

Source-Separated Organics Pilot Project in Conjunction with Mixed Waste Recycling and Organics Processing Facility

(City Council on April 11, 12 and 13, 2000, adopted this Clause, without amendment.)

The Works Committee recommends the adoption of the report dated January 5, 2000, from the Commissioner of Works and Emergency Services.

The Works Committee reports, for the information of Council, having requested the Commissioner of Works and Emergency Services to submit a report to the Committee on the design, costs and implementation of a source-separated organics pilot project for industrial, commercial and institutional (ICI) waste; and having invited Members of the Committee to suggest possible sites for the pilot project.

The Works Committee submits the following report (January 5, 2000) from the Commissioner of Works and Emergency Services:

Purpose:

To respond to a request from the Works Committee to report on the costs of pilot and full facility operation of mixed waste and source-separated organics processed at the Dufferin Mixed Waste Recycling and Organics Processing Facility.

Financial Implications and Impact Statement:

There are no financial implications at this time. Should Council decide to proceed with a source-separated organics pilot project in 2000, approximately \$140,000.00 will need to be added to the 2000 operating budget in addition to the \$200,000.00 already included.

Recommendation:

It is recommended that mixed waste processing proceed as the first phase of testing at the Dufferin Mixed Waste Recycling and Organics Processing Facility to allow finalization of the Toronto Integrated Resource Management (TIRM) Diversion process to proceed with minimal potential delay.

Background:

At its meeting of December 1, 1999, the Works Committee had before it a report entitled "Pilot Wet/Dry Collection Project in Conjunction with the Mixed Waste Recycling and Organics Processing Facility." The report was deferred to the January 12, 2000 meeting, and a motion was made "that the source-separated organics pilot project proceed first." It was requested that the Commissioner of Works and Emergency Services submit a report on:

- “(i) the estimated costs and what they are for; and
- (ii) the costs for volume of mixed waste and source-separated organic tonnage that can be handled by the pilot facility and by the expanded facility.”

Comments:

The Mixed Waste Recycling and Organics Processing Facility which is being constructed at the Dufferin Transfer Station (the Dufferin facility) is scheduled to be operational by late fall 2000.

The original objectives for constructing this small scale facility were to test both mixed waste processing and source-separated organics processing before constructing additional waste processing capacity. The priority is to test the viability of processing residual mixed waste (after recycling) from apartment buildings to assess diversion levels and end product quality.

Multi-family (apartment) dwellings account for about 30 percent (230,000 tonnes) of the residential waste collected annually across the City. The recycling rate for apartment dwellings is quite low at 9 percent as compared to the rate of 36 percent for single family dwellings. This is due to the number of challenges to increasing the recycling participation in apartment buildings. By processing the mixed waste stream from apartments, we would be able to capture additional recyclables as well as the organics stream. Processing of mixed waste from apartment dwellings is a key element of our strategy to achieve 50 percent waste diversion.

Municipally collected commercial waste accounts for about 100,000 tonnes of the City's total waste collected annually. A number of commercial areas receiving City collection generate high quantities of organics. Collecting their mixed solid waste for processing at the facility would allow us to capture and divert high quantities of organics while circumventing the problems of extra collections, storage issues, equipment, and promotional and educational communication costs.

If the Dufferin Mixed Waste Processing Pilot is successful, the City will have a major opportunity to deal with the combined municipally collected commercial and apartment volumes of waste (330,000 tonnes). Staff planned thus to proceed with mixed waste processing first at the Dufferin facility.

With Council's direction to proceed with a Request for Proposals for Proven Waste Diversion Capacity under the (TIRM) process, we will now be awarding a contract for a second facility close to the time that the evaluation of the small scale facility is being completed. To delay implementation of the mixed waste pilot would necessitate a corresponding delay in finalizing contracts for diversion to ensure that the mixed waste process is fully feasible as one of the diversion solutions.

With respect to the question about the volume and the associated cost of mixed waste and source separated organics that can be handled by the Dufferin facility, it is designed to process 15,000 tonnes per year of a mixed waste stream at a total annual operating cost of \$960,805.00 (approximately \$64.00/tonne based on 15,000 tonnes per year) or 25,000 tonnes of source

separated organics at a total annual operating cost of \$870,061.00 (\$34.80/tonne based on 25,000 tonnes per year). If expanded, the facility could process up to 100,000 tonnes of mixed waste or 165,000 tonnes of source separated organic material. Operating costs for the expanded plant have yet to be negotiated. The facility is designed to divert 70 percent of mixed waste and 90 percent of organic waste.

Conclusions :

It is recommended that we proceed with mixed waste processing as the first phase of testing at the Dufferin facility for approximately six months, followed by a source separated organics pilot project as the second phase of testing. This will provide adequate information on the mixed waste diversion process to allow a final decision to be reached on the TIRM diversion solutions.

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The Works Committee also submits the following communication (December 1, 1999) from the City Clerk:

The Works Committee on December 1, 1999, had before it a report (November 15, 1999) from the Commissioner of Works and Emergency Services responding to a request from the Committee to report on a proposal for a pilot wet/dry collection project in conjunction with the Mixed Waste Recycling and Organics Processing Facility; advising that such a facility is designed to process a mixed waste stream, a source-separated organics stream and a wet stream of a wet/dry system, and that once the mixed waste processing test is near completion, a further report will be submitted to the Committee in early 2001 on the results of this first phase and on specific plans for the three-stream and wet/dry pilots; and recommending that this report be received for information.

The Committee:

- (1) deferred consideration of the aforementioned report and following motion until its next meeting, scheduled to be held on January 12, 2000:

Moved by Councillor Layton:

“That the source-separated organics pilot project proceed first”; and

- (2) requested the Commissioner of Works and Emergency Services to submit a report to such meeting on:

- (i) a breakdown of the estimated costs for the project; and
- (ii) the volume of mixed waste and source-separated organic tonnage that can be handled by the pilot facility and by the expanded facility.

(Report dated November 15, 1999, addressed to the
Works Committee from the
Commissioner of Works and Emergency Services)

Purpose:

To respond to a request from the Works Committee to report on a proposal for a pilot wet/dry collection project in conjunction with the Mixed Waste Recycling and Organics Processing Facility.

Financial Implications and Impact Statement:

There are no financial implications arising from this report.

Recommendation:

It is recommended that this report be received for information.

Background:

At its meeting of July 14, 1999, the Works Committee had before it a report entitled "Toronto's Integrated Solid Waste Resource Management Process Request for Expressions of Interest - Results of Application of Evaluation Criteria." One of the motions made by the Committee was to request the Commissioner of Works and Emergency Services to report back with "a proposal for a pilot wet/dry collection project in conjunction with the demonstration composter/mixed waste processing plant."

Comments:

The Mixed Waste Recycling and Organics Processing Facility which is being constructed at the Dufferin Transfer Station is scheduled to be operational by the summer/fall 2000. The facility is designed to process a mixed waste stream, the wet stream of a wet/dry system or a source separated organics stream. We plan to operate the facility on a mixed waste stream initially, since this presents the most challenges in terms of material recovery.

The material for the mixed waste test may be sourced from apartment buildings and commercial locations. The test will occur in conjunction with the existing Blue Box program. Thus, the mixed waste will be made up of items that end up in the garbage after recycling, including recyclable material that is not put into the Blue Box. Participants would be setting out recyclables and waste. Only the waste portion would be collected for processing at the Mixed

Waste Recycling and Organics Processing Facility. The Blue Box materials would be collected as usual and delivered to a Material Recovery Facility (MRF) for processing. Once the testing of the mixed waste operational mode is complete we plan to test both source separated organics and wet stream processing.

The material for the source separated organics waste test may be sourced from single family households and commercial locations. This would involve a three-stream collection where residents and/or businesses separate their organic waste from other waste and recyclables. Thus, participants would be setting out recyclables, organic materials and any remaining waste. Only the organic waste component would be processed at the Mixed Waste Recycling and Organics Processing Facility. The Blue Box material and regular garbage would be collected and processed as usual.

We are also planning on implementing a wet/dry pilot involving single-family households. A wet/dry system is a two-stream system, which is an alternative system to the Blue Box program. Waste is sorted into two categories: wet and dry. The wet waste component would include items such as kitchen, bathroom and other wastes which can be composted, including heavily soiled or dirty items. This includes food scraps, dirty tissues, houseplants, sanitary items and diapers.

The dry waste would include items such as: recyclables and non-recyclables like metal cans, glass bottles, plastics, paper, broken dishes, toothpaste tubes, chip bags and furnace filters. Dry wastes are processed to recover recyclables.

The wet waste component would be processed at the Mixed Waste Recycling and Organics Processing Facility. However, the facility is not set up for processing the dry stream and alternate arrangements would have to be made, such as shipping the material to Guelph for processing at their wet/dry facility.

Conclusions:

The Mixed Waste Recycling and Organics Processing facility is designed to process a mixed waste stream, a source-separated organics stream and a wet stream of a wet/dry system.

Once the mixed waste processing test is near completion, we will report further to the Works Committee (in early 2001) on the results of this first phase and on specific plans for the three-stream and wet/dry pilots.

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The Works Committee also submits the following communication (January 12, 2000) from Councillor Jack Layton, Don River:

Recommendation:

That the source-separated organics project proceed first.

Financial Implications:

Starting with a source-separated organics (SSO) pilot and then doing a mixed waste (MW) pilot if deemed necessary will, at minimum, be cost-neutral over the one-year pilot. If the SSO pilot were extended to a full year (because the MW pilot was not deemed necessary), there might be up to \$70,000.00 savings (plus a 20 percent higher diversion rate). This savings and higher diversion rate cannot be realized if the MW pilot goes first.

Note:

The following financial assessments are based on information contained in:

- (a) the Works Department staff report contained in Clause No. 6 of Report No. 16 of The Strategic Policy and Priorities, "Award of Contract for a Small Scale Mixed Waste Recycling and Organics Processing Facility", adopted by City Council on July 29, 30, and 31, 1998 (attached); and
- (b) the Works staff report, entitled "Source Separated Organics Pilot Project in Conjunction with the Mixed Waste Recycling and Organics Processing Facility", dated January 5, 2000.

Rationale:

- (1) Running an SSO pilot first would mean that the City is using the most cost-effective and environmentally beneficial waste diversion approach while Council decides whether to proceed with the wet/dry or mixed waste/SSO technologies. Council will decide by the summer which waste diversion technologies to use. This decision can then inform whether it is necessary to proceed with a wet/dry and/or mixed waste pilot and in what order these pilots should occur. By running an SSO first, Council ensures no unfair advantage is given to MW or wet/dry proposals.
- (2) Running the MW pilot first to test the feasibility of mixed waste collection from apartment buildings will have no impact on the Council decision about what waste diversion options to pursue as part of the Waste Diversion stream of TIRM. Council will decide by early summer whether or not to contract with a proponent that will have a mixed waste facility (results from the pilot will not be available until early 2001).

- (3) The January 5, 2000 staff report argues that not proceeding with MW first will somehow delay finalizing contracts for turning the Dufferin facility into a full-scale MW facility and building another MW facility (third and second last paragraphs, page 2). This contradicts the Works staff report dated November 15, 1999, entitled “Pilot Wet/Dry Collection Project in Conjunction with the Mixed Waste Recycling and Organics Processing Facility”, which states that the Dufferin facility will run three pilots (MW, SSO and Wet/Dry) and that any recommendation about the future of the Dufferin facility will be made in early 2001. Council has yet to decide which diversion technology (or combination of technologies) to use for the Dufferin facility or for other future waste diversion facilities. Proceeding with the SSO pilot first in no way precludes or limits potential options.
- (4) The order of the SSO and MW pilots should be revenue neutral for the year-long pilot (see Attachment 4 from SPPC report).
- (5) The Works staff report states that SSO collection costs “could be avoided by processing municipally collected organics-rich commercial waste from the downtown core.” See page 5 of SPPC report.
- (6) If the SSO pilot were extended to a full year, there is a potential cost savings (up to \$70,000.00). See Attachment 4 from SPPC report. However, if Council decided it was important to run a MW pilot, it could still do so. (The only reason for this would be because no MW proponent was chosen as part of the waste diversion contract and Council still deemed it important to test MW for apartment buildings.)
- (7) Running the SSO pilot first (either for half a year or the full year) would assist downtown commercial businesses. The City could substitute waste pick-ups with as many organic pick-ups as was necessary. Any cost savings from an organics pick-up could be passed on to the local businesses.
- (8) If an SSO pilot were to be extended to the full year, it would have a positive environmental impact: 25,000 tonnes of waste could be handled as opposed to no more than 20,000 tonnes from a MW/SSO pilot. This additional diversion rate cannot be achieved by having a MW pilot first.

Conclusion:

There are only financial and technical benefits in proceeding with a source-separated organics pilot first. There are only technical or financial risks with proceeding with a mixed waste pilot first.

Depending on Council’s decision regarding which waste diversion technologies to use, there are significant potential financial gains for the City and for local commercial businesses as well as significant environmental benefits if the SSO pilot comes first. These gains will not be realized if the mixed waste pilot proceeds first.

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The Works Committee reports, for the information of Council, having also had before it during consideration of the foregoing matter the following communications:

- (i) (January 11, 2000) from Ms. Karen Buck, Toronto, Ontario, respecting the pilot wet/dry collection project in conjunction with the mixed waste recycling facility and organics processing facility;
- (ii) (March 21, 2000) from Mr. Brian Cochrane, President, Toronto Civic Employees' Union, CUPE Local 416, recommending that the source-separated organics pilot project proceed first for the reasons outlined therein; and
- (iii) (March 22, 2000) from Ms. Karen Buck, Citizens for a Safe Environment, commenting on the implementation of a limited pilot project for a mixed waste stream.

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

- Mr. Bill Guthrie, Vice-President, Toronto Civic Employees' Union, CUPE Local 416;
- Mr. Gord Perks, Toronto Environmental Alliance; and
- Ms. Karen Buck, Citizen for a Safe Environment.