

REGIONAL MUNICIPALITY OF OTTAWA CARLETON
 MUNICIPALITY REGIONAL D'OTTAWA CARLETON

REPORT
RAPPORT

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TO/DEST. Coordinator
 Planning and Environment Committee

FROM/EXP. Director, Solid Waste Division
 Environment and Transportation Department

SUBJECT/OBJET **INTERIM WASTE MANAGEMENT PLAN -
 BY-LAW 234 OF 1992 - FUTURE INITIATIVES FUND**

DEPARTMENTAL RECOMMENDATION

That the Planning and Environment Committee recommend that Council approve this interim Waste Management Plan, as required under By-law 234 of 1992, as it relates to the expenditures of monies from the Future Initiatives Fund.

BACKGROUND

In the fall of 1992, Regional Council approved By-law 234 of 1992. The By-law established the Future Initiatives Fund, to which all landfill operators in Ottawa-Carleton were to contribute, for the purpose of replacing depleted landfill capacity in the Region. Shortly after the enactment of the By-law, the other three major landfill operators in Ottawa-Carleton appealed to the Ontario Municipal Board (OMB) against By-law 234.

In November 1994, for a period of approximately four weeks, OMB Hearings were held on this issue, in Ottawa. On 11 April 1996, the OMB released its report and included in its Decision the following amendment to By-law 234: *“All payments received in accordance with this By-law shall be paid into a waste disposal and facility replacement account. No expenditures shall be authorized from this account prior to approval of a waste management master plan, by Regional Council, justifying such expenditures which payments shall conform to the Environmental Assessment Act and the Planning Act”*. The balance of the OMB Decision basically upheld By-law 234 and the Region’s right to receive a compensation fee for the depletion of landfill capacity.

This report is intended to provide further background on the amendment to By-law 234 of 1992 and to fulfil the requirements of that portion of the OMB Decision related to payments into and expenditures out of the Future Initiatives Fund.

Through the balance of 1996, the three appellants indicated their intention to pursue further legal appeals on the OMB Decision. Through the fall, negotiations took place that have led to agreements between the Region and all three parties involved. Generally speaking, the agreements will see the compensation fee paid at a reduced rate but establish strong partnership relationships with the three landfill operators. A joint petition to the Lieutenant Governor and Council to amend By-law 234 was presented in early 1997.

DISCUSSION

Other Relevant Requirements of the OMB Decision

As stated above, the By-law now requires that a plan be in place dealing with the expenditure of monies from the Future Initiatives Fund. In the OMB Decision, there are a number of sections which address the nature of a Waste Management Plan. The following extract is from Page 39: *“The Board finds that although the public acceptance of a future waste disposal fee might flow from an integrated master plan, such a document is not now statutorily required, is not now a necessary precursor to an application or approval under the Environmental Assessment Act. Accordingly, even if such a document existed, it could be subject to continuous review and revision by Council as policy, technological and financial circumstances might dictate”*.

Format/Nature of the Waste Management Plan

As noted in the Board’s own words, dealing with the Waste Management Plan is not a statutory requirement and that the area of solid waste is one of changing legislative and technological parameters. As a result, the status of waste management planning in Ottawa-Carleton is reflected by the various reports and policies Council has put into place. In 1990, the Region’s previous waste management master planning process was discontinued because of concerns that the process undertaken would not stand up to the emerging regulatory requirements.

The current Capital Budget identified a project titled *“Solid Waste Planning - Long Term”* (Project No. 992-43430) which in fact will lead to the development of the broader, more long-term Waste Management Master Plan. In addition, revenue projections into the Future Initiatives Fund are based on waste quantities which in turn are impacted by the economic health of the community. It is, therefore, unreasonable to expect that a one-time management plan and funding schedule can be accurately developed to serve future needs. Approval of this plan is intended to meet the requirements laid out in the Board’s Decision and now forming part of By-law 234. It should be noted that the approval of annual expenditures must accord with the Waste Management Plan and the annual budget of Regional Council.

Practices Prior to the Board Decision

Prior to the OMB Decision in April of 1996, only the Regional Municipality of Ottawa-Carleton (RMOC) had established and contributed to the Future Initiatives Fund. As had been outlined in the staff reports in 1992, the monies were to be used for waste diversion initiatives or landfill replacement. Over time, a separate portion of the Capital Budget dealing with future initiatives, Solid Waste - Compensation Fund, has evolved and a number of projects are ongoing in that area. Operation of the leaf and yard composting and Household Special Waste operations have been funded from the revenues contributed to the Future Initiatives Fund by the RMOC. Contract services for private sector composting of leaf and yard material are also being paid from the Future Initiatives Fund. With the amendment of the By-law by the OMB, it is now necessary that Council specifically approve a plan for the expenditure of funds for those activities.

Status of Waste Management Plan

As alluded to in the Board's Decision, solid waste planning is difficult with respect to changing technologies and financial constraints. In addition, the situation is made more difficult with ongoing changes in responsibilities and regulations. Through the early nineties, the Department stepped back from a formal waste management planning process that it had begun, instead the Corporation embarked on a gradual development using incremental but coordinated steps. Over the last few years, the Department has attempted to address these changes in a number of ways. A series of significant reports have outlined major policies or steps that have been taken dating back to 1990. These policies and reports make up the elements of an integrated waste management plan for Ottawa-Carleton. Some of the major initiatives and reports that have been approved by Regional Council dealing with key elements in Ottawa-Carleton's waste planning efforts are listed below, and a brief summary of the highlights contained in a number of those reports is contained in *Annex A* attached.

<u>Report Title</u>	<u>Date Approved by Council</u>
1. Waste Management Master Plan - Interim Review	Apr 1990
2. Departmental Organization Review - Establishment Solid Waste Division	Jul 1990
3. Final Report on Waste Composition Study (Study Completed December 1992)	
4. Solid Waste Collection and Waste Diversion Jurisdiction and Transition Plan	Sep 1994
5. Solid Waste Planning Exercise - 3Rs Study Final Report	22 Feb 1995
6. Solid Waste Planning Update	25 May 1995
7. Household Special Services	2 Jul 1995

8. Solid Waste 3Rs Strategic Plan Implementation	12 Jul 1995
9. Solid Waste Collection - Levels of Service	2 Nov 1995
10. MOEE Regulatory Review Project	25 Sep 1996
11. Operating and Capital Budget for Solid Waste Division	Annually
12. Trail Road and Nepean Landfill Sites - Annual Monitoring Reports	Annually

Recognizing the importance of solid waste management in Regional functions, the Department reorganized in the early 1990's to establish the Solid Waste Division. The responsibilities further changed in 1995 when, with the agreement of the local area municipalities, responsibility for waste and recyclable collection moved from the municipalities to the Region. The area of regulatory changes has been no less dynamic. In early 1995, the Province established waste diversion goals and objectives for municipalities. Through 1996, the Province has proposed and not yet finalized a number of changes to the *Environmental Assessment Act* and related acts dealing with waste management.

Through this period, a number of cornerstone studies have been undertaken by the Department to help formulate plans and goals with respect to waste management. A detailed analysis of waste composition was undertaken to understand the sources and quantities of waste and recyclables which were being disposed. A comprehensive 3Rs Study was undertaken that involved a good deal of public participation. Finally, the Department has undertaken a detailed review of the operations at the Trail Road Landfill Site to optimize current operations and consider long-term options for utilizing the infrastructure invested in that facility. Results of that feasibility study should be available later this fall.

With respect to the specific issues of landfill capacity, a number of short term initiatives are in place. Finalization of the Optimization Study and review of its results will lead us further into the long-term disposal facility planning process in accordance with the new Environmental Assessment requirements. Works have also been identified to undertake a pilot process to determine the practicality of mining closed stages of the Trail Road Landfill Site and reusing the reclaimed air space.

With respect to waste diversion, the Department plans to proceed on initiatives outlined in the 3Rs report and subsequently detailed in various reports to Council. These activities are identified in the Capital Budget *Waste Management Alternatives* (Project No. 992-42330) activity. In addition, there are several diversion operations taking place at our Trail Road facility, including the leaf and yard composting operations and the Household Special Waste (HSW) depot. Other diversion initiatives using contracted service providers include the leaf and yard and industrial, commercial and institutional (IC&I) food waste pilots and the mobile HSW

depots. As previously approved by Council, short-term waste management initiatives will continue to focus on low cost/low technology solutions quite often in conjunction with our waste and recyclable collection activities.

The Regional Official Plan reviewed by Council earlier this year has allowed for an updating of the general objectives and policies of our waste management system. These objectives include waste diversion targets for the residential waste stream and a desire to work with the private sector solid waste management firms in the areas of recycling, composting and disposal.

It should be clearly stated that current waste management planning in Ottawa-Carleton has not developed significantly enough to identify the specific need for new waste disposal sites for landfills, incinerators or other facilities providing for the long-term storage or destruction of municipal solid waste. Other than for study or feasibility purposes, no monies from the Future Initiatives Funds should be spent until an updated version of this plan is approved by Council. Similarly, no major capital expenditures should be made on material recycling facilities (MRFs) until related issues are reviewed and approved by Council.

FINANCIAL IMPLICATIONS

The original Future Initiatives Fund was established to pay for a portion of the anticipated landfill replacement cost and the cost of future waste diversion initiatives. With the resolution of the Compensation By-law, the establishment of a new fee schedule and the anticipated updating of waste quantities at Trail Road, the preparation of the 1998 Budget will allow for significant review of the financial projections. The Tables in *Annex B and C* attached show anticipated revenues to the Future Initiatives Fund over the next ten-year period and anticipated cash flow out of the fund based on the 1997 Capital and Operating budgets. This is consistent with the original thinking when the Compensation Fee was proposed, in that it was never envisioned nor was it the intent that funds raised through this fee would cover all the future costs. The cost of these programs will have to be supported in part by the compensation fee, with the balance of funding from either the tipping fees or from the appropriate taxation method. It should be noted that for planning purposes only, some cash flow out with respect to a new landfill and other waste diversion facilities has been identified. Approval of this interim Waste Management Plan does not approve any of the funding for these items. This issue will be the subject of further discussion in subsequent reports.

PRIVATE PARTNERSHIP

Throughout the discussions and negotiations with other landfill operators, concern has been expressed about access or use of the funds by the parties who are contributing. As noted above, future initiatives will be funded from revenue derived from a number of sources. Through negotiations, a number of commitments have already been established with Canadian Waste Services Inc. and Huneault Waste Management Ltd., to take place over the next few years. As part of the Minutes of Settlement, those parties that are required to pay into the Future Initiatives Fund have been guaranteed portions of the residential waste streams and the related tipping fee revenues. In some cases, this is subject to the Province's approval with respect to their operating certificates.

CONCLUSIONS

This report summarizes the background with respect to the OMB Decision on the appeal of By-law 234 of 1992 by the private sector landfill operators, presents an interim Waste Management Plan as it relates to the expenditure of funds from the Compensation Program and fulfills the By-law obligation to have such a plan in place. The Waste Management Plan will be updated for Council's approval on an "*as required*" basis.

Approved by
P. McNally, P.Eng.

PM/md

Attach. (4)

SUMMARY OF WASTE MANAGEMENT PLAN COMPONENTS

Waste Management Master Plan - Interim Review

This staff report reviewed the Region's waste management activities of the late 1980's and set the framework for what would follow in the 1990's. As the result of a March 1989 decision of a Joint Board of the Environmental Assessment Board and the Ontario Municipal Board with respect to the Regional Municipality of Halton's application for landfill, the RMOC decided to review its own process to date. The interim review was undertaken by the firm of Walker Wright Young Associates. Review of the public participation component was contracted to the firm of Marbeck Resource Consultants. A significant portion of the report deals with changes which have occurred in the area of waste management master planning in Ontario since the inception of Ottawa-Carleton's Waste Management Master Plan in the mid-1980's. Those changes include: (1) the acknowledgement of the Environmental Assessment process as a legal and planning exercise rather than an engineering exercise, (2) a new understanding of the distinction between the waste management master plan and environmental assessment, (3) an evolution from 4Rs to 3Rs, (4) a better understanding of the role of the Ministry of Environment, and (5) an understanding of the decision-making authority of Regional Council in this area.

The consultant report outlined four significant areas of criticism of the regional municipality's existing waste management master plan; namely, traceability of the process, study methodology, level of expertise and concurrent site selection and alternative technology analysis. As a result, Regional Council approved a series of recommendations that has formed the basis of waste management planning in Ottawa-Carleton today.

Key recommendations directed staff to undertake comprehensive audit of the composition of the waste stream, to undertake a comprehensive 3Rs study with the ultimate goal of developing an overall plan for the Region, and to review the optimization of the Trail Road Landfill Site. The Department was also directed to restructure, in light of the emerging responsibilities with respect to solid waste management.

Departmental Organization Review - Establishment of Solid Waste Division

As recommended in the Interim Review, this report proposed an organizational structure and the creation of a new solid waste division. A number of developments across the Province had given rise to the need for the creation of this division as well as the development of a long-term solid waste plan. The requirements for waste diversion which were being promoted by the Ministry of Environment had given rise to a need for the Region to specifically develop expertise in the management of waste diversion. In addition, the growing tendency to increase tipping fees at landfills across the Province had increased the level of sophistication with which municipalities must now approach the administration of financial issues related to the landfill.

The establishment of three branches in the new Solid Waste Division was designed to accommodate these pressing concerns as well as ongoing landfilling responsibilities. The branches proposed in the Division were as follows: A waste diversion branch, finance and administration branch, and an operations branch. The report also recommended the establishment of a position of Director of Solid Waste Division. As part of the broader organizational review in the Environmental Services Department, landfill operations and scalehouse operations were transferred from the Operations Division to the Solid Waste Division as part of this change.

Final Report on the Waste Composition Study

The results of the Waste Composition Study were reported in a series of progress reports in 1991 -1992 dealing separately with a number of related issues including: demographic and land use trends, specific results of four separate waste sorts, survey of legislation and regulations, and a review of existing waste management systems. The final report was titled "*Description of the Waste Stream and Program Implications*", and included a waste stream overview touching on generation rates, cross-boundary flow, recycling and composting, breakdowns of the waste composition including the identification of potentially recyclable quantities and seasonal variation, and further analysis of the construction and demolition (C&D) and industrial, commercial and institutional (IC&I) waste sub-streams. Many of the recommendations of the study have been incorporated or adopted in the subsequent waste management activities of the Region. As this study pre-dated the 3Rs Study, many of the recommendations are reflected in the options developed.

Solid Waste Collection and Waste Diversion Jurisdiction and Transition Plan

This report represented the culmination of efforts that had taken place through the early 1990's, reviewing the balance of solid waste responsibilities. In general, it recommended that the Region assume the responsibility for waste collection and waste diversion in the residential sector. In addition to requests received from Regional Council, the Provincial Government had received requests for legislative amendments from a number of regional municipalities dealing with solid jurisdiction. These legislative changes were set out with the enactment of Bill 7.

A number of issues helped motivate this jurisdictional change, but the key policy issue that was responsible for driving this initiative was the recognition of the fragmentation of authority as it pertained to waste management. Provincial waste diversion policies and the scarcity of landfill had led to the requirement for a more innovative approach to waste management such as diversion initiatives that the Region had been planning to implement, or having an impact on collection and disposal of solid waste. For example, banning items such as corrugated cardboard from the landfill would have an impact on the municipal collection programs. Other examples that identified the level of co-operation include the leaf and yard programs that were implemented by the municipalities, with the co-operation of solid waste operations at the Trail Road Landfill Site, to divert it from the landfill. The report suggested that for policy and financial accountability, the jurisdiction should be moved to one level of government.

In addition, subsequent reports have outlined key milestones that would be required to undertake a two-year transition as existing municipal contracts expired and the new regional system was put into place.

Solid Waste Planning Exercise - 3Rs Study Final Report

This report in February of 1995, brought forward the second of three cornerstone reports outlined in the original interim review. The 3Rs Study was a strategic plan for the development of waste diversion from landfill, which is practical, efficient and meets the specific needs of the Ottawa-Carleton community. Ninety-nine 3Rs options were developed. A significant number of those options arose from the extensive public consultation process which was undertaken to support the Study.

In contrast to more conventional waste diversion planning processes which seek to eliminate options through an elaborate screening process, the RMOC's 3Rs Study is characterised by an inclusive planning and evaluation process. An implementation timetable was outlined in three phases. The first phase leading up to the 1 January 1995 assumption of municipal solid waste responsibilities, phase II dealt with the continuation and consolidation of the existing programs and experimentation to determine in more detail such things as diversion impact, and participation and diversion capture rates. Finally, the 3Rs report saw a third phase being marked by the end of 1998 when significant decisions would have to be made as to the methods by which Ottawa-Carleton will achieve its waste diversion goals. Leading up to that point in time it was anticipated that programs would continue using low-cost and low-technology options. More capital-intensive waste management systems would only be considered after that point in time.

Household Special Waste Services

Having implemented Household Special Waste diversion with a number of weekend depots beginning in 1989 and subsequently moving to a permanent depot at the Trail Road site in August of 1992, the Department undertook a review of its Household Special Waste services. The firm of Jacques Whitford Environment Ltd. was retained to review the operating costs, quantities of material received, and participation rates at the existing depot. In addition, the report was to address how services could be provided to small quantity generators from the IC&I sector, as well as addressing how the needs of the residents of the east-end of the Region could be met. The report also outlined the cost of the existing depot and that review of the household special waste services had been outlined as one of the options in the 3Rs Study. The report concluded that the existing operation at Trail Road should continue but that trial mobile depots should be implemented to serve the east-end of the Region. In addition, the report recommended that the Ministry of Environment and Energy should be approached with respect to small

quantity generators and that the Region should continue its efforts with respect to product stewardship and public education as a means of reducing the generation of household special waste in Ottawa-Carleton.

The consultant's review evaluated mobile depots, toxic taxis, red box and other permanent facilities as options to household special waste services.

Solid Waste Collection Levels of Service

In preparation for calling the first Regional tender for the collection of solid waste, staff undertook extensive public consultation and technical review of the options available to serve the residents of Ottawa-Carleton. The public consultation leading up to this report reconfirmed the results of the 3Rs Study and the interest of the residents of Ottawa-Carleton in outlining aggressive waste recycling and waste diversion programs. In fact, the staff report recommended moving to the new service levels as soon as possible, with the implementation of the new contract to be complete by the end of 1996. In addition to addressing service levels to the public, the report also outlined and the Councillors provided input on contract structure with respect to the number of zones and length of contract.

Based on record revenues from recycled materials that were occurring in 1995, and by desire to remove the risk with respect to revenue markets from the contractor, the Region also decided to retain ownership of all recycled materials and the revenues derived. Service levels were subsequently approved and a tender call was made in December of 1995.

MOEE Regulatory Review Project

This report in the summer of 1996 and other reviews that were taking place during the same period reconfirmed that the regulatory environment with respect to solid waste management was no more settled in mid-1996 than it was when the interim report was tabled. The regulatory review included comments on a discussion paper entitled "*Responsive Environmental Protection*" that had been released by the MOEE. Although that document touched on many aspects of the Ministry's mandate, issues relating to solid waste reform included proposals for new guidelines or standards for the construction of non-hazardous solid waste landfills, streamlining of the approval process with respect to waste management facilities, and modifications to a series of regulations that the Province had put forward to promote waste diversion. This report documented regional concerns on the discussion document as well as other comments that had been submitted with respect to Bill 76 which proposed modifications to the *Environmental Assessment Act* as well as submitting comments on the landfill standards that were being proposed.

One year later, it generally remains unclear as to the direction that the Province of Ontario will take with respect to some of the various proposals suggested in the summer of 1996.

Trail Road and Nepean Landfill Sites - Annual Monitoring Reports

As a requirement of our Certificate of Approval for operating the Trail Road and Nepean Landfill sites and as part of our ongoing waste management duties, annual reports are submitted to the Ministry of Environment and Energy dealing with the operation of those two sites. Much of the data included in the reports pertains to the operation of the sites, including: waste quantities received, monitoring activities with respect to ground water, surface water, landfill gas and leachate, and an evaluation of the general compliance with the Certificate of Approval. Landfill monitoring and the preparation of the report for submission to the Ministry is contracted to the private sector firms with the appropriate qualifications for such work.

The reports give a summary of our landfill operation as well as the various waste diversion activities that take place on the site, including compost operations. Once viewed by the Ministry, comments are returned to the Region for appropriate action, including additions or deletions to the monitoring program.

Operating and Capital Budgets for the Solid Waste Division

The financial outline for solid waste management in Ottawa-Carleton is submitted to Regional Council for approval on an annual basis. The format includes the ongoing operating requirements for the Division and is detailed to reflect the current structure of the Division, including collection operations, landfill operations, waste diversion and finance and operational support. In addition, an annual capital budget is submitted which outlines a ten-year plan for projected capital works. Although Council reviews the ten-year plan, the approval for authority for funds is based on the request for the coming year. Staff currently outline a proposed ten-year program for funds derived from the Compensation Fund as well as general tax revenues that flow into the Solid Waste fund. Once authority has been approved by Regional Council, approval for the expenditure of funds follows regional policy with respect to tendering and award of amounts based on delegated authority levels.

WASTE MANAGEMENT PLAN

Anticipated Revenues to the Future Initiatives Fund Over the Next Ten Years

Year	Waste Quantities (1000 tonnes)			Revenues			
	Residential	IC&I	C&D	Residential @\$16/Tonne	IC&I @\$16/Tonne	C & D @\$10/Tonne	Total
1997	179	141	152	\$2,864	\$2,256	\$1,520	\$6,640
1998	173	144	154	\$2,768	\$2,304	\$1,540	\$6,612
1999	176	146	156	\$2,816	\$2,336	\$1,560	\$6,712
2000	178	148	159	\$2,848	\$2,368	\$1,590	\$6,806
2001	181	150	161	\$2,896	\$2,400	\$1,610	\$6,906
2002	183	152	163	\$2,928	\$2,432	\$1,630	\$6,990
2003	185	154	165	\$2,960	\$2,464	\$1,650	\$7,074
2004	188	156	167	\$3,008	\$2,496	\$1,670	\$7,174
2005	190	158	170	\$3,040	\$2,528	\$1,700	\$7,268
2006	193	160	172	\$3,088	\$2,560	\$1,720	\$7,368
							\$69,550
RMOC Payments - 1995 and 1996							\$5,425
Canadian Waste Services Inc. Payments - 1992 - June 1996							\$5,861
Canadian Waste Services Inc. Payment - 1996							\$1,820
							\$82,656

WASTE MANAGEMENT PLAN

Work Plan to be Funded in Part by Future Initiatives Fund Over the Next Ten Years

Expenditures from Operating and Capital Budgets	Prior	1997	1998	1999	2000	2001	2002- 2006	Total
Operating Budget - Operation of Household Special Waste Services	\$1,082	\$541	\$541	\$541	\$541	\$541	\$2,705	\$6,492
Operating Budget - Operation of Leaf and Yard Services	\$1,010	\$505	\$505	\$505	\$505	\$505	\$2,525	\$6,060
Capital Budget Acct. #42315 - New Landfill Site			\$1,880	\$5,665	\$13,835	\$14,180	\$5,860	\$41,420
Capital Budget Acct. #42316 - Environmental Assessment Hearing Process	\$490	\$490	\$1,440	\$1,440				\$3,860
Capital Budget Acct. #42317 - Leaf and Yard Waste Management.	\$538	\$1,555						\$2,093
Capital Budget Acct. #42330 - Waste Management Alternatives	\$1,405	\$1,405	\$1,335	\$1,650	\$18,105	\$28,750	\$14,305	\$66,955
Capital Budget Acct. #43430 - Solid Waste - Long Term Plan	\$745	\$865	\$1,345	\$1,830				\$4,785
Totals	\$5,270	\$5,361	\$7,046	\$11,631	\$32,986	\$43,976	\$25,395	\$131,665

for financial planning only

RMOC/PRIVATE SECTOR PARTNERSHIPS

Canadian Waste Services Inc. Waste Systems Ltd.

- The landfill site at Carp owned by Canadian Waste Services Inc. will receive one-third of the Ottawa-Carleton residential waste stream until 30 September 2001.
 - $5 \text{ years} \times \$47 \text{ tipping fee per tonne} \times 160,000 \text{ tonnes} \times 0.33 = \$12.4M$

Huneault Waste Management Ltd.

- The landfill site in Navan owned by Huneault Waste Management Ltd. will receive leaf and yard waste at a rate of 7500 tonnes per year, until 31 May 1999, with possible extension to 31 December 2001.
 - $5 \text{ years} \times \$38 \text{ tipping fee} \times 7,500 \text{ tonnes} = \$1.4M + \text{possible revenue from compost}$
- If appropriate Provincial approvals are obtained, Huneault will receive grits and screenings from 1 January 2000 to 31 December 2009.
 - $10 \text{ years} \times \$47 \text{ tipping fee} \times \text{approximately } 2,000 \text{ tonnes} = \$940K$
- If appropriate Provincial approvals are obtained, Huneault will receive one-eighth of the Ottawa-Carleton residential waste stream for a five-year period.
 - $5 \text{ years} \times \$47 \text{ tipping fee} \times 160,000 \text{ tonnes} \times 0.125 = \$4.7M$