CITY OF TEMISKAMING SHORES
NEW WASTE MANAGEMENT CAPACITY
ENVIRONMENTAL ASSESSMENT

IDENTIFICATION AND EVALUATION OF "ALTERNATIVES TO"

Submitted to:

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AMEC	AMEC Environment & Infrastructure
City	City of Temiskaming Shores
CTWMB	Cochrane Temiskaming Waste Management Board
EA	Environmental Assessment
°F	degrees Fahrenheit
IC&I	institutional, commercial and industrial
kg/m^3	kilograms per cubic metre
km	kilometres
m^3	cubic metre
m^3/year	cubic metre per year
MOE	Ministry of the Environment
MRF	Materials Recovery Facility
PET	polyethylene terephthalate
TCLP	toxic chemical leaching potential
ToR	Terms of Reference
WMMP	Waste Management Master Plan

1.0 INTRODUCTION

AMEC Environment & Infrastructure, a Division of AMEC Americas Ltd. (AMEC), was retained by the City of Temiskaming Shores (the City) to conduct an environmental assessment (EA) for new waste management capacity. As part of the EA process, the City developed a Terms of Reference (ToR), which was approved by the Ministry of the Environment (MOE) on the 28 November 2012. The ToR represents a guidance document for the preparation of the EA. As such the document requires as one of the first steps in the EA process, the identification and evaluation of "Alternatives To". Alternatives To are defined as functionally different ways of addressing the identified need or problems and opportunities.

The City's only existing and operating landfill site, the Haileybury Landfill is anticipated to reach capacity between 2016 and 2018. The resulting need for new landfill capacity has been identified some time ago and is reflected in the City's draft Solid Waste Management Master Plan (WMMP) (Earth Tech, 2008). The "Alternatives to" that could address this need entail such approaches as waste incineration, landfilling or waste export.

This text has been developed in support of the EA process and in accordance with the ToR to document the planning efforts related to the identification and evaluation of "Alternatives To" and the determination of the preferred Alternative To. The results of this planning exercise will lead to the next step in the process, the evaluation and selection of alternative methods which could include alternative sites, facility designs and operational schemes.

1.1 BACKGROUND

The City is located in north-eastern Ontario, near the Quebec border, at the head of Lake Temiskaming and has a current population of approximately 10,600 residents. The City was formed in January 2004 through the amalgamation of the former Town of Haileybury, former Town of New Liskeard and the former Township of Dymond into a single tier municipality (Earth Tech, 2008).

The City has two existing landfill sites: the New Liskeard Landfill (formally the Town of New Liskeard Landfill) and the Haileybury Landfill (formally the Town of Haileybury Landfill). The New Liskeard Landfill, located approximately 3 kilometres (km) west of the former Town of New Liskeard off of Rockley Road, has been used for landfilling since 1916 (Earth Tech, 2008). The Haileybury Landfill, located approximately 9 km southwest of the former Town of Haileybury off of Highway 11 along Dump Road, has been in operation since 1975 (Earth Tech, 2008).

Prior to amalgamation, the New Liskeard Landfill received waste only from the former Town of New Liskeard, while the Haileybury Landfill received waste from the former Town of Haileybury, the former Town of Dymond, the Town of Cobalt, and from residents of Firstbrooke and Lorrain Townships (Earth Tech, 2008). The New Liskeard Landfill reached its approved landfill capacity in June 2009, and is currently no longer accepting waste. Today, the Haileybury Landfill accepts landfill waste from the City of Temiskaming Shores and the Town of Cobalt.

Based on waste generation projections, the Haileybury Landfill is expected to reach its approved landfill capacity by mid-2016 to 2018. As such, the City's draft WMMP identified the provision of additional landfill capacity to facilitate long-term waste disposal as the second key objective in establishing a sustainable solid waste management program for the City of Temiskaming Shores (Earth Tech, 2008).

The City also administers a recycling program through the operation of a Materials Recovery Facility (MRF) through the Cochrane Temiskaming Waste Management Board (CTWMB) (Earth Tech, 2008). The recycling program includes the collection of paper fibres, aluminium and steel cans, container glass, and No. 1 polyethylene terephthalate (PET) plastic which are deposited at drop-off depots located throughout the City (Earth Tech, 2008).

2.0 APPROACH

At the on-set of the EA process, the City's current and projected waste generation rates and associated waste diversion were examined in order to update the quantitative future waste management requirements. The review and updated calculations identified:

- Current waste generation rates (2012): 13,630 cubic metres per year (m^3/year);
- Future waste generation rates (average over 30 years): 15,760 m^3/yr; and
- Required waste management capacity over 30 years: 424,500 cubic metres (m^3) (minus the 120,000 m^3 of space currently remaining in the Haileybury Landfill Site).

It is of note that the waste projection estimate assumes that the City continues and improves on its recycling efforts and achieves on average a 60% diversion rate for the 30-year planning time frame.

The determination of the preferred Alternative To involved the following steps:

- Identification of Alternatives To;
- Identification of Criteria;
- Evaluation of Alternatives To; and
- Detarmination of the Preferred Alternative.

An initial reasonable range of Alternatives To (i.e., potentially suitable approaches to the identified need) was established based on the study team's review of existing practices and experience with waste management and input obtained from the City.

Public and stakeholder consultation during the establishment of the ToR, as well as an Open House event (February 2013) held after formal commencement of the EA and dedicated to the Alternative To confirmed the initial list (AMEC, 2013).

Similarly, an initial list of criteria for the evaluation of the Alternatives To was established in the ToR. These criteria were also subject of review and discussion during the February 2013 Open House on the Alternatives To and addressed considerations related to the:

- Environment;
- Socio/cultural conditions;
- Economic issues;
- Technical aspects; and
- Municipal policies.

Each of the Alternatives To was examined with respect to each of the identified criteria. The subsequent assessment was based on a qualitative evaluation taking into account potential for impact management measures (mitigation), net environmental effects, and overall advantages and disadvantages.

3.0 IDENTIFICATION AND RATIONALE FOR ALTERNATIVES TO

Functionally different ways of addressing the City's identified waste management needs have been reviewed. Together with input obtained from the City, government agencies, stakeholders and the public at large, the following list of alternative technologies for waste treatment, as well as more traditional disposal alternatives, was established:

- "Do nothing";
- Thermal technology (waste incineration);
- Energy from waste approach;
- Waste export;
- Waste import; and
- Landfilling.

The general characteristics of the preliminary Alternatives To and the rationale for their selection are presented in the following subsections.

3.1 Do Nothing

The "Do Nothing" approach entails the continuation of landfill operations as currently practiced, without making any changes. The waste from the City, as well as the neighbouring community of Cobalt would continue to dispose of their waste at the Haileybury Landfill Site. Since the landfill is estimated to reach capacity within the next three to five years, the "do nothing" alternative would mean that the City would not provide the additional waste disposal capacity needed, a mandate that they currently have.

3.2 Thermal technology (waste incineration)

Thermal technology, more commonly known as incineration, incinerates waste at high temperatures, which converts the waste into ash, flue gas and heat. The process of incineration occurs in an environment with excess air and requires little to no additional fuel source (i.e., natural gas) once combustion has commenced. As waste incineration involves the burning of raw waste materials, some handling is required for pre-processing, to remove recyclables from the waste stream, as well as the removal of recyclable metals from the process ash. This requires a storage/sorting/pre-processing yard in association with the actual incinerator site.

As for the process ash, it is mostly composed of inorganic materials and usually deposited as lumps at the base of the system or as particulates within the gases. As a result, the exhaust gases typically pass through a monitored air filtering system. Under normal operating conditions, they are discharged to the environment in accordance with specific guidelines (the air emissions from these plants meet the requirements of MOE Guideline A-7).

As for the sizing of the incinerator, a great amount of detailed information including data on the waste composition and characteristics is required to engineer the facility properly. Poor design can cause unstable combustion conditions and potentially (temporarily) increased air emissions.

The sizing of a furnace to match the quantity and characteristics of waste fed to the incinerator is of utmost importance. It determines if the temperatures required for a complete and clean combustion are achieved and maintained. This emphasizes the importance of the waste pre-processing mentioned above to ensure a reasonable steady waste stream with the required minimum characteristics and combustible components.

Typically this alternative involves a small landfilling component as residues from the incineration process are mostly disposed of at a landfill. The thermal incineration of the waste has the potential to divert approximately 70% to 75% of the materials that would otherwise be landfilled, if the metals are recovered from ash. Furthermore, if the ash has desirable toxic chemical leaching potential (TCLP) results, it can be marketed as a recycled granular construction aggregate, which further reduces the amount of materials going to the landfill. Due to the encapsulation of the waste materials (i.e., within a controlled environment) incineration can be located within population centers and built up areas, thus reducing waste transportation and associated costs. The high temperatures of the incineration have the potential to destroy clinical and hazardous wastes, as well as eliminating methane gas emissions from the waste management process.

As stated above, incineration reduces the amount of waste significantly, yet a landfill is still required for disposal of the by-products, if a suitable market is not found. In Ontario, there is currently one operating incinerator facility, in the Region of Peel, which has been in operation since 1992 and operates at approximately 130,000 tonnes per year.

Currently, waste generation volumes for the City are in the range of 13,000 to 18,000 m^3/year. Assuming an average waste density of 690 kilograms per cubic metre (kg/m^3), this equates to approximately 9,000 to 12,900 tonnes of waste per year, including institutional, commercial and industrial (IC&I) wastes. It is anticipated that as waste diversion numbers increase the waste generation rate will stabilize to offset the expected population growth. As discussed above, a constant waste stream is required to make this alternative feasible. A minimum of 100 tonnes per day is required for a two stage incineration. With the above yearly waste generation rate estimates, the City generates only between 25 and 35 tonnes per day. Incineration therefore works well if large amounts of waste are to be processed, particularly since there is an inverse relationship between volume and the operational costs of these facilities (i.e., cost/ton is higher for smaller facilities). Based on the current waste generation volumes for the City, additional waste would need to be imported to make this alternative feasible (i.e., three to four times the current waste generation rates).

As large-scale operations generally have several incinerators to supply the demand for the large volumes of waste, the low waste generation rates for the City are generally too low to support multiple incinerators. As a result, consideration would have to be taken into account for the storage of waste materials during maintenance periods of the equipment.

3.3 Waste to Energy

There are numerous approaches to dispose of waste and, at the same time, obtain energy from the waste management process. This is typically associated with waste streams high in organic content. It is included as an Alternative To as it potentially offers an economically attractive approach for managing the waste in combination with the utilization of its value as an energy source.

The waste-to-energy process is similar to the waste incineration process. The process begins with the delivery of waste within an enclosed reception area. The waste is placed within storage pits, where it is fed into large hoppers that feed the boilers. Within the boiler structures, an inclined, reciprocating, metal grate slowly disperses the waste through a combustion (thermal) process, with temperatures typically exceeding 2000 degrees Fahrenheit (°F), resulting in complete combustion. The high pressure steam created from the combustion is collected within the boiler, which is then transferred to a turbine generator, thus creating electricity. Like the incinerator process, the subsequent gases are passed through multiple filtration systems and the air released is cleaned to meet regulatory guidelines. In order to achieve the proper combustion of the materials, air is drawn in from the receiving area, which causes negative pressures, significantly reducing the escape of odours and dust to the natural environment.

Upon completion of the process, recyclable materials such as scrap metals, are removed from the ash residue and recycled, reducing the overall waste by approximately 90%. The by-product of the incineration of the waste, being energy, can be a viable source of revenue for the plant, as the power can potentially be sold back to the grid and use to provide power to numerous homes. As there is an increasing need for alternatives to landfilling, waste to energy has been considered a renewable resource because there will always be fuel available to run the plant. In some cases, it has been proposed that materials that have previously been landfill be mined out and used within the plants.

As with the previously discussed incinerators, capital and operating costs for these types of facilities are extremely high, even after considering potential revenues from energy. Furthermore, with increased diversion at the source of the waste (i.e., 3 R's – reduce, reuse, recycle), the quality and quantity of the feed is reduced, which could potentially decrease the heating value within the boilers, which pose challenges in the proper operation of the system.

As per the discussion pertaining to the incinerators, a constant waste stream of significant size is required to support the waste to energy alternative. The high capital and operation costs of both the incinerator and the energy generation system would not be offset with the minimal amount of materials that would be processed through the facility. In order to feasibly operate a process of this nature, the City would have to act as a hub for northern Ontario, accepting waste from multiple municipalities or consider the mining of waste from existing landfills, to support a sufficient waste feed for the plant.

3.4 Waste Import

Waste import involves the transportation of waste from a neighbouring municipality to the City where it would be managed together with the City's own waste. For a small community, such as the City of Temiskaming Shores, to develop and operate certain waste management facilities (e.g., a waste incinerator) is often economically not feasible. This is typically due to low waste generation rates and rather small overall waste volumes. It is therefore considered reasonable that, when evaluating alternatives to managing its own waste, the City examines waste imports in order to take advantage of additional revenue streams from processing fees (e.g., tipping fees) and economy of scale considerations. The additional funds that such a program could provide would contribute to covering the cost for the development and operation of a new management facility. In an ideal situation, the revenues from the waste import would not only make the waste management infrastructure economically viable but also provide the City with a net income.

3.5 Waste Export

This involves the export of waste into another jurisdiction outside of the City. In this scenario, the waste would be disposed of or otherwise processed in a facility, located outside of the City but licensed to receive and manage the various types of waste generated by the City. The City would ensure long-term acceptance of its waste in a contractual agreement with the facility's owner. This Alternative To has been included as it has the potential to address the need for additional waste management capacity without the City owning/operating a new facility or continuing as owner/operator of its existing landfills.

It can be assumed that it is not feasible for the roadside waste collection trucks to transport the waste to an outside source. As such, this scenario also entails the development of one or more waste transfer station(s) within the City. At the transfer station the waste would be temporarily stored and the loaded onto large transport vehicles to be taken to the final disposal site. The site in which the waste is disposed of or otherwise processed would need to be licensed to receive the waste from the City and would need to meet all applicable environmental standards that are imposed by the local governing bodies. With a long-term contractual agreement between the two parties, such scenario could potentially address the City's need for additional waste management capacity.

4.0 LANDFILLING

Landfilling is the most established approach to waste management in Ontario and possibly worldwide. Landfilling involves the organized disposal of waste within an engineered facility that has been certified to accept various types of waste from a specified region of the municipality. Typically, waste is placed within a specific footprint or cell and covered with materials (i.e., sand) on a daily basis to prevent windblown waste. As all landfills are engineered and permitted for a specific capacity, once a cell or the landfill has reached that capacity, they are capped with an impermeable material and vegetative growth is reintroduced to the surface. At this point, future landfilling for the City could involve the development of a new landfill site or the expansion of an existing site.

As landfills are operated under strict regulatory guidelines and control, a properly managed landfill will monitor the levels of impacts to the groundwater, as well as the amounts of gas and leachate being generated. Concentrations are compared to specific criteria and if there are signs of impacts migrating off-site, a variety of techniques is available to prevent further off-site contamination.

With recent development of methane gas collection systems, the production of energy for these gases are in existence at a commercial scale throughout Canada and could contribute a revenue potential for a landfill.

With respect to the Thermal Treatment and Energy From Waste Alternatives To discussed above, they too require some degree of landfilling to manage the residual wastes. There are no facilities to date that can eliminate waste completely. As a result, the landfilling alternative has been included as it would, as a minimum, be required in association with the alternatives involving incineration. Also, landfilling would represent a continuation of the management of the City's waste as is currently successfully practiced.

5.0 EVALUTATION OF "ALTERNATIVES TO"

5.1 Evaluation Criteria

The primary evaluation of the "Alternatives To" the undertaking involved a qualitative comparison of the advantages and disadvantages with respect to each of a set of evaluation criteria:

- Environmental Considerations (i.e., destruction of habitat, air emissions, groundwater pollution);
- Socio/Cultural Considerations (i.e., land use conflicts, number of facilities required);
- Economic Considerations (construction, operating and transportation costs, Site approvals, legal risk);
- Technical Considerations (i.e., complexity of technology, addressing of the current problem, technical risk, additional studies required); and
- Municipal Policy Considerations (i.e., compliance with draft WMMP, potential to support waste diversion efforts, municipal preferences).

The comparison focussed on the principal differences between the Alternatives To and associated potentials for effects, impact management (mitigation), and net effects. The results of the examination are documented in a summary matrix, which addressed each evaluation criterion for each of the Alternatives To (Appendix A).

5.2 Confirmation of Alternatives To and Criteria

AMEC and the City held an open house on 21 February 2013 dedicated to the evaluation of Alternatives To and specifically soliciting input on the range of Alternatives To, the evaluation criteria and their importance, and the overall evaluation of the Alternatives To.

As part of the open house, the City presented a selection of 17 poster boards covering various aspects of the Project, including the Project history, the need for a new landfill site, current and future waste management practices, regulatory process, Project schedule, the EA process, as well as the proposed Alternatives To", and the study team's preliminary examination of alternatives in a matrix format. For a summary of the open house refer to Appendix B.

In total 31 people attended this event, representing a mix of those who had been involved in the process during the preparation of the EA ToR and new participants.

Following a review of the summary matrix, as well as the associated poster boards, attendees were asked to complete a comment form. The input received:

- Confirmed the range of Alternatives To presented for examination; and
- Confirmed the study team's preliminary list of evaluation criteria.

It is of note that as part of the discussion of Alternatives To, the public expressed interest in increased/additional diversion at the source (i.e., increased recycling), as well as a dislike for the importing of neighbouring waste into their community to support a particular waste management technology.

Increased diversion is a regulatory requirement for the City and the target diversion rates were 60% by the year 2008. These target numbers are considered very ambitious objectives. Nevertheless, they have been taken into account in the project's estimates on future waste volumes. Given the mandatory character of the future waste diversion, this approach has not been added to range of Alternatives To.

Import of waste remained in the list of Alternatives To, as the opposition to this alternative was limited to some of the participants/comments received. For a complete summary of the open house and comments received refer to Appendix B.

5.3 Criteria Ranking

At the above mentioned open house, each of the attendees was asked to rank the evaluation criteria based on their relative importance for decision–making. Based on feedback obtained through the comments forms, as well as verbal discussions, it was determined that all of the evaluation criteria (considerations) were ranked relatively close to one another, with environmental and economic considerations being the most important.

Based on the input received at the public consultation event, as well as the information gathered during the compilation of the summary matrix, it was decided to move forward with the selection of a preferred long-term disposal system.

6.0 EXAMINATION AND EVALUATION OF ALTERNATIVES TO

Following the open house, the preliminary examination of the Alternatives To was reviewed and supplemented with information derived from public input. The results are presented in an updated summary matrix (Appendix A) and briefly discussed below.

Do-Nothing Alternative

After discussions with the public at the open house and based on feedback submitted on comment forms, it has been determined that the Do Nothing alternative is not an acceptable option. Simply doing nothing is not advantageous to the City as it does not address the City's need for additional landfill capacity, which is expected to be reached within the next seven years. Once the permitted capacity of the Haileybury Landfill is reached, landfilling at that location would have to be terminated. Continued landfilling would represent an operation non-compliant with the landfill permit. (It is of note that the do nothing alternative was never considered a viable option but was included in the examination to provide for a baseline against which other alternatives can be evaluated).

Thermal Treatment and Energy From Waste

Thermal treatment (incineration) and waste to energy are alternatives that significantly reduce the waste stream. These types of systems are widely used in Europe and Asia, where there is a large volume of waste, with limited space for landfilling. Also, given the complexity of these systems, they are most often operated by a third-party with the necessary expertise and experience. A key concern related to adverse environmental effects of incinerators relates to air emissions (in particular during start up and upset conditions). With proper emission controls and continuous monitoring these facilities can be operated in compliance with regulatory requirements. However, public acceptance is generally very poor. Currently, there is only one such facility in Ontario, within the Region of Peel.

Typically, incineration systems require a large amount of waste to keep the incinerator functioning properly and to generate marketable energy. With this in mind, given that the City is not a large urban center, with a relatively small waste stream, this alternative is not feasible.

The Region of Peel facility processes approximately 130,000 tonnes of waste per year compared to the 10,000 tonnes that the City generates. The use of a two stage incinerator requires a minimum 100 tonnes per day (i.e., 36,500 tonnes per year or 3.5 times what the City generates). Initial construction costs, as well as operating costs would be extremely high. In order to run the facility effectively and economically, it is probable that considerable waste volumes (two to three times of what the City generates) would need to be imported from other communities. Given the distance to the next large centres that could generate such quantities, significant haul distances would further challenge the economic feasibility.

Based on feedback received to date, waste import is generally not acceptable by the general public (see Waste Import). Additionally, an incineration system can only effectively reduce the

waste stream by approximately 75%, as the remainder of the materials is collected as residuals (i.e., ash, kiln dust). In addition, residuals are not always marketable and landfilling is still required to dispose of these wastes. As such, the alternatives of thermal treatment/energy from waste are not the most suitable options for the City, as they do not effectively address the City's needs for waste management.

Import of Waste

Import of waste into the municipal boundaries per se would not provide the City with new waste management capacity. The scenario would increase the waste volumes that would need to be managed by the City through techniques such as landfilling, thermal treatment, and/or energy from waste. Therefore, the environmental effects of waste import would depend on the selected management technique. Irrespectively of the technology selected, the increased waste volumes would provide for an increased potential of adverse environmental effects. This would be a result of the increased facility size as well as the additional waste haul for import. The advantage of waste import solely rests on the fact that the increased waste volumes to be processed by the City could reduce the cost per tonne of waste and provide a revenue source through the processing fees that the City would impose on the imports. Based on the numbers above (see Section 4.2), to be financially feasible, the incineration scenario would require the import of about 65 to 75 tonnes per day (2-3 waste transfer trucks), or roughly 2 to 3 times the amount of waste generated by the City. As the only comparable urban centre is about 100 km away from the City, this would involve a considerable haul distance. After discussions with the public and the City, the general view however has been that, irrespectively of the potential for economic benefits, they do not want to be considered a regional hub for waste. As such, this Alternative To has been evaluated as less preferred.

Export of Waste

The exportation of waste has the advantage that it eliminates the need for a local processing facility, with waste being collected at Transfer Sites and being hauled off to an acceptable location administered by another jurisdiction. Adverse environmental effects potentially experienced within the City would be limited to those associated with the Transfer Station and the waste haul. Environmental effects at the ultimate processing location would depend on what technology would be applied at that location but would certainly be of no consequence to the residents of the City. On the other hand, the hauling to and tipping fees at the receiving facility are likely to result in high costs. In addition, the City would need to bear cost associated with the construction and operation of a transfer station within the City, as well as the waste haul. As the City is in a relatively remote location, there is no large municipal center nearby that could receive the City's waste, while keeping the potential fees low. This venue has been explored as part of previous studies conducted by the City. In one case, a neighbouring community would have accepted the City's waste, yet the tipping fees were extremely high, as well as the City would have had to take on the liability of the landfill. In addition, residents that wish to dispose of large items that may be excluded from regular pick-up would have to travel

long distances to dispose of such materials. As a result, this Alternative To has been evaluated as less preferred.

Landfilling

In general, the City has significant experience with landfills. Public and City officials who participated in consultations on this Project to date have generally reacted favourably to landfilling as a future approach to managing the City's waste. Adverse environmental effects of landfill are associated with potentials for groundwater contamination, dust, and odours. Experience with numerous engineered landfill sites in Ontario (including the City's two sites) demonstrate that properly engineered and closely monitored sites can operate in full compliance with all applicable regulatory requirements. Landfills have the flexibility to adjust to changing waste types and quantities, while being less costly to build and operate than incinerators for comparable waste volumes. With the potential of additional diversion at the source, the overall waste stream that is disposed of at the landfill can be significantly reduced. Furthermore, landfilling is a proven technology within the region and is a generally accepted practice. Additional landfill capacity has also been explicit component of City's WMMP objectives. As a result, this Alternative To has been evaluated as a preferred waste management alternative.

7.0 THE PREFERRED ALTERNATIVE TO

Overall, the preferred Alternative To is considered the one that is overall most preferred taking into consideration all of the established criteria as well as feedback obtained from consultation with the public. Appendix B provides the underlying considerations for each Alternative To and each criterion. Table 7.1 below summarizes the discussion from the matrix.

Table 7.1: Summary of Evaluation of Alternatives To

Considerations	Alternative 1	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
	Do Nothing	Thermal Treatment	Energy from Waste	Waste Export	Waste Import	Landfilling
Environmental	NA	2	2	3	1	2
Socio/Cultural	NA	2	2	3	1	2
Economic	NA	1	1	1	3	3
Technical	NA	2	2	3	3	3
Policies	NA	1	1	2	2	3
Overall	NA	8	8	12	10	13

3= most preferred/suitable; 2= preferred/suitable; 1= least preferred/suitable

Based on the public consultation, as well as provincial waste reduction objectives, increased 3R's is considered to be the most preferred method of managing/reducing the City's waste. As stated above (Section 5.2), this alternative was not included as part of this study, as the City's draft WMMP makes it imperative to implement further diversion at source, and represents a provincial regulatory requirement.

Currently, within the City there are several drop off locations that accept various recyclables. These recyclables are then collected and distributed to various sources. The adaptation of further recycling initiatives within the City has the potential for extending the life of the landfill by reducing the overall waste volumes. It is important to note that even with the reduction in the waste volume there is still a portion of waste that must be disposed of. As such, Alternatives To must be selected in order to manage all of the waste derived by the City.

Thus, based on the evaluation of the Alternatives To, the preferred solid waste management system for the City is a combination of increased 3R's and landfilling. As a landfill facility requires *Environmental Assessment Act* approval, the next step in the EA process involves the identification and evaluation of Alternative Methods, which represents the different ways of implementing the preferred Alternative To.

8.0 CLOSURE

This review was prepared exclusively for the City of Temiskaming Shores for specific application to the EA for the New Waste Management Capacity. No other warranty, expressed or implied, is made.

Respectfully submitted,

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9.0 REFERENCES

Earth Tech Canada Inc. 2008. Draft Solid Waste Management Master Plan.

APPENDIX A

COMPARATIVE EVALUATION OF ALTERNATIVES TO (SUMMARY MATRIX)

Table: Evaluation of "Alternatives To"

	Alt 1	Alt 2	Alt 3	Alt 4	Alt 5	Alt 6
	Do Nothing	**Thermal waste treatment facility**	**Energy from waste (EFW) facility**	**Waste export**	**Waste import**	**Landfilling**
Environmental Considerations						
Potential for destruction terrestrial and aquatic habitat	No additional adverse effects	Greenfield site development would have potential for impacts / displacement of habitat and wildlife Landfill component may lead to additional adverse effects on habitat and wildlife; alternative likely to require waste import (economic reasons) which would increase potential for haul related impacts on habitat/widlife.	Greenfield site development would have potential for impacts / displacement of habitat and wildlife; Landfill component may lead to additional adverse effects on habitat and wildlife;alternative likely to require waste import (economic reasons) which would increase potential for haul related impacts on habitat/widlife.	Potential for impacts on habitat at receiving site dependent on whether or not existing or new facility is used; facility related impacts of no consequence for COTS; Within COTS, potential for impacts on habitat limited to transfer station(s) that is/are likely required within COTS; also, additional haul traffic may adversly impact habitat/wildlife	Greenfield site development would have potential for impacts / displacement of habitat and wildlife; impact larger than for a facility tailored solely to COTS needs; also, additional haul traffic may adversly impact habitat/wildlife	Greenfield site development would have potential for impacts / displacement of habitat and wildlife Expansion of existing landfill would allow to minimize such effects as part of infrastructure is already in place
Potential for air emissions (incl. local and global considerations)	No additional adverse effects	Potential for adverse effects from air emissions Increased transport related emissions (incl. GHG emissioins) due to high transport efforts; alternative likely to require waste import (economic reasons) which would increase potential for air emissions due to increased waste volume being processed in COTS	Potential for adverse effects from air emissions Increased transport related emissions (incl. GHG emissioins) due to high transport efforts; alternative likely to require waste import (economic reasons) which would increase potential for air emissions due to increased waste volume being processed in COTS	Odours from transfer station High transport related emissions (incl. GHG emissioins) Potential for air emissioins at receiving site dependent on technology used for management/ treatment; in any case air emissioins at receiving site of no consequence for COTS	Potential for additional adverse effects through increased haul traffic and increased haul distance (GHG emissions) Potential for emissioins further dependent on technology used for management	Transport related air emissisons (incl. GHG emissioins) limited to garbage collection; no long-distnace waste haul required; Potential for landfill gas emissions (if not captured/managed)
Potential for effects on groundwater resources	No additional adverse effects	Ongoing need for landfilling of by-products Landfill component would pose potential for adverse effects on groundwater resources; alternative likely to require waste import (economic reasons) which would increase potential for groundwater impacts due to increased waste volume being processed in COTS	Ongoing need for landfilling of by-products Landfill component would pose potential for adverse effects on groundwater resources; alternative likely to require waste import (economic reasons) which would increase potential for groundwater impacts due to increased waste volume being processed in COTS	No additional adverse effects (transfer station would likely be located at existing landfill); Potential grounwater impacts at receiving facility of no consequence for COTS;	Increased volume of waste would result in a greater potential for adverse groundwater effects	Potential for adverse effects in new location if greenfield site development Expansion of existing landfill would allow to minimize effects to attenuation zone of existing landfill
Conclusion	NA	suitable (2)	suitable (2)	most suitable (3)	least suitable (3)	suitable (2)
Socio/Cultural Considerations						
Potential for land use conflicts	No additional adverse effects	Potential for land use conflicts (air emissioins, noise levels at nearby receptors); alternative likely to require waste import (economic reasons) which would increase potential for haul related land use conflicts	Potential for land use conflicts (air emissioins, noise levels at nearby receptors); alternative likely to require waste import (economic reasons) which would increase potential for haul related land use conflicts	Along haul route and as a result of aditional haul trucks; odours from transfer station; Potential conflicts at receiver location of no consequence for COTS	Along haul route and as a result of aditional haul trucks; Potential for conflicts dependent on technology used for management	Noise levels at nearby receptors, odours from landfill, additional dust from hauling trucks; If landfilling through expansion of existing site new land use conflicts would be minimal
Number of facilities required for COTS	No additional adverse effects	Two: One incinerator (including waste storage/pre-processing yard) plus one landfill site; alternative likely to require waste import (economic reasons) which would require a waste transfer station	Two: One incinerator (including a generator, as well as waste storage/pre-processing yard) plus one landfill site; alternative likely to require waste import (economic reasons) which would require a waste transfer station	One: One transfer station (receiving facility not located, owned or operated by COTS)	One: receiving management facility in COTS (plus one transfer station, assumed to be near source, i.e. outside of COTS and not owned and operated by COTS)	One landfill
Other	Does not address need	May require imported waste to support the facility	May require imported waste to support the facility	Adverse effects on receiving jurisdiction	Additional waste streams for other communities	None
Conclusion	NA	suitable (2)	suitable (2)	most suitable (3)	least suitable (1)	suitable (2)
Economic						
Construction Cost	NA	High (incinerator plus landfill site); alternative likely to require waste import (economic reasons) which would increase construction cost	Very high (EFW facility plus plus landfill site); alternative likely to require waste import (economic reasons) which would increase construction cost	Moderate (transfer station)	Dependent on technology chosen for management; Potential for long-term (partial) recovery of cost from processing fees imposed on importers	Low to moderate if greenfield site development Low if expansion of existing landfill as infrastructure and long-term environmental records data in place
Operating Cost/Processing Cost	NA	High (facility has to operate on a continuous basis in order to be cost effective; this requires on-going maintenance); alternative likely to require waste import (economic reasons) which would increase operating cost	Very high (facility has to operate on a continuous basis in order to be cost effective; this requires on-going maintenance); alternative likely to require waste import (economic reasons) which would increase construction cost Potential for cost offsets from energy generation with significant waste stream	Moderate cost for haul and operation of transfer station; Potentially ver high cost due to per tons payments to receiving facility (tipping fees/ processing fees)	Dependent on technology chosen for management; Potential for (partial) cost recovery from processing fees imposed on importers	Low

Transport Cost	NA	Moderate to High (transport component includes transport of waste to incinerator and transport of ashes to landfill site)	Moderate to High (transport component includes transport of waste to incinerator and transport of ashes to landfill site)	High (cost effort depending on location; trucking cost could be reduced through construction and operation of transfer station which require capital and operation cost)	High (cost effort depending on source location; trucking cost could be reduced through construction and operation of transfer which require capital and operation cost); Potential avoiding transport cost if contract makes importer responsible for haul cost	Moderate (limited to local waste collection)
Approval Time/Cost/Risk	NA	Extensive approval requirements due to complexity of facility and the fact that two facilities are involved (facility siting, engineering, air dispersion modeling); Potential risk that current landfill capacity would be consumed before this option can be operational	Extensive approval requirements due to complexity of facility and the fact that two facilities are involved (facility siting, engineering, air dispersion modeling, negotiations with utility companies etc.); Potential risk that current landfill capacity would be consumed before this option can be operational	Moderate to Low. If exported to an existing facility licensed for import of waste from COTS approvals would be limited to the transfer station development. If not licensed to receive waste from COTS, Certificate of Approval for receiving facility would need to be amended.	Dependent on technology chosen for management	Low to moderate if greenfield site development Low if expansion of existing landfill as long-term environmental records data in place and site would be well understood
Legal/Contractual Risk	COTS non-compliant with MOE approval	Would have to be run by a third party; long-term commitment of suitable waste stream required	Would have to be run by a third party, long-term commitment of suitable waste stream required; Need for a long-term market/agreement for generated energy	Contractual risk with potential receiver; City would be dependent on receiver	Dependent on technology chosen for management	Low
Conclusion	NA	least suitable (1)	least suitable (1)	least suitable (1)	most suitable (3)	most suitable (3)
Technical						
Complexity of technology (maintenance requirements, staffing, training monitoring)	Low	High maintenance requirement, skilled staff required, air monitoring required	High maintenance requirement, skill staff required, air monitoring required	Low	Dependent on technology chosen for managament	Low
How well is need/problem addressed?	Does not address need/problem	Would add additional life to landfill, yet landfilling is still required	Would add additional life to landfill, yet landfilling is still required	Nee/problem addressed	Dependent on technology chosen for managament	Need/problem fully addressed
Technical Risk (proven technology? Reliability?)	No change	Only one facility currently in operation in Ontario	Not a proven technology within Ontario	Coordination of hauling trucks	Dependent on technology chosen for managament	Low (acceptable technology proven in this environment)
Additional Studies Required	None	Site selection study plus additional studies pertaining to waste stream volumes and composition of waste in order to size the facility (i.e., furnaces)	Site selection study plus additional studies pertaining to waste stream volumes and composition of waste in order to size the facility (i.e., furnaces, turbines)	Site selection study for transfer station	Dependent on technology chosen for managament	Site selection process; key studies for a greenfiled development would involve geotechnical and other environmental site investigations as well as design and operations plan; for expansion of existing landfill required studies would be similar however, work would benefit from existing data and knowledge of site
Conclusion	NA	suitable (2)	suitable (2)	most suitable (3)	most suitable (3)	most suitable (3)
Municipal Policies and Preferences						
Compliance with Draft WMMP	No	No	No	No	No	Yes Explicit objective of Draft WMMP
Potential to support waste diversion efforts	No	No Alternative does not support overall objective of reducing waste stream; this alternative requires considerable capital investment tailored to address a specific waste volume; reduction in the waste volume would potentially jeorpardize economics behind the investment; facility also dependent on certain percentage of combustables which would require to remain within the waste stream	No Alternative does not support overall objective of reducing waste stream; this alternative requires even more capital investment than the Thermal treatment option (Alt. 2); reduction in the waste volume would potentially jeorpardize economics behind the investment and potentially the power supply agreements and associated revenue streams; facility also dependent on certain percentage combustables which would require to remain within the waste stream	No. Typically export agreements are based on specified minimum waste quantities; a change in waste generation rates (e.g., as a result of intensified diversion) may adversely affect contract and/ or tipping / processing fees	Yes	Yes; the higehr the diversion rate, the lower the long-term cost (operation and capital)
Municipal preferences	No, does not address need	No	No	No	No	Yes Explicit objective of Draft WMMP; Explicit objective of Municipal Council
Conclusion	NA	least suitable (1)	least suitable (1)	suitable (2)	suitable (2)	most suitable (3)
Public feedback/preferences	least suitable (1)	least suitable (1)	suitable (2)	least suitable (1)	least suitable (1)	most suitable (3)
Overall Conclusion	**NA**	**least suitable (9)**	**least suitable (10)**	**suitable (13)**	**suitable (11)**	**most suitable (16)**

APPENDIX B

SUMMARY – OPEN HOUSE EVENT (21 FEBRUARY 2013)

CITY OF TEMISKAMING SHORES

NEW WASTE MANAGEMENT CAPACITY PROJECT

SUMMARY OF FEBRUARY 2013 OPEN HOUSE

Submitted to:
City of Temiskaming Shores
325 Farr Drive
P.O. Box 2050
Temiskaming Shores, Ontario
P0J 1K0

Submitted by:
AMEC Environment & Infrastructure,
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131 Fielding Road
Lively, Ontario
P3Y 1L7

February 2013

TY910491

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1.0 INTRODUCTION

This Summary of February 2013 Open House Report (Report) is part of the commitment of the City of Temiskaming Shores (City) to inform and consult with local communities and stakeholders regarding the New Waste Management Capacity Project (Project). The February 21, 2013 Open House was organized by the City to share information about the Project, the related environmental assessment process, and to solicit input on the identification and evaluation of “Alternatives To”. This Report presents a summary of the consultation activities and feedback associated with this session.

2.0 CONSULTATION PROCESS

2.1 Notification of the Open Houses

Notifications of the Open House were provided in advance through Canada Post's unaddressed admail to all residents, apartments, farms and businesses within the municipal boundaries of the City (approximately 5,632 notices were delivered). Notices were also mailed to all individuals and Aboriginal communities on the Project Mailing List the week of February 11, 2013.

The open house was also advertised on the local radio channel CJTT-FM (104.5 FM) on three times for thirty seconds on February 20 and 21, 2013.

Notifications of the Commencement of the Environmental Assessment (EA) and Open House were published in the local newspaper as summarized in Table 1. Copies of the newspaper advertisements are presented in Appendix A.

Table 1: Newspaper Publication Schedule

Notice/Publication	Publication Dates
Notice of Commencement of EA	
Temiskaming Speaker	February 6 and 13, 2013
Weekender	February 8, 15, and 22, 2013
Notice of Open House	
Temiskaming Speaker	February 13 and 20, 2013
Weekender	February 15 and 22, 2013

A section of the City's website has also been dedicated to this project. The notice and all related Project information is available on the website. The information can be accessed through: www.temiskamingshores.ca

2.2 Description of the Open Houses

The Open House was held on February 21, 2013 from 3:00 p.m. to 7:00 p.m. at Riverside Place (55 Riverside Drive, Temiskaming Shores). It consisted of a selection of 17 poster boards covering various aspects of the Project. Information was presented on the following areas.

- Project history,
- Need for new waste management capacity,
- Current and future waste management practices,
- Project schedule,
- Alternatives To,
- Evaluation Criteria, and
- Environmental Assessment process.

Attendees were provided with a summary matrix of the Alternatives To, including a preliminary discussion of each Alternative To by proposed evaluation criteria. Copies of the poster boards and summary matrix are available on the City's website and are presented in Appendix B.

Attendees were encouraged to sign a registration form at the door and indicate whether they would want to be placed on a Project Mailing List. There were 31 attendees during the open house (21 signed the register).

Comment Forms were made available for each attendee. Project representatives encouraged attendees to fill out and return the comment forms following the session. Comments and questions gathered from comment form submissions and records of conversations recorded by open house staff are presented in Section 2.3.

2.3 Summary of Questions and Comments

There were seven Comment Forms completed and returned to the City. Completed Comment Forms are presented in Appendix C. The following presents a summary (paraphrased) of the responses received by questions.

1. Do you have any comments, interests or suggestions related to the New Waste Management Capacity project in general?

    - Recycling pick-up service in the City might increase diversion and increase landfill lifespan
    - Would like to have a Regional Platform and have all local townships involved in the process to make it an environmental priority for everyone in the area. Too many dumps in the area.
    - Public information session was well done. Informal open houses work well for this type of project. Boards were very informative and well done.
    - The city may have potential to accept waste from outlying areas for disposal of waste to assist in operation costs.
    - At present there is no need for curb side pickup, each home owner can deliver to one site, as this would only add extra expenses.
    - Once again, the "Summary - Considerations for Determining the Preferred Alternative to New Waste Management Capacity Environmental Assessment" handed out at the open house, if read carefully, directs the project back to the previous Terms of References choice ie. The expansion of the New Liskeard landfill site. So much for the new broader "new catchment" area that was supposed to be considered under the revised Terms of Reference approved by the MOE. We have reached this conclusion, as under the "landfilling" column on the information sheet handed out, nothing reflects the costs of developing a new site, the purchase of land that might be required, new technology to be used, additional studies required, technical risk and the necessary training and maintenance to ensure a site is maintained a level similar to some of the "pristine" landfills we have visited.

      The City has now leased the contamination attenuation zone at the New Liskeard landfill to Canadian Solar on a long term lease. The changes to this area and integrity of the zone have been changed by regarding and drilling necessary for construction. Trans Canada Energy and Canadian Solar should be consulted as the

negative impact on the solar farm, with the westerly winds blowing garbage and dust, could have a significant financial impact.

No where under the “Considerations” is there any mention of building a new landfill site and the impact, whether it be within Temiskaming Shores on City owned land or a purchased site within or outside the city limits. Did the MOE not send the City back to redo the Terms of Reference to encompass a broader perspective and area to be considered?

Who is on the committee looking at alternative sites? Is it solely made up of town employees and council member? We do realize that the final vote rests with Council.

The New Liskeard landfill is officially closed as per the MOE. Would not any expansion be considered a "New" site as you can only expand an active site?

2. Please identify any criteria that are important to you that the City should use in the evaluation of Alternatives To and the identification of the Preferred Alternative To (where most important is a 1 and least important is 5).The following presents the average of responses received.[1]

   - Environmental: 1.3
   - Economic: 2.0
   - Technical: 2.0
   - Municipal Policy: 2.3
   - Other: 1 (location/aesthetics)

   Comments:
   - Environmental: groundwater, emissions, odours, wind borne garbage; adverse effects on habitat/wildlife are essential considerations
   - Economic: should never become the final selection point when choices are close considering lifespan
   - Technical: any choice must use the best and most current engineering, not the basics to gain approval
   - Other- Location/Aesthetics: the New Liskeard landfill is not only close to residential properties, it is on the highest point of land seen for miles; expansion here would certainly make you rethink “Temiskamazing” or “Heart of the Scenic North”; what an eyesore

3. Regarding the evaluation of Alternatives To, please rank alternatives and provide any comments regarding these Alternatives To (where most preferred is a 1 and least preferred is 5).The following presents the average of responses received. [2]

[1] Comment Forms submitted by two individuals appear to have had reversed their rankings based on review and conversations. The averages presented reflect the corrected numbers. Original forms are presented in Appendix C.
[2] Comment Forms submitted by one individual appears to have had reversed their rankings based on

- Do Nothing: 5
- Landfilling: 1.7
- Thermal Technology: 4
- Energy from Waste: 2.9
- Waste Export: 3.9
- Waste Import: 4.0
- Other: 1 (increase diversion), 4 (Private company contract)

Comments:

- Energy from waste, perhaps Miller Paving and Asphalt Plant
- Waste import, increase volume to be viable
- All of the proposed options have environmental drawbacks, but importing or exporting waste doesn't make any common sense to me. Handle it where it's made, don't make it someone else's problem.
- Landfilling, Thermal Technology, Energy from Waste, Waste Export: Landfilling and Waste Export must go hand-in-hand as the site could be within or just outside the city limits as per the new Terms of Reference.
- Private company contract: Seek submissions/proposals from a company such as as Miller Waste Management to look after waste management for the town.

4. How did you hear about the Community Meeting?

- Newspaper advertisement: 3
- Invitation: 4
- Website :
- From a neighbour/friend: 1
- Other: 1 (City staff)

5. How would you rate the following about this Open House (where poor is 1 and excellent is 5)? The following presents the average of responses received.

- Location of the Open House: 4.7
- Time of day it was held: 4.6
- Length of the session: 4.7
- Information provided: 4.7
- Your opportunity to comment/be heard: 4.9
- Your opportunity to have your questions answered: 4.7

An overall summary of comments and questions received during the sessionis presented in Table 2 together with study team responses

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review and conversations. Another individual developed a modified ranking. The averages presented reflect the corrected numbers. Original forms are presented in Appendix C.

Table 2: Comments, Questions and Responses

Comments/Questions	Responses
Develop a landfill for a larger regional area	This would involve shipping and/or receiving wastes across municipal boundaries and requires cooperation and long-term commitments from all participating municipalities. To establish a regional waste management system is a long term undertaking and could not be accomplished before the City runs out of landfill capacity. The process is also complex from a permitting and contractual basis (cost sharing for operations, etc.). Increased shipping costs and increased distances (non-local landfill) can also lead to illegal dumping.
Increase recycling capabilities and bring in curb side pickup	The City is working to increase the efficiency of the recycling program; however, increased diversion will not completely eliminate the need for additional waste management capacity for residual waste.
Recycling pick-up service in the City might increase diversion and increase landfill lifespan	Agreed, however increased diversion will not completely eliminate the need for additional waste management capacity for residual waste
Would like to have a Regional Platform and have all local townships involved in the process to make it an environmental priority for everyone in the area. Too many dumps in the area.	This would require cooperation and long-term commitments from all participating municipalities. To establish a regional waste management system is a long term undertaking and could not be accomplished before the City runs out of landfill capacity. A regional system would involve shipping and/or receiving wastes across municipal boundaries and is very complex from a permitting and contractual basis (cost sharing for operations, etc.). Increased shipping costs and non-local landfill can lead to illegal dumping.
Public information session was well done. Informal open houses work well for this type of project. Boards were very informative and well done.	The City and AMEC will continue to share project information in similar forms to ensure community involvement and input is a part of the process.
The city may have potential to accept waste from outlying areas for disposal of waste to assist in operation costs.	Importing of waste was an alternative that was evaluated, but it was not very well received by the public.
At present there is no need for curb side pickup, each home owner can deliver to one site, as this would only add extra expenses.	Review and evaluation of waste and recycling collection is not directly part of this scope.
Once again, the "Summary - Considerations for Determining the Preferred Alternative to New Waste Management Capacity Environmental Assessment" handed out at the open house, if read carefully, directs the project back to the previous Terms of References choice ie. The expansion of the New Liskeard landfill site. So much for the new broader "new catchment" area that was supposed to be considered under the revised Terms of	At this stage we have only completed Section 5.0 of the Terms of Reference (ToR) (i.e., The Alternatives To the Undertaking). No decision as to the Site has been completed. Once the preferred alternative to has been finalized, we will proceed to the “Alternative Methods” which will include a site selection process and evaluation of alternative

Reference approved by the MOE. We have reached this conclusion, as under the "landfilling" column on the information sheet handed out, nothing reflects the costs of developing a new site, the purchase of land that might be required, new technology to be used, additional studies required, technical risk and the necessary training and maintenance to ensure a site is maintained a level similar to some of the "pristine" landfills we have visited.	designs/operational approaches as well as the evaluation of environmental effects of the Undertaking.
The City has now leased the contamination attenuation zone at the New Liskeard landfill to Canadian Solar on a long term lease. The changes to this area and integrity of the zone have been changed by regarding and drilling necessary for construction. Trans Canada Energy and Canadian Solar should be consulted as the negative impact on the solar farm, with the westerly winds blowing garbage and dust, could have a significant financial impact.	The potential effects/interferences with landfilling operations and the surrounding land uses will be considered throughout the EA process.
No where under the “Considerations” is there any mention of building a new landfill site and the impact, whether it be within Temiskaming Shores on City owned land or a purchased site within or outside the city limits. Did the MOE not send the City back to redo the Terms of Reference to encompass a broader perspective and area to be considered?	As indicated above we are only at the stage where we are identifying the preferred waste management alternative. Once that strategy is identified then the study team will start the site selection process.
Who is on the committee looking at alternative sites? Is it solely made up of town employees and council member? We do realize that the final vote rests with Council. The New Liskeard landfill is officially closed as per the MOE. Would not any expansion be considered a "New" site as you can only expand an active site?	Similar to the previous feasibility study it is anticipated that a Technical Advisory Committee will be set up to direct the site selection process, but this will have to follow the criteria established within the ToR. Any expansion of the New Liskeard site would essentially be new in that the current landfill standards would be followed to develop any additional cells. However, the landfill site is registered on title and can have very few future uses, a landfill expansion and a solar farm are two such uses.
Economic: should never become the final selection point when choices are close considering lifespan.	Economics will not be the final selection point and will be weighted in accordance with public and council input.
Technical: any choice must use the best and most current engineering, not the basics to gain approval	The MOE design standards for landfill sites would be used as a guidance tool, however, many aspects of the design and operational approaches will likely exceed the minimum standards.
Other- Location/Aesthetics: the New Liskeard landfill is not only close to residential properties, it is on the highest point of land seen for miles; expansion here would certainly make you rethink “Temiskamazing” or “Heart of the Scenic North”;	Potential for adverse visual effects is just one of the evaluation criteria that will be used to assess the alternative methods (site locations).

what an eyesore	
Energy from waste, perhaps Miller Paving and Asphalt Plant	We are not aware of any facilities that are located within reasonable distance, with sufficient capacity, and capable or licensed to process municipal waste. Waste to energy also does not completely eliminate the need for landfilling.
Waste import, increase volume to be viable	Waste import scenarios have not been well received by the community to date.
All of the proposed options have environmental drawbacks, but importing or exporting waste doesn't make any common sense to me. Handle it where it's made, don't make it someone else's problem.	Landfilling locally has been identified as the preferred option.
Landfilling, Thermal Technology, Energy from Waste, Waste Export: Landfilling and Waste Export must go hand-in-hand as the site could be within or just outside the city limits as per the new Terms of Reference.	Currently the options for the landfilling alternative would include continuation of the City's diversion program and landfilling all the residual waste generated within the City and none will be exported to a site not owned by the City.
Private company contract: Seek submissions/proposals from a company such as as Miller Waste Management to look after waste management for the town.	Typically smaller centres subcontract the operation of their landfill site, but they actually own the facility. Through this process the City is trying to secure a long-term waste management solution. The long-term operation of the facility is beyond the current scope of this project.
What is the current recycling program?	The City currently provides a depot style recycling program. There are four recycling depots setup across the City.
Leachate from the existing landfill, is it being contained?	The leachate in being managed and is within the property limits.
Further development of existing Sites, which have already got landfill derived impacts, rather than developing a new Site and potentially impacting another area	Re-development of brownfield sites, as well as development of greenfield sites will be considered in the next part of the EA process.
City should purchase land around existing landfill to allow for expansion and long-term planning	The City is currently exploring land acquisition options around the existing landfill site.
Post your decision on local newspaper or radio	The City will continue to notify the community of the Project through the Project mailing list, notices and updates to our website

3.0 CONCLUSION

The session was well attended. The proposed “Alternatives To” were considered adequate (no additional alternative were identified). The evaluation criteria suggested for determining the overall preferred “Alternative To” were also considered adequate and no suggestions were made for additional considerations.

Aside from increased diversion, landfilling was considered the overall preferred “Alternative To”. As far as the evaluation criteria are concerned, no notable differences in the significance of the individual criteria were expressed.

Overall, there was a positive interest in the Project. The community identified an interest in seeing increase recycling programs and further information on the selected preferred alternative (and site selection). Ensuring that the selected preferred alternative is developed with utmost care to the environment was identified as important to the attendees.

On the comment forms participants were also asked to evaluate the information sessions and there was overall very positive feedback on the session, information presented, and knowledge of the team.

APPENDIX A

NOTICES

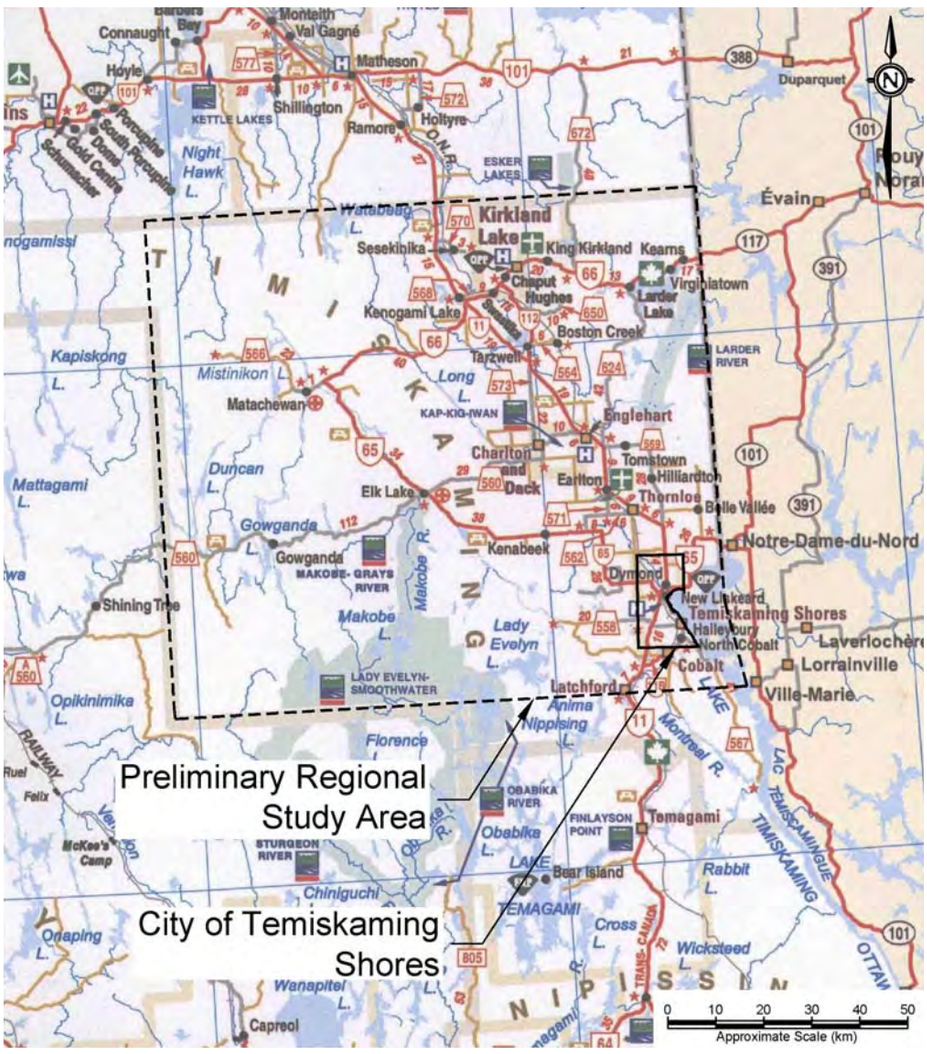
Notice of Commencement of Environmental Assessment

New Waste Management Capacity

The City of Temiskaming Shores (the City) is beginning an environmental assessment for new waste management capacity, Currently, the City's waste is disposed of at its Haileybury Landfill Site. This site will reach its capacity in 2016. The City places emphasis on intensifying its waste reduction and recycling efforts but also identified the need for new waste managament capacity by 2016.

The Process

In May 2011, the City initiated the planning process by developing Terms of Reference for the environmental assessment pursuant to the Ontario *Environmental Assessment Act*. The assessment is to identify and evaluate alternatives, and to determine the preferred approach to addressing the City's need for new waste management capacity. The assessment will include the evaluation of environmental effects, development of mitigation measures, and detailed design and operation plans for the preferred approach.



On November 28, 2012, the Minister of the Environment (MOE) approved the Terms of Reference. Electronic copies are available via the website below. Hard copies of the approved Terms of Reference are also available for review at City Hall - 325 Farr Drive, Temiskaming Shores.

This environmental assessment will be carried out according to the approved Terms of Reference and the requirements of the *Environmental Assessment Act*. Results from this study will be documented in an Environmental Assessment Report, which will be submitted to the MOE for a review. At that time, the public and other interested persons will be informed when and where the environmental assessment can be reviewed.

Consultation

Members of the public, agencies and other interested persons are encouraged to actively participate in the planning of this undertaking by attending consultation opportunities or contacting staff directly with information, comments or questions. Consultation opportunities are planned throughout the planning process and will be advertised in local newspapers, on the City's website, and directly to individuals or groups on the Project Mailing List.

If you would like to be added to our Project Mailing List or have project-related questions, please contact:

Dave Treen, Technical and Environmental Compliance Coordinator
CITY OF TEMISKAMING SHORES
325 Farr Drive, P.O. Box 2050, Temiskaming Shores, Ontario P0J 1K0
Phone: (705) 672-3363 Ext. 4136
Email: dtreen@temiskamingshores.ca
Website: www.temiskamingshores.ca/en/municipalservices/LinksDocuments.asp

LET'S TALK

You're invited to get involved in our environmental assessment

The City of Temiskaming Shores is hosting a public open house to share information about the environmental assessment and proposed "Alternatives To" for the new waste management capacity project. The City is evaluating the potential alternatives for waste management for our community based on the Ministry of the Environment approved Terms of Reference.

The City of Temiskaming Shores would like to meet with members of the community and businesses to hear what environmental considerations and alternatives are important to you for consideration in the environmental assessment process.

OPEN HOUSE

Please drop by our Open House:

Thursday, February 21st
3:00pm to 7:00pm
Riverside Place
55 Riverside Street
Temiskaming Shores, Ontario

If you would like to be added to our Project Mailing List or have project-related questions, please contact:

Dave Treen
Technical and Environmental Compliance Coordinator
City of Temiskaming Shores
325 Farr Drive, P.O. Box 2050
Temiskaming Shores, Ontario P0J 1K0
Phone: (705) 672-3363 Ext. 4136
Email: dtreen@temiskamingshores.ca

Dymond
Haileybury
New Liskeard

City of • Ville de
Temiskaming Shores

Discover a whole new Ontario • Découvrez un tout nouvel Ontario

Website: www.temiskamingshores.ca/en/municipalservices/LinksDocuments.asp

APPENDIX B

POSTER BOARDS AND SUMMARY MATRIX

City of • Ville de Temiskaming Shores
Dymond Haileybury New Liskeard
Discover a whole new Ontario • Découvrez un tout nouvel Ontario

Open House

Environmental Assessment

New Waste Management Capacity

Alternatives To

Thursday, February 21st
3:00 p.m. to 7:00 p.m.
Riverside Place
55 Riverside Drive

Project History

- **2009:** The City's Draft Waste Management Master Plan (WMMP) promotes increased recycling and waste diversion and identifies need for new landfill capacity
- **2009:** New Liskeard Landfill site operation is suspended (Site reached capacity)
- **2009/10:** City's feasibility study proposes New Liskeard Site expansion
- **2011/12:** City's Terms of Reference for the Environmental Assessment (EA) developed and approved by Ministry of the Environment
- **2013/2014:** Undertake studies and consultation for completion of the EA
- **2018 to 2020:** Haileybury Landfill Site expected to reach capacity

Current Waste Management Practice

Recycling Waste Diversion

- Material Recovery Facility (MRF)
- Collection of recyclable materials

Solid Waste Collection

- Residential waste
- Industrial, commercial and institutional solid waste
- Special waste
- Hazardous waste (at landfill , e.g. old/used paint, oils, batteries, etc.)

Waste Disposal

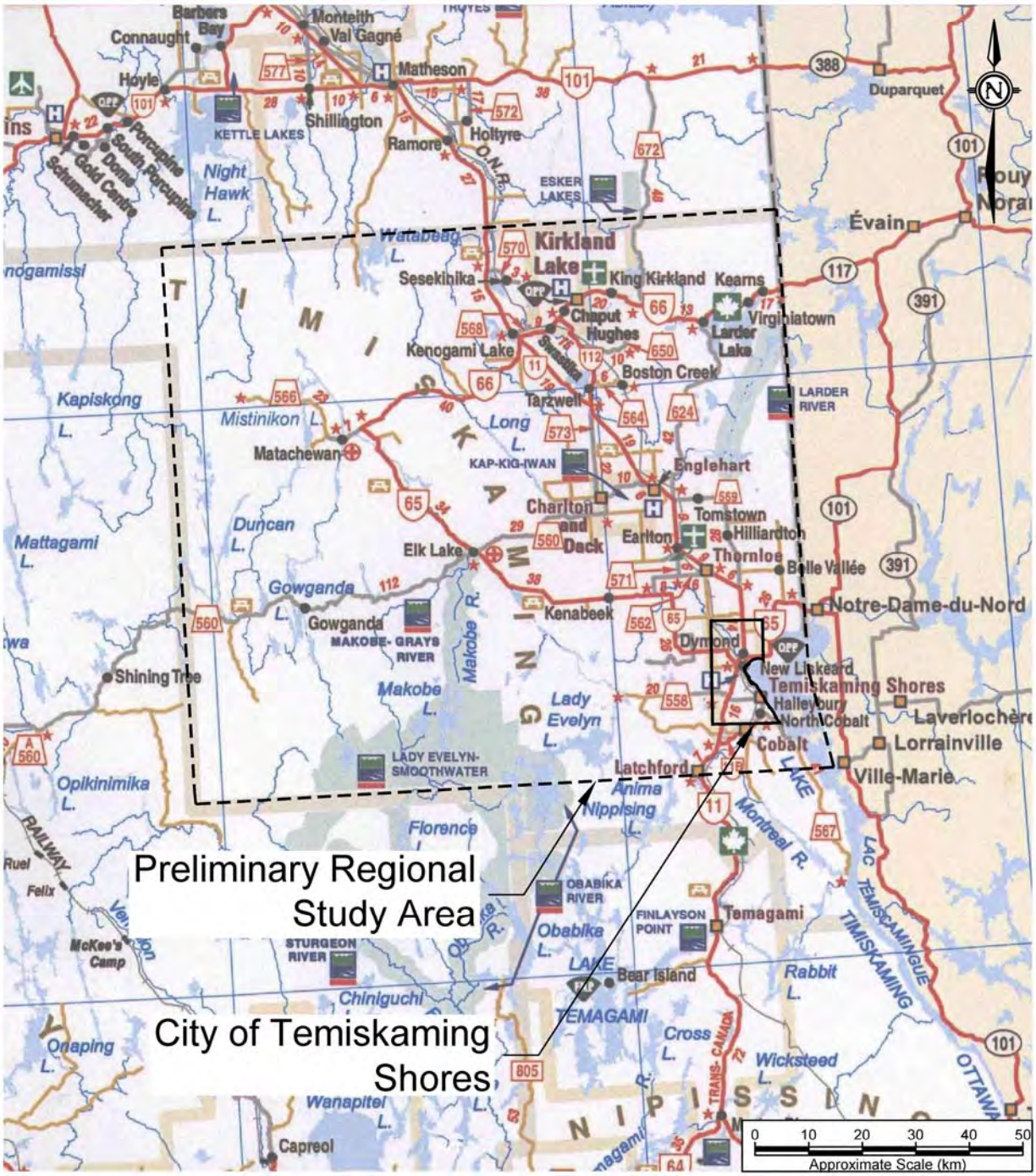
- New Liskeard Landfill (operation suspended in June 2009)
- Haileybury Landfill has serviced the entire City and Town of Cobalt since 2009

Current Waste Management Practice

The New Liskeard Landfill

- Used for waste deposition since about 1916
  - Landfilling was suspended in June 2009
- Located approx. 3 km west of the former Town of New Liskeard
  - Total property area is 32 hectares
  - Approx. 5 hectares have been landfilled
- Contaminants managed through natural attenuation
- On-going groundwater monitoring – no contamination off site
- Potential opportunity for new landfill capacity through site expansion

Preliminary Regional Study Area



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Environmental Assessment

Regulatory Requirements

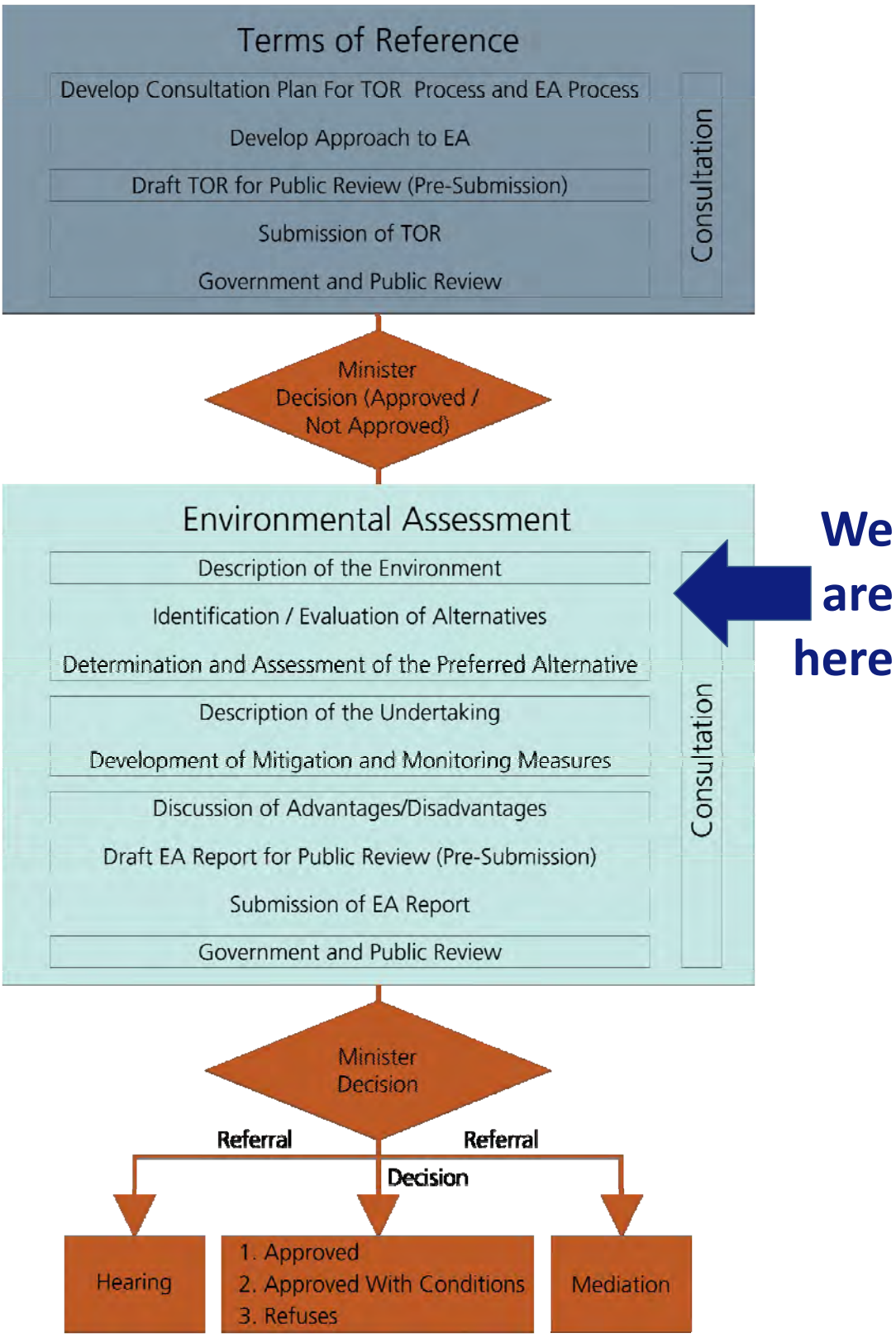
- Environmental assessments are required under Ontario Regulation 101/07 (Waste Management Projects) for new landfill sites and landfill expansions exceeding 100,000 m^3
  - Under certain conditions, this requirement also applies to thermal waste treatment facilities
- Ontario *Environmental Assessment Act* requires
  - Terms of Reference (Approved November 2012)
  - Environmental Assessment
    (Notice of Commencement issued January 2013)

Environmental Assessment

Key Elements of the Environmental Assessment

- Establish the need/rationale for the undertaking
- Description of the Project
- Environmental characterization of the Project area
- Identification/evaluation of alternatives
- Assessment of environmental effects
- Development of mitigation and monitoring measures
- Consultation and engagement (public, stakeholders, government agencies, Aboriginal communities)

EA Process


Terms of Reference
Develop Consultation Plan For TOR Process and EA Process
Develop Approach to EA
Draft TOR for Public Review (Pre-Submission)
Submission of TOR
Government and Public Review
Consultation
Minister Decision (Approved / Not Approved)
Environmental Assessment
Description of the Environment
Identification / Evaluation of Alternatives
Determination and Assessment of the Preferred Alternative
Description of the Undertaking
Development of Mitigation and Monitoring Measures
Discussion of Advantages/Disadvantages
Draft EA Report for Public Review (Pre-Submission)
Submission of EA Report
Government and Public Review
Consultation
We are here
Minister Decision
Referral
Referral
Decision
Hearing
1. Approved
2. Approved With Conditions
3. Refuses
Mediation

Project Schedule and Next Steps

Project Schedule

Year	2011			2012				2013				2014				2015	
Activities / Quarter Year	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd
Terms of Reference	■	■	■	■	■	■											
Environmental Assessment							■	■	■	■	■	■					
Design and Engineering												■	■	■			
Permits and Approvals														■	■	■	
Construction (Start)																	★

Alternative To

- Different alternatives to address the need; for this Project, the following Alternatives To have been identified:
  - Do nothing (status quo)
  - Landfilling
  - Energy from Waste
  - Thermal waste treatment facility
  - Waste Export
  - Waste Import
- ***Do you have any other Alternatives To that should be considered?***

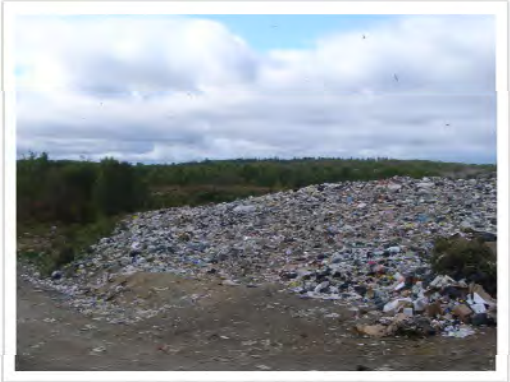
Alternative Methods

- Refers to the different ways of implementing the preferred Alternative To
- This can include:
  - Alternative Site locations
  - Alternative Designs

Alternatives To: Do Nothing

“Do nothing”

- Considered the status quo, where waste from the City is continued to be landfilled at the Haileybury Landfill Site
- This scenario is proposed only for the purpose of providing a comparison to any other Alternative To
- This is not a real alternative for the City as the current landfill will reach capacity sometime between 2018 and 2020



Typical Concerns

- Non-Compliance with Permits
- Adverse environmental effects
- Potential for waste management service disruptions

Mitigation Measures

- Not applicable

Alternatives To: Landfilling

Landfilling

- Involves the disposal of waste in an engineered landfill facility, designed and operated to handle the various types of waste generated by the City in accordance with Ontario's Landfill Regulation 232/98.
    - Could involve the development of a new landfill site or the expansion of an existing site.
- Typical features include measures to collect and manage gas and leachate generated in the landfill. Operational features would involve daily cover, groundwater monitoring, and the implementation of a capping and closure scenario when the approved capacity is reached.

Typical Concerns

- Adverse environmental effects
- Adverse impacts on water (ground and surface)
- Increases in odour
- Increases in noise levels
- Increase in local truck traffic and related dust, noise, traffic safety
- Landfill gas generation

Mitigation Measures

- Siting facility away from sensitive receptors
- Minimize size of landfill
- Limit operating hours and haul routes
- General housekeeping
- Implement air pollutant and noise control systems
- Landfill gas management plan

Alternatives To: Thermal Technology

Thermal waste treatment facility (incineration)

- Involves the development and operation of a waste incinerator, where waste would be incinerated at a high temperature in a controlled facility using fossil fuel (e.g., natural gas)
  - Any such facility would be equipped with air emission controls and would be closely monitored with respect to its compliance with applicable air quality standards
  - Typically this involves a small landfilling component for disposal of residues
- This Alternative To has been included as it offers a potential approach to future waste management that minimizes the need for additional landfill capacity

Typical Concerns

- Adverse environmental effects
- Adverse impacts from air emissions
- Adverse impacts on water (ground and surface)
- Loss of habitat for plants and wildlife
- Odour and noise levels
- Local truck traffic and related dust, noise, traffic safety
- Cost effectiveness
- Schedule (design and approvals)
- Management of the ash (hazardous and non hazardous landfilling)

Mitigation Measures

- Siting facility away from sensitive receptors
- Implement air pollutant and noise control systems
- Air quality monitoring
- Limit operating hours
- Prescribe haul routes
- For landfill component : see “Landfilling”

Alternatives To: Energy from Waste

Energy from Waste (EFW)

- Principally the same approach as “Thermal Technology” but this alternative allows for generating energy from the waste management process
  - Offers an economically attractive approach for managing the waste in combination with the utilization of its value as an energy source

Typical Concerns

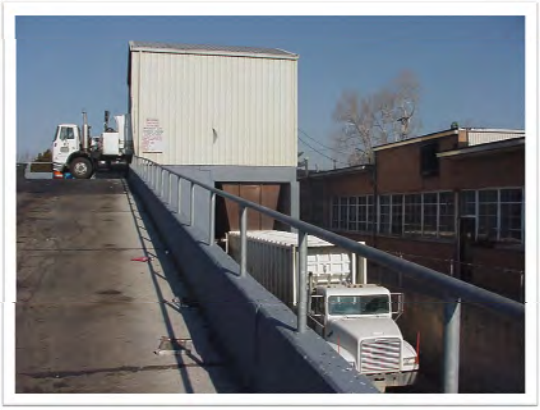
- Adverse environmental effects
- Adverse impacts from air emissions
- Adverse impacts on water (ground and surface)
- Loss of habitat for plants and wildlife
- Odour and noise levels
- Local truck traffic and related dust, noise, traffic safety
- Cost effectiveness
- Schedule (design and approvals)
- Management of the ash (hazardous and non hazardous landfilling)

Mitigation Measures

- Siting facility away from sensitive receptors
- Implement air pollutant and noise control systems
- Air quality monitoring
- Limit operating hours
- Prescribe haul routes
- For landfill component : see “Landfilling”

Alternatives To: Waste Export

Waste Export



- Involves the export of waste into another jurisdiction outside of the City
  - Waste would be disposed of or otherwise processed in a facility, licensed to manage the various types of waste generated by the City. The City would ensure long-term acceptance of its waste in a contractual agreement with the facility's owner
- Included as it has the potential to address the need for additional waste management capacity without the City becoming owner/operator of an existing or new management facility.

Typical Concerns

- Likely requires transfer stations
- Increase in local truck traffic
- Adverse environmental effects related to factor such as, ground- and surface water (at transfer station)
- Increases in noise, odour, vermin, litter (at transfer station)
- Makes City dependent on other jurisdiction
- Tipping fees/ overall cost

Mitigation Measures

- Siting transfer facility away from sensitive receptors
- Limit operating hours and prescribe haul routes
- Developing one or more transfer stations
- Landfill gas management plan

Alternatives To: Waste Import

Waste Import

- Involves the import of waste by the City and its management together with the City's own residual waste
- Waste imports could provide additional funds that could help to cover the cost for the development and operation of the City's own management system (e.g., landfill or incinerator)

Typical Concerns

- Adverse environmental effects dependent on the technology chosen to manage the waste
- Increased adverse effects due to increased volume to be managed
- Increase in truck traffic related to waste import

Mitigation Measures

- Dependent on technology chosen to manage imported waste (see other Alternatives To)

Evaluation Criteria

Environmental Considerations

- Natural environment (e.g., air, water, land, species at risk)
- Social environment (e.g., transportation, other infrastructure, noise)
- Cultural environment (e.g., heritage and archaeological resources)
- Economic environments (e.g., land use, land values)

Economic Considerations

- Relative approval cost (cost implications of required planning and approval processes and associated time implications)
- Relative cost (construction operation, maintenance)
- Cost effectiveness and financial risks

Technical Considerations

- How well does the alternative address the stated problem or need?
- Complexity of the technology?
- Reliability of technology – is this a proven technology?
- Flexibility regarding changes in waste volumes)

Municipal Policy Considerations

- How well does the alternative meet relevant municipal policies (e.g., Waste Management Master Plan objectives; sustainable development policies)
- Long-term operating principles and objectives; dependency on other jurisdictions

Contact Us

How to get involved in the Environmental Assessment Process?

- Attend public open houses
- Join our Project mailing list to be kept up-to-date
- Watch for Public Notices in local newspapers and on the City's website
- Check out the Project web site: www.temiskamingshores.ca
- Review and comment on draft reports as they are released
- Contact Dave Treen for further information.

Dave Treen
CITY OF TEMISKAMING SHORES
325 Farr Drive
P.O. Box 2050
Temiskaming Shores, Ontario P0J 1K0
www.temiskamingshores.ca

Summary – Considerations for Determining the Preferred Alternative To
New Waste Management Capacity
Environmental Assessment
City of Temiskaming Shores

Alternatives	Do Nothing	Thermal waste treatment facility	Energy from waste facility	Waste export	Waste import	Landfilling
Environmental Considerations						
Potential for destruction terrestrial and aquatic habitat	No additional adverse effects	Greenfield site development would have potential for impacts / displacement of habitat and wildlife Landfill component may lead to additional adverse effects on habitat and wildlife	Greenfield site development would have potential for impacts / displacement of habitat and wildlife Landfill component may lead to additional adverse effects on habitat and wildlife	Potential for such impacts limited to transfer stations that are likely required within the City	Greenfield site development would have potential for impacts / displacement of habitat and wildlife; impact larger than for a facility tailored solely to the City's needs	Greenfield site development would have potential for impacts / displacement of habitat and wildlife Expansion of existing landfill would allow to minimize such effects as part of infrastructure is already in place
Potential for air emissions (incl. Local and global considerations)	No additional adverse effects	Potential for adverse effects from air emissions Increased transport related emissions (incl. GHG emissions) due to high transport efforts	Potential for adverse effects from air emissions Increased transport related emissions (incl. GHG emissions) due to high transport efforts	Odours from transfer station High transport related emissions (incl. GHG emissions) Potential for air emissions at receiving site dependent on technology used for management/ treatment	Potential for additional adverse effects through increased haul traffic and increased haul distance (GHG emissions) Potential for emissions further dependent on technology used for management	Transport related air emissions (incl. GHG emissions) Potential for landfill gas emissions (if not captured/managed)
Potential for effects on groundwater resources	No additional adverse effects	Ongoing need for landfilling of by-products Landfill component would pose potential for adverse effects on groundwater resources	Ongoing need for landfilling of by-products Landfill component would pose potential for adverse effects on groundwater resources	No additional adverse effects (transfer station would likely be located at existing landfill)	Increased volume of waste would result in a greater potential for adverse effects	Potential for adverse effects
Other:						
Socio/Cultural Considerations						
Potential for land use conflicts	No additional adverse effects	Potential for land use conflicts (air emissions, noise levels at nearby receptors)	Potential for land use conflicts (air emissions, noise levels at nearby receptors)	Increased truck traffic, odours from transfer station Potential conflicts at receiver location	Along haul route and as a result of additional haul trucks Potential for conflicts dependent on technology used for management	Noise levels at nearby receptors, odours from landfill, additional dust from hauling trucks; If landfilling through expansion of existing site new land use conflicts would be minimal
Number of facilities required	No additional adverse effects	Two: One incinerator plus one landfill site	Two: One incinerator (including a generator) plus one landfill site	Two: One transfer station plus one facility at receiving end	Two: Probably one transfer station near source and plus one facility in COTS	One
Other:		May require imported waste to support the facility	May require imported waste to support the facility	Adverse effects on receiving jurisdiction	Additional waste streams for other communities	N/A
Economic Considerations						
Construction Cost	N/A	High (incinerator plus landfill site)	Very High (EFW facility plus landfill site)	Moderate (transfer station)	Dependent on technology chosen for management	Low
Operating Cost	N/A	High (facility has to operate on a continuous basis in order to be cost effective; this requires on-going maintenance)	Very High (facility has to operate on a continuous basis in order to be cost effective; this requires on-going maintenance); Potential for cost offsets from energy generation with significant waste stream	Moderate (transfer station)	Dependent on technology chosen for management	Low
Transport Cost	N/A	Moderate to High (transport component includes transport of waste to incinerator and transport of ashes to landfill site)	Moderate to High (transport component includes transport of waste to incinerator and transport of ashes to landfill site)	High (cost effort depending on location; trucking cost could be reduced through construction and operation of transfer station which require capital and operation cost)	High (cost effort depending on source location; trucking cost could be reduced through construction and operation of transfer which require capital and operation cost)	Moderate
Approval Time/Cost/Risk	N/A	Extensive approval requirements due to complexity of facility and the fact that two facilities are involved (facility siting, engineering, air dispersion modeling); Potential risk that current landfill capacity would be consumed before this option can be operational	Extensive approval requirements due to complexity of facility and the fact that two facilities are involved (facility siting, engineering, air dispersion modeling, negotiations with utility companies etc.); Potential risk that current landfill capacity would be consumed before this option can be operational	Moderate to Low. If exported to an existing facility licensed for import of waste from the City approvals would be limited to the transfer station development. If not licensed to receive waste from the City, Certificate of Approval for receiving facility would need to be amended.	Dependent on technology chosen for management	Low
Legal/Contractual Risk	COTS non-compliant with MOE approval	Would have to be run by a third party, commitment of waste stream	Would have to be run by a third party, commitment of waste stream Need for a market/agreement for generated energy	Contractual risk with potential receiver	Dependent on technology chosen for management	Low
Other:						

Summary – Considerations for Determining the Preferred Alternative To
New Waste Management Capacity
Environmental Assessment
City of Temiskaming Shores

Alternatives	Do Nothing	Thermal waste treatment facility	Energy from waste facility	Waste export	Waste import	Landfilling
Technical Considerations						
Complexity of technology (maintenance requirements, staffing, training monitoring)	Low	High maintenance requirement, skilled staff required, air monitoring required	High maintenance requirement, skill staff required, air monitoring required	Low	Dependent on technology chosen for management	Low
How well is need/problem addressed?	Does not address problem	Would add additional life to landfill, yet landfilling is still required	Would add additional life to landfill, yet landfilling is still required	Problem addressed	Dependent on technology chosen for management	Problem fully addressed
Technical Risk (proven technology? Reliability?)	No change	Only one facility currently in operation in Ontario	Not a proven technology within Ontario	Coordination of hauling trucks	Dependent on technology chosen for management	Low (acceptable technology proven in this environment)
Additional Studies Required	N/A	Additional studies pertaining to waste stream volumes and composition of waste in order to size the facility (i.e., furnaces)	Additional studies pertaining to waste stream volumes and composition of waste in order to size the facility (i.e., furnaces, turbines)	No additional studies required	Dependent on technology chosen for management	No additional studies required
Other:						
Municipal Policy Considerations						
Compliance with Draft WMMP	No	No	No	No	No	Yes Explicit objective of Draft WMMP
Potential to support waste diversion efforts	No	No Alternative does not support overall objective of reducing waste stream; this alternative requires considerable capital investment tailored to address a specific waste volumes; reduction in the waste volume would potentially jeopardize economics behind the investment	No Alternative does not support overall objective of reducing waste stream; this alternative requires even more capital investment than the thermal treatment alternative; reduction in the waste volume would potentially jeopardize economics behind the investment and potentially the power supply agreements and associated revenue streams	No Typically export agreements are based on specified minimum waste quantities; a change in waste generation rates (e.g., as a result of intensified diversion) may adversely affect contract and/ or tipping fees	Yes	Yes
Municipal preferences	No	No	No	No	No	Yes Explicit objective of Draft WMMP Explicit objective of Municipal Council
Other:						

APPENDIX C

COMMENT FORMS (COMPLETED)

COMMENT FORM
Environmental Assessment, New Waste Management Capacity
February 21, 2013, City of Temiskaming Shores

Your comments on the Environmental Assessment are important to us and will be used in the planning and development of this Project.

1. Do you have any comments, interests or suggestions related to the New Waste Management Capacity project in general?

Recycling pick-up service in City might increase diversion & increase landfill lifespan

2. Please identify any criteria that are important to you that the City should use in the evaluation of ***Alternatives To*** and the identification of the ***Preferred Alternative To***.

Criteria	**Ranking** Most important (1) to Least important (5)					**Comment**
Environmental	(1)	2	3	4	5	
Economic	1	(2)	3	4	5	
Technical	(1)	2	3	4	5	
Municipal Policy	1	(2)	3	4	5	
Other (specify) _____	1	2	3	4	5	

3. Regarding the evaluation of ***Alternatives To***, please rank alternatives and provide any comments regarding these ***Alternatives To*** (circle number).

Alternative To	**Ranking** Most Preferred (1) to Least Preferred (5)					**Comment**
Do Nothing	1	2	3	4	(5)	
Landfilling	1	(2)	3	4	5	
Thermal Technology	1	2	3	(4)	5	
Energy from Waste	1	2	(3)	4	5	
Waste Export	1	2	3	(4)	5	
Waste Import	1	2	3	4	(5)	
Other (specify) _____	(1)	2	3	4	5	Increased diversion

4. How did you hear about the Community Meeting?

❑ Newspaper advertisement ☒ Invitation ❑ Website

❑ From a neighbour / friend ❑ Other: via mail

5. How would you rate the following about this Open House (circle number)?

	Poor ⟷ Excellent					Comments
Location of the Open House	1	2	3	(4)	5	
Time of day it was held	1	2	3	(4)	5	
Length of the session	1	2	3	(4)	5	
Information provided	1	2	3	4	(5)	
Your opportunity to comment/be heard	1	2	3	4	(5)	
Your opportunity to have your questions answered	1	2	3	(4)	5	

6. Do you want to be added to our mailing list for future information about the Project?

Name: _____

Organization or Affiliation (if applicable): _____

Street Address: _____

Municipality: _____

Postal Code: _____

Phone: _____

Email: _____

Thank you for your input!

Completed forms can be left with a member of our team or faxed/mailed to:

Dave Treen, Technical and Environmental Compliance Coordinator
CITY OF TEMISKAMING SHORES, 325 Farr Drive, P.O. Box 2050, Haileybury, Ontario P0J 1K0
E-mail: dtreen@temiskamingshores.ca; Fax: (705) 672-2911

Information will be collected and used in accordance with the Environmental Assessment Act, and solely for the purpose of assisting the City of Temiskaming Shores in meeting environmental assessment and approval requirements. This material will be maintained on file for use during the study and may be included in project documentation. All comments will become part of the public record. Personal information is protected under authority of the Freedom of Information and Protection of Privacy Act, Section 32, and is used solely for the purpose of completing this environmental assessment. Individuals will not be identified in any public documents or used for any purpose other than this project.

COMMENT FORM
Environmental Assessment, New Waste Management Capacity
February 21, 2013, City of Temiskaming Shores

Your comments on the Environmental Assessment are important to us and will be used in the planning and development of this Project.

1. Do you have any comments, interests or suggestions related to the New Waste Management Capacity project in general?
Would like To have a Regional Platform & have all Local Twps involved in this process To make it an environmental priority for everyone in the area. Too many dumps in area

2. Please identify any criteria that are important to you that the City should use in the evaluation of ***Alternatives To*** and the identification of the ***Preferred Alternative To***.

Criteria	**Ranking** Most important (1) to Least important (5)				
Environmental	1	2	3	4	(5)
Economic	1	2	3	4	(5)
Technical	1	2	3	4	(5)
Municipal Policy	1	2	3	4	(5)
Other (specify) _____	1	2	3	4	5

NOTE:
Based on conversations with this individual the rankings in Question 2 appear to be reversed.

3. Regarding the evaluation of ***Alternatives To***, please ra…nts regarding these ***Alternatives To*** (circle number).

Alternative To	**Ranking** Most Preferred (1) to Least Preferred (5)					**Comment**
Do Nothing	1	2	3	4	(5)	
Landfilling	1	(2)	3	4	5	
Thermal Technology	1	2	3	4	(5)	
Energy from Waste	(1)	2	3	4	5	
Waste Export	1	2	(3)	4	5	
Waste Import	1	2	(3)	4	5	
Other (specify) _____	1	2	3	4	5	

4. How did you hear about the Community Meeting?

- ☐ Newspaper advertisement
- ☑ Invitation
- ☐ Website
- ☐ From a neighbour / friend
- ☐ Other: _____

5. How would you rate the following about this Open House (circle number)?

	Poor ← → Excellent					Comments
Location of the Open House	1	2	3	4	(5)	
Time of day it was held	1	2	3	4	(5)	
Length of the session	1	2	3	4	(5)	
Information provided	1	2	3	4	(5)	
Your opportunity to comment/be heard	1	2	3	4	(5)	
Your opportunity to have your questions answered	1	2	3	4	(5)	

6. Do you want to be added to our mailing list for future information about the Project?

Name: _____

Organization or Affiliation (if applicable): _____

Street Address: _____

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Phone: _____

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Thank you for your input!

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Environmental Assessment, New Waste Management Capacity
February 21, 2013, City of Temiskaming Shores

Your comments on the Environmental Assessment are important to us and will be used in the planning and development of this Project.

1. Do you have any comments, interests or suggestions related to the New Waste Management Capacity project in general?

_____

_____

_____

_____

2. Please identify any criteria that are important to you that the City should use in the evaluation of ***Alternatives To*** and the identification of the ***Preferred Alternative To***.

Criteria	**Ranking** Most important (1) to Least important (5)	**Comment**
Environmental	(1) 2 3 4 5	
Economic	(1) 2 3 4 5	
Technical	(1) 2 3 4 5	
Municipal Policy	(1) 2 3 4 5	
Other (specify) _____	(1) 2 3 4 5	

3. Regarding the evaluation of ***Alternatives To***, please rank alternatives and provide any comments regarding these ***Alternatives To*** (circle number).

Alternative To	**Ranking** Most Preferred (1) to Least Preferred (5)	**Comment**
Do Nothing	1 2 3 4 5	
Landfilling	(1) 2 3 4 5	
Thermal Technology	1 2 3 4 (5)	
Energy from Waste	1 2 3 4 (5)	
Waste Export	1 2 3 4 (5)	
Waste Import	1 2 3 4 (5)	
Other (specify) _____	(1) 2 3 4 5	

4. How did you hear about the Community Meeting?

☑ Newspaper advertisement ☐ Invitation ☐ Website

☑ From a neighbour / friend ☐ Other: _____

5. How would you rate the following about this Open House (circle number)?

	Poor ← → Excellent					Comments
Location of the Open House	1	2	3	4	(5)	
Time of day it was held	1	2	3	4	(5)	
Length of the session	1	2	3	4	(5)	
Information provided	1	2	3	4	(5)	
Your opportunity to comment/be heard	1	2	3	4	(5)	
Your opportunity to have your questions answered	1	2	3	4	(5)	

6. Do you want to be added to our mailing list for future information about the Project?

[redacted]

Thank you for your input!

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February 21, 2013, City of Temiskaming Shores

Your comments on the Environmental Assessment are important to us and will be used in the planning and development of this Project.

1. Do you have any comments, interests or suggestions related to the New Waste Management Capacity project in general?

The city may have potential to export waste from out laying areas for disposal of waste to avoid in operation costs.

2. Please identify any criteria that are important to you that the City should use in the evaluation of ***Alternatives To*** and the identification of the ***Preferred Alternative To***.

Criteria	**Ranking** Most important (1) to Least important (5)	**Comment**
Environmental	(1) 2 3 4 5	
Economic	1 (2) 3 4 5	
Technical	1 (2) 3 4 5	
Municipal Policy	1 (2) 3 4 5	
Other (specify) _____	1 2 3 4 5	

3. Regarding the evaluation of ***Alternatives To***, please rank alternatives and provide any comments regarding these ***Alternatives To*** (circle number).

Alternative To	**Ranking** Most Preferred (1) to Least Preferred (5)	**Comment**
Do Nothing	1 2 3 4 (5)	
Landfilling	1 (2) 3 4 5	
Thermal Technology	1 2 (3) 4 5	
Energy from Waste	(1) 2 3 4 5	MULLER TOWNSHIP & ASPHALT PLANT.
Waste Export	1 2 3 (4) 5	
Waste Import	1 (2) 3 4 5	AS ABOVE INCREASE VOLUME TO BE
Other (specify) _____	1 2 3 4 5	VIABLE

4. How did you hear about the Community Meeting?

☑ Newspaper advertisement ☐ Invitation ☐ Website

☐ From a neighbour / friend ☑ Other: City staff

5. How would you rate the following about this Open House (circle number)?

	Poor ← → Excellent					Comments
Location of the Open House	1	2	3	4	(5)	
Time of day it was held	1	2	3	4	(5)	
Length of the session	1	2	3	4	(5)	
Information provided	1	2	3	4	(5)	
Your opportunity to comment/be heard	1	2	3	4	(5)	
Your opportunity to have your questions answered	1	2	3	4	(5)	

6. Do you want to be added to our mailing list for future information about the Project? Copied by D. Treen

Name: _____

Organization or Affiliation (if applicable): _____

Street Address: _____

Municipality: _____

Postal Code: _____

Phone: _____

Email: _____

Thank you for your input!

Completed forms can be left with a member of our team or faxed/mailed to:

Dave Treen, Technical and Environmental Compliance Coordinator
CITY OF TEMISKAMING SHORES, 325 Farr Drive, P.O. Box 2050, Haileybury, Ontario P0J 1K0
E-mail: dtreen@temiskamingshores.ca; Fax: (705) 672-2911

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COMMENT FORM
Environmental Assessment, New Waste Management Capacity
February 21, 2013, City of Temiskaming Shores

Your comments on the Environmental Assessment are important to us and will be used in the planning and development of this Project.

1. Do you have any comments, interests or suggestions related to the New Waste Management Capacity project in general?

Public info session was well done. Informal open houses work well for this type of project. Boards were very informative & well done.

2. Please identify any criteria that are important to you that the City should use in the evaluation of ***Alternatives To*** and the identification of the ***Preferred Alternative To***.

Criteria	**Ranking** Most important (1) to Least important (5)				
Environmental	1	2	3	(4)	5
Economic	1	(2)	3	4	5
Technical	1	2	3	(4)	5
Municipal Policy	1	2	3	(4)	5
Other (specify) _____	1	2	3	4	5

NOTE:
Based on conversations with this individual and written comments the rankings in Questions 2 and 3 appear to be reversed.

3. Regarding the evaluation of ***Alternatives To***, please rar s regarding these ***Alternatives To*** (circle number).

Alternative To	**Ranking** Most Preferred (1) to Least Preferred (5)					**Comment**
Do Nothing	(1)	2	3	4	5	All of the proposed options have environmental drawbacks, but importing or exporting waste doesn't make any common sense to me. Handle it where it's made, don't make it someone else's problem.
Landfilling	1	2	(3)	4	5	
Thermal Technology	1	2	(3)	4	5	
Energy from Waste	1	2	(3)	4	5	
Waste Export	(1)	2	3	4	5	
Waste Import	(1)	2	3	4	5	
Other (specify) _____	1	2	3	4	5	

4. How did you hear about the Community Meeting?

- ☐ Newspaper advertisement
- ☑ Invitation
- ☐ Website
- ☐ From a neighbour / friend
- ☐ Other: _____

5. How would you rate the following about this Open House (circle number)?

	Poor ← → Excellent					Comments
Location of the Open House	1	2	3	4	(5)	
Time of day it was held	1	2	3	4	(5)	
Length of the session	1	2	3	4	(5)	
Information provided	1	2	3	4	(5)	
Your opportunity to comment/be heard	1	2	3	4	(5)	
Your opportunity to have your questions answered	1	2	3	4	(5)	

6. Do you want to be added to our mailing list for future information about the Project?

Name: _____

Organization or Affiliation (if applicable): _____

Street Address: _____

Municipality: _____

Postal Code: _____

Phone: _____

Email: _____

Thank you for your input!

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COMMENT FORM
Environmental Assessment, New Waste Management Capacity
February 21, 2013, City of Temiskaming Shores

Your comments on the Environmental Assessment are important to us and will be used in the planning and development of this Project.

1. Do you have any comments, interests or suggestions related to the New Waste Management Capacity project in general?
at present there is no need for curb recycling pick ups, each home owner can deliver to one site, that would only add extra expenses

2. Please identify any criteria that are important to you that the City should use in the evaluation of ***Alternatives To*** and the identification of the ***Preferred Alternative To***.

Criteria	**Ranking** Most important (1) to Least important (5)	**Comment**
Environmental	(1) 2 3 4 5	
Economic	(1) 2 3 4 5	
Technical	1 2 3 (4) 5	
Municipal Policy	1 2 (3) 4 5	
Other (specify) _____	1 2 3 4 5	

3. Regarding the evaluation of ***Alternatives To***, please rank alternatives and provide any comments regarding these ***Alternatives To*** (circle number).

Alternative To	**Ranking** Most Preferred (1) to Least Preferred (5)	**Comment**
Do Nothing	1 2 3 4 (5)	
Landfilling	(1) 2 3 4 5	
Thermal Technology	1 2 3 4 5	
Energy from Waste	1 2 (3) 4 5	
Waste Export	1 2 3 4 (5)	
Waste Import	1 2 3 4 (5)	
Other (specify) _____	1 2 3 4 5	

4. How did you hear about the Community Meeting?

☑ Newspaper advertisement ☐ Invitation ☐ Website

☐ From a neighbour / friend ☐ Other: _____

5. How would you rate the following about this Open House (circle number)?

	Poor ← → Excellent					Comments
Location of the Open House	1	2	3	4	(5)	
Time of day it was held	1	2	3	4	(5)	
Length of the session	1	2	3	4	(5)	
Information provided	1	2	3	(4)	5	
Your opportunity to comment/be heard	1	2	3	(4)	5	
Your opportunity to have your questions answered	1	2	3	(4)	5	

6. Do you want to be added to our mailing list for future information about the Project?

Name: No only post your ~~dec~~ decision on

Organization or Affiliation (if applicable): Local paper and Radio

Street Address: _____

Municipality: _____

Postal Code: _____

Phone: _____

Email: _____

Thank you for your input!

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COMMENT FORM
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Your comments on the Environmental Assessment are important to us and will be used in the planning and development of this Project.

1. Do you have any comments, interests or suggestions related to the New Waste Management Capacity project in general?

Once again, the " Summary - Considerations for Determining the Preferred Alternative to New Waste Management Capacity Environmental Assessment" handed out at the open house, if read carefully, directs the project back to the previous Terms of References choice ie. the expansion of the New Liskeard Landfill site. So much for the new broader "new catchment" area that was supposed to be considered under the revised Terms of Reference approved by the MOE. We have reached this conclusion, as under the "Landfilling" column on the information sheet handed out, nothing reflects the costs of developing a new site, the purchase of land that might be required, new technology to be used, additional studies required, technical risk, and the necessary training and maintenance to ensure a site is maintained a level similar to some of the "pristine" landfills we have visited.

The City has now leased the contamination attenuation zone at the New Liskeard landfill to Canadian Solar on a long term lease. The changes to this area and integrity of the zone have been changed by regrading and drilling necessary for contruction. Trans Canada Energy and Canadian Solar should be consulted as the negative impact on the solar farm, with the westerly winds blowing garbage and dust, could have a significant financial impact.

No where under the "Considerations" column is there any mention of building a new landfill site and the impact, whether it be within Temiskaming Shores on City owned land or a purchased site within or outside city limits. Did the MOE not send the City back to redo the Terms Of Refernece to encompass a broader perspective and area to be considered?

Who is on the committee looking at alternative sites? Is it solely made up of town employees and council member? We do realize the final vote rests with Council.

The New Liskeard Landfill is officially closed as per the MOE. Would not any expansion be considered a "New" site as you can only expand an active site?

2. Please identify any criteria that are important to you that the City should use in the evaluation of ***Alternatives To*** and the identification of the ***Preferred Alternative To***.

Criteria	Ranking (Most important (1) to Least important (5))	Comment
Environmental	1 (2) 3 4 5	-ground water, emissions, odours wind borne garbage -adverse effects on habitat/wildlife are essential considerations.
Economic	1 2 (3) 4 5	-should never become the final selection point when choices are close. Considering lifespan
Technical	1 2 (3) 4 5	-any choice must use the best and most current engineering, not the basics to gain approval.
Municipal Policy	1 2 3 4 (5)	
Other (specify) location/Aesthetics.	(1) 2 3 4 5	-the NH landfill is not only close to residential properties, it is on the highest point of land seen for miles - expansion here would certainly make you rethink "Temiskamazing" or "Heart of the Scenic North" -What an eyesore.

3. Regarding the evaluation of ***Alternatives To***, please rank alternatives and provide any comments regarding these ***Alternatives To*** (circle number).

Alternative To	Ranking (Most Preferred (1) to Least Preferred (7))	Comment
Do Nothing	1 2 3 4 5 6 (7)	
Landfilling	(1) 2 3 4 5 6 7	landfilling and Waste Export must go hand in hand as the site could be within or just outside the city limits as per the new terms of Reference.
Thermal Technology	1 2 3 4 5 (6) 7	
Energy from Waste	1 2 3 4 5 (6) 7	
Waste Export	(1) 2 3 4 5 6 7	
Waste Import	1 2 (3) 4 5 6 7	
Other (specify) Private Company Contract. Miller Waste Management to look after waste management for the town.	1 2 3 (4) 5 6 7	-Seek submissions/proposals from company as

4. How did you hear about the Community Meeting?

❑ Newspaper advertisement ☒ Invitation ❑ Website

❑ From a neighbour / friend ❑ Other: _____

5. How would you rate the following about this Open House (circle number)?

	Poor ← → Excellent					Comments
Location of the Open House	1	2	3	(4)	5	
Time of day it was held	1	2	(3)	4	5	
Length of the session	1	2	3	(4)	5	
Information provided	1	2	3	(4)	5	
Your opportunity to comment/be heard	1	2	3	4	(5)	
Your opportunity to have your questions answered	1	2	3	4	(5)	

6. Do you want to be added to our mailing list for future information about the Project?

[redacted]

Thank you for your input!

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