

Clause embodied in Report No. 6 of the Works Committee, as adopted by the Council of the City of Toronto at its meeting held on May 21, 22 and 23, 2002.

**1**

**Source Separated Organics Processing Capacity**

*(City Council on May 21, 22 and 23, 2002, amended this Clause by adding thereto the following:*

*“It is further recommended that the Commissioner of Works and Emergency Services be requested to submit a report to the Works Committee for its meeting to be held on June 25, 2002, with options for the long-term processing of source separated organics, including:*

- (1) expansion of the Dufferin Organics Processing Facility;*
- (2) development of other City-owned organics processing facilities; and*
- (3) securing private sector processing capacity.”)*

**The Works Committee recommends:**

- (1) the adoption of the report dated April 17, 2002, from the Commissioner of Works and Emergency Services; and**
- (2) that concurrent with negotiations with Canada Composting Inc. to examine the possible expansion of the Dufferin Organics Processing Facility, the Commissioner of Works and Emergency Services be requested to expand the Portlands anaerobic digestion study to include consideration of thermophylic aerobic processing, and that staff undertake a technical and financial evaluation of the use of thermophylic processing and its possible application at the Dufferin site or other sites, including the processing of wastewater from the Dufferin facility.**

The Works Committee reports, for the information of Council, having:

- (1) requested the Commissioner of Works and Emergency Services to submit a report to the Works Committee with the following information, both as a percentage of the total waste and in kilograms per year:
  - (a) the estimated total amount of Source Separated Organics (SSO) in the single family household stream;
  - (b) current SSO diversion through back yard composting, yard waste pick-up and other SSO diversion programs for single family households;

- (c) staff projections of expected SSO diversion from single family households; and
  - (d) comparative numbers from other communities such as the Region of Halifax;
- (2) further requested the Commissioner of Works and Emergency Services to research potential techniques for increasing the capture rate of Source Separated Organics in single and multi-family households, and report back thereon to the Works Committee by fall 2002; and
- (3) further requested that Members of Council be invited to tour the Dufferin facility when it becomes operational.

**The Works Committee submits the following report (April 17, 2002) from the Commissioner of Works and Emergency Services:**

Purpose:

The purpose of this report is to report back to the Works Committee on the capacity for processing Source Separate Organics generated from planned programs in the residential, commercial and agencies, boards, commissions, departments and schools (ABC&D) sectors between 2002 and 2006.

Financial Implications and Impact Statement:

Recommendations contained in this report will result in an expenditure of up to \$50,000.00. Funding is available in the approved Capital Works Program project CSW004-5.

Recommendation:

It is recommended that the existing Consulting Agreement between the City and MacViro Consultants Inc. for services related to the design and construction of the small-scale Dufferin facility be amended to allow for an increase, not to exceed \$50,000.00 including all charges and taxes, to provide technical assistance in relation to the proposed negotiations with Canada Composting Inc. (CCI) and their joint venture partners in relation to the possible expansion of the Dufferin Organics Processing Facility.

Background:

At its meeting held on January 15, 22 and 25, 2002, the Works Committee requested that the Commissioner of Works and Emergency Services submit a report to the Works Committee no later than its meeting scheduled for June 25, 2002, on:

- (i) the capacity for processing Source Separated Organics.

### Comments:

#### Source Separated Organics (SSO) Tonnage Projections:

The attached graph shows the estimated tonnage of SSO to be collected during the period 2002 to 2006 from single family households, multi-family households, commercial customers, and ABC&Ds. The commencement of the SSO program in Etobicoke in September 2002 will produce approximately 11,600 tonnes per year of SSO. SSO tonnage will increase over time as the SSO program is rolled out across the City reaching an estimated 140,000 tonnes per year from all sources by the end of 2006. The estimated tonnage from residential sources is based on a capture rate of 166 kilograms per household per year for single family households and 40 kilograms per household per year for multi-family households. These rates are consistent with diversion rates reported in earlier Task Force reports and are also consistent with single and multi-family diversion rates experienced by others under voluntary programs and in City of Toronto pilots. The estimated tonnage from non-residential sources is based on capturing 20 percent of the waste stream from commercial customers and ABC&Ds as SSO. These rates are consistent with diversion rates reported in earlier Task Force reports. SSO tonnage will be monitored as the program is rolled out across the City.

#### Short-Term Processing Capacity:

Construction of the Dufferin Organics Processing Facility is nearing completion. Start-up is planned for August 2002, one month in advance of the SSO program launch in Etobicoke. The facility will have an annual processing capacity of 25,000 tonnes. Negotiation of an operating agreement with Canada Composting Inc. (CCI) is in the final stages. Staff will report back to the May 28, 2002 Works Committee with details of the operating agreement.

#### Interim Processing Capacity:

The Dufferin facility has sufficient capacity to process SSO from the first two phases of residential roll-out, Etobicoke and Scarborough. Acceleration of commercial harmonization plans to September 2002 results in an estimated 20,000 additional tonnes per year of SSO, thereby exceeding the capacity of the Dufferin facility by the end of 2002. As detailed later in this report, staff intends to begin negotiations with CCI and their joint venture partners for a possible phased expansion of the Dufferin facility. It is expected that the first phase of the expansion could be operational by mid-2004. It is recommended that the City utilize existing external processing capacity until the Dufferin facility is expanded or other long-term processing capacity is available. Three potential service providers are known to exist, with an aggregate available annual capacity in excess of 100,000 tonnes. Staff intends to issue a tender to secure interim processing capacity for the tonnage over and above the 25,000 tonnes per year that can be processed at the Dufferin facility.

#### Potential Expansion of the Dufferin Organics Processing Facility:

In keeping with our plans to expand the Dufferin facility beyond the current small scale of 25,000 tonnes, staff has reviewed expansion options with CCI and the project consultants. Two options were considered: expansion to 100,000 tonnes in a single step; and modular expansion

first to 62,500 tonnes with future ability to expand in 37,500 tonne modules. It was concluded that expanding in two steps will allow a portion of the capital expenditure to be deferred until future years when the capacity is required. Expanding the Dufferin facility to 62,500 tonnes per year of capacity at this time would improve the operational flexibility and reliability of the facility, result in a reduction in the per tonne processing fee and make green energy production more economically feasible at the facility. It would also reduce our reliance on an external market, which is not yet fully matured. The facility could be expanded to 62,500 tonnes per year capacity by mid-2004. The existing facility could remain operational during the expansion.

For these reasons, staff intends to begin negotiations with CCI and their joint venture partners, as allowed under the terms of the existing design-build agreement, for the design, construction and operation of an expansion of the facility to 62,500 tonnes with the provision for future modular expansion. Staff intends to report back to the September 2002 Works Committee with details of the negotiations.

Staff recommends that the existing Consulting Agreement between the City and MacViro Consultants Inc. for services related to the design and construction of the small-scale Dufferin facility be amended to allow for an increase, not to exceed \$50,000.00 including all charges and taxes, to provide technical assistance in relation to the proposed negotiations with CCI and their joint venture partners. Staff are recommending MacViro because they are the City's current consultant for this project, they have been involved in this project from the initial RFP stage, they are familiar with the design of the facility and they have participated in prior negotiations related to this project.

#### Long-Term Processing Capacity:

As indicated earlier in this report, a total of approximately 140,000 tonnes per year of SSO processing capacity will be required by 2006. Staff is considering four main options, and combinations thereof, for providing long-term processing capacity. They are (1) expansion of the Dufferin Organics Processing Facility beyond 62,500 tonnes per year capacity, (2) development of an organics processing facility in the Portlands, possibly in conjunction with Enwave District Energy Limited, (3) development of other City-owned organics processing facilities, and (4) securing private sector processing capacity.

With regard to the second option, the City, in a joint effort with Enwave District Energy Limited, is currently conducting a study to examine the feasibility of locating an anaerobic processing facility in the Portlands area of the City. The study is expected to be completed by late May or early June 2002. Staff will therefore report back to the June 2002 Works Committee with the results of our review of long-term processing options.

#### Conclusions:

The small-scale Dufferin Organics Processing Facility will be completed and operational by August 2002, one month in advance of the SSO program launch in Etobicoke. The Dufferin facility will have an annual processing capacity of 25,000 tonnes which is sufficient for the first two phases of the residential SSO program, Etobicoke and Scarborough. The accelerated commercial harmonization program will generate additional SSO material, over and above the

capacity of the small-scale Dufferin facility. This material can be processed at existing processing facilities in southern Ontario. Staff intends to issue a tender for processing of this overflow material until the phased expansion of the Dufferin facility can take place or other suitable long-term processing options are in place.

Staff intends to negotiate with Canada Composting Inc. and their joint venture partners for the two step modular expansion of the Dufferin Organics Processing Facility and will report back to the September 2002 Works Committee on details of the negotiations. Staff recommends amending the existing Consulting Agreement between the City and MacViro Consultants Inc. to allow for the provision of technical assistance in relation to the proposed negotiations with CCI and their joint venture partners.

Staff is reviewing long-term processing options and will report back to the June 2002 Works Committee with the results of our review of long-term processing options.

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List of Attachments:

Attachment 1 – Estimated SSO Tonnages (2002 – 2006)

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The Works Committee reports, for the information of Council, having also had before it during consideration of the foregoing matter material submitted by Councillor Bas Balkissoon, Ward 41 - Scarborough-Rouge River, from International Bio Recovery Corp. respecting IBR technology and soil fertility products.

The following persons appeared before the Works Committee in connection with the foregoing matter:

- Mr. Gord Perks, Toronto Environmental Alliance; and
- Ms. Karen Buck, Toronto, Ontario, and submitted a communication with respect thereto.

(A copy of the attachment to the foregoing report was forwarded to all Members of Council with the agenda for the Works Committee meeting of May 1, 2002, and a copy thereof is on file in the office of the City Clerk, City Hall.)

*(City Council on May 21, 22 and 23, 2002, had before it, during consideration of the foregoing Clause, a communication (May 1, 2002) from Waste Diversion Toronto, entitled “Green Bin Idea Could Go to Waste”.)*