SUBJECT: Long Range Waste Disposal Options for the City of Hamilton (PW08113) - (City Wide)

RECOMMENDATIONS:

(a) That the recommendations of the July 11, 2008 Niagara-Hamilton WastePlan Joint Working Group meeting, contained in Appendix “A” to report PW08113, be approved;

(b) That the City of Hamilton enter into a Termination Agreement to discontinue the waste disposal initiative and the WastePlan Environmental Assessment Study with Niagara Region be approved;

(c) That the Mayor and Clerk be authorized to execute the Termination Agreement referred to in recommendation (b) above, in a form satisfactory to the City Solicitor;

(d) That Councillor Powers continue to fulfill the role of co-chair of the Working Group through the balance of the current term of Council;

(e) That private sector vendors of residual waste treatment technologies continue to be advised that the City will not be entertaining proposals unless or until the City is involved in an Environmental Screening process for an alternative disposal technology;

(f) That the Water and Wastewater and Waste Management Divisions of the Public Works Department participate in the Energy From Waste (EFW) Integration Study process with Hamilton Utilities Corporation (HUC);
(g) That the City’s portion of the Energy From Waste (EFW) Integration Study cost be funded with $42,000 from the Biosolids Management Capital account 5160366304 and $60,000 from the WastePlan Capital account 5120594529.

Scott Stewart, C.E.T.
General Manager
Public Works

EXECUTIVE SUMMARY:

In response to the Solid Waste Management Master Plan (SWMMP) recommendation to investigate Energy From Waste and the early closure of the Solid Waste Reduction Unit (SWARU) in 2002, the City partnered with the Region of Niagara to explore alternative disposal technologies through an Environmental Assessment (EA) Study.

In July of 2008, the WastePlan Joint Working Group determined that the municipalities should focus on waste diversion and it was recommended that the WastePlan EA Study and the formal working arrangement end. There was however an interest in continuing to pursue matters of mutual interest, not necessarily exclusive to waste management. The July 11, 2009 recommendations of the Joint Working Group are contained in WastePlan staff report in Appendix “A” to report PW08113.

It is recommended that Council approve the termination of the WastePlan EA Study, and that the working group members continue to meet at least annually or at the call of the co-chairs to consider matters of mutual interest.

That leaves Recommendation #5 of the SWMMP outstanding regarding Energy From Waste (EFW). There are several options that are available for consideration, including:

1) Deferral of further consideration of alternative disposal capacity
2) Initiation of an independent screening process
3) Participation in the Hamilton Utilities Corporation integration study
4) Entertaining private sector proposals

It is important that the City continue to move forward on exploring alternatives to landfill to extend the life of the landfill and potentially generate energy to benefit the community.

Hamilton Utilities Corporation has been investigating alternative energy projects and is interested in working with the City to explore opportunities and proposed undertaking an integration study with the City.

Participating in the HUC integration study offers the City an opportunity to continue to pursue alternative disposal capacity as well as biosolids treatment with a City-owned entity. Consideration would be given to current and projected quantities of waste and
biosolids, energy production, cost benefit analyses and environmental benefit. The integration study would also provide good value for the investment.

The total cost of the study is estimated to be $283,000 and HUC is proposing the City pay for half of the costs that are specific the City in an amount of $102,000. HUC’s cost for the study will be $181,000. Staff is recommending the City participate in the HUC integration study on waste and biosolids and that $60,000 be funded from the Waste Management WastePlan Capital account and that $42,000 be funded from the Water and Wastewater Biosolids Management Capital account.

It is expected that the integration study will take ten (10) to twelve (12) months to complete and staff would report back to the Public Works Committee on the findings and any further actions.

BACKGROUND:

The information contained within this report has City wide implications.

The Solid Waste Management Master Plan (SWMMP), approved in 2001 includes the following:

**Recommendation #5** - “A new state-of-the-art Energy From Waste (EFW) facility may form part of the City of Hamilton’s waste management system so the need for the EFW facility must be revisited in 2006 to determine if such a facility is needed to optimize the disposal capacity at the Glanbrook landfill site. Our diversion rates will be continuously monitored in order to determine the likelihood of success of achieving our 2006 diversion target.”

With the early closure of SWARU in 2002, Council approved the following recommendation:

“*That in view of the early closure of SWARU, the General Manager of Transportation, Operations and Environment begin exploring the need for a new state-of-the-art Energy From Waste (EFW) facility to form part of the City of Hamilton’s waste management system to optimize the disposal capacity at the Glanbrook landfill immediately instead of 2006 as set out in Recommendation #5 of the SWMMP.*”

Subsequently, in 2003, Niagara Region and the City of Hamilton commenced discussions related to the mutual need to pursue alternative waste disposal alternatives. By late 2003 it was determined that there was enough common ground to proceed with a formal working arrangement and study process. The commonalities included:

- Approved waste management master plans
- 65% diversion target
- Limited landfill capacity
- A desire to manage their own waste

As part of the agreement the Joint Working Group was established to lead the study. The Joint Working Group consisted of five (5) elected representatives from each municipality and one (1) representative from each public waste management task force. The original Joint Working Group members from Hamilton were Councillors David Braden (co-chair), Phil Bruckler, Murray Ferguson, David Mitchell, Art Samson
and citizen member David Hart-Dyke. The current Joint Working Group members from Hamilton are Councillors Russ Powers (co-chair), David Mitchell, Lloyd Ferguson, Margaret McCarthy and Sam Merulla (alternate) and citizen members David Hart-Dyke and Jim Sweetman (alternate).

The approach was to be an Environmental Assessment (EA) Study in accordance with the Environmental Assessment Act.

The Terms of Reference (ToR) for the EA Study was developed in 2004 in conjunction with a series of public workshops and open houses. The ToR was approved by the Minister of the Environment in February 2005. The balance of 2005 included a series of public workshops and open houses around the development and evaluation of the “Alternatives to” or alternative technologies.

A preferred alternative of thermal technology with recovery of recyclable materials was received by the Joint Working Group in December 2005 for a sixty (60) day public consultation period. In March 2006 the Joint Working Group requested that additional investigation be undertaken on the option of stabilized landfill including a study of stabilized landfill sites and a visit to the Otter Lake stabilized landfill site in Halifax.

This stabilized landfill review was completed in early 2007.

In August of 2007, the Joint Working Group received an addendum report to the report on the preferred option that recommended that there were three (3) alternative systems that could be given further consideration, but also recommended a nine (9) month recess in the EA study process to allow staff to focus efforts on diversion programs.

In July 2008 the Joint Working Group reconvened, considered a staff report on next steps and approved the recommendations contained in Appendix “A” to report PW08113.

The purpose of this report is to finalize the disposition of the WastePlan process, to respond to the HUC proposal and to recommend an approach to dealing with private sector technology vendors.

**ANALYSIS/RATIONALE:**

A Termination Agreement has been discussed with the Legal Services staff from both Niagara and Hamilton. The Termination Agreement will terminate the “Agreement for Joint Study of Waste Disposal”, which was effective on January 1, 2004. The Termination Agreement will also include responsibility for notifying the Ministry of the Environment that the Environmental Assessment Study has ended. The WastePlan website will be closed at the end of January 2009.

Public Works staff will continue to review cooperative opportunities with Niagara staff. The working group of elected officials, members of the Joint Working Group and the Steering Committee include Councillor Powers as co-chair and Councillors Mitchell, Ferguson, McCarthy, Merulla, Pearson and Collins.

It is recommended that the role of co-chair continue to be fulfilled by Councillor Powers for the duration of this term of Council and that the Councillors listed above be invited to any joint meeting with their Council colleagues from Niagara.
During the remainder of the current Council term, staff from both Niagara and Hamilton would review the Terms of Reference for the Joint Working Group and the need for a Terms of Reference for any further working relationship beyond the current term. This would be brought back to the Public Works Committee following the 2010 municipal election.

In accordance with the diversion options report PW07151 presented to the Public Works Committee in November 2007, staff will continue to focus on waste diversion efforts around the one (1) container limit and delivery of the Green Cart program to multi-residential buildings.

During the EA Study process a number of private sector technology vendors requested consideration in the process. A formal communication protocol was in place to respond to private technology vendor inquiries and advise them that the EA Study process had a step where a competitive process would likely be pursued.

Although the WastePlan EA Study process with Niagara Region is concluding, there is a continued need to address the SWMMP recommendation around Energy From Waste or an alternative form of disposal capacity to ensure long term disposal capacity for the City.

Recently a proposal was received from Hamilton Utilities Corporation to work together with the City to carry out an EFW Integration Study to justify proceeding with an Environmental Assessment Screening (EAS) process to build a thermal waste processing facility in Hamilton that would potentially handle municipal solid waste and biosolids.

The approval process for waste disposal and treatment facilities has been improved with the Environmental Assessment screening process however it is still quite lengthy. To preserve the capacity at the Glanbrook landfill for the future it is important that the City continues to pursue alternatives to landfill. An alternative disposal technology, such as an Energy From Waste Facility will extend the life of the landfill and generate energy to benefit the community.

The proposal by HUC represents an opportunity to continue to investigate waste disposal alternatives at a reasonable cost representing good value. There is also value in the proposal to explore the integration of the treatment of the City’s biosolids.

The Water & Wastewater Division (WWW) is currently undertaking a Biosolids Master Plan (BMP) and a component Schedule C Class Environmental Assessment, focusing on biomethane production, thermal reduction and associated EFW opportunities. These EFW opportunities exist at multiple points in the biosolids treatment and disposal process. Many biosolids EFW applications currently under assessment in the BMP are viewed as emerging technologies in North America but, in fact, are firmly established and operating successfully in overseas jurisdictions, particularly in the European Union.

In Ontario, BMPs are reviewed and updated as applicable every five (5) years to ensure currency and relevancy.

While the Integration Study and WastePlan’s Long Term Waste Disposal Options initiative will remain outside of WWW’s ongoing BMP/Schedule C Class EA activities and have no inherent impact or influence on the current BMP process, components of
the Integration Study analysis may be relevant to the BMPs findings or recommendations in terms of long term co-ordination of facility development and operations within future BMP five (5) year review periods. WWW’s participation in the initiative also lends to the promoting of overall waste management cooperation within the City and the further identification of interdivisional opportunities, while significantly broadening and facilitating the assessment of options available to the City with respect to EFW.

In this manner, WWW’s participation in the Integration Study represents good value for investment.

The study would consider current and projected quantities of waste and biosolids, energy production, cost benefit analyses and environmental benefit. The total cost of the study is estimated at $283,000. Costs to be borne by HUC would include $96,000 for the overall coordination of the project including contingency, and the equal portion of $102,000 to that paid by the City specific to Parts A and B.

For Part A, HUC proposes that the City pay half of the $120,000 cost ($100,000 plus a contingency of $20,000). The City’s portion would be $60,000. There is adequate funding in the WastePlan Capital account 5120594529 to fund the Waste Management portion of the waste management component of the study. This would represent an affordable opportunity to continue to pursue alternatives to fulfilling Recommendation #5 of the SWMMP.

For Part B, HUC proposes that the City pay half of the $84,000 cost ($70,000 plus a contingency of $14,000). The Water and Wastewater portion would be $42,000. This could be funded from the Biosolids Management Capital account 5160366304.

There is merit in the City participating in the HUC study for the following reasons:

- HUC is a City owned corporation and there are no conflicts with purchasing policies;
- There is adequate funding in the WastePlan and Biosolids Management Capital accounts to fund the City’s portion of the study; and
- There is no binding commitment on the City to proceed with any further study or for the construction of a facility should one be approved, although the study may reveal that there is merit in proceeding with an Environmental Assessment screening process.

It is expected that the integration study would be completed in ten (10) to twelve (12) months. Staff would report back on the findings and any recommended next steps.

It is recommended that the City participate in the waste and biosolids integration study with HUC. The funding for the City’s portion of the study is available in existing Capital accounts in the Waste Management and Water and Wastewater Divisions.

**ALTERNATIVES FOR CONSIDERATION:**

Since the termination of WastePlan is a recommendation of the Joint Working Group, no alternatives are presented for consideration related to this process. Alternatives were considered as part of the staff report in Appendix "A".
It is recommended that the agreement be approved and that the Mayor and Clerk be authorized to execute it.

However as a result of the recommendations of the Joint Working Group, some direction from Council is required related to possible future initiatives with Niagara Region and fulfilling the requirements of the Solid Waste Management Master Plan.

a) Future Initiatives with Niagara Region

The Joint Working Group recommended that Niagara and Hamilton continue to meet annually or more often if necessary to consider opportunities of mutual interest including but not limited to waste management. Meetings could be at the call of the co-chairs and appropriate staff would make the arrangements.

Although technically the Joint Working Group would be dissolved with the termination agreement, for the purpose of future meetings the group would include the Joint Working Group members at the time of termination and members of the SWMMP Steering Committee.

b) Recommendation #5 of SWMMP

Also the decision to end the joint EA Study leaves the implementation of SWMMP Recommendation #5 outstanding and there are alternative approaches for consideration, including:

1) Defer further consideration of alternative disposal capacity
2) Initiate an independent screening process
3) Participate in the Hamilton Utilities Corporation study
4) Entertain private sector proposals

1) Defer Further Consideration of Alternative Disposal Capacity

Deferring consideration of Recommendation #5 of the SWMMP would not be consistent with another recommendation of the SWMMP. Recommendation #9 states that:

“The City of Hamilton must implement the components of the new waste management system as soon as possible based upon diversion potential and operational viability”.

In view of the ten (10) year review of the SWMMP scheduled to commence in 2009, planning for an alternative disposal facility could be deferred for further consideration in that process. However, doing so may result in a lost opportunity to consider proposals that are in the City’s interest. The City has approved moving forward with initiatives that will achieve 55% diversion from landfill so disposal options must continue to be explored to ensure long term landfill capacity is available.

2) Initiate An Independent Screening Process

Through the Environmental Assessment reform, Ontario Regulation 101/07 states a screening process can be used for thermal technologies that do not use coal, oil or petroleum and where a portion of the energy/fuel generated is used other than in the treatment process.

The City could initiate an independent EAS process to consider alternative disposal technologies and sites. A Request for Proposals would need to be undertaken to determine the cost.
Although the WastePlan Capital account 5120594529 has a balance of $498,000 available, the screening process is a new process and it is not expected that this amount would be adequate to complete the process. Appropriate funding could only be determined through a Request for Proposals process.

3) Participate in the Hamilton Utilities Corporation (HUC) EFW Integration Study

HUC has submitted a proposal to the City to partner on an EFW Integration Study to determine if there is merit in moving ahead with the EAS process on thermal technology.

The proposal is in two (2) components, Part A relates to the feasibility of an Energy From Waste facility to manage residual solid waste and Part B relates to the feasibility of a facility to manage the City’s biosolids.

4) Entertain Private Sector Proposals

During the WastePlan study approximately forty (40) private sector technology vendors requested consideration of their processes either through correspondence or attendance at a vendor workshop. A standard response was issued advising vendors that WastePlan was an EA Study and that there was a place in the process where a competitive process may be required to seek vendor proposals on the preferred technology.

Many of these technologies are in developmental stages and are yet to be proven. The WastePlan EA Terms of Reference established that only technologies with proven operating histories would be entertained.

Consideration of private sector proposals would only be appropriate in the context of an EA screening process such as one outlined in 2) or 3) above. At this time it is proposed that staff continue to respond to technology vendors in a similar manner to the WastePlan approach, that is, unless or until the City participates in an EA screening process for alternative disposal technologies, any vendor proposal is premature.

In summary, the option of participating in the HUC study provides a cost-effective opportunity to continue to pursue alternative technologies for waste disposal and biosolids treatment. Adequate funding is available in existing capital accounts.

It is recommended that the City participate in the HUC study. It is further recommended that the private sector technology vendors for waste management facilities continue to be advised that it is premature for their proposals to be considered by Council or staff at this time.

**FINANCIAL/STAFFING/LEGAL IMPLICATIONS:**

Funds are available to fund the City’s portion of the Integration Study costs in Capital Budget accounts 5120594529, WastePlan, for Part A the waste management component and 5160366304, Biosolids Management for Part B the biosolids feasibility component.

The proposal has been reviewed by staff from Finance and Corporate Services (Purchasing and Legal Services Divisions). The Purchasing staff advises that the City does not have to go through a competitive process with HUC as HUC is fully owned by
the City. Legal Services staff advises that there is no legal impediment to the City participating in the HUC study.

**POLICIES AFFECTING PROPOSAL:**

Three (3) policy documents affect the proposal including the Corporate Strategic Plan, the Public Works Strategic Plan and the Solid Waste Management Master Plan (SWMMP).

**Corporate Strategic Plan**

In Focus Area 5, Environmental Stewardship, reducing the impact of City activities on the environment includes a desired end result of 65% diversion of waste from landfill by 2011. Although most diversion will be achieved through recycling and composting, consideration of an alternative disposal technology would extend the life of the Glanbrook landfill significantly.

**Public Works Strategic Plan**

Consideration of an alternative disposal technology would contribute to greening and stewardship of the City and sound financial management.

**Solid Waste Management Master Plan**

This report relates to three (3) recommendations of the SWMMP:

Recommendation #2 recognizes that the Glanbrook landfill is a valuable resource and that the City must optimize its disposal capacity.

Recommendation #5 acknowledges that Energy From Waste (EFW) may form part of the waste management system that contributes to the extended capacity at the Glanbrook landfill. Although consideration of EFW was originally intended to start with the closure of SWARU in 2006, the early closure in 2002 accelerated the exploration of this option to start immediately.

Recommendation #9 suggests that the City should implement the components of the new waste management system as soon as possible. Most of the key components for diversion are in place, Recommendation #5 is one that is outstanding.

**RELEVANT CONSULTATION:**

The proposal by HUC has been discussed with the SWMMP Steering Committee. As indicated, the HUC proposal has been reviewed with Purchasing and Legal Services divisions who have indicated that there are no purchasing or legal impediments to the City participating in this study.

**CITY STRATEGIC COMMITMENT:**

By evaluating the “Triple Bottom Line”, (community, environment, economic implications) we can make choices that create value across all three bottom lines, moving us closer to our vision for a sustainable community, and Provincial interests.

**Community Well-Being is enhanced.** ☑ Yes ☐ No

Public services and programs are delivered in an equitable manner, coordinated, efficient, effective and easily accessible to all citizens.
Environmental Well-Being is enhanced. ☑ Yes ☐ No
Consumption of all natural resources is reduced. Waste is reduced and recycled.

Economic Well-Being is enhanced. ☑ Yes ☐ No
Hamilton’s high quality environmental amenities are maintained and enhanced. Additional funding will be passed on to residents.

Does the option you are recommending create value across all three bottom lines? ☑ Yes ☐ No
The proposed recommendations in the discussion paper contribute to the reduction of environmental impact through diversion from landfill and may result in additional WDO funding. These environmental and economic benefits would contribute to a safe and healthy community.

Do the options you are recommending make Hamilton a City of choice for high performance public servants? ☐ Yes ☑ No
Not relevant.
REPORT TO: Co-Chairs and Members of the Joint Working Group

SUBJECT: Report on WastePlan Next Steps

DATE: June 30, 2008

RECOMMENDATION(S)

It is recommended that:

(a) This staff report be received.

(b) The Niagara Region and City of Hamilton, represented by current members of the WastePlan Joint Working Group or other members of the Niagara Region Waste Management Planning Steering Committee and the Hamilton Solid Waste Management Master Plan Steering Committee members, continue to meet not less than annually or at the call of the co-chairs to consider opportunities of mutual interest including but not limited to waste management.

(c) The Councils of the Niagara Region and City of Hamilton be requested to enter into an agreement to terminate the Agreement for Joint Study of Waste Disposal dated January 1, 2004; and that the Chair of the Niagara Region, the Mayor of the City of Hamilton and the respective Clerks be authorized to execute the agreement within three (3) months of the approval by both Councils.

(d) The WastePlan website at www.wastoplan.ca be posted with a notice that the site will be discontinued on a specified date to be three (3) months after; and subject to, the approval by both Councils to terminate the agreement and end the Environmental Assessment (EA) Study.

(e) Subject to the approval by both Councils to terminate the agreement and end the EA Study, the Ministry of the Environment be so advised.

PURPOSE

The purpose of this report is to provide members of the Niagara-Hamilton WastePlan’s Joint Working Group (JWG) with recommendations for next steps in the joint project following a recess in the project as approved on August 9, 2007. Additionally, diversion progress updates and other information as requested at the last meeting are also included in this report.

BACKGROUND

In 2003, the Niagara Region and the City of Hamilton commenced discussions related to the mutual need to pursue alternative waste disposal alternatives. By late 2003, it was determined that there was enough common ground to proceed with a formal working arrangement.

Appendix A to this report contains a list of activities around the formalization of the joint working arrangements and in the Environmental Assessment Study.
The ‘Addendum Report to Draft Report on Evaluation of “Alternatives To” and Selection of a Preferred Disposal System’ (Addendum Report) was received by the WastePlan Joint Working Group on August 9, 2007. Following presentation and discussion of the Addendum Report, a number of recommendations were approved and the resulting actions have occurred:

1) The WastePlan Environmental Assessment (EA) Study process recessed for a period of nine (9) months to allow staff to follow up on matters that potentially impact on the future of the EA study. The Joint Working Group is reconvening after this recess to consider next project steps.

2) The WastePlan website is being maintained through the recess by the City of Hamilton, at a cost to be shared by Niagara and Hamilton;

3) The e-mail contact information is being shared by Niagara and Hamilton staff;

4) The consulting arrangement with MacViro has been concluded; and

5) The request for a progress report is being fulfilled through this staff report.

Since that time, Niagara and Hamilton waste management staffs have been pursuing their respective waste diversion programs and initiatives, monitoring external activities around alternative disposal options and activities around provincial waste matters.

REPORT

This section of the report provides information that follows up on the recommendations from the August 9, 2007 Joint Working Group meeting, reviews the joint study arrangements and presents options for next steps and a recommended course of action.

Appendix B contains a status update of various long-term waste disposal projects across Ontario and Appendix C contains a summary of key provincial waste management policy issues.

1) Follow-Up on Matters Impacting on the EA Study Process

a) Municipal Waste Management Activities

The Niagara Region and City of Hamilton have independently continued to improve their waste management systems and waste diversion.

The two (2) municipalities, together with the Regions of Durham, Halton and Peel also worked on a joint initiative for compostable liners/bags for household organic waste programs. The goal was to ensure that only certified compostable products were used in the program through communication with retail organizations, retailers and product manufacturers. Municipalities have been promoting the acceptable compostable liners in their source separated organic programs and the retailers have been co-operative.

Niagara Region

Niagara Region’s estimated diversion rate for 2007 is 41.4%. The diversion rate has been relatively stable since the introduction of the Green Bin organics collection program in 2004.

The Draft Level of Service and Rate Study was received by Council on August 16, 2007 and circulated to stakeholders for comment. The study recommends options for improving the existing waste diversion system in order to meet and exceed the 65% diversion target:

1) Organics Program
   - Expand Green Bin program municipality-wide in West Lincoln and Wainfleet;
   - Relaunch Green Bin program Region-wide and include kitty litter/pet waste, and
2) Reuse/Recycling
   - Three (3) reuse centres (partnerships with non-profits);
   - Two (2) additional municipal household special waste depots; and
   - Recycling programs in public spaces.

3) Waste
   - Every other week waste collection beginning September 2009 and/or
   - Three (3) container (bag/can) limit every other week; and
   - Two (2) staff for outreach and enforcement of waste collection and landfill disposal bans of recyclables and organics, MHSW, etc.

4) System-wide
   - Operate four (4) residential drop-off depots as landfills close;
   - Special set-out service for residents (for those who cannot physically set out their materials at the curb for collection) as a base level across the Region; and
   - Continued communication and education to support all programs.

Key diversion highlights include:

- Mandatory special events recycling through the area municipal approval/permit system beginning in 2007;
- Pilot Battery Recycling Collection Program for single use and rechargeable batteries at Regional facilities beginning May 2008;
- Implementation of organics program options from the Draft Level of Service Study (Green Bin relaunch and plastic bag ban (September 2008));
- New 20 year service contract with Integrated Municipal Services to process and market residential organics, beginning April 1, 2009, subject to negotiations;
- Launch of the Glass Recycling System, which manufactures a finished retail product (Niagara Ecoglass) from recycled glass and diverts thousands of tonnes of broken glass from landfills each year; and
- Moving forward with the installation of an optical sorter at the Recycling Centre.

A Long Term Landfill Utilization Strategy was completed in order to address a potential disposal capacity shortfall. As an outcome of the strategy, Niagara Region is negotiating an agreement with Niagara Waste Systems Limited (NWSL), for disposal of curbside collected waste and other waste collected by the Region or its contractors. The twenty (20) year contract would begin in 2009. Niagara Region would have the right to dispose of up to 120,000 tonnes of waste each year at the NWSL landfill site in Niagara Falls.

Numerous site improvements occurred at Niagara’s five (5) open landfill sites and nine (9) closed landfill sites.

**City of Hamilton**

- Hamilton’s diversion rate went from 30% in 2005, the full year prior to the roll-out of the household organics program, to 42% in 2007, the first full year of the program.
- A third Community Recycling Centre at the former Solid Waste Reduction Unit (SWARU) site on Kenora Avenue opened in June 2007.
- In November of 2007, Council approved a report on the Status of the Solid Waste Management Master Plan, Options for Increasing Diversion and Landfill Capacity. It was determined that the City would not reach its diversion target of 65% by 2008, so
This has now been changed to 2011. In addition, Council approved a three (3) year phase in plan to full implementation of a one (1) container limit for garbage in 2010, enhanced multi-residential diversion, continued education and promotion and the use of certified compostable liners in the household organics program. All of these activities are geared to improving diversion.

- In the fall of 2007, staff commenced a review of the operations of the landfill, leaf and yard waste composting site, transfer stations, community recycling centres, reuse store and haulage. A Request for Proposals (RFP) was issued and closed on June 26th. The goal is to award a contract for all or part of the services by the end of 2008 for new contracts to commence in early 2010. A segregated in-house team will also cost the operations for the landfill and leaf and yard facility to be compared in the evaluation process.
- The City of Hamilton commenced a five (5) year contract with a new recycling collection contractor, National Waste Services Inc. on March 31, 2008 for the entire city. This is the same contractor that co-collects garbage and organics for half of the City and provides front end collection for bin garbage in the multi-residential sector.
- A new container line is being installed at the Materials Recycling Facility which should be complete in the fall of 2008.
- A landfill gas to energy system will be operational this summer at the Glenbrook landfill. Energy produced will be managed by Hamilton Renewable Power Inc.

b) EA Reform

In this section a recap of the revised regulatory requirements only as they relate to WastePlan will be reviewed.

Regulation 101/07 was enacted on March 23, 2007 to address waste undertakings that are subject to the Environmental Assessment (EA) process and those that could be subject to an environmental screening process.

- Environmental screening is available for the following undertakings:
  1) A landfill site between 40,000 and 100,000 cubic metres;
  2) A thermal treatment site where no coal, oil or petroleum are used as fuel and where a portion of the energy/fuel generated is used other than in the treatment process;
  3) A thermal treatment site where no coal, oil or petroleum are used as fuel, a maximum daily capacity of ten (10) tonnes and where the energy/fuel generated is used in the treatment process;
  4) A transfer site with a maximum capacity of 1,000 tonnes per day.

When the regulation was enacted EA study proponents who met the regulation were given sixty (60) days to indicate their intent to switch to the screening process. Although the Joint Working Group recommended this to the respective Councils, and Niagara Region approved the switch, the City of Hamilton favoured continuing with the Environmental Assessment process.

2) The Joint Study Arrangements

The documents related to the joint study include the Agreement for Joint Study of Waste Disposal, the Joint Working Group Terms of Reference (ToR) and a Communication Strategy.
The agreement for Joint Study on Waste Disposal commenced on January 1, 2004 and was proposed to end when the EA Study was complete. Either party may terminate with sixty (60) days notice upon achievement of a milestone. Such termination is to be made by the respective Councils. The milestones relate to the significant points in the EA Study process including:

- selection of a preferred method (system) for managing post diversion waste
- selection of a preferred procedure (siting) for implementation of the preferred system
- request for proposals to select a technology provider for the preferred system
- applications for the necessary approvals for the preferred system

Although a milestone in the EA study process has yet to be achieved and the agreement does not directly offer other options for terminating the study, the Legal Services staff from Niagara has advised that parties to an existing agreement can mutually agree to end their contractual obligations to each other. While the Joint Working Group could certainly recommend termination, further approval of both Councils would be required, as would a written agreement to terminate.

The Joint Working Group Terms of Reference set out the operating rules for the group. There is nothing in the ToR that precludes the termination of the Joint Working Group.

The Communication Strategy was not the consultation plan for the EA Study. It was developed as the protocol for the distribution of information to the public and the media as the strategy did include the operation of the website, which has continued to be active as directed by the Joint Working Group in August of 2007. If the website was to be discontinued it would be appropriate to post a period of notice, perhaps three (3) months, after which the site would be abandoned. The WastePlan study documentation would continue to be maintained on each respective municipal Waste Management Division webpage.

Any media release resulting from this report would be issued jointly by the JWG Co-Chairs.

Should both Councils make a decision to conclude the EA study process, it would be appropriate that the Ministry of the Environment (MOE) be advised so they can address their file appropriately.

3) Options for Next Steps

There are two (2) general options for next steps including resuming the study or ending the study, the details of which are described below. In addition the potential to work together on future initiatives remains a viable alternative for either option.

a) Resume Study

If the EA Study was to be resumed, it would start with a public consultation process for the Addendum report and three (3) systems that were remaining. It would be necessary to retain a consultant to undertake the consultation process and resume work on the balance of the EA Study process. The process would be managed jointly by Niagara and Hamilton staff.

Both municipalities have the funding available to resume the study.

b) End Study

Both municipalities currently have sufficient short term landfill capacity and are focusing on their respective waste diversion programs. Ending the study will enable both municipalities to put a priority on waste diversion activities.
The municipalities could continue to meet on a regular basis to review opportunities for working together.

There are also a number of new and emerging alternative disposal technologies that should continue to be monitored for future consideration. The work and information resulting from WastePlan will serve as reference information for future activities relating to alternative disposal options for the two (2) municipalities.

The EA Study could be ended with the agreement of both Councils. An agreement to terminate the existing Agreement would be required to be signed by the Regional Chair in Niagara, the Mayor of Hamilton and the respective Clerks.

c) Future Initiatives

It is recognized that the municipalities can work together for common causes as evidenced by the WastePlan study and the compostable liner/bag initiative. It is also recognized that Niagara and Hamilton may find opportunities to work together on matters of mutual interest including but not necessarily limited to waste management. One of the opportunities that has been discussed briefly is a co-operative approach to the future disposition of plastic shopping bags in the Niagara and Hamilton waste streams.

CONCLUSIONS

Niagara Region and Hamilton continue to be committed to 65% diversion from landfill and this will continue to be a priority for the municipalities instead of jointly pursuing alternative disposal options. The two (2) municipalities will continue to work together on matters of mutual interest, where appropriate. Waste Management Steering Committee members could meet annually or as otherwise scheduled to discuss future initiatives. However it is in the interest of both municipalities to terminate the current agreement around alternative disposal options as they pursue their waste diversion goals.

Pat Parker, MCIP, RPP
Manager of Solid Waste Planning
City of Hamilton

Lydia Torbicki
Manager, Waste Policy and Planning
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c.c. Scott Stewart, General Manager of Public Works, City of Hamilton
Ken Brothers, Commissioner of Public Works, Niagara Region
Beth Goodger, Director, Waste Management Division, City of Hamilton
Catherine Habermebl, Acting Director, Waste Management Services, Niagara Region
Appendix A

Chronology of Events from the WastePlan Joint Study Agreement

<table>
<thead>
<tr>
<th>Date/Timeframe</th>
<th>Activity/Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>Region of Niagara and City of Hamilton commence discussions on alternative waste disposal needs</td>
</tr>
<tr>
<td>March 2004</td>
<td>Niagara and Hamilton Councils approve the agreement for the joint project, an Environmental Assessment (EA) study and striking a Joint Working Group to oversee the study (the agreement was effective commencing January 1, 2004)</td>
</tr>
<tr>
<td>January to August 2004</td>
<td>Development of the Draft Terms of Reference (ToR) for the EA study, including workshops and public information sessions</td>
</tr>
<tr>
<td>August 20, 2004</td>
<td>ToR submitted to the Minister of the Environment for approval, a public consultation process is undertaken</td>
</tr>
<tr>
<td>February 7, 2005</td>
<td>Minister of the Environment approved the ToR</td>
</tr>
<tr>
<td>February to November 2005</td>
<td>Development and evaluation of the “Alternatives to” including workshops and public information sessions</td>
</tr>
<tr>
<td>December 8, 2005</td>
<td>“Preferred Alternative” of thermal technology with recovery of recyclable materials presented to the Joint Working Group, who received the report for public consultation</td>
</tr>
<tr>
<td>December 9, 2005 to February 6, 2006</td>
<td>Public consultation period</td>
</tr>
<tr>
<td>March 9, 2006</td>
<td>Joint Working Group received the report on the Preferred Alternative and directed a study on the stabilized landfill option and a review of the systems comparison based on the results of the stabilized landfill study; Joint Working Group members and staff to visit the Otter Lake Landfill Site near Halifax</td>
</tr>
<tr>
<td>June 2006</td>
<td>Members of the Joint Working Group, public advisory committees and staff tour of Otter Lake Landfill Site</td>
</tr>
<tr>
<td>March 2006 to December 2007</td>
<td>Gartner Lee undertook the stabilized landfill study</td>
</tr>
<tr>
<td>April 12, 2007</td>
<td>Joint Working Group received presentation and report on stabilized landfill and asked that the results be considered in an Addendum report to the Selection of a Preferred Alternative report</td>
</tr>
<tr>
<td>August 9, 2007</td>
<td>Joint Working Group received the Addendum Report and decided to take a recess in the EA study process for nine (9) months (further details in Background Section of report)</td>
</tr>
<tr>
<td>June 2008 (present)</td>
<td>Joint Working Group meeting</td>
</tr>
</tbody>
</table>
Appendix B
Status Update on Similar Processes

1) Durham York

The Durham York energy-from-waste (EFW) facility update is based on information provided by Durham Region staff as of the end of April, 2008:

- Durham and York Regional Councils approved the recommended site for the EFW facility (Clarington 01 site at Highway 401 and Courtice Road, Clarington) in January 2008.
- HDR Consultants were hired to prepare the technical specifications for the EFW facility.
- Genivar and Jacques Whitford consultants are completing the Environmental Assessment (EA) and Environmental Protection Act (EPA) portions of the project in conjunction with HDR. The EA and Request for Proposal (RFP) processes are being completed in parallel.
- Deloitte prepared the Business Case based on the HDR specifications and the York-Durham tonnage proportions:
  - EFW plant size is proposed at 140,000 tonnes per year (tpy) based on 100,000 tpy from Durham plus 10,000 tpy for growth and 20,000 tpy guaranteed from York plus 10,000 tpy for growth.
- Following the release of the Business Case (see http://www.durhamyorkwaste.ca/pdfs/businesscase/EFWReport.pdf) on May 21st, it will go for approval to York and Durham Regional Councils.
- If the Business Case is approved and a memorandum of understanding is signed, the RFP for the design, construction and operation of the EFW facility will go out to the five (5) pre-qualified vendors.
- Anticipated completion of RFP and selection of preferred vendor is late 2008.
- Anticipated completion of EA is first quarter of 2009.
- Construction start date would depend on EA status and negotiations with vendor.

2) Plasco Trail Road Demonstration Facility

Monthly reports are prepared by Decommissioning Consulting Services (DCS) Limited on behalf of Plasco Trail Road Inc. and the MOE. The project summary below is based on the monthly reports and related data, as of May 22, 2008 from http://www.zerowasteottawa.com/trailroadperformance/:

- PlascoEnergy is operating a demonstration facility at the Trail Road landfill for up to a two (2) year evaluation period.
- The City of Ottawa is providing the site, the waste and is being charged a $40 per tonne tipping fee during the evaluation period.
- Plasco will be processing up to 85 tonnes of waste into electricity each day by converting the waste to synthetic gas (syngas).
- The system will produce a small amount of inert residual solid that can be used as aggregate for concrete and asphalt.
- Small amounts of waste have been processed during the reporting period.
- Plasco expects to have the facility available for testing at a sustained rate of twenty-four (24) hours at the maximum rate, as required by the Certificate of Approval for Air, during the first week in June 2008.
- Based on three (3) DSC monthly reports to date, Plasco Trail Road is in substantial compliance’ with O.Reg. 254/06 - Plasco Demonstration Project, Provisional Certificate of Approval - Waste Disposal Site and Certificate of Approval - Air.
- After the evaluation period the City can contract with PlascoEnergy to build a facility of two-hundred and twenty-five (225) tonnes or more per day to process the residual waste going to landfill.
On June 10, the City of Ottawa's Planning & Economic Development Committee recommended to Council that staff be authorized to finalize and execute a Letter of Intent with Plasco. This will set out the terms and conditions under which a long-term agreement for a full-scale waste conversion facility could be executed. Council approved this recommendation, at its meeting on June 25, 2008.

3) Liberty Energy Inc. Thermal Treatment Facility

Liberty Energy Inc. is the proponent of a thermal treatment facility for biosolids (sewage sludge) and biomass (wood waste) to be located at 675 Strathcona Avenue in the industrial area of north Hamilton. The proposed facility would receive a maximum of 1,560 tonnes of material per day and the maximum storage on site could not exceed 14,560 tonnes per day.

In 2005, Liberty Energy commenced an environmental screening process under the relevant energy regulation. The City of Hamilton requested the Minister of the Environment to bump the proposal up to a full Environmental Assessment study. Liberty Energy was completing some final iteration in the screening process in 2007 when the EA Reforms discussed in Section 1(b) of this report were enacted to provide a screening process for certain waste facilities. At the suggestion of the Ministry of the Environment, Liberty Energy switched to the screening process under the waste regulation and submitted all the information accordingly.

In February of 2008, the Ministry of the Environment accepted the environmental screening reports.

In January 2008, Liberty Energy had submitted its application for conditional Certificate of Approval (CoA), which was circulated for comment.

The City of Hamilton Council approved the City's comments on the CoA on April 9, 2008. As the comments relate to waste management and WastePlan, there is a memorandum of agreement that requires that the City Waste Management Division approves the feedstock for the facility on a quarterly basis to ensure that there are no conflicts with the City's waste diversion goals.

4) Lafarge Alternative Fuel Proposal at Bath

The following project description is based on information from the Government of Ontario Environmental Registry (http://www.ebr.gov.on.ca) and the site's Provisional Certificate of Approval (CoA) - Waste Disposal Site and Certificate of Approval - Air.

- In December 2006, Lafarge Canada's existing Bath Cement Plant was issued a Certificate of Approval (Waste Disposal Site) by the Ministry of Environment. Approval was given to burn solid non-hazardous waste for use as alternative fuels within the existing cement kiln.
- The following categories of municipal waste are accepted at the facility for use as alternative fuels:
  - whole and part used tires;
  - shredded solid waste;
  - pelletized municipal waste; and
  - meat and bone meal waste.
- The facility is approved to utilize alternative fuels at a maximum rate of one hundred (100) tonnes per day. However, pelletized municipal waste is restricted to at a maximum rate of 1.25 tonnes per day.
- Only alternative fuels generated within the Provinces of Ontario and Quebec and within the State of New York can be accepted.
- Applicants appealed the MOE’s decision to issue the Certificates of Approval for air emissions and waste. The first step, which was the granting of appeal rights to the applicants by the Environmental Review Tribunal, was completed. The Tribunal concluded that the ‘successful applicants provide sufficient information to establish that the Director’s decision to issue the CoA could result in significant harm to the environment.’
- On June 18, 2008 the Ontario Divisional Court ruled that a citizen-led appeal of Lafarge Canada’s plan to burn tires, plastics, bone meal and other waste will go forward. The Court
rejected the MOE and Lafarge's attempt to shut down an Environmental Review Tribunal hearing.

It should be noted that the Divisional Court decision to allow an appeal of the issuance of the CoA (for the burning of solid non-hazardous waste for use as alternative fuels), sets a precedent that may impact the integrity of the EA process.

5) York Region Refuse Derived Fuel

The following summary on the York Region Refuse Derived Fuel (RDF) initiative is based on York Region Committee/Council Reports completed over the past few years and a review by York Region Solid Waste Management staff.

- York Region has entered into an agreement to ship 100,000 tonnes of residual waste per year for twenty (20) years to Dongara Developments Inc.
- Dongara's waste pelletization facility, which is located in the City of Vaughan, will convert the waste to an alternative fuel source.
- The waste received from the curbside waste collection will be presorted and processed into pellets that can be used as burnable sources of fuel.
- The commencement date for the contract and the commercial operations of the pellet plant is July 1, 2008.
- The total tipping fee for York waste at the plant is $84.00 per tonne, inclusive of transportation by York Region to the Dongara Pellet Plant and any transportation costs associated with the transportation of the pellet to the end user.
- The remaining residual waste would be directed to the proposed Durham-York Energy from Waste facility.

York Region had also requested that a Dongara representative review the project update. Dongara has noted that in terms of RDF markets: “Dongara has contracts with companies in Ontario and the United States permitted by regulators in their industries to utilize the pellets in the production of energy and alternative fuels.” No further end market details were provided by Dongara.

6) Dufferin County Energy-from-Waste

Following a Request for Qualifications process in 2006, the County of Dufferin has issued a Request for Proposals for the design, finance, build and operation of a thermal treatment waste processing facility. Information of interest related to WastePlan includes:

- A request for a single proponent.
- The facility could be located on County-owned land or another site in Dufferin County.
- The term of the contract would be twenty (20) years.
- The minimum capacity would be 10,000 tonnes per year however proponents can propose a 25,000 to 50,000 tonne facility, but would be responsible for sourcing the feedstock beyond 10,000 tonnes.
- The proponent would be responsible for the sale of energy and disposal of process residual waste.
- Approvals are expected to be sought under Regulation 101/07, the environmental screening process, unless the project qualifies as a pilot project under Regulation 347.

The RFP is proposed to close September 18, 2008 with the contract being awarded in the fall of 2008. The agreement would be approved and executed in the spring of 2009. The construction period would be about two years with operations beginning in 2012.
Appendix C

Provincial Policy Issues

1) AMC/AMRC Discussion Paper for an Alternative Approach to Ontario’s Blue Box Funding Model

The current Blue Box Program Plan model, which is used to determine the funding that municipalities receive from industry stewards, is coming to the end of its five (5) year term.

Ontario municipalities receive funding for approximately 33% of the net costs of their Blue Box program, versus the 50% committed by Stewardship Ontario. In order to address funding issues, the AMC/AMRC’s Discussion Paper for an Alternative Approach to Ontario’s Blue Box Funding Model proposes a series of recommendations. The key recommendation is:

- Phasing-in of Extended Producer Responsibility, where industry would eventually become responsible for 100% of the cost of managing all Post Consumer Packaging and Printed Paper, including the costs for managing what is in the litter and garbage stream.

Municipalities would no longer pay for Blue Box costs (processing, P&E, administration/overhead, revenues). Instead they would focus on implementing and managing other diversion programs where industry funding organizations are not easily identifiable, such as kitchen organics.

This Action Plan shifts the responsibility onto the industry stewards that produce the packaging and printed paper, and results in the following benefits as described in the discussion paper:

- It provides Stewards with the ability to achieve higher recovery rates through their involvement in the management of the entire life cycle of the product;
- It may result in product packaging design changes that become more recyclable;
- It provides for consistency of decisions across the Province, helping to establish a more uniform Blue Box program;
- It is good for business. Consumers become increasingly aware of the ill effects of excess consumer packaging and are more environmentally motivated in their purchasing choices.

Niagara passed a Council resolution, conveying support of the Discussion Paper. Hamilton Council supported the need to change the funding model and expressed concern about the future of a Blue Box program fully funded by industry.

2) WEEE Program Plan

The Draft Final Waste Electronic and Electrical Equipment (WEEE) Program Plan for the collection and processing of designated electronic equipment, was posted on the MOE Environmental Registry for commenting by May 9, 2008. Comments have been submitted by both Hamilton and Niagara Region.

The WEEE products will be collected in three (3) phases:

- Phase I - computers and peripheral equipment (including monitors) plus televisions;
- Phase II (one year later) - DVD players, radios, cell phones and other electronic products;
- Phase III will be announced later.

Ontario Electronic Stewardship (OES), which represents companies (i.e. Sony, Panasonic, HP, IBM, etc.) who manage this program, will use the following methods to collect WEEE:

- Special events (retail hosted, OES round up, municipal, co-site Municipal Hazardous or Special Waste);
- Municipal waste management sites;
- WEEE reuse/processor sites;
- Non-profit organization; and
• Waste haulers/recyclers.

The plan is good first step in creating a true extended producer responsibility model. However, a number of concerns have been raised by municipalities and some of which include the following:

• The plan needs to ensure all Ontario residents have access to a WEEE drop-off location.
• Waste diversion targets in the plan are too low and should be aligned with the Provincial diversion target of 60% by 2010.
• The proposed $165/tonne funding may be too low for Phase I material, and this amount should be reviewed closely over the first year and adjusted as necessary.
• Reuse targets for WEEE should be established.
• More design for the environment principles should be included in the WEEE Plan.

3) Municipal Hazardous or Special Waste (MHSW) Program Plan

The new Municipal Hazardous or Special Waste (MHSW) Program commences on July 1, 2008. Stewardship Ontario will be entering into a MHSW Shared Responsibility Agreement with every municipality currently providing or interested in providing MHSW collection services.

Under the MHSW program, industry will pay for about 80% of the program cost for Phase I materials, while municipalities will cover the balance. The municipality/industry roles are

• Municipalities will be responsible for activities and costs associated with receiving, sorting, packing and manifesting MHSW.
• Industry will be responsible for post collection activities and costs associated with transporting, recycling (where appropriate) and disposing of MHSW and packaging of Phase I material.

Phase I encompasses items such as:

• Paints, stains, solvents;
• Used oil filters and oil containers (30 litres or less), antifreeze, hydraulic, power steering and transmission fluids;
• Single use, dry cell batteries (e.g. Non-rechargeable batteries);
• Propane tanks; and
• Fertilizers, fungicides, herbicides, insecticides and pesticides.

Until Phase II materials are included in the funding model, municipalities will continue to pay for all costs associated with items such as batteries (other than single use dry cell), aerosol containers, portable fire extinguishers, fluorescent light bulbs and tubes, pharmaceuticals, sharps, switches/measuring devices that contain mercury.

Additional facets of the MHSW plan include:

• Province-wide promotion and education campaign;
• Acceptance of small quantity waste from IC&I;
• Multi-year plan to improving accessibility i.e. expand events/deposits and increase industry take-back programs; and
• Monitoring, performance benchmarks and tracking mechanisms.