost Quality Standards (Standards) for aerobic composting that came into effect in July 1, 2015. The Standards established new compost quality parameters and processing guidelines for aerobic composting operations, which include foreign matter content, maturity, minimum curing requirements and moisture content.

Since the introduction of the Standards, City staff, in consultation with MOECC, have been conducting trials and studies to determine potential cost-effective operational changes and/or equipment additions that will be required in order to comply with the Standards. Based on the conclusions of the trials and instructions from MOECC guidance documents, City staff have determined that the operations at the CCF will require the following capital improvements in order to comply with the Standards:

- Design and construction of an engineered composting bunker system inside the compost storage building. This new system will provide the required 21-days retention time for compost during the curing phase, and help the operator to monitor and manage the process;
- Design and installation of a compost moisture addition system inside the compost storage building. This moisture system will provide water addition to the compost within the new bunker system during the curing phase to maintain 40% moisture level as required in the Standards.

The proposed capital upgrades to the CCF's compost storage building will ensure the curing of compost can be conducted in an efficient manner that complies with the requirement in the Standards.

The MOECC Hamilton District Office and the City developed a transition plan that would allow the CCF to continue with status quo operations and marketing of compost until the end of the third quarter in 2016 and the implementation of required capital improvements.

There are sufficient funds in the existing capital budget for the improvements listed above. It is being recommended that MRCL construct the capital improvements, as the facility was originally engineered and built by MRCL and as the facility operator they are familiar with the design and operations of the CCF. Retaining MRCL to complete the work would also allow the upgrade to be completed with minimum service interruption to daily operations. MRCL, as per their operating agreement, will also be required to continue operations compliant with regulatory requirements both during capital upgrades and after commissioning of works.

The capital improvements to the CCF are estimated to be completed by the end of September of 2016, pending approval processes.

Alternatives for Consideration – See Page 4

FINANCIAL – STAFFING – LEGAL IMPLICATIONS

Financial: Improvements will be funded from capital Project ID 5121349002 and 5121449002 (CCF Air Handling/Odour Control), a total allocation of \$2M. Staff have retained the service of a consultant for the design of the capital improvements. The conceptual estimate for the work is \$700,000 and subject to refinement during detailed design. One unknown, under investigation, is the load carrying capacity of the slab and backfill to support new storage requirements. This may increase costs. Staff will ensure that the cost for the work provided by MRCL is competitive and good value. As part of the processing contract with the Regional Municipality of Halton, the cost associated with the capital improvements outlined in this report will be shared with the Regional Municipality of Halton. The total amount contributed by the Regional Municipality of Halton will be determined by the percentage of SSO processed at the CCF on an annual basis.

An increase in the operations and maintenance cost for the CCF will be experienced because of the implementation of the Standards and associated capital improvements. This has been included in the 2016 Operating Budget.

Staffing: The recommendations contained in this report will have no impact on City staffing levels.

Legal: Legal Services has been consulted during the preparation of this report. Pending approval from Council, an amending agreement will be prepared for execution by the Mayor and City Clerk.

HISTORICAL BACKGROUND

On June 19th, 2015, City staff submitted an information update (OPS1504) regarding regulatory changes affecting the operations of the CCF. This report contains information and recommendations to address the regulatory changes.

The City's CCF was constructed to accept SSO as part of the City's Green Cart Program. In 2004, MRCL was awarded Contract C11-105-03 to design, build and operate the CCF. Construction of the CCF began in February 2005 and operations commenced in May 2006.

In 2005, MOECC issued a Waste Disposal Site Environmental Compliance Approval (ECA) for the CCF that detailed the operating parameters and compost quality the operations had to comply with. These requirements were based on the 1996 Canadian Council of Ministers of the Environment guidelines for compost quality.

In 2012, the MOECC revised and published the Ontario Compost Quality Standards for aerobic composting that came into effect on July 1, 2015. The Standards created the following changes that have impacts on the CCF's operations:

- New categories of Compost – AA, A and B. Category AA and A are considered unrestricted use compost while Category B compost is considered restricted and

may be applied as a soil amendment to agricultural land subject to additional requirements under the *Nutrient Management Act*;

- Allowable content is reduced and more stringent requirement for foreign matters in the compost;
- Compost in the curing phase to be cured for a minimum of 21 days;
- Compost in the curing phase to be maintained at a moisture level above 40%.

Under the new regulatory framework, current CCF operations and equipment cannot consistently produce AA compost that meets the requirements outlined in the Standards.

During the public consultation period for the proposed Standards, City staff participated in discussions with the MOECC through a working group led by the Ontario Waste Management Association to address industry concerns related to the Standards. This working group was tasked with consulting with the MOECC regarding the potential impacts the Standards would place on composting operations in the province and to request parameters be amended to support the production of valuable agricultural grade compost.

The MOECC was open to discuss the composting industry's concerns and on June 11, 2015 released draft documents entitled "*Guidance for Generators of Category AA, A and B Compost and the Ontario Compost Quality Standards*". This document helped clarify operational expectations for the quality parameters outlined in the new Standards.

As a result of this clarification, the MOECC Hamilton District Office and the City have been working on a transition plan that would allow the CCF to continue with status quo operations and marketing of compost until the completion of the capital improvements required to meet the Standards, targeted for completion at the end of the third quarter in 2016.

Following a series of trials and studies to determine the effects the Standard will have on the operations of the CCF and to determine the most cost effective and efficient upgrades, it was determined that capital improvements to the CCF compost storage building are necessary in order to meet the regulatory requirements as outlined in the Standards.

POLICY IMPLICATIONS AND LEGISLATED REQUIREMENTS

N/A

RELEVANT CONSULTATION

City staff have consulted with the following regarding this report:

- City Manager's Office, Legal Services,
- Corporate Services, Finance & Administration.

ANALYSIS AND RATIONALE FOR RECOMMENDATION

N/A

ALTERNATIVES FOR CONSIDERATION

If Council chooses not to approve the recommendations in this report then City staff could follow Procurement Policy #5.3 (Request for Tender) process. The concerns associated with this alternative relate to potential interference with on-going operations, potential lack of experience and knowledge with the facility and project completion timelines associated with the Request for Tender process.

ALIGNMENT TO THE 2012 – 2015 STRATEGIC PLAN

Strategic Priority #2

Valued & Sustainable Services

WE deliver high quality services that meet citizen needs and expectations, in a cost effective and responsible manner.

Strategic Objective

- 2.1 Implement processes to improve services, leverage technology and validate cost effectiveness and efficiencies across the Corporation.

APPENDICES AND SCHEDULES ATTACHED

N/A