



Waste Management Master Plan

**Report 1b:
Evaluation of Long Term
Waste Disposal Options
and
Time Frame for Decisions**

August 25, 2010

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with assistance from the
**Huron County
Planning and Development Department**

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1. Background

This report is the second in a series of reports intended to complete the Huron County Waste Management Master Plan.

Report 1a explained the current status of waste management in Huron County and its nine lower tier municipalities, and identified the challenges that need to be addressed when choosing a long term solution. Report 1a was revised following its circulation and commenting period and was released in final form on February 4, 2010.

This Report 1b identifies and evaluates the options open to County Council in selecting a long term solution for waste management to serve the needs of Huron County residents and businesses, and sets out a timetable for making decisions.

The background to waste management in Huron County was provided on page 2 of Report 1a and is repeated here in the next three paragraphs.

Under County By-law 14-2001, the County of Huron, through its Planning and Development Department, has responsibility for long-term planning for waste management, including pursuing a long-term solution for the County's nine municipalities. Local municipalities are responsible for the ownership, operation and perpetual care of municipal landfill sites. Local municipalities are also responsible for coordinating recycling collection and processing, and for determining how curbside waste collection is arranged. The County's only involvement in the delivery of waste management services is the operation of the Household Hazardous Waste Depot located at the Mid-Huron Landfill at Holmesville and available free of charge to all county households.

The approach to waste management in Huron County for several years has been guided by "optimization" whereby local municipalities seek to improve the operational efficiency and environmental performance of local landfill sites. As local landfills reach capacity, the County By-law enables inter-municipal-County agreements for the transfer of waste from a generating municipality (out of landfill capacity) to a receiving municipality (available landfill capacity). This process has been pursued twice in the past several years and includes benefits for both parties – the generating municipality gains a solution for a period of years, and the receiving municipality gains economies of scale which improve landfill operations, efficiency, and financing.

Even with optimization efforts, the municipal landfills will not last forever, and several will be reaching capacity over the coming years. County By-law 14-2001 requires a county-wide solution for long-term waste management planning. The Ministry of the Environment (MOE) does not support the creation of new municipal landfills, and requires a coordinated solution over a larger area to ensure the viability of a waste management solution using the most appropriate environmental technology.

2. Introduction

Two major topics are addressed in this report: first, a review and update on actions taken by the Ministry of the Environment (MOE) and by Huron County municipalities following the release of Report 1a, and second, a review and evaluation of the disposal systems available to Huron County and a recommendation on how and when to select the preferred system.

Report 1a commented that waste management in Huron County is at a crossroad and that the County and the Municipalities have to examine and carry out an open discussion on how waste disposal services are to be provided in the long term. All disposal options, regardless of whether they involve directing

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wastes to a facility external to the County, to an active municipal landfill being optimized for increased capacity, or to a new greenfield landfill will require a new level of municipal cooperation:

- (i) Municipal consensus on the ownership, operation and financing of waste management facilities that are to be shared with other municipalities in the County;
- (ii) Accommodating the interests of those municipalities that have waste disposal capacity for a very long time with those who will be out of capacity in the very near future;
- (iii) Ensuring municipal commitment by those requiring the service to direct collected wastes to the selected facility;
- (iv) Establishing transfer facilities to minimize longer distance haulage of wastes and to respect municipal landfill access concerns;
- (v) Siting and designing transfer facilities that are capable of handling all sources: curbside collected waste, commercial bin loads, and landowner delivered wastes;
- (vi) Rationalizing the balance between establishing a long term disposal facility in the County versus reliance on an external to the County landfill with an approved Province-wide service area. Added to this rationalization are the concerns of the waste industry to the risks associated with municipal reliance on a limited number of privately owned and operated waste management organizations;

For Huron County the first major consideration in reaching a conclusion lies in the County's role established by the Waste Management By-law and the fact that local municipalities have the ability to control collection through contracts and through the operation of existing landfills that they own. The County is not in the position to guarantee a waste tonnage that could be committed to carry the cost burden of collection and haulage to a large processing facility or to an internal or external landfill without agreement and commitment to the disposal system by the municipalities.

The second major consideration is that a number of municipalities in Huron County do not have a short term or even medium term need for landfill disposal. They already have landfills within their respective municipalities that have remaining capacities in excess of 20 years. Some municipalities, like North Huron and Morris-Turnberry, have very significant long term landfill waste disposal facilities that have MOE approval and are operational today. These municipalities don't own the problem; it belongs to those municipalities without a longer term disposal solution and to the County through By-law 14-2001.

The third major consideration is the recognition of the private sector commercial waste operations to function on their own business terms and not on any terms the County might craft. The waste haulage and disposal needs of industrial, commercial, and institutional (ICI) enterprises and larger residential complexes that involve bin loads can be contracted out to the private sector, and these operators do not have to follow municipal policies such as the use of clear bags for wastes or the purchasing of bag tags, or to deliver the waste to a specified facility. These wastes may be and are often delivered to a private landfill with province-wide service area outside of the County. When waste is exported out of the County there is less revenue to support the chosen system.

Waste collection in the current Mid-Huron service area is continuing to be provided through a number of different collection and disposal arrangements. Commercial waste management firms collect curbside wastes under contracts with municipalities and take these wastes directly to the Mid-Huron Landfill. Commercial waste operators collect large bin loads and take these to a landfill they select. Only if they use the Mid-Huron Landfill must these wastes satisfy the clear bag containment rule. All other landfills in the County and those open as export potential for Huron County do not currently follow this rule.

The task that now faces the County in charting a preferred course is achieving a balance between the private sector service and the continuance of a municipal/County supported system. This balance needs to be sorted out through discussions and comments generated by this report.

The fourth major consideration is whether a transfer station should be established to receive waste and facilitate its transfer to the Exeter Landfill (under the South Huron – Mid-Huron 3 agreement) over the medium term or to the selected option over the long term. Should wastes being collected at curbside, or in container bin systems, be taken to the Transfer Station and then transferred into large bins for long distance haulage or should the curbside collection trucks and bin collection trucks be required to undertake the longer-distance haul to the disposal facility? And how are the costs of such transfer facilities to be carried – in the tipping fee, by bag-tag fees or with user assessment through taxation?

With the closure of the Mid-Huron landfill (approx. 2014) and the need to redirect wastes to more distant facilities, the need for collaboration between municipalities will become more essential in order to take advantage of cost sharing opportunities. Transfer facilities that are shared by municipalities will become essential components of the waste management system in order to reduce haulage costs and to provide a measure of public convenience. As this Report and the recommended Waste Disposal System are reviewed by municipalities and other stakeholders, the opportunity will arise to test out and answer these questions.

3. County-wide Landfill Capacity and Remaining Site Life

Based on 2008-9 year-end records submitted to the MOE by the municipalities, there is unapproved potential capacity on a County-wide basis for approximately 2.3 million m³ of municipal solid wastes. Yearly consumption of capacity is approximately 60,700 m³ and this translates into an estimated 38 years of capacity on a County-wide basis. Waste disposal densities for individual landfills vary significantly from a high compaction level of 0.75 tonnes per m³ at the Mid-Huron landfill to an average of 0.35 tonnes per m³ at the other landfills. If the Mid-Huron compaction densities were achieved at all landfills in the County for the tonnages reported in 2009, landfill capacity would be extended well beyond 38 years.

The above capacity and landfill life figures are very preliminary and depend on further submissions by the municipalities to optimize potential capacity estimates and to secure MOE approval of later stages in the various landfills' development. Also it should be recognized that achieving higher compaction levels may not be a practical solution for small landfills that operate on a limited service level due to the relatively high costs of compaction equipment and the difficulties associated with servicing small waste disposal sites that are open on a limited service basis. In addition, although the County Waste Management By-law could be utilized to implement the necessary service area adjustments to re-align site use, the administrative costs, MOE review costs and possible public reaction may not justify the solution.

Figure 1 and Table 1 (from Report 1a) provide summaries of the remaining life at the operating landfills in Huron County that have been updated based on the 2009 year end reports on landfill operations. Three operating landfills in Huron County have significant long term capacity for their current approved service areas – Wingham landfill in North Huron, Morris landfill in Morris-Turnberry and Exeter landfill in South Huron. Approval by the MOE of landfill stages for these landfills will however be required to operationalize these sites' long term capacity. Within the short and medium term periods to 2027, several smaller landfills will have reached or nearly reached their approved design capacity – Ashfield, Blyth-Hullett, Grey, Hensall, Howick, and Stanley landfills. This means that by approximately 2030, a long term disposal solution will be required by six of the nine municipalities in Huron County – all, except for North Huron, South Huron and Morris-Turnberry.

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The information in the following Table from Report 1a has been updated based on a review of each landfill site's 2009 year end report.

Table 1 - Landfill Capacity and Remaining Site Life

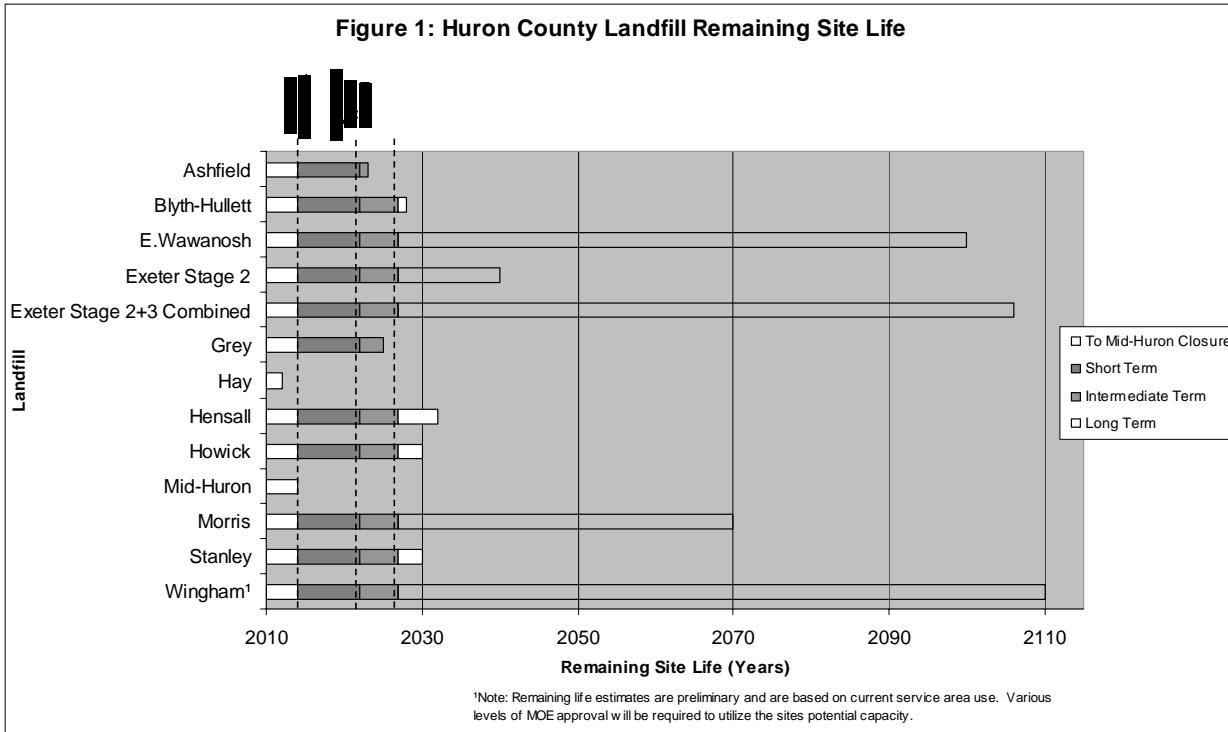
MUNICIPALITY	LANDFILL & Location #	SERVICE AREA (Wards)	CAPACITY REMAINING	YEARLY USE	REMAINING SITE LIFE
North Huron	Wingham #3	Wingham, Blyth	437,200 m ³	4,500 m ³	+ 97 years
	E.Wawanosh	E. Wawanosh Ward	25,327 m ³	255 m ³	+ 74 years
Morris-Turnberry	Morris #12	Morris Turnberry Brussels (Huron East)	240,100 m ³	3,840 m ³	+ 60 years
Ashfield-Colborne-Wawanosh	Ashfield #6	Ashfield W. Wawanosh Colborne	59,645 m ³	3,400 m ³	+ 17 years
Central Huron	Mid-Huron #8	Goderich Seaforth, Tuckersmith (Huron East) Clinton, West Ward (Central Huron) Bayfield (Bluewater) Colborne (ACW) Lucknow (Huron-Kinloss)	37,144 m ³	8,000 tonnes @ .75 tonnes/m ³	4 years
	Blyth-Hullett #4	Hullett (Central Huron)	23,440 m ³	1,540 m ³	Temporarily closed for 2 years
Bluewater	Hay #10	Zurich Hay	14,600 m ³	3,650 m ³	2 years
	Hensall #5	Hensall	59,400 m ³	2,400 m ³	22 years
	Stanley #13	Stanley	37,600 m ³	1,300 m ³	20 years
Huron East	Grey #9 (Walton Landfill)	Grey McKillop	10,300 m ³	640 m ³	15 years
South Huron	Exeter #1	South Huron	Stg2 377,000 Stg3 779,000	12,000 m ³	30 years 65 years
Howick	Howick #11	Howick	42,859 m ³	2,260 m ³	+ 19 years

Comments: Compaction densities and density assumptions vary significantly between landfills;

Remaining capacity is based on 2009 reports by Municipalities with estimates made to adjust to common base year using information received from Municipalities;

Service area revisions for the Blyth-Hullett landfill use are being finalized by Central Huron and North Huron. Effective October 1, 2009 wastes from the Blyth Ward of North Huron are being transferred to the Wingham landfill and the public can utilize this landfill. Landfill has just been closed for a 2 year period by Central Huron and wastes from Hullett Ward are being received at the Mid-Huron landfill;

Exeter Landfill figures are preliminary and do not include the Mid-Huron 3;



4. Implementation of the Huron County Waste Management By-law 14-2001 and MOE Confirmation

The policy proposition of service area amendments for local landfills that can be implemented based on County By-law 14-2001 is an extremely important feature for waste management in Huron County. This By-law was adopted pursuant to Section 209 of the Municipal Act and through this By-law the County assumed certain waste management responsibilities for the provision of waste disposal capacity for local municipalities within the County.

A serious question was raised by the MOE in the Ministry’s review of South Huron’s Stage 2 application to amend the service area of the Exeter Landfill’s Certificate of Approval to include the Mid-Huron 3 (Central Huron, Huron East and Goderich). The Ministry questioned the County’s interpretation of O. Reg. 347 to the Environmental Protection Act on which the County’s Waste Management By-law has been established. Had this challenge been successful the potential for the service area amendment applications to require an EA Screening Study under the EA Act would likely have been required. This would have seriously extended the time required and costs incurred in realigning landfill service areas to suit landfill availability and demand across Huron County. However, following further submissions by the County that included documentation of the MOE Legal Services Branch acceptance some 10 years ago, the Ministry Approvals Branch has reconsidered its position and has accepted the County’s interpretation of the Regulations on April 27, 2010 as follows:

“A municipality that owns or operates a landfilling site is exempt from sections 27, 30 and 32 of the Act with respect to increasing the service area of the site if the additional service area from which the site will receive municipal wastes is:

a) *within the boundaries of the local municipality in which the site is located or, if the upper tier municipality in which the local municipality is located is exercising the power to provide land filling sites within the boundaries of that upper tier municipality.*

It was concluded and agreed that under By-law 14-2001, Huron County as the upper tier municipality is exercising the power to provide land filling sites within the County's boundaries and, of importance, the County does not have to own and operate the landfill. With this acceptance by the Ministry, the County's interpretation of the Regulations will permit the approval of the Stage 2 application by South Huron to amend the service area of the Exeter landfill to include Central Huron, Huron East and Goderich. Formal MOE approval of the Stage 2 application is now expected by mid-summer 2010.

This same interpretation was accepted by MOE several years ago when the then Town of Wingham entered into an agreement with the then Town of Exeter for landfilling services. This agreement was never operationalized, but the service area of the Exeter landfill was approved by MOE to include Wingham at that time.

The Inter-municipal Agreement between South Huron, the Mid-Huron 3 (Central Huron, Huron East and Goderich) and Huron County to support an amendment of the service area of the Exeter landfill to handle wastes from the Mid-Huron 3 was signed by all parties on November 23, 2009 after several years of discussion and study. With the completion of the MOE review, the County Waste Management Master Plan can be divided into 3 stages as described on the following Table 2 and illustrated on Figure 1.

Table 2: Huron County Waste Disposal Schedule

STAGE	Time Period	Landfill Utilized	Regulatory Requirement	Disposal Contingency
Short Term	2014 - 2021	Exeter landfill Stage 2 until 65,000 tonne limit is reached	Stage 2 Service Area Expansion to include Mid-Huron 3, approval by MOE ¹	WMC - Twin Creeks Landfill ²
Medium Term	2022 - 2029	Exeter Landfill to completion of Stage 2	Stage 3 of the Exeter landfill approval by MOE (for South Huron's use).	WMC – Twin Creeks Landfill and/or combination of Exeter and Wingham s/t inter-munic. agreements
Long Term	2030 +	Optimization of operating landfill in Huron County	Submission of TofR for EA and approval of the EA for the proposed facility	WMC – Twin Creeks Landfill

¹MOE accepted the County interpretation of O. Reg. 347 and completion of the Ministry review of the Stage 2 Application is now underway;

²Twin Creeks Landfill near the community of Warwick in Lambton County has received approval for a 25 million m³ expansion and certification for a Province-wide service area;

Short Term Stage

The waste tonnage being received at the Mid-Huron landfill, as analyzed in Report 1a, dropped significantly in 2009 to about 8,000 tonnes annually and given the combination of the aggressive marketing of the Twin Creeks landfill by WMC and Mid-Huron policy on the use of clear bags, this situation is expected to continue for at least the next five years. As a consequence, the maximum total waste likely to be taken to the Exeter landfill over the short term period commencing from the planned closure date of Jan. 1, 2014 for the original 5 year term, will be considerably less than 65,000 tonnes – about 40,000 tonnes.

At the low tonnage rate of 8,000 tonnes per year, and assuming Stage 2 approval by the MOE, it will take about 8 years to reach the 65,000 tonne limit set out in Clause 1 of the inter-municipal agreement. The Short Term Stage during which the Mid-Huron 3 could use the Exeter landfill from the Mid-Huron planned closure date of Jan.1, 2014 would extend through to Dec. 31, 2021 with the decision being based on (i) Stage 2 approval by the MOE and (ii) the time required to meet the 65,000 tonne limit specified in the inter-municipal agreement.

Medium Term Stage

The South Huron Stage 2 application to the MOE indicates that as of Jan. 1, 2011 the Stage 2 “Air Space” remaining at the Exeter landfill is estimated to be 383,385 m³. Based on landfill compaction estimated in the 2009 year-end report of 0.64 tonnes/m³, the remaining tonnage capacity as of this date would be approximately 245,366 tonnes.

The remaining capacity estimated as of Dec. 31, 2021 would be 245,366 – 65,000 less the tonnage anticipated to be received from South Huron. In the Stage 2 application this is estimated to be approximately 11,300m³/year and converting this to weight at 0.64tonnes/m³, the South Huron requirement to Dec. 31, 2021 would reduce this figure by a further 58,000 tonnes leaving 122,000 tonnes as the remaining Stage 2 capacity.

Assuming the Stage 3 application is pursued by South Huron and approved by the MOE, the intention of Clause 2 of the Inter-municipal Agreement is to permit the Mid-Huron 3 to continue to utilize South Huron’s landfill until “the close of Stage 2 of the Exeter Landfill (estimated at earliest December 31, 2024)”. Using the revised landfill capacity figure for Stage 2 of 122,000 tonnes and annual landfilled waste tonnage figures of 8,000 tonnes (Mid-Huron 3) + 7,200 tonnes (South Huron), Stage 2 would continue for a further 8 years to about Dec. 31, 2029 before the capacity of Stage 2 is reached. Clause 2 of the Agreement estimated this date to be Dec. 31, 2024; the 5 year difference is the delayed closure of Mid-Huron due to reduced tonnages, and smaller deliveries to the Exeter landfill than estimated originally.

Long Term Stage

This stage would commence on Jan. 1, 2030 and as per Clause 3, wastes from the Mid-Huron 3 would be redirected to another site or disposal solution developed in accordance with the County’s Waste Management Master Plan By-law. By this date, the current waste estimates listed on Table 1 indicate that ACW and Bluewater would also require a replacement for their closed municipal landfills.

5. Mid-Huron Landfill Update

5.1 Tonnages Received

Waste disposal trends identified at Mid-Huron based on 2008 and early 2009 landfill tonnages are continuing in 2010 and are the result of a number of operational factors including the clear bag policy adopted by the Board and private sector redirection of wastes (waste bin services) to a landfill external to the County.

If the Mid-Huron tonnage experience for 2009 is used, the landfill tonnages appear to be dropping to less than one-half the 2007 and 2008 figures to about 8,000 tonnes annually, as noted earlier. Two factors could reduce this figure even further: - the disposal of biosolids from the Goderich STP and the handling of construction and demolition wastes (C&D) both of which are being handled by the Mid-Huron facility.

The continuation of the present practice of using C&D wastes to help in the landfill disposal of biosolids maintains the currently reduced annual tonnage level at the 8,000 tonnes figure. However, if C&D wastes were diverted to Try-Recycling's London facility and processed as compost, as per the 2008 practice, and the Goderich STP biosolids were also diverted from the Mid-Huron landfill, possibly by composting and approved land application, the tonnage requiring actual landfill disposal would drop to about 5,000 tonnes. Such a reduction in landfill tonnages would have an obvious impact on site life and on landfill revenues. The Town of Goderich is reviewing a report from its engineers on alternative methods for the management of biosolids from the Goderich STP.

For the purposes of this report, however, it is assumed that 8,000 tonnes will require landfill disposal and based on this tonnage the closure date for the Mid-Huron landfill for planning purposes will be January 1, 2014.

5.2 Mid-Huron Closure and Possible Conversion to a Transfer Station

As noted above, it is expected that the comparatively low 2009 waste tonnage experience will continue and that for the purpose of projections, no significant changes will occur over the next 5 years. As a consequence of the reduced tonnages being received at the Mid-Huron landfill, a planning date for landfill closure has been set as January 1, 2014. Although there are several waste management options under consideration by the Mid-Huron Board and administration, once the Mid-Huron landfill is closed the site could be converted to a transfer station (TS) for general public use from the participating municipalities. Waste could be loaded into roll-off containers at the TS and taken to the Exeter landfill. An application to close the landfill (details on closure technical steps), the conversion of the landfill entrance area to a transfer station and the establishment of a Household Hazardous Waste Facility has already been approved by the MOE. This application was prepared under the Federal-Provincial-County COMRIF Program. Action on the amended CofA is pending further discussions between the County and the Mid-Huron WM Board.

Clause 9 of the Inter-municipal Agreement requires that: "*The general public from Central Huron, Goderich and Huron East will not be permitted to take wastes directly to the Exeter Landfill. Only municipal vehicles and licensed waste haulers will be permitted to deliver wastes to the Exeter Landfill from Central Huron, Goderich and Huron East.*" In order to satisfy this condition there will have to be some arrangement for the handling of wastes currently being delivered to the Mid-Huron landfill by the general public. This service will be required by the Mid-Huron 3 either with a collection facility located in each municipality or a common transfer facility at the Mid-Huron landfill site.

In the course of preparing Report 1b, discussions have occurred with Waste Management Corporation of Canada (WMC) staff who handles the curbside collection in Goderich under a municipal contract. WMC

has provided an informal cost estimate that wastes collected at curbside in Goderich could be taken directly to the Exeter landfill, bypassing a Mid-Huron TS. An informal quote from WMC to take curbside collected wastes from Goderich to the Exeter landfill would add in 2010 dollar figures, \$175/load or approximately \$22/tonne.

Biosolids from the Goderich STP are currently being handled by the Mid-Huron landfill and Veolia Water has also provided an informal estimate to take these wastes to the Exeter Landfill of \$940/week as an additional cost to the current municipal contract with Goderich. Veolia Water has commented that haulage would be based on 4 operational days rather than the current 2 days a week for deliveries due to longer haulage distance. Based on 30 tonnes/week, this translates to an add-on cost of \$31/tonne for haulage. The cost to haul to the Twin Creeks landfill has not yet been provided, although it is expected to be close to the added costs of delivery to the Exeter landfill. The tipping fee charged at the Twin Creeks landfill would be \$65/tonne for biosolids meeting the Provincial standard for landfill disposal. The tipping fee for municipal solid waste is \$42/tonne at Twin Creeks.

6. Timetable for Public Review of Alternative Waste Disposal Systems

To satisfy the long term waste disposal requirements of the municipalities in Huron, County Council will need to select, in time, the preferred alternative based on this report and public review and input. After Council receipt of this report, three public sessions would be scheduled – Wingham, Holmesville and Exeter – to be held later in 2010 or early 2011.

Report 1a provided a listing of alternatives and these included the following:

- Do Nothing – municipalities and commercial interests would be required to solve their individual waste disposal requirements;
- Export - delivery of wastes to a landfill located outside of the County that is licensed for Province-wide service;
- Thermal - development of a waste destruction facility employing a form of thermal technology (incineration, gasification etc.);
- New Landfill – a new greenfield site licensed to serve all of Huron County;
- Optimization – expansion of an existing landfill within Huron County that would be licensed to handle wastes from all of Huron County.

In meetings with the EA Branch of the MOE it has been recommended that the County undertake an evaluation of the alternatives, select the County's preferred solution and proceed to test this preference in a series of public review sessions. It was stressed by the Ministry that other solutions may be identified in the course of the public review and that these may also warrant evaluation.

7. Evaluation of Alternative Waste Disposal Systems

7.1 Do Nothing

This option is a standard requirement in carrying out Environmental Assessments under the EA Act. Huron County through the adoption of its Waste Management By-law has assumed responsibility for the

provision of long term disposal systems for the entire County. County Council's authority in waste management was established by by-law approximately 20 years ago and this approach has been reviewed and supported by MOE Legal Services (currently County By-law 14-2001 and previous by-laws) and re-confirmed in 2010. Huron County is committed to efficient and effective waste management that provides County residents and businesses with long term waste management programs. While County Council could theoretically repeal By-law 14-2001 and abandon its planning responsibilities for waste management, this action would leave municipalities without a coordinated approach, the great difficulty and expense of attempting to study and site a new landfill within their borders, and susceptible to the unknown future costs associated with export (as described below).

It is recommended that Huron County reject this option on the grounds that it conflicts with the fundamental principle of the County WM By-law No. 14-2001 whereby the County has assumed the responsibility to provide the nine local municipalities within the County with a long term waste disposal solution.

7.2 Export

Two landfills located outside of Huron County have been identified as possible candidates for the receipt of wastes from Huron County:

- Green Lane Landfill in Elgin County - Southwold Township, owned by the City of Toronto; and
- Twin Creeks Landfill in Lambton County – near Warwick, owned by Waste Management Corporation of Canada Inc. (WMC).

Green Lane Landfill in Elgin County

This facility has a Province-wide service area designation and has been purchased by Toronto to provide a long term waste disposal service for municipally-collected wastes. Huron County was advised by Toronto that the possibility could exist whereby Toronto would consider entering into contracts with neighbouring municipalities to handle their municipal solid wastes. This possibility was explored with Toronto's Waste Management Division and it was determined that while Toronto had made this opportunity available it was limited to a narrow time window. Huron County was advised that Toronto's long term waste management plan was to reserve the site for Toronto's use and that this window for non-Toronto users "would close later in 2010". Based on this position, it was concluded that Huron County's need for a long term disposal facility did not mesh with Toronto's timetable and the Green Lane landfill was therefore not available to the County.

Twin Creeks Landfill in Lambton County

Waste Management Corporation of Canada Inc. (WMC) received an Amended Provisional Certificate of Approval for the Twin Creeks Landfill, in Lambton County near Warwick on February 13, 2008 and there were a number of operational requirements that had to be met before wastes could be handled. These requirements have now been satisfied and the facility is fully operational. The main features of the amended CofA are:

- Landfill is licensed to receive wastes from a Province-wide service area;
- Air Space Capacity is 26.5 million m³;
- Maximum tonnage limit per year is 750,000 tonnes and current delivery rate is about 1/3 of this limit;

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- The current tipping fees that would be charged to Huron County and its municipalities at the Twin Creeks site is \$42 per tonne with no stipulation as to the annual tonnage to be guaranteed. Biosolids from the Goderich STP would be accepted by the landfill providing the materials meet Provincial standards for municipal solid wastes. Tipping fee for these wastes would be \$65 per tonne. It should be noted that these estimates are informal and there is no guarantee as to the tipping fee that would be applicable for the time periods indicated on Table 2;

- Hours of operation for waste delivery are 7 am to 7 pm Monday through Saturday;

The Twin Creeks landfill is currently handling significant waste tonnages generated by commercial and residential development in the Mid-Huron landfill service area (and possibly other areas in Huron) that use bin collection facilities supplied by WMC. Wastes collected are taken to an intermediate transfer facility located in Mount Forest, owned by WMC. WMC Administration has indicated that Twin Creeks landfill services are and will continue to be available for use by Huron County residents and businesses. This landfill is listed on Table 1 as a Disposal Contingency for the Short Term and Medium Term periods in the event approval is not granted by the MOE for: (i) South Huron's Stage 2 application to amend the Exeter landfill service area to include the Mid-Huron 3 and to handle biosolids from the Goderich STP (Short Term Stage) and (ii) South Huron's Stage 3 application, if pursued, for operation of the final section of the Exeter landfill site (Medium Term Stage).

In the event that the Stage 3 application is not pursued or approved, then a replacement disposal facility would be required to handle wastes from the Mid-Huron 3 commencing in about 2022. At that time South Huron would be able to continue to utilize the remaining Stage 2 capacity for a further 30+ years before requiring an alternative such as the County's Long Term Solution or the Twin Creeks Landfill.

Export to the Twin Creeks landfill meets four of the criteria listed for evaluation. From the standpoint of costs, the present tipping fee quoted by WMC of \$42/tonne for "municipal solid waste" is below the \$82/tonne currently being assessed at the landfills in Huron County that utilize a weigh-in system - Mid-Huron, Exeter, ACW and Wingham landfills. The costs to operate centralized transfer facilities plus the costs to haul the wastes to the Twin Creeks landfill would appear to be about equal. WMC obviously cannot predict the costs that may be assessed for disposal or haulage that would be incurred in about 12 years at the end of the Short Term Period in 2022. Nor can WMC predict what may occur with the cross border movement of Toronto Area commercial wastes to Michigan landfills and the potential for closure of the Michigan Border to these wastes and their redirection to the Twin Creeks landfill.

The above points are of concern but do not require any action at this time by Huron County. Wastes collected in large bins from commercial and multiple residential developments are currently being taken to the Twin Creeks landfill from Huron County. Approval of the Stage 2 application for the Exeter landfill resolves only the handling of wastes received at the Mid-Huron landfill from Goderich, Huron East and Central Huron for a time period to about 2022. The South Huron decision and MOE response on the Stage 3 application becomes a more critical factor as it could provide an additional 7 years of disposal service to 2029.

In the review of this system alternative it is felt that Huron County should have an alternative waste disposal solution for the County and the nine municipalities to that provided by an external landfill facility licensed for Province-wide service. Having no alternative over the long term other than export leaves the County and municipalities vulnerable to cost increases that are not controlled locally, and with little ability to negotiate price when no alternative exists.

7.3 Thermal Technology

This review focused on Plasco Energy, a company specializing in gasification as a means of reducing waste volumes and producing electricity. Other thermal technologies, such as plasma or incineration, have the same operational characteristics as gasification, including scalability, capital cost, transportation to a central facility, and disposal of residual waste.

Plasco Energy has made numerous presentations at provincial events of its thermal technology based on the firm's pilot project in the Ottawa area. The following Information was obtained from the Plasco Energy Group Inc. and from discussions with Plasco's Ottawa office and with City of Ottawa waste management staff.

i) Waste tonnage and other operational commitments to support development of a facility:

The municipality must guarantee 400 tonnes/day or 150,000 tonnes per year as a minimum. To handle the 150,000 tonnes/year, the Plasco facility would have 4 processing strings of 50,000 tonnes each. At any given time, three would be operating and 1 string would be down for servicing (built-in redundancy).

Wastes would be required to be delivered directly (not via intermediate transfer stations) to the plant and storage would be made available at the site to adjust plant processing to accommodate curbside collection down-times (weekends, holidays etc.) and plant maintenance. The plant would require 3 day waste storage capacity.

The Plasco contract with Ottawa is a pilot project and requires the City to deliver to the plant 75 tonnes of municipal solid waste (MSW) at a tipping fee of \$40/tonne plus 10 tonnes of plastic materials – high BTU residual materials rejected in the bluebox program as not being recyclable. According to Ottawa Engineering staff there is a potentially difficult requirement with respect to the need for the quantities of BTU rich plastic residuals and the wastes to be destroyed that requires close monitoring. Materials must have a high BTU value that is tied to a pre-determined proportion of the base waste tonnage being delivered to the facility. If the BTU value of the MSW stream is highly variable then additional high BTU inputs may have to be added to the stream to safeguard the burning process.

(ii) Financial considerations

The facility depends on a base price of \$0.11 per KWH for power sale to the Ontario grid for a minimum of 20 years. In the Ottawa pilot plant the Federal, Provincial and Municipal governments have all contributed significantly to the project and this has permitted the low \$40/tonne fee charged for wastes delivered to the facility.

Only 2 plant sizes are now being promoted by Plasco – 400 tonnes/day and 200 tonnes/day. These are based on processing “strings” of 100 tonnes/day. For the smaller plant it is recommended that system “redundancy” be covered by adding an extra string. Capital cost of the 400 tonnes/day is \$150,000,000 and for the 200 tonnes/day the figure is \$85,000,000 and with the additional string – the figure is \$100,000,000. Tied to these plant sizes would be the mandatory provision of high BTU value wastes with the percentage set at approximately 10% of the design waste stream.

(iii) Centralized Waste Processing Systems – Conclusions

A major mismatch exists between the waste tonnage required to operate the Plasco system and the waste tonnages available in Huron County and this fact was drawn to the County's attention in the discussion by Plasco representatives. Waste from all sources in Huron County amount to approximately 40,000 tonnes per year, or approx. 100 tonnes per day. This quantity is less than half of the requirement for Plasco's smaller plant. In addition, a far greater quantity of waste would actually be available because many municipalities have remaining landfill space sufficient for many

years, and municipalities can only control the delivery of waste that is contracted by the municipality (i.e., curbside collection). All other waste – from multi-residential buildings, commercial, industrial, institutional, and private sector curbside collection – may go to a landfill with service area approval of the contractor's choosing.

Over the short to medium term in the Mid-Huron 3, wastes under municipal control that could be directed to a thermal facility located in Huron County are approximately 2,500 tonnes per year and this could be increased to about 5,000 tonnes, but only if Central Huron and Huron East introduced municipal-wide curbside waste collection and specifically directed the wastes to the Plasco facility. Even with these additional wastes, the quantities available represent less than 10% of the tonnage necessary to support this type of waste processing system.

To increase the tonnage of wastes available for processing to satisfy the design loading would require the wastes from a very large area likely encompassing about 4 Counties, according to Plasco. The Plasco representative was reluctant to offer any estimates of the possible tipping fee associated with the optimum plant size models but did observe that the combination of the costs associated with haulage, capital debt retirement costs and operational costs would place the tipping fee well above \$100/tonne. Given this cost potential, added to the cost of curbside collection and haulage to the facility, a centralized Plasco system would not be sufficiently attractive to other Southwestern Ontario Counties to support any expansion of the plant's service area to generate sufficient waste tonnages

The existing landfill capacity, low waste volume and high capital cost make thermal technologies a non-viable option for Huron County.

Centralized large scale incineration facilities have been proposed and some are in operation in Europe and the US. All of these facilities require comparatively larger waste tonnages than can be made available by Huron County and face high capital costs. Wastes must be stored to offset collection down times due to waste collection "holidays" and all appear to require intermediate transfer station collection to minimize vehicle deliveries to the disposal facility. Finally, the process, site location and collection system would all require Ministry of the Environment approval under the Environmental Assessment Act. Ministry staff has added that proof of the system's operational performance with respect to air emissions and residual waste disposal would also be required.

A centralized waste processing system such as the Plasco Group's system that requires from 200 to 400 tonnes per day for operations cannot be considered by Huron County as a long term solution for the disposal of municipal solid wastes.

7.4 New Landfill

In 1988, the County initiated the preparation of a Waste Management Master Plan (WMMP) and the strategy at that time was to develop a long-term plan for reducing, reusing, recycling and disposing of "municipal solid waste" being generated within Huron County over a forty year period. Municipal solid waste (MSW) was defined as residential wastes from single-family and multiple-family dwellings, as well as solid non-hazardous wastes from commercial, industrial and institutional (IC&I) establishments.

A Waste Management Master Plan (WMMP) was initiated that proceeded through a series of stages in accordance with WMMP Guidelines published at that time by the MOE. In May 1989, a **Stage 1 Report** was released that outlined the nature and distribution of waste generation in the County and identified the local landfills then handling these wastes. At that time, and based on preliminary field studies of the existing landfills by consultants for the local municipalities, the County-wide life expectancy of landfills was estimated to be 6 years, a figure well below the County's objective of 40 years. Based on this forecast, the County initiated studies to find a long term landfill.

The Stage 1 Report was followed by **Stage 2A and Stage 2B Reports** which set out a number of alternative 3R proposals, or Waste Management Systems; identified potential areas for locating a landfill and the criteria for selecting a site. The **Stage 2C Report** identified some 11 “short-listed” or potential landfill sites. The next document, the **Stage 2D Report**, completed this phase of the WMMP and selected the preferred landfill location – Site A-3 in the former Ashfield Township, now part of the Municipality of Ashfield-Colborne-Wawanosh.

Following a change in waste management policies in Ontario, and in response to public concerns, Huron County decided that a review should be undertaken of available waste management alternatives prior to a final decision being reached in respect to a new County landfill site and the “preferred landfill solution”. This review dealt with the “alternatives to” requirements of s. 6.2 of the EA Act.

In September 1996, a **Strategy Report** was released in which the recommendation was made that export to Southwestern Ontario landfills or to Michigan landfills could readily handle the County’s wastes for a period of 25 years, that the basis for optimization of existing landfills within the County appeared promising, and that further reduction to waste quantities could be achieved by greater participation in 3R programs. The **Strategy Report** also recommended that Site A-3 no longer be carried as a solution. County Council adopted this recommendation and Site A-3 was removed from further consideration. Further consideration by Huron County of a “Greenfield Landfill Site” was abandoned and all further County studies have maintained this position and have focused on optimizing existing landfills.

Revised engineering estimates of site life in the annual reports of local landfills and better management over the years have resulted in considerably longer site life estimates for many municipal landfills. This capacity, together with the costly experience of a site search in the 1980-90s and the high cost to develop a greenfield site, make this option not feasible or acceptable.

7.5 Optimization

As illustrated on Figure 1 and Table 1 there are three operating landfills in Huron County that have significant long term capacity – Wingham landfill in North Huron, Exeter landfill in South Huron and the Morris landfill in Morris-Turnberry. The Landfill capacity estimates listed on Table 1 have been prepared for the year-end landfill reports by Consulting Engineers for each municipality. The following review of these landfills draws on the materials in these reports and concludes with a recommendation on the preferred solution for further consideration by County Council.

Exeter Landfill – South Huron has undertaken to assist certain municipalities in solving the immediate problems associated with closure of the Mid-Huron landfill by agreeing to amend the service area for the Exeter landfill to accommodate wastes from three municipalities - Central Huron, Goderich and Huron East - who have indicated a need for this service once the Mid-Huron landfill is closed. This step has required an amendment to the Exeter landfill Certificate of Approval for Stage 2 of the landfill and South Huron has proceeded to submit the necessary application to the MOE.

An agreement was ratified in 2009 by South Huron, Huron County and the Mid-Huron 3 whereby 65,000 tonnes of disposal capacity would be made available to satisfy the Short Term disposal requirements. MOE approval of the Stage 2 application is expected by mid-2010 and this is expected to provide a waste disposal solution for the Mid-Huron 3 to 2022. Subject to South Huron making application and MOE approval of the Stage 3 application, the Mid-Huron 3 could continue to be permitted to use the Exeter landfill until approx. 2029 when Stage 2 capacity will have been depleted. Stage 3 would be reserved for only South Huron use and would provide capacity for approximately 65 years, subject to MOE approval of the Stage 3 application.

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By entering into the agreement, South Huron has demonstrated considerable good will on the understanding that Stage 3 would be preserved for South Huron's use only. A further request from the County to South Huron on the Long Term use of the Exeter landfill is considered inappropriate and to not be consistent with the Inter-municipal Agreement that both the County and South Huron have signed.

Morris Landfill –

Although this landfill has significant approved capacity and appears to have the potential for an expansion that could add close to 1,183,738 m³ capacity, problems were encountered with adjacent land owners in 2002 and 2003 that resulted in the Municipality purchasing the north half of Lot 15 to provide an additional buffer for the landfill area and to prevent potential development that could impact of the local groundwater flow patterns. On Jan. 2, 2003 the Municipality registered a Certificate of Prohibition that included both the landfill property and the municipally owned property to the south. These adjacent land use issues caused the County to remove the Morris landfill from further consideration as a Long Term waste disposal facility.

Wingham Landfill-

Several years ago, Huron County identified the Wingham Landfill as an existing landfill with future expansion potential to handle wastes from other municipalities.

The Wingham landfill is located on Part of Lot 39, Concession 12, in the Township of North Huron and the site includes a 6.1 hectare (15.1 acre) operating landfill within a total site area of 40.5 hectares (100.1 acres). The site operates under Certificate of Approval No. A160502 issued December 24, 2002 and authorizes a total waste, daily, interim and final cover volume of 645,000 m³. If the landfill were expanded to the south on the existing property owned by the Municipality the total site capacity would be increased to approximately 1,720,000 m³

Following a presentation by the County of Huron representatives at a Township Council meeting held on April 29, 2003, North Huron Council passed Motion M280/03 as follows:

“That Council hereby authorizes the County of Huron to undertake geotechnical investigations to confirm the technical acceptability of the Wingham Landfill for possible use by selected Huron County Municipalities on condition that Huron County assume full financial responsibility for said technical investigations including operational costs required as a result of said technical investigations”.

Commencing in July 2003 additional monitoring wells were installed as part of the County's monitoring program to support a future hydrogeological assessment of the Wingham landfill. Based on current conceptual designs, the estimated volume of the entire landfill site area was confirmed at 1,720,000 m³. This estimate is based on a conceptual design and has no MOE formal approval status at this time.

A full examination of the Wingham landfill site proposal will be required and this will include:

- (i) Hydrogeological assessment based on the 6 years of County/North Huron site monitoring will be undertaken to determine if the landfill should be developed as a fully engineered site with leachate collection and treatment versus- continuation as a natural attenuation site. It is noted that the review undertaken by the County on the disposal of septic tank wastes concluded that the Wingham STP had an uncommitted hydraulic reserve of 701.8m³/day and an uncommitted organic reserve of 127.11kg BOD₅/day. These estimates were produced in Aug. 29, 2002 and should be brought up to date. Should these reserves still be available they could be used to handle leachate from an engineered site if the engineering review determined that this was required. The Wingham STP is considered to be easily accessed from the Wingham landfill should this be required.
- (ii) Address the closed Imperial Oil Exploratory Gas Well by locating the well and re-closing it using 2010 technology or by placing a 1m thick clay liner over the underlying till for the entire area believed to

contain the closed gas well. It is noted that MNR records indicate that the well closure was undertaken in accordance with closure procedures in effect at the time of closure and that there is no suggestion at this time of a problem with the adequacy of the closure. Alternatively, consider a possible reduction to the landfill site with an area encompassing the Imperial Oil Well removed from the landfill and a modified engineered site developed around the well area to protect this area

- (iii) Delay in the need for a Long Term disposal system– a major factor to consider is the timing for landfill demand and the extent to which the disposal requirements of the Mid-Huron 3 can be satisfied by implementing the Short Term Stage and the Medium Term Stage listed on Table 1. Based on the reduced tonnage of wastes requiring landfill the Exeter Landfill appears able to accommodate wastes from the Mid-Huron 3 for close to 20 years – to 2029 at which time a Long Term solution will be required. Enhanced landfill compaction levels or an export contract with Twin Creeks could potentially extend this date;
- (iv) The life expectancy of the current Wingham landfill, for North Huron needs, approaches 100 years and the possibility exists that the Wingham landfill could be utilized to extend the time period expected for the Medium Stage of 2029 by providing additional waste disposal capacity subject to the implementation of the County WM By-Law and inter-municipal agreement on service area amendments (i.e., diverting some waste to the existing Wingham landfill, subject to inter-municipal agreements in the future)..

8. Selection of the Preferred System

8.1 Background

Huron County has undertaken to carry out an evaluation of the alternative disposal systems, with public input on the evaluation of the system alternatives and following this process, the County should identify the timeframe and process for selecting a preferred solution. MOE approval will then be sought as necessary to implement the preferred solution.

Of the alternative disposal systems identified to date it is felt that optimizing an existing landfill is the frontrunner for provision of a long term waste disposal solution and should be considered as the recommended disposal solution for public review. It is understood that other solutions may be identified in the course of the public review and that these may also be evaluated.

In reaching this recommendation it is recognized that the Twin Creeks Landfill, owned and operated by WMC in Lambton County, will continue to provide a contingency disposal solution for all of Huron County's municipalities. Twin Creeks as a contingency is available during any of the time frames (short, medium and long term) shown in Table 2. In addition to Twin Creeks as an option the County could implement limited term service area amendments for other operating landfills by inter-municipal agreements to gain the necessary time to carry out the required EA studies.

8.2 Preliminary Evaluation

Seven criteria have been identified to evaluate the system options and applying these to the possible future consideration of the Wingham landfill. As described in the Work Plan in section 9, no decision is necessary on the preferred solution (Wingham expansion or other options) until at least 2016.

- Proven technology, - Wingham landfill has been subjected to an expanded and comprehensive monitoring program and based on Burnside Reporting the site is continuing to perform well within the

MOE operational requirements. Additional buffering has been implemented by North Huron along adjacent roadways and is being extended to the entrance and operating area. North Huron has also initiated a review of the operating site and a revised access route, public transfer facility and a possible household hazardous waste depot;

- Sound from an environmental and land use standpoint, - the land utilized in the expansion to the south being potentially considered is an abandoned mined-out gravel pit. There is no current active use of this land – for crop growth or grazing. Extensive tree cover exists to the west and southwest of the site; additional buffers would be required along the east and south boundaries of the site;
- Technical site factors - an impermeable till layer lies beneath the mined-out gravel deposit and provides effective protection to the underlying bedrock;
- Effective in handling residual wastes (remaining after recycling). Site operations are reported in the year-end reports to be meeting the MOE requirements for cover and wind-blow management,
- Operations - Landfill has been equipped with weigh scale, entry kiosk and recording system and can handle registration of wastes from other municipalities;
- Cost effective landfill - operational costs would include enhanced compaction,
- Potential for implementation by the County, the principles for an Inter-municipal agreement have been formulated for the Exeter–Mid-Huron 3 Agreement and this provides guidance for the North Huron reviews;

Should the MOE require the identification of a contingency system for the management of leachate generated by the landfill and the design of the site as an engineered facility, as was required in the Ministry's review of the Exeter Stage 2 application, the Wingham STP could be accessed from the north end of site. While this requirement is not anticipated as the Burnside Reports on the operation of the facility as a natural attenuation site have satisfied the Ministry, it does provide an additional reason for the future consideration of the Wingham site.

9. Next Steps

Several matters must be considered before County Council makes a decision on the preferred solution identified by this report.

9.1 Waste Management in Huron County

This Report and the earlier 1(a) Report have both highlighted the fact that waste management in Huron County is operated by the municipalities and a number of municipalities are in the process of re-examining their collection and disposal services. Any longer term Waste Management Plan developed by the County must be carefully tuned to reflect the service directions being developed by the municipalities if it is to be successful.

With the closure of smaller landfills, municipalities will have to reconsider the provision of disposal services to satisfy the needs of the general public – both urban and rural. In other areas, like the Waterloo Region, conversion of small scale landfills to “rural transfer stations” became a necessity to resolve the needs of an agricultural/rural community. Urban areas can often accommodate the need for convenient facilities through the provision of special collection days as an add-on to a curbside collection

service. In urban areas, creating a transfer station as a “stand-alone” new facility often invites adverse public reaction and can lead to a costly approval process by the MOE.

9.2 Consultation with Municipalities and the Public

The first step in gathering reactions to this report will be to convene workshops with municipalities (with political representatives and relevant staff). These meetings will be convened on an area basis as many municipalities share common disposal operational problems with neighbouring municipalities and may even share “customers.” Three sessions are proposed: one with the Mid-Huron Landfill Board and relevant staff from the participating municipalities; and two area workshops – in Wingham for the north part of the County and in Exeter for the south.

The second step will be to convene public meetings in Wingham, Exeter and Holmesville. At these meetings the general findings of Reports 1a and 1b will be presented. It is felt that the public will find understanding Report 1(b) on disposal options much easier if participants have an understanding of the circumstances facing the County and its municipalities in the provision of waste disposal services.

The results of these municipal and public sessions will be summarized in a Consultation Report, including records of attendance, comments, suggestions and questions raised, and summary directions.

9.3 Property Value Protection Policies

The selection of a preferred solution may have implications for property values in the vicinity of the subject site (unless export is chosen). Landowners in proximity to the site of the preferred solution may feel that the possibility of a future enlarged landfill for waste from other municipalities may have a detrimental effect on the resale value of their real estate. In effect, the possibility of a future landfill expansion, even if not proceeding for certain (due to the myriad of studies that must be completed), places a “cloud” of uncertainty on the area which may affect property values. This is a legitimate concern.

The County, on behalf of municipalities requiring future landfill capacity, can implement a Property Value Protection Policy, whereby compensation is provided to owners on the sale of their property for the difference in value, if any, caused by the County’s selection of the preferred solution (the “cloud”). Given that the preferred solution would involve an existing landfill, the amount of additional loss in property value by the County’s decision is expected to be minimal (i.e., no compensation will be given resulting from the existing landfill). A policy providing compensation usually provides for the compensator (County) to have first right of refusal to purchase the property.

The implementation of inter-municipal agreements for the use of existing landfills would not invoke property value protection. Those agreements utilize existing approved landfill capacity within the purview of local municipalities, and often result in beneficial operating processes and perpetual care funds for the receiving municipality.

This approach was discussed but not implemented in the vicinity of the Wingham Landfill in 2007-8 when discussions were underway for the possible future expansion of the Wingham Landfill. The policy was not implemented at that time because area residents asked the County to conduct a review of alternatives. County Council agreed to undertake the review, and MOE supported the approach of identifying a preferred solution in advance of commencing an environmental assessment. Those decisions led to the research and preparation of Reports 1a and 1b. If the recommendations of this report are followed, a decision on the preferred alternative will not occur until at least 2016 after further evaluation studies of the options are completed. Until a decision is made on the preferred alternative, no property value protection policy will be implemented.

Property value protection policies would not be implemented until a preferred solution is identified by County Council. This report identifies a time frame for the process to unfold.

9.4 MOE Approval of the Environmental Assessment (EA) Terms of Reference

The chosen disposal system will require EA Act approval (landfill or incineration facility), unless export is chosen as the preferred solution. Terms of Reference (ToR) for the EA must be submitted to the Minister of the Environment for approval. The Ministry has a prescribed process to be followed for such projects and it is anticipated that the ToR process would take about six months to be completed. The following outline summarizes the ToR process required by the MOE.

- Arrange meeting with the Director of the EA Branch to confirm the name of the Project Officer;
- Obtain a copy of the Master Government Review Team List to determine those agencies with an interest in the proposal (copy has already been received – but a new request will be necessary);
- Prepare a public consultation program and obtain Ministry (EA Branch) approval of this program. Program would guide the consultation activities during the development of the ToR;
- Prepare and release a Notice of Commencement of the preparation of the ToR. A form is attached to the MOE ToR requirements;
- Prepare a detailed work plan and study schedule and release this to the public for comment and for monitoring. This would outline the main elements of the ToR program and would provide directions on how to contact the County – who, where and how;
- Draft Terms of Reference document with some sections left incomplete pending public input released for discussion with interest groups;
- Conduct public input sessions and compile consultation report.
- Submit ToR to MOE for approval.

9.5 Work Plan to Complete the Waste Management Master Plan

For waste management planning, the important issue facing the County is the development of an alternative to export (to Twin Creeks Landfill) by **2022** when the current agreement between South Huron and the Mid-Huron 3 is expected to expire. During the 2020s, other municipalities are expected to require alternatives to their nearing-capacity existing landfills.

If Stage 3 of the Exeter Landfill is pursued by South Huron and approved, and if inter-municipal agreements are used to accommodate other municipalities' needs during the 2020s, then a long term solution is not required until **2030**.

Despite these long time periods, waste management planning and engineering require long lead times.

Not included in the above is the factor that enhanced compaction could extend the Exeter landfill life and the life of other municipal landfills in the County. This County WM Plan also stresses the following activities to extend landfill life: enhanced bluebox services, recycling of construction and demolition (C&D) waste, solving the disposal requirements for STP biosolids; promoting the use of backyard composters; expansion of the County's Household Hazardous Waste program with Stewardship Ontario, and expansion of municipal programs for E-waste, tires, etc.

With MOE approval of the Stage 2 application, there is enough time (8 years) to fully assess the EA regulatory process (ToR process), the issue of the long term landfill operational/ownership and the associated financial question of developing an internal Huron County solution. While all this is happening the Twin Creeks landfill will continue to be available to Huron County and it may be appropriate to initiate

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formal discussions on securing an Intermediate Term contractual arrangement with WMS for all “wastes attributed to Huron County residents and businesses”. With this last point will evolve the need for a County-wide system of transfer facilities to minimize haulage costs and to efficiently handle the general public requirements.

The following timetable suggests that a decision on a long term solution by County Council should not be made until **2016**, based on updated information at that time (path A). If the site life of the Exeter Landfill is extended and the inter-municipal agreement continues between South Huron and the Mid-Huron 3 (path B), then a decision by County Council on a long term solution is not required until **2023**. This decision timetable provides ample opportunity to re-assess the waste management options as inter-municipal agreements are operationalized and as technologies evolve over the coming years.

**Table 3:
Timetable for a Long Term Solution**

Year	Action	
2010 - 2011	<ul style="list-style-type: none"> - Conduct municipal and public consultation on this report - Compile consultation report - County Council approval of Report 1b, including timetable for key decisions - Obtain Stage 2 approval from MOE for Exeter Landfill (underway) 	
2012 - 2015	<ul style="list-style-type: none"> - Confirm Mid-Huron closure date - Confirm Mid-Huron Transfer Station or alternative arrangements (by end of 2012) - Facilitate inter-municipal agreement (South Huron – Mid-Huron 3) - South Huron evaluation of regulations and issues with pursuing Stage 3 - Facilitate South Huron’s submission of Stage 3 application, if pursued 	
2016	<p style="text-align: center;">Path A</p> <p>If South Huron Stage 3 is <u>not</u> pursued or approved:</p> <ul style="list-style-type: none"> - County Council initiates a review of alternatives <u>Update</u> to determine if the options or conditions identified in Report 1b have changed; County Council identifies the preferred solution; implement property value protection policy if applicable (one option could be a combination of inter-municipal agreements and export to Twin Creeks) 	<p style="text-align: center;">Path B</p> <p>If South Huron Stage 3 is <u>is</u> approved (resolving Mid-Huron 3 to 2030:</p> <ul style="list-style-type: none"> - Facilitate inter-municipal agreements for other municipalities as necessary through to 2023
2017	<ul style="list-style-type: none"> - Prepare Terms of Reference (ToR) for preferred solution - Obtain MOE approval of ToR 	
2018 - 2020	<ul style="list-style-type: none"> - Complete Environmental Assessment (EA) for preferred solution 	
2021 - 2022	<ul style="list-style-type: none"> - Construction and implementation of preferred solution 	
2023 - 2030	<ul style="list-style-type: none"> - County Council initiates a review of alternatives <u>Update</u>; County Council identifies the preferred solution; implement property value protection policy if applicable; proceed with ToR and EA; construction and implementation 	

10. Conclusion

Huron County's long-standing waste management plan continues to be sound, as the needs of local municipalities can be accommodated under County By-law 14-2001 through the use of inter-municipal agreements. This approach allows for the movement of waste from municipalities with disposal deficiencies to municipalities with suitable capacity with only the approval of an amended Certificate of Approval for the service area of the receiving landfill (and revised operating plan if necessary).

The decisions needed in the near future include obtaining MOE approval for Stage 2 of the Exeter Landfill, confirming the closure date for the Mid-Huron Landfill, confirming whether the Mid-Huron Landfill will be converted to a transfer station (MOE approval already received) or other arrangements, and obtaining a tipping fee quote from CWS for the Twin Creeks Landfill as a contingency plan.

The County's By-law 14-2001 and the use of inter-municipal agreements for landfill optimization, as recently endorsed by the MOE, means there is no waste management crisis in Huron County that requires a decision today on a long term solution. This approach offers significant protection to local municipalities that can be implemented relatively quickly should problems arise with current waste disposal arrangements.

A decision on the preferred long term solution should not be made for approximately 5 years (2016), following a review of available options at that time. This time frame provides an opportunity for the implementation and evaluation of inter-municipal agreements and leaves open the possibility that a solution preferable to landfilling may arise.