

Appendix A: Environmental Assessment Act (Section 6)

Environmental Assessment Act

R.S.O. 1990, CHAPTER E.18

Last amendment: 2010, c. 16, Sched. 7, s. 1.

Terms of reference

[6. \(1\)](#) The proponent shall give the Ministry proposed terms of reference governing the preparation of an environmental assessment for the undertaking. 1996, c. 27, s. 3.

Same

[\(2\)](#) The proposed terms of reference must,

- (a) indicate that the environmental assessment will be prepared in accordance with the requirements set out in subsection 6.1 (2);
- (b) indicate that the environmental assessment will be prepared in accordance with such requirements as may be prescribed for the type of undertaking the proponent wishes to proceed with; or
- (c) set out in detail the requirements for the preparation of the environmental assessment. 1996, c. 27, s. 3.

Same

[\(3\)](#) The proposed terms of reference must be accompanied by a description of the consultations by the proponent and the results of the consultations. 1996, c. 27, s. 3.

Public notice

[\(3.1\)](#) The proponent shall give public notice of the proposed terms of reference and shall do so by the prescribed deadline and in the manner required by the Director. 2000, c. 26, Sched. E, s. 2 (2).

Same

[\(3.2\)](#) The public notice must indicate where and when members of the public may inspect the proposed terms of reference and state that they may give their comments about the proposed terms of reference to the Ministry. It must also contain such other information as may be prescribed or as the Director may require. 2000, c. 26, Sched. E, s. 2 (2).

Notice to clerk of a municipality

[\(3.3\)](#) The proponent shall give the information contained in the public notice to the clerk of each municipality in which the undertaking is to be carried out and shall do so by the deadline for giving the public notice. 2000, c. 26, Sched. E, s. 2 (2).

Notice to other persons

[\(3.4\)](#) The proponent shall give the information contained in the public notice to such other persons as the Director may require and shall do so by the deadline for giving the public notice. 2000, c. 26, Sched. E, s. 2 (2).

Public inspection

(3.5) Any person may inspect the proposed terms of reference in the places and at the times set out in the public notice. 2000, c. 26, Sched. E, s. 2 (2).

Comments

(3.6) Any person may comment in writing on the proposed terms of reference to the Ministry and, if the person wishes the comments to be considered by the Minister in deciding whether to approve the proposed terms of reference, shall submit the comments by the prescribed deadline. 2000, c. 26, Sched. E, s. 2 (2).

Approval

(4) The Minister shall approve the proposed terms of reference, with any amendments that he or she considers necessary, if he or she is satisfied that an environmental assessment prepared in accordance with the approved terms of reference will be consistent with the purpose of this Act and the public interest. 2000, c. 26, Sched. E, s. 2 (3).

Mediation

(5) Before approving proposed terms of reference, the Minister may refer a matter in connection with them to mediation and section 8 applies with necessary modifications. 1996, c. 27, s. 3.

Deadline

(6) The Minister shall notify the proponent whether or not the proposed terms of reference are approved and shall do so by the prescribed deadline. 1996, c. 27, s. 3.

Same

(7) Different deadlines may be prescribed with respect to proposed terms of reference that are referred to mediation and with respect to those that are not. 1996, c. 27, s. 3.

Preparation of environmental assessment

6.1 (1) The proponent shall prepare an environmental assessment for an undertaking in accordance with the approved terms of reference. 1996, c. 27, s. 3.

Contents

(2) Subject to subsection (3), the environmental assessment must consist of,

- (a) a description of the purpose of the undertaking;
- (b) a description of and a statement of the rationale for,
 - (i) the undertaking,
 - (ii) the alternative methods of carrying out the undertaking, and
 - (iii) the alternatives to the undertaking;
- (c) a description of,
 - (i) the environment that will be affected or that might reasonably be expected to be affected, directly or indirectly,
 - (ii) the effects that will be caused or that might reasonably be expected to be caused to the environment, and
 - (iii) the actions necessary or that may reasonably be expected to be necessary to prevent, change, mitigate or remedy the effects upon or the effects that might reasonably be expected upon the environment,

by the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking;

- (d) an evaluation of the advantages and disadvantages to the environment of the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking; and
- (e) a description of any consultation about the undertaking by the proponent and the results of the consultation. 1996, c. 27, s. 3.

Exception

(3) The approved terms of reference may provide that the environmental assessment consist of information other than that required by subsection (2). 1996, c. 27, s. 3.

Submission of environmental assessment

6.2 (1) The proponent shall submit an environmental assessment for an undertaking to the Ministry. 1996, c. 27, s. 3.

Amendment or withdrawal

(2) After it is submitted to the Ministry, the proponent may amend or withdraw the environmental assessment at any time before the deadline for completion of the Ministry review of the environmental assessment. 1996, c. 27, s. 3.

Same

(3) The proponent may amend or withdraw the environmental assessment after the deadline for completion of the Ministry review only upon such conditions as the Minister may by order impose. 1996, c. 27, s. 3.

Same

(4) The Minister may by order amend or revoke conditions imposed under this section. 1996, c. 27, s. 3.

Public notice of submission

6.3 (1) The proponent shall give public notice of the submission of the environmental assessment and shall do so by the prescribed deadline and in the manner required by the Director. 1996, c. 27, s. 3.

Same

(2) The public notice must indicate where and when members of the public may inspect the environmental assessment and state that they may give their comments about it to the Ministry. It must also contain such other information as may be prescribed or as the Director may require. 1996, c. 27, s. 3.

Notice to clerk of a municipality

(3) The proponent shall give the information contained in the public notice to the clerk of each municipality in which the undertaking is to be carried out and shall do so by the deadline for giving the public notice. 1996, c. 27, s. 3.

Notice to other persons

(4) The proponent shall give the information contained in the public notice to such other persons as the Director may require and shall do so by the deadline for giving the public notice. 1996, c. 27, s. 3.

Public inspection of environmental assessment

6.4 (1) Any person may inspect the environmental assessment in the places and at the times set out in the public notice. 1996, c. 27, s. 3.

Comments

(2) Any person may comment in writing on the undertaking or on the environmental assessment to the Ministry and, if the person wishes the comments to be considered during the preparation of the Ministry review, shall submit the comments by the prescribed deadline. 1996, c. 27, s. 3; 2000, c. 26, Sched. E, s. 2 (4).

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Appendix B: Terms of Reference

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**Ministry of the Environment
2 St. Clair Avenue West
Floor 12A
Toronto, ON M4V 1L5**

City of Elliot Lake Waste Management Plan Environmental Assessment Terms of Reference

Prepared by:

Earth Tech Canada Inc. doing business as AECOM

Date: October 2008

105 Commerce Valley Drive West
Markham, Ontario
L3T 7W3

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- B. Preliminary Evaluation Criteria for “Alternatives to the Undertaking” (i.e. Alternative Technologies)
- C. Preliminary Screening and Evaluation Criteria for “Alternative Methods for Carrying Out the Undertaking” (i.e. Alternative Sites)
- D. Government Review Team
- E. First Nations Distribution List

1. Introduction

In 2002, the City of Elliot Lake commissioned a study regarding the current status of their waste management efforts. The report suggested a number of waste management options to create an efficient and sustainable waste system for the City of Elliot Lake. With the expectation that the community will continue to grow and attract tourism activities, the City is now considering a number of options to manage future waste. Alternative methods of waste management and facility site selection will be examined to establish a long term waste management plan including waste diversion.

The City of Elliot Lake is located in Northeastern Ontario, north of Lake Huron in the Algoma District. Access is by Highway 108, 26 km north of the Trans Canada highway (Highway 17E), mid way between Sudbury and Sault Ste. Marie. The study area is limited to the official boundaries of the City of Elliot Lake, which exceeds 75,000 ha. Figure 1-1 illustrates the geographical study area.

The existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake in the Township of Esten and began operation on October 12, 1982.¹ The site consists of a 7.41 ha fill area within a total approved site of 15.7 ha. Based on an April 2002 survey and an annual fill rate of 12,000 m³, the remaining site volume as of April 2007, is estimated to be 214,000 m³. The remaining site life in April 2007 was estimated to be 10 years.

The City of Elliot Lake's landfill began operating in 1982 and was originally constructed as a natural attenuation site. In 1998, a leachate collection and sand filter treatment system was installed to provide additional treatment of leachate. Leachate from the landfill is collected and then filtered through a 1500 m² sand filter bed. The treatment system is effective in reducing concentrations of metals, suspended solids, ammonium and nitrate before being discharged into a wetland.

The recycling services offered by the City meet and exceed Ontario Regulation 101/07. The regulation, made under the *Environmental Assessment Act*, requires any northern community with a population of over 15,000 to provide a blue box program for the collection of recyclables. Recycling services offered by the City of Elliot Lake includes a curbside pickup program and depots for multi-residential units. Curbside pick up is provided bi-weekly for all household paper waste, newsprint and fine paper, telephone books and magazines; box board, corrugated cardboard, aluminum and poly food containers, PET 1, HDPE 2 containers, aluminum foil and clear and colored glass. On average, the City of Elliot Lake generates 7,350 tonnes of waste annually. Approximately, 700 tonnes of waste was diverted in 2006-07 and this number is expected to increase to 1000 tonnes in 2008-09.

At present the City does not have a specific plan to expand its recycling services, but they are committed to continue to meet or exceed MOE waste diversion requirements for the municipal solid waste stream. Potential waste diversion programs which will be identified in developing the City of Elliot Lake Waste Management Plan include increased curbside/depot recycling, composting (backyard and central), waste

¹ "City of Elliot Lake – 2006 Monitoring Report", Earth Tech (Canada) Inc., April 3, 2007.

reduction programs and special waste diversion programs for tires, white goods/scrap metals, etc. Disposal capacity is being sought for only those wastes remaining after diversion.

A Glossary of Terms and Abbreviations that are expected to be frequently used over the course of the EA Study is included in Appendix A. Attached to the Glossary is a comment sheet that the public or agencies can use to request clarification on certain terms or to request additional terms be added. As such, the Glossary will be continually updated over the course of the study.

Figure 1-1. Study Location

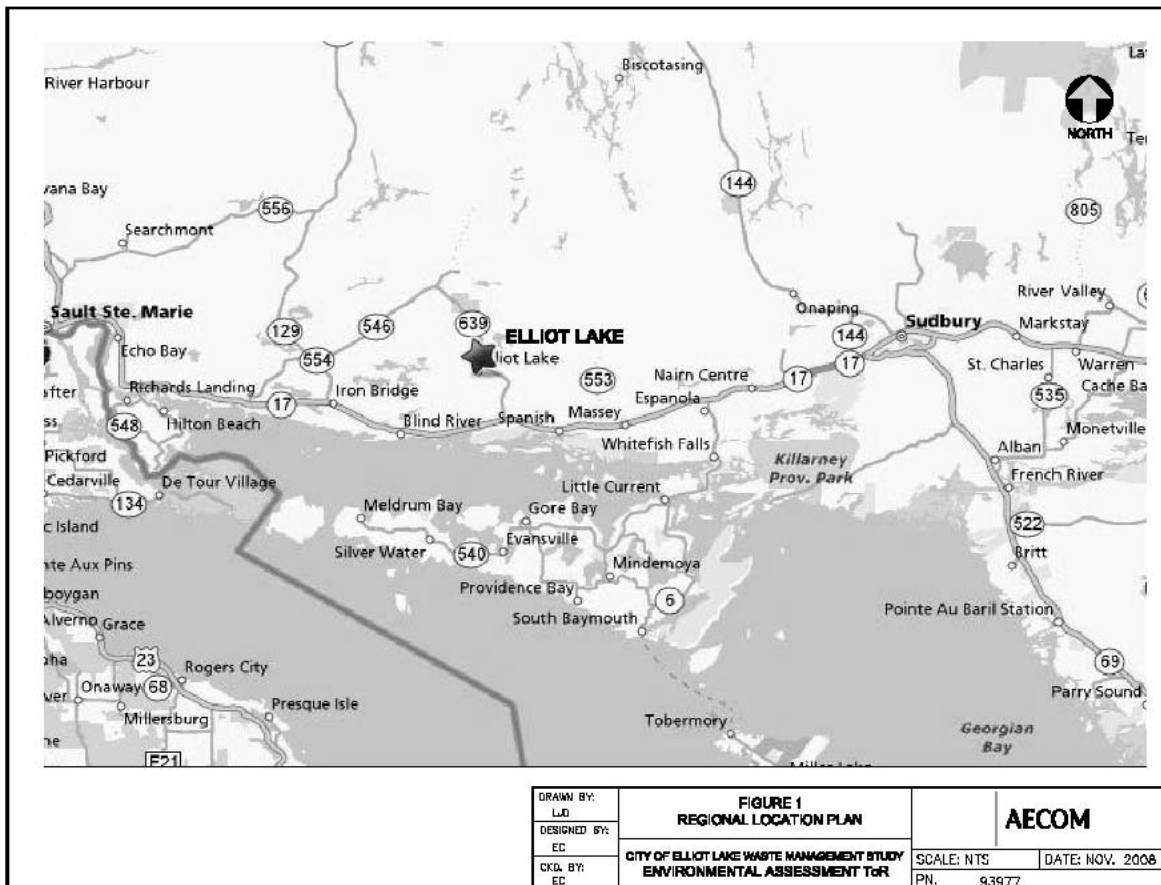
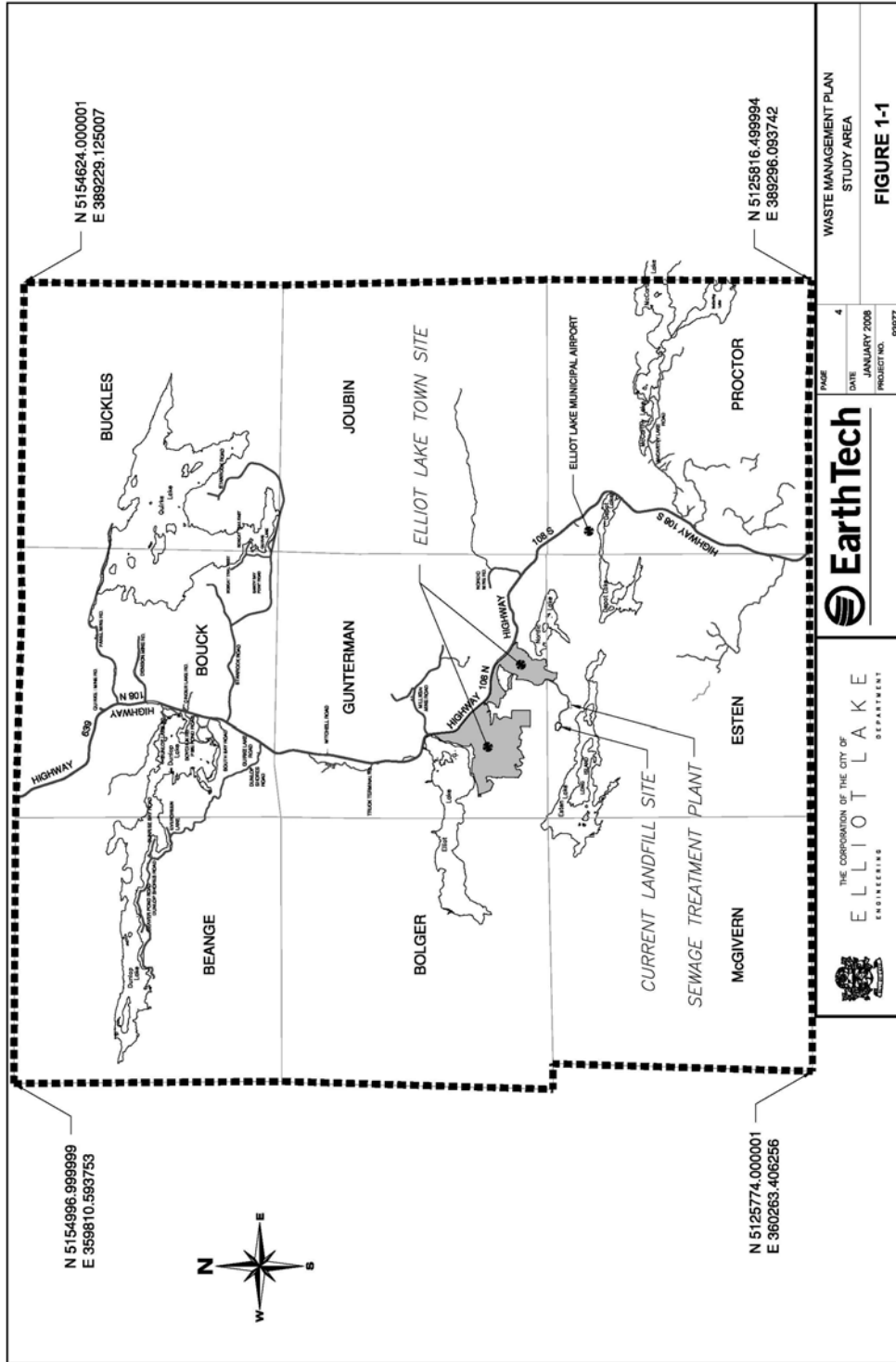


Figure 1-2. Study Area



	PAGE 4 DATE JANUARY 2008 PROJECT NO. 93977	WASTE MANAGEMENT PLAN STUDY AREA FIGURE 1-1
	THE CORPORATION OF THE CITY OF ELLIOT LAKE DEPARTMENT OF ENGINEERING	

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2. Environmental Assessment (EA) Planning Process

The *Environmental Assessment Act* (EAA) planning process applies to most waste disposal facilities established in Ontario. The process requires a proponent to evaluate a reasonable range of alternatives for the purpose of establishing required disposal capacity through what is called an environmental assessment (EA) study. The EA Study involves the evaluation of alternatives - potential solutions - and resulting in the identification of a preferred solution considering a comparison of the advantages and disadvantages to the environment (natural, social, economic) and screening criteria established by the City of Elliot Lake. The EAA requires that two types of alternatives be considered in an EA Study:

1. "Alternatives to" or alternative approaches/technologies and systems to manage residual waste and,
2. "Alternative methods" of carrying out the undertaking (i.e. facility siting).

The scope of these alternatives, which are considered reasonable and which will be evaluated in the EA study, are initially defined in an EA Terms of Reference (ToR). Prior to commencing with the EA Study the City of Elliot Lake's EA ToR must be developed in consultation with the public and requires the approval of the Minister of the Environment. .

2.1 Scope of EA Terms of Reference

This Environmental Assessment Terms of Reference (EA ToR) has been prepared in accordance with the following sections of the Environmental Assessment Act (EAA):

- 6.(1) *Terms of Reference - The proponent shall give the Ministry [of the Environment] proposed terms of reference governing the preparation of an environmental assessment for the undertaking.*
- 6.(2) *Same - The proposed terms of reference must,*
 - (a) *indicate that the environmental assessment will be prepared in accordance with the requirements set out in subsection 6.1(2);...Subsection 6.1(2) states with regards to the content of an environmental assessment:*
- 6.1(2) *Contents - the environmental assessment must consist of,*
 - (a) *a description of the purpose of the undertaking;*
 - (b) *a description of and a statement of the rational for,*
 - (i) *the undertaking,*

- (ii) *the alternative methods of carrying out the undertaking and*
- (iii) *the alternatives to the undertaking;*
- (c) *a description of,*
 - (i) *the environment to be affected or that might reasonably be expected to be affected, directly or indirectly,*
 - (ii) *the effects that will be caused or that might reasonably be expected to be caused to the environment, and*
 - (iii) *the actions necessary or that may reasonably be expected to be necessary to prevent, change, mitigate or remedy the effects upon or the effects that might reasonably be expected upon the environment, by the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking;*
- (d) *an evaluation of the advantages and disadvantages to the environment of the undertaking, the alternative methods of carrying out the undertaking and the alternatives to the undertaking; and,*
- (e) *a description of any consultation about the undertaking by the proponent and the results of the consultation.*

This EA ToR has been organized considering the above requirements and the Ministry of the Environment's code of practice document entitled "*Preparing and Reviewing Terms of Reference for Environmental Assessments in Ontario, June, 2007*". Accordingly, the EA ToR document includes the following:

- Section 1 - Introduction;
- Section 2 - EA Planning Process including Scope of EA Terms of Reference;
- Section 3 - Identification of the Proponent;
- Section 4 - Purpose and Description of the Proposed Undertaking;
- Section 5 - Range of Alternatives to be evaluated in the EA Study;
- Section 6 - Existing Environment and Potential Effects of the undertaking;
- Section 7 - Required Information to start the study;
- Section 8 - Description of the Evaluation Criteria and Methodologies;
- Section 9 - Commitments and Monitoring Strategy;

- Section 10 - Consultation Plan for the Environmental Assessment;
- Section 11 - Study Schedule;
- Section 12 - Modifications to this Terms of Reference;
- Section 13 - Identification of Other Approvals Required; and,
- Section 14 - Environmental Assessment Report and Submission.

Included with this EA ToR, as separate documents, are the results of public consultation undertaken as part of developing the draft EA ToR development.

During the EA process a series of *Background Documents* will be developed in support of the ToR. These background documents will contain the rationale supporting the development of this ToR and the public and agency consultation that the City of Elliot Lake has already undertaken to date. The Background Documents do not form part of the ToR submitted for review and approval by the Minister.

The background documents will include the following:

- Purpose and Need for the Undertaking;
- Consideration of “Alternatives to” the Undertaking;
- Consideration of “Alternative Methods of Carrying Out” the Undertaking;
- Description of Environment Potentially Affected; and,
- Approvals, Policies, Guidelines and Practices Related to the Proposed Undertaking.

3. Identification of the Proponent

The proponents for the proposed ToR and the corresponding EA study are as follows:

The official Proponent lead name is:

The City of Elliot Lake

45 Hillside Drive N.

Elliot Lake, ON

P5A 1X5

Tel: 705-461-7219

Fax: 705-461-7244

Email: publicworks@city.elliottlake.on.ca

Contact: Rob deBortoli, Director of Operations

4. Purpose and Description of the Proposed Undertaking

The purpose of the proposed undertaking is to create a long-term (20 - 25 year) waste management master plan, to commence no later than 2010, that will guide the management of wastes that remain after the application of the at-source waste diversion (reduction, reuse, recycling and composting) programs.

The development of the Master Plan will be guided by the preparation of population and waste generation projections which in turn will be used for waste diversion projections and waste management facility sizing. At-source programs refer to those initiatives undertaken at the source of waste generation (e.g. at home) to eliminate the generation of waste or to divert wastes to an appropriate diversion facility (e.g. separation of recyclable materials from the waste stream by the home owner and placement of the recyclable material in a blue box for curb-side collection).

The following description of the proposed undertaking is for the purpose of initiating the environmental assessment only. It may be refined or altered depending on the findings of the various EA studies. The final description of the proposed undertaking will be included in the EA document submitted for approval of the Minister in accordance with the requirements of Section 6.1(2) (a) of the EA Act.

The proposed undertaking that would be the subject of an EAA approval in accordance with this EA ToR would be a waste management facility or facilities which, at a minimum, would be capable of managing the projected residual wastes that will remain for disposal over the 25-year planning period (starting in 2010 and ending in 2035) after achievement of the municipal diversion objectives.

It should be noted that any policies or programs that support diversion identified for implementation as a result of the "Alternatives to" (i.e. Identification of the Technology) evaluation could be implemented without the need for EAA approval and therefore do not form part of the undertaking description included in this EA ToR. To date, there have been no alternative processing approaches or technologies identified that would totally eliminate the need for landfill capacity within the subject planning period.

4.1 Potential Consideration of Contingency or Surplus Disposal Capacity

After the evaluation of the "Alternatives to" (alternative technologies) and during development of the minimum site size requirement, the need to include excess disposal or processing capacity for future contingencies will be reviewed. At that time, a detailed assessment of the potential of at-source diversion will have been completed and the City will have a better understanding of the performance of their diversion programs. If the addition of capacity to the proposed undertaking is needed, it will be considered in consultation with the public. If, however, it is determined that the preferred alternative may not provide adequate long term disposal or processing capacity, a contingency plan will be developed.

5. Range of Alternatives to Be Evaluated in EA Study

5.1 “Alternatives To” the Undertaking (Alternative Technologies)

5.1.1 Component Approaches and Technologies

During development of the EA ToR a ‘long list’ of all potentially available ways to manage the waste remaining after diversion, or “alternatives to”, were screened for reasonableness and identification in the EA ToR for consideration during the EA. The alternatives identification and screening process were undertaken in consultation with the public. A background document will be provided to explain the rationale for the “alternatives to” that have been included for consideration in the EA Study and for those that have been removed from consideration. The following “alternatives to” the undertaking have been identified for consideration during the EA study:

Table 5-1. Alternatives to the Undertaking

Alternative	Rationale for Inclusion in EA Evaluation:
Thermal Processing	Based on recent industry activity in Ontario (e.g. responses to requests for expressions of interest) and facilities operating in other jurisdictions it is evident that this alternative is reasonably available to address the purpose of the undertaking from both a commercial and technical perspective. This alternative offers best potential for a minimal landfill system.
Biological Processing	This approach is being applied elsewhere including other parts of Canada for a mixed waste stream. This approach offers the potential for a relatively stable landfill with a reduced contaminating lifespan (i.e. length of time that landfill leaches contaminants and therefore generates leachate after closure). Considering proportion of organics remaining in residual waste stream, this alternative may be applicable to addressing the purpose of the undertaking.
Physical Processing	May be considered for the pre-landfill processing of residual waste to remove recyclable materials not captured by curbside programs. This equipment has been applied for a long time in different contexts to increase the capture rate of recyclable materials. May also be considered to pre-process wastes to be managed by biological or thermal processing alternatives to capture recyclable content and improve consistency and mixture of materials for processing.
Landfill	Capable of managing the entire residual waste stream, and is the most common and readily available form of waste disposal.

Alternative	Rationale for Inclusion in EA Evaluation:
Additional At-Source Diversion (the 3R's)	Public consultation regarding this option would be necessary to gauge interest in program participation. A zero waste system is not included with this alternative. This level of diversion is considered not reasonably available to the municipality within its planning timeframe as there are no jurisdictions elsewhere achieving a zero waste system. The municipality also does not have jurisdiction over packaging, which is a significant policy area that can reduce waste.
Export	If waste management facilities and programs can not adequately manage waste within the study area, or if more preferable means of waste management than can be reasonably developed within the study area exist in close proximity, export of waste may be considered.
Do Nothing	Maintain status quo, and allow waste generation to increase. The "Do Nothing" alternative constitutes a baseline alternative to the EA. Its evaluation will contribute to the establishment of the rationale for the undertaking, as required under Section 6.1(2)(b) of the Environmental Assessment Act (EAA).

5.1.2 Consideration of Waste Management Systems

To ensure that all alternatives are considered in the context of cumulative impacts and life-cycle impact analysis, waste management systems will be evaluated rather than independent components. This approach recognizes that municipal waste management solutions require integrated strategies to effectively manage solid waste. For example a landfill component may be added on the back end of the programs and facility(ies) to manage residual wastes. Other examples include the addition of more diversion, by way of other at-source measures or by the addition of physical processing equipment at the front-end or back-end of the facility to capture those materials.

5.2 "Alternative Methods" of Carrying Out the Undertaking (Alternative Sites)

Once the preferred ways of managing the waste or "Alternatives to" are determined, facility sites or "Alternative Methods" may be identified and evaluated in the EA study. This component of the study will consider a range of sites for the purpose of locating a processing and/or disposal facility. A background document will provide the rationale for the process that is proposed for the purpose of locating a processing and/or disposal facility. Siting requirements for a disposal facility will differ from the requirements of a processing facility (thermal, biological or physical processing). For simplicity both processing and disposal facilities will be referred to as waste management facilities for the remainder of the section.

The process of identifying these siting alternatives for a waste management facility will not seek to consider all lands within the study area, but rather, will focus on those unconstrained lands considered

reasonably available and accessible to the City of Elliot Lake. Accordingly, the following types or categories of sites will be considered at the EA evaluation:

- Publicly owned lands that meet the minimum site size and configuration requirements for the type of facility being pursued and that are located in areas that are unconstrained from a land use perspective; and,
- Lands offered by a willing host property owner that exhibit the minimum site size and configuration requirements for the type of facility being pursued and that are located in areas that are unconstrained from a land use perspective.

The only circumstances that would lead to the consideration of privately owned lands not being offered by the property owner (i.e. expropriation) would be a determination, in consultation with the public and MOE, that the first two categories of sites do not present a reasonable range of siting alternatives.

5.3 Waste Management Site Selection Process

The process to select the waste management site(s) will be completed based on a seven-level process. A level represents the term used to describe a major step in the process. Seven levels are proposed and Level One is the development of the waste management site selection process. The product of Level One is the waste management site selection methodology document (WMSSMD) which will be approved by the City of Elliot Lake and the Ministry of the Environment. The following outlines the purpose of each level and the product resulting from that level. The site selection process begins by examining all of the City of Elliot Lake study area. As shown below, the process progressively narrows until one site is identified. The level of effort required at each level of the selection process will be based upon the purpose and potential impacts of the waste management facility / site.

Table 5-2. Waste Management Site Selection

Level	Purpose	Product
Level One	<ul style="list-style-type: none"> Establishes the waste management site selection process 	<ul style="list-style-type: none"> WMSSMD
Level Two	<ul style="list-style-type: none"> Excludes unsuitable lands 	<ul style="list-style-type: none"> Candidate Waste Management Areas
Level Three	<ul style="list-style-type: none"> Identifies boundaries of candidate sites 	<ul style="list-style-type: none"> “Long List” Candidate Waste Management Sites
Level Four	<ul style="list-style-type: none"> Compares “long list” sites to identify more suitable sites 	<ul style="list-style-type: none"> “Short List” Candidate Waste Management Sites
Level Five	<ul style="list-style-type: none"> Obtains more detailed information on the “short list” sites 	<ul style="list-style-type: none"> Results of the Preliminary Field investigation and a Social Impact Assessment, as well a Stage 1 Archaeological Assessment
Level Six	<ul style="list-style-type: none"> Compares “short list” sites to identify the most suitable site(s) for waste management 	<ul style="list-style-type: none"> Preferred Waste Management Site
Level Seven	<ul style="list-style-type: none"> Document the results of the entire process including the public consultation program 	<ul style="list-style-type: none"> Waste Management Site Selection Report

Constraint Mapping involves identifying areas in the study area not suitable for certain waste management facilities, such as areas which comprise Aboriginal land, provincially significant natural communities etc. Constraint mapping is used at Level Two to identify suitable areas and at Level Three to define the boundaries of candidate sites. Candidate sites are then systematically evaluated using qualitative and quantitative evaluation methodologies based on a net effects analysis.

Natural environment field investigations, where appropriate, will be conducted to aid in the evaluation of the “short list” sites with the intent of avoiding significant areas/species and proposed mitigation. Methodology descriptions will be included in the WMSSMD.

As a result of the evaluation and consultation, it may be determined that multiple facilities may be the best solution to the City of Elliot Lake Waste Management Plan. Multiple facilities could, for example, include more than one landfill, processing facility, or transfer station. If multiple facilities are proposed, each facility location would be subject to site specific studies to confirm suitability with the criteria established in the waste management master plan process.

6. Description Of Environment Potentially Affected

The environment that may be affected by a proposed City of Elliot Lake waste management facility is briefly described as follows. The EA will include a detailed description of the environment in the study area, potential environmental impacts to the described environment and methods to manage or mitigate these impacts.

6.1 Natural Environment

Elliot Lake is located on the Canadian Shield and is surrounded by forests and a number of lakes. The local forest is a transitional forest typically comprised of sugar maple, yellow birch, white birch, trembling aspen, white and red pine, white spruce and balsam fir. Moose, black bears, white tailed deer and transitional forest bird species are prominent in the area. Other species present include fur bearers such as beaver, mink and otter, and other predator species such as wolves, and lynx.

The land surrounding Elliot Lake is primarily managed by the Ministry of Natural Resources. There are pockets of land classified as conservation or forest reserve. No Conservation Authorities have jurisdiction within the study area.

6.2 Economic / Financial

The City of Elliot Lake was established in the early 1950's based on serving a large deposit of uranium. For 40 years the municipality thrived on the success of the mining industry until the closure of the mines in the mid 1990's. In order to maintain the City the area has been marketed as a retirement centre and tourism destination. The recreation and cottage industry are growing and are significantly stabilizing the City population and economy.

6.3 Technical / Infrastructure

Elliot Lake is located 26 km north of the TransCanada Highway (Hwy 17) on Highway 108. A local airport provides landing and terminal facilities for charter flights and private aircraft usage. The city is cellular serviced and is connected to a fibre optic cable enabling high speed broadband access for business and residential users. Municipal services include water, sewer, roads and waste management.

6.4 Social / Cultural

The City of Elliot Lake has a population of approximately 11,549 people according to 2006 Census Canada data². The median age is 55 years with 89% of the population over 15. This is a reflection of the number of retirees in the community. Community programs are largely focused on retirement and leisure activities. The Lester B. Pearson Civic Centre offers residents access to community theatre, fine arts and includes the Elliot Lake Nuclear and Mining Museum. Main employers include government agencies, health care, the retail industry and emerging tourism/recreation. The community has a high percentage of bilingual residents (26.6%) compared to the national average (17.7%). Approximately 7% of the population identify themselves as Aboriginal.

6.5 Legal / Jurisdictional

The City of Elliot Lake is governed by an elected mayor and city council.

² Statistics Canada. 2007. *Elliot Lake, Ontario (table). 2006 Community Profiles*. 2006 Census. Statistics Canada Catalogue no. 92-591-XWE. Ottawa. Released March 13, 2007.
<http://www12.statcan.ca/english/census06/data/profiles/community/Index.cfm?Lang=E> (accessed February 13, 2008).

7. Data Collection

The following presents a list of required information to start the plan:

Table 7-1. Data Collection

Requested Information		Availability
A.	Aerial Photo Base	
1.	Up-to-date electronic aerial photo base	Aerial photographs are available through NRCanada http://airphotos.nrcan.gc.ca/index_e.php .
2.	Outline of vegetation and place names for significant land use features	Digital boundary information for some significant wetlands, terrestrial areas and wildlife sensitive areas are available through the Ministry of Natural Resources.
3.	Same as above for topographic mapping including contours, watercourses.	Digital Ontario Base Maps (scale 1:20,000 are available.
B.	Certificates of Approval	
4.	Certificates of Approval for all waste management facilities/systems	The CofA for the current landfill is available through the City of Elliot Lake.
C.	Other Facilities and Firms	
5.	Prepare list based on determined distance from City: <ul style="list-style-type: none"> - Landfills - Recycling Centres - HHW Depots 	Information to complete this task can be collected via a variety of sources (i.e. Request For Information).
6.	Same as above for waste management firms.	Same as above.

Table 7-2. Secondary Sources

Category	Information Sources	Table of Contents
Landfill Site		
	Design Report and Environmental Monitoring Program Contingency Plan for Leachate. M.J. Perkins, City of Elliot Lake Engineer. February 1984.	<ul style="list-style-type: none"> o Introduction o Site Preparation o Scheduling o Operation o Closure <p>Appendices</p> <p>Figure 1: Annual Cell No. 1 Figure 2: Annual Cell No. 2 Figure 3: Annual Cell No. 3 Figure 4: Annual Cell No. 4 Figure 5: Annual Cell No. 5 Figure 6: First Five Year Cell Figure 7: Final Contours Closure Plan Total Volume</p> <p>Environmental Monitoring Program</p> <ul style="list-style-type: none"> o Introduction o Gas Movement o Groundwater o Drainage Stream - Surface Water
	1993-1994 Monitoring Report Sanitary Landfill Site City of Elliot Lake. Trow Consulting Engineers Ltd. June 1995	<ul style="list-style-type: none"> o Background and Study Scope o Monitoring Station Summary o Groundwater Chemistry o Surface Water Chemistry o Impact Assessment o Summary and Recommendations o Observation Well Locations <p>Appendices</p> <p>A: Water Chemistry Data B: Groundwater and Leachate Chemistry Summary C: Background and Surface Water Chemistry Summary D: Policy 15-08 Analysis E: Geochemical Trend Analysis</p>
Landfill Site		
	2005 Annual Monitoring Report City of Elliot Lake. Earth Tech Canada, June 2006.	<ul style="list-style-type: none"> o Introduction Background o Physical Site Setting o Water Quality Monitoring Program o Groundwater Quality o Surface Water Quality o Conclusions o Recommendations <p>Appendices</p> <p>A: Certificate of Approval B: Site Design and Operations Plan C: Site Hydrogeological Investigation D: Analytical Reports E: Summary of Ground and Surface Water Quality Data F: Sampling Protocol G: Groundwater, Leachate and Surface Water Monitoring Parameters</p>
Zoning & By-Law and Official Plan for the City of Elliot Lake		

Category	Information Sources	Table of Contents
Provincial Policy Statement (2005)		
	Provincial Policy Statement (2005). Ontario. Ministry of Municipal Affairs and Housing	<ul style="list-style-type: none"> ○ Specifically Section 1.6.8. Waste Management
Certificates of Approval		
	Provisional Certificate of Approval, Waste Disposal Site MOE, September 1982.	<ul style="list-style-type: none"> ○ No. A560810 Notice No. 1
Waste Management Studies		
	The City of Elliot Lake Waste Management Study, Earth Tech Canada, December 2002	<ul style="list-style-type: none"> ○ Introduction ○ Municipal Waste Profile ○ Waste Collection ○ Recycling Services ○ Organic Waste Stream ○ Special Waste Collection/Disposal/Recycling ○ Waste Disposal ○ Waste Management Funding ○ Conclusions ○ Recommendations <p>Appendices:</p> <ul style="list-style-type: none"> A: Request for Proposal B: Certificates of Approval - Existing Waste Disposal Sites C: Design Report - February 1984 D: 1993-1994 Monitoring Report - Trow Consulting Engineers Ltd. E: Geophysical Survey of Elliot Lake Landfill F: Post-Closure Care Costs
Geophysical Studies		
	Letter from MOE (June 22, 1998) summarizing Geophysical survey of Elliot Lake Landfill	<ul style="list-style-type: none"> ○ Introduction ○ Survey Results ○ Conclusions <p>Appendices:</p> <ul style="list-style-type: none"> Figure 1: EM Conductivity Survey (1-2m) Figure 2: EM Conductivity Survey (3m) Figure 3: EM Conductivity Survey (6m)
Hydrogeological Studies		
	Hydrogeological Investigation of Proposed Town of Elliot Lake Landfill. Morrison Beatty Limited, February, 1980.	<ul style="list-style-type: none"> ○ Introduction ○ Investigations and Site Instrumentation ○ Physical Setting ○ Water Resources ○ Landfill Impacts ○ Summary and Conclusions ○ Recommendations <p>Appendices:</p> <ul style="list-style-type: none"> A: Observation Well Logs and Construction Details B: Grain-Size Curves
Noise Guidelines		
	Noise Guidelines for Landfill Sites. Ontario, Ministry of the Environment. October 1998.	<ul style="list-style-type: none"> ○ Scope ○ References ○ Technical Definitions ○ Measurements ○ Sound Level Limits ○ Off-Site Vehicles ○ Required Information

Category	Information Sources	Table of Contents
	NPC-205 – Sound Level Limits for Stationary Sources in Class 1 & 2 Areas (Urban). Ontario, Ministry of the Environment. October 1995. (*)	<ul style="list-style-type: none"> ○ Scope ○ References ○ Technical Definitions ○ Establishment of Limits – Objective ○ Background Sound Levels ○ Sound Levels Due to Stationary Sources ○ Procedures ○ Sound Level limits – General ○ Sound Level limits – Specific Impulsive Sounds ○ Sound Level limits – Pest Control Devices ○ Pre-Emption ○ Exclusion Appendices: A.1. General A.2. Application A.3. Stationary Sources A.4. Predictable Worst Case Impact A.5 Definitions
	NPC- 232 - Sound Level Limits for Stationary Sources in Class 3 Areas (Rural). Ontario, Ministry of the Environment. October 1995. (*)	<ul style="list-style-type: none"> ○ Scope ○ References ○ Definitions ○ Establishment of Limits – Objective ○ Background Sound Levels of the Natural Environment ○ Sound Levels Due to Stationary Sources ○ Procedures ○ Sound Level limits – General ○ Sound Level limits – Specific Impulsive Sounds ○ Sound Level limits – Pest Control Devices ○ Pre-Emption ○ Exclusion Appendices: A.1. General A.2. Application A.3. Stationary Sources A.4. Predictable Worst Case Impact ○ A.5 Definitions

*Note – These documents should be references for any stationary noise source such as any non-landfill alternative, along with some ancillary activities which might take place at a landfill operation including:

- Facilities for reception, storage and processing of waste,
- Equipment used in the processing of the waste (e.g. crushers, grinders),
- Ventilation equipment utilized in the subject buildings,
- Off-site source vehicles while on site.

8. Evaluation Methodologies and Criteria

8.1 Comparative Evaluation of “Alternatives To” the Undertaking

The evaluation of the ways to manage the waste remaining after diversion (“alternatives to” the undertaking) will be a comparison of the advantages and disadvantages associated with each alternative which, in turn, will be defined using a net effects analysis. The step-by-step methodology for use of a net effects analysis of “alternatives to” in the City of Elliot Lake Waste Management Plan is described as follows:

- Step 1 - The component alternatives will be assembled into a range of alternative proposed waste management systems with each system being capable of managing all of the residual waste stream;
- Step 2 - Data collection will be undertaken to apply each of the comparative evaluation criteria to the alternative proposed waste management systems. The proposed system comparative evaluation criteria are included in Appendix “B” of this EA ToR. Suggested indicators and data sources will be included in the background documents and may be adjusted at the initiation of this EA evaluation based on input received from agencies and the public.
- Step 3 - The evaluation criteria will be applied to each of the proposed waste management systems and potential impacts will be identified.
- Step 4 - Each of the potential effects identified at Step 3 will be considered with respect to the availability of measures to mitigate (i.e. measures that may be applied to reduce or eliminate impacts) or enhance (measures that may be applied to improve or increase the magnitude of a benefit or positive effect) the effects, and to identify the residual or ‘net effects’.
- Step 5 - The net effects associated with each proposed waste management system under each comparative criterion will be compared and a list of relative advantages and disadvantages associated with each alternative proposed waste management system will be developed; and,
- Step 6 - The relative advantages and disadvantages of each alternative proposed waste management system in the context of priorities established in consultation with the public will be examined and the preferred system will be selected. The preferred system will exhibit the preferred balance of advantages and disadvantages accounting for the significance of environmental categories and criteria established by the public.

The background documents to be developed will provide additional information on the development of the proposed “alternatives to” evaluation methodology and it’s development.

8.1.1 Review of Proposed “Alternatives to” Evaluation Methodology and Criteria

Prior to initiation of the evaluation of “Alternatives to” the undertaking, the proposed evaluation methodology and criteria will again be reviewed in consultation with the public and government review agencies. This review will again seek input on the proposed evaluation steps and evaluation criteria presented in the EA ToR and will seek to confirm the priorities to be considered during the evaluation.

8.2 Screening and Comparative Evaluation of Alternative Methods of Carrying Out the Undertaking

The evaluation of “alternative methods” of carrying out the undertaking will be comprised of a facility site selection process. Site selection will start with a review of the entire study area to identify those areas considered un-constrained from the stand-point of locating a processing and/or disposal facility. These available areas will then be systematically evaluated to identify a long-list of sites followed by additional screening and comparative steps to narrow that list down to a preferred siting option. The following describes the major steps in this evaluation process:

- Step 1- Apply siting constraints to entire study area and identify those lands considered un-constrained for the siting of a processing and/or disposal facility. The proposed siting constraints are included in Appendix “C” – Table C-1. Lands within the study area which are constrained by any of the exclusionary criteria would be screened out for the purpose of moving forward in the site selection process.
- Step 2 - Identify a minimum site size requirement for the type of facility to be sited based on the preferred alternative selected.
- Step 3 - Identify a “long-list” of siting opportunities in the un-constrained lands through a review of publicly owned lands and the issuance of a request for “willing host” properties. Review the “long-list” of sites to ensure that a reasonable range of alternatives are included on the list (e.g. sites in both municipalities, sites in both an urban and rural setting, etc.).
- Step 3(b) - *Optional.* If it is determined that there is not a reasonable range of siting opportunities on the “long-list”, then a review of privately owned lands in the study area would be undertaken to identify additional siting opportunities with the same or better attributes than those publicly owned and “willing host” sites on the list. The owners of identified properties would be approached to determine if a negotiated acquisition of the property is feasible.
Review the “long-list” of sites to ensure that a reasonable range of alternatives are included on the list.

- Step 3(c) - *Optional.* If it is still determined that there is not a reasonable range of siting opportunities on the “long-list”, then the constraints applied at Step 1 would be reviewed and relaxed in consultation with the public and government agencies. Steps 2 and 3 and, if necessary, 3(b) would then be re-applied. Step 3(c) would be repeated, as required, to arrive at a reasonable “long-list”.
Only if absolutely necessary, the expropriation of privately held lands would be considered. This would be the approach of last resort for the purpose of siting a facility.
- Step 4 - As a rule-of-thumb, a “long-list” site evaluation will be carried out if there are more than three (3) sites remaining after the application of siting constraints and consideration of available siting opportunities. The purpose of this level of evaluation is to eliminate less preferred sites from the list of sites under consideration using broad-based technical, economic and social criteria. The proposed “long-list” evaluation criteria are included in Appendix “C” - Table C-2. Their application would result in the identification of a “short-list” of alternative sites.
- Step 5 - Evaluate the “short-list” of alternative sites using the same net effects analysis methodology described in Section 7.1 for the evaluation of “Alternatives to” resulting in the identification of a siting preference. The “short-list” comparative evaluation criteria are included in Appendix “C” - Table C-3.

The background document that will be developed will provide additional information on the development of the proposed “alternative methods” of carrying out the undertaking evaluation methodology and its development.

8.2.1 Review of Proposed “Alternatives Methods” Evaluation Methodology and Criteria

Prior to initiation of the evaluation of “Alternatives Methods” and after a preferred approach (“alternative to”) has been identified by the EA study, the proposed evaluation methodology and criteria will again be reviewed in consultation with the public and government review agencies. This review will seek input on the proposed evaluation steps and evaluation criteria presented in the EA ToR and will seek to confirm the priorities to be considered during the evaluation.

8.3 Application of a Competitive Request for Proposal (RFP) Process

An RFP process may be used to select a vendor to the preferred technology (“Alternative To”) following the selection of a preferred site. This RFP will request firm price proposals for a facility to be developed on the identified site. In addition to this “base bid” proposal request, vendors may be offered the option of proposing their technology on their own site. Any site offered at this stage would have to meet certain minimum specified requirements such as being located in Ontario. If any additional acceptable sites were offered at this stage in the process they would be compared with the preferred site using the comparative process set out in section 7.2. Following this comparison an overall preferred vendor and site would be selected.

8.4 Confirmation of the Proposed Undertaking

When screening alternatives at the EA stage, broad criteria will be used to short list projects. To determine the preferred alternative from the short listed projects, technical analysis will be used to allow the proponent to make an informed selection. The level of study required will be determined by the complexity of the alternatives, the potentially impacted environment, and the comparability of the alternatives.

To establish and operate a solid waste management facility, the Environmental Protection Act (EPA) requires that a Provisional Certificate of Approval be obtained. Detailed investigations will be completed at the preferred site, once selected, to satisfy the requirements of the EPA, to obtain a Certificate of Approval, and to confirm the suitability of the proposed facility on the proposed site. The requirements of Section 53 Ontario Water Resources Act (OWRA) should also be considered for the establishment of stormwater management facility and leachate collection, treatment, and disposal facility.

The scope of detailed studies to be undertaken will depend on the type of facility being established and the nature of the site location and its conditions. A detailed work program will be developed once the preferred site is selected and will be prepared in consultation with the public and relevant government agencies. The background document will identify a potential scope of studies that could be completed at the preferred site.

9. Commitments to Address Identified Issues and Prepare a Monitoring Strategy

During the course of developing and approval of the ToR, any commitments made, and how these commitments will be met, will be summarized for inclusion in the EA. The EA will also include a comprehensive list of commitments made during the development of the EA, that may include:

- Impact management measures;
- Additional works and studies to be carried out;
- Monitoring;
- Public consultation and contingency planning;
- Documentation and correspondence.

Over the course of the study and the application of evaluation criteria, potential effects and mitigative requirements will be identified for the proposed undertaking. It is noted that these considerations will be defined based on supporting EA studies. Accordingly, over the course of completing the EA study, the City of Elliot Lake will review the current monitoring strategy and schedule to assess potential effects and the performance of mitigative measures. Under the EA a monitoring framework will be developed that considers all phases of the identified undertaking, and may include monitoring to ensure compliance and/or effects on the environment.

10. Consultation Plan for the Environmental Assessment

This section describes a general consultation plan which is intended to guide the consultation process over the course of the EA Study. It includes reference to the types of parties to be consulted over the course of the study and the scope of consultation to be undertaken at various milestones during the study. Provision is also made for issues resolution which could be applied during the study.

10.1 Parties to be Consulted during EA Study

In general, there are three types or categories of parties to be consulted over the course of the EA Study. These are:

- **Government and Agencies** which represent the interests and mandate of various governmental departments, ministries and agencies potentially affected by the outcome of the EA Study. A Government & Agency Review List has been established for the study and is included as an appendix of this EA ToR.
- **General Public** which includes all residents, landowners and businesses within the study area which may have a broad or general interest in the study or that may be directly affected by the study outcome. Over the course of the EA ToR development, a contact list of those individuals and groups expressing interest in the study will be compiled and will be updated as the study proceeds. The general public will be contacted through means of media, website and public notices. The list of media to be used for public notice will be included in the Consultation Record supporting the EA.
- **Aboriginal Peoples** potentially impacted or interested in the undertaking will be identified through contact with the agencies listed on the MOE's website³, including such agencies as Department of Indian and Northern Affairs, Ministry of Aboriginal Affairs, local bands and tribal councils. All public documents will be circulated to the interested aboriginal groups, including the ToR for their review and comment. All comments will be recorded and addressed in the Consultation Record supporting the EA.

By way of a Communications Strategy developed for the study (see Section 10.2) and future study consultation events, the above lists of parties to be consulted will be continually updated over the course of the EA Study.

³ "Government Review Team List for Aboriginal Information"
http://www.ene.gov.on.ca/envision/env_reg/ea/english/General_info/GRTLlist.htm

10.2 Scope of Consultation at Study Milestones

Over the course of the EA Study, it is anticipated that the scope of consultation events will move from initiatives and events addressing and seeking input from the larger community to a program that is more focused on the individuals and community with the greatest potential to be impacted by the proposed undertaking. The following outlines the minimum scope of consultation associated with the various study milestones.

Table 10-1 - Consultation Activities

Study Milestones	Minimum Scope of Consultation Activities
<ul style="list-style-type: none"> ➤ Prepare ToR 	<p>Newsletter to the public to initiate the development of the ToR. Open houses for the general public, municipal elected official and City staff. Circulation of the ToR to the Government Review team (GRT) for comment. Posting of the ToR on the City's Web site with instructions on how to submit secure comments.</p>
<ul style="list-style-type: none"> ➤ Initiate EA Study 	<p>General Public Notices and Website to inform general public and agencies on overall scope of Study with instructions on how to submit secure comments.</p>
<ul style="list-style-type: none"> ➤ Identify Alternative Waste Diversion Strategies and Waste Disposal Options 	<p>Open houses for the general public and intended to obtain input on alternative waste diversion strategies and waste disposal options. Meeting notices and notes to be posted on website for information.</p>
<ul style="list-style-type: none"> ➤ Evaluate Alternative Waste Diversion Strategies ➤ Select Preferred Approach to Manage Residual Wastes ➤ Evaluate Long List of Disposal Options and Reduce to a Short List 	<p>Focused events such as workshops or 'step-specific' open houses open to the general public will inform and receive input about the evaluation process. Meeting notices and notes to be posted on website for information.</p>
<ul style="list-style-type: none"> ➤ Evaluate Short List of Waste Disposal Options and Select Preferred Option 	<p><u>At Identification of Short List:</u></p> <p>Open House / Public Meeting type events open to the general public and intended to notify and receive input on the process leading to selection of the short list sites (i.e. study area to suitable areas to long list to short list).</p> <p><u>At Evaluation of Short List:</u></p> <p>Open House or Public Meeting type events open to the general public but focused on the communities surrounding the short list sites for the purpose of identifying community-specific issues and information regarding the respective sites.</p> <p><u>At Identification of Preferred Site:</u></p> <p>Focused information sessions with community / residents potentially impacted by site to inform and exchange information regarding site specific issues, next steps in process, and opportunities to discuss / resolve concerns.</p> <p>General public notice of selected preferred site. Meeting notices and minutes to be posted on website for information.</p>

Study Milestones	Minimum Scope of Consultation Activities
<p>➤ Complete Site Specific Studies to Confirm Suitability and Documentation to Support Approvals</p>	<p>Provision of opportunity to form a Site Liaison Committee consisting of resident, agency and other interest representatives to review and provide input on site specific studies.</p> <p>Focused information sessions with community / residents potentially impacted by site to obtain input on study methodologies and to inform and exchange information regarding study results, design and operational implications, and supporting documentation.</p> <p>Meeting notices and notes to be posted on website for information.</p>

10.2.1 Communications Strategy

To effectively disseminate information on the study and to provide opportunities for the public and agencies to provide specific or general input to the study, the City of Elliot Lake have developed this communications strategy. Elements of the Communications Strategy will include the development and issuance of public advisories including a newsletter series, press releases, website, and the provision of a range of avenues for communication between the public and study representatives. A special effort will be provided to communicate with the Aboriginal community. The communication strategy will be maintained and updated, as required for the entirety of the study.

10.2.2 City of Elliot Lake Waste Management Newsletter

A City of Elliot Lake Waste Management newsletter series will be developed and circulated (assessment roll mailing list and others) and posted on the web site during study milestones. The content will include:

- Details on the Initiation of Consultation for the ToR
- Announcement of EA study;
- Problem/opportunity statement - justification for project;
- Identification and evaluation of diversion and disposal options and strategies;
- Study schedule, upcoming consultation activities; and
- Who to contact for more information/provide update.

The newsletter will be mailed out upon project initiation, upon completion of draft ToR, prior to all Public Information Centres (PICs) and at the notice of completion stage. In addition, information posters announcing the study and upcoming consultation activities will be strategically placed throughout the

communities using municipal offices, community centres, local businesses, post offices and the library. All information distributed in the community will also be available on the City's web site.

10.2.3 Public Information Centre

A series of up to four (4) PIC's will be convened in the City of Elliot Lake. Presentation materials at the PICs may include display panels and PowerPoint presentations to clearly communicate information on the issues/topics that the public is being asked to provide feedback on. The PIC content will be guided by the technical work program task and potential workshop outputs. The input received from the PICs will be documented in a report format that can be provided to participants and will facilitate the use of public feedback in the study process.

10.2.4 Meetings/Presentations

It is proposed that up to seven (7) meetings will be held with the Public Services Committee to review the information obtained based on the completion of all work program tasks and the results of the PICs. The Public Services Committee is composed of three councilors and the mayor, as well as a member of the administration as who acts as a resource and committee secretary.

10.2.5 Project Website

A project website will be developed during the ToR stage as a part of the City of Elliot Lake's existing website. This site will be used to disseminate information regarding up coming meetings, meeting minutes, public communications and documents related to the project. It will host the ToR and other approved documents with instructions of how to submit secure responses.

10.3 Issues Resolution

Over the course of the study it is expected that issues will arise that require resolution either before moving from one step to the next or prior to the issuance of approvals. It will be the City of Elliot Lake's preference to resolve issues as they arise and without the assistance of an outside party. However, should this approach not work, the use of a facilitator to negotiate a resolution or use of the EAA's mediation provisions will be considered. It is recognized that unresolved issues could be referred to the Province's Environmental Review Tribunal which would make a decision on approval of the undertaking and that unresolved issues could have a bearing on that decision and that conditions of approval could be imposed to deal with certain issues.

11. Estimated Study Schedule

The following presents an estimated study schedule from the time of this EA ToR preparation to implementation of a proposed undertaking. This schedule will be updated as study steps and implementation activities are completed.

Table 11-1 - Study Schedule

Project Milestone	Estimated Timeframe
➤ Prepare EA Terms of Reference	June 2006 to October 2007
➤ Submit EA ToR to MOE for Approval	November 2008 to March 2009
➤ Initiate EA Study	April 2009
➤ Evaluate "Alternatives to" the Undertaking (i.e. Technologies)	April 2009 to October 2009
➤ Select Preferred Approach to Manage Residual Wastes	November 2009 to March 2010
➤ Evaluate "Alternative Methods" of Carrying Out the Undertaking (Landfilling/Processing)	April 2010 to October 2010
➤ Select Preferred Site	November 2010 to April 2011
➤ Complete Site Specific Studies to Confirm Suitability and Documentation to Support Approvals	May 2011 to October 2011
➤ Submit EAA Application to Minister for Approval	December 2011
➤ EA Review and Approval	January 2012 to June 2012
➤ Additional Approvals and Implementation	2012+

12. Modifications to This Terms of Reference

In the course of carrying out the work contemplated by this ToR, the City of Elliot Lake may determine that minor modifications to the approaches and methodologies described herein are necessary or appropriate. Minor modifications may include additional information, studies or consultation methods/events to address concerns expressed by the public as study results become available or adjustments to the sequence / overlap of study events which may become available depending on study results and circumstances.

These modifications may include, but are not limited to, the following:

- Additional partnerships;
- Additional problems and opportunities;
- Additional alternatives;
- Revisions to the study area;
- Additional evaluation criteria;
- Additional evaluation methodologies utilized to select the preferred planning alternatives and/or alternative method;
- Additional and/or expanded studies to ensure that the nature and magnitude of potential effects area accurately identified and mitigated;
- Additional consultation activities; and
- Examination of additional environmental effects.

This ToR is written based on current information and is meant as guideline of methods and steps to be followed in the EA process based on the intent or purpose of the undertaking. As new information arises and circumstances change during the course of the EA, significant changes to the presented methodology may be necessary, and will be discusses with the Minister. Details with regards to the methods or steps to be followed to achieve the intent or purpose of the consideration will be included in the background documentation which is not approved by the Minister. For example, data sources and specific indicators for the evaluation criteria are not included in the ToR but may be reviewed in the background documents if a party is interested in the types of considerations for application of the evaluation criteria.

Where minor modifications are contemplated, such modifications will be undertaken at the direction of the City of Elliot Lake and in consultation with the public and relevant agencies, and the MOE.

13. Identification of Other Approvals Required

EAA and EPA approvals required for each alternative will be identified as appropriate. Also, any further approvals for the preferred undertaking will be identified in the EA. For example, these could include:

- a) Fisheries Act - Department of Fisheries and Oceans
- b) Federal/Provincial EA Co-ordination
- c) Lakes and Rivers Improvement Act - Ministry of Natural Resources
- d) Permit to Take Water - Ministry of Environment
- e) Section 53 Ontario Water Resources Act (OWRA) Certificate of Approval to Construct Sewage Works for stormwater and leachate management - Ministry of the Environment
- f) Certificate of Approval for Air - Ministry of the Environment
- g) Certificate of Approval for Noise - Ministry of the Environment
- h) Local Approvals (noise bylaws, road closures, tree removals, site alterations, etc.) - local municipalities
- i) Ontario Realty Corporation (ORC) Class EA - ORC
- j) Easement over ORC managed lands - ORC

13.1.1 Federal/Provincial EA Coordination

The proposed undertaking is subject to the requirements of the Ontario EA Act. The requirements of the Canadian Environmental Assessment Act (CEAA) may also apply. As a result, the proponent will work in a coordinated way with the provincial and federal governments to satisfy both levels of environmental legislation pursuant to the Canadian-Ontario Agreement on EA Cooperation (November, 2004).

In order to ensure an effective and efficient coordination of the provincial and federal EA processes, a project description will be prepared in a timely fashion for circulation to federal authorities to determine if there is trigger under CEAA.

The intent is to produce a single EA body of documentation on environmental effects to meet all of the information needs of both the federal and provincial governments. To the extent practical, federal/provincial information requirements regarding potential factors to be assessed in the context of this study have been integrated. General information requirements under CEAA will be found in Supporting Documents.

14. Environmental Assessment Report and Submission

An EA Report will be prepared at the conclusion of the individual EA to document the environmental assessment undertaken in accordance with the approved ToR. At a minimum, the EA report will fulfill the requirements set out in subsection 6.1(2) of the EA Act.

A draft of the EA Report will be made available for agency/public review prior to formal submission to the Ministry of the Environment (MOE). The purpose of the pre-submission review is to obtain comments on the contents of the EA report before submitting it formally to the Minister for review and approval. Similar to the ToR, the draft EA will be available for public review at the proponent's offices, area municipal offices and libraries, and on the project website.

Subsequent to the pre-submission review and incorporation of any comment received, the EA Report will be formally submitted to the Minister for review and approval. MOE will then undertake a formal public and agency review process for the EA report.

Appendix A

The City of Elliot Lake Waste Management Plan Glossary of Frequently Used Terms and Abbreviations

GLOSSARY OF FREQUENTLY USED TERMS

A7 Air Emission Guidelines: Air emission guidelines developed by the Ministry of the Environment (MOE) to govern combustion and air pollution control requirements for new municipal waste incinerators in the Province of Ontario.

Aerobic Treatment: Treatment of organic waste with access to/addition of oxygen (e.g. windrow composting).

Air Emissions: for stationary sources, the release or discharge of a pollutant from a facility or operation into the ambient air either by means of a stack or as a fugitive dust, mist or vapour.

Alternative Disposal Technology (ADT): Technologies, other than landfill, capable of disposing municipal waste (e.g. incineration, EFW, gasification, pyrolysis, etc.).

Anaerobic Treatment: Treatment of organic waste without access to/addition of oxygen (e.g. anaerobic digestion)

Anaerobic Decomposition: Reduction of the net energy level and change in chemical composition of organic matter caused by microorganisms in an oxygen-free environment.

Anaerobic Digestion (AD): See definition for anaerobic treatment. Anaerobic treatment method for waste through which biogas is formed from the decomposition of the organic stream.

Approved Site or facility: A landfill site or waste management facility with a valid Certificate of Approval.

Ash: The mineral content of a product remaining after complete combustion (see 'bottom ash' and 'fly ash').

'At-Source': referring to a waste minimization or management activity at the source of waste generation (e.g. at the household, at the business, etc.)

Baling: Compacting solid waste into blocks to reduce volume and simplify handling.

Biocell: A cell in which organic waste is decomposed biologically in an aerobic process and landfill gas is extracted.

Biodegradable: Capable of decomposing under natural conditions.

Biogas: Gas formed during the anaerobic decomposition of organic material, mainly consisting of methane and carbon dioxide.

Biological Treatment: A treatment technology that uses bacteria to consume organic waste.

Bottom Ash: The non-airborne combustion residue from burning pulverized coal in a boiler; the material which falls to the bottom of the boiler and is removed mechanically; a concentration of non-combustible materials, which may include toxins.

Briquetting: The compaction of waste into small bricks to be burned in an incinerator. Bricks are easier to manage and have a higher calorific value than regular uncompacted waste.

British Thermal Unit (BTU): Unit of heat energy equal to the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit at sea level.

Buffer Area: That part of a landfilling site that is not a waste fill area.

Bulky Waste: Large items of waste materials, such as appliances, furniture, large auto parts, trees, stumps.

Calorific Value: The amount of heat produced by a specific material type when combusted under specific conditions. Calorific Value is usually expressed in Calories or Joules per kilogram (ie. Cal/Kg or J/Kg).

Candidate Site: Property identified as suitable for consideration as a potential site for a waste management facility.

Carbon Monoxide (CO): A colorless, odorless, poisonous gas produced by incomplete fossil fuel combustion.

Carcinogenic: Capable of causing the cells of an organism to react in such a way as to produce cancer.

Catalyst: A substance that changes the speed or yield of a chemical reaction without being consumed or chemically changed by the chemical reaction.

Cells: Holes where waste is dumped, compacted, and covered with layers of dirt on a daily basis.

Certificate of Approval: A license or permit issued by the Ministry of the Environment for the operation of a waste management site/facility.

Class Environmental Assessment (EA): A planning process for an approved group of projects that are carried out routinely and have predictable and mitigatable effects.

Cogeneration: The consecutive generation of useful thermal and electric energy from the same fuel source.

Combustion: 1. Burning, or rapid oxidation, accompanied by release of energy in the form of heat and light. 2. Refers to controlled burning of waste, in which heat chemically alters organic compounds, converting into stable inorganics such as carbon dioxide and water.

Combustion Chamber: The actual compartment where waste is burned in an incinerator.

Combustion Product: Substance produced during the burning or oxidation of a material.

Commercial Waste: All solid waste emanating from business establishments such as stores, markets, office buildings, restaurants, shopping centers, and theatres.

Compactor: Tracked vehicle used to crush and compact waste at a landfill, to reduce volume.

Compost: The relatively stable humus material that is produced from a composting process in which bacteria in soil mixed with garbage and degradable trash break down the mixture into organic fertilizer.

Composting Facilities: 1. An offsite facility where the organic component of municipal solid waste is decomposed under controlled conditions; 2. an aerobic process in which organic materials are ground or shredded and then decomposed to humus in windrow piles or in mechanical digesters, drums, or similar enclosures.

Composting: The controlled biological decomposition of organic material in the presence of air to form a humus-like material. Controlled methods of composting include mechanical mixing and aerating, ventilating the materials by dropping them through a vertical series of aerated chambers, or placing the compost in piles out in the open air and mixing it or turning it periodically.

Construction and Demolition Waste (C&D): Waste building materials, dredging materials, tree stumps, and rubble resulting from construction, remodeling, repair, and demolition of homes, commercial buildings and other structures and pavements. May contain lead, asbestos, or other hazardous substances.

Contingency Plan: A plan developed to be implemented should some aspect of the project need to be altered or some aspect of the operation fail (i.e. "Plan B").

Cover Material: Material used to cover compacted solid waste in a sanitary landfill, typically soil. Alternatives to soil are now being investigated, including non-hazardous ash from incinerator facilities.

Design and Operation (D&O): A document (plan/report), required for obtaining a Certificate of Approval, which describes in detail the function, elements or features of a landfill site/facility, and how a landfill site/facility would function including its monitoring, and control/management systems.

Digestion: The biochemical decomposition of organic matter, resulting in partial gasification, liquefaction, and mineralization of pollutants.

Disposal: Final placement or destruction of wastes. Disposal is typically accomplished through use of approved sanitary landfills or incineration with or without energy recovery.

Disposal Facilities: Repositories for solid waste, including landfills and combustors intended for permanent containment or destruction of waste materials. Excludes transfer stations and composting facilities.

Diversion Rate: The percentage of waste materials diverted from traditional disposal such as landfilling or incineration to be recycled, composted, or re-used.

Dump: A site used to dispose of solid waste without environmental controls.

Ecological/Environmental Risk Assessment (ERA): A scientific method used to examine the nature and magnitude of risks from the exposure of plants and animals to contaminants in the environment.

Economies of Scale: The reduction in operation and administrative staffing costs and reduction in redundancy of positions and equipment through implementing larger scale undertakings.

Electrostatic Precipitator (ESP): A device that removes particles from a gas stream (smoke) after combustion occurs. The ESP imparts an electrical charge to the particles, causing them to adhere to metal plates inside the precipitator. Rapping on the plates causes the particles to fall into a hopper for disposal.

Emissions: gases released into the atmosphere.

Emissions Trading: The creation of surplus emission reductions at certain stacks, vents or similar emissions sources and the use of this surplus to meet or redefine pollution requirements applicable to other emission sources. This allows one source to increase emissions when another source reduces them, maintaining an overall constant emission level. Facilities that reduce emissions substantially may "bank" their "credits" or sell them to other facilities or industries.

Energy-from-waste (EFW): The recovery of useful energy in the form of heat and/or power from the thermal treatment of waste. Generally applied to incineration, pyrolysis, gasification but can also include the combustion of landfill gas and gas produced from anaerobic digestion.

Energy Recovery: The recovery of useful energy in the form of heat and/or power from the thermal treatment of waste. Generally applied to incineration, pyrolysis, gasification but can also include the combustion of landfill gas and gas produced from anaerobic digestion.

Environment (as it relates to the Environmental Assessment Act): Environment is defined under the Environmental Assessment Act as follows:

- (a) air, land or water,
- (b) plant and animal life, including human life,
- (c) the social, economic and cultural conditions that influence the life of humans or a community,
- (d) any building, structure, machine or other device or thing made by humans,
- (e) any solid, liquid, gas, odour, heat, sound, vibration or radiation resulting directly or indirectly from human activities, or
- (f) any part or combination of the foregoing and the interrelationships between any two or more of them.

Environmental Assessment (EA): A systematic process that is conducted in accordance with applicable laws or regulations aimed at assessing the effects of a proposed undertaking on the environment. Includes evaluation of need, alternatives, impacts, and mitigative, remedial, monitoring and/or compensatory measures.

Environmental Assessment Act (EAA): An Ontario Act to provide for the protection; conservation; and, wise management of Ontario's environment. To achieve this, the EAA ensures that environmental problems or opportunities are considered and their effects are planned for before development or building takes place.

Environmental Protection Act (EPA): An Ontario Act to provide for the protection and conservation of the natural environment.

Environmental Assessment Terms of Reference (EAToR): An Environmental Assessment Terms of Reference outlines the work plan for the study to be undertaken in an Environmental Assessment.

Environmental Site Assessment (ESA): A systematic process of determining whether a specific property is or may be subject to actual or potential contamination.

Exports: In solid waste programs, municipal solid waste and recyclables transported outside the municipal jurisdiction or locality where they originated.

Expression of Interest (EOI): A preliminary document prepared by an outside source documenting their interest in a proposed project and a very general set of qualifications they possess that would make them eligible to participate further in the project.

Ferrous Metals: Magnetic metals derived from iron or steel; products made from ferrous metals include appliances, furniture, containers, and packaging like steel drums and barrels. Recycled products include processing tin/steel cans, strapping, and metals from appliances into new products.

Flue Gas: The air coming out of a chimney after combustion in the burner it is venting. It can include nitrogen oxides, carbon oxides, water vapor, sulfur oxides, particles and many chemical pollutants.

Fluidized Bed Incinerator: An incinerator that uses a bed of hot sand or other granular material to transfer heat directly to waste. Used mainly for destroying municipal sludge.

Fly Ash: Non-combustible residual particles expelled by flue gas.

Fugitive Emissions: Emissions not caught by a capture system.

Gasification: Conversion of solid material such as coal or waste into a gas for use as a fuel.

Gigajoule (GJ): A measurement of Energy. A typical single family household (approx. 2000 sq. ft.) uses approximately 60 to 90 GJ annually for heating (NRCAN).

Greenhouse Effect: The warming of the Earth's atmosphere attributed to a buildup of carbon dioxide or other gases; some scientists think that this build-up allows the sun's rays to heat the Earth, while making the infra-red radiation atmosphere opaque to infra-red radiation, thereby preventing a counterbalancing loss of heat.

Greenhouse Gas: A gas, such as carbon dioxide or methane, which contributes to potential climate change.

Hazardous Waste: By-products of society that can pose a substantial or potential hazard to human health or the environment when improperly managed. Possesses at least one of four characteristics (ignitability, corrosivity, reactivity, or toxicity), or appears on special EPA lists.

Household Hazardous Waste (HHW): See Household Special Waste (HSW).

Household Special Waste (HSW): Hazardous products used and disposed of by residential as opposed to industrial consumers. Includes paints, stains, varnishes, solvents, pesticides, and other materials or products containing volatile chemicals that can catch fire, react or explode, or that are corrosive or toxic.

Household Waste (Domestic Waste): Solid waste, composed of garbage and rubbish, which normally originates in a private home or apartment house. Domestic waste may contain a significant amount of toxic or hazardous waste.

Hydrolysis: Decomposition of a chemical compound by reaction with water, such as the dissociation of a dissolved salt or the catalytic conversion of starch to glucose.

Impact Studies: Studies that predict negative consequences (if any) of a proposed undertaking. Air, visual, environmental, traffic, hydrogeological, noise, health risk, land use and hydrological Impact Studies are required under the Environmental Protection Act.

Imports: In solid waste programs, municipal solid waste and recyclables transported into the municipal jurisdiction or locality for processing or final disposition (but that did not originate in that jurisdiction or locality).

Incineration: A treatment technology involving destruction of waste by controlled burning at high temperatures with the overall aim of reducing the volume of waste; e.g., burning waste to remove the water and reduce the remaining residues to a safe, non-burnable ash that can be disposed of safely on land, in some waters, or in underground locations.

Incinerator: A furnace for burning waste under controlled conditions.

Industrial, Commercial & Institutional (IC&I) Waste: Combination of wastes generated by industrial, commercial and institutional sectors that are not typically picked up at the curb or accepted at public drop-off facilities as part of the municipal waste collection process. These wastes are primarily managed by way of contract with private waste management service providers.

Industrial Waste: Unwanted materials from an industrial operation; may be liquid, sludge, solid, or hazardous waste.

Institutional Waste: Waste generated at institutions such as schools, libraries, hospitals, prisons, etc.

Integrated Waste Management System: The combination of reduction, diversion and disposal alternatives comprising one waste management system. For example – home composting, blue box recycling, source-separated organics composting, incineration, and landfilling could all form part of an integrated waste management system.

Landfills: Sanitary landfills are disposal sites for non-hazardous solid wastes spread in layers, compacted to the smallest practical volume, and covered by material applied at the end of each operating day.

Leachate: Water that collects contaminants as it trickles through wastes, pesticides or fertilizers. Leaching may occur in industrial sites, farming areas, feedlots, and landfills, and may result in hazardous substances entering surface water, ground water, or soil.

Leachate Collection System: A system that gathers leachate and pumps it to the surface for treatment.

Lift: In a sanitary landfill, a compacted layer of solid waste and the top layer of cover material.

Limestone Scrubbing: Use of a limestone and water solution to remove gaseous stack-pipe sulfur before it reaches the atmosphere.

Liner: A relatively impermeable barrier designed to keep leachate inside a landfill. Liner materials include plastic, dense clay and composites.

Magnetic Separation: Use of magnets to separate ferrous materials from mixed municipal waste stream.

Mass Burn Incineration: The incineration of waste without any initial pre-treatment or separation of wastes.

Materials Recovery Facility (MRF): A facility that processes residentially collected mixed recyclables into new products available for market.

Mechanical Separation: The separation of wastes by material type using trammels, cyclones, and various screens.

Mediation: An attempt to bring about a peaceful settlement or compromise between disputants through the objective intervention of a neutral party.

Mitigation: Measures taken to reduce adverse impacts on the environment.

Mixed Municipal Waste: Solid waste that has not been sorted into specific categories (such as plastic, glass, yard trimmings, food waste, etc.)

Modular Facility: A facility designed to allow for an expansion by adding new capacity with very little changes to the existing facility.

Moisture Content: The percentage of a material that is water.

Monitoring: Periodic or continuous surveillance or testing to determine the level of compliance with statutory requirements and/or pollutant levels in various media or in humans, plants, and animals.

Municipal Solid Waste (MSW): Common garbage or trash generated by industries, businesses, institutions, and homes.

Non-combustible Waste: Waste which cannot be incinerated even if energy is added. (e.g. stone and metals).

Non-Ferrous Metals: Nonmagnetic metals such as aluminum, lead, and copper. Products made all or in part from such metals include containers, packaging, appliances, furniture, electronic equipment and aluminum foil.

Ontario Regulation 101 (O. Reg. 347): a regulation under the Environmental Protection Act that specifies standards and approval requirements for waste management sites and systems in Ontario.

Operating and Maintenance Costs: Usually expressed annually, operation and maintenance costs are a sum of money to operate and maintain the facility in operating order (ie, labour, utilities, equipment repairs, materials, supplies, etc.).

Open Burning: Uncontrolled fires in an open dump.

Open Dump: An uncovered site used for disposal of waste without environmental controls.

Organic: Referring to or derived from living organisms. In chemistry, any compound containing carbon.

Organic Matter: Carbonaceous waste contained in plant or animal matter and originating from domestic or industrial sources.

Pelletizing: The compaction of waste into small pellets to be burned in an incinerator. Pellets are easier to manage and have a higher calorific value than regular uncompacted waste.

Pilot Tests: Testing a waste management technology under actual site conditions to identify potential problems prior to full-scale implementation.

Plasma-Arc Reactor: An incinerator that operates at extremely high temperatures and that is generally used to treat highly toxic wastes that do not burn easily.

Pollutant: Generally, any substance introduced into the environment that adversely affects the usefulness of a resource or the health of humans, animals, or ecosystems.

Pollution: Generally, the presence of a substance in the environment that because of its chemical composition or quantity prevents the functioning of natural processes and produces undesirable environmental and health effects.

Post-Closure: The time period following the shutdown of a waste management or manufacturing facility; for monitoring purposes.

Potable Water: Water that is safe for drinking and cooking.

Precipitator: Pollution control device that collects particles from an air stream.

Proponent: Proponent means a person/persons who: 1) carries out or proposes to carry out an undertaking, or 2) is the owner or person having charge, management or control of an undertaking.

Putrescible: Able to rot quickly enough to cause odours and attract flies.

Pyrolysis: Decomposition of waste and its constituent chemicals by extreme heat.

Receptor: The person, plant or wildlife species that may be affected due to exposure to a contaminant.

Recycle/Reuse: Minimizing waste generation by recovering and reprocessing usable products that might otherwise become waste (i.e. recycling of aluminum cans, paper, and bottles, etc.).

Refuse Derived Fuel (RDF): Waste that has been processed to remove non-combustible materials. RDF can be compacted or compressed through processes such as pelletizing or briquetting. Pelletized or Bricked RDF is easy to manage and handle, and also usually has a higher calorific value because of the increased density and reduced moisture content.

Refuse Reclamation: Conversion of solid waste into useful products; e.g., composting organic wastes to make soil conditioners or separating aluminum and other metals for recycling.

Reserve Capacity: Extra treatment capacity built into solid waste and wastewater treatment plants and interceptor sewers to accommodate flow increases due to future population growth.

Residential Waste: Waste generated in single and multi-family homes, including newspapers, clothing, disposable tableware, food packaging, cans, bottles, food scraps, and yard trimmings other than those that are diverted to backyard composting.

Residual: Amount of a pollutant remaining in the environment after a natural or technological process has taken place; e.g., the sludge remaining after initial wastewater treatment, or particulates remaining in air after it passes through a scrubbing or other process.

Resource Recovery: The process of obtaining matter or energy from materials formerly discarded.

Scrubber: An air pollution device that uses a spray of water or reactant or a dry process to trap pollutants in emissions.

Self Hauled Wastes: Wastes that are delivered to a waste management facility by the waste generator.

Siting: The process of choosing a location for a facility.

Source Reduction: Reducing the amount of materials entering the waste stream from a specific source by redesigning products or patterns of production or consumption (e.g., using returnable beverage containers). Synonymous with waste reduction.

Source Separated Organics (SSO): Organics separated by the household or business that include food wastes and leaf and yard wastes. Source separated organics are collected by a separate collection vehicle and sent for processing/composting.

Source Separation: Segregating various wastes at the point of generation (e.g., separation of paper, metal and glass from other wastes to make recycling simpler and more efficient).

Special Waste: Items such as household hazardous waste, bulky wastes (refrigerators, pieces of furniture, etc.) tires, and used oil.

Stack: A chimney, smokestack, or vertical pipe that discharges used air.

Stakeholder: Any organization, governmental entity, or individual that has a stake in or may be impacted by a given approach to environmental regulation, pollution prevention, energy conservation, etc.

Terms of Reference: refer to Environmental Assessment Terms of Reference.

Thermal Treatment: Use of elevated temperatures to treat wastes.

Tipping Fee: A monetary fee paid to dispose of waste at a disposal facility.

Toxic Waste: A waste that can produce injury if inhaled, swallowed, or absorbed through the skin.

Transfer Station: Facility where solid waste is transferred from collection vehicles to larger trucks or rail cars for longer distance transport.

Undertaking: is defined in the Environmental Assessment Act as follows:

1. An enterprise or activity or a proposal, plan or program in respect of an enterprise or activity by or on behalf of Her Majesty in right of Ontario, by a public body or public bodies or by a municipality or municipalities,
2. A major commercial or business enterprise or activity or a proposal, plan or program in respect of a major commercial or business enterprise or activity of a person or persons other than a person or persons referred to in clause (1) that is designated by the regulations, or
3. An enterprise or activity or a proposal, plan or program in respect of an enterprise or activity of a person or persons, other than a person or persons referred to in clause (a), if an agreement is entered into under section 3.0.1 in respect of the enterprise, activity, proposal, plan or program; ("enterprise")

User Fee: Fee collected from only those persons who use a particular service, as compared to one collected from the public in general.

Venturi Scrubbers: Air pollution control devices that use water to remove particulate matter from emissions.

Volume Reduction: Processing waste materials to decrease the amount of space they occupy, usually by compacting, shredding, incineration, or composting.

Waste: Unwanted materials left over from a manufacturing process. Refuse from places of human or animal habitation.

Waste Characterization: The process of identify the various components, including quantities, and materials found within a waste stream.

Waste Exchange: Arrangement in which companies exchange their wastes for the benefit of both parties.

Waste Feed: The continuous or intermittent flow of wastes into an incinerator.

Waste Generation: The weight or volume of materials and products that enter the waste stream before recycling, composting, landfilling, or combustion takes place. Also can represent the amount of waste generated by a given source or category of sources.

Waste Generator: The individual, household, establishment or business engaged in an activity that generates a specific waste or wastes.

Waste Management Facility / Site: A facility or site utilized in as a part of the waste management system.

Waste Management System: Any facilities or equipment used in, and any operations carried out for, the management of waste including the collection, handling, transportation, storage, processing or disposal of waste, and may include one or more waste disposal / processing sites.

Waste Minimization: Measures or techniques that reduce the amount of wastes generated during industrial production processes; term is also applied to recycling and other efforts to reduce the amount of waste going into the waste stream.

Waste Reduction: Using at-source reduction, reuse, or composting to prevent or reduce waste generation.

Waste Stream: The total flow of solid waste from homes, businesses, institutions, and manufacturing plants that is recycled, burned, or disposed of in landfills, or segments thereof such as the "residential waste stream" or the "recyclable waste stream."

Waste-to-Energy Facility/Municipal-Waste Combustor: Facility where recovered municipal solid waste is converted into a usable form of energy, usually via combustion.

White Goods: Usually large household appliances such as washing machines, dishwashers, and refrigerators/freezers.

Yard Waste: The part of solid waste generated at the household in the yard composed of grass clippings, leaves, twigs, branches, and other garden refuse.

Appendix B

Preliminary Evaluation Criteria for “Alternatives to the Undertaking”

(i.e. Alternative Technologies)

Table B-1: Preliminary Evaluation Criteria for “Alternatives to the Undertaking”

Environmental Category	Proposed Evaluation Criteria
Natural Environment	<ul style="list-style-type: none"> ✓ Environmental burden at a global or macro-environmental scale. ✓ Consumption / preservation of non-renewable environmental resources. ✓ Potential for destruction or disruption of sensitive terrestrial and/or aquatic habitats at an eventual site. ✓ Potential to increase diversion rate from disposal and/or make best use of residual (post-diversion) waste materials. ✓ Potential air quality and noise impacts - related to Haul Routes and Sites.
Economic / Financial	<ul style="list-style-type: none"> ✓ Net system costs per tonne of waste managed including facility costs, residual disposal, etc. ✓ Sensitivity of system costs and affordability to external financial influences.
Technical	<ul style="list-style-type: none"> ✓ Technical risks associated with waste management alternative.
Social / Cultural	<ul style="list-style-type: none"> ✓ Potential for land use conflicts from siting of facilities required for alternative.
Legal	<ul style="list-style-type: none"> ✓ Legal / contractual risks associated with waste management alternative.

Appendix C

**Preliminary Screening and Evaluation Criteria for
“Alternative Methods for Carrying Out the
Undertaking”**

(i.e. Alternative Sites)

Table C-1: Preliminary Exclusionary Criteria for the Consideration of Suitable Lands on which to Locate a Waste Disposal Facility.

- ✘ Designated Residential Areas and areas within 400 meters of these designations.**
- ✘ Designated Institutional Areas and areas within 400 meters of these designations.**
- ✘ Designated Natural Heritage Areas and areas within 400 meters of these designations.**
- ✘ Prime Agricultural Lands (Class 1).**
- ✘ Designated Tourism Areas and areas within 400 meters of these designations.**
- ✘ Park / Recreational Lands.**
- ✘ Areas around federally regulated airports as per Transport Canada Guidelines subject to further discussions with Transport Canada.**
- ✘ Aboriginal Reserves (Lands will only be considered if Aboriginals intend to participate).**
- ✘ Where possible, areas with less than 1 metre (subject to further consideration) of overburden in the base of the potential landfill.**
- ✘ Where possible, areas less than 50 metres from a permanent watercourse.**
- ✘ Land which would prevent the efficient expansion of settlement areas, on sites adjacent of close to settlement area.**
- ✘ Land containing significant habitat of endangered species and/or threatened species; or that “Natural Heritage Feature” be defined in the Terms of Reference to be consistent with the term used in the Provincial Policy Statement, 2005**.**
- ✘ Land known/identified as a mineral, mineral aggregate or petroleum resource, where development would preclude or hinder their expansion or continued use or which would be incompatible for reasons of public health, public safety or environmental impact.**
- ✘ Lands where there are natural and human made hazards that cannot be mitigated (e.g. flooding, mine hazards).**

Notes: **Criteria for exclusion used for waste management facilities other than disposal to be developed based on the nature of the facility.*

*** Provincial Policy Statement, 2005. Ontario. Ministry of Municipal Affairs and Housing.*

Table C-2: Preliminary Evaluation Criteria for a “Long-List” of Alternative Sites.

- ✓ **Proximity to required infrastructure (dependent on technology selected).** Example Consideration: Maximum distance from electrical connection if a facility that generates or uses electricity is to be sited.
- ✓ **Site Accessibility.** Example Consideration: Maximum distance from Provincial highway (i.e. existing public road).
- ✓ **Potential impact of the haul route.** Example Consideration: Length and nature of haul route from highway and types of land uses along haul route, avoid potential impacts such as littering of Right-of-Way and subsequent clean-up.
- ✓ **Property size.** Example Consideration: Amount of surplus land available beyond minimum site size requirement.
- ✓ **Land Use surrounding site.** Example Consideration: Existence of designated industrial or industrial type land use in proximity to site.
- ✓ **Availability of site.** Example Consideration: Requirement to acquire site through expropriation.
- ✓ **Proximity of Site to Regulated Aerodromes and Certified Airports.** Example Consideration: Site exists within the vicinity of an aerodrome or airport and is subject to Transport Canada guidelines. Wildlife management practices must be enabled to decrease risk of bird hazards.

Table C-3: Preliminary Comparative Evaluation Criteria for a “Short-List of Alternative Sites.

Environmental Category	Proposed Evaluation Criteria
Public Health & Safety and Natural Environment	<ul style="list-style-type: none"> ✓ Potential air quality and noise impacts - related to Haul Routes and Sites. ✓ Potential ground water and surface water quality and quantity impacts. ✓ Potential impacts on environmentally sensitive areas and species, and other areas and species where there is a likelihood of impact. ✓ Potential impacts on vegetation.
Economic / Financial	<ul style="list-style-type: none"> ✓ Capital cost for development of facility. ✓ Operation and Maintenance costs for facility. ✓ Potential disruption to business on-site and along haul routes (noise impacts, traffic, etc...).
Technical	<ul style="list-style-type: none"> ✓ Compatibility with existing infrastructure. ✓ Design & operational flexibility provided by site.
Social / Cultural	<ul style="list-style-type: none"> ✓ Potential for conflicts with existing and/or proposed land uses (noise impact, traffic, etc...). ✓ Potential impacts on residential areas (noise, traffic, etc...). ✓ Potential impacts on parks and recreational areas. ✓ Potential impacts on institutional facilities or areas. ✓ Potential impacts on archaeological and cultural resources. ✓ Potential traffic impacts, including avian impact on local airports.
Legal	<ul style="list-style-type: none"> ✓ Type of property acquisition required. ✓ Complexity of required approvals.

Appendix D

Government Review Team

Name and Address	Status	Explanation
FEDERAL AGENCIES		
Canadian Environmental Assessment Agency		
Louise Knox, Regional Director Ontario Region Canadian Environmental Assessment Agency 55 St. Clair Avenue East, 9th Floor Toronto ON M4T 1M2	included	
Canadian Nuclear Safety Commission		
Henry Rabski, Director Process Facilities and Technical Support Division Canadian Nuclear Safety Commission P.O. Box 1046, Station B Ottawa ON K19 5S9	included	
Department of Indian and Northern Affairs		
Fred Hoskings, Ontario Research Team Lead Specific Claims Branch Department of Indian and Northern Affairs 10 Wellington St. Room 1310 Gatineau QU K1A 0H4	included	Maps of study area only
Marc-Andre Millaire, Litigation Team Leader Litigation Management and Resolution Branch Department of Indian and Northern Affairs 10 Wellington St. Room 1310 Gatineau QU K1A 0H4	included	Maps of study area only
Sean Darcy, Manager Assessment and Historical Research Department of Indian and Northern Affairs 10 Wellington St. Room 1310 Gatineau QU K1A 0H4	included	Map of study area only
Mr. Gregg Dahl Senior Policy Analyst Office of the Federation Interlocutor for Metis and non- status Indians 66 Slater Street – Room 1218 Ottawa, ON K1A 0H4	included	Maps of study area only.
Environment Canada		
Sheila Allan, (A) Head EA Section, Ontario Region Environment Canada P.O. Box 5050, 867 Lakeshore Road Burlington ON L7R 4A6	included	All EAs (particularly those affecting an area of federal interest or responsibility).
Fisheries and Oceans Canada		
Lyndon Kivi, Fish Habitat Biologist Department of Fisheries and Oceans Northern Ontario District, Great Lakes Area Central and Arctic Region P.O. Box 649 Kenora, ON P9N 3X6	included	Navigable waters within the study boundaries.
Health Canada		
Ms. Kitty Ma Regional Environmental Assessment Coordinator Health Canada, Ontario Region 180 Queen Street West Toronto, ON M5V 3L7	included	Any human health related issues other than air.

Name and Address	Status	Explanation
Transport Canada		
Ms. Monique Mousseau, Regional Manager Environnemental Affairs, Programs Branch Transport Canada - Ontario Region 4900 Yonge Street, Suite 300 Toronto, ON M2N 6A5	included	Transport Canada has already responded to the Draft ToR with their position on adjacent airport buffers and guidance for navigable waters.
PROVINCIAL AGENCIES & MINISTRIES		
Hydro One Inc.		
Charles S. Esendal, Sustainment Manager Hydro One Inc. 483 Bay Street, TCT15-A11 North Tower Toronto, ON M5G 2P5	included	
Ministry of Aboriginal Affairs (MMA)		
Pam Wheaton, Director Aboriginal and Ministry Relationships Branch Ministry for Aboriginal Affairs 720 Bay Street, 4th Floor Toronto ON M5G 2K1 and Technical Contact Francois Lachance, Senior Policy Advisor Aboriginal and Ministry Relationships Branch Ministry for Aboriginal Affairs 720 Bay Street Toronto ON M5G 2K1	included	If land claim has been established.
Attorney General-Litigation Information		
Ria Tzimas Counsel, Crown Law Office-Civil Ministry of the Attorney General 8th Floor, 720 Bay Street Toronto ON M5G 2K1	included	- Instructed to directed all future communications to the Ministry of Aboriginal Affairs.
Ministry of Culture		
Mr. Andrew Hinshelwood Heritage Planner/Archaeologist Heritage Operations Section, Heritage& Libraries Branch Ministry of Culture 435 South James Street, Suite 334 Thunder Bay ON P7E 6S7	included	
Ministry of Education		
Huron-Superior Catholic District School Board 90 Ontario Avenue Sault Ste Marie ON P6B 6G7	included	Waste facilities (especially rural locations).
Algoma District School Board 644 Albert Street East Sault Ste Marie ON P6A 2K7		
Conseil Scolaire Catholique du Nouvel-Ontario 201 Joques Street Sudbury ON P3C 5L7		
Conseil Scolaire Public du Grand Nord de L'Ontario 296 Van Horne Street Sudbury P3B 1H9		

Name and Address	Status	Explanation
Ministry of Economic Development and Trade		
<p>Mr. Fernando Traficante, Director Sector Competitiveness Branch Ministry of Economic Development and Trade 900 Bay St., 7th Floor, Hearst Block Toronto ON M7A 2E1</p> <p>and</p> <p>Mr. Gregory Wootton, Director (A) Investment Branch Ministry of Economic Development and Trade 900 Bay St., 7th Floor, Hearst Block Toronto ON M7A 2E1</p>	included	-EAs which involve investments in large scale manufacturing facilities, co-generation projects and investment into large-scale expansions of existing manufacturing or co-generation facilities.
Ministry of Energy		
<p>Alan Jenkins Senior Policy Adviser Renewable Energy Supply Ministry of Energy 880 Bay Street, 3rd Floor Toronto, ON Canada M7A 2C1</p> <p>and</p> <p>Kevin Pal, Manager, Strategic Policy Branch Conservation & Strategic Policy Division Ministry of Energy 6th Floor, 880 Bay St. Toronto, ON M7A 2C1</p>	included	
Ministry of Health and Long-Term Care		
<p>Brenda Mitchell, Director Environmental Health Branch Public Health Division 5700 Yonge St, 2nd Floor Toronto ON M2M 4K5</p> <p>and</p> <p>Marshal Chow Algoma Health Unit Box 194 Blind River, ON P0R 1B0</p>	included	Types of projects reviewed - Sewage, water-works, waste facilities - anything with health implications.
Ministry of Municipal Affairs and Housing		
<p>Ms. Heather Robertson, Manager Community Planning and Development Northeastern Municipal Services Office Ministry of Municipal Affairs and Housing 159 Cedar Street, Suite 401 Sudbury ON P3E 6A5</p>	included	
Ministry of Natural Resources		
<p>Att: Environmental Assessment Contact Sault Ste. Marie District Ministry of Natural Resources 64 Church Street Sault Ste. Marie, ON P6A 3H3</p>	included	All EAs.

Name and Address	Status	Explanation
Ministry of Northern Development and Mines		
Herb Shields EA Coordinator Corporate Policy Secretariat Ministry of Northern Development and Mines Rm. 5630, Whitney Block, 99 Wellesley St. W Toronto, ON M7A 1C3	included	All EAs. Those EAs containing geological resources and mineral rights information should consult MNDM at pre-submission stages of the study and ensure contact /submission of the draft EA as well as formal EA submission. Please note that the Ministry of Northern Development and Mines should be circulated for projects in Northern Ontario (North Bay, Sudbury, etc.) where there may be tourism issues involved.
Ministry of Agriculture, Food and Rural Affairs		
David Cooper Manager – Environmental and Land Use Policy 3 rd Floor 1 Stone Road West Guelph, ON N1G 4Y2	included	
Office of the Fire Marshal		
Fire Chief Elliot Lake Fire Department 45 Hillside Drive North Elliot Lake, ON, P5A 1X5	included	
Ministry of Transportation		
Northwestern Region Paul F. Marleau Engineering Office, Ministry of Transportation Ontario Government Bldg, Suite 301 447 McKeown Ave. North Bay ON P1B 9S9	included	EAs for Waste Management Plans, Municipal Road/Sewage, Rail, Shipping/Dry Docks, Water Projects, and EAs for Transit Projects.
LOCAL AGENCIES		
Serpent River Region Environment Committee		
Serpent River Region Environment Committee 45 Hillside Drive N. Elliot Lake, On P5A 2T1		

Appendix E

First Nations Distribution List

Name and Address
Wikwemikong Unceded Indian Reserve Chief Robert Corbiere P.O. Box 112 19A Complex Drive Wikwemikong, ON P0P 2J0
M'Chigeeng First Nation Chief Isadora Bebamash P.O. Box 333 M'Chigeeng ON P0P 1G0
Mississauga #8 First Nation Chief Fidele Jokinen P.O. Box 1299 66 Park Rd. Blind River ON P0R 1B0
Thessalon First Nation Chief David Giguere P.O. Box 9, RR#2 Thessalon ON P0R 1L0
Sagamok Anishnawbek First nation Chief Paul Eshkakogan P.O. Box 610 Massey ON P0P 1P0
Aundeck Omni Kaning First Nation R.R #1, Box 21 Little Current, ON P0P 1K0
Sheguindah First Nation P.O. Box 101 Sheguindah, ON P0P 1W0
Zhiibaahaasing First Nation General Delivery Silverwater, ON P0P 1Y0

Name and Address
Sheshewaning First Nation P.O. Box 1 Sheshewaning, ON P0P 1Y0
Serpent River First Nation Chief Isadore Day P.O. Box 14 195 Village Road Cutler, ON P0P 1B0
Garden River First Nation 7 Shingwauk Street Garden River, ON P6A 6Z8
Historic Sault Ste. Marie Steve Leffler, President 26 Queen Street East Sault Ste. Marie, ON P6A 1Y3
North Shore Metis Council Art Bennet, Interim President P.O. Box 160 Bruce Mines, ON P0R 1C0
Temagami First Nation and Teme-Augama Anishnaba Chief Jim Twain Bear Island Post Office Temagami, ON P0H 1C0
Moose Deer Point First Nation Chief Edward Williams P. O. Box 119 3719 Twelve Mile Bay Rd MACTIER, ON P0C 1H0

Appendix C: Long Term Solid Waste Management Plan

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Elliot Lake

City of Elliot Lake

Solid Waste Management Plan

Prepared By:

exp. Services Inc.

Date

February 2012

Legal Notification

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1 Introduction

The City of Elliot Lake is a Northeastern Ontario community located in Algoma District. In 2009, Elliot Lake had a population of 11,500¹. The municipality is comprised of 6,180 total households or dwellings. Of these, 2,429 are single-family households and 3,751 are multi-family households. According to data produced by the provincial Waste Diversion Organization (WDO) there is no significant change (>10%) in population throughout the year based on seasonal activities.

In 2002, the City of Elliot Lake completed a review of its waste management plan and concluded it needs to develop a long term strategy for its solid waste stream. The Strategy will identify, consult on, and evaluate waste reduction, diversion and disposal options and will provide the City with a long term sustainable waste management system. This process will also include an environmental assessment (EA) study in accordance with the recently approved Terms of Reference (ToR) to determine the preferred disposal solution.

2 Study Purpose and Planning Overview

The development of the City's Long Term Solid Waste Management Strategy is being completed in two main stages:

Stage 1. Development of a Waste Management Strategy (WMS):

- Start up meeting to provide an overview of the process and review the ToR.
- Establish problems and opportunities to be addresses (including current and future needs).
- Development of alternative waste management options.
- Evaluation of waste management options and selection of preferred system.

Stage 2. Process for planning for disposal options that are subject the EA act:

- Review of the ToR the preparation of an EA based on the approved ToR.
- Research and preparation of background studies regarding disposal facilities.
- Public consultation.
- Development and submission of an Environmental Study Report to the MOE.

This document reports on the result of Stage 1 of the City's Solid Waste Management Strategy process.(see Figure 1 below). A review of current programs and a detailed breakdown of Elliot Lake's waste composition has been completed. Based on this information, potential disposal and diversion options were identified, evaluated and a preferred suite of options for diversion and disposal recommended. This document summarizes the progress of the project, the public consultation, and the recommended solid waste management options for Elliot Lake.

¹ 2009 City of Elliot Lake Municipal Finance Department.

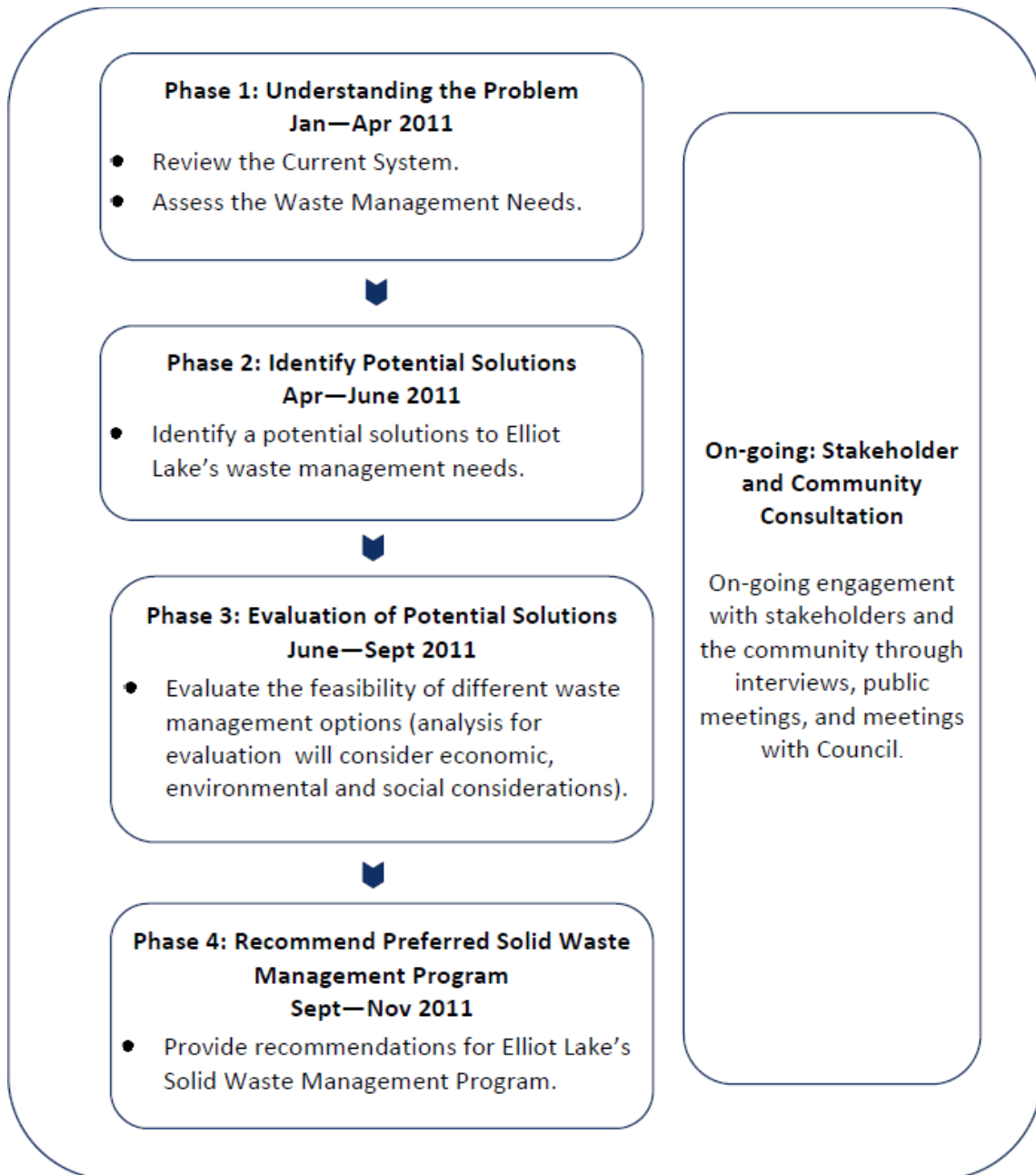


Figure 1. Stage 1 Planning Progress

3 Current Solid Waste Management Programs and Trends

3.1 Existing Programs and Services

3.1.1 Residential

Currently, Elliot Lake has the following programs in place to manage residential solid waste:

- Garbage Collection;
- Leaf and Yard Waste Collection, including collection of yard waste in the spring and a leaf collection day in the fall);
- Two-Stream Recycling Collection (Fibres and Containers);
- Recycling Depot;
- Household Hazardous Waste Drop-off Days; and
- Electronic Waste Drop-off Days.

Curbside collection services for household garbage is provided weekly to residents in single family dwellings, while a bin collection service is provided to multi-family units. Recycling services are provided weekly and on the same day as garbage collection, although fibre and container streams are collected every other week.

Every year during May, a Spring Clean-up Week is performed by the City. During this time, the City allows residents to set out large items and debris that does not normally qualify for collection the rest of the year. Certain items and appliances need to have harmful products removed (such as Freon from refrigerators and freezers) and be properly tagged by the resident. Refrigerator and freezer doors must be removed prior to collection. This also includes leaf and yard waste materials which at other times of the year are to be disposed of by householders at their own expense.

Household hazardous waste is not permitted in the garbage stream and is not collected regularly by the City. Residents are encouraged to drop off hazardous material at the City's annual designated "Household Hazardous Waste Collection Event". Residents are encouraged to separate and store any hazardous materials until such events occur. Drop off is free of charge for residents.

Backyard composting is a voluntary diversion option for residents. Residents can divert yard waste, food scraps and paper products in these receptacles. According to comments from community members online, some residents are reluctant to compost because they feel the composting process will attract animals². The Ministry of Natural Resources (MNR) has agreed with this position in the past and suggests residents only place grass and hedge clippings in an outdoor composter. It also recommends indoor worm composters for food waste.

² <http://www.elliottlakestandard.ca/ArticleDisplay.aspx?e=1755741&auth=&archive=true>

3.1.2 Industrial, Commercial and Institutional

Generally, the management of waste from the industrial, commercial or institutional (IC&I) sector is outside of a municipality's jurisdictional responsibility. However, all IC&I waste generated in Elliot Lake is disposed at the City's landfill. The development of policies and enforcement for IC&I waste disposal is typically the responsibility of the Province of Ontario. For example, waste from IC&I sector is governed mainly by provincial regulations (O.reg 102/94), which covers requires designated organizations to:

- Conduct waste audit
- Prepare a waste reduction work plan;
- For major packaging users, to conduct packaging audits and packaging reduction work plans.

3.2 Current Waste Composition and Waste Operating Costs

In 2009, Elliot Lake generated approximately 3,791 tonnes of residential solid waste. Of this, 812.9 tonnes, or 21% percent³, is diverted through the two-stream blue box program, hazardous waste collection events, backyard composting, recycling depot/deposit return collection and seasonal leaf and yard waste collection. The most common material recycled is fibrous materials, while the least are Waste Electrical and Electronic Equipment (WEEE) products.

In order to determine Elliot Lake's waste composition and potential diversion, WDO waste audit data from Sault St. Marie was used as a representative sample⁴. The City of Sault St. Marie has similar characteristics in terms of demographics, recycling programs, and is also located in Northeastern Ontario.

Figure 2 below illustrates the estimated composition of waste in Elliot Lake's residential waste stream for 2009. As seen in the diagram, the greatest proportion of the City's waste stream is comprised of compostable food waste (27.1%), non-divertable residue (24.6%), recyclable papers (16.1%), and yard waste (11.6%). Table 1 presents the composition of solid waste material managed by the City.

³ 2009 WDO data call

⁴ WDO Waste Audit results from Sault St. Marie.

<http://www.stewardshipontario.ca/stewards/library/single-family-waste-audit-program>

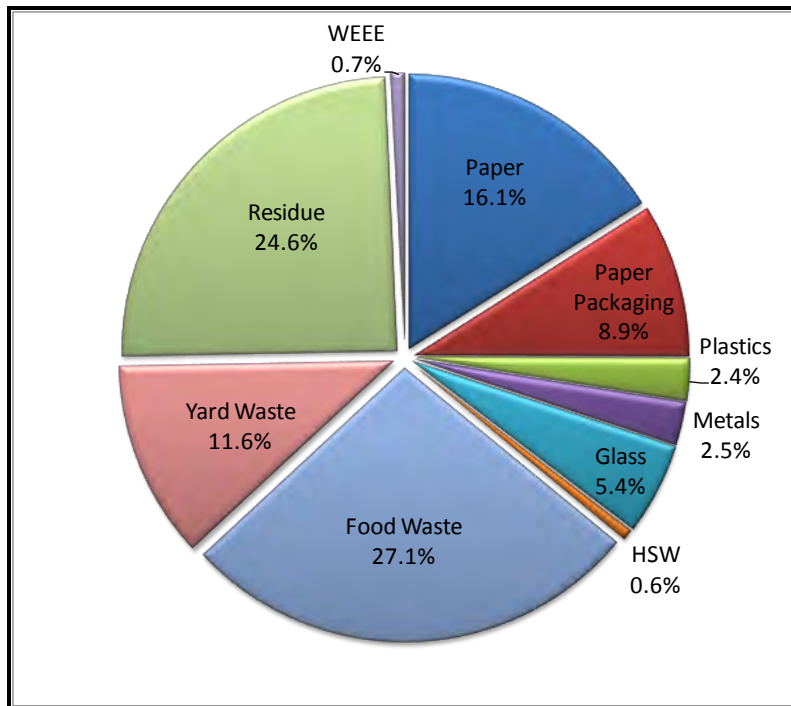


Figure 2. Waste Composition (2009)

Residential Waste Stream	Tonnes Generated	Percent of Total Waste Stream
Paper and paper packaging	950	25.1%
Metals (aluminum, steel, mixed metal)	95	2.5%
Plastics (containers, film, tubs & lids)	91	2.4%
Glass	203	5.3%
Organics – Food Waste	1,028	27.1%
Organics – Yard Waste	440	11.6%
WEEE	27	0.7%
Household Special Waste (HSW)	24	0.6%
Residue	932	17.9%
Total Available For Diversion	2,858	75.4%
Total Waste Generated	3,791	100%

3.2.1 Residential Blue Recycling Program

In 2009, the City of Elliot Lake recycled 717.7 tonnes of blue box material through curbside, deposit return and depot programs. Based on comparable waste composition audit data from Sault St. Marie, the city is currently capturing 53.6% of the recyclable material in their programs. This falls short of the WDO goal of 70% for a municipality of its designation (Rural Collection North). The City's greatest recycling capture rate is with fibrous materials, designated as "Fibre" in their waste collection

calendar, with a capture rate of 57.9%. The lowest capture rate is in the glass category, where 12% of materials are captured. The capture rate for the City's recyclable material is illustrated in Figure 3 below.

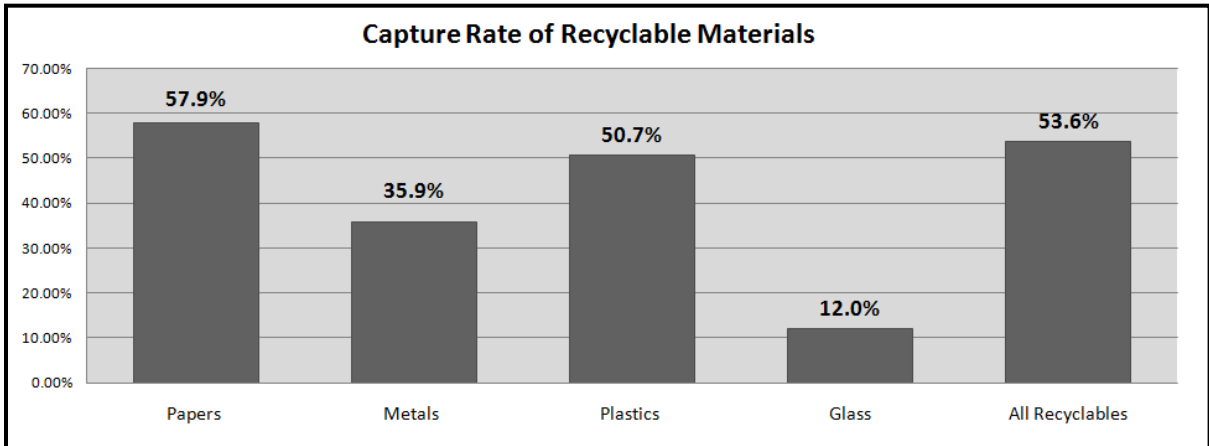


Figure 3: Capture Rate of Recyclable Materials (2009)

3.2.2 Organic Waste

The City of Elliot Lake generates approximately 1,469 tonnes of organic wastes each year (1,028 tonnes of food waste and 440 tonnes of yard waste), which accounts for approximately 38.7% of the City's total waste stream. Of this, an estimated 80 tonnes of organics is diverted through a voluntary backyard composting program. .

3.2.3 WEEE (Waste Electrical and Electronic Equipment)

In 2011, the City established a recycling program for WEEE, where residents are able to drop off WEEE at a municipal depot three to four times a year for recycling.

3.2.4 Municipal Household Special Waste (HSW)

During designated days, the City provides residents with an opportunity to drop off household special waste (HSW), including batteries, paint, oil, household chemicals and solvents. In 2009, Elliot Lake generated an estimated 24 tonnes of HSW, representing 0.64% of the total waste stream. Of this, Elliot Lake collected and diverted 15.2 tonnes of hazardous waste for safe disposal or recycling.

3.2.5 Garbage

The City of Elliot Lake currently disposes all refuse at the City's Landfill site. In 2009, the City sent approximately 2,980 tonnes of residential waste (or 78.6% of the waste stream) to landfill. IC&I waste is also sent to landfill.

During spring clean up, the City also collects excess leaf and yard waste from residents, which is disposed of in landfill.

3.2.6 Solid Waste Management Program Operating Cost

Table 2 below presents the net cost of Elliot Lake's solid waste management system and its system components for 2009. Overall, Elliot Lake's solid waste management system cost a total of \$606,313.57. Table 3 presents this amount on a per tonne, per household and per capita basis. When compared against other municipalities in its WDO municipal grouping, Elliot Lake's has a lower per tonne net annual recycling costs than the group's average of \$540/tonne.

Item	Cost
Garbage Collection Expenditures	\$ 284,391 ⁵
Recycling Collection Net Total	\$ 86,727
<i>Recycling Expenditures</i>	\$ 119,674 ⁶
<i>Recycling Revenues</i>	\$ 32,947 ⁷
Landfill Site	\$ 235,196 ⁸
Total Waste Management Operating Cost	\$ 606,314

Item	Cost Per Tonne	Cost Per Capita	Cost Per Household
Elliot Lake - Recycling	\$ 133	\$ 8	\$14
Elliot Lake - Garbage	\$ 171	\$ 45	\$ 84
Elliot Lake Total	\$ 160	\$ 53	\$ 98

⁵ Includes distributed wages, materials, contracted services and vehicle & machinery maintenance.

⁶ Includes materials, advertising and promotion, contracted services and insurance premiums.

⁷ Includes hazardous and special waste, sale of material and supplies, recycling partner revenue.

⁸ Includes consultant fees, contracted services and money transferred to the reserve fund.

4 Potential Waste Diversion

A gap analysis was conducted to assess the performance of the City's current diversion programs and determine where improvements could be made to maximize the diversion of waste from disposal. The table below illustrates current practices, amount of material available for diversion by waste type, and potential future increase in diversion based on a WDO recommended 70% capture rate.

Table 4: Estimate of Diverted and Available Recoverable Waste Materials						
Material	Estimated Composition	Total Available Material in Waste Stream (tonnes)	Material Currently Diverted (tonnes)	Current Capture Rate (%)	Additional Tonnes Needed to Reach 70% Capture Target (tonnes)	Material Remaining in Waste Stream (% of total waste stream)
Papers	25%	949.6	549.9	57.9%	114.8	3%
Metals	2.5%	95.2	34.1	35.8%	32.5	0.9%
Plastics	2.4%	91	46.1	50.7%	17.6	0.5%
Glass	5.35%	203	24.3	12%	117.8	3.1%
Deposit Return			63.3			
Food Waste	27.1%	1028.1	80.0	5.4%	639.7	16.9%
Yard Waste	11.6%	440.5	0.0	0.0%	308.4	8.1
WEEE	0.71%	26.9	0.0	0.0%	18.8	0.5%
HSW	0.64%	24.3	15.2	62.6%	1.8	0.05%
Total Divertible Material	75.4%	2856.8	812.9		1251.4	
Current Diversion Rate				21.4%		
Additional Diversion Rate						33.1%
Potential Diversion Rate if 70% captured						54.5%

When compared to other municipalities in its WDO municipal grouping, Elliot Lake's current Blue Box diversion rate is below the average of 23.3% and its overall diversion rate is short of the Provincial goal of 60%. Waste diversion rates of municipalities in the same WDO grouping as Elliot Lake (rural collection north) are illustrated below in Figure 4.

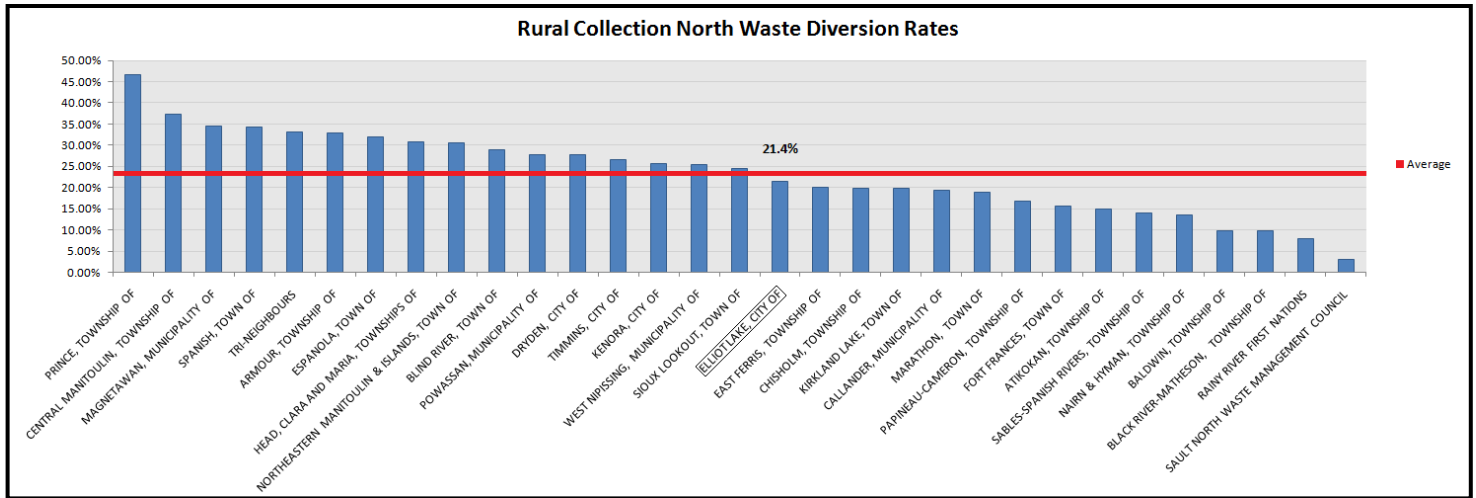


Figure 4: WDO Rural collection north grouping diversion rates

5 Public Consultation

Public consultation is an important component of the waste management strategy development process. Consultation initiatives for this project consists of posting information in the local newspapers and on the City's website, distributing newsletters at key period phase points of the project, and holding public information centres (PICs).

The first PIC was hosted in Elliot Lake on May 25, 2011 to gather input from local residents on what Elliot Lake's long term goals should be, what disposal and diversion options could be used, and on criteria by which each of the options should be evaluated against. Eight members of the community attended.

A number of specific diversion options were reviewed at the open house. Most residents were in favour of enhancing the collection of recyclable materials, while others were also in favour of increasing education and initiating the curbside collection of compostable material. When residents were asked which policy changes should be considered, the most accepted options were mandatory recycling by-laws, full or partial user pay for garbage collection and using blue transparent bags for recycling. It was also suggested that Elliot Lake's solid waste management activities should minimize any associated impacts on the environment.

With respect to funding Elliot Lake's solid waste management system and to encourage diversion, most participants agreed with introducing a user pay system or increasing tipping fees at the municipal landfill. Other participants suggested requiring residents to buy "bag tags" for residential garbage, increasing enforcement (including harsher monetary penalties) and increasing charges for IC&I waste.

Based on comments received through the public workshop, the disposal options with the most support were building an energy from waste facility, expanding the existing disposal site and establishing a new landfill site.

After the discussion on diversion and disposal options, residents were asked to create a prioritized list of evaluation criteria. Residents agreed upon the following criteria for evaluating disposal and diversion options:

- Environmental impacts (positive and negative) (including affect on waste diversion);
- Cost effectiveness/affordability;
- Economic development;
- Social/cultural acceptability;
- Ease of implementation; and
- Track record of technology/program (proven results).

Residents at the PIC clearly stated that the environmental impact, whether positive or negative, should be the highest priority. Cost effectiveness and affordability were the second highest priorities, followed by economic development (job creation), social and cultural acceptability and ease of implementation.

A second PIC was held on September 15, 2011 to review the preferred options with the community. Approximately eight residents attended. General discussion among the attendees confirmed acceptance of the preferred options. One written comment was received, noting that that tip fees should be applied to the ICI sector. No issues or concerns were raised regarding the City's waste management program or the preferred waste management options presented.

6 Overview of Waste Management Options

Based on the results of the background review and gap analysis, a number of waste diversion and disposal options were identified for consideration in Elliot Lake's solid waste management system. The options are in addition to the City's current diversion programs (e.g., blue box recycling, household hazardous waste event days) and are described below.

6.1 Waste Diversion Options

6.1.1 Promotion and Education

A successful waste management system requires a sound communications strategy that supports all of the system's waste management components (e.g., recycling, composting, reduction, MHSW, etc). A good communications program will allow residents and businesses to fully participate in waste reduction and diversion programs by raising awareness about the City's programs and overcoming barriers to participation.

An enhanced promotion and education program would go beyond the static use of brochures and online information by establishing a dialogue with residents to assess those barriers to participation and determine opportunities for improvement. Such a program may include:

- Face-to-face contact to promote specific programs, possibly at community events or by going door-to-door;
- Using neighbourhood champions or community leaders to teach others or to lead by example (e.g., backyard composting);
- Give-aways or discounts to help physical barriers to participation (e.g., biodegradable mini-bin bags, mulching lawnmower blades);
- Interactive on-line waste forums and feedback forms; and

- Community engagement and marketing approaches, among other things.

It may also include outreach to the local ICI (industrial, commercial and institutional) community, which could consist of information on how to reduce waste in the workplace, or what businesses could do to recycle.

An enhanced promotion and education campaign should also examine additional cost-effective means of delivering outreach to the community, including (but not limited to):

- The use of community volunteers and neighbourhood champions;
- Participation in existing events (e.g., display booths at fairs);
- Cost-sharing opportunities with other municipal departments or engaging community partners that have similar or complimentary mandates (e.g., beautification or anti-litter programs, newsletters from other departments or community partners, etc);
- Hiring of a student or intern (specifically for waste projects or shared between departments); or
- Presentations to community groups on available programs.

The communication activities should have specific strategic targets. Possible targets may include (but are not limited to):

- Promotion of specific programs at key points of the year (e.g., promotion of leaf and yard waste during the Spring “Clean Up Week”, backyard composting in late winter/early spring);
- Reminders about specific recyclable materials or topics of concern to achieve identified problem areas (e.g., to reduce contamination levels, to clarify how to recycle problematic or confusion materials, etc); or
- Encouraging the adoption of waste reduction/prevention behaviours (e.g., encouraging wasteless gifts by purchasing ‘experiences’, such as concert tickets or a spa visit, or consciously avoiding the purchase of products with excessive packaging).
- Waste diversion information for specific sectors, such as the business community, multi-residential buildings, or seasonal residents.

The City could also include co-promotion of other retailer or take-back programs, such as for tires, waste electronics, or items such as compact fluorescent light bulbs (CFL) or batteries (available at some retailers such as Home Depot or Canadian Tire).

The waste diversion communication strategy should include a monitoring and evaluation component, which will allow program managers to adjust programming in response to program performance or other identified needs, such as changes in materials collected, common contamination issues, feedback from residents, or new priority issues.

The estimated annual cost for the waste system’s education program (not including ICI) is \$12,360 (based on \$2 per household as suggested by a benchmark in the KPMG Best Practices Report⁹ plus funds for outreach to the ICI sector).

6.1.2 Waste Minimization (source reduction)

An emphasis on waste minimization (or source reduction) is an important component of the solid waste management hierarchy and could be included in the City’s solid waste promotion and

⁹ Blue Box Program Enhancement and Best Practices Assessment Project. Final Report Volume I – July 31, 2007.

education program. The most efficient way to reduce waste going to disposal is to avoid producing it in the first place. Waste reduction addresses the first, most important approach of the waste hierarchy – reduce. There are a number of ways that residents and businesses can avoid generating waste, including:

- Buying green – purchase goods that have a minimal amount of packaging, or that are durable rather than disposable.
- Grasscycling – grass clippings left on the lawn provide a wide range of benefits to lawn-owners, including less dependence on purchased fertilizers, better water retention, and greener lawns. This could be reinforced by implementing a disposal ban on grass clippings.
- Backyard composting – backyard composters can be made available to residents at a subsidized cost or through a limited number of free backyard composters (possibly as a prize in a contest). Encourage neighbours or groups of people to compost together through gardening clubs or events and share the finished product.
- Precycling – influence buying decisions by considering the amount of packaging that will have to be disposed.
- Reuse – instead of buying new or disposing of unwanted yet useful items, residents can perhaps find what they need at thrift stores or used-goods stores, community swaps, or through donations to charities.
- Waste exchanges – online waste exchanges can help businesses and residents alike save money by connecting them with people who can use their waste materials. Freecycle.org is another example of a waste exchange that operates in Ontario, with a presence in Elliot Lake. .

Encouraging waste reduction will require frequent public engagement. To broaden the draw of the waste reduction message, the City could conduct its outreach in cooperation with community partners, such as charities, retailers or non-governmental organizations. Businesses in particular can play a key role in waste minimization. By examining their purchasing and production processes, they can identify ways to avoid waste and save money through material and disposal costs.

The cost for the promotion of waste minimization would be included in the cost for an enhanced promotion and education program. Additional costs for giveaways such as backyard composters or lawn mower mulching blades would vary depending on the amount distributed, but this is likely to cost approximately \$2 per household, or \$12,360 per year, for promotions of backyard composters and lawn mower mulching blades. Diversion from waste minimization is typically expected to contribute an additional 3 percentage points to the annual diversion rate (or 115 tonnes).

6.1.3 Household Source Separated Organics (not including leaf and yard waste)

The term “household source separated organics” (SSO) is commonly used to describe the biodegradable portion of the residential waste stream and includes materials such as food waste and other kitchen scraps. Organics (not including leaf and yard waste) present a major opportunity for increasing diversion, as it makes up an estimated 27% of Elliot Lake’s residential waste stream. Some of this material (possibly along with some yard waste) is currently diverted through backyard composting.

A centralized organics composting program presents the most significant opportunity for increasing the City’s overall diversion rate. Assuming a capture rate of 70% of the City’s household organics, a centralized composting program could divert

SSO Organics Green Cart and Mini Bin



approximately 640 tonnes of food waste and increase the City's diversion rate by nearly 17 percentage points.

To capture this waste stream, many municipalities in Ontario have implemented curbside source separated organics (SSO) programs. Most commonly, households are provided with a green cart and a kitchen-mini bin (see pictures, right). The green cart is stored outside, while the mini-bin is stored in the kitchen. Household organics such as food wastes (peelings, meat and bone scraps) are put into the mini-bin, which is then emptied daily into the green cart. To reduce mess and odour from food wastes, residents can wrap their food waste in newspaper or paper towel, or some municipalities allow residents to use compostable bags.

The average cost to collect SSO is approximately \$100 per tonne, while costs to process or compost the material can range up to \$200 per tonne, depending on the composting technology used (see table below). Implementation costs would include to consider the initial start-up costs such as preparing the Request for Proposals and contract development, purchase of carts and bins, and development of communication materials. The estimated capital cost required to implement an SSO program in the City of Elliot Lake (including both single-family and multi-family households) would range between \$95,000 to \$110,000. For the purpose of this study, the estimated annual operating cost for an SSO program in Elliot Lake is \$127,600, based on an estimated cost of \$200 per tonne for collection and processing combined. However, a portion of the SSO program operating cost will be offset by a reduction to the amount of garbage required to be collected and disposed.

Technology	Estimated Operating Cost (\$/tonne)
Covered Windrow	\$50 - \$80
Aerobic (in-vessel)	\$50 - \$100
Anaerobic (in-vessel)	\$100 - \$200

6.1.4 Yard Waste Composting

Currently, the City does not compost leaf and yard waste, although it does offer a one-time curbside collection of leaf and yard waste for disposal to residents in the spring and the collection of leaves in the fall. It is estimated that Elliot Lake's waste stream consists of approximately 440 tonnes of leaf and yard waste. Assuming a capture rate of 70%, a municipal leaf and yard waste composting program could divert approximately 308 tonnes of material from disposal and increase the City's diversion rate by 8 percentage points.

Typical costs to collect leaf and yard waste at curbside range from \$80 to \$120 per tonne. A less expensive option would be for the City to operate a depot for where residents would be able to drop off their leaf and yard waste for composting. Composting of the material using simple windrow technology would cost approximately \$50 per tonne. For the purpose of this study, the estimated cost of a centralized yard waste program is \$40,085 (based on an average estimated cost of \$80 per tonne for collection and \$50 per tonne for processing).

6.1.5 Blue Box Service Optimization

The City's current capture rates range from a low of 12% for glass to a high of 58% for papers. Optimization of how the City collects and processes its recyclables may help to increase the City's overall capture towards 70% while improving cost efficiencies.

The collection of recyclables forms a key component of the City's current diversion program, and will continue to be so. The City should assess the cost difference in moving from alternating weekly collection to weekly collection for fibre and containers. This can be done by requesting costs for both alternating weekly and for weekly collection of recyclables. Upon the evaluation of tenders, the City can then determine the cost-effectiveness of implementing this option. The City should also examine the feasibility and cost-effectiveness of:

- Adding the expanded blue box materials to the currently recycling stream (when the availability of markets allow);
- The use of alternative collection containers, where feasible (e.g., providing larger blue boxes, or moving to single stream automated cart collection); and
- Maintaining and further promoting the depot at the transfer station, and providing additional depot locations.

Currently, there are a number of materials that Elliot Lake could add to its existing Blue Box program that are considered expanded blue box materials. Diverting these materials could add another three percentage points to the City's diversion rate. These materials include:

- Composite cans (e.g., cans for concentrated juice);
- Polystyrene packaging;
- Polyethylene plastic bags and film;
- Steel aerosol cans; and
- Steel paint cans.

Prior to future program changes, further consideration and research should be completed to examine the timing of municipal contracts, end markets for new materials, alternative collection methodologies such as using split compaction collection vehicles, and creative solutions to overcome the cost of providing weekly blue box collection. While the City currently has a contract with a private MRF and does not have immediate control over the types of material recycled, the City could work with the MRF operator to examine which of these materials could be added to the recycling program.

The estimated cost for this option is estimated to range from \$15,000 to \$20,000. However, to determine a more accurate cost to provide an enhanced blue box collection program, the City should include this program as an option in its future waste collection tender.

6.1.6 Policy Options

In addition to programs such as the ones listed above, there are also a number of policy options that the City could use to encourage diversion. These are described below. It is important to note that the policy options would require material diversion programs in place in order to have an effect. The policy options would help support the other diversion programs and encourage their use by residents and businesses.

- **User Pay:** residents pay a set amount per bag or container using tags bought at local retailers and municipal offices.
- **Mandatory recycling bylaw:** the City could explore developing a by-law that makes recycling mandatory for materials that have a diversion program in place.

- **Ban on materials:** some hard-to-recycle materials could be banned from Elliot Lake, such as plastic bags (or types of plastic bags).
- **Clear garbage bags:** using clear bags to allow collectors to easily identify banned items in the garbage stream.
- **Bag limits:** impose a 2 or 3 bag limit per collection on garbage and allow unlimited use of other diversion programs.

6.2 Waste Disposal Options

The existing municipal landfill has operated since 1982 and is on pace to reach capacity by 2017, based on a current fill rate of 12,000 m³ per year. Depending on the type of waste disposal option chosen, the City will need to commence implementation of a waste disposal method within the next year or two if it is to have a solution in place before it runs out of capacity at its existing landfill. Based on the City's social, geographic, and economic characteristics, the following disposal options were identified for evaluation.

6.2.1 Landfill Expansion

The City has identified that it has sufficient land available at its existing landfill site to provide for an expansion. Expanding the current landfill site would involve completing an Environmental Assessment (EA) and applying for an amendment to the site's Certificate of Approval (CofA) under the Environmental Protection Act (EPA). Once approved, the site expansion would be engineered and constructed.

The cost for the approval process and constructing the expansion area would be between \$1,000,000 and \$3,000,000 depending on the size of the expansion area. Operational costs would be comparable to that of the current landfill site.

6.2.2 New Landfill Site

Another alternative for waste disposal is to site and build a new landfill. Several types of landfill are available for consideration: a modified landfill and a sanitary landfill. Modified landfills require some engineering design, for example leachate control and will require some site and operational management. Sanitary landfills have the most extensive designs and are equipped with leachate control, geotextile wall linings, treatment systems and in some cases gas management infrastructure.

The timeframe to site a new landfill, including the EA process and construction would be approximately 5 to 10 years. All landfill development in Ontario are subject to Part V of the Environmental Act (EPA), The Ontario Waste Resources Act and the Environmental Assessment Act. In relation to landfills, the following regulations need to be considered when designing a new landfill:

- Section 27 of the EPA: Requires a Certificate of Approval (CofA) be obtained from the Ministry of the Environment. The CofA defines the capacity, the types of wastes accepted, any necessary conditions for design and operation and how a site is to be closed along with measure taken following closure.
- EPA Regulation 347 (R.R.O. 1990 Regulation 347): Provides definitions of waste as well as designates, classifies and exempts waste sites. Also, establishes standards for waste disposal sites and waste management systems.

- EPA Regulation 232/98: Describes the standards required for landfill designs, operation, closure, post-closure care and financial assurance. The standards apply to waste landfill sites larger than 40,000m³.
- EPA Regulation 217/08: Applies to waste disposal sites with capacities larger than 1.5 million cubic meters and requires these sites to use gas collection and flaring equipment.
- The Ontario Waste Resources Act: Requires any leachate collection system which discharges to surface waste obtain approval from the Ministry of Environment. Also, any surface waste discharge from a landfill must meet water quality standards as defined by the Act. If landfill discharge drains into a sewer, it must meet local sewer use bylaws and requirements of the receiving wastewater treatment plant.
- Environmental Assessment Act (EAA): Depending on the proposed capacity of the landfill, approval under the EAA may be required. If required, a broader view of the environment must be taken and issues beyond the effects on the natural environment have to be addressed such as cultural, social and economic factors. Public consultation and public hearings could also be required under the Act.
- EAA Regulation 101/07: Defines requirements for landfill sites with capacities smaller than 40,000m³ (not subject to requirements of the EAA), between 40,000m³ and 100,000m³ (subject to an EA Screening process) and larger than 100,000m³ (subject to Individual Environmental Assessment).
- Depending on the design and size of a new landfill, the cost ranges between \$3,000,000 and \$5,000,000. Operational costs would be comparable to the current landfill. Other factors that must be taken into consideration which can make siting a new landfill difficult include social and environmental issues. Generally, the public is opposed to developing new landfill sites, and it is often difficult to find sufficient land free of environmental constraints that prevent approval of a new site.

6.2.3 Thermal Treatment of Waste

Disposal of garbage can be achieved either through incineration or other waste technologies collectively known as Advanced Thermal Treatment. However, thermal treatment does not eliminate entirely the need for a landfill site. Thermal treatment offers the benefit of reducing waste volumes, which in turn increases the lifespan of a landfill, and the potential for recovering energy from the process. However, the capital and operational costs can be significant.

In general, incineration involves converting residual waste into fuel or directly into energy. This conversion greatly reduces the quantity of waste for disposal while in most applications, providing a source of energy. The technologies required for can vary in complexity, cost and economies of scale. Based on the application, wastes can be fed into an incinerator on a continuous basis, or the material can be incinerated in batches. Most models offer flexibility regarding power source and fuel consumption. Most models require use the following to incinerate waste: diesel fuel, fuel oil, JP8, natural gas or propane.

Incineration can reduce the amount of waste requiring landfill by up to 90 percent by volume, or 70 percent by weight. While incineration can handle most wastes, its efficiency depends on the heat value (BTU) of the materials being processed. For example, glass and metals have little heat value, while plastics and fibres have more. While these types of processes can reduce the volume of waste, a waste disposal site or landfill is still required to manage the remaining waste residue known as ash.

There are various forms of advanced thermal treatment to manage municipal solid waste and convert into forms of energy. These involve the decomposition of carbon-based materials using an indirect source of heat and result in a synthetic, combustible gas. Three common types of waste to energy technologies include gasification, pyrolysis, and plasma-arc. Pyrolysis is undertaken in the absence of oxygen, while gasification and plasma-arc use a limited amount of oxygen. The limited use or absence of oxygen results in the production of fewer air emissions at the thermal treatment source compared to combustion type thermal treatment technologies.

A key issue related to incineration of waste is the release of pollutants into the atmosphere. Waste must be incinerated at a high temperature (in excess of 1,000°C) in order to safely destroy wastes. In addition, not all types of municipal waste can be incinerated using this option. Materials that include mercury, asbestos, heavy metals, and composed largely of metals and/or glass should not be incinerated. Plastics, metals and glass materials should be diverted using alternative options (e.g. recycling) before being considered for incineration. Specifically, plastics have a high heat value and should not be incinerated in models designed for low heat value materials such as food waste.

For a municipality producing roughly 4,000 tons of waste per year, such as Elliot Lake, Environment Canada recommends a dual chamber controlled air incinerator¹⁰. When properly operated and maintained, these configurations can handle a wide range of wastes and attain dioxin, furans and mercury emission levels below Canada-wide Standards.

Several private companies offer products suitable for Elliot Lake and examples of similar systems can be found around the world:

- Peccioli Italy ~ 5 Tons per Day using WTEC's Batch Oxidizing System (BOS)
- Skagway, Alaska ~ 8 Tons per Day using Eco-Waste's Thermal Oxidation Unit (TOU)
- Prudhoe Alaska ~ 7 Tons per Day using EnerWaste's Batch Oxidizing System (BOS)
- Wemindji, Quebec ~ 3 Tons per Day using Eco Waste Solutions' Oxidizer ECO Model

When deciding on a specific incineration model and operating the machinery, it is important to consider the following:

- Waste Characteristics – The composition of waste will have an effect on temperature and fuel consumption in various sections of the incinerator. For example, materials with high moisture content (e.g. food waste) require more fuel in order to evaporate the moisture in order to properly incinerate the materials.
- Incinerator Loading – To properly load an incinerator, the operator needs to determine the source of wastes, weigh the waste to determine how much is being incinerated and most importantly portion the waste based on the anticipated heating value. As mentioned earlier, certain incinerators are designed for low heat value waste. Making sure each batch of waste falls within a predetermined heat value range is critical to operating the incinerator.
- Controlling Air – The amount of air in an incinerator is one of the main ways to control operating temperature. Under ideal circumstances the amount of oxygen within the combustion chamber is just enough to oxidize the carbon and hydrogen in the waste. Too little air will cause temperatures to drop and not allow the waste to incinerate sufficiently,

¹⁰ *Technical Document for Batch Waste Incineration*, Environment Canada, January 2010.

while too much air causes incineration to speed up and release excess amounts of volatile gases. This in turn increases the operating temperature of the incinerator and has the potential to damage the machinery. Most large scale models include automatic temperature control systems, but small scale incinerators often do not and require a trained operator to constantly monitor the temperature profile of the machine.

Capital costs for equipment able to handle such capacity ranges from \$4M to \$10M. This includes land acquisition, engineering and design, assembly and shipping. Operating costs range from \$150k to \$600k per year. This cost includes fuel, maintenance and labour. It is important to note that fuel and labour costs are variable and change throughout lifespan of the incinerator. For example batch incinerators can require two to four labourers to operate and 1,000 to 2,000 litres of fuel per month depending on the type of technology.

Some of the costs associated with purchasing and operating an incinerator can be offset if energy and/or heat recovery systems are included. The amount of heat or energy recovered depends largely on the heat value of the waste being incinerated and the amount of waste incinerated.

6.2.4 Export of Waste

Shipping waste to another landfill outside of Elliot Lake is an option which requires no change in infrastructure or capital costs. Currently, the City spends \$174.48 per tonne for garbage collection and disposal. Exporting of waste has an approximate cost of \$18-35 per tonne to ship and \$40-80 per tonne for disposal, based on a 300km shipping radius. Therefore, this option could be favourable in terms of economics but could ultimately run into problems if the receiving site decides to discontinue service, much like the issues Toronto encountered with Michigan. Also, the aforementioned costs do not include collection of waste from residents, which would still be required. The City currently collects garbage at a cost of \$95 per tonne. The total cost of exporting waste could therefore be as high as \$210 per tonne.

Possible locations for exporting waste include: Sudbury (161km), Sault St. Marie (199km), and Blind River (60km).

7 Selection of Preferred Waste Management Options

While there are many combinations of solid waste diversion and disposal options available for the City of Elliot Lake, they might not be economical, socially acceptable or environmentally sustainable. It is also important to select options that have a proven track record, are reliable, easy to implement and provide a significant increase in the diversion rate. During the public meeting, several criteria were discussed and reviewed by the public. According to the public consensus, the evaluation of options will be based on the following criteria:

- Environmental impacts (positive and negative) (including affect on waste diversion);
- Cost effectiveness/affordability;
- Economic development¹¹;
- Social/cultural acceptability;

¹¹ Criterion added based on public workshop #1.

- Ease of implementation; and
- Track record of technology/program (proven results).

The various options discussed above are weighed against these criteria in Table 6. The criteria are scored from 1 to 5, where 1 indicates a negative affect or outcome, 3 is neutral, and 5 is positive affect or outcome.

Table 6: Evaluation of Diversion and Disposal Options							
<i>Option</i>	Criteria (score out of 5)						Total Score
	<i>Environmental Impact/ Diversion</i>	<i>Cost Effectiveness/ Affordability</i>	<i>Economic Development</i>	<i>Social Acceptability</i>	<i>Ease of Implementation</i>	<i>Proven Results</i>	
<i>Diversion Options</i>							
Yard Waste Composting	5	3	4	5	5	5	27
Promotion and Education	4	3	4	5	5	5	26
Waste Minimization	4	3	4	5	5	4	25
Source Separated Organics	5	2	4	4	4	5	24
Blue Box Service Optimization	4	2	4	5	3	5	23
Policy Options	4	3	3	2	4	5	21
<i>Disposal Options</i>							
Landfill Expansion	3	2	4	4	4	5	22
New Landfill Site	3	2	4	2	2	4	18
Thermal Treatment	3	1	3	2	2	3	14
Export	2	2	3	2	3	5	16

Preferred Diversion Options

Based on the evaluation illustrated in the table above, the preferred options for diversion in addition to the City's current recycling program, include:

- Yard waste composting (diversion potential: 308 tonnes, or 8 % of the waste stream);

- Promotion and education (require to support programs);
- Waste minimization (diversion potential: 115 tonnes, or 3% of the waste stream); and
- Source separated organics (diversion potential: 640 tonnes, or 17% of the waste stream).
- Service optimization could be revisited during the next collection contract process by including as an option. The bid information would provide accurate information for evaluation. .

These programs would help to raise Elliot Lake's existing waste diversion rate from 21.4% up to 49.4% based on increasing participation to the provincial target of 70%.

Preferred Disposal Options

The preferred disposal option is to expand the current landfill. However, based on public feedback the option of thermal treatment as a means to reduce the amount of waste for disposal should be reviewed again in five years, once the landfill expansion is complete.

8 Recommendations and Implementation Plan

8.1 Recommendations

The Solid Waste Management Plan recommendations include:

1. The City of Elliot Lake should compost leaf and yard waste material that residents are unable to compost in their own backyard. The City should maintain the seasonal collection leaf and yard waste it now offers to residents and supplement it by allowing residents to drop-off their excess leaf and yard waste at a municipal depot. To plan for this, the City should develop a detailed implementation plan that includes the following:
 - Estimated costs of the City's new leaf and yard waste composting program;
 - Design of the depot drop-off and the composting/curing area;
 - Obtaining the required permits and approvals;
 - Development of communication materials; and
 - Development of any required operating contracts.

Estimated additional costs:

- Planning and design: \$15,000
 - Collection at depot: \$40/per tonne x 300 tonnes/year = \$12,000/year
 - Processing of leaf and yard waste: \$50/tonne x 300 tonnes/year = \$15,000/year
2. The City should develop and implement a comprehensive waste management promotion and education strategy. The strategy should identify:
 - Goals and objectives of the strategy, including waste diversion goals;
 - Target audiences;
 - Target messages;

- How the messages would be delivered; and
- Potential community partners, among other things.

One of the key topics of the promotion and education strategy would be waste minimization, which would promote waste reduction and reuse.

Estimated additional costs:

- Increased annual waste management communications budget: \$12,000

3. To meet the Provincial waste diversion target and maximize the lifespan of its landfill, the City needs to implement a source separated organic collection program. However, due to the cost of a new program, the City should initiate a multi-year process for the design and implementation in phases. The phased process should include:

- A detailed implementation plan;
- A pilot assessment to develop the design of the program and identify the anticipated costs;
- Development of communication materials for the program;
- Pilot-testing of the program to confirm the costs and logistics of the program; and
- Full implementation of the program (pending the results of the pilot-test).

Estimated additional costs:

- Implementation plan/feasibility assessment: \$10,000
- Pilot test (including design of communication materials): \$40,000
- Implementation capital \$95,000 - \$110,000
- Operating cost of program once the program has reached maturity (approximately 3 to 5 years after implementation): \$200/tonne x 638 tonnes per year = \$127,600

4. The City should proceed with the optimization of its Blue Box program, which would include assessing the costs and feasibility of:

- Providing larger blue bins to residents.
- Adding additional materials to the blue box stream;
- Moving from alternating weekly collection of recyclables to weekly collection; and
- Collecting recyclables in a single stream using a cart-based system.

The assessment of the costs would be conducted through the tender process. The optimizations listed above would be included in the tender as options, whereby the contractors would provide pricing on the options.

Estimated additional costs:

- To be determined through tender process

5. The City should initiate an Environmental Assessment process for the expansion of the City's existing landfill. With the successful completion of the Environmental Assessment, the City

would then amend the site's Certificate of Approval (CofA) under the Environmental Protection Act (EPA), followed by engineering design and construction of the expansion.

Estimated costs:

- The estimated cost of completing the Environmental Assessment, obtaining the amendment of the Certificate of Approval, and completing the design and construction will depend on the size of the expansion and could range from approximately \$1,000,000 to \$3,000,000 over the life of the site. Operational costs would be comparable to that of the current landfill site.

8.2 Implementation Plan

The next steps for Elliot Lake will be to prepare detailed implementation plans for the preferred system components to be implemented. Recommended steps to move each of the system options toward implementation are provided in table 7.

Table 7: Implementation Steps			
Recommended Diversion Options	Recommended Steps toward Implementation	Timeline	Estimated Additional Costs
Leaf and Yard waste Composting	<ul style="list-style-type: none"> • Develop detailed implementation plan, including: <ul style="list-style-type: none"> ○ System design (e.g., space required for composting/curing); ○ Costs; ○ Permits and approvals; ○ Communications; ○ Contracting (if required). 	2013	Implementation (planning and design): \$15,000 Annual Operating (depot collection and processing): \$27,000
Promotion and education (including waste minimization)	<ul style="list-style-type: none"> • Develop a detailed solid waste communications budget. • Build partnerships, as necessary. • Prepare a communications strategy, including the identification of: <ul style="list-style-type: none"> ○ Goals and objectives of the communications strategy, including specific diversion goals; ○ Target audience; ○ Target messages; ○ Mechanisms for delivering the messages (e.g., brochures, volunteers, etc). • Develop communication materials/obtain equipment (e.g., backyard composters, mulching blades, etc). • Roll-out communications strategy. 	2012 - 2013	Annual budget: \$12,000

Table 7: Implementation Steps			
Recommended Diversion Options	Recommended Steps toward Implementation	Timeline	Estimated Additional Costs
Household Source Separated Organics (e.g., kitchen and food waste)	<ul style="list-style-type: none"> • Develop detailed implementation plan, including: <ul style="list-style-type: none"> ○ System design (type of collection/processing); ○ Costs; ○ Communications; ○ Pilot testing; ○ Contracting (if required) 	2012 – 2013 Design 2014 Pilot testing 2016 Implementation	Implementation planning/ feasibility assessment: \$15,000 Pilot test: \$40,000 Implementation: \$95,000 - \$110,000 Annual Operating (collection and processing): \$127,600
Blue Box Service Optimization	<ul style="list-style-type: none"> • Assess funding options for conducting necessary research or purchase of equipment • Complete additional required research/studies • Purchase necessary equipment 	2015 Preparation for tender 2016 Issue/evaluate tender	Costs to be assessed during tendering process
Recommended Disposal Option	Recommended Steps toward Implementation	Timeline	Estimated Additional Costs
Landfill Expansion	<ul style="list-style-type: none"> • Initiate and complete EA Process • Amend CofA • Design and build landfill expansion 	2013 – 2014 Complete EA Process 2014 Amend CofA 2015 – 2017 Design/build of landfill expansion	\$1,000,000 and \$3,000,000 (including EA, CofA amendment and design/build of expansion)

Appendix A: Public Consultation Materials



WELCOME

PUBLIC INFORMATION CENTRE #1

DEVELOPING A LONG TERM SUSTAINABLE SOLID WASTE MANAGEMENT PLAN FOR THE CITY OF ELLIOT LAKE

Please sign in at the front desk



PURPOSE OF OPEN HOUSE

Purpose of the SSWMP

- Provide a long term strategy for sustainably managing solid waste
- Increase the amount of waste recycled
- Reduce waste sent to landfill
- Identify preferred disposal alternatives

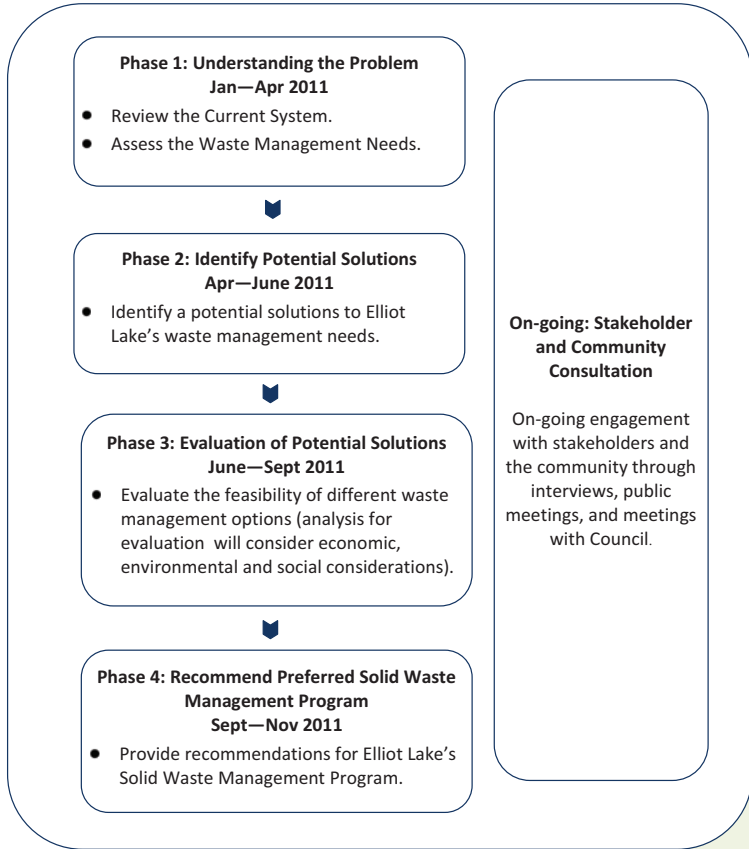
Purpose of this Open House

- Obtain your ideas on what waste management options should be included in Elliot Lake's solid waste management plan.



Development of a Long Term Sustainable Solid Waste Management Plan

PROCESS OVERVIEW



After the completion of Phase 4, an Environmental Assessment will be completed on the preferred waste disposal option.



Development of a Long Term Sustainable Solid Waste Management Plan

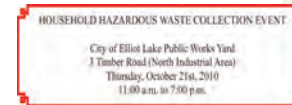
ELLIOT LAKE’S CURRENT SYSTEM



Curbside Collection of Garbage and Blue Box Recyclables (Fibres and Container)



Curbside Leaf and Yard Waste Collection (seasonal)



Household Hazardous Waste Collection Event



Backyard Composting



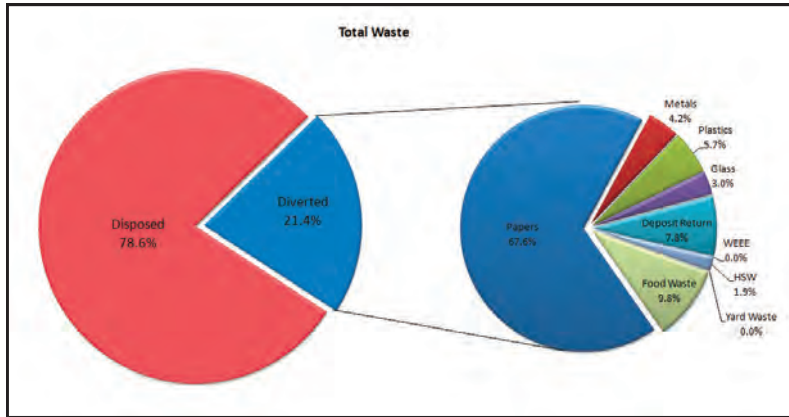
Recycling Depot





Development of a Long Term Sustainable Solid Waste Management Plan

ELLIOT LAKE'S CURRENT SYSTEM Diversion Percentage and Types



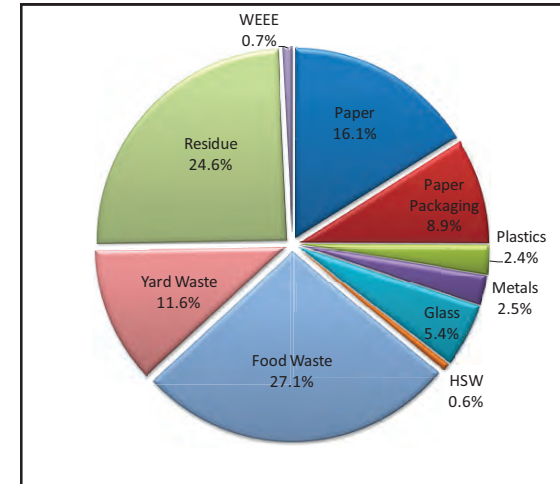
Material Diverted	Tonnes
Papers (ONP, OMG, OCC, OBB and fine papers)	550
Metals (aluminum, steel, mixed metal)	34
Plastics (containers, film, tubs and lids)	46
Glass	24
Deposit Return Program	63
WEEE	0
HSW	15
Food Waste (backyard composting)	80
Yard Waste	0
Total Materials Diverted	812
Sent to Landfill	2,979
Diversion Rate	21.4%

WEEE = Waste Electrical and Electronic Equipment
HSW = Household Special Waste



Development of a Long Term Sustainable Solid Waste Management Plan

ELLIOT LAKE'S CURRENT SYSTEM Waste Stream Composition



Material In Waste Stream	Tonnes
Papers (ONP, OMG, OCC, OBB and fine papers)	950
Metals (aluminum, steel, mixed metal)	95
Plastics (containers, film, tubs and lids)	91
Glass	203
WEEE	27
HSW	24
Food Waste	1028
Yard Waste	440
Residue	933
Total	3791

WEEE = Waste Electrical and Electronic Equipment
HSW = Household Special Waste





Development of a Long Term Sustainable Solid Waste Management Plan

ELLIOT LAKE'S CURRENT SYSTEM

System Costs per Household (2009)

Recycling program:	\$14
Garbage collection and disposal	\$84
Total system	\$98

Net Cost of Elliot Lake's Waste Management Services	
Garbage Collection Expenditures	\$ 284,390
Recycling Collection Expenditures	\$ 119,674
Recycling Collection Revenues	\$ 32,946
Recycling Collection Net Total	\$ 86,727
Landfill (Disposal) Site	\$ 235,195
Total Waste Management	\$ 606,312



Development of a Long Term Sustainable Solid Waste Management Plan

POSSIBLE DIVERSION OPTIONS

Waste Minimization

- Reduces waste *at the source*
- Possible activities include:
 - Increased backyard composting
 - Changing purchasing behaviors
 - Grasscycling
 - Reusing items
- Challenges: can be difficult to change minds, requires continuous education

Possible performance

- Up to 3% additional diversion (~115 tonnes)
- Approximate cost: ~ \$2 per household





Development of a Long Term Sustainable Solid Waste Management Plan

POSSIBLE DIVERSION OPTIONS

Household Organics Diversion

- Kitchen and food waste, non-recyclable paper and some leaf and yard waste
- Source-separating organics in the home, and then setting at curbside for collection
- Lots of potential since it encompassed large portion of waste stream



Possible performance

- Up to 17% additional diversion (~520 tonnes)
- Approximate costs
 - Collection: \$8 to \$13 per household
 - Composting: \$8 to \$13 per household
 - Start-up (including capital and education): \$15 to \$25 per household



Development of a Long Term Sustainable Solid Waste Management Plan

POSSIBLE DIVERSION OPTIONS

Education

- Supports all programs
- Approximate cost: ~ \$2 per household
- May include door to door education, print media, community outreach at events

Electronics and

Household Special Waste Recycling

- Additional special event days at Recycling Depot or other locations
- Provide additional opportunities for residents to drop off waste electronics, or household special wastes (e.g., batteries, paints, etc)
- Increase diversion by up to 1%
- Approximate cost: ~\$2 per household (funding opportunities provided through stewardship programs)



Development of a Long Term Sustainable Solid Waste Management Plan

POSSIBLE DIVERSION OPTIONS

Enhanced Yard Waste Collection

- This may include increasing the collection frequency of leaf and yard waste organics
- Key issues may include the potential cost increase and a need for more composting capacity



Possible Performance

- Increase diversion by up to 9% (~310 tonnes)
- Approximate cost: \$5 - \$8 per household



Development of a Long Term Sustainable Solid Waste Management Plan

POSSIBLE DIVERSION OPTIONS

Waste Diversion Policies

- Examples of municipal policy options to encourage greater waste diversion include:
 - User pay
 - Clear garbage bags
 - Bi-weekly garbage collection
 - Bag limits (e.g., 2 or 3 bags max. per week)
 - Mandatory recycling by-law

Possible performance

- Up to 5% additional diversion (~190 tonnes)
- Policies would help to support diversion through other programs, such as blue box and organics
- Approximate cost: ~\$3 per household for implementation of enforcement officers, buying waste tags/bags



Development of a Long Term Sustainable Solid Waste Management Plan

POSSIBLE DIVERSION OPTIONS

Industrial, Commercial and Institutional (ICI) Waste Diversion

- Options for increasing waste diversion in the ICI sector may include:
 - Education programs
 - Incentives and disincentives
 - Waste exchanges (i.e., a network for selling/giving away wastes that others can use)

Possible Performance

- Approximate cost: \$4 - \$6 per household



Development of a Long Term Sustainable Solid Waste Management Plan

POSSIBLE DISPOSAL OPTIONS

Expanding Current Landfill Site

- Existing landfill site could be expanded
- Approximate cost: \$600,000 - \$2,000,000

New Landfill Site

- A new landfill site could be sited in proximity to Elliot Lake
- Approx. cost: \$1 million to \$5 million

Energy from Waste (EFW)

- Waste could be converted to energy
- Approx. capital cost \$5M-\$10M (Small scale)
- Approx. operating cost: \$100 - \$200 tonne

Export of Waste

- Waste could be exported to landfill in another community
- Approximate cost: \$18 - \$35/tonne to ship*, \$40 to \$80 per tonne for disposal

* based on 300 km radius



Development of a Long Term Sustainable Solid Waste Management Plan

COST OF FUTURE SYSTEM

Future System Programs	Anticipated Diversion/ Disposal (tonnes)	Estimated Annual Cost	Estimated Annual Cost per household
ICI		\$30,900	\$5
Education	*	\$12,360	\$2
Waste Minimization	115	\$12,360	\$2
Policies	*	\$18,540	\$3
Household Organics	525	\$104,930	\$17
Yard Waste	308	\$40,085	\$6
Enhanced Recycling	1110	\$121,076	\$20
WEEE/HSW**	36	\$10,000	\$2
Refuse Collected/ Disposed	1,617	\$276,288	\$45
	Total	\$626,539	\$101

* Used to support other diversion programs

** WEEE = Waste Electrical and Electronic Equipment; HSW = Household Special Waste (e.g., batteries, used oil, paints and solvents, etc)

Comparison of Current and Potential Future System

	Current System	Future System with Options
Waste Diversion Rate	21.4%	55.7%
Annual Cost	\$606,312	\$626,539
Annual Cost per Tonne of waste Generated	\$160	\$174
Average Cost per Household	\$98	\$101



Development of a Long Term Sustainable Solid Waste Management Plan

CRITERIA FOR SELECTING OPTIONS

Each option being investigated will be evaluated against its overall sustainability and performance. Examples of criteria that can be used include:

- * Environmental effects (impacts and benefits)
- * Affect on waste diversion
- * Social impact and acceptability
- * Track record of technology/program
- * Cost effectiveness
- * Ease of implementation

What criteria should be used to assess and select the options to be included in the SSWMP? Do you agree with what is included above? What is missing?



Development of a Long Term Sustainable Solid Waste Management Plan

NEXT STEPS

- Review the feedback from the open house.
- Evaluate the waste management options.
- Identify the preferred options.
- Review the preferred options with the public.
- Prepare document describing preferred waste management system.
- Present the preferred waste management system to Council.
- Conduct Environmental Assessment on preferred waste disposal option.



Development of a Long Term Sustainable Solid Waste Management Plan

WE NEED YOUR FEEDBACK!



Your input into this process is crucial and will help to ensure the new Elliot Lake SSWMP meets the long term solid waste management needs of the community.

We encourage you to speak with our project team to ask questions or discuss your ideas.

Please take a few moments to complete the Open House workbook and write your comments. You may do so here, or take it home with you and send it in at a later date.

Contact Information

Elliot Lake

Mike Perkins, P.Eng.
City of Elliot Lake
City Hall
45 Hillside Drive North
Elliot Lake, ON P5A 1X5
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John.smith@exp.com





WELCOME

PUBLIC INFORMATION CENTRE #2

DEVELOPING A LONG TERM SUSTAINABLE SOLID WASTE MANAGEMENT PLAN FOR THE CITY OF ELLIOT LAKE

Please sign in at the front desk



PURPOSE OF OPEN HOUSE

Purpose of the SSWMP

- Provide a long term strategy for sustainably managing solid waste
- Increase the amount of waste recycled
- Reduce waste sent to landfill
- Identify preferred disposal alternatives

Purpose of this Open House

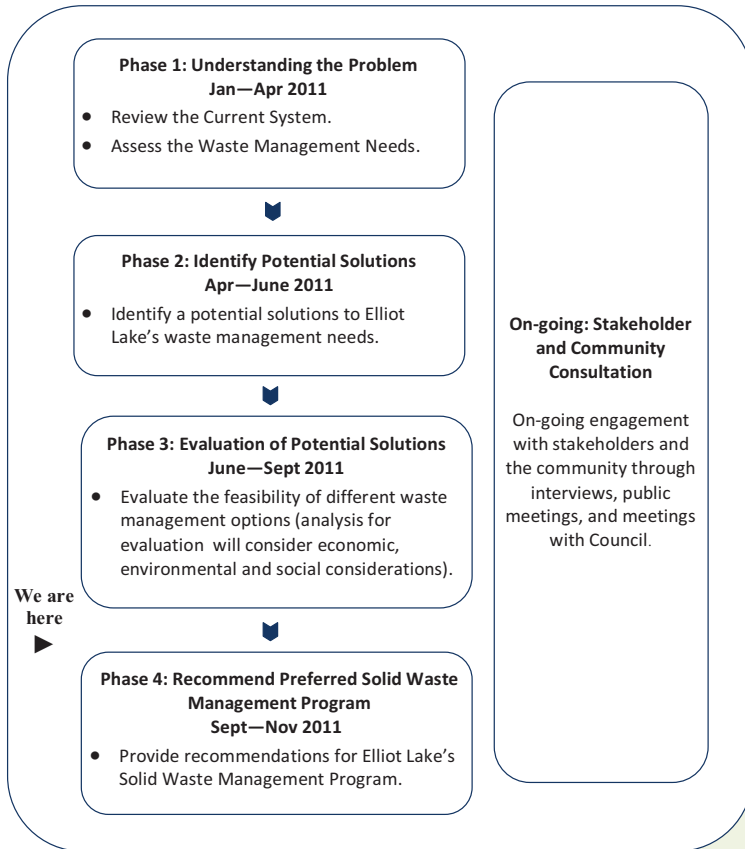
- Obtain your input on the waste management options identified to be included in Elliot Lake's solid waste management plan.





Development of a Long Term Sustainable Solid Waste Management Plan

PROCESS OVERVIEW

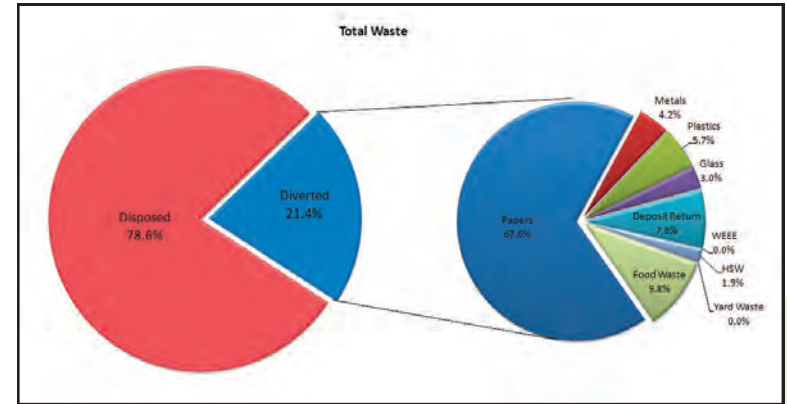


After the completion of Phase 4, an Environmental Assessment will be completed on the preferred waste disposal option.

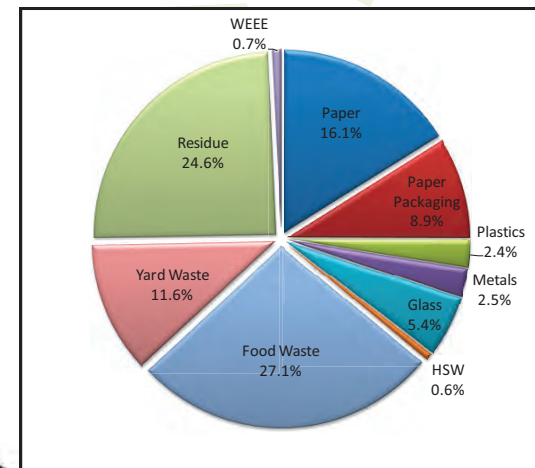


Development of a Long Term Sustainable Solid Waste Management Plan

ELLIOT LAKE'S CURRENT SYSTEM Diversion Percentage and Types



Composition of Total Waste Stream





Development of a Long Term Sustainable Solid Waste Management Plan

ELLIOT LAKE'S CURRENT SYSTEM

System Costs per Household (2009)

Recycling program:	\$14
Garbage collection and disposal	\$84
Total system	\$98

Net Cost of Elliot Lake's Waste Management Services	
Garbage Collection Expenditures	\$ 284,390
Recycling Collection Expenditures	\$ 119,674
Recycling Collection Revenues	\$ 32,946
Recycling Collection Net Total	\$ 86,727
Landfill (Disposal) Site	\$ 235,195
Total Waste Management	\$ 606,312



Development of a Long Term Sustainable Solid Waste Management Plan

WASTE MANGEMENT OPTIONS CONSIDERED FOR EVALUATION

- Programs to promote reducing waste *at the source*:
 - * Increased backyard composting
 - * Changing purchasing behaviors
 - * Grasscycling
 - * Reusing items
- Household Organics Diversion (e.g. food waste)
- Enhanced Promotion and Education Program (incl. ICI waste diversion)
- Electronics and Household Special Waste (e.g. paints, oil, etc.)
- Increased collection frequency for leaf and yard waste organics



Development of a Long Term Sustainable Solid Waste Management Plan

WASTE MANGEMENT OPTIONS CONSIDERED FOR EVALUATION

- Waste Diversion Policies
 - User pay
 - Clear garbage bags
 - Bi-weekly garbage collection
 - Bag limits (e.g., 2 or 3 bags max. per week)
 - Mandatory recycling by-law
- Expanding Current Landfill Site
- New Landfill Site
- Thermal Treatment (e.g. incineration)
- Export of Waste



Development of a Long Term Sustainable Solid Waste Management Plan

EVALUATION OF WASTE MANAGEMENT OPTIONS

Option	Criteria (score out of 5)						Total Score
	Environmental Impact/ Diversion	Cost Effectiveness/ Affordability	Economical Development	Social Acceptability	Ease of Implementation	Proven Results	
Diversion Options							
Yard Waste Composting	5	3	4	5	5	5	27
Promotion and Education	4	3	4	5	5	5	26
Waste Minimization	4	3	4	5	5	4	25
Source Separated Organics	5	2	4	4	4	5	24
Policy Options	4	3	3	3	4	5	22
Blue Box Service Optimization	4	1	3	5	3	4	20
Disposal Options							
Landfill Expansion	3	2	4	4	5	5	23
New Landfill Site	3	2	4	2	2	5	19
Thermal Treatment	3	1	3	2	2	3	14
Export	2	2	1	2	3	2	12



Development of a Long Term Sustainable Solid Waste Management Plan

In addition to the City's current program, the preferred options for diversion include:

- Yard waste composting (diversion potential: 308 tonnes, or 8% of the waste stream);
- Promotion and education (required to support programs);
- Waste minimization (diversion potential: 115 tonnes, or 3% of the waste stream);
- Source separated organics (diversion potential: 640 tonnes, or 17% of the waste stream);
- Service optimization should also be included during the next collection contract.

The preferred disposal option is to expand the current landfill. However, the option of incineration or waste to energy should be reviewed again in five years, once the landfill expansion is complete.

These programs would help to raise Elliot Lake's existing waste diversion rate from 21.4% up to 49.4% and provide 20+ years of disposal capacity.



Development of a Long Term Sustainable Solid Waste Management Plan

COST OF FUTURE SYSTEM

Future System Programs	Anticipated Diversion/ Disposal (tonnes)	Estimated Annual Cost	Estimated Annual Cost per household
Promotion/Education		\$37,000	\$6
Waste Minimization	115	\$12,360	\$2
Policies	*	\$18,540	\$3
Household Organics	525	\$104,930	\$17
Yard Waste	308	\$40,085	\$6
Enhanced Recycling	1110	\$121,076	\$20
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Development of a Long Term Sustainable Solid Waste Management Plan

WE NEED YOUR FEEDBACK!



Your input into this process is crucial and will help to ensure the new Elliot Lake SSWMP meets the long term solid waste management needs of the community.

Please take a few moments to complete the Open House workbook and write your comments. You may do so here, or take it home with you and send it in at a later date.

Contact Information

Elliot Lake	exp
Mike Perkins, P.Eng. City of Elliot Lake City Hall 45 Hillside Drive North Elliot Lake, ON P5A 1X5 Tel: (705) 848-2287 ext. 2123 Mike.Perkins@city.elliottlake.on.ca	John Smith exp 195 Clark Boulevard Brampton, ON L6T 4V1 Tel: (905) 793-9800 John.smith@exp.com



Appendix D: Archaeological Potential and Built Heritage/Cultural Landscape Screening Checklist

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“Archaeological potential” is a term used to describe the likelihood that a property contains archaeological resources. This checklist is intended to assist non-specialists screening for the archaeological potential of a property where site alteration is proposed.

Note: for projects seeking a Renewable Energy Approval under Ontario Regulation 359/09, the Ministry of Tourism and Culture has developed a separate checklist to address the requirements of that regulation.

Project Name Elliot Lake Solid Waste Management Plan Environmental Assessment			
Project Location Elliot Lake, ON			
Proponent Name City of Elliot Lake			
Proponent Contact Information Mike Perkins, City of Elliot Lake (705) 848-2287			
Known Archaeological Sites	Yes	Unknown	No
1. Known archaeological sites within 300 m of property	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Physical Features	Yes	Unknown	No
2. Body of water within 300 m of property If yes, what kind of water?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
a) Primary water source (lake, river, large creek, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Secondary water source (stream, spring, marsh, swamp, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Past water source (beach ridge, river bed, relic creek, ancient shoreline, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3. Topographical features on property (knolls, drumlins, eskers, or plateaus)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. Pockets of sandy soil (50 m ² or larger) in a clay or rocky area on property	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5. Distinctive land formations on property (mounds, caverns, waterfalls, peninsulas, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cultural Features	Yes	Unknown	No
6. Known burial site or cemetery on or adjacent to the property (cemetery is registered with the Cemeteries Regulation Unit)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7. Food or scarce resource harvest areas on property (traditional fishing locations, agricultural/berry extraction areas, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. Indications of early Euro-Canadian settlement within 300 m of property (monuments, cemeteries, structures, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. Early historic transportation routes within 100 m of property (historic road, trail, portage, rail corridor, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Property-specific Information	Yes	Unknown	No
10. Property is designated and/or listed under the <i>Ontario Heritage Act</i> (municipal register and lands described in Reg. 875 of the <i>Ontario Heritage Act</i>)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
11. Local knowledge of archaeological potential of property (from aboriginal communities, heritage organisations, municipal heritage committees, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12. Recent deep ground disturbance [†] (post-1960, widespread and deep land alterations)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

[†] Archaeological potential can be determined not to be present for either the entire property or a part(s) of it when the area under consideration has been subject to widespread and deep land alterations that have severely damaged the integrity of any archaeological resources. Deep disturbance may include quarrying or major underground infrastructure development. Activities such as agricultural cultivation, gardening, minor grading and landscaping are not necessarily considered deep disturbance. Alterations can be considered to be extensive or widespread when they have affected a large area, usually defined as the majority of a property.

Scoring the results:

If **Yes** to **any** of **1, 2a, 2b, 2c, 6, 10, or 11** → high archaeological potential – assessment is required

If **Yes** to **two or more** of **3, 4, 5, 7, 8, or 9** → high archaeological potential – assessment is required

If **Yes** to **12** or **No** to all of **1 - 10** → **low** archaeological potential – assessment is not required

If 3 or more **Unknown** → an archaeological assessment is required (see note below)

† **Note:** If information requested in this checklist is unknown, a consultant archaeologist licensed under the *Ontario Heritage Act* should be retained to carry out at least a Stage 1 archaeological assessment to further explore the archaeological potential of the property and to prepare a report on the results of that assessment. The Ministry of Tourism and Culture reviews all such reports prepared by consultant archaeologists against the ministry's Standards and Guidelines for Consultant Archaeologists. Once the ministry is satisfied that, based on the available information, the report has been prepared in accordance with those guidelines, the ministry issues an acceptance letter to the consultant archaeologist and places the report into its registry where it is available for public inspection.

The purpose of the checklist is to determine:

- if a property(ies) or project area:
 - is a recognized heritage property
 - may be of cultural heritage value
- it includes all areas that may be impacted by project activities, including – but not limited to:
 - the main project area
 - temporary storage
 - staging and working areas
 - temporary roads and detours

Processes covered under this checklist, such as:

- *Planning Act*
- *Environmental Assessment Act*
- *Aggregates Resources Act*
- *Ontario Heritage Act* – Standards and Guidelines for Conservation of Provincial Heritage Properties

Cultural Heritage Evaluation Report (CHER)

If you are not sure how to answer one or more of the questions on the checklist, you may want to hire a qualified person(s) (see page 5 for definitions) to undertake a cultural heritage evaluation report (CHER).

The CHER will help you:

- identify, evaluate and protect cultural heritage resources on your property or project area
- reduce potential delays and risks to a project

Other checklists

Please use a separate checklist for your project, if:

- you are seeking a Renewable Energy Approval under Ontario Regulation 359/09 – separate checklist
- your Parent Class EA document has an approved screening criteria (as referenced in Question 1)

Please refer to the Instructions pages for more detailed information and when completing this form.

Project or Property Name
Elliot Lake Solid Waste Management Plan Environmental Assessment

Project or Property Location (upper and lower or single tier municipality)
Elliot Lake, ON

Proponent Name
City of Elliot Lake

Proponent Contact Information
Robert deBortoli, CAO Tel: (705) 848-2287

Screening Questions

1. Is there a pre-approved screening checklist, methodology or process in place? Yes No

If Yes, please follow the pre-approved screening checklist, methodology or process.

If No, continue to Question 2.

Part A: Screening for known (or recognized) Cultural Heritage Value

2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value? Yes No

If Yes, do not complete the rest of the checklist.

The proponent, property owner and/or approval authority will:

- summarize the previous evaluation and
- add this checklist to the project file, with the appropriate documents that demonstrate a cultural heritage evaluation was undertaken

The summary and appropriate documentation may be:

- submitted as part of a report requirement
- maintained by the property owner, proponent or approval authority

If No, continue to Question 3.

3. Is the property (or project area): Yes No

- | | | |
|---|--------------------------|-------------------------------------|
| a. identified, designated or otherwise protected under the <i>Ontario Heritage Act</i> as being of cultural heritage value? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b. a National Historic Site (or part of)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c. designated under the <i>Heritage Railway Stations Protection Act</i> ? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d. designated under the <i>Heritage Lighthouse Protection Act</i> ? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e. identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office (FHBRO)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f. located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

If Yes to any of the above questions, you need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report, if a Statement of Cultural Heritage Value has not previously been prepared or the statement needs to be updated

If a Statement of Cultural Heritage Value has been prepared previously and if alterations or development are proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No, continue to Question 4.

Part B: Screening for Potential Cultural Heritage Value

	Yes	No
4. Does the property (or project area) contain a parcel of land that:		
a. is the subject of a municipal, provincial or federal commemorative or interpretive plaque?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has or is adjacent to a known burial site and/or cemetery?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. is in a Canadian Heritage River watershed?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. contains buildings or structures that are 40 or more years old?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Part C: Other Considerations

	Yes	No
5. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area):		
a. is considered a landmark in the local community or contains any structures or sites that are important in defining the character of the area?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. has a special association with a community, person or historical event?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c. contains or is part of a cultural heritage landscape?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If Yes to one or more of the above questions (Part B and C), there is potential for cultural heritage resources on the property or within the project area.

You need to hire a qualified person(s) to undertake:

- a Cultural Heritage Evaluation Report (CHER)

If the property is determined to be of cultural heritage value and alterations or development is proposed, you need to hire a qualified person(s) to undertake:

- a Heritage Impact Assessment (HIA) – the report will assess and avoid, eliminate or mitigate impacts

If No to all of the above questions, there is low potential for built heritage or cultural heritage landscape on the property.

The proponent, property owner and/or approval authority will:

- summarize the conclusion
- add this checklist with the appropriate documentation to the project file

The summary and appropriate documentation may be:

- submitted as part of a report requirement e.g. under the *Environmental Assessment Act, Planning Act* processes
- maintained by the property owner, proponent or approval authority

Instructions

Please have the following available, when requesting information related to the screening questions below:

- a clear map showing the location and boundary of the property or project area
 - large scale and small scale showing nearby township names for context purposes
- the municipal addresses of all properties within the project area
- the lot(s), concession(s), and parcel number(s) of all properties within a project area

For more information, see the Ministry of Tourism, Culture and Sport's [Ontario Heritage Toolkit](#) or [Standards and Guidelines for Conservation of Provincial Heritage Properties](#).

In this context, the following definitions apply:

- **qualified person(s)** means individuals – professional engineers, architects, archaeologists, etc. – having relevant, recent experience in the conservation of cultural heritage resources.
- **proponent** means a person, agency, group or organization that carries out or proposes to carry out an undertaking or is the owner or person having charge, management or control of an undertaking.

1. Is there a pre-approved screening checklist, methodology or process in place?

An existing checklist, methodology or process may already be in place for identifying potential cultural heritage resources, including:

- one endorsed by a municipality
- an environmental assessment process e.g. screening checklist for municipal bridges
- one that is approved by the Ministry of Tourism, Culture and Sport (MTCS) under the Ontario government's [Standards & Guidelines for Conservation of Provincial Heritage Properties](#) [s.B.2.]

Part A: Screening for known (or recognized) Cultural Heritage Value

2. Has the property (or project area) been evaluated before and found not to be of cultural heritage value?

Respond 'yes' to this question, if all of the following are true:

A property can be considered not to be of cultural heritage value if:

- a Cultural Heritage Evaluation Report (CHER) - or equivalent - has been prepared for the property with the advice of a qualified person and it has been determined not to be of cultural heritage value and/or
- the municipal heritage committee has evaluated the property for its cultural heritage value or interest and determined that the property is not of cultural heritage value or interest

A property may need to be re-evaluated, if:

- there is evidence that its heritage attributes may have changed
- new information is available
- the existing Statement of Cultural Heritage Value does not provide the information necessary to manage the property
- the evaluation took place after 2005 and did not use the criteria in Regulations 9/06 and 10/06

Note: Ontario government ministries and public bodies [prescribed under Regulation 157/10] may continue to use their existing evaluation processes, until the evaluation process required under section B.2 of the Standards & Guidelines for Conservation of Provincial Heritage Properties has been developed and approved by MTCS.

To determine if your property or project area has been evaluated, contact:

- the approval authority
- the proponent
- the Ministry of Tourism, Culture and Sport

3a. Is the property (or project area) identified, designated or otherwise protected under the Ontario Heritage Act as being of cultural heritage value e.g.:

- i. designated under the *Ontario Heritage Act*
 - individual designation (Part IV)
 - part of a heritage conservation district (Part V)

Individual Designation – Part IV

A property that is designated:

- by a municipal by-law as being of cultural heritage value or interest [s.29 of the *Ontario Heritage Act*]
- by order of the Minister of Tourism, Culture and Sport as being of cultural heritage value or interest of provincial significance [s.34.5]. **Note:** To date, no properties have been designated by the Minister.

Heritage Conservation District – Part V

A property or project area that is located within an area designated by a municipal by-law as a heritage conservation district [s. 41 of the *Ontario Heritage Act*].

For more information on Parts IV and V, contact:

- municipal clerk
- [Ontario Heritage Trust](#)
- local land registry office (for a title search)

ii. subject of an agreement, covenant or easement entered into under Parts II or IV of the *Ontario Heritage Act*

An agreement, covenant or easement is usually between the owner of a property and a conservation body or level of government. It is usually registered on title.

The primary purpose of the agreement is to:

- preserve, conserve, and maintain a cultural heritage resource
- prevent its destruction, demolition or loss

For more information, contact:

- [Ontario Heritage Trust](#) - for an agreement, covenant or easement [clause 10 (1) (c) of the *Ontario Heritage Act*]
- municipal clerk – for a property that is the subject of an easement or a covenant [s.37 of the *Ontario Heritage Act*]
- local land registry office (for a title search)

iii. listed on a register of heritage properties maintained by the municipality

Municipal registers are the official lists - or record - of cultural heritage properties identified as being important to the community.

Registers include:

- all properties that are designated under the *Ontario Heritage Act* (Part IV or V)
- properties that have not been formally designated, but have been identified as having cultural heritage value or interest to the community

For more information, contact:

- municipal clerk
- municipal heritage planning staff
- municipal heritage committee

iv. subject to a notice of:

- intention to designate (under Part IV of the *Ontario Heritage Act*)
- a Heritage Conservation District study area bylaw (under Part V of the *Ontario Heritage Act*)

A property that is subject to a **notice of intention to designate** as a property of cultural heritage value or interest and the notice is in accordance with:

- section 29 of the *Ontario Heritage Act*
- section 34.6 of the *Ontario Heritage Act*. **Note:** To date, the only applicable property is Meldrum Bay Inn, Manitoulin Island. [s.34.6]

An area designated by a municipal by-law made under section 40.1 of the *Ontario Heritage Act* as a **heritage conservation district study area**.

For more information, contact:

- municipal clerk – for a property that is the subject of notice of intention [s. 29 and s. 40.1]
- [Ontario Heritage Trust](#)

v. included in the Ministry of Tourism, Culture and Sport's list of provincial heritage properties

Provincial heritage properties are properties the Government of Ontario owns or controls that have cultural heritage value or interest.

The Ministry of Tourism, Culture and Sport (MTCS) maintains a list of all provincial heritage properties based on information provided by ministries and prescribed public bodies. As they are identified, MTCS adds properties to the list of provincial heritage properties.

For more information, contact the MTCS Registrar at registrar@mtc.gov.on.ca.

3b. Is the property (or project area) a National Historic Site (or part of)?

National Historic Sites are properties or districts of national historic significance that are designated by the Federal Minister of the Environment, under the *Canada National Parks Act*, based on the advice of the Historic Sites and Monuments Board of Canada.

For more information, see the [National Historic Sites website](#).

3c. Is the property (or project area) designated under the *Heritage Railway Stations Protection Act*?

The *Heritage Railway Stations Protection Act* protects heritage railway stations that are owned by a railway company under federal jurisdiction. Designated railway stations that pass from federal ownership may continue to have cultural heritage value.

For more information, see the [Directory of Designated Heritage Railway Stations](#).

3d. Is the property (or project area) designated under the *Heritage Lighthouse Protection Act*?

The *Heritage Lighthouse Protection Act* helps preserve historically significant Canadian lighthouses. The Act sets up a public nomination process and includes heritage building conservation standards for lighthouses which are officially designated.

For more information, see the [Heritage Lighthouses of Canada](#) website.

3e. Is the property (or project area) identified as a Federal Heritage Building by the Federal Heritage Buildings Review Office?

The role of the Federal Heritage Buildings Review Office (FHBRO) is to help the federal government protect the heritage buildings it owns. The policy applies to all federal government departments that administer real property, but not to federal Crown Corporations.

For more information, contact the [Federal Heritage Buildings Review Office](#).

See a [directory of all federal heritage designations](#).

3f. Is the property (or project area) located within a United Nations Educational, Scientific and Cultural Organization (UNESCO) World Heritage Site?

A UNESCO World Heritage Site is a place listed by UNESCO as having outstanding universal value to humanity under the Convention Concerning the Protection of the World Cultural and Natural Heritage. In order to retain the status of a World Heritage Site, each site must maintain its character defining features.

Currently, the Rideau Canal is the only World Heritage Site in Ontario.

For more information, see Parks Canada – [World Heritage Site website](#).

Part B: Screening for potential Cultural Heritage Value

4a. Does the property (or project area) contain a parcel of land that has a municipal, provincial or federal commemorative or interpretive plaque?

Heritage resources are often recognized with formal plaques or markers.

Plaques are prepared by:

- municipalities
- provincial ministries or agencies
- federal ministries or agencies
- local non-government or non-profit organizations

For more information, contact:

- municipal heritage committees or local heritage organizations – for information on the location of plaques in their community
- Ontario Historical Society's Heritage directory – for a list of historical societies and heritage organizations
- Ontario Heritage Trust – for a list of plaques commemorating Ontario's history
- Historic Sites and Monuments Board of Canada – for a list of plaques commemorating Canada's history

4b. Does the property (or project area) contain a parcel of land that has or is adjacent to a known burial site and/or cemetery?

For more information on known cemeteries and/or burial sites, see:

- Cemeteries Regulations, Ontario Ministry of Consumer Services – for a [database of registered cemeteries](#)
- Ontario Genealogical Society (OGS) – to [locate records of Ontario cemeteries](#), both currently and no longer in existence; cairns, family plots and burial registers
- Canadian County Atlas Digital Project – to [locate early cemeteries](#)

In this context, adjacent means contiguous or as otherwise defined in a municipal official plan.

4c. Does the property (or project area) contain a parcel of land that is in a Canadian Heritage River watershed?

The Canadian Heritage River System is a national river conservation program that promotes, protects and enhances the best examples of Canada's river heritage.

Canadian Heritage Rivers must have, and maintain, outstanding natural, cultural and/or recreational values, and a high level of public support.

For more information, contact the [Canadian Heritage River System](#).

If you have questions regarding the boundaries of a watershed, please contact:

- your conservation authority
- municipal staff

4d. Does the property (or project area) contain a parcel of land that contains buildings or structures that are 40 or more years old?

A 40 year 'rule of thumb' is typically used to indicate the potential of a site to be of cultural heritage value. The approximate age of buildings and/or structures may be estimated based on:

- history of the development of the area
- fire insurance maps
- architectural style
- building methods

Property owners may have information on the age of any buildings or structures on their property. The municipality, local land registry office or library may also have background information on the property.

Note: 40+ year old buildings or structure do not necessarily hold cultural heritage value or interest; their age simply indicates a higher potential.

A building or structure can include:

- residential structure
- farm building or outbuilding
- industrial, commercial, or institutional building
- remnant or ruin
- engineering work such as a bridge, canal, dams, etc.

For more information on researching the age of buildings or properties, see the Ontario Heritage Tool Kit Guide [Heritage Property Evaluation](#).

5a. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) is considered a landmark in the local community or contains any structures or sites that are important to defining the character of the area?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has potential landmarks or defining structures and sites, for instance:

- buildings or landscape features accessible to the public or readily noticeable and widely known
- complexes of buildings
- monuments
- ruins

5b. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) has a special association with a community, person or historical event?

Local or Aboriginal knowledge may reveal that the project location is situated on a parcel of land that has a special association with a community, person or event of historic interest, for instance:

- Aboriginal sacred site
- traditional-use area
- battlefield
- birthplace of an individual of importance to the community

5c. Is there local or Aboriginal knowledge or accessible documentation suggesting that the property (or project area) contains or is part of a cultural heritage landscape?

Landscapes (which may include a combination of archaeological resources, built heritage resources and landscape elements) may be of cultural heritage value or interest to a community.

For example, an Aboriginal trail, historic road or rail corridor may have been established as a key transportation or trade route and may have been important to the early settlement of an area. Parks, designed gardens or unique landforms such as waterfalls, rock faces, caverns, or mounds are areas that may have connections to a particular event, group or belief.

For more information on Questions 5.a., 5.b. and 5.c., contact:

- Elders in Aboriginal Communities or community researchers who may have information on potential cultural heritage resources. Please note that Aboriginal traditional knowledge may be considered sensitive.
- [municipal heritage committees](#) or local heritage organizations
- Ontario Historical Society's "[Heritage Directory](#)" - for a list of historical societies and heritage organizations in the province

An internet search may find helpful resources, including:

- historical maps
- historical walking tours
- municipal heritage management plans
- cultural heritage landscape studies
- municipal cultural plans

Information specific to trails may be obtained through [Ontario Trails](#).

Appendix E: Record of Consultation

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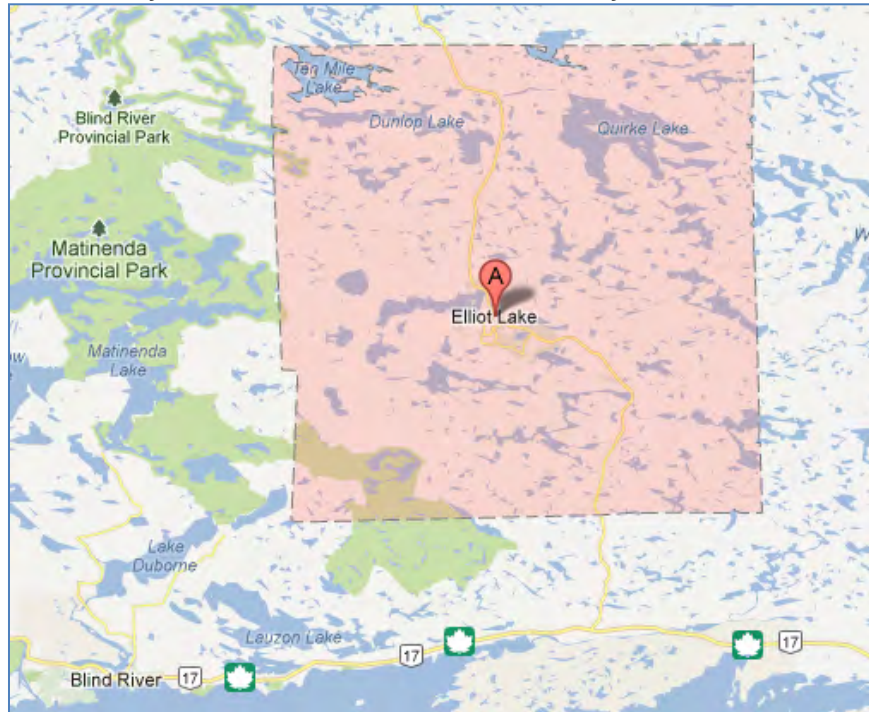
Notice of Commencement of Environmental Assessment City of Elliot Lake Waste Management Plan

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period.

The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

The study area is limited to the official boundaries of the City of Elliot Lake (see map below).

Study Area: Official boundaries of the City of Elliot Lake



The Process

In May 11, 2009 the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. A copy of the approved terms of reference is available at:

- www.cityofelliottlake.com
- http://www.ene.gov.on.ca/environment/en/industry/assessment_and_approvals/environmental_assessments/projects/STDPROD_082748.html

This study 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, which will be submitted to the ministry 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, such as Public Information Centres (PICs) and the posting of project documents. PICs will be advertised via the City's website, in the local newspaper, and by notice to the project stakeholder list.

If you would like to be added to our project mailing list or have project-related questions, please contact:

City of Elliot Lake
Mike Perkins, P.Eng
City of Elliot Lake
45 Hillside Drive North
Elliot Lake, ON P5A 1X5

Tel: (705) 848 2287
E-mail: mperkins@city.elliottlake.on.ca

Consultant Project Manager
John Smith
Exp Services Inc.
1595 Clark Blvd.
Brampton, On L6T 4V1

Tel: (905) 793-9800 x 2533
E-mail: john.smith@exp.com

Project website: www.cityofelliottlake.com

Under the *Freedom of Information and Protection of Privacy Act* and the *Environmental Assessment Act*, unless otherwise stated in the submission, any personal information such as name, address, telephone number and property location included in a submission will become part of the public record files for this matter and will be released, if requested, to any person.

Notice of Public Meeting

Deciding the Future of Solid Waste Management in Elliot Lake

The current landfill used by Elliot Lake is reaching capacity and a new waste management facility is required. The City is developing a new solid waste management strategy to manage the City's waste diversion and disposal programs into the future.

**We want your input on this important project!
Please drop into the open house and share your ideas.**

**Wednesday, May 25, 2011
City Hall, Council Chambers
45 Hillside Drive North
6:30 p.m. – 7:30 p.m.**

For more information contact Mike Perkins, P.Eng
Elliot Lake
705 848 2287 (2123)
E-mail: mperkins@city.elliottlake.on.ca

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WELCOME

PUBLIC INFORMATION CENTRE

#1

SOLID WASTE MANAGEMENT

PLAN

ENVIRONMENTAL

ASSESSMENT

FOR THE CITY OF ELLIOT LAKE

Please sign in at the front desk



Development of a Long Term Sustainable Solid Waste Management Plan

PURPOSE OF OPEN HOUSE

Purpose of the SSWMP

- Provide a long term strategy for sustainably managing solid waste
- Increase the amount of waste recycled
- Reduce waste sent to landfill
- Identify preferred disposal alternatives

Purpose of this Open House

- Obtain your ideas on what waste management options should be included in Elliot Lake's solid waste management plan.



Development of a Long Term Sustainable Solid Waste Management Plan

PROCESS OVERVIEW

Phase 1: Understanding the Problem Jan—Apr 2011

- Review the Current System.
- Assess the Waste Management Needs.



Phase 2: Identify Potential Solutions Apr—June 2011

- Identify a potential solutions to Elliot Lake's waste management needs.



Phase 3: Evaluation of Potential Solutions June—Sept 2011

- Evaluate the feasibility of different waste management options (analysis for evaluation will consider economic, environmental and social considerations).



Phase 4: Recommend Preferred Solid Waste Management Program Sept—Nov 2011

- Provide recommendations for Elliot Lake's Solid Waste Management Program.

On-going: Stakeholder and Community Consultation

On-going engagement with stakeholders and the community through interviews, public meetings, and meetings with Council.

After the completion of Phase 4, an Environmental Assessment will be completed on the preferred waste disposal option.



Development of a Long Term Sustainable Solid Waste Management Plan

ELLIOT LAKE'S CURRENT



Curbside Collection of Garbage and Blue Box Recyclables (Fibres and Container)



Curbside Leaf and Yard Waste Collection (seasonal)

HOUSEHOLD HAZARDOUS WASTE COLLECTION EVENT
City of Elliot Lake Public Works Yard
3 Timber Road (North Industrial Area)
Thursday, October 21st, 2010
11:00 a.m. to 7:00 p.m.

Household Hazardous Waste Collection Event



Backyard Composting

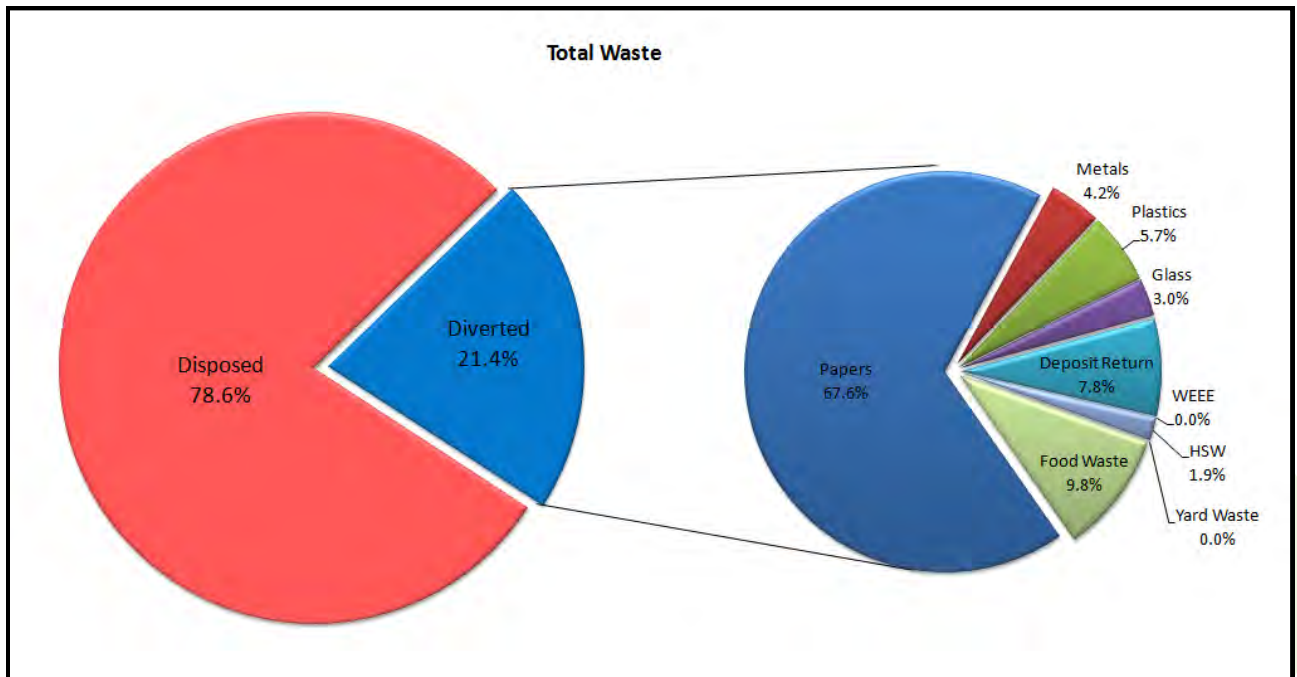


Recycling Depot



Development of a Long Term Sustainable Solid Waste Management Plan

ELLIOT LAKE'S CURRENT Diversion Percentage and Types



Material Diverted	Tonnes
Papers (ONP, OMG, OCC, OBB and fine papers)	550
Metals (aluminum, steel, mixed metal)	34
Plastics (containers, film, tubs and lids)	46
Glass	24
Deposit Return Program	63
WEEE	0
HSW	15
Food Waste (backyard composting)	80
Yard Waste	0
Total Materials Diverted	812
Sent to Landfill	2,979
Diversion Rate	21.4%



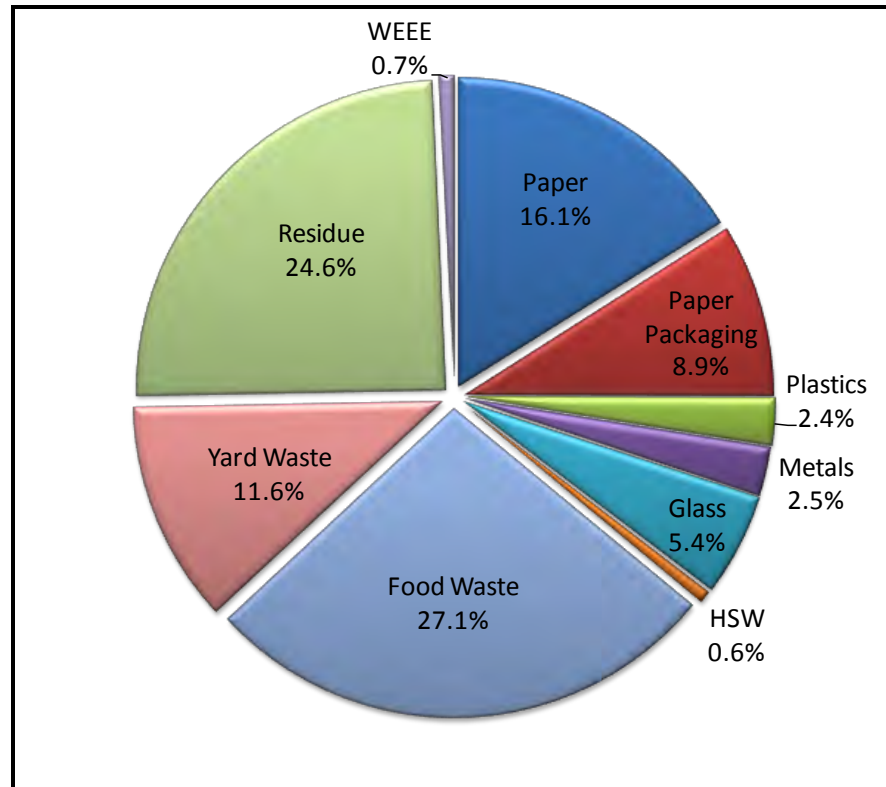
WEEE = Waste Electrical and Electronic Equipment
 HSW = Household Special Waste





Development of a Long Term Sustainable Solid Waste Management Plan

ELLIOT LAKE'S CURRENT Waste Stream Composition



Material In Waste Stream	Tonnes
Papers (ONP, OMG, OCC, OBB and fine papers)	950
Metals (aluminum, steel, mixed metal)	95
Plastics (containers, film, tubs and lids)	91
Glass	203
WEEE	27
HSW	24
Food Waste	1028
Yard Waste	440
Residue	933
Total	3791



WEEE = Waste Electrical and Electronic Equipment
 HSW = Household Special Waste





Development of a Long Term Sustainable Solid Waste Management Plan

ELLIOT LAKE'S CURRENT

System Costs per Household (2009)

Recycling program:	\$14
Garbage collection and disposal	\$84
<i>Total system</i>	\$98

Net Cost of Elliot Lake's Waste Management Services	
Garbage Collection Expenditures	\$ 284,390
Recycling Collection Expenditures	\$ 119,674
Recycling Collection Revenues	\$ 32,946
<i>Recycling Collection Net Total</i>	<i>\$ 86,727</i>
Landfill (Disposal) Site	\$ 235,195
<i>Total Waste Management</i>	\$ 606,312



POSSIBLE DIVERSION OPTIONS

Waste Minimization

- Reduces waste *at the source*
- Possible activities include:
 - * Increased backyard composting
 - * Changing purchasing behaviors
 - * Grasscycling
 - * Reusing items
- Challenges: can be difficult to change minds, requires continuous education

Possible performance

- Up to 3% additional diversion (~115 tonnes)
- Approximate cost:
~ \$2 per household





Development of a Long Term Sustainable Solid Waste Management Plan

POSSIBLE DIVERSION OPTIONS

Household Organics Diversion

- Kitchen and food waste, non-recyclable paper and some leaf and yard waste
- Source-separating organics in the home, and then setting at curbside for collection
- Lots of potential since it encompassed large portion of waste stream



Possible performance

- Up to 17% additional diversion (~520 tonnes)
- Approximate costs
 - Collection: \$8 to \$13 per household
 - Composting: \$8 to \$13 per household
 - Start-up (including capital and education): \$15 to \$25 per household



Development of a Long Term Sustainable Solid Waste Management Plan

POSSIBLE DIVERSION OPTIONS

Education

- Supports all programs
- Approximate cost: ~ \$2 per household
- May include door to door education, print media, community outreach at events

Electronics and Household Special Waste Recycling

- Additional special event days at Recycling Depot or other locations
- Provide additional opportunities for residents to drop off waste electronics, or household special wastes (e.g., batteries, paints, etc)
- Increase diversion by up to 1%
- Approximate cost: ~\$2 per household (funding opportunities provided through stewardship programs)



POSSIBLE DIVERSION OPTIONS

Enhanced Yard Waste Collection

- This may include increasing the collection frequency of leaf and yard waste organics
- Key issues may include the potential cost increase and a need for more composting capacity



Possible Performance

- Increase diversion by up to 9% (~310 tonnes)
- Approximate cost: \$5 - \$8 per household



POSSIBLE DIVERSION OPTIONS

Waste Diversion Policies

- Examples of municipal policy options to encourage greater waste diversion include:
 - * User pay
 - * Clear garbage bags
 - * Bi-weekly garbage collection
 - * Bag limits (e.g., 2 or 3 bags max. per week)
 - * Mandatory recycling by-law

Possible performance

- Up to 5% additional diversion (~190 tonnes)
- Policies would help to support diversion through other programs, such as blue box and organics
- Approximate cost: ~\$3 per household for implementation of enforcement officers, buying waste tags/bags



POSSIBLE DIVERSION OPTIONS

Industrial, Commercial and Institutional (ICI) Waste Diversion

- Options for increasing waste diversion in the ICI sector may include:
 - * Education programs
 - * Incentives and disincentives
 - * Waste exchanges (i.e., a network for selling/giving away wastes that others can use)

Possible Performance

- Approximate cost: \$4 - \$6 per household



Development of a Long Term Sustainable Solid Waste Management Plan

POSSIBLE DISPOSAL OPTIONS

Expanding Current Landfill Site

- Existing landfill site could be expanded
- Estimated cost: \$600,000 - \$2,000,000

New Landfill Site

- A new landfill site could be sited in proximity to Elliot Lake
- Approximate cost: \$1 million to \$5 million

Energy from Waste (EFW)

- Waste could be converted to energy (Small scale)
- Approximate cost: \$100 - \$200

Export of Waste

- Waste could be exported to landfill in another community
- Approximate cost: \$18 - \$35/tonne to ship*, \$40 to \$80 per tonne for disposal

* based on 300 km radius



Development of a Long Term Sustainable Solid Waste Management Plan

COST OF FUTURE SYSTEM

Future System Programs	Anticipated Diversion/ Disposal (tonnes)	Estimated Annual Cost	Estimated Annual Cost per household
ICI		\$30,900	\$5
Education	*	\$12,360	\$2
Waste Minimization	115	\$12,360	\$2
Policies	*	\$18,540	\$3
Household Organics	525	\$104,930	\$17
Yard Waste	308	\$40,085	\$6
Enhanced Recycling	1110	\$121,076	\$20
WEEE/HSW**	36	\$10,000	\$2
Refuse Collected/ Disposed	1,617	\$276,288	\$45
	Total	\$626,539	\$101

* Used to support other diversion programs

** WEEE = Waste Electrical and Electronic Equipment; HSW = Household Special Waste (e.g., batteries, used oil, paints and solvents, etc)

Comparison of Current and Potential Future System

	Current System	Future System with Options
Waste Diversion Rate	21.4%	55.7%
Annual Cost	\$606,312	\$626,539
Annual Cost per Tonne of waste Generated	\$160	\$174
Average Cost per Household	\$98	\$101



CRITERIA FOR SELECTING

Each option being investigated will be evaluated against its overall sustainability and performance. Examples of criteria that can be used include:

- * Environmental effects (impacts and benefits)
- * Affect on waste diversion
- * Social impact and acceptability
- * Track record of technology/program
- * Cost effectiveness
- * Ease of implementation

What criteria should be used to assess and select the options to be included in the SSWMP? Do you agree with what is included above? What is missing?



NEXT STEPS

- Review the feedback from the open house.
- Evaluate the waste management options.
- Identify the preferred options.
- Review the preferred options with the public.
- Prepare document describing preferred waste management system.
- Present the preferred waste management system to Council.
- Conduct Environmental Assessment on preferred waste disposal option.



Development of a Long Term Sustainable Solid Waste Management Plan

WE NEED YOUR FEEDBACK!

Your input into this process is crucial and will help to ensure the new Elliot Lake SSWMP meets the long term solid waste management needs of the community.



We encourage you to speak with our project team to ask questions or discuss your ideas.

Please take a few moments to complete the Open House workbook and write your comments. You may do so here, or take it home with you and send it in at a later date.

Contact Information

Elliot Lake

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City of Elliot Lake
City Hall
45 Hillside Drive North
Elliot Lake, ON P5A 1X5
Tel: (705) 848-2287 ext. 2123
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John Smith
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Brampton, ON L6T 4V1
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John.smith@exp.com





SAGE

Seniors' Action Group
of
Elliot Lake

Council Meeting Report September 24, 2012

Minutes From Closed Session: Sept. 10th: It was moved that Brian Cardy be appointed to the vacant position on the Police Services Board. The resignation of Keith Moyer from the Economic Development Advisory Committee was accepted.

Public Presentations:

1/ A presentation from Mr. Joey Lagace on behalf of the Elliot Lake Wrestling Club regarding the "Take Down the Champion" event being held September 29th in the Lower Plaza, was made.

2/ William Elliott made a presentation as an update to the Pearson Plaza project. He gave various reasons as to why the former mall site cannot be considered for the project, most centering around on going investigations and insurance processes. He stated that RFP's from prospective mall developers are due on September 29th, and they have at least four "interested" developers. He said evaluations of proposals will be immediately undertaken and it's expected the successful developer will be announced at October 9th council meeting. Tenders for the "making shovel ready" process are due October 3rd, and successful contractor should also be announced October 9th.

He told the council and public that the property purchased from Milltown Motors was appraised at the current evaluation for downtown commercial property of \$96K/acre, for 1.4 acres, or, \$134,400. This purchase brings the total area of the property for the plaza to 7.63 acres. At \$96K per acre, that would mean a selling price of \$95,992.37. **Given we are paying upwards of \$3.5 million to level and service the site, how can this be considered as sound economics? Mr. Elliott spoke of \$1.0 million from each senior level of government, so it will only leave Elliot Lake a matter of a \$1.5 million long term loan, (on which interest is of course payable) from Infrastructure Ontario. This still leaves us with a \$500K shortfall from the sale, plus loan interest. Of course, the collective \$2.0 million from senior governments is still tax payer's money too. In short, we, the tax payers of Elliot Lake, are subsidizing the mall and it's future owner with millions of tax payer's dollars. Much will hinge on what a developer is willing to pay for the property, over and above the appraised price.**

In addition, it was reported by Mr. Elliott, that the project will be putting some of the removed fill from the leveling, on the property behind the existing Milltown Building, and, constructing a retaining wall, to bring it up to the level of Milltown's existing lot. Milltown actually owns this property to be filled. Councilor Rastin, when the issue of approving the purchase of the property on the new mall site, was concerned with the Assistance or "Bonusing" of land sales or deals. Section 106 of the Municipal Act reads:

Assistance prohibited

106. (1) Despite any Act, a municipality shall not assist directly or indirectly any manufacturing business or other industrial or commercial enterprise through the granting of bonuses for that purpose. 2001, c. 25, s. 106 (1).

Despite assurances from the CAO that the city is not in violation of this clause, he may have a valid concern, not only with city funded improvements to the Milltown property, but, for the whole Pearson Plaza project itself. One would think it prudent that the city get a qualified legal opinion prior to proceeding with agreements and contracts of sale.

Correspondence: A letter from the Remobilization Committee was received and commented on at great length. It informed the council that this committee has fulfilled its mandate and was disbanding.

Reports:

1/ A report from the Economic development Advisory Committee concerning an addendum to the Economic Development and Diversification study to address the development and implementation of a strategy to replace the loss of retail space within the community, was presented. **Seems a bit overdue, since the same consultant has been working on this project almost since he arrived in the city, and, much work has already been done (see Pearson Plaza), and the funding agreement with senior government for funding was passed by council on September 10th. Seems like someone suddenly realized that this was a necessary detail.**

2/ A report from the Public Services Committee was presented, concerning the Environmental Assessment process required for the expansion of the landfill site. **Watch for announcements of public meetings for this open public process.** Appears a bit ironic that this project will require a full public Environmental Assessment, however, the Pearson Plaza, still and environmental impact on the community, will not have any public input or open participation, because it's considered as a "municipal project" under watered down provincial regulations.

3/ A report from the Public Services Committee dealing with the routine annual tender for supply and stocking of winter road sand was presented.

4/ A report from the Finance & Administration committee was presented, dealing with an offer from the Ombudsman to address council and the public as to the rules surrounding Closed Session meetings. The offer was accepted by council with little discussion. **See Report #6 later.**

5/ A report from Clerks & Planning was presented dealing with rezoning the property purchased by the city from Milltown Motors, from Tourist Highway Commercial to Central Commercial. **A public meeting concerning rezoning will take place at 6.30 pm on October 22nd.**

6/ A report from the City Clerk dealing with resignations of Councilors Mann and Finamore from the Board of Directors of White Mountain Academy was presented. **This report generated much discussion among council, most centered around the reason for the resignations being due to advice from a lawyer on said board to conform to the recent rulings from the Ombudsman over council quorums at unannounced to the public, meetings. It must be pointed out that White Mountain is NOT CITY OWNED, but is owned by the actual Board of Directors. Since this is so, and since the city has been funding the facility for a number of years, and, utilizing it for some city needs or programs, it's apparent that, having a quorum of council sit at board meetings and make recommendations to that same quorum of council in regular council meetings would make such board meetings much similar to, if not an official council meeting, at very least, a Committee of Council, much as any other Standing Committee. There was much indignation from council, especially Councilor Farquhar, saying he was not convinced the Ombudsman was right and he wanted to put the question directly to the Ombudsman before he could accept it, and "maybe not even then". He wants to incur further legal expense to get another legal opinion. It would appear, from reading the Ombudsman Act, RSO 1990, that the decisions of the Ombudsman are not subject to appeal.**

The mayor went on to almost “brow beat” Councilor Patrie regarding some suggestion the mayor had made at a recent board meeting that he (Patrie) should draw up a plan for the composition of the board and “bring it to council for approval”. Question: If this board is not considered as part of council, as per Councilor Farquhar and others, then why should any such “plan” be brought to council for approval?

The resignations were withdrawn, pending the Ombudsman's visit, however, meetings of the board will continue with the quorum of council still potentially present.

Cheque Registry: One item of interest came up. There was a cheque for some \$60,000 issued to a trust company with reference to a piece of property on Popeye Lake. This would appear to be the “buy back” of a Cottage Lot. The banner along 108 must be changed to read “7 Lots Available On Popeye Lake” if this indeed is the case.

By-Laws:

By-Law 12-66: A by-law to authorize an agreement with Wendell Farquhar Trucking for supply and stocking winter road sand.

By-Law 12-67: A by-law to authorize agreement with Milltown Motors to purchase Block M, Plan M-151 property for purpose of Pearson Plaza Project.

Adjournment:

NOTE:

Prior to the council meeting, a short Ad Hoc Budget Committee was held, but not much could be accomplished at this point and discussion was light. The next meeting of this committee is scheduled for October 15th at 6.30 pm. It has been verified that packages will be available for public in attendance.

Notice of Public Meeting

Deciding the Future of Solid Waste Management in Elliot Lake

The current landfill used by Elliot Lake is reaching capacity and a new waste management facility is required. The City has developed a new solid waste management strategy to manage the City's waste diversion and disposal programs into the future.

**We want your input on the draft Strategy
Please drop into the open house and share your ideas.**

**Wednesday, September 14, 2011
City Hall, Council Chambers
45 Hillside Drive North
6:30 p.m. – 7:30 p.m.**

**For more information contact Mike Perkins, P.Eng
Elliot Lake
705 848 2287 (2123)
E-mail: mperkins@city.elliottlake.on.ca**

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WELCOME

PUBLIC INFORMATION CENTRE

#2

SOLID WASTE MANAGEMENT

PLAN

ENVIRONMENTAL

ASSESSMENT

FOR THE CITY OF ELLIOT LAKE

Please sign in at the front desk



Development of a Long Term Sustainable Solid Waste Management Plan

PURPOSE OF OPEN HOUSE

Purpose of the SSWMP

- Provide a long term strategy for sustainably managing solid waste
- Increase the amount of waste recycled
- Reduce waste sent to landfill
- Identify preferred disposal alternatives

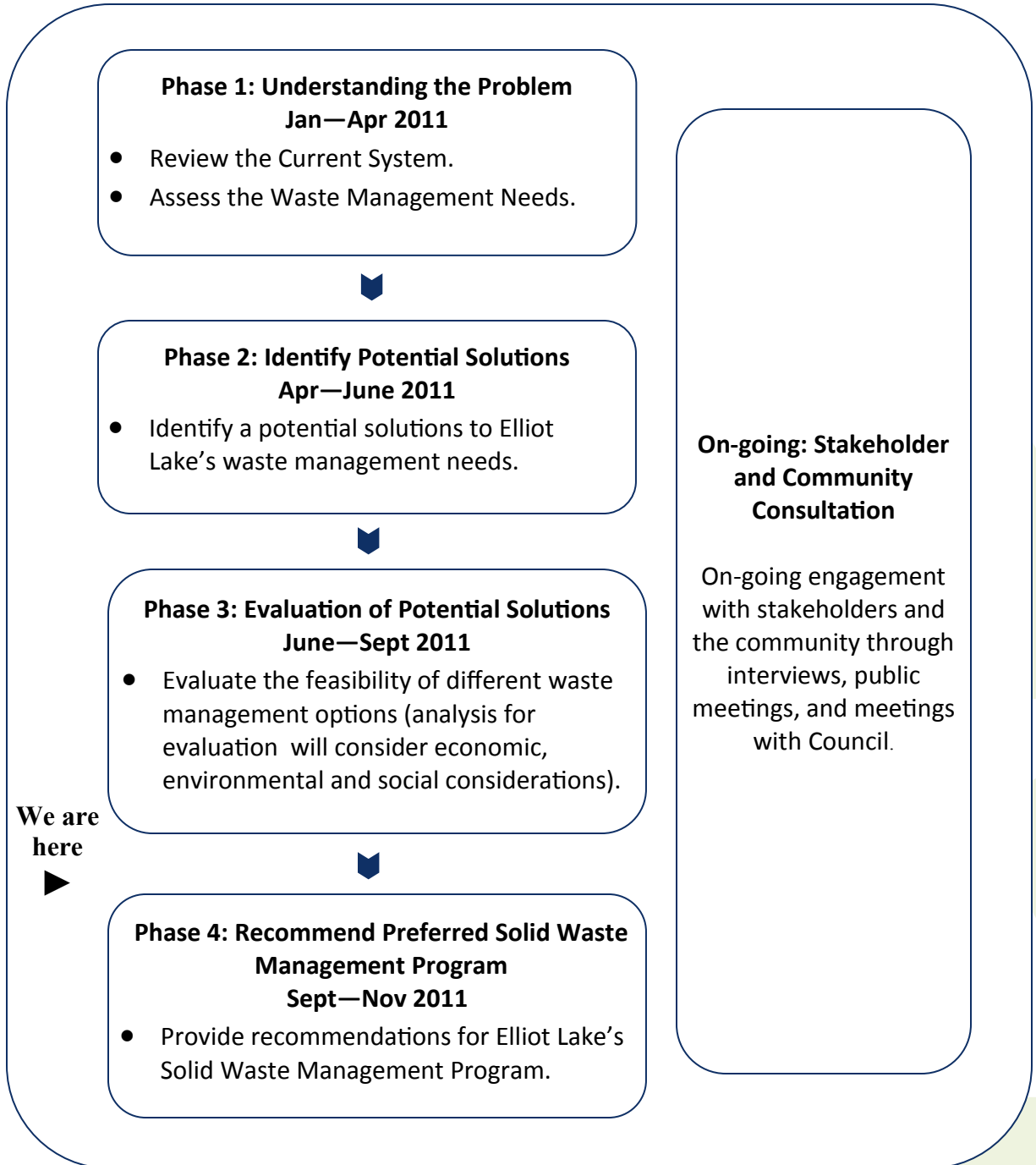
Purpose of this Open House

- Obtain your input on the waste management options identified to be included in Elliot Lake's solid waste management plan.



Development of a Long Term Sustainable Solid Waste Management Plan

PROCESS OVERVIEW

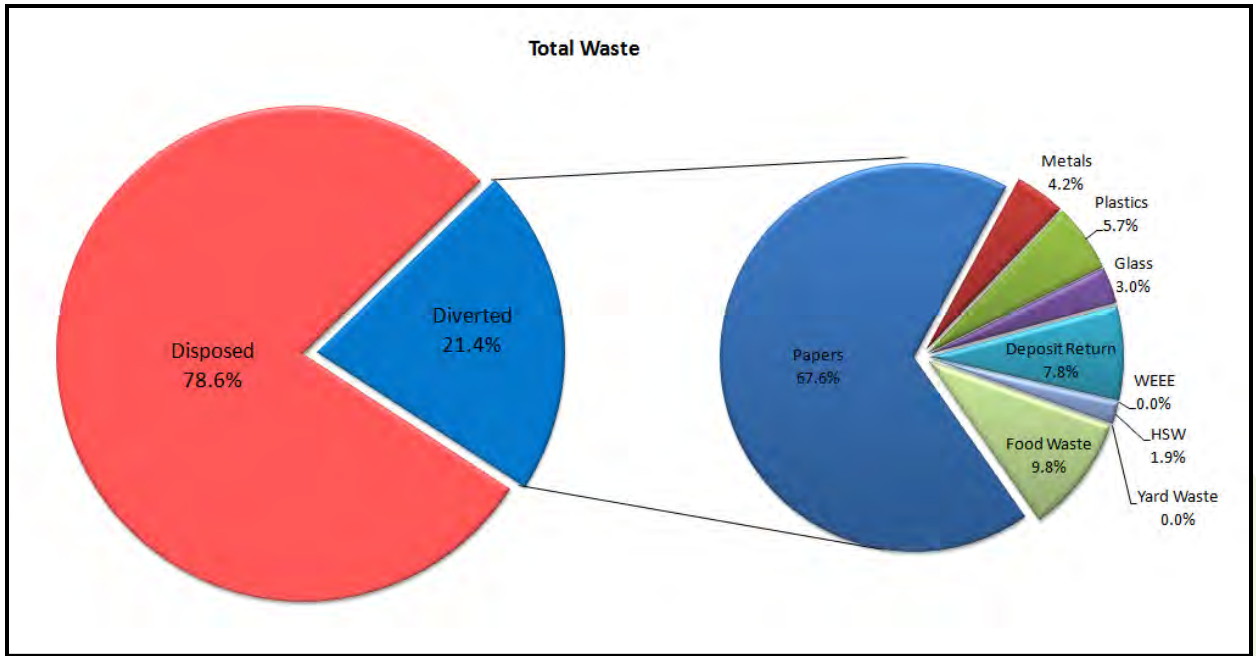


After the completion of Phase 4, an Environmental Assessment will be completed on the preferred waste disposal option.

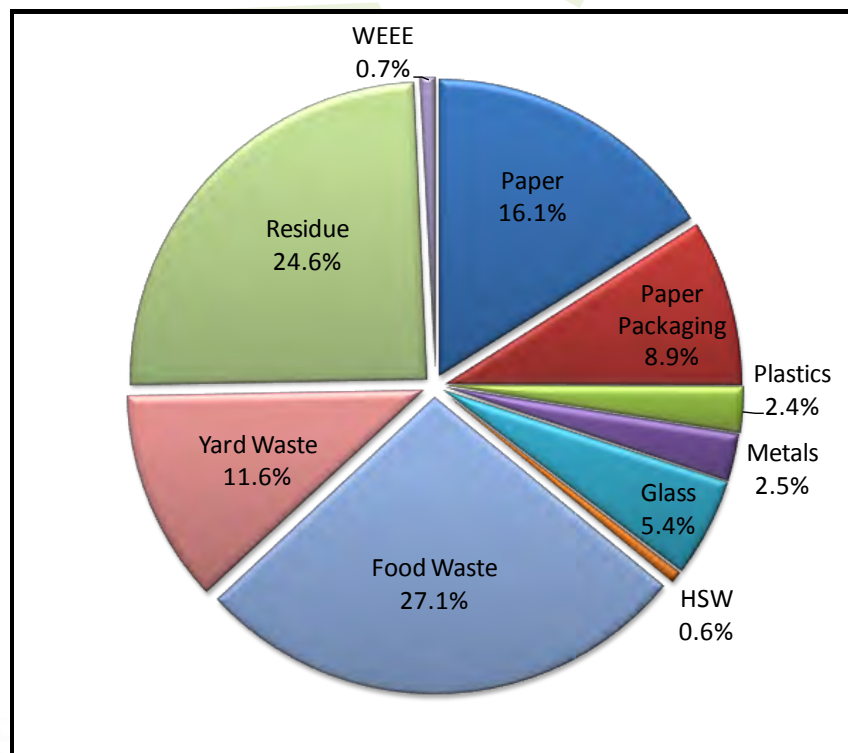


Development of a Long Term Sustainable Solid Waste Management Plan

ELLIOT LAKE'S CURRENT Diversion Percentage and Types



Composition of Total Waste Stream





Development of a Long Term Sustainable Solid Waste Management Plan

ELLIOT LAKE'S CURRENT

System Costs per Household (2009)

Recycling program:	\$14
Garbage collection and disposal	\$84
<i>Total system</i>	\$98

Net Cost of Elliot Lake's Waste Management Services	
Garbage Collection Expenditures	\$ 284,390
Recycling Collection Expenditures	\$ 119,674
Recycling Collection Revenues	\$ 32,946
<i>Recycling Collection Net Total</i>	<i>\$ 86,727</i>
Landfill (Disposal) Site	\$ 235,195
<i>Total Waste Management</i>	\$ 606,312



WASTE MANAGEMENT OPTIONS CONSIDERED FOR EVALUATION

- Programs to promote reducing waste *at the source*:
 - * Increased backyard composting
 - * Changing purchasing behaviors
 - * Grasscycling
 - * Reusing items
- Household Organics Diversion (e.g. food waste)
- Enhanced Promotion and Education Program (incl. ICI waste diversion)
- Electronics and Household Special Waste (e.g. paints, oil, etc.)
- Increased collection frequency for leaf and yard waste organics



Development of a Long Term Sustainable Solid Waste Management Plan

WASTE MANGEMENT OPTIONS CONSIDERED FOR EVALUATION

- Waste Diversion Policies
 - User pay
 - Clear garbage bags
 - Bi-weekly garbage collection
 - Bag limits (e.g., 2 or 3 bags max. per week)
 - Mandatory recycling by-law
- Expanding Current Landfill Site
- New Landfill Site
- Thermal Treatment (e.g. incineration)
- Export of Waste



Development of a Long Term Sustainable Solid Waste Management Plan

EVALUATION OF WASTE MANAGEMENT

Option	Criteria (score out of 5)						Total Score
	Environmental Impact/ Diversion	Cost Effectiveness/ Affordability	Economical Development	Social Acceptability	Ease of Implementation	Proven Results	
Diversion Options							
Yard Waste Composting	5	3	4	5	5	5	27
Promotion and Education	4	3	4	5	5	5	26
Waste Minimization	4	3	4	5	5	4	25
Source Separated Organics	5	2	4	4	4	5	24
Policy Options	4	3	3	3	4	5	22
Blue Box Service Optimization	4	1	3	5	3	4	20
Disposal Options							
Landfill Expansion	3	2	4	4	5	5	23
New Landfill Site	3	2	4	2	2	5	19
Thermal Treatment	3	1	3	2	2	3	14
Export	2	2	1	2	3	2	12



Development of a Long Term Sustainable Solid Waste Management Plan

In addition to the City's current program, the preferred options for diversion include:

- Yard waste composting (diversion potential: 308 tonnes, or 8% of the waste stream);
- Promotion and education (required to support programs);
- Waste minimization (diversion potential: 115 tonnes, or 3% of the waste stream);
- Source separated organics (diversion potential: 640 tonnes, or 17% of the waste stream);
- Service optimization should also be included during the next collection contract.

The preferred disposal option is to expand the current landfill. However, the option of incineration or waste to energy should be reviewed again in five years, once the landfill expansion is complete.

These programs would help to raise Elliot Lake's existing waste diversion rate from 21.4% up to 49.4% and provide 20+ years of disposal capacity.



Development of a Long Term Sustainable Solid Waste Management Plan

COST OF FUTURE SYSTEM

Future System Programs	Anticipated Diversion/ Disposal (tonnes)	Estimated Annual Cost	Estimated Annual Cost per household
Promotion/Education		\$37,000	\$6
Waste Minimization	115	\$12,360	\$2
Policies	*	\$18,540	\$3
Household Organics	525	\$104,930	\$17
Yard Waste	308	\$40,085	\$6
Enhanced Recycling	1110	\$121,076	\$20
WEEE/HSW**	36	\$10,000	\$2
Refuse Collected/ Disposed	1,617	\$276,288	\$45
	Total	\$626,539	\$101

* Used to support other diversion programs

** WEEE = Waste Electrical and Electronic Equipment; HSW = Household Special Waste (e.g., batteries, used oil, paints and solvents, etc)

Comparison of Current and Potential Future System

	Current System	Future System with Options
Waste Diversion Rate	21.4%	55.7%
Annual Cost	\$606,312	\$626,539
Annual Cost per Tonne of waste Generated	\$160	\$174
Average Cost per Household	\$98	\$101



Development of a Long Term Sustainable Solid Waste Management Plan

WE NEED YOUR FEEDBACK!



Your input into this process is crucial and will help to ensure the new Elliot Lake SSWMP meets the long term solid waste management needs of the community.

Please take a few moments to complete the Open House workbook and write your comments. You may do so here, or take it home with you and send it in at a later date.

Contact Information

Elliot Lake	exp
Mike Perkins, P.Eng. City of Elliot Lake City Hall 45 Hillside Drive North Elliot Lake, ON P5A 1X5 Tel: (705) 848-2287 ext. 2123 Mike.Perkins@city.elliottlake.on.ca	John Smith exp 195 Clark Boulevard Brampton, ON L6T 4V1 Tel: (905) 793-9800 John.smith@exp.com



Introduction

The City of Elliot Lake is conducting an Environmental Assessment (EA) for an expansion of the City's existing landfill site. This EA continues the City's process in developing a long-term solid waste management system for Elliot Lake that is environmentally, financially and socially sustainable.

In 2002, the City completed a review of its waste management plan. The review concluded that the City needed to prepare a Long Term Solid Waste Management Strategy that evaluated options for waste reduction, diversion and disposal. This process was to also include an EA study to determine the preferred disposal solution. The Terms of Reference (TOR) for the EA was prepared in 2008.

The City's Solid Waste Management Strategy was prepared in 2012. The process examined options for waste reduction and diversion as well as options to address the City's need for additional disposal capacity. The strategy identified expansion of the current landfill as the preferred option for increasing disposal capacity and recommended that the City conduct an EA for this purpose. This EA is now underway and the City will be holding a **public open house on August 13, 2014** to discuss the results of the study to date and obtain feedback.

Purpose of the Environmental Assessment

The purpose of the EA is to determine how the City will manage its residual waste over a 25-year period. While the strategy identified expansion of the existing landfill as the preferred option, this EA study is comparing the landfill expansion option against other disposal alternatives to confirm whether it is still the preferred option.

Public Open House

**August 13, 2014
4:30 pm - 8:00 pm**

**City Hall
45 Hillside Drive North, Elliot Lake**

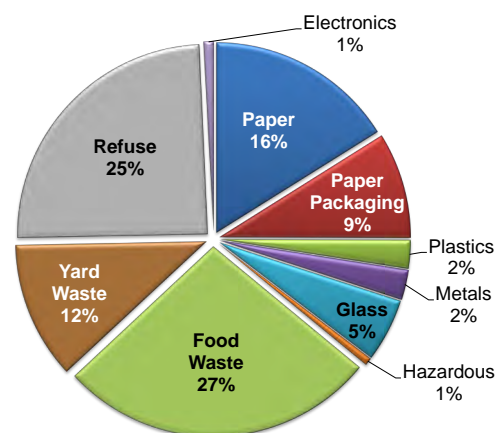
Solid Waste Management in Elliot Lake

While the City works to find a solution for managing the City's residual waste, it is also working to reduce that waste through diversion. Currently, the residents of Elliot Lake are doing a good job of diverting waste through recycling, and their efforts are helping Elliot Lake divert about 28% of residential solid waste from the landfill. Because 75% of the City's residential solid waste can potentially be diverted, the City is looking to implement the following waste diversion initiatives in the years ahead:

- A comprehensive solid waste management promotion and education strategy;
- Composting of leaf and yard waste;
- A drop-off depot or location for residential leaf and yard waste;
- A source-separated household organics collection program; and
- Optimization of the City's blue box program.

Implementation of these initiatives should increase the City's residential waste diversion rate to about 62%.

**Estimated Composition of
Elliot Lake's Residential Solid Waste**



Evaluating Solid Waste Disposal Alternatives

The EA study has evaluated expansion of the City’s current landfill site against other disposal options, including:

- Thermal treatment - includes processes such as incinerators, gasification and pyrolysis;
- Mechanical biological treatment - where waste is mechanically sorted and biologically processed before disposal;
- Siting and building a new landfill site - would include closing of current landfill site, identifying and securing a new location for a waste disposal site, and building a new landfill; and
- Export of residual waste - would include exporting the City’s garbage to a waste disposal site in another jurisdiction.

The various alternatives were evaluated against screening criteria pertaining to the natural environment, financial, technical, social/cultural, and legal. The table below summarizes the results of the evaluation.

Criteria	Thermal Processing	Mechanical Biological Treatment	New Landfill	Waste Export	Landfill Expansion
Natural Environment	Moderately Preferred	Most Preferred	Moderately Preferred	Least Preferred	Most Preferred
Financial	Least Preferred	Least Preferred	Most Preferred	Moderately Preferred	Most Preferred
Technical	Least Preferred	Least Preferred	Most Preferred	Moderately Preferred	Most Preferred
Social/Cultural	Moderately Preferred	Moderately Preferred	Moderately Preferred	Moderately Preferred	Most Preferred
Legal	Moderately Preferred	Moderately Preferred	Moderately Preferred	Most Preferred	Moderately Preferred
Summary	Moderately Preferred	Least Preferred	Moderately Preferred	Moderately Preferred	Most Preferred

The results of the evaluation found that the landfill expansion is the most environmentally, socially and financially preferable option for ensuring the City has sufficient capacity to dispose of its solid waste for the next 25 years.

By the Numbers

Some key facts about the City’s proposed landfill expansion:

- The landfill is currently approved for 842,000 m³ of landfill space. The expansion will provide an additional 345,000 m³ of landfill space.
- The expansion will increase the footprint of the landfill area by 0.79 hectares (2 acres).
- The landfill expansion will provide the City with disposal capacity until about 2041, or possibly even longer once diversion programs are implemented.

We Want to Hear From You!

Your comments on this project are important to us.

To learn more about this EA and the proposed landfill expansion, please come to our **public open house** on **August 13** at **City Hall** (45 Hillside Drive North). Members of our project team will be present to answer your questions and receive your comments.

Consultant Project Manager

John Smith

Exp Services Inc.

1595 Clark Blvd.

Brampton, On L6T 4V1

john.smith@exp.com

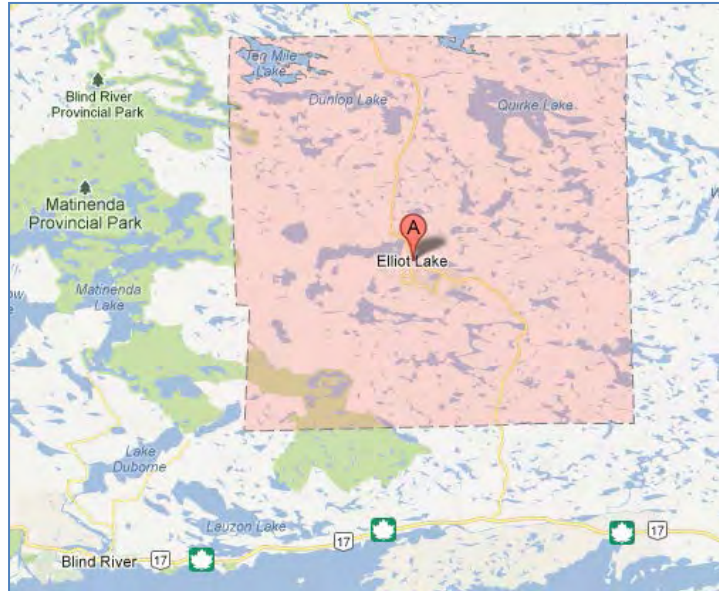
Notice of Public Open House City of Elliot Lake Waste Management Plan

The City of Elliot Lake is undertaking an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25 year planning period.

The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

The study area is limited to the official boundaries of the City of Elliot Lake (see map below).

Study Area: Official boundaries of the City of Elliot Lake



The Process

This study is being carried out according to the Ministry of Environment *Environmental Assessment Act*. Results from this study will be documented in an environmental assessment report, which will be submitted to the ministry for review. At that time, the public and other interested persons will be informed when and where the environmental assessment can be reviewed.

Consultation

Information will be displayed regarding the studies to date and the recommendation to expand the City's existing landfill site to provide long term disposal capacity. 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.

Date and Location of Open House

Wednesday August 13, 2014
4:30pm to 8pm
City Hall, 45 Hillside Drive North, Elliot Lake, ON P5A 1X5

If you would like to be added to our project mailing list or have project-related questions, please contact:

City of Elliot Lake

Mike Perkins, P.Eng
City of Elliot Lake
45 Hillside Drive North
Elliot Lake, ON P5A 1X5
Tel: (705) 848 2287
E-mail: mperkins@city.elliottlake.on.ca

Consultant Project Manager

John Smith
Exp Services Inc.
1595 Clark Blvd.
Brampton, On L6T 4V1
Tel: (905) 793-9800 x 2533
E-mail: john.smith@exp.com

Project website: www.cityofelliottlake.com

Under the *Freedom of Information and Protection of Privacy Act* and the *Environmental Assessment Act*, unless otherwise stated in the submission, any personal information such as name, address, telephone number and property location included in a submission will become part of the public record files for this matter and will be released, if requested, to any person.

Solid Waste Management Plan

Environmental Assessment

Purpose of Study

- The City's existing landfill site is getting close to its final capacity.
- The City needs to identify additional disposal capacity for the City's solid waste. It will require enough capacity to dispose of about 155,000 tonnes of solid waste over 25 years.
- This study builds on the City's Solid Waste Management Strategy, completed in 2012.
- This study is being conducted according to Ontario's *Environmental Assessment Act* (EAA).
- The Study's Terms of Reference (TOR) was prepared and approved in 2008.

Study Area

- The study area for this EA is bounded by the municipal boundaries of the City.
- The planning horizon for this EA is 25 years (2013 – 2038).

EA Process

- EA included evaluation of “Alternatives to” the undertaking, followed by evaluation of “Alternative methods” for the undertaking.
- Studies were undertaken to provide required background and supplemental information:
 - Natural sciences
 - Geotechnical
 - Hydrogeological
 - Site surveying

Assessment of “Alternatives to”

Range of “alternatives to” meeting the Town’s waste disposal needs

Thermal Treatment	Mechanical/Biological Treatment	Landfill Expansion	New Landfill Site	Export of Waste	Waste Diversion
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Selection of Preferred “Alternative to”

Assessment of “Alternative Methods”

Range of “alternative methods” or designs for the preferred “alternative to”

Alternative methods or designs to be evaluated will depend on the preferred “alternative to”

Solid Waste Management Strategy

- Solid Waste Management Strategy (SWMS) completed in 2012.
- The SWMS recommended the following solid waste improvements:
 - Expand leaf and yard waste composting.
 - Implement comprehensive solid waste management promotion and education.
 - Design and implement a source separated organics collection and composting program.
 - Optimize City's blue box recycling program.
- SWMS reviewed options for meeting disposal capacity and recommended expansion of existing landfill.
- EA study required to confirm and assess landfill expansion option.

Review of “Alternatives to”

Thermal Processing

- Disposal of waste managed through incineration or use of other Advanced Thermal Treatment technologies (gasification, pyrolysis).
- Incineration could reduce waste volume by about 70%.
- Potential for energy recovery from waste heat.
- Estimated capital cost: \$4M to \$10M, depending on technology.
- Estimated operating cost: \$150,000 to \$600,000 annually, depending on technology.

Mechanical and Biological Treatment

- Solid waste is pre-sorted and then managed with a biological process (e.g., composting or anaerobic digestion).
- Residual waste is stabilized into an inert, compost-like product.
- Potential for energy recovery through production of biogas.
- Process would not replace disposal, but would reduce and stabilize material to be disposed.
- Estimated capital cost: \$2.5M to \$4.5M
- Estimated operating cost: \$130 to \$170 per tonne.

Landfill Expansion

- SWMS identified that landfill expansion as a preferred option for securing additional landfill expansion.
- Would require successful completion of EA study and amendment to City’s exiting Environmental Compliance Approval (ECA) for the landfill site.
- Estimated capital cost: \$2.4M
- Estimated operating cost: \$79/tonne

Review of “Alternatives to”

New Landfill Site

- Would require siting and building a new landfill site.
- Timeframe to identify and secure a new site, obtain approvals and build a new landfill would be 5 to 10 years.
- Estimated capital cost: \$3,000,000 to \$5,000,000
- Estimated operating cost: \$79/tonne

Export of Waste

- The City’s solid waste would be exported to another jurisdiction for disposal.
- Exporting waste would cost approximately \$18 - \$35 per tonne to ship (within 300 km) and \$40 - \$80 for disposal. This could add up to \$775,000 per year to the cost of managing residential and business waste in Elliot Lake.
- City would face a potential risk if the receiving site faces its own capacity issues or decides to close its borders to Elliot Lake’s waste.

Additional Waste Diversion

- 2012 Solid Waste Management Strategy called for expanding or adding to the City’s recycling and composting programs.
- These improvements could potentially help the City reach a waste diversion rate of about 62%.
- While waste diversion can reduce the amount of waste requiring disposal, it will not replace the City’s need for disposal capacity.

Evaluation Criteria

- Evaluation criteria developed based on Terms of Reference and feedback during the SWMS process.


Environmental Category	Proposed Evaluation Criteria
Natural Environment	<ul style="list-style-type: none"> • Environmental burden at a global or macro-environmental scale. • Consumption / preservation of non-renewable environmental resources. • Potential for destruction or disruption of sensitive terrestrial and/or aquatic habitats at an eventual site. • Potential to increase diversion rate from disposal and/or make best use of residual (post-diversion) waste materials.
Economic / Financial	<ul style="list-style-type: none"> • Net system costs per tonne of waste managed including facility costs, residual disposal, etc. • Sensitivity of system costs and affordability to external financial influences. • Potential for local economic development
Technical	<ul style="list-style-type: none"> • Technical risks associated with waste management alternative. • Proven track record of alternative. • Ease of implementation
Social/Cultural	<ul style="list-style-type: none"> • Potential for land use conflicts from siting of facilities required for alternative. • Social acceptability of the alternative
Legal	<ul style="list-style-type: none"> • Legal / contractual risks associated with waste management alternative.

Evaluation Summary

- Numerical scoring based on range of 1 to 5:
 - 1 = least preferred
 - 3 = moderately preferred
 - 5 = most preferred
- Option with highest overall score most preferred

Numerical Score Summary

Category/Criteria	Summary of Net Effects				
	Thermal Processing	Mechanical/ Biological Treatment	Landfill Expansion	New Landfill	Waste Export
Natural Environment	12	18	15	11	10
Economic / Financial	2	5	10	9	5
Technical	6	6	14	12	15
Social/Cultural	8	9	10	2	8
Legal	3	3	3	3	1
Total	31	41	52	37	39


most preferred

Evaluation Summary

Category/Criteria	Summary of Net Effects				
	Thermal Processing	Mechanical/ Biological Treatment	Landfill Expansion	New Landfill	Waste Export
NATURAL ENVIRONMENT					
Environmental burden at a global or macro-environmental scale	3 Reduced methane emissions from landfill, but generation of some other emissions.	5 Overall reduction in GHG reductions compared to landfilling.	4 Reduced landfill emissions if SSO diversion programs in place.	4 Reduced landfill emissions if SSO diversion programs in place.	1 Emission of greenhouse and other gasses from disposal site, plus emissions related to hauling of waste to disposal site.
Consumption / preservation of non-renewable environmental resources	3 No significant impact or benefit to recycling. Net decrease in emissions of greenhouse gasses if energy recovered and used to offset fossil-fuel use.	5 Increased diversion of recyclables from disposal.	3 No impact on diversion programs.	3 No impact on diversion programs.	1 Increased consumption of fossil fuels to ship residual waste requiring disposal.
Potential for destruction or disruption of sensitive terrestrial and/or aquatic habitats at an eventual site	3 Thermal processing and disposal facility would have a footprint of about 2 to 5 acres. A new site may require the displacement of habitat unless a brownfield location or the existing landfill site is used. However, sensitive terrestrial and/or aquatic habitats would not be included in the selection of alternative sites.	3 The MBT facility would have a footprint of about 2 to 5 acres, plus area required for disposal of residuals. A new site may require the displacement of habitat unless a brownfield location or the existing landfill site is used. However, sensitive terrestrial and/or aquatic habitats would not be included in the selection of alternative sites.	5 Minimized impact on sensitive habitats.	1 Footprint of new waste management site to disrupt about 20 acres of natural environment. Sensitive habitat would be avoided.	5 No or minimal disruption of habitat.
Potential to increase diversion rate from disposal and/or make best use of residual (post-diversion) waste materials	3 No significant change to waste diversion rate.	5 Potential for increased capture of recyclables. Stabilized material could potentially be used as landfill cover, or minimize the amount of landfill cover required.	3 No impact on diversion programs.	3 No impact on diversion programs.	3 No impact or effect on waste diversion rate.

Evaluation Summary

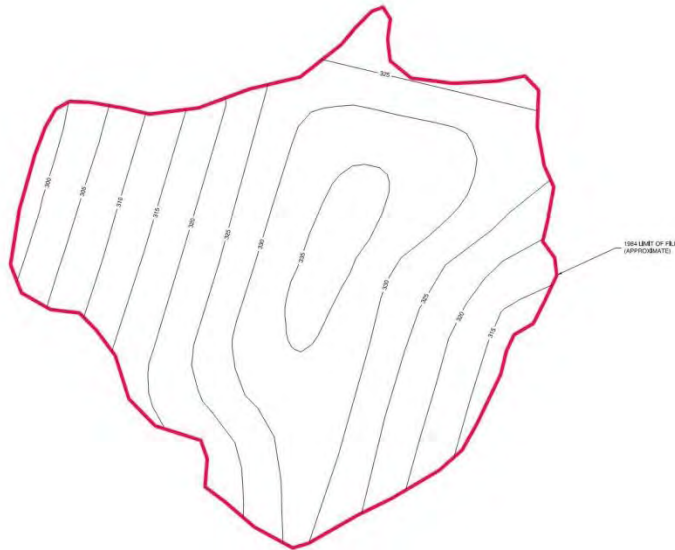
Category/Criteria	Summary of Net Effects				
	Thermal Processing	Mechanical/ Biological Treatment	Landfill Expansion	New Landfill	Waste Export
ECONOMIC / FINANCIAL					
Net system costs per tonne of waste managed including facility costs, residual disposal, etc.	1 Estimated capital costs ranging between \$4M to \$10M. Annual operating costs ranging between \$50 to \$200 per tonne. Potential for revenue or cost-offset through energy recovery uncertain.	2 Estimated capital cost of \$2.5M to \$4.5M Approximately \$130 to \$170 per tonne, not including capital costs.	5 Estimated capital cost of \$2.4M. Similar operating cost of existing landfill site (\$79/tonne).	4 Capital costs range between \$3M to \$5M. Similar operating cost of existing landfill site (\$79/tonne).	4 Cost could range between \$58 - \$115 per tonne, depending on location of facility and tip fee charge.
Sensitivity of system costs and affordability to external financial influences	1 Operating costs directly related to cost of fuel, due to fuel requirement of thermal facilities.	3 Operating costs moderately sensitive to increases in cost of fuel and energy.	5 Limited sensitivity to external financial influences.	5 Limited sensitivity to external financial influences.	1 Municipality has limited control over cost escalation.
Potential for local economic development	2 Limited potential for economic development.	3 Potential for employment opportunities as additional staff would be required for front-end sorting and managing stabilization process.	1 No effect on economic development.	1 Limited effect on economic development.	5 Potential for employment opportunities through transfer operations. Economic generation for host municipality.
TECHNICAL					
Technical risks associated with waste management alternative	2 Elevated potential of not meeting environmental standards due to small scale and inability to run combustion facility continuously.	2 Technology proven at larger scale but not for smaller scale operations. Increased risks due to system breakdown.	4 Risks of landfilling managed through design, operations, and on-going monitoring and reporting.	4 Risks of landfilling managed through design, operations, and on-going monitoring and reporting.	5 No technical risks
Proven track record of alternative	1 Technology not widespread at required small scale.	1 Technology proven at larger scale but not for smaller scale operations.	5 Landfilling has proven track record, as it is most common method of disposal.	5 Landfilling has proven track record, as it is most common method of disposal.	5 Waste export a common practice, but exporting municipalities face risk that receiving site will discontinue service.
Ease of implementation	2 Additional investigation required to ensure appropriateness of technology.	2 Implementation and operational challenges can be addressed by contracting qualified contractors.	5 Straight-forward implementation.	3 Site selection a potentially long process, likely to experience NIMBY (not in my backyard) issues.	5 Straight-forward implementation.

Evaluation Summary

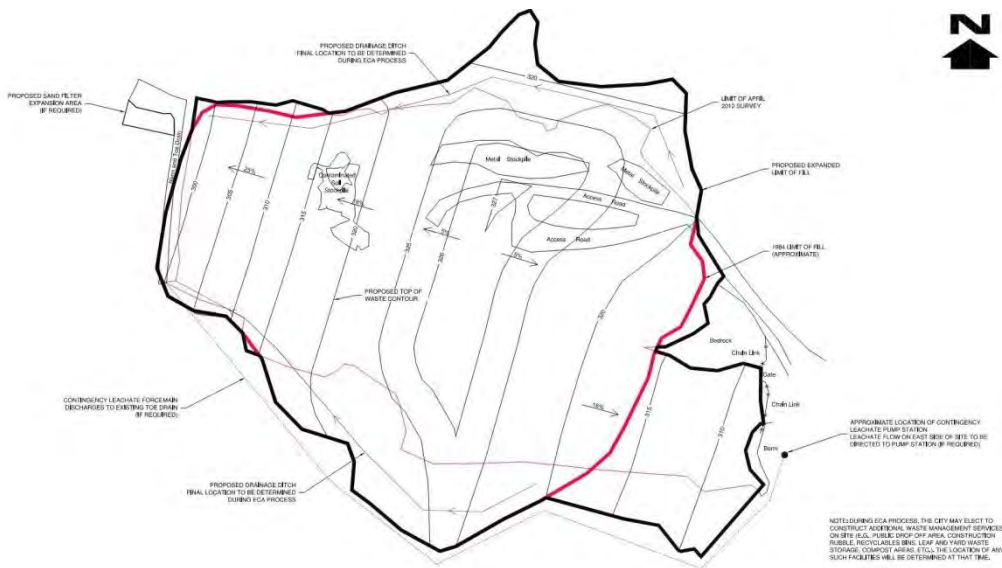
Category/Criteria	Summary of Net Effects				
	Thermal Processing	Mechanical/ Biological Treatment	Landfill Expansion	New Landfill	Waste Export
SOCIAL/ CULTURAL					
Potential for land use conflicts from siting of facilities required for alternative	4 Large study area, low population density, and potential to site on existing landfill site indicates good potential to resolve siting conflicts.	4 Large study area, low population density, and potential to site on existing landfill site indicates good potential to resolve siting conflicts.	5 Minimal nuisances due to operating procedures and remoteness of existing location.	1 High potential for land use conflict (NIMBY)	5 No foreseen land use conflicts.
Social acceptability of the alternative	4 Some support received for a thermal facility, although uncertain whether wider community would provide support.	5 Recovery of non-separated recyclables and stabilization likely would be viewed favourable, although residents may have issue with cost.	5 Alternative would be socially acceptable.	1 Siting a new landfill site commonly unfavoured by general public.	3 No support for option expressed during SWMP process.
LEGAL					
Legal / contractual risks associated with waste management alternative	3 Environmental approvals and ongoing monitoring required for thermal facility and for waste management facility. Contractual risk due to operation by contractor.	3 Requirement of environmental approvals and monitoring activities. Potential for municipality to contract out operation/ ownership of facility. Contractual risk due to operation by contractor.	3 Facility will require environmental approvals and on-going monitoring and reporting.	3 Facility will require environmental approvals and on-going monitoring and reporting.	1 Contract required with waste receiver. Approvals and monitoring responsibility of owner/operator of receiving facility.

Proposed Expansion

Original Approved Landfill Area



Proposed Expanded Landfill Area



Proposed Expansion

Characteristics of the Expansion

- Expansion of the landfill will be primarily on east side.
- Expansion to the north, south and west not viable due to hydrogeologic and geological conditions.
- Site design will establish and maintain buffer zones and protect adjacent and surrounding ground and surface water resources.
- Maximum elevation of final elevation will be lower than the original approved final elevation.
- Total new volume: 345,000 m³
- Size of expansion: 0.79 ha (2 acres).
- Total fill area footprint (including expansion): 7.05 ha (17.4 acres).

Next Steps

- Review comments and feedback from general public and stakeholders.
- Update evaluation based on feedback received.
- Finalize background studies and reports.
- Prepare Environmental Study Report (ESR).
- Government and public review of ESR.
- Minister's makes decision on ESR.
- If approved, City proceeds with preferred disposal option.

We want to hear from You!

Please send us your thoughts, comments and suggestions.

City of Elliot Lake
45 Hillside Drive North
Elliot Lake, ON P5A 1X5
Tel: (705) 848-2287

Consultant Project Manager
John Smith
Exp Services Inc.
1595 Clark Blvd.
Brampton, On L6T 4V1
Tel: (905) 793-9800 x 2533
E-mail: john.smith@exp.com

Jean Louis Gaudet

From: Nguyen, Milan (ENE) <Milan.Nguyen@ontario.ca>
Sent: November-26-12 3:25 PM
To: Jean Louis Gaudet
Cc: Sugar, Alissa (ENE)
Subject: City of Elliot Lake Waste Management Plan - Aboriginal consultation

Good afternoon Jean Louis,

I just wanted to update you in regards to the Aboriginal consultation requirements for the City of Elliot Lake Waste Management Plan environmental assessment. I have provided our legal counsel with the First Nations and Metis distribution list used for the Terms of Reference to determine whether the list will need to be updated for the environmental assessment.

I expect to hear a response from them within the next two weeks. Please let me know if this presents any issues for you.

Cheers,

Milan Nguyen

Environmental Assessment Coordinator

Ministry of the Environment | Environmental Approvals Branch
2 St. Clair Avenue West | Toronto, Ontario | M4V 1L5
T: 416.314.0897 | milan.nguyen@ontario.ca

Jean Louis Gaudet

From: Jean Louis Gaudet
Sent: December-19-12 4:52 PM
To: Heather.Levacque@Ontario.ca
Cc: Ashley.Johnson@ontario.ca; John Smith
Subject: Elliot Lake Waste Management Plan EA - Aboriginal Consultation
Attachments: 2012 12 19 Js_MAA_update on TOR FN_M list.pdf

Hello,

The City of Elliot Lake is proceeding with an Environmental Assessment for its Waste Management Plan (EA).

In 2008, a Terms of Reference (TOR) was prepared for the EA, and it included a distribution list for First Nations and Métis groups that would be stakeholders in this project.

Please find attached a request to the Ministry for updates to the stakeholder list for this project.

Original to follow by mail.

Regards,

Jean-Louis Gaudet



Jean-Louis Gaudet

Project Coordinator
t: +1.905.793.9809 x 2344
e: jeanlouis.gaudet@exp.com
1595 Clark Blvd.
Brampton, ON L6T 4V1
CANADA

exp.com | legal disclaimer

keep it green, read from the screen



December 19, 2012

Environmental Unit
Environment and Natural Resources
Lands and Trusts Services
Aboriginal Affairs and Northern Development Canada
8th Floor-25 St. Clair Avenue East
Toronto ON M4T 1M2

By E-mail: EACoordination_ON@inac-ainc.gc.ca

Re: V00601389 City of Elliot Lake Waste Management Plan Environmental Assessment
Aboriginal Consultation: Development of Stakeholder List

To Whom It May Concern:

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period.

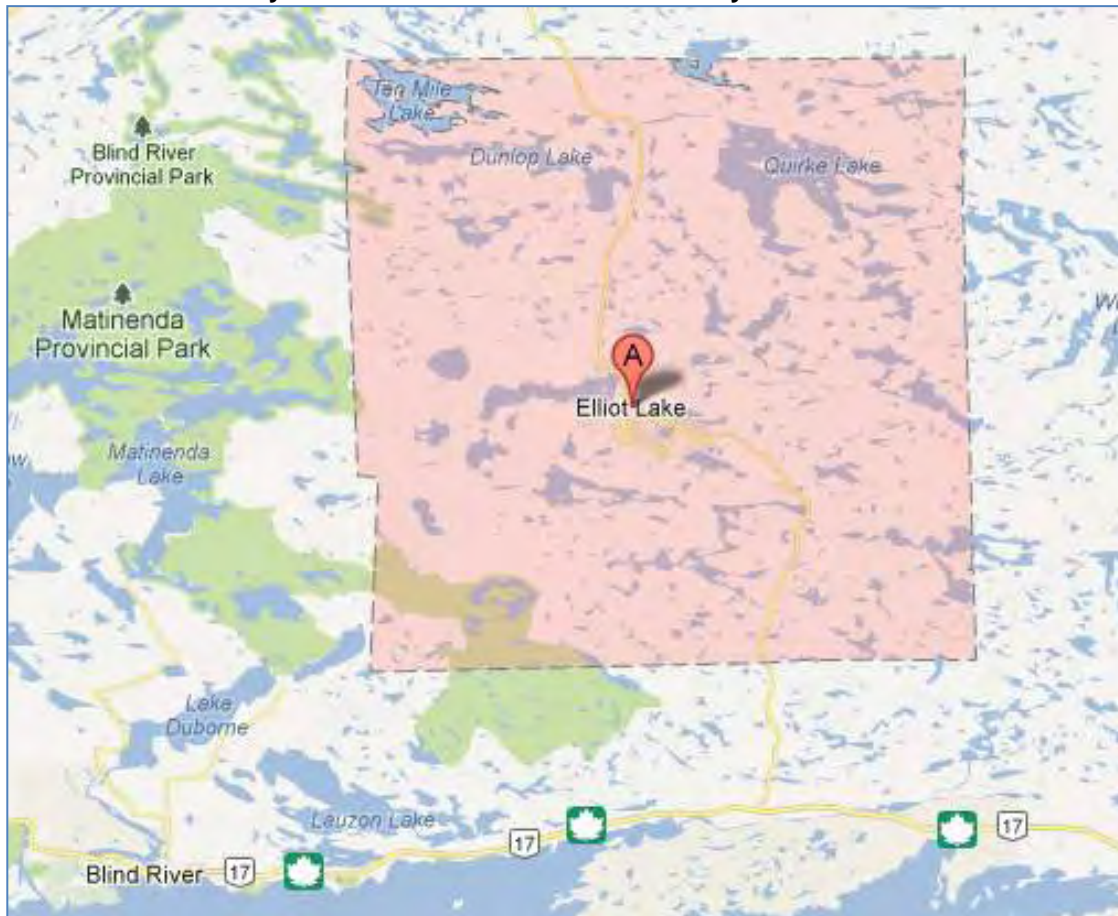
The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

The study area is limited to the official boundaries of the City of Elliot Lake (see map, page 2).

We request that Aboriginal Affairs and Northern Development Canada identify any Aboriginal stakeholder groups that may have an interest in this project.

In 2008, a Terms of Reference (TOR) was prepared for the EA, and it included a distribution list for First Nations and Métis stakeholders groups for the EA. This list is attached for your information.

Study Area: Official boundaries of the City of Elliot Lake



Sincerely,

A handwritten signature in black ink, appearing to read "John Smith".

John Smith
Project Manager

exp Services Inc.
Enclosures (1)

cc: Mr. Don Boswell, Senior Claims Analyst, Specific Claims Branch, AANDC
Consultation and Accommodation Unit, AANDC

First Nations and Métis Distribution List

Name and Address
Wikwemikong Unceded Indian Reserve Chief Robert Corbiere P.O. Box 112 19A Complex Drive Wikwemikong, ON P0P 2J0
M'Chigeeng First Nation Chief Isadora Bebamash P.O. Box 333 M'Chigeeng ON P0P 1G0
Mississauga #8 First Nation P.O. Box 1299 66 Park Rd. Blind River ON P0R 1B0
Thessalon First Nation Chief David Giguere P.O. Box 9, RR#2 Thessalon ON P0R 1L0
Sagamok Anishnawbek First nation Chief Paul Eshkakogan P.O. Box 610 Massey ON P0P 1P0
Aundeck Omni Kaning First Nation R.R. #1, Box 21 Little Current, ON P0P 1K0
Sheguindah First Nation P.O. Box 101 Sheguindah, ON P0P 1W0
Zhiibaahaasing First Nation General Delivery Silverwater, ON P0P 1Y0
Sheshegwaning First Nation P.O. Box 1 Sheshewaning, ON P0P 1Y0

Name and Address
Serpent River First Nation Chief Isadore Day P.O. Box 14 195 Village Road Cutler, ON P0P 1B0
Garden River First Nation 7 Shingwauk Street Garden River, ON P6A 6Z8
Historic Sault Ste. Marie Stev Leffler President Sault Ste. Marie, ON P6A 1Y3
North Shore Metis Council Art Bennet, Interim President P.O. Box 160 Bruce Mines, ON P0R 1C0
Temagami First Nation and Teme-Augama Anishnaba Chief Jim Twain Bear Island Post Office Temagami, ON P0H 1C0
Moose Deer Point First Nation Chief Edward Williams P. O. Box 119 3719 Twelve Mile Bay Rd MACTIER, ON P0C 1H0
Batchewana First Nation 236 Frontenac Street Sault Ste Marie, ON P6A 5K9
Whitefish River First Nation PO Box A 46 Bay of Islands Road Birch Island, ON P0P 1A0



December 19, 2012

Ms. Heather Levecque
Manager
Consultation Unit
Ministry of Aboriginal Affairs
9th Floor-160 Bloor Street East

By E-mail: Heather.Levecque@Ontario.ca

Re: V00601389 City of Elliot Lake Waste Management Plan Environmental Assessment
Update on Aboriginal Contact List

Dear Ms. Levecque:

The City of Elliot Lake is proceeding with an Environmental Assessment for its Waste Management Plan (EA). The Notice of Commencement (with map) is attached. The study area is the City of Elliot Lake, Ontario.

In 2008, a Terms of Reference (TOR) was prepared for the EA, and it included a distribution list for First Nations and Métis groups that would be stakeholders in this project (attached).

We request that the Ministry please review the attached 2008 TOR First Nations and Métis distribution list and:

- Advise us of any updates to the list, for use in this EA, including additions, deletions or other changes; and
- Confirm the correct name for the MNO North Channel Métis Council (listed as North Shore Métis Council in 2008 list), if still applicable.

Sincerely,

A handwritten signature in black ink, appearing to read 'John Smith', is positioned above the typed name.

John Smith
Project Manager

exp Services Inc.
Enclosures (2)

cc: Ashley Johnson, Strategy Policy & Planning Division (by e-mail: Ashley.Johnson@ontario.ca)

Jean Louis Gaudet

From: Nguyen, Milan (ENE) <Milan.Nguyen@ontario.ca>
Sent: December-19-12 11:07 AM
To: Jean Louis Gaudet
Subject: RE: City of Elliot Lake Waste Management Plan - Aboriginal consultation

Good morning Jean Louis,

Sorry for the delay in getting back to you - I have heard back from our legal counsel regarding the Aboriginal contact list. Our legal counsel has advised the following:

- If not already done so, contact MAA and the federal government to update the information that was provided by these ministries during the ToR;
- Include the communities of Batchewana First Nation and Whitefish River (Pt 4) or Wauwasquinagaa on the list for the EA and provide the two communities with notice and ask if they have any comments, questions or concerns;
 - It was not suggested that they be consulted on a rights basis unless and until the communities indicate that they have rights and that those rights would be impacted as they are a good distance away from the project (There are claims by the communities and Elliot Lake is around the water). Should that occur, please talk to the MOE about how to proceed with respect to these communities;
- Confirm that the correct name for one of the Metis Councils is being used - it should be MNO North Channel Metis Council and not North Shore Metis. The Superior North Shore Metis are located on Lake Superior;
- "MNO" should be added to the name of the Historic Sault Ste Marie Metis – MNO Historic Sault Ste Marie Metis; and
- A copy of notices should be provided to the Metis Nation of Ontario as well as the two community councils for both the Historic Sault Ste Marie Metis and North Channel Metis.

Please let me know if you require any additional information.

Cheers,

Milan Nguyen

Environmental Assessment Coordinator

Ministry of the Environment | Environmental Approvals Branch
2 St. Clair Avenue West | Toronto, Ontario | M4V 1L5
T: 416.314.0897 | milan.nguyen@ontario.ca

From: Jean Louis Gaudet [mailto:jeanlouis.gaudet@exp.com]
Sent: November 27, 2012 4:08 PM
To: Nguyen, Milan (ENE)
Cc: Sugar, Alissa (ENE)
Subject: RE: City of Elliot Lake Waste Management Plan - Aboriginal consultation

Hi Milan,

Yes, this is fine.

Thanks,

JL

Jean-Louis Gaudet

Project Coordinator
t: +1.905.793.9809 x2344 | f: +1.905.793.0641
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada

[exp.com](#) | [legal disclaimer](#)

keep it green, read from the screen

From: Nguyen, Milan (ENE) [<mailto:Milan.Nguyen@ontario.ca>]
Sent: Monday, November 26, 2012 3:25 PM
To: Jean Louis Gaudet
Cc: Sugar, Alissa (ENE)
Subject: City of Elliot Lake Waste Management Plan - Aboriginal consultation

Good afternoon Jean Louis,

I just wanted to update you in regards to the Aboriginal consultation requirements for the City of Elliot Lake Waste Management Plan environmental assessment. I have provided our legal counsel with the First Nations and Metis distribution list used for the Terms of Reference to determine whether the list will need to be updated for the environmental assessment.

I expect to hear a response from them within the next two weeks. Please let me know if this presents any issues for you.

Cheers,

Milan Nguyen

Environmental Assessment Coordinator

Ministry of the Environment | Environmental Approvals Branch
2 St. Clair Avenue West | Toronto, Ontario | M4V 1L5
T: 416.314.0897 | milan.nguyen@ontario.ca



December 20, 2012

Bryan O'Meara
Litigation Case Manager
Litigation Management and Resolution Branch
Aboriginal Affairs and Northern Development Canada
Room 1430-25 Eddy Street
Gatineau QC K1A 0H4

By E-mail: Bryan.OMeara@inac-ainc.gc.ca

Re: V00601389 City of Elliot Lake Waste Management Plan Environmental Assessment
Aboriginal Consultation: Development of Stakeholder List

Dear Mr. O'Meara:

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period.

The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

The study area is limited to the official boundaries of the City of Elliot Lake (see map, page 2).

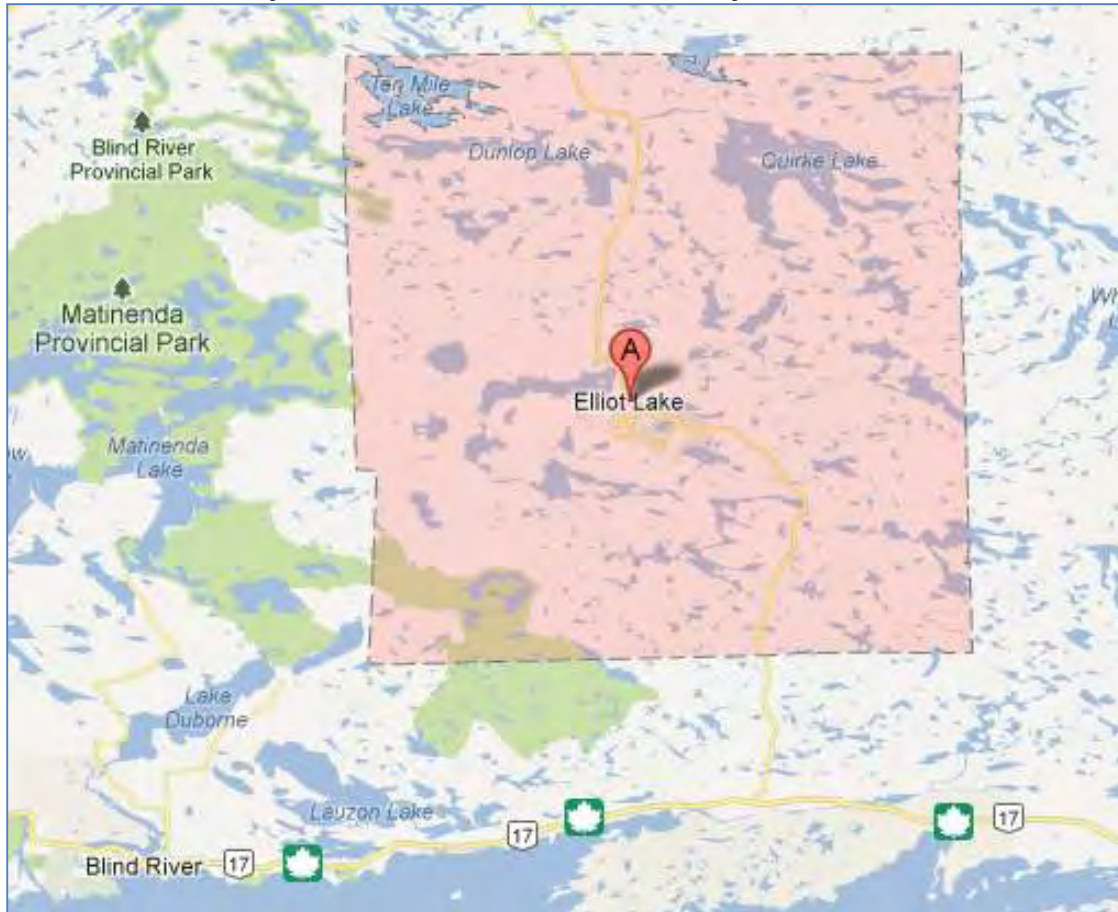
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We request that Aboriginal Affairs and Northern Development Canada:

- **Confirm whether there is any First Nation, Métis or aboriginal litigation in the vicinity of this project,**
- **Identify any First Nation, Métis or aboriginal stakeholder groups that may have an interest in this project, and**
- **Suggest updates to the attached 2008 TOR First Nations and Métis stakeholder distribution list as deemed necessary.**



Study Area: Official boundaries of the City of Elliot Lake



Sincerely,

A handwritten signature in black ink, appearing to read 'John Smith'.

John Smith
Project Manager

exp Services Inc.
Enclosures (1)

Jean Louis Gaudet

From: Jean Louis Gaudet
Sent: December-20-12 9:46 AM
To: Bryan.OMeara@inac-ainc.gc.ca
Cc: John Smith
Subject: City of Elliot Lake Waste Management EA - Aboriginal Consultation
Attachments: 2012 12 20_Js_Bo AANDC (fed litigation_FN Consult).pdf

Hello,

The City of Elliot Lake is proceeding with an Environmental Assessment for its Waste Management Plan (EA).

In 2008, a Terms of Reference (TOR) was prepared for the EA, and it included a distribution list for First Nations and Métis groups that would be stakeholders in this project.

Please find attached a request to AANDC to identify any Aboriginal stakeholder groups that may have an interest in this project.

Original to follow by mail.

Regards,

Jean-Louis Gaudet



Jean-Louis Gaudet

Project Coordinator
t: +1.905.793.9809 x 2344
e: jeanlouis.gaudet@exp.com
1595 Clark Blvd.
Brampton, ON L6T 4V1
CANADA

exp.com | legal disclaimer

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December 20, 2012

Bryan O'Meara
Litigation Case Manager
Litigation Management and Resolution Branch
Aboriginal Affairs and Northern Development Canada
Room 1430-25 Eddy Street
Gatineau QC K1A 0H4

By E-mail: Bryan.OMeara@inac-ainc.gc.ca

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Aboriginal Consultation: Development of Stakeholder List

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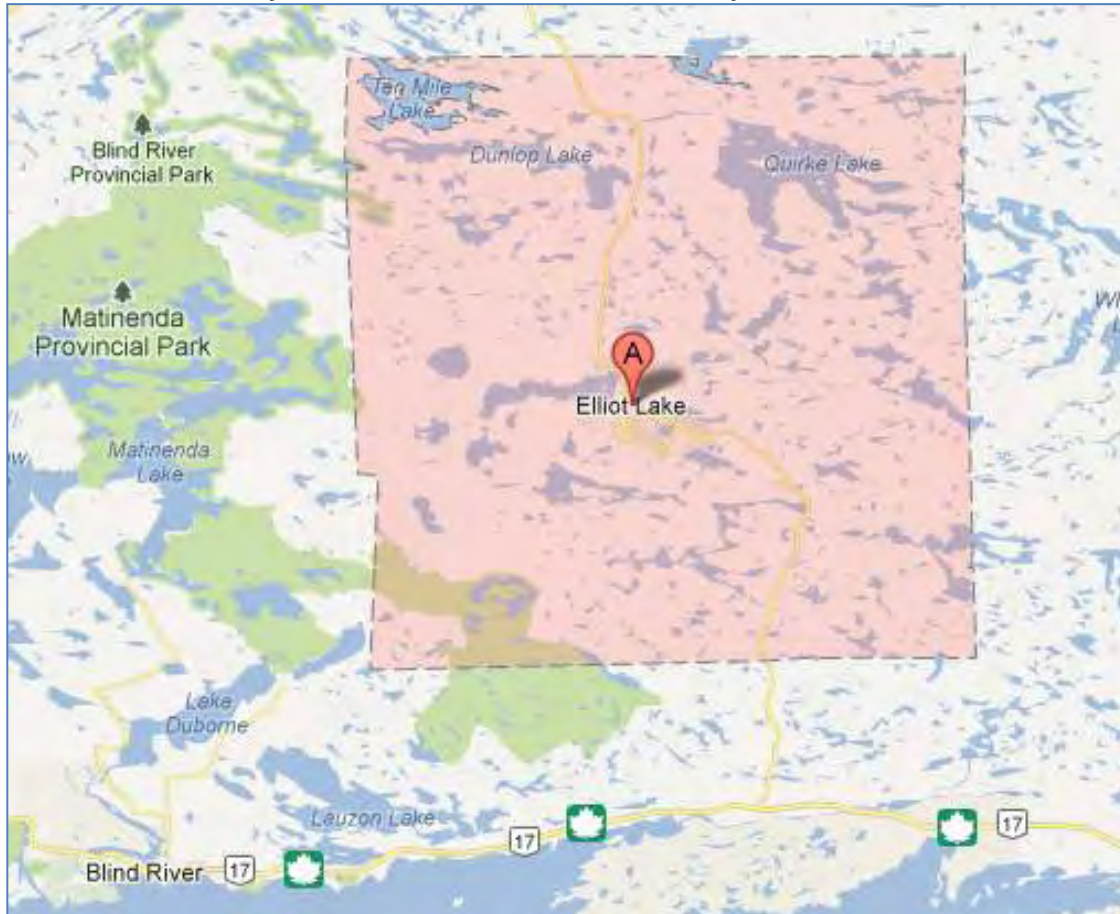
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- **Suggest updates to the attached 2008 TOR First Nations and Métis stakeholder distribution list as deemed necessary.**

Study Area: Official boundaries of the City of Elliot Lake



Sincerely,

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John Smith
Project Manager

exp Services Inc.
Enclosures (1)

First Nations and Métis Distribution List

Name and Address
Wikwemikong Unceded Indian Reserve Chief Robert Corbiere P.O. Box 112 19A Complex Drive Wikwemikong, ON P0P 2J0
M'Chigeeng First Nation Chief Isadora Bebamash P.O. Box 333 M'Chigeeng ON P0P 1G0
Mississauga #8 First Nation P.O. Box 1299 66 Park Rd. Blind River ON P0R 1B0
Thessalon First Nation Chief David Giguere P.O. Box 9, RR#2 Thessalon ON P0R 1L0
Sagamok Anishnawbek First nation Chief Paul Eshkakogan P.O. Box 610 Massey ON P0P 1P0
Aundeck Omni Kaning First Nation R.R. #1, Box 21 Little Current, ON P0P 1K0
Sheguindah First Nation P.O. Box 101 Sheguindah, ON P0P 1W0
Zhiibaahaasing First Nation General Delivery Silverwater, ON P0P 1Y0
Sheshegwaning First Nation P.O. Box 1 Sheshewaning, ON P0P 1Y0

Name and Address
Serpent River First Nation Chief Isadore Day P.O. Box 14 195 Village Road Cutler, ON P0P 1B0
Garden River First Nation 7 Shingwauk Street Garden River, ON P6A 6Z8
Historic Sault Ste. Marie Stev Leffler President Sault Ste. Marie, ON P6A 1Y3
North Shore Metis Council Art Bennet, Interim President P.O. Box 160 Bruce Mines, ON P0R 1C0
Temagami First Nation and Teme-Augama Anishnaba Chief Jim Twain Bear Island Post Office Temagami, ON P0H 1C0
Moose Deer Point First Nation Chief Edward Williams P. O. Box 119 3719 Twelve Mile Bay Rd MACTIER, ON P0C 1H0
Batchewana First Nation 236 Frontenac Street Sault Ste Marie, ON P6A 5K9
Whitefish River First Nation PO Box A 46 Bay of Islands Road Birch Island, ON P0P 1A0



December 20, 2012

Mr. Jeffrey Betker
Senior Policy Analyst
Office of the Federal Interlocutor for Métis and non-status Indians
Aboriginal Affairs and Northern Development Canada
Room 1218-66 Slater Street

By E-mail: Jeffrey.betker@inac.gc.ca

Re: V00601389 City of Elliot Lake Waste Management Plan Environmental Assessment
Aboriginal Consultation: Development of Stakeholder List

Dear Mr. O'Meara:

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period.

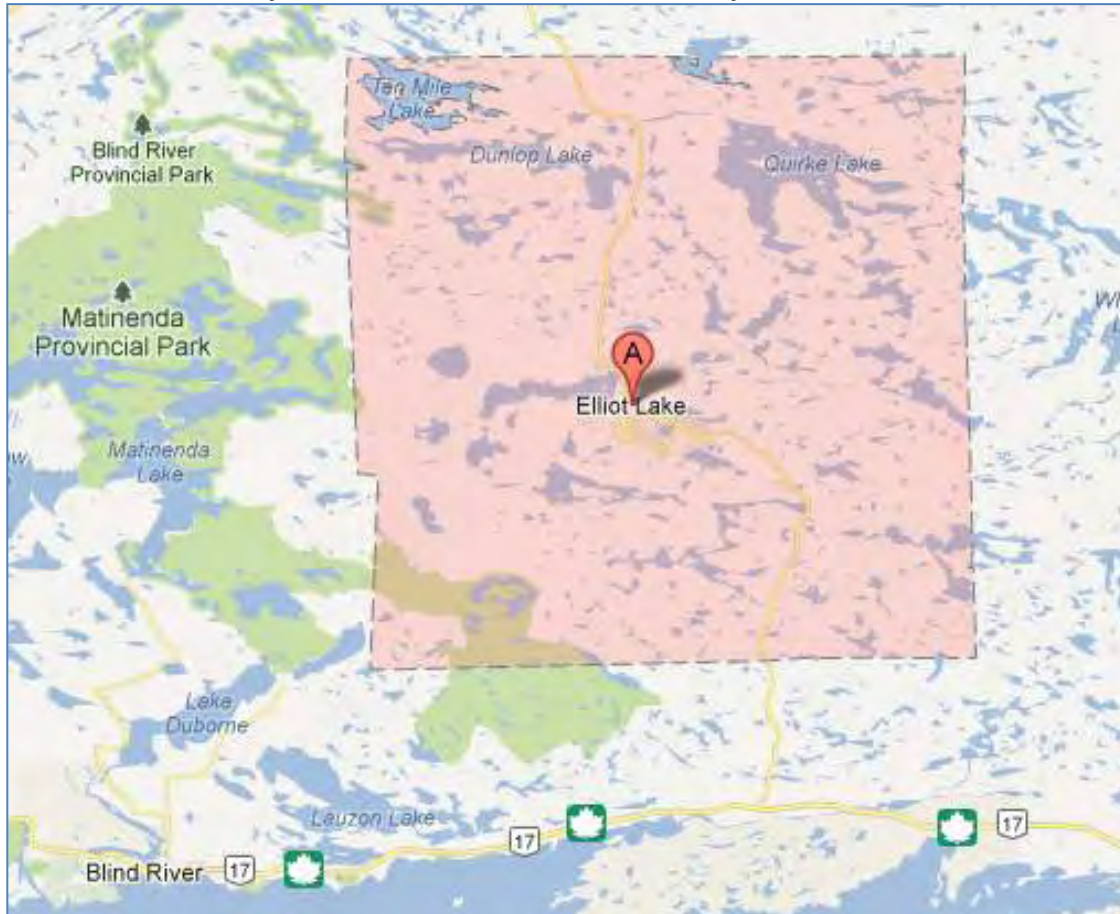
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In 2008, a Terms of Reference (TOR) was prepared for the EA, and it included a distribution list for First Nations and Métis stakeholder groups for the EA. This list is attached for your information.

We request that Aboriginal Affairs and Northern Development Canada to advise of any Metis, Non-Status Indian and urban Aboriginal stakeholder groups within or in proximity to the project study area, and to suggest updates to the attached 2008 TOR First Nations and Métis stakeholder distribution list as deemed necessary.

Study Area: Official boundaries of the City of Elliot Lake



Sincerely,

A handwritten signature in black ink, appearing to read 'John Smith'.

John Smith
Project Manager

exp Services Inc.
Enclosures (1)

First Nations and Métis Distribution List

Name and Address
Wikwemikong Unceded Indian Reserve Chief Robert Corbiere P.O. Box 112 19A Complex Drive Wikwemikong, ON P0P 2J0
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Mississauga #8 First Nation P.O. Box 1299 66 Park Rd. Blind River ON P0R 1B0
Thessalon First Nation Chief David Giguere P.O. Box 9, RR#2 Thessalon ON P0R 1L0
Sagamok Anishnawbek First nation Chief Paul Eshkakogan P.O. Box 610 Massey ON P0P 1P0
Aundeck Omni Kaning First Nation R.R. #1, Box 21 Little Current, ON P0P 1K0
Sheguindah First Nation P.O. Box 101 Sheguindah, ON P0P 1W0
Zhiibaahaasing First Nation General Delivery Silverwater, ON P0P 1Y0
Sheshegwaning First Nation P.O. Box 1 Sheshewaning, ON P0P 1Y0

Name and Address
Serpent River First Nation Chief Isadore Day P.O. Box 14 195 Village Road Cutler, ON P0P 1B0
Garden River First Nation 7 Shingwauk Street Garden River, ON P6A 6Z8
Historic Sault Ste. Marie Stev Leffler President Sault Ste. Marie, ON P6A 1Y3
North Shore Metis Council Art Bennet, Interim President P.O. Box 160 Bruce Mines, ON P0R 1C0
Temagami First Nation and Teme-Augama Anishnaba Chief Jim Twain Bear Island Post Office Temagami, ON P0H 1C0
Moose Deer Point First Nation Chief Edward Williams P. O. Box 119 3719 Twelve Mile Bay Rd MACTIER, ON P0C 1H0
Batchewana First Nation 236 Frontenac Street Sault Ste Marie, ON P6A 5K9
Whitefish River First Nation PO Box A 46 Bay of Islands Road Birch Island, ON P0P 1A0

Jean Louis Gaudet

From: EACoordination_ON@aandc-aadnc.gc.ca
Sent: December-21-12 8:39 AM
To: Jean Louis Gaudet
Cc: CAU-UCA@aandc-aandc.gc.ca CAU-UCA; Don Boswell; John Smith
Subject: Re: City of Elliot Lake Waste Management EA - Aboriginal Consultation

Hello,

The AANDC Ontario Region Environment Unit does not provide this service at this time.

For information with respect to claims, litigation, treaties and Métis and Non-Status Indians interests, you may contact our Consultation and Accommodation Unit (CAU), located at AANDC Headquarters. The CAU can provide information on:

1. The location of Aboriginal communities, reserves or their traditional territory, as claimed; and/or
2. The asserted or established rights that pertain to those communities or to a given geographic location.

For these inquiries you may contact them directly at CAU-UCA@aandc.gc.ca.

Mei Ling

Mei Ling Chen
Environmental Assessment Coordination
T: 416-954-3224
F: 416-954-4328

Aboriginal Affairs and Northern Development Canada - Ontario Region
25 St. Clair Avenue East
Toronto, Ontario M4T 1M2

>>> Jean Louis Gaudet <jeanlouis.gaudet@exp.com> 12/19/2012 4:55 PM >>>
Hello,

The City of Elliot Lake is proceeding with an Environmental Assessment for its Waste Management Plan (EA).

In 2008, a Terms of Reference (TOR) was prepared for the EA, and it included a distribution list for First Nations and Métis groups that would be stakeholders in this project.

Please find attached a request to AANDC to identify any Aboriginal stakeholder groups that may have an interest in this project.

Original to follow by mail.

Regards,

Jean-Louis Gaudet



Jean-Louis Gaudet

Project Coordinator
t: +1.905.793.9809 x 2344
e: jeanlouis.gaudet@exp.com
1595 Clark Blvd.
Brampton, ON L6T 4V1
CANADA

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Jean Louis Gaudet

From: CAU-UCA <CAU-UCA@aadnc-aandc.gc.ca>
Sent: January-02-13 11:33 AM
To: Jean Louis Gaudet
Cc: Allison Berman
Subject: Request for consultation information - Waste Management project- Elliot Lake
Attachments: NCR-#4924255-v1-CAU CIS RESPONSE ON EXP WASTE MANAGEMENT PLAN ELLIOT LAKE.pdf

Hello Jean Louis,

On behalf of the Consultation and Accommodation Unit (CAU) of Aboriginal Affairs and Northern Development Canada (AANDC), I am attaching a response to your recent request for information concerning consultation with Aboriginal groups and First Nation communities in the vicinity of the City of Elliot Lake Waste Management project in Ontario.

If you have any concerns, feel free to contact me.

Regards,

Allison Berman
Regional Subject Expert for Ontario
Consultation and Accommodation Unit
Aboriginal Affairs and Northern Development Canada
5H- 5th Floor,
Gatineau, QC K1A 0H4
Tel: 819-934-1873

January 2, 2013

Jean-Louis Gaudet
Project Coordinator
EXP.
1595 Clark Blvd.
Brampton, Ontario L6T 4V1
Jeanlouis.gaudet@exp.com

Dear Mr. Gaudet,

Thank you for your e-mail of December 19, 2012 regarding your request for information held by Aboriginal Affairs and Northern Development Canada (AANDC) on established or potential Aboriginal and treaty rights in the vicinity of the Waste Management Plan project for the City of Elliot Lake, in Ontario.

Consulting with Canadians on matters of interest or concern to them is an important part of good governance, sound policy development and decision-making. In addition to good governance objectives, there may be statutory or contractual reasons for consulting, as well as the common law duty to consult with First Nations, Métis and Inuit when conduct that might adversely impact rights Aboriginal or treaty rights (established or potential) is contemplated.

It is important to note that the information held by AANDC is provided as contextual information and may or may not pertain directly to Aboriginal or treaty rights. In most cases, the Aboriginal community remains best positioned to explain their traditional use of land, their practices or claims that may fall under section 35, including claims they may have put before the courts.

AANDC has developed the Aboriginal and Treaty Rights Information System (ATRIS), which brings together information regarding Aboriginal groups such as their location, related treaty information, claims (specific, comprehensive and special) and litigation data.

The Consultation Information Service (CIS) response

The CIS of the Consultation and Accommodation Unit responds to requests sent to AANDC for information on established or potential Aboriginal and treaty rights known to the Department. The CIS has prepared the attached response which combines the resources of ATRIS and the support of sectors and regions within the AANDC. Using a 100 km radius surrounding the project location, information regarding potentially affected Aboriginal communities is presented in the attached report in the following sections for each community:

Aboriginal Community Information includes key contact information and any other information such as Tribal Council affiliation.

Treaties includes information on historic and modern treaties.

Claims includes specific, comprehensive and special claims.

Self-Government Agreements and other negotiations may be part of comprehensive claims or stand-alone negotiations.

Litigation usually refers to litigation between the Aboriginal Group and the Crown, often pertaining to section 35 rights assertions or consultation matters.

Also included, where available, is a section entitled **Other Considerations**. This may include information on Métis rights or information on the assertions of other Aboriginal groups, consultation-related protocols or agreements and other relevant information.

Should you require further assistance regarding the information provided, or if you have any questions and/or comments about the enclosed response, please do not hesitate to contact me.

Regards,

Allison Berman
Regional Subject Expert for Ontario
Consultation and Accommodation Unit
Aboriginal Affairs and Northern Development Canada
5H- 5th Floor,
Gatineau, QC K1A 0H4
Tel: 819-934-5267

Disclaimer

This information is provided as a public service by the Government of Canada. All of the information is provided "as is" without warranty of any kind, whether express or implied, including, without limitation, implied warranties as to the accuracy or reliability of any of the information provided, its fitness for a particular purpose or use, or non-infringement, which implied warranties are hereby expressly disclaimed. References to any website are provided for information only shall not be taken as endorsement of any kind. The Government of Canada is not responsible for the content or reliability of any referenced website and does not endorse the content, products, services or views expressed within them.

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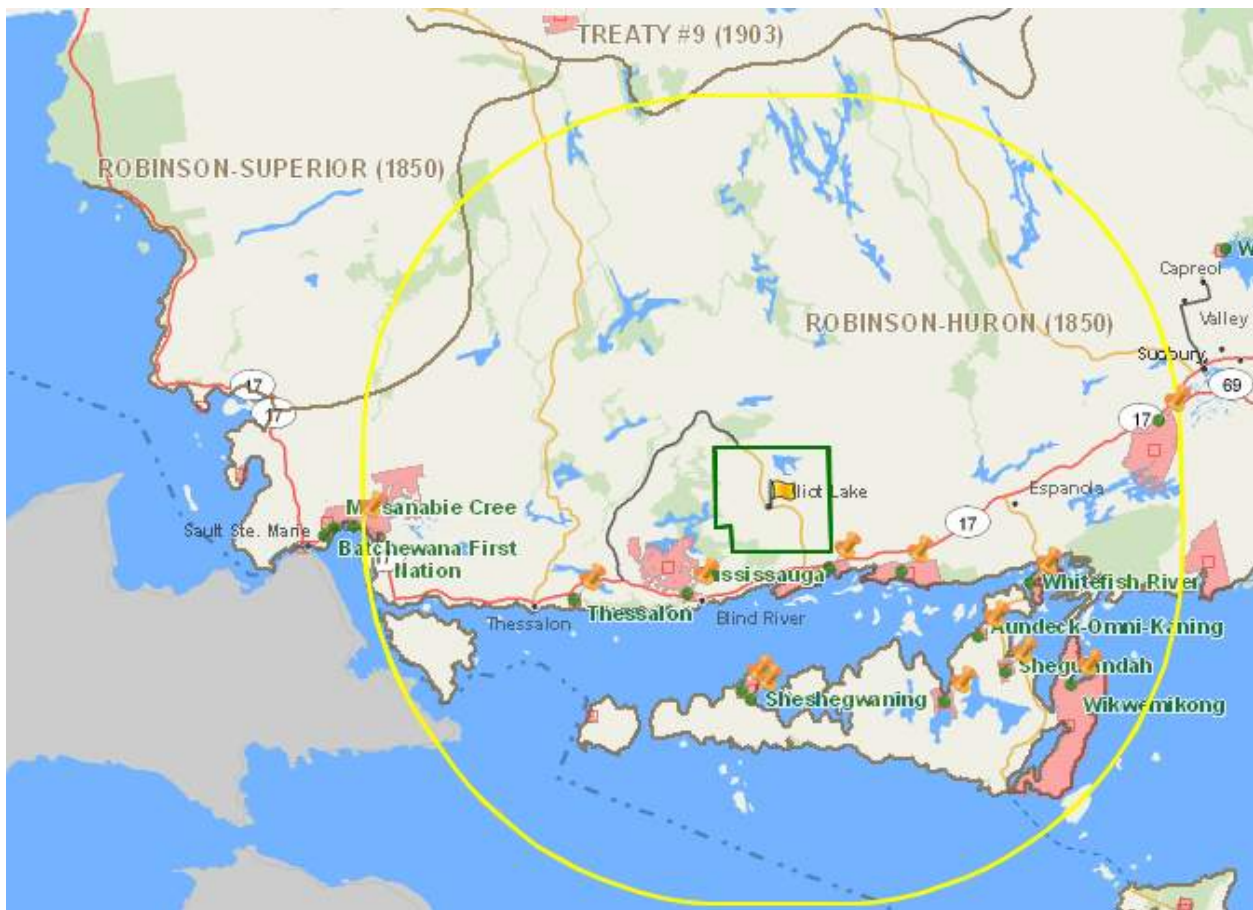
Under no circumstances will the Government of Canada be liable to any person or business entity for any reliance on the completeness or accuracy of this information or for any direct, indirect, special, incidental, consequential, or other damages based on any use of this information including, without limitation, any lost profits, business interruption, or loss of programs or information, even if the Government of Canada has been specifically advised of the possibility of such damages.

Within a 100 km radius of your project there are 12 First Nation communities. These are:

Atikameksheng Anishnawbek	Serpent River First Nation
Aundek-Omni- Kaning	Sheguiandah First Nation
Garden River First Nation	Thessalon First Nation
M'Chigeeng First Nation	Whitefish River First Nation
Mississauga #8 First Nation	Wikwemikong First Nation
Sagamok Anishnawbek	Zhiibaahaasing First Nation

Your distribution list also includes the following First Nations which have been added:
 Batchewana First Nation
 Moose Deer Point First Nation
 Sheshegwaning First Nation

The following information should assist you in planning any consultation that may be required.



In general, where historic treaties have been signed, the rights of signatory First Nation's are defined by the terms of the Treaty. In many cases, however, there are divergent views between First Nations and the Crown as to what the treaty provisions imply or signify. For each First Nation below, the relevant treaty area is provided.

In areas where no historic treaty exists or where such treaties were limited in scope (i.e. where only certain rights were addressed by the treaty, such as the Peace and Friendship Treaties),

there may be comprehensive claims that are asserted or being negotiated. Comprehensive claim negotiations are the means by which modern treaties are achieved.

Specific claims refer to claims made by a First Nation against the federal government related to outstanding lawful obligations, such as the administration of land and other First Nation assets, and to the fulfillment of Indian treaties, although the treaties themselves are not open to re-negotiation. The below response provides summaries of relevant claims that are current to the date of the response. Claims that have been settled or closed may also be included to give a sense of the First Nation's claims history with the Crown.

As the claims progress regularly, it is recommended that the status of each claim be reviewed through the Reporting Centre on Specific Claims at:

http://pse5-esd5.ainc-inac.gc.ca/SCBRI_E/Main/ReportingCentre/External/externalreporting.aspx

Self-government agreements set out arrangements for Aboriginal groups to govern their internal affairs and assume greater responsibility and control over the decision making that affects their communities. Many comprehensive claims settlements also include various self-government arrangements. Self-government agreements address: the structure and accountability of Aboriginal governments, their law-making powers, financial arrangements and their responsibilities for providing programs and services to their members. Self-government enables Aboriginal governments to work in partnership with other governments and the private sector to promote economic development and improve social conditions.

First Nation/Aboriginal Communities

Atikameksheng Anishnawbek (Whitefish Lake First Nation)

Chief Edward Steven Miller (tenure expires July 15, 2014)

P.O. Box 39

Naughton, Ontario, POM 2M0

Phone: (705) 692-3651 Fax: (705) 692-5010

www.atikamekshenganishnawbek.ca

Treaty area - Robinson-Huron Treaty of 1850

For more information on the treaty, see "Other Considerations" below.

Membership

Union of Ontario Indians (UOI)

Chiefs of Ontario

Mamaweswen, The North Shore Tribal Council Secretariat

For more information, see "Other Considerations" below.

Specific Claims

Name: Timber Claim

Status: active litigation

Description: The First Nation alleged the inadequate compensation for timber which was surrendered in 1886. The community claims the Crown failed to honour the Robinson Huron Treaty of 1850, and alleges a failure to pay market value for the timber which constitutes a breach of Canada's fiduciary obligation. The land involved in the claim encompasses more than

1,000 square kms including a significant amount of Crown land as well as the city of Sudbury and surrounding municipalities.

Name: Incorrect Survey

Status: settled through negotiations

Description: The First Nation alleged that boundaries of the reserve were incorrectly surveyed, resulting in loss of land to First Nation.

Name: Treaty Rights

Status: concluded- no lawful obligation found

Description: Chiefs of the Robinson-Huron treaty area asked that their treaty dated 1850 be renegotiated alleging that the Crown failed to meet certain commitments under the treaty specifically: Crown liability regarding Indian land, and hunting and fishing rights.

Agreement negotiations

Anishinabek Nation (UOI) negotiations on Governance and Education

Please see "Other Considerations" for more details.

Litigation

Name: Atikameksheng Anishnawbek, Aundeck Omni Kaning FN, Batchewana FN of Ojibways, Dokis FN, Henvy Inlet FN, Magnetawan FN, M'Chigeeng FN, Mississauga #8 FN, Nipissing FN, Ojibways of Garden River FN, Sagamok Anishnawbek, Serpent River FN, Shawanaga FN, Sheguiandah FN, Sheshegwaning FN, Thessalon FN, Wahnapiatae FN, Wasauksing FN, Whitefish River FN, Wikwemikong Unceded IR No. 26, and Zhiibaahaasing FN v. HMTQ in Right of Canada

Status: active

Court File No.: not available

Description: A group of 21 Northeastern Ontario First Nations have filed a Notice to the Crown regarding the treaty annuity provisions in the Robinson Huron Treaty. The Plaintiffs assert that these provisions have never been increased since 1874 and are inadequate. They seek an accounting, an immediate increase in the annuities on a go-forward basis, and compensation for losses suffered as a result of the Crown's alleged failure to augment the annuities.

Name: Atikameksheng Anishnawbek v. Attorney General of Canada

Status: active

Court File No.: CV-08-366890

Description: In March 2008, the Atikameksheng Anishnawbek First Nation (formally Whitefish Lake), served a claim against Canada and Ontario for breach of fiduciary duties for allegedly failing to provide a reserve in accordance with the written and oral terms of the Robinson Huron Treaty. The alleged reserve lands would encompass the City of Sudbury and the surrounding mining areas.

The Plaintiff seeks, among other things, an order they are entitled to possession of the alleged additional reserve lands; a declaration that the Crown breached its fiduciary obligation to the Plaintiff, and damages for trespass, loss of use and breach of treaty rights. The Plaintiff has claimed damages for economic and non-economic losses.

Name: Whitefish Lake First Nation v. HMTQ in right of the Province of Ontario and The Attorney General of Canada

Status: closed

Court File No.: 85-CQ-003064CM

Description: The Whitefish Lake First Nation alleges that Ontario and Canada breached their fiduciary duties owed to the First Nation in connection with the flooding of land on the Whitefish Lake Indian Reserve commencing circa 1900.

Name: James Bob v. HNTQ

Status: dormant

Court File No.: not yet available

Description: Mr. Bob is a member of the Whitefish Lake First Nation and was invited to hunt with a friend in a Numbered Treaty Region, and was charged under the Fish & Wildlife Conservation Act. He claims he has the right to hunt under the Robinson Huron Treaty.

Name: Chief Larry Naponse v. HMTQ

Status: closed

Court File No.: 85-CQ-003064CM

Description: The plaintiffs first filed their claim against Ontario 1985, stating that the Province was responsible for flooding caused by a lumber company's dam. The dam raised water levels and flooding portions of the lands in the Whitefish Lake Indian Reserve. The parties entered into settlement negotiations, and an Agreement-in-Principal was reached in 1999. Subject to ratification, the Province would pay the Whitefish Lake First Nation as settlement of the claim. The Agreement wasn't ratified and the plaintiffs decided to amend their Statement of Claim to include causes of action that were not included in the original; Aboriginal rights, treaty rights, lack of consultation.

Land Management:

The Atikameksheng Anishnawbek First Nation is party to the First Nation Land Management Regime. This Agreement was signed by the Minister of Indian Affairs and Northern Development in 1996, and is an initiative allowing signatory First Nations the ability to take over management and control of their lands and resources outside of the Indian Act. For more information, visit: <http://www.aadnc-aandc.gc.ca/eng/1327090675492/1327090738973>

Aundeck-Omni-Kaning

Chief Patsy Corbiere

RR 1

Comp. 21

Little Current, Ontario, POP 1K0

Phone: (705) 368-2228 Fax: (705) 368-3563

www.aundeckomnikaningfn.com/index.html

Treaty area - Manitoulin Island Treaty of 1862 (also known as McDougall Treaty)

For more information on the treaty, see "Other Considerations" below.

Membership

United Chiefs and Councils of Mnidoo Mnising

Chiefs of Ontario

Union of Ontario Indians

For more information, see "Other Considerations" below.

Specific Claims

Name: Treaty Rights

Status: concluded- no lawful obligation found

Description: Chiefs of the Robinson-Huron treaty area asked that their treaty dated 1850 be renegotiated alleging that the Crown failed to meet certain commitments under the treaty specifically: Crown liability regarding Indian land, and hunting and fishing rights.

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Status: active

Court File No.: not available

Description: A group of 21 Northeastern Ontario First Nations have filed a Notice to the Crown regarding the treaty annuity provisions in the Robinson Huron Treaty. The Plaintiffs assert that these provisions have never been increased since 1874 and are inadequate. They seek an accounting, an immediate increase in the annuities on a go-forward basis, and compensation for losses suffered as a result of the Crown's alleged failure to augment the annuities.

Name: Manitoulin Project (Claim No. 1 to 7)

Status: active

Court File No.: C-10672-08

Description: There are seven claims that fall under the Manitoulin Project. The Plaintiffs (Aundeck-Omni-Kaning, Sheshegwaning First Nation, M'Chigeeng First Nation, Zhiibaahaasing First Nation, and Sheguiandah First Nation) allege the following:

- Breach of fiduciary duty by Canada in failing to seek and secure compensation for use and occupancy of lots, permitting trespass, as well as the selling lots for less than their value
- Misallocation of trust funds, Indian monies, interests and costs pertaining to lots
- Misuse of land meant for sale on behalf of the Plaintiffs

These claims concern lots in the townships of Dawson, Billings, Lowland, Assiginack, Tehkummah, as well as a shoreline allowance a road construction site.

Name: Chief Patrick Madahbee, Chief Elizabeth Laford, Chief Glen Hare, Chief Irene Kells, Chief Georgina Thompson, Sheshegwaning Band, MChigeeng Band, Zhiibaahaasing Band, Sheguiandah Band, Sucker Creek Band v. HMTQ in Right of the Dominion of Canada, Department of Indian Affairs and Northern Development Canada

Status: dormant

Court File No.: /07

Description: The plaintiffs allege that by failing to seek and secure any compensation for the use and occupation of Lot 34 between 1924 and the present; Canada breached its fiduciary duty; and are claiming on all the amounts that should have been collected and costs of this action.

Batchewana First Nation (Ojibwa of Batchewana)
Chief Dean Sayers (**tenure expires February 5, 2013**)
236 Frontenac Street
Sault Ste. Marie, Ontario P6A 5K9
Phone: (705) 759-0914 Fax: (705) 759-9171
www.batchewana.ca

Treaty Area – Robinson Huron Treaty of 1850
For more information on treaties, see “Other Considerations” below.

Membership
Mamaweswen, The North Shore Tribal Council
Association of Iroquois & Allied Indians
For more information, see “Other Considerations” below.

Specific Claims
Name: Whitefish Island
Status: settled through negotiation
Description: The First Nation alleged the improper taking (surrender) of Whitefish Island in St. Mary’s River.

Name: Whitefish Island Loss of Use
Status: resolved through administrative remedy
Description: The First Nation alleged that compensation is owed for the loss of use of the reserve land at Whitefish Island.

Litigation
Name: Atikameksheng Anishnawbek, Aundeck Omni Kaning FN, Batchewana FN of Ojibways, Dokis FN, Henvy Inlet FN, Magnetawan FN, M’Chigeeng FN, Mississauga #8 FN, Nipissing FN, Ojibways of Garden River FN, Sagamok Anishnawbek, Serpent River FN, Shawanaga FN, Sheguiandah FN, Sheshegwaning FN, Thessalon FN, Wahnapiatae FN, Wasauksing FN, Whitefish River FN, Wikwemikong Unceded IR No. 26, and Zhiibaahaasing FN v. HMTQ in Right of Canada
Status: active
Court File No.: not available
Description: A group of 21 Northeastern Ontario First Nations have filed a Notice to the Crown regarding the treaty annuity provisions in the Robinson Huron Treaty. The Plaintiffs assert that these provisions have never been increased since 1874 and are inadequate. They seek an accounting, an immediate increase in the annuities on a go-forward basis, and compensation for losses suffered as a result of the Crown’s alleged failure to augment the annuities.

Name: Batchewana First Nation v.
Status: active
Court File No.: PL070640

Description: The plaintiff intends to questions the constitutional applicability of the Aggregates Resources Act, R.S.O. 1990, c. A.8, to affect, foreclose, dispense with or otherwise prejudice the First Nation's Aboriginal, Treaty, contractual, common law and equitable interest in the development of aggregates, stone and other minerals on the lands in question and asserts its constitutional rights to consultation and/or consent and/or accommodation with respect to the proposed quarry development on the site, which rights have not been adequately addressed by the Crown in right of Ontario in accordance with the law.

Name: Regina v. Brian Irving, Danny Irving, Olaf Bjornaa Jr.

Status: active

Court File No.: 4-434029

Description: The Applicants are challenging the constitutional applicability of section 6(1)(a), 12, 25(2) and 54(1) of the Fish and Wildlife Conservation Act, 1997. They claim that it does not respect Aboriginal and treaty rights; the provisions are of no force or effect with respect to their Treaty hunting rights; and that the prosecution of the alleged offences is an abuse of the process of the court.

Name: Regina v. Carl Lesage

Status: active

Court File No.: 4-034029

Description: The applicant is a member of the Ojibways of Batchewana First Nation, and was charged with two counts of unlawfully hunting and unlawful possession of meat. The Applicant is challenging the constitutional applicability of section 6(1)(a), 12, 25(2) and 54(1) of the Fish and Wildlife Conservation Act, 1997; does not respect Aboriginal and treaty rights; the provisions are of no force or effect with respect to his Treaty hunting rights; and that the prosecution of the alleged offences is an abuse of the process of the court.

Notice of Assertion:

A Notice of Assertions was published on the Batchewana website. The First Nation considers this to be formal notice to governments, resource users, developers, neighbours and the general public of the rights and interests they assert and will continue to assert in their original, traditional and historic territory. For more details of the territory, their treaty, reserves and other relevant information, visit: <http://www.batchewana.ca/content/content.html?page=19>

Garden River First Nation

Chief Lyle Sayers

RR4

7 Shingwauk Street

Garden River, Ontario, P6A 6Z8

Phone: (705) 946-6300 Fax: (705) 945-1415

www.gardenriver.org/home/ahniin.htm

Treaty Area - Robinson-Huron Treaty of 1850

For more information on the treaty, see "Other Considerations" below.

Membership

Mamaweswen, The North Shore Tribal Council Secretariat

Union of Ontario Indians

For more information, see “Other Considerations” below.

Specific Claims

Name: Great Lakes Power Company

Status: concluded- no lawful obligation found

Description: The First Nation alleged that the federal government failed to take steps to ensure that the First Nation receive proper rental compensation in return for the erection & location of the 33 K.v. line across the Garden River Reserve in or around 1930 & the issuing of a License of Occupation in 1940. They also alleged that the federal government did not safe-guard its interests by failing to seek proper compensation and payment for the issuing of two long-term permits in 1959 & 1968.

Name: Squirrel Island

Status: settled through negotiation

Description: The First Nation alleged that Squirrel Island, adjacent to reserve and sold by Canada in 1871, was incorrectly included in land surrender of 1859.

Name: Treaty Rights

Status: concluded

Description: The First Nation alleged that the Chiefs of the Robinson-Huron treaty area asked that their treaty, dated 1850, be renegotiated alleging that the Crown failed to meet certain commitments under the treaty specifically: Crown liability regarding Indian land and hunting and fishing rights.

Agreement negotiations

Anishinabek Nation (UOI) negotiations on Governance and Education

Please see “Other Considerations” below for more details.

Litigation

Name: Atikameksheng Anishnawbek, Aundeck Omni Kaning FN, Batchewana FN of Ojibways, Dokis FN, Henvy Inlet FN, Magnetawan FN, M'Chigeeng FN, Mississauga #8 FN, Nipissing FN, Ojibways of Garden River FN, Sagamok Anishnawbek, Serpent River FN, Shawanaga FN, Sheguiandah FN, Sheshegwaning FN, Thessalon FN, Wahnapiatae FN, Wasauksing FN, Whitefish River FN, Wikwemikong Unceded IR No. 26, and Zhiibaahaasing FN v. HMTQ in Right of Canada

Status: active

Court File No.: not available

Description: A group of 21 Northeastern Ontario First Nations have filed a Notice to the Crown regarding the treaty annuity provisions in the Robinson Huron Treaty. The Plaintiffs assert that these provisions have never been increased since 1874 and are inadequate. They seek an accounting, an immediate increase in the annuities on a go-forward basis, and compensation for losses suffered as a result of the Crown's alleged failure to augment the annuities.

Name: Garden River First Nation Reserve No. 14 v. AG of Canada, HMTQ in Right of Ontario

Status: active

Court File No.: 22162/A3

Description: In this litigation, the Garden River First Nation is alleging that the Defendants, Canada and Ontario, are liable for the Crown's breaches of fiduciary and legal obligations in the negotiation and implementation of the Robinson-Huron Treaty of 1850, including the improper survey of the western boundary of the reserve, and the patenting of reserve lands to a mining company without a valid surrender or compensation.

M'Chigeeng First Nation

Chief Joseph Hare

#53 Hwy 551

M'Chigeeg, Ontario, P0P 1G0

P.O. Box 333

Phone: (705) 377-5362

Fax: (705) 377-4980

www.mchigeeng.ca

Treaty area - Manitoulin Island Treaty of 1862 (also known as McDougall Treaty)

For more information on the treaty, see "Other Considerations" below.

Membership

United Chiefs and Councils of Mnidoo Mnising

Union of Ontario Indians

Chiefs of Ontario

For more information, see "Other Considerations" below.

Specific Claims

Name: Flooding of Lake Mindemoya

Status: concluded- no lawful obligation found

Description: The First Nation alleges the unlawful damming of Lake Mindemoya on Manitoulin Island Indian Reserve No. 22, by a private milling company. The flooding has caused damage on reserve land along the lakeshore.

Name: Land Purchases (Surrender Project)

Status: concluded- no lawful obligation found

Description: The First Nation alleges a breach of fiduciary obligation on the part of the Crown, with regard to sales of surrendered land. The sales did not conform to the Crown's directives regarding how the sales were to be conducted.

Name: Sanfied Sugar Bush

Status: concluded- no lawful obligation found

Description: The First Nation alleges that desired land, known as the 'Sugar Bush Lands' were never properly set aside for them. This land was sold without the notification or consultation of the First Nation in 1943, and the First Nation alleges the loss of use of the Sugar Bush.

Name: Treasure Island

Status: concluded- no lawful obligation found

Description: The First Nation alleges a breach of fiduciary obligation as a result of a failure to observe the First Nation requests regarding the selection of their reserve lands.

Agreement negotiations

Anishinabek Nation (UOI) negotiations on Governance and Education

Please see "Other Considerations" for more details.

Litigation

Name: Atikameksheng Anishnawbek, Aundeck Omni Kaning FN, Batchewana FN of Ojibways, Dokis FN, Henvy Inlet FN, Magnetawan FN, M'Chigeeng FN, Mississauga #8 FN, Nipissing FN, Ojibways of Garden River FN, Sagamok Anishnawbek, Serpent River FN, Shawanaga FN, Sheguiandah FN, Sheshegwaning FN, Thessalon FN, Wahnapiatae FN, Wasauksing FN, Whitefish River FN, Wikwemikong Unceded IR No. 26, and Zhiibaahaasing FN v. HMTQ in Right of Canada

Status: active

Court File No.: not available

Description: A group of 21 Northeastern Ontario First Nations have filed a Notice to the Crown regarding the treaty annuity provisions in the Robinson Huron Treaty. The Plaintiffs assert that these provisions have never been increased since 1874 and are inadequate. They seek an accounting, an immediate increase in the annuities on a go-forward basis, and compensation for losses suffered as a result of the Crown's alleged failure to augment the annuities.

Name: Manitoulin Project (Claim No. 1 to 7)

Status: active

Court File No.: C-10672-08

Description: There are seven claims that fall under the Manitoulin Project. The Plaintiffs (Aundeck-Omni-Kaning, Sheshegwaning First Nation, M'Chigeeng First Nation, Zhiibaahaasing First Nation, and Sheguiandah First Nation) allege the following:

- Breach of fiduciary duty by Canada in failing to seek and secure compensation for use and occupancy of lots, permitting trespass, as well as the selling lots for less than their value
- Misallocation of trust funds, Indian monies, interests and costs pertaining to lots
- Misuse of land meant for sale on behalf of the Plaintiffs

These claims concern lots in the townships of Dawson, Billings, Lowland, Assiginack, Tehkummah, as well as a shoreline allowance a road construction site.

Name: Chief Patrick Madahbee, Chief Elizabeth Laford, Chief Glen Hare, Chief Irene Kells, Chief Georgina Thompson, Sheshegwaning Band, M'Chigeeng Band, Zhiibaahaasing Band, Sheguiandah Band, Sucker Creek Band v. HMTQ in Right of the Dominion of Canada, Department of Indian Affairs and Northern Development Canada

Status: dormant

Court File No.: /07

Description: The plaintiffs allege that by failing to seek and secure any compensation for the use and occupation of Lot 34 between 1924 and the present; Canada breached its fiduciary duty; and are claiming on all the amounts that should have been collected and costs of this action.

Mississauga #8

Chief Reginald Niganobe

64 Park Road

P.O. Box 1299

Blind River, Ontario, P0R 1B0

Phone: (705) 356-1621 Fax: (705) 356-1740

www.mississauga.com

Treaty area - Robinson-Huron Treaty of 1850

For more information on the treaty, see “Other Considerations” below.

Membership

Union of Ontario Indians (UOI)

Chiefs of Ontario

Mamaweswen, the North Shore Tribal Council Secretariat

For more information, see “Other Considerations” below.

Specific Claims

Name: Flooding

Status: active negotiations

Description: The First Nation claims that the 643 acres of land set aside under the Robinson- Huron Treaty were flooded as a result of the construction of dams on the Penewabecong River in 1852. The First Nation alleges that the Crown has failed to provide compensation for the flooding of their reserve land.

Name: Highway

Status: settled through negotiations

Description: The First Nation alleged that between 1909 and 1938, a trunk road/highway was built through their reserve by the government of Ontario without legal authority, and paid no compensation for this action. In 1909, this land was surrendered to the Crown in trust for sale. It was instead transferred to the government of Ontario.

Name: Northern Boundary

Status: settled through negotiations

Description: The First Nation alleged that the location of the Northern boundary of Indian Reserve No. 8 was not surveyed in 1852 in accordance with the provisions of the Robinson- Huron Treaty. The result has been the loss of land to the First Nation.

Name: Southern Boundary

Status: concluded- no lawful obligation found

Description: The First Nation alleged that the Crown failed in its fiduciary obligations to the First Nation by the illegal taking of Island no. 9 and marshy Bay, and is entitled to compensation for this land.

Name: Treaty Rights

Status: concluded- no lawful obligation found

Description: Chiefs of the Robinson-Huron treaty area asked that their treaty dated 1850 be renegotiated alleging that the Crown failed to meet certain commitments under the treaty specifically: Crown liability regarding Indian land, and hunting and fishing rights.

Agreement negotiations

Anishinabek Nation (UOI) negotiations on Governance and Education

Please see “Other Considerations” for more details.

Litigation

Name: Atikameksheng Anishnawbek, Aundeck Omni Kaning FN, Batchewana FN of Ojibways, Dokis FN, Henvy Inlet FN, Magnetawan FN, M'Chigeeng FN, Mississauga #8 FN, Nipissing FN, Ojibways of Garden River FN, Sagamok Anishnawbek, Serpent River FN, Shawanaga FN, Sheguiandah FN, Sheshegwaning FN, Thessalon FN, Wahnapiatae FN, Wasauksing FN,

Whitefish River FN, Wikwemikong Unceded IR No. 26, and Zhiibaahaasing FN v. HMTQ in Right of Canada

Status: active

Court File No.: not available

Description: A group of 21 Northeastern Ontario First Nations have filed a Notice to the Crown regarding the treaty annuity provisions in the Robinson Huron Treaty. The Plaintiffs assert that these provisions have never been increased since 1874 and are inadequate. They seek an accounting, an immediate increase in the annuities on a go-forward basis, and compensation for losses suffered as a result of the Crown's alleged failure to augment the annuities.

Name: Alderville Indian Band et al v. HMTQ in Right of Canada

Status: active

Court No: T-195-92

Description: The Plaintiffs allege the Crown breached its fiduciary duty, and negotiated in bad faith, regarding the 1923 Williams Treaties. Litigation to resolve the allegations was launched in 1992 by the Alderville First Nation and six other First Nations, and is now at trial which is scheduled to continue October 22, 2012.

Name: Algoma Action Committee Inc. v. HMTQ in Right of Ontario as represented by Minister of Natural Resources, HMTQ in Right of Canada as represented by Minister Department of Indian Affairs and Northern Development

Status: closed in litigation and settled through Specific Claims

Court File No.: 13189/94

Description: Further to an agreement-in-principle reached between Canada, Ontario and Mississauga No. 8, concerning a Specific Claims file, the Plaintiffs commenced this action to prevent the conclusion of the settlement agreement. The Plaintiffs seek a declaration which would restrain the federal and provincial governments from continuing negotiations or from transferring any lands to the Mississauga Band. The Plaintiffs claims the negotiation process constitutes a denial of the principles of natural justice and an infringement of section 7 of the Charter.

Name: Curve Lake First Nation and Gimaa Gary Williams suing on his own behalf and on behalf of the members of the Curve Lake First Nation, Hiawatha First nation and Gimaa Greg Cowie suing on his own behalf and on behalf of the members of the Hiawatha First Nation

Status: administratively closed; in negotiation through Specific Claims.

Court File No.: T-1358-99

Description: The Plaintiffs allege that the construction of Trent Severn Waterway, starting in 1838, resulted in the flooding of reserve lands held by the Crown for the use and benefit of the Plaintiffs. They claim the flooding caused damage to plant and animal life on the reserve, mainly wild rice, water fowl and fish, thus hindering their traditional way of living. The Plaintiffs further allege that the Crown breached a fiduciary duty to the Plaintiffs to hold the reserves for the use and benefit of the Plaintiffs. They maintain that the fiduciary duty was breached when the Crown failed to inform the Plaintiffs of the flooding, failed to consult with the Plaintiffs, and failed to compensate the Plaintiffs for their loss.

Name: Donald McLeod v. Attorney General of Ontario, Attorney General of Canada

Status: active

Court File No.: not available

Description: The Defendant intends to question the constitutional validity of the Fish and Wildlife Conservation Act, both generally and in its application to the Defendant.

Name: Jim Sayers v. Mississauga First Nation

Status: active

Court File No.: not available

Description: Motion for an interlocutory injunction restraining Mississauga FN from settling its claim against the Federal and Provincial Crown in respect to lands in the Robinson-Huron Treaty of 1850.

Name: Toronto Islands v.

Status: active

Court File No.: not available

Description: Descendants of the Mississauga Indians who sold land in September of 1787 are demanding compensation for a deal they claim was illegal. The British bought the land for trade goods worth about \$4,000 in present-day dollars. The Mississauga Nation wants the deal renegotiated.

Land Management:

The Mississauga #8 First Nation is party to the First Nation Land Management Regime. This Agreement was signed by the Minister of Indian Affairs and Northern Development in 1996, and is an initiative allowing signatory First Nations the ability to take over management and control of their lands and resources outside of the Indian Act. For more information, visit:

<http://www.aadnc-aandc.gc.ca/eng/1327090675492/1327090738973>

Moose Deer Point First Nation

Chief Barron King (tenure expires November 9, 2013)

P.O. Box 119

Mactier, Ontario, P0C 1H0

Phone: (705) 375-5209 Fax: (705) 375-0532

Treaty Area - Williams Treaties of 1923

For more information on the treaties, see "Other Considerations" below.

Membership

Ogemawahj Tribal Council

Union of Ontario Indians

Chiefs of Ontario

See "Other Considerations" below for more information.

Specific Claims

Name: 1837 Treaty Claim

Status: active litigation

Description: The First Nation alleges that promises made in 1837 amounted to a treaty that included: lands for settlement; distribution of presents; and the protection of the Crown.

Name: 1923 Williams Treaties

Status: active litigation

Description: The United Indian Council alleged that the Williams Treaty was invalid. They state that compensation has been inadequate for land taken, along with a failure to provide reserves.

The First Nations involved are: Alderville, Beausoleil, Chippewas of Georgina Island, Chippewas of Mnjikaning, Curve Lake, Hiawatha, Mississauga of Scugog Island and Mississaugas of the Credit, Moose Deer Point.

Agreement negotiations

Anishinabek Nation (UOI) negotiations on Governance and Education
Please see "Other Considerations" below for more details.

Litigation

Name: Moose Deer Point First Nation, Chief Edward Williams suing on his own behalf and on behalf of the members of Moose Deer Point First Nation v. HMTQ in Right of Ontario

Status: inactive

Court File No.: 01-CV-220612CM

Description: The claim alleges that the Crown and Canada breached their treaty and fiduciary obligations to the plaintiff by: 1) Failing to provide sufficient land for their reserves and for their traditional economy. 2) Purporting to extinguish their entitlement to presents. 3) Failing to protect their right to hunt and fish in the vicinity of their settlements 4) Purporting to take a surrender of their lands under the Robinson-Huron Treaty or the Williams Treaties without obtaining their assent to the treaty or providing them with any rights or benefits.

Name: Moose Deer Point First Nation, Chief Edward Williams suing on his own behalf and on behalf of the members of the Moose Deer Point First Nation v. HMTQ in Right of Ontario

Status: abeyance

Court File No.: T-195-92

Description: This claim was severed from the Alderville First Nation action (currently in the Federal Court) on the understanding that Canada would be added to the Ontario Court Action. This claim relates to the Williams Treaty lands, and the Plaintiffs allege that treaty promises remain unfulfilled.

Sagamok Anishnawbek

Chief Paul Eshkakogan (tenure expires August 15, 2014)

P.O. Box 610

Massey, Ontario, P0P 1P0

Phone: 1-705-865-2421 Fax: 1-705-865-3307

www.sagamok.ca

Treaty area - Robinson-Huron Treaty of 1850

For more information on the treaty, see "Other Considerations" below.

Membership

Mamaweswen, the North Shore Tribal Council Secretariat
Union of Ontario Indians (UOI).

Chiefs of Ontario

For more information, see "Other Considerations" below.

Specific Claims

Name: La Cloche Tract

Status: concluded- no lawful obligation found

Description: The First Nation (previously named Spanish River Band) claims that the Lac Cloche Tract, a 2 mile by 5 mile tract of land adjacent to the No. 5 reserve was wrongly excluded from the reserve at the time of the survey in 1852. This occurred due to the Hudson Bay Company's interest in the land.

Name: Treaty Rights

Status: concluded- no lawful obligation found

Description: Chiefs of the Robinson-Huron treaty area asked that their treaty dated 1850 be renegotiated alleging that the Crown failed to meet certain commitments under the treaty specifically: Crown liability regarding Indian land, and hunting and fishing rights.

Agreement negotiations

Anishinabek Nation (UOI) negotiations on Governance and Education
Please see "Other Considerations" for more details.

Litigation

Name: Atikameksheng Anishnawbek, Aundeck Omni Kaning FN, Batchewana FN of Ojibways, Dokis FN, Henvy Inlet FN, Magnetawan FN, M'Chigeeng FN, Mississauga #8 FN, Nipissing FN, Ojibways of Garden River FN, Sagamok Anishnawbek, Serpent River FN, Shawanaga FN, Sheguiandah FN, Sheshegwaning FN, Thessalon FN, Wahnapiatae FN, Wasauksing FN, Whitefish River FN, Wikwemikong Unceded IR No. 26, and Zhiibaahaasing FN v. HMTQ in Right of Canada

Status: active

Court File No.: not available

Description: A group of 21 Northeastern Ontario First Nations have filed a Notice to the Crown regarding the treaty annuity provisions in the Robinson Huron Treaty. The Plaintiffs assert that these provisions have never been increased since 1874 and are inadequate. They seek an accounting, an immediate increase in the annuities on a go-forward basis, and compensation for losses suffered as a result of the Crown's alleged failure to augment the annuities.

Serpent River

Chief Isadore Day

P.O. Box 14

195 Village Road

Cutler, Ontario, P0P 1B0

Phone: 1-705-844-2418

Fax: 1-705-844-2757

Treaty area - Robinson-Huron Treaty of 1850

For more information on the treaty, see "Other Considerations" below.

Membership

Mamaweswen, the North Shore Tribal Council Secretariat

Union of Ontario Indians (UOI)

Chiefs of Ontario

For more information, see "Other Considerations" below.

Specific Claims

Name: Acid Plant

Status: under assessment

Description: The First Nation alleges that Canada breached its treaty, statutory and fiduciary obligations towards them while executing and managing a portion of their Reserve land during the construction and operation of an acid plant.

Name: Highway Taking

Status: closed until further research is submitted

Description: The First Nation alleged the illegal occupation and trespass of approximately 100 acres of Indian Reserve No. 7. This occurred by Public Highways between 1870 and 1956, when it entered into construction projects without proper surrender or compensation.

Name: Treaty Rights

Status: concluded- no lawful obligation found

Description: Chiefs of the Robinson-Huron treaty area asked that their treaty dated 1850 be renegotiated alleging that the Crown failed to meet certain commitments under the treaty specifically: Crown liability regarding Indian land, and hunting and fishing rights.

Agreement Negotiations

Anishinabek Nation (UOI) negotiations on Governance and Education

Please see "Other Considerations" for more details.

Litigation

Name: Atikameksheng Anishnawbek, Aundeck Omni Kaning FN, Batchewana FN of Ojibways, Dokis FN, Henvy Inlet FN, Magnetawan FN, M'Chigeeng FN, Mississauga #8 FN, Nipissing FN, Ojibways of Garden River FN, Sagamok Anishnawbek, Serpent River FN, Shawanaga FN, Sheguiandah FN, Sheshegwaning FN, Thessalon FN, Wahnapiatae FN, Wasauksing FN, Whitefish River FN, Wikwemikong Unceded IR No. 26, and Zhiibaahaasing FN v. HMTQ in Right of Canada

Status: active

Court File No.: not available

Description: A group of 21 Northeastern Ontario First Nations have filed a Notice to the Crown regarding the treaty annuity provisions in the Robinson Huron Treaty. The Plaintiffs assert that these provisions have never been increased since 1874 and are inadequate. They seek an accounting, an immediate increase in the annuities on a go-forward basis, and compensation for losses suffered as a result of the Crown's alleged failure to augment the annuities.

First Nation Consultation Policy

In September of 2011, the Serpent River First Nation Chief and Council publically endorsed the codification of a consultation law and the development of a "Free, Prior and Informed Consent Policy Framework" in September of 2011. It is recommended that when available, this policy be reviewed in advance of consultation to better understand the First Nation's expectations. However, the federal government does not endorse its content.

Sheguiandah

Chief Orville Aguonie (tenure expires October 29, 2013)

P.O. Box 101

Sheguiandah, Ontario, P0P 1W0

Phone: 1-705-368-2781 Fax: 1-705-368-3697

<http://www.sheguiandah.com/>

Treaty area - Manitoulin Island Treaty of 1862 (also known as McDougall Treaty)

For more information on the treaty, see "Other Considerations" below.

Membership

Union of Ontario Indians (UOI)

United Chiefs and Councils of Mnidoo Mnising

Chiefs of Ontario

For more information, see "Other Considerations" below.

Specific Claims

Name: Treaty Rights

Status: concluded

Description: Chiefs of the Robinson-Huron treaty area asked that their treaty dated 1850 be renegotiated alleging that the Crown failed to meet certain commitments under the treaty specifically: Crown liability regarding Indian land, and hunting and fishing rights.

Agreement negotiations

Anishinabek Nation (UOI) negotiations on Governance and Education

Please see "Other Considerations" for more details.

Litigation

Name: Atikameksheng Anishnawbek, Aundeck Omni Kaning FN, Batchewana FN of Ojibways, Dokis FN, Henvy Inlet FN, Magnetawan FN, M'Chigeeng FN, Mississauga #8 FN, Nipissing FN, Ojibways of Garden River FN, Sagamok Anishnawbek, Serpent River FN, Shawanaga FN, Sheguiandah FN, Sheshegwaning FN, Thessalon FN, Wahnapiatae FN, Wasauksing FN, Whitefish River FN, Wikwemikong Unceded IR No. 26, and Zhiibaahaasing FN v. HMTQ in Right of Canada

Status: active

Court File No.: not available

Description: A group of 21 Northeastern Ontario First Nations have filed a Notice to the Crown regarding the treaty annuity provisions in the Robinson Huron Treaty. The Plaintiffs assert that these provisions have never been increased since 1874 and are inadequate. They seek an accounting, an immediate increase in the annuities on a go-forward basis, and compensation for losses suffered as a result of the Crown's alleged failure to augment the annuities.

Mantioulin Project Claims 1 to 7.

Status: active

Court File No.: C-10672-08

Description: There are seven claims that fall under the Manitoulin Project. The Plaintiffs (Aundeck-Omni-Kaning, Sheshegwaning First Nation, M'Chigeeng First Nation, Zhiibaahaasing First Nation, and Sheguiandah First Nation) allege the following:

- Breach of fiduciary duty by Canada in failing to seek and secure compensation for use and occupancy of lots, permitting trespass, as well as the selling lots for less than their value
- Misallocation of trust funds, Indian monies, interests and costs pertaining to lots
- Misuse of land meant for sale on behalf of the Plaintiffs

These claims concern lots in the townships of Dawson, Billings, Lowland, Assiginack, Tehkummah, as well as a shoreline allowance a road construction site.

Name: Chief Patrick Madahbee, Chief Elizabeth Laford, Chief Glen Hare, Chief Irene Kells, Chief Georgina Thompson, Sheshegwaning Band, M'Chigeeng Band, Zhiibaahaasing Band, Sheguiandah Band, Sucker Creek Band v. HMTQ in Right of the Dominion of Canada, Department of Indian Affairs and Northern Development Canada

Status: dormant

Court File No.: /07

Description: The plaintiffs allege that by failing to seek and secure any compensation for the use and occupation of Lot 34 between 1924 and the present; Canada breached its fiduciary duty; and are claiming on all the amounts that should have been collected and costs of this action.

Sheshegwaning

Chief Joseph Endanawas

P.O. Box 1

Sheshegwaning, Ontario, P0P 1X0

Phone: 705-283-3292 Fax: 705-283-3481

Treaty area - Robinson-Huron Treaty of 1850

For more information on the treaty, see "Other Considerations" below.

Membership

United Chiefs and Councils of Mnidoo Mnising

Union of Ontario Indians (UOI)

Chiefs of Ontario

For more information, see "Other Considerations" below.

Specific Claims

No relevant claims to report.

Agreement negotiations

Anishinabek Nation (UOI) negotiations on Governance and Education

Please see "Other Considerations" for more details.

Litigation

Name: Atikameksheng Anishnawbek, Aundeck Omni Kaning FN, Batchewana FN of Ojibways, Dokis FN, Henvy Inlet FN, Magnetawan FN, M'Chigeeng FN, Mississauga #8 FN, Nipissing FN,

Ojibways of Garden River FN, Sagamok Anishnawbek, Serpent River FN, Shawanaga FN, Sheguiandah FN, Sheshegwaning FN, Thessalon FN, Wahnapiatae FN, Wasauksing FN, Whitefish River FN, Wikwemikong Unceded IR No. 26, and Zhiibaahaasing FN v. HMTQ in Right of Canada

Status: active

Court File No.: not available

Description: A group of 21 Northeastern Ontario First Nations have filed a Notice to the Crown regarding the treaty annuity provisions in the Robinson Huron Treaty. The Plaintiffs assert that these provisions have never been increased since 1874 and are inadequate. They seek an accounting, an immediate increase in the annuities on a go-forward basis, and compensation for losses suffered as a result of the Crown's alleged failure to augment the annuities.

Name: Manitoulin Project (Claim No. 1 to 7)

Status: active

Court File No.: C-10672-08

Description: There are seven claims that fall under the Manitoulin Project. The Plaintiffs (Aundeck-Omni-Kaning, Sheshegwaning First Nation, M'Chigeeng First Nation, Zhiibaahaasing First Nation, and Sheguiandah First Nation allege the following:

- Breach of fiduciary duty by Canada in failing to seek and secure compensation for use and occupancy of lots, permitting trespass, as well as the selling lots for less than their value
- Misallocation of trust funds, Indian monies, interests and costs pertaining to lots
- Misuse of land meant for sale on behalf of the Plaintiffs

These claims concern lots in the townships of Dawson, Billings, Lowland, Assiginack, Tehkummah, as well as a shoreline allowance a road construction site.

Name: Chief Patrick Madahbee, Chief Elizabeth Laford, Chief Glen Hare, Chief Irene Kells, Chief Georgina Thompson, Sheshegwaning Band, M'Chigeeng Band, Zhiibaahaasing Band, Sheguiandah Band, Sucker Creek Band v. HMTQ in Right of the Dominion of Canada, Department of Indian Affairs and Northern Development Canada

Status: dormant

Court File No.: /07

Description: The plaintiffs allege that by failing to seek and secure any compensation for the use and occupation of Lot 34 between 1924 and the present; Canada breached its fiduciary duty; and are claiming on all the amounts that should have been collected and costs of this action.

Thessalon First Nation

Chief Alfred Bisailon

RR 2

P.O. Box 9

Thessalon, Ontario, P0R 1L0

Phone: (705) 842-2323

Fax: (705) 842-2332

Treaty Area - Robinson-Huron Treaty of 1850

See "Other Considerations" below for treaty information.

Membership

Mamaweswen, the North Shore Tribal Council Secretariat
Union of Ontario Indians (UOI)
Chiefs of Ontario
For more information, see "Other Considerations" below.

Specific Claims

Name: Boundaries of Thessalon

Status: closed

Description: The First Nation alleges that, in 1852, the Thessalon reserve was surveyed in "miles," and not in "leagues" as the First Nation intended. As a result, they state that they never received the proper amount of land to which it was entitled under the Robinson-Huron Treaty. (note: 1 league = between 2.5 and 4 miles)

Name: Road Rebates

Status: concluded

Description: Alleged that in 1852, the Thessalon reserve was surveyed in "miles" and not in "leagues" as the First Nation intended. As a result, the First Nation allegedly did not receive the proper amount of land to which it was entitled under the Robinson-Huron Treaty.

Agreement negotiations

Anishinabek Nation (UOI) negotiations on Governance and Education
Please see "Other Considerations" below for more details.

Litigation

Name: Atikameksheng Anishnawbek, Aundeck Omni Kaning FN, Batchewana FN of Ojibways, Dokis FN, Henvy Inlet FN, Magnetawan FN, M'Chigeeng FN, Mississauga #8 FN, Nipissing FN, Ojibways of Garden River FN, Sagamok Anishnawbek, Serpent River FN, Shawanaga FN, Sheguiandah FN, Sheshegwaning FN, Thessalon FN, Wahnapiatae FN, Wasauksing FN, Whitefish River FN, Wikwemikong Unceded IR No. 26, and Zhiibaahaasing FN v. HMTQ in Right of Canada

Status: active

Court File No.: not available

Description: A group of 21 Northeastern Ontario First Nations have filed a Notice to the Crown regarding the treaty annuity provisions in the Robinson Huron Treaty. The Plaintiffs assert that these provisions have never been increased since 1874 and are inadequate. They seek an accounting, an immediate increase in the annuities on a go-forward basis, and compensation for losses suffered as a result of the Crown's alleged failure to augment the annuities.

Whitefish River

Chief Franklin Paibomsai (tenure expires February 11, 2013)

P.O. Box A

Birch Island, Ontario P0P 1A0

Phone: (705) 285-4335 Fax: (705) 285-4532

www.whitefishriver.ca

Treaty area - Robinson-Huron Treaty of 1850

For more information on the treaty, see “Other Considerations” below.

Membership

United Chiefs and Councils of Mnidoo Mnising

Chiefs of Ontario

Union of Ontario Indians (UOI)

For more information, see “Other Considerations” below.

Specific Claims

Name: Boundaries of Whitefish River

Status: active negotiations

Description: The First Nation alleges that the Whitefish Reserve did not receive the proper amount of land to which it was entitled under the Robinson-Huron Treaty.

Name: Highway

Status: active litigation

Description: The First Nation alleged the Crown has failed to compensate them for reserve land taken for highway purposes.

Name: Moose Point

Status: settled through negotiations

Description: The First Nation alleged errors occurred in the description in the survey plans of lands being surrendered in 1901. An additional 540 acres above the 710 acres was included in letters patent to a railway company. The First Nation never received compensation.

Name: Treaty Rights

Status: concluded- no lawful obligation found

Description: Chiefs of the Robinson-Huron treaty area asked that their treaty dated 1850 be renegotiated alleging that the Crown failed to meet certain commitments under the treaty specifically: Crown liability regarding Indian land, and hunting and fishing rights.

Agreement negotiations

Anishinabek Nation (UOI) negotiations on Governance and Education

Please see “Other Considerations” for more details.

Litigation

Name: Atikameksheng Anishnawbek, Aundeck Omni Kaning FN, Batchewana FN of Ojibways, Dokis FN, Henvy Inlet FN, Magnetawan FN, M'Chigeeng FN, Mississauga #8 FN, Nipissing FN, Ojibways of Garden River FN, Sagamok Anishnawbek, Serpent River FN, Shawanaga FN, Sheguiandah FN, Sheshegwaning FN, Thessalon FN, Wahnapiatae FN, Wasauksing FN, Whitefish River FN, Wikwemikong Unceded IR No. 26, and Zhiibaahaasing FN v. HMTQ in Right of Canada

Status: active

Court File No.: not available

Description: A group of 21 Northeastern Ontario First Nations have filed a Notice to the Crown regarding the treaty annuity provisions in the Robinson Huron Treaty.

They seek an accounting, an immediate increase in the annuities on a go-forward basis, and compensation for losses suffered as a result of the Crown's alleged failure to augment the annuities.

Name: Whitefish River First Nation v. Attorney General of Canada

Status: active

Court File No.: CV-11-418246

Description: The Plaintiffs allege that their lands were unlawfully expropriated by the Provincial Crown through the 1920s and the 1960s for the construction of Highway 6. The Plaintiffs allege that Canada breached its fiduciary obligations by allowing Ontario to trespass upon, occupy and use the reserve lands from approximately 1922 – 1962 without any compensation to the First Nation. The Plaintiffs seek equitable compensation, compound interest, various declarations, pre- and post-judgment interest and costs.

Wikwemikong

Chief Duke Peltier (as of August 25, 2012)

P.O. Box 112

Wikwemikong, Ontario, P0P 2J0

Phone: (705) 859-3122 Fax: (705) 859-3851

www.wikwemikong.ca

Treaty area

The original Chief, Wikwemikong, did not sign the McDougall Treaty of 1862. Therefore this First Nation considers the Wikwemikong Reserve an unceded territory. See "Other Considerations" below for treaty information.

Membership

Chiefs of Ontario

Union of Ontario Indians (UOI)

For more information, see "Other Considerations" below.

Specific Claims

Name: Wikwemikong Islands

Status: active negotiations

Description: The First Nation alleged that 41 islands off the eastern shore of Manitoulin Island were never surrendered to the Crown in 1836 and 1862. For more information, visit:

<http://www.aboriginalaffairs.gov.on.ca/english/negotiate/wikwemikong/wikwemikong.asp>

Name: Point Grondine

Status: settled through negotiations

Description: The First Nation alleged that boundaries of reserve land were surveyed incorrectly, at the Robinson-Huron Treaty of 1859. Using miles rather than leagues, the result has been a loss of land to the First Nation.

Litigation

Name: Atikameksheng Anishnawbek, Aundeck Omni Kaning FN, Batchewana FN of Ojibways, Dokis FN, Henvy Inlet FN, Magnetawan FN, M'Chigeeng FN, Mississauga #8 FN, Nipissing FN,

Ojibways of Garden River FN, Sagamok Anishnawbek, Serpent River FN, Shawanaga FN, Sheguiandah FN, Sheshegwaning FN, Thessalon FN, Wahnapiatae FN, Wasauksing FN, Whitefish River FN, Wikwemikong Unceded IR No. 26, and Zhiibaahaasing FN v. HMTQ in Right of Canada

Status: active

Court File No.: not available

Description: A group of 21 Northeastern Ontario First Nations have filed a Notice to the Crown regarding the treaty annuity provisions in the Robinson Huron Treaty. The Plaintiffs assert that these provisions have never been increased since 1874 and are inadequate. They seek an accounting, an immediate increase in the annuities on a go-forward basis, and compensation for losses suffered as a result of the Crown's alleged failure to augment the annuities.

Name: David Pitawanakwat v. Attorney General of Ontario, Attorney General (Canada)

Status: dormant

Court File No.: na

Description: The defendant is a status Indian (member of the Wikwemikong Band) who resides on the Garden River First Nation Indian Reserve. The defendant was charged with unlawfully hunting wildlife, contrary to section 20(1) (a) of the Fish and Wildlife Conservation Act. The defendant intends to argue that it is his Aboriginal and treaty rights to hunt within his ancestral traditional territory.

Name: Wikwemikong Indian Band v. Attorney General of Canada, HMTQ in Right of Canada, HMTQ in Right of Ontario

Status: closed

Court File No.: C97-44

Description: This litigation was a challenge to the validity of the surrender of the plaintiff's interest in the islands surrounding and including Manitoulin Island by the 1862 Manitoulin Island Treaty. The Band was seeking legal recognition of its alleged continued interest in the unsold and unpatented islands surrounding Manitoulin Island and along the north shore of Lake Huron, which they allege is protected by the Bondhead Treaty of 1836.

Note:

The Land Use Planner of the Wikwemikong Department of Lands and Natural Resources contacted AANDC in October of 2012, to request that correspondence to Wikwemikong be addressed to **Wikwemikong Unceded Indian Reserve**, and not Wikwemikong First Nation. When contacting the Reserve, also contact the Land Use Planner.

Zhiibaahaasing First Nation

Chief Irene Sagon Kells

36 Sagon Road

Zhiibaahaasing, Ontario, P0P 1X0

Phone: (705) 283-3963

Fax: (705) 283-3964

Treaty area - Manitoulin Island Treaty of 1862 (also known as McDougall Treaty)

For more information on the treaty, see "Other Considerations" below.

Membership

United Chiefs and Councils of Mnidoo Mnising
Union of Ontario Indians (UOI)
Chiefs of Ontario
For more information, see “Other Considerations” below.

Agreement negotiations

Anishinabek Nation (UOI) negotiations on Governance and Education
Please see “Other Considerations” for more details.

Specific Claims

No relevant claims to report.

Litigation

Name: Atikameksheng Anishnawbek, Aundeck Omni Kaning FN, Batchewana FN of Ojibways, Dokis FN, Henvy Inlet FN, Magnetawan FN, M'Chigeeng FN, Mississauga #8 FN, Nipissing FN, Ojibways of Garden River FN, Sagamok Anishnawbek, Serpent River FN, Shawanaga FN, Sheguiandah FN, Sheshegwaning FN, Thessalon FN, Wahnapiatae FN, Wasauksing FN, Whitefish River FN, Wikwemikong Unceded IR No. 26, and Zhiibaahaasing FN v. HMTQ in Right of Canada

Status: active

Court File No.: not available

Description: A group of 21 Northeastern Ontario First Nations have filed a Notice to the Crown regarding the treaty annuity provisions in the Robinson Huron Treaty. The Plaintiffs assert that these provisions have never been increased since 1874 and are inadequate. They seek an accounting, an immediate increase in the annuities on a go-forward basis, and compensation for losses suffered as a result of the Crown's alleged failure to augment the annuities.

Name: Manitoulin Project (Claim Nos. 1 to 7)

Status: active

Court File No.: C-10672-08

Description: There are seven claims that fall under the Manitoulin Project. The Plaintiffs (Aundeck-Omni-Kaning, Sheshegwaning First Nation, M'Chigeeng First Nation, Zhiibaahaasing First Nation, and Sheguiandah First Nation) allege the following:

- Breach of fiduciary duty by Canada in failing to seek and secure compensation for use and occupancy of lots, permitting trespass, as well as the selling lots for less than their value
- Misallocation of trust funds, Indian monies, interests and costs pertaining to lots
- Misuse of land meant for sale on behalf of the Plaintiffs

These claims concern lots in the townships of Dawson, Billings, Lowland, Assiginack, Tehkummah, as well as a shoreline allowance a road construction site.

Name: Whitefish River First Nation v. Attorney General of Canada

Status: active

Court File No.: CV-11-418246

Description: The Plaintiffs allege that their lands were unlawfully expropriated by the Provincial Crown through the 1920s and the 1960s for the construction of Highway 6. The Plaintiffs allege that Canada breached its fiduciary obligations by allowing Ontario to trespass upon, occupy and use the reserve lands from approximately 1922 – 1962 without any compensation to the First Nation. The Plaintiffs seek equitable compensation, compound interest, various declarations, pre- and post-judgment interest and costs.

Other Considerations

Aboriginal Rights Assertions: the Métis

The inclusion of the Métis in s.35 represents Canada's commitment to recognize and value their distinctive cultures, which can only survive if they are protected along with other Aboriginal communities. In 2003, the Supreme Court of Canada affirmed Métis rights under s.35 of the Constitution Act, 1982, in the Sault St. Marie area, in the *Powley* decision. For more information on the *Powley* decision visit the following link: www.aadnc-aandc.gc.ca/eng/1100100014419

The Office of the Federal Interlocutor for Métis and Non-Status Indians (OFI) is aware that the Métis Nation of Ontario (MNO), its regional and community councils, have asserted a Métis right to harvest in a large section of the province.

The provincial government has accommodated Métis rights on a regional basis within Métis harvesting territories identified by the MNO. These accommodations are based on credible Métis rights assertions. An interim agreement (2004) between the MNO and the Ministry of Natural Resources (MNR) recognizes the MNO's Harvest Card system. This means that Harvester's Certificate holders engage in traditional Métis harvest activities within identified Métis traditional territories across the province. For a map of Métis traditional harvesting territories visit the MNO website at: <http://www.metisnation.org/harvesting/harvesting-map.aspx>

The MNO maintains that Aboriginal 'rights-holders' are Métis communities which are collectively represented through the MNO and its community councils. In partnership with community councils, MNO has established a consultation process. The MNO has published regional consultation protocols on their website which offer pre-consultation stage instructions on engaging the Métis through their community councils (via the consultation committee made up of an MNO regional councilor, a community councilor representative and a Captain of the Hunt). Please note however, that this organization does not represent all Métis in Ontario.

Métis Nation of Ontario

Métis Consultation Unit is located within the MNO head office.

500 Old St. Patrick Street, Unit 3

Ottawa, Ontario, K1N 9G4

Phone: (613) 798-1488 Fax: (613) 725-4225

www.metisnation.org/home.aspx

Métis National Council

4-340 MacLaren Street,

Ottawa, Ontario, K2P 0M6

Phone: (613) 232-3216 Fax: (613) 232-4262

www.metisnation.ca

Historic Saugeen Métis

204 High Street, Box 1492

Southampton, Ontario N0H 2L0

Phone: (519) 483-4000

www.saugeenmetis.com/index.php

On June 13, 2012 a representative of the HSM addressed the Senate Committee on Aboriginal Peoples. The communities' historical development since the fur trade was outlined in order to

provide a credible Aboriginal rights assertion, according to the Supreme Court decision *R. vs. Powley* (2003).

The geographic scope of the contemporary community is described as covering over 275 kms of Lake Huron shoreline from Tobermory to south of Goderich. This area includes Bruce, Grey and Huron counties.

For an indication of the population in Ontario who self-identify as Métis, visit the Statistics Canada website. The Ontario map indicates populations as small as 250 up to over 2,000 within its borders.

http://geodepot.statcan.gc.ca/2006/13011619/200805130120090313011619/16181522091403090112_13011619/151401021518090709140112_201520011213052009190904161516_0503-eng.pdf

Métis Litigation in Ontario

Name: HMTQ in Right of Canada v. Michel Blais

Status: active

Court File No.: 08-213

Description: The Applicant is charged with unlawfully harvesting forest resources in a Crown forest without a license contrary to the Crown Forest Sustainability Act, 1994. The Applicant, a Métis, asserts that he is an Aboriginal person within the meaning of s. 35 of the Constitution Act, 1982 and that the alleged harvesting occurred in lands set apart for the Batchewana Band pursuant to the Robinson Treaty of 1850. He claims that the Batchewana First Nation may permit Métis persons to exercise the same Aboriginal and treaty rights as its members pursuant to this treaty.

Name: HMTQ in Right of Canada, Laurie Desautels v. Henry Wetelainen Jr.

Status: active

Court File No.: CV-08-151

Description: The defendant, Henry Wetelainen Jr., intends to question the constitutional validity of sections 28, 31 and 40 of the Crown Forest Sustainability Act (1994), S.O. 1994, c. 25 and Ontario Regulation 167/95, as amended, in relation to an act or omission of the government of Ontario. The defendant claims that he was exercising Aboriginal and treaty rights afforded by the Adhesion to Treaty 3, by harvesting wood within his traditional territory. He claims that he is a Métis/Non-Status Indian and that the imposition of payment for harvesting or use of the forest resource is an infringement and violates his constitutional rights.

Name: Ministry of Natural Resources v. Kenneth Sr. Paquette

Status: active

Court File No.: to be determined

Description: This Notice of Constitutional Question relates to a provincial prosecution involving a charge pertaining to hunting moose. The Defendant intends to assert his s. 35 right as a Métis person to hunt moose, and he also intends to seek a Charter remedy under s. 15 of the *Charter*.

Court Decisions concerning Métis in Ontario

R. v. Laurin, Lemieux, Lemieux - 2007

Court No.: ONCJ 265

Three Métis defendants were charged with fishing violations and claimed that the decision of the Ministry of Natural Resources (MNR) to prosecute them violated the terms of the Interim Agreement (2004) between the MNR and the Métis Nation of Ontario (MNO). As the defendants

were indeed Harvester Card holders authorized to fish in the Mattawa/Nipissing territory, therefore, they were entitled to the exemption in the agreement.

The Court concluded that laying of charges against any valid Harvester Card holder who is harvesting in the territory designated on the card within 2 years of the 2004 agreement was a breach. The Interim Agreement itself was silent as to any geographic limitations. There was no mention of the Agreement only applying north and east of Sudbury. Further, the reliance on Harvester Cards, which explicitly contained the territorial designation of the cardholder, signified that the MNR accepted such designations for the purpose of the agreement. The Court was clear to note that this case did not make any ruling regarding the merits of any claim that the Mattawa/Nipissing area contains section 35 rights bearing Métis communities.

Membership

First Nations may or may not delegate certain authority and/or powers to tribal councils to administer programs, funding and/or services on their behalf. The best source of information with respect to consultation is through individual First Nations themselves.

Chiefs of Ontario

The Chiefs of Ontario is a coordinating body for 133 First Nation communities in Ontario. The main objective of this body is to facilitate the discussion, planning, implementation and evaluation of all local, regional and national matters affecting its members.

www.chiefs-of-ontario.org

Administrative Office:
111 Peter Street, Suite 804
Toronto, Ontario, M5V 2H1
Phone: (416) 597-1266
Fax: (416) 597-8365

Political Office:
Fort William First Nation
RR 4, Suite 101, 9- Anemki Drive
Thunder Bay, Ontario, P7J 1A5
Phone: (807) 626-9339
Fax: (807) 626-9404

Mamaweswen, The North Shore Tribal Council Secretariat

This Council provides a variety of services and training to seven First Nations.

www.mamaweswen.ca

473A Highway 17 West
Cutler, Ontario, P0P 1B0
Phone: (877) 633-7558

The Union of Ontario Indians (UOI)

The UOI is a political advocate for approximately 40 member First Nations across Ontario. Its headquarters is located on Nipissing First Nation, just outside of North Bay Ontario, and has satellite offices in Thunder Bay, Curve Lake First Nation and Munsee-Delaware First Nation. The UOI delivers a variety of programs and services. The Anishinabek Nation incorporated the Union of Ontario Indians (UOI) as its secretariat in 1949.

www.anishinabek.ca

Head Office:
1 Miigizi Mikan
North Bay, Ontario, P1B 8J8
Phone: (705) 497-9127
Fax: (705) 497-9135

Regional Office
300 Anemki Place
Thunder Bay, Ontario, P7J 1H9
Phone: (807) 623-8887

United Chiefs and Councils of Mnidoo Mnising (Manitoulin)

This organization is a service provider and purports to foster and protect the rights of its six First Nation members, as well as to refine and promote good government and orderly administration.

<http://uccm.ca/index.php>

1110 Hwy 551

P.O. Box 275

M'Chigeeng, Ontario P0P 1G0

Phone: 705-377-5307 Fax: 705-377-5309

Treaty Areas

Treaty Making on Manitoulin Island

On August 9, 1836 the Ottawa, Ojibwa and Potawatomi signed the Manitoulin Island Treaty and relinquished their claim to the island chain so that the land could become the territory of all First Nations who wished to reside there. Not long afterward pressure to use this land as stepping stones to westerly settlement, and disputes over the fisheries lead to the signing of a second Treaty on October 6, 1862 (McDougall Treaty). However, this Treaty only covered part of the island as the people of Wikwemikong refused to sign the treaty and the part of the island "eastwardly of the Manitoulin Gulf and Heywood Sound" remains unceded territory.

For further information consult:

1811-1867: Pre-Confederation Treaties

http://www.canadiana.ca/citm/themes/aboriginals/aboriginals5_e.html

Treaty Research Report Manitoulin Island Treaties

<http://www.aadnc-aandc.gc.ca/eng/1100100028956>

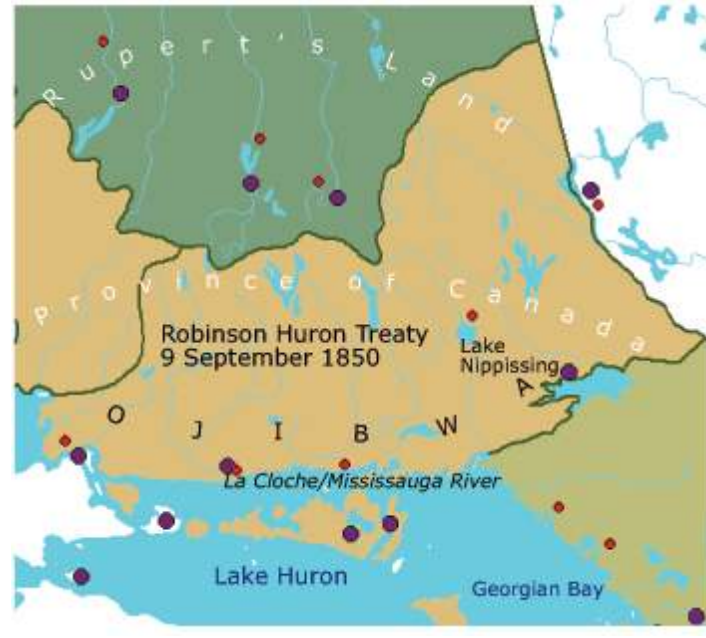
Unceded Territory

The Wikwemikong Unceded Indian Reserve is an amalgamation of three First Nations: Manitoulin Island Indian Reserve, Pointe Grondine and South Bay. The Wikwemikong people signed the Manitoulin Island treaty of 1836, and have retained their peninsula on the southeast end of the island. They still consider it covered by this treaty. However, they view their territory as unceded because they did not sign the Manitoulin Island treaty of 1862. Although the 1862 treaty contained an option for Wikwemikong Chiefs to sign at a later date, the people have never chosen to do so, and they consider themselves the possessors of unceded territory.

The Wikwemikong Unceded First Nation is one that falls under the governance of the Indian Act. It receives revenue from federal government grants and contributions as do other Indian Act First Nations. The federal government recognizes the easterly portion of greater Manitoulin island as having unextinguished Aboriginal and treaty rights.

Robinson-Huron Treaty of 1850

This treaty was negotiated by William Robinson with Chief Shingauouse and the Lake Huron Chippewa. The signatories are entitled to **"full and free privilege to hunt over the territory now ceded by them and to fish in the waters thereof as they have heretofore been in the habit of doing..."**. This means that ongoing rights apply to this treaty area (the Lake Huron shoreline, including the islands from Matchedash Bay to Batchewana Bay and inland as far as the height of land).



*Atlas of Canada Map

Métis communities were not recognized in this Treaty, but individual Métis were given the option of joining bands in order to receive treaty annuities. When individuals joined, they acquired treaty rights, and their descendants became members of First Nations. Those who remained Métis were delisted.

Southern Ontario Treaty Making after the Upper Canada Land Surrenders

While the protocols for surrenders established in 1763 by the Royal Proclamation, were largely followed by the Indian Department, complaints and petitions to the Crown were submitted by First Nation signatories regarding these surrenders as early as 1866. They claimed they had an unsundered interest in the so-called “northern hunting grounds”. In response, the province of Ontario and Canada enlisted a Commission in 1916 to investigate the veracity of these claims once and for all. If the claims were found to be valid, the Commission was to negotiate a treaty. The Commission’s investigation found a number of places where the certainty of the validity of the surrenders was questionable, and recommended that new treaties be made. They appointed A.S. Williams to negotiate with the Ojibway in 1923. The areas of uncertainty were brought into the boundaries of the Williams Treaties to achieve certainty.

Unlike the terms of the Robinson Treaties in Ontario (1850) and the more recent numbered treaties in the west, the Williams Treaties were cash for land deals. Aboriginal (Ojibway) signatories surrendered all of their rights and benefits to the Crown on lands in central Ontario and the northern shore of Lake Ontario. The Potawatomi and the Mississaugas of the New Credit were not involved in these negotiations.

Since the signing of these treaties, there have been questions as to whether the signatory First Nations had surrendered all of their rights to hunt and fish. In 1994, this debate was ended by the Supreme Court of Canada, when in *R. v. Howard*, the Court decided that the seven First Nations Georgina Island, Mnjikaning and Beausoleil, Curve Lake, Alderville, Scugog and Hiawatha by way of the Williams Treaties “basket clause”, had knowingly surrendered all of their hunting, fishing and trapping rights (whether they be Aboriginal rights or treaty rights) outside of their existing reserves.



*Atlas of Canada Map - The treaty boundaries on the above maps for Southern Ontario are approximate. The treaty areas listed for Aboriginal communities are based on the geographic location of each First Nation.

Litigation to resolve the allegations that Canada negotiated the Williams Treaties in bad faith was launched in 1992 by the Alderville First Nation and six other First Nations. A trial in this matter is scheduled to resume on October 22, 2012.

Self Government Agreement Negotiations

Anishinabek Nation (Union of Ontario Indians) negotiations on Governance and Education

In 1995, the Anishinabek Nation's Grand Council authorized its secretariat arm, the Union of Ontario Indians (UOI), to begin self-government negotiations with Canada. Negotiations towards agreements in the areas of education and governance began in 1998.

An agreement-in-principle (AIP) on education was signed in November 2002. In February 2007, the parties signed the AIP with respect to governance. Final agreement negotiations are proceeding in parallel, and together these agreements would mark important steps towards the Anishinabek Nation's long-term objective of supporting participating First Nations to move out from under the *Indian Act*.

The governance agreement will provide the establishment of the Anishinabek Nation government and the recognition of participating First Nation lawmaking authority in four core governance areas: leadership selection, citizenship, culture and language, and management and operations of government.

The education AIP authorized the parties to negotiate a final agreement with respect to lawmaking authority for primary, elementary and secondary education for on-reserve members, and to administer AANDC's post-secondary education assistance program. Negotiations towards a final agreement with respect to education are nearing conclusion. The Province of Ontario is not a party to these negotiations but is engaged in tripartite discussions on particular issues that would assist in the implementation of the final agreement.

To prepare for self-government in member communities, the Union of Ontario Indians has undertaken a range of activities including a Community Engagement Strategy, the development of an appeal and redress process, a constitutional development process and a number of capacity development activities.

Provincial guidelines

Under its responsibility to promote stronger Aboriginal relationships, the Ontario Ministry of Aboriginal Affairs has produced *Draft Guidelines on Consultation with Aboriginal Peoples Related to Aboriginal Rights and Treaty Rights*. These guidelines are for use by ministries who seek input from key First Nations and Métis organizations, all Ontario First Nations and selected non-Aboriginal stakeholders. To review the guidelines, visit:

<http://www.aboriginalaffairs.gov.on.ca/english/policy/draftconsultjune2006.pdf>

Jean Louis Gaudet

From: Allison Berman <Allison.Berman@aadnc-aandc.gc.ca>
Sent: February-04-13 3:50 PM
To: Jean Louis Gaudet
Subject: RE: Request for consultation information - Waste Management project- Elliot Lake

Hi Jean Louis,
Thanks very much for sending this information my way. I really appreciate the effort.
have a nice afternoon,
Allison

Allison Berman
Regional Subject Expert for the Prairie Provinces and Ontario
Consultation and Accommodation Unit / Unité de la consultation et de l'accommodement
Policy and Strategic Direction / Politiques et orientation stratégique
Aboriginal Affairs and Northern Development Canada
10 Wellington, 5-H, 5th Floor
Gatineau, QC

>>> Jean Louis Gaudet 2/4/2013 12:16 PM >>>

Hi Allison,

On January 2, you sent our office a list of First Nations/Aboriginal groups to include in the consultation for our project. A couple of letters were sent back "return to sender" to us, and I have since followed up and received the correct address.

For your information:

Chiefs of Ontario Political Office – the address your office gave us was RR4, Suite 101, 9-Anemki Drive, Thunder Bay Ontario, P7J 1A5. The "return to sender" notice says "moved". The address on the COO's website for the political office is "109 Mission Rd, FORT WILLIAM FIRST NATION, ON P7J 1L3".

Thessalon First Nation – the address your office provided was RR 2, PO Box 9, Thessalon, ON P0R 1L0 (this is the same address as is on the COO website). We e-mailed their office, and they called back to say the address is 40 Sugar Bush Road (They will be sending us their full mailing address when they return our consultation form).

Regards,

Jean-Louis

Jean-Louis Gaudet | exp

Project Coordinator
t: +1.905.793.9809 x2344 | e: jeanlouis.gaudet@exp.com
1595 Clark Boulevard
Brampton, ON L6T 4V1
Canada

From: CAU-UCA [mailto:CAU-UCA@aadnc-aandc.gc.ca]
Sent: Wednesday, January 02, 2013 11:33 AM
To: Jean Louis Gaudet
Cc: Allison Berman
Subject: Request for consultation information - Waste Management project- Elliot Lake

Hello Jean Louis,

On behalf of the Consultation and Accommodation Unit (CAU) of Aboriginal Affairs and Northern Development Canada (AANDC), I am attaching a response to your recent request for information concerning consultation with Aboriginal groups and First Nation communities in the vicinity of the City of Elliot Lake Waste Management project in Ontario.

If you have any concerns, feel free to contact me.

Regards,

Allison Berman
Regional Subject Expert for Ontario
Consultation and Accommodation Unit
Aboriginal Affairs and Northern Development Canada
5H- 5th Floor,
Gatineau, QC K1A 0H4
Tel: 819-934-1873

Ministry of Aboriginal Affairs

160 Bloor St. East, 9th Floor
Toronto, ON M7A 2E6
Tel: (416) 326-4740
Fax: (416) 325-1066
www.aboriginalaffairs.gov.on.ca

Ministère des Affaires Autochtones

160, rue Bloor Est, 9^e étage
Toronto ON M7A 2E6
Tél. : (416) 326-4740
Télééc. : (416) 325-1066
www.aboriginalaffairs.gov.on.ca



Reference: 492

March 28, 2013

John Smith
Exp Services Inc.
1595 Clark Blvd.
Brampton, ON
L6T 4V1

Re: City of Elliot Lake Waste Management Plan Environmental Assessment

Dear John Smith:

Thank you for informing the Ministry of Aboriginal Affairs (MAA) of your project. Please note that MAA treats all letters, emails, general notices, etc. about a project as a request for information about which Aboriginal communities may have rights or interests in the project area.

As a member of the government review team, the Ministry of Aboriginal Affairs (MAA) identifies First Nation and Métis communities who may have the following interests in the area of your project:

- reserves;
- land claims or claims in litigation against Ontario;
- existing or asserted Aboriginal or treaty rights, such as harvesting rights; or
- an interest in the area of the project.

MAA is not the approval or regulatory authority for your project, and receives very limited information about projects in the early stages of their development. In circumstances where a Crown-approved project may negatively impact a claimed Aboriginal or treaty right, the Crown may have a duty to consult the Aboriginal community advancing the claim. The Crown often delegates procedural aspects of its duty to consult to proponents. Please note that the information in this letter should not be relied on as advice about whether the Crown owes a duty to consult in respect of your project, or what consultation may be appropriate. Should you have any questions about your consultation obligations, please contact the appropriate ministry.

You should be aware that many First Nations and/or Métis communities either have or assert rights to hunt and fish in their traditional territories. For First Nations, these territories typically include lands and waters outside of their reserves.

In some instances, project work may impact aboriginal archaeological resources. If any Aboriginal archaeological resources could be impacted by your project, you should contact your regulating or approving Ministry to inquire about whether any additional Aboriginal communities should be contacted. Aboriginal communities with an interest in archaeological resources may include communities who are not presently located in the vicinity of the proposed project.

With respect to your project, and based on the brief materials you have provided, we can advise that the project appears to be located in an area where First Nations may have existing or asserted rights or claims in Ontario's land claims process or litigation, that could be impacted by your project. Contact information is below:

Zhiibaahaasing First Nation (Cockburn) General Delivery SILVERWATER, Ontario P0P 1Y0	Chief Irene Sagon-Kells (705) 283-3963 (Fax) 283-3964 zhiiband@manitoulin.net
Mississauga #8 First Nation P. O. Box 1299, 64 Park Road BLIND RIVER, Ontario P0R 1B0	Chief Douglas Daybutch (705) 356-1621 Ext. 2238 (Fax) 356-1740 douglasdaybutch@mississaugi.com lindac@mississaugi.com
Sagamok Anishnawbek First Nation P. O. Box 610 MASSEY, Ontario P0P 1P0	Chief Paul Eshkakogan (705) 865-2421 (Fax) 865-3307 eshkakoganpaul@sagamok.ca
Serpent River First Nation 48 Indian Road CUTLER, Ontario P0P 1B0	Chief Isadore Day (705) 844-2418 (Fax) 844-2757 lday.srfn@ontera.net
Sheshegwaning First Nation P. O. Box 1 SHESHEGWANING, Ontario P0P 1X0	Chief Joseph Endanawas (705) 283-3292 (Fax) 283-3481 joe@sheshegwaning.org

For your information, MAA is aware of Métis communities that have asserted rights near your project. Contact information is below:

Historic Sault Ste Marie Métis Council 26 Queen Street East	Kim Powley, President (705) 254-1768
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Sault Ste. Marie, ON P6A 1Y3	(Fax) 705-254-3515 e-mail: kimmysue@shaw.ca
North Channel Métis Council 9190 Hwy 17, Bruce Mines ON P0R 1C0	Dan Belisle, President (705) 785-3500 (Fax) 705-785-3505 e-mail: danielbelisle1@hotmail.com

Please copy any correspondence to Historic Sault Ste Marie Métis Council and North Channel Métis Council to the Métis Nation of Ontario. Contact information is below:

Métis Nation of Ontario Head Office 500 Old St. Patrick Street, Unit D Ottawa, Ontario, K1N 9G4	Métis Consultation Unit Fax: (613) 725-4225
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The information upon which the above comments are based is subject to change. First Nation or Métis communities can make claims at any time, and other developments can occur that could result in additional communities being affected by or interested in your undertaking.

Through Aboriginal Affairs and Northern Development (AANDC), the Government of Canada sometimes receives claims that Ontario does not receive, or with which Ontario does not become involved. AANDC's Consultation and Accommodation Unit (CAU) established a "single window" to respond to requests for baseline information held by AANDC on established or potential Aboriginal Treaty and rights. To request information from the Ontario Subject Matter Expert send an email to: UCA-CAU@aadnc-aandc.gc.ca

Additional details about your project or changes to it that suggest impacts beyond what you have provided to date may necessitate further consideration of which Aboriginal communities may be affected by or interested in your undertaking. If you think that further consideration may be required, please bring your inquiry to whatever government body oversees the regulatory process for your project. MAA does not wish to be kept informed of the progress of the project; please be sure to remove MAA from the mailing list.

Yours truly,

David Pickles
Acting Manager, Consultation Unit
Aboriginal Relations and Ministry Partnerships Division

Elliot Lake Landfill Expansion – Environmental Assessment

First Nations and Aboriginal Groups Contact List

Organization	Contact	Mailing Address	E-mail/website	Phone/fax
Atikameksheng Anishnawbek (Whitefish Lake First Nation)	Chief Edward Steven Miller	P.O. Box 39 Naughton, Ontario, POM 2M0	receptsec@wfn.com www.atikamekshenganishnawbek.ca	Phone: (705) 692-3651 Fax: (705) 692-5010
Aundeck-Omni-Kaning	Chief Patsy Corbiere	RR 1 Comp. 21 Little Current, Ontario, POP 1K0	corbierep@aokfn.com www.aundeckomnikaningfn.com/index.html	Phone: (705) 368-2228 Fax: (705) 368-3563
Batchewana First Nation (Ojibwa of Batchewana)	Chief Dean Sayers	236 Frontenac Street Sault Ste. Marie, Ontario P6A 5K9	www.batchewana.ca	Phone: (705) 759-0914 Fax: (705) 759-9171
Garden River First Nation	Chief Lyle Sayers	RR4 7 Shingwauk Street Garden River, Ontario, P6A 6Z8	sayersl@gardenriver.org www.gardenriver.org/home/ahniin.htm	Phone: (705) 946-6300 Fax: (705) 945-1415
M'Chigeeng First Nation	Chief Joseph Hare	#53 Hwy 551 P.O. Box 333 M'Chigeeg, Ontario, P0P 1G0	www.mchigeeng.ca	Phone: (705) 377-5362 Fax: (705) 377-4980
Mississauga #8 First Nation	Chief Reginald Niganobe	64 Park Road P.O. Box 1299 Blind River, Ontario, P0R 1B0	www.mississaugi.com	Phone: (705) 356-1621 Fax: (705) 356-1740
Moose Deer Point First Nation	Chief Barron King	P.O. Box 119 Mactier, Ontario, P0C 1H0		Phone: (705) 375-5209 Fax: (705) 375-0532
Sagamok Anishnawbek First Nation	Chief Paul Eshkakogan	P.O. Box 610 Massey, Ontario, P0P 1P0	www.sagamok.ca	Phone: 1-705- 865-2421 Fax: 1-705- 865-3307
Serpent River First Nation	Chief Isadore Day	P.O. Box 14 195 Village Road Cutler, Ontario, P0P 1B0	lday.srfn@ontera.net	Phone: 1-705- 844-2418 Fax: 1-705- 844-2757
Sheguiandah First Nation	Chief Orville Aguonie	P.O. Box 101 Sheguiandah, Ontario P0P 1W0	http://www.sheguiandah.com/	Phone: 1-705- 368-2781 Fax: 1-705- 368-3697
Sheshegwaning First Nation	Chief Joseph Endanawas	P.O. Box 1 Sheshegwaning, Ontario, P0P 1X0	joe@sheshegwaning.org	Phone: 705- 283-3292 Fax: 705-283- 3481
Thessalon First Nation	Chief Alfred Bisailon	P.O. Box 9 RR 2 40 Sugarbush Road Thessalon, Ontario, P0R 1L0	chiefalfredbisailon@vianet.ca	Phone: (705) 842-2323 Fax: (705) 842-2332
Wikwemikong Unceded Indian Reserve	John Manitowabi, Land Use Planner	P.O. Box 112 Wikwemikong, Ontario, P0P 2J0	jmanitowabi@wiky.net www.wikwemikong.ca	Phone: (705) 859-3122 Fax: (705) 859-3851

Organization	Contact	Mailing Address	E-mail/website	Phone/fax
Wikwemikong Unceded Indian Reserve	Chief Duke Peltier	P.O. Box 112 Wikwemikong, Ontario, P0P 2J0	administrator@wiky.net www.wikwemikong.ca	Phone: (705) 859-3122 Fax: (705) 859-3851
Whitefish River First Nation	Chief Franklin Paibomsai	P.O. Box A Birch Island, Ontario P0P 1A0	chief@whitefishriver.ca www.whitefishriver.ca	Phone: (705) 285-4335 Fax: (705) 285-4532
Zhiibaahaasing First Nation	Chief Irene Sagon Kells	36 Sagon Road Zhiibaahaasing, Ontario, P0P 1X0		Phone: (705) 283-3963 Fax: (705) 283-3964
Métis Nation of Ontario	Métis Consultation Unit	500 Old St. Patrick Street, Unit 3 Ottawa, Ontario, K1N 9G4	www.metisnation.org/home.aspx	Phone: (613) 798-1488 Fax: (613) 725-4225
Métis National Council		4-340 MacLaren Street, Ottawa, Ontario, K2P 0M6	info@metisnation.ca www.metisnation.ca	Phone: (613) 232-3216 Fax: (613) 232-4262
Historic Saugeen Métis	Audrey Holden Lands and Resources Consultation	204 High Street, Box 1492 Southampton, Ontario N0H 2L0	saugeenmetisadmin@bmts.com www.saugeenmetis.com/index.php	Phone: (519) 483-4000
Chiefs of Ontario	Administrative Office	111 Peter Street, Suite 804 Toronto, Ontario, M5V 2H1	www.chiefs-of-ontario.org	Phone: (416) 597-1266 Fax: (416) 597-8365
Chiefs of Ontario	Political Office	Fort William First Nation RR 4, Suite 101, 9- Anemki Drive Thunder Bay, Ontario, P7J 1A5	www.chiefs-of-ontario.org	Phone: (807) 626-9339 Fax: (807) 626-9404
The Union of Ontario Indians (UOI)		1 Miigizi Mikan North Bay, Ontario, P1B 8J8	info@anishinabek.ca www.anishinabek.ca	Phone: (705) 497-9127 Fax: (705) 497-9135
The Union of Ontario Indians (UOI)	Regional Office	300 Anemki Place Thunder Bay, Ontario, P7J 1H9	www.anishinabek.ca	Phone: (807) 623-8887
Mamaweswen, The North Shore Tribal Council Secretariat		473A Highway 17 West Cutler, Ontario, P0P 1B0	www.mamaweswen.ca	Phone: (877) 633-7558
United Chiefs and Councils of Mnidoo Mnising (Manitoulin)		1110 Hwy 551 P.O. Box 275 M'Chigeeng, Ontario P0P 1G0	http://uccm.ca/index.php	Phone: 705- 377-5307 Fax: 705-377- 5309
Historic Sault Ste Marie Métis Council	Kim Powley President	26 Queen Street East Sault Ste. Marie, ON P6A 1Y3	kimmysue@shaw.ca	Phone: (705) 254-1768 Fax: (705) 254-3515
North Channel Métis Council	Dan Belisle President	9190 Hwy 17, Bruce Mines, ON P0R 1C0	Danielbelisle1@hotmail.com	Phone: (705) 785-3500 Fax: (705) 785-3505



City of Elliot Lake Waste Management Plan Environmental Assessment

Consultation Form

Organization/Department:

Contact Name:

Mailing address:

E-mail Address:

Phone/Fax:

<input checked="" type="checkbox"/>	Please Check All Responses Below That Apply:
<input type="checkbox"/>	Our organization/department does not require any further involvement in this study
<input type="checkbox"/>	Please keep us informed throughout the project
<input type="checkbox"/>	My organization's area of interest for this project includes (please indicate, if applicable):

Please fax, email or mail this form back to:

Jean-Louis Gaudet
exp Services Inc.

Fax: (905) 793-0641
E-mail: jeanlouis.gaudet@exp.com

Mailing address:
1595 Clark Blvd
Brampton, ON L6T 4V1



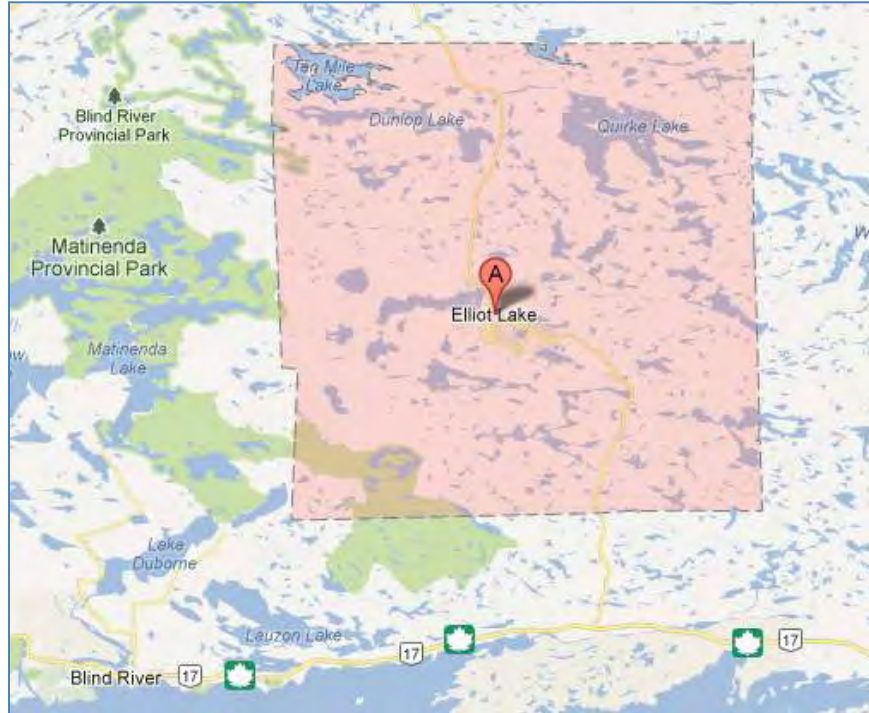
Notice of Commencement of Environmental Assessment City of Elliot Lake Waste Management Plan

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period.

The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

The study area is limited to the official boundaries of the City of Elliot Lake (see map below).

Study Area: Official boundaries of the City of Elliot Lake



The Process

In May 11, 2009 the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. A copy of the approved terms of reference is available at:

- www.cityofelliottlake.com
- http://www.ene.gov.on.ca/environment/en/industry/assessment_and_approvals/environmental_assessments/projects/STDPROD_082748.html

This study 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, which will be submitted to the ministry 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, such as Public Information Centres (PICs) and the posting of project documents. PICs will be advertised via the City's website, in the local newspaper, and by notice to the project stakeholder list.

If you would like to be added to our project mailing list or have project-related questions, please contact:

City of Elliot Lake
Mike Perkins, P.Eng
City of Elliot Lake
45 Hillside Drive North
Elliot Lake, ON P5A 1X5

Tel: (705) 848 2287
E-mail: mperkins@city.elliottlake.on.ca

Consultant Project Manager
John Smith
Exp Services Inc.
1595 Clark Blvd.
Brampton, On L6T 4V1

Tel: (905) 793-9800 x 2533
E-mail: john.smith@exp.com

Project website: www.cityofelliottlake.com

Under the *Freedom of Information and Protection of Privacy Act* and the *Environmental Assessment Act*, unless otherwise stated in the submission, any personal information such as name, address, telephone number and property location included in a submission will become part of the public record files for this matter and will be released, if requested, to any person.



January 23, 2013

Chief Edward Steven Miller
Atikameksheng Anishnawbek (Whitefish Lake First Nation)
P.O. Box 39
Naughton, ON POM 2M0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Chief Miller:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

In May 11, 2009, the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. This study will be carried out according to the approved terms of reference and the requirements of the *Environmental Assessment Act*.

The City wishes to consult with your First Nation community to identify any potential concerns or issues it may have with respect to this project. We request that you indicate whether this project is of interest to your community, the nature of your community's interest and whether your community wishes to be consulted further about the project.

For your convenience, a feedback form has been provided with this letter, which can be returned to my colleague Jean-Louis Gaudet by mail, email at jeanlouis.gaudet@exp.com or by fax at (905) 793-0641.

Sincerely,

A handwritten signature in black ink, appearing to read "John Smith", is written over a light grey rectangular background.

John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chief Patsy Corbiere
Aundeck-Omni-Kaning
RR 1
Comp. 21
Little Current, ON POP 1K0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Chief Corbiere:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

In May 11, 2009, the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. This study will be carried out according to the approved terms of reference and the requirements of the *Environmental Assessment Act*.

The City wishes to consult with your First Nation community to identify any potential concerns or issues it may have with respect to this project. We request that you indicate whether this project is of interest to your community, the nature of your community's interest and whether your community wishes to be consulted further about the project.

For your convenience, a feedback form has been provided with this letter, which can be returned to my colleague Jean-Louis Gaudet by mail, email at jeanlouis.gaudet@exp.com or by fax at (905) 793-0641.

Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chief Dean Sayers
Batchewana First Nation (Ojibwa of Batchewana)
236 Frontenac Street
Sault Ste. Marie, ON P6A 5K9

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Chief Sayers:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

In May 11, 2009, the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. This study will be carried out according to the approved terms of reference and the requirements of the *Environmental Assessment Act*.

The City wishes to consult with your First Nation community to identify any potential concerns or issues it may have with respect to this project. We request that you indicate whether this project is of interest to your community, the nature of your community's interest and whether your community wishes to be consulted further about the project.

For your convenience, a feedback form has been provided with this letter, which can be returned to my colleague Jean-Louis Gaudet by mail, email at jeanlouis.gaudet@exp.com or by fax at (905) 793-0641.

Sincerely,

A handwritten signature in black ink, appearing to read "John Smith".

John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chief Lyle Sayers
Garden River First Nation
RR4
7 Shingwauk Street
Garden River, ON P6A 6Z8

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Chief Sayers:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

In May 11, 2009, the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. This study will be carried out according to the approved terms of reference and the requirements of the *Environmental Assessment Act*.

The City wishes to consult with your First Nation community to identify any potential concerns or issues it may have with respect to this project. We request that you indicate whether this project is of interest to your community, the nature of your community's interest and whether your community wishes to be consulted further about the project.

For your convenience, a feedback form has been provided with this letter, which can be returned to my colleague Jean-Louis Gaudet by mail, email at jeanlouis.gaudet@exp.com or by fax at (905) 793-0641.

Sincerely,

A handwritten signature in black ink, appearing to read "John Smith", is written over a light grey rectangular background.

John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chief Joseph Hare
M'Chigeeng First Nation
#53 Hwy 551
P.O. Box 333
M'Chigeeg, ON P0P 1G0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Chief Hare:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

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The City wishes to consult with your First Nation community to identify any potential concerns or issues it may have with respect to this project. We request that you indicate whether this project is of interest to your community, the nature of your community's interest and whether your community wishes to be consulted further about the project.

For your convenience, a feedback form has been provided with this letter, which can be returned to my colleague Jean-Louis Gaudet by mail, email at jeanlouis.gaudet@exp.com or by fax at (905) 793-0641.

Sincerely,

A handwritten signature in black ink, appearing to read "John Smith", is written over a light grey rectangular background.

John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chief Reginald Niganobe
Mississauga #8 First Nation
64 Park Road
P.O. Box 1299
Blind River, ON P0R 1B0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Chief Niganobe:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

In May 11, 2009, the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. This study will be carried out according to the approved terms of reference and the requirements of the *Environmental Assessment Act*.

The City wishes to consult with your First Nation community to identify any potential concerns or issues it may have with respect to this project. We request that you indicate whether this project is of interest to your community, the nature of your community's interest and whether your community wishes to be consulted further about the project.

For your convenience, a feedback form has been provided with this letter, which can be returned to my colleague Jean-Louis Gaudet by mail, email at jeanlouis.gaudet@exp.com or by fax at (905) 793-0641.

Sincerely,

A handwritten signature in black ink, appearing to read "John Smith", is written over a light grey rectangular background.

John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chief Barron King
Moose Deer Point First Nation
P.O. Box 119
Mactier, ON P0C 1H0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Chief King:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

In May 11, 2009, the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. This study will be carried out according to the approved terms of reference and the requirements of the *Environmental Assessment Act*.

The City wishes to consult with your First Nation community to identify any potential concerns or issues it may have with respect to this project. We request that you indicate whether this project is of interest to your community, the nature of your community's interest and whether your community wishes to be consulted further about the project.

For your convenience, a feedback form has been provided with this letter, which can be returned to my colleague Jean-Louis Gaudet by mail, email at jeanlouis.gaudet@exp.com or by fax at (905) 793-0641.

Sincerely,

A handwritten signature in black ink, appearing to read "John Smith", is written over a light grey rectangular background.

John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chief Paul Eshkakogan
Sagamok Anishnawbek First Nation
P.O. Box 610
Massey, ON P0P 1P0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Chief Eshkakogan:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

In May 11, 2009, the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. This study will be carried out according to the approved terms of reference and the requirements of the *Environmental Assessment Act*.

The City wishes to consult with your First Nation community to identify any potential concerns or issues it may have with respect to this project. We request that you indicate whether this project is of interest to your community, the nature of your community's interest and whether your community wishes to be consulted further about the project.

For your convenience, a feedback form has been provided with this letter, which can be returned to my colleague Jean-Louis Gaudet by mail, email at jeanlouis.gaudet@exp.com or by fax at (905) 793-0641.

Sincerely,

A handwritten signature in black ink, appearing to read "John Smith".

John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chief Isadore Day
Serpent River First Nation
195 Village Road
P.O. Box 14
Cutler, ON P0P 1B0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Chief Day:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

In May 11, 2009, the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. This study will be carried out according to the approved terms of reference and the requirements of the *Environmental Assessment Act*.

The City wishes to consult with your First Nation community to identify any potential concerns or issues it may have with respect to this project. We request that you indicate whether this project is of interest to your community, the nature of your community's interest and whether your community wishes to be consulted further about the project.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chief Orville Aguonie
Sheguiandah First Nation
P.O. Box 101
Sheguiandah, ON P0P 1W0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Chief Aguonie:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

In May 11, 2009, the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. This study will be carried out according to the approved terms of reference and the requirements of the *Environmental Assessment Act*.

The City wishes to consult with your First Nation community to identify any potential concerns or issues it may have with respect to this project. We request that you indicate whether this project is of interest to your community, the nature of your community's interest and whether your community wishes to be consulted further about the project.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chief Joseph Endanawas
Sheshegwaning First Nation
P.O. Box 1
Sheshegwaning, ON P0P 1X0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Chief Endanawas:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chief Alfred Bisaillon
Thessalon First Nation
RR 2
P.O. Box 9
Thessalon, ON P0R 1L0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Chief Bisaillon:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

John Manitowabi, Land Use Planner
Wikwemikong Unceded Indian Reserve
P.O. Box 112
Wikwemikong, ON P0P 2J0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Mr. Manitowabi:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

In May 11, 2009, the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. This study will be carried out according to the approved terms of reference and the requirements of the *Environmental Assessment Act*.

The City wishes to consult with your First Nation community to identify any potential concerns or issues it may have with respect to this project. We request that you indicate whether this project is of interest to your community, the nature of your community's interest and whether your community wishes to be consulted further about the project.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chief Duke Peltier
Wikwemikong Unceded Indian Reserve
P.O. Box 112
Wikwemikong, ON P0P 2J0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Chief Peltier:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

In May 11, 2009, the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. This study will be carried out according to the approved terms of reference and the requirements of the *Environmental Assessment Act*.

The City wishes to consult with your First Nation community to identify any potential concerns or issues it may have with respect to this project. We request that you indicate whether this project is of interest to your community, the nature of your community's interest and whether your community wishes to be consulted further about the project.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chief Franklin Paibomsai
Whitefish River First Nation
P.O. Box A
Birch Island, ON P0P 1A0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Chief Paibomsai:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

In May 11, 2009, the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. This study will be carried out according to the approved terms of reference and the requirements of the *Environmental Assessment Act*.

The City wishes to consult with your First Nation community to identify any potential concerns or issues it may have with respect to this project. We request that you indicate whether this project is of interest to your community, the nature of your community's interest and whether your community wishes to be consulted further about the project.

For your convenience, a feedback form has been provided with this letter, which can be returned to my colleague Jean-Louis Gaudet by mail, email at jeanlouis.gaudet@exp.com or by fax at (905) 793-0641.

Sincerely,

A handwritten signature in black ink, appearing to read "John Smith".

John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chief Irene Sagon Kells
Zhiibaahaasing First Nation
36 Sagon Road
Zhiibaahaasing, ON P0P 1X0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Chief Sagon Kells:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Métis Nation of Ontario
Métis Consultation Unit
500 Old St. Patrick Street, Unit 3
Ottawa, ON K1N 9G4

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

To Whom It May Concern:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Métis National Council
4-340 MacLaren Street
Ottawa, ON K2P 0M6

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

To Whom It May Concern:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chiefs of Ontario
Administrative Office
111 Peter Street, Suite 804
Toronto, ON M5V 2H1

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

To Whom It May Concern:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Chiefs of Ontario
Political Office
c/o Fort William First Nation
RR 4
Suite 101, 9- Anemki Drive
Thunder Bay, ON P7J 1A5

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

To Whom It May Concern:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

The Union of Ontario Indians (UOI)
1 Miigizi Mikan
North Bay, ON P1B 8J8

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

To Whom It May Concern:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

The Union of Ontario Indians (UOI)
Regional Office
300 Anemki Place
Thunder Bay, ON P7J 1H9

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

To Whom It May Concern:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Mamaweswen, The North Shore Tribal Council Secretariat
473A Highway 17 West
Cutler, ON P0P 1B0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

To Whom It May Concern:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

United Chiefs and Councils of Mnidoo Mnising (Manitoulin)
1110 Hwy 551
P.O. Box 275
M'Chigeeng, ON P0P 1G0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

To Whom It May Concern:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)



January 23, 2013

Audrey Holden, Lands and Resources Consultation
Historic Saugeen Métis
204 High Street, Box 1492
Southampton, ON N0H 2L0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Audrey Holden:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

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Sincerely,

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John Smith
Project Manager

exp Services Inc.
(enc)

Jean Louis Gaudet

From: Jean Louis Gaudet
Sent: February-04-13 10:49 AM
To: chiefalfredbisailon@vianet.ca
Cc: mjward@soonet.ca
Subject: City of Elliot Lake Waste Management Plan EA - Notice of Commencement
Attachments: TFN_EL NOC (Jan 2013).pdf

Dear Chief Bisailon,

Please find attached the Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The original notice and form was sent by regular mail to the address included on the attached letter but was returned marked no such address/address incomplete.

If your office wishes to receive future notices for this project, please return the attached form with your office's mailing address for our files, or you may also send a reply to this e-mail.

Thank you,

Jean-Louis Gaudet



Jean-Louis Gaudet

Project Coordinator
t: +1.905.793.9809 x 2344 | e: jeanlouis.gaudet@exp.com
1595 Clark Blvd.
Brampton, ON L6T 4V1
CANADA

exp.com | legal disclaimer

keep it green, read from the screen



April 18, 2013

Dan Belisle, President
North Channel Métis Council
9190 Highway 17
Bruce Mines, ON P0R 1C0

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Mr. Belisle:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

In May 11, 2009, the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. This study will be carried out according to the approved terms of reference and the requirements of the *Environmental Assessment Act*.

The City wishes to consult with your organization to identify any potential concerns or issues it may have with respect to this project. We request that you indicate whether this project is of interest to your organization, the nature of your organization's interest and whether your organization wishes to be consulted further about the project.

For your convenience, a feedback form has been provided with this letter, which can be returned to my colleague Jean-Louis Gaudet by mail, email at jeanlouis.gaudet@exp.com or by fax at (905) 793-0641.

Sincerely,

A handwritten signature in black ink, appearing to read "John Smith", is placed over a light grey rectangular background.

John Smith
Project Manager

exp Services Inc.
(enc)

cc: Métis Consultation Unit, Métis Nation of Ontario Head Office



April 18, 2013

Kim Powley, President
Historic Sault Ste Marie Métis Council
26 Queen Street East
Sault Ste Marie, ON P6A 1Y3

Re: City of Elliot Lake Waste Management Plan Environmental Assessment
Notice of Commencement and Request for Consultation

Dear Ms. Powley:

Please find enclosed with this letter a Notice of Commencement for the City of Elliot Lake's Waste Management Plan Environmental Assessment and a consultation form.

The City of Elliot Lake is beginning an environmental assessment under the *Environmental Assessment Act* for a waste management facility capable of managing the City's residual waste over a 25-year planning period. The City's existing landfill is located approximately 1.5 km south of the City of Elliot Lake and 1.0 km north of Esten Lake. The landfill began operating in October 1982 and is expected to be full by 2017. A means to dispose of the City's waste will be required before then.

In May 11, 2009, the Minister of the Environment approved the terms of reference for the City of Elliot Lake Waste Management Plan. This study will be carried out according to the approved terms of reference and the requirements of the *Environmental Assessment Act*.

The City wishes to consult with your organization to identify any potential concerns or issues it may have with respect to this project. We request that you indicate whether this project is of interest to your organization, the nature of your organization's interest and whether your organization wishes to be consulted further about the project.

For your convenience, a feedback form has been provided with this letter, which can be returned to my colleague Jean-Louis Gaudet by mail, email at jeanlouis.gaudet@exp.com or by fax at (905) 793-0641.

Sincerely,

A handwritten signature in black ink, appearing to read 'John Smith', is written over a light grey rectangular background.

John Smith
Project Manager

exp Services Inc.
(enc)

cc: Métis Consultation Unit, Métis Nation of Ontario Head Office

THESSALON FIRST NATION

P.O. Box 9 • R.R. # 2 • Thessalon, Ontario • P0R 1L0 • Telephone: (705) 842-2323 • Fax: (705) 842-2332

COVER FAX TRANSMISSION

Deliver To: Jean-Louis Studet
 Firm: exp Fax #: (905) 793-0641
 Date: Feb 4, 2013 Time: _____

Sender: Chief's Office - Alfred Bisailon
 Band Manager/Administrator - Mary-Jane Wardell

- | | | |
|--|---|--------------------|
| <input type="checkbox"/> Receptionist | - | Sheri-Lynn Richard |
| <input type="checkbox"/> Economic Development/LDM | - | Pamela Yukich |
| <input type="checkbox"/> Education Department | - | Darlene Monette |
| <input type="checkbox"/> Native Student Support | - | Laura Lewis |
| <input type="checkbox"/> Native Student Support | - | Shelley Ried |
| <input type="checkbox"/> Finance Co-ordinator | - | Mary Ann Giguere |
| <input type="checkbox"/> Finance Assistant | - | Christine Giasson |
| <input type="checkbox"/> Membership/Social Services | - | Bobbi-Jo McColman |
| <input type="checkbox"/> Special Projects Co-ordinator | - | Kathleen Naponse |
| <input type="checkbox"/> Public Works Manager | - | Doug Bisailon |

Other: _____

Comments:

Number of pages including fax cover sheet: 2



City of Elliot Lake
Waste Management Plan
Environmental Assessment

Consultation Form

Organization/Department: Thessalon First Nation

Contact Name: Alfred Bisailon

Mailing address: 40 Sugarbush Rd

E-mail Address: chiefalfredbisailon@vianet.ca

Phone/Fax: (705) 842-2323 (FAX) 842-2332

<input checked="" type="checkbox"/>	Please Check All Responses Below That Apply:
	Our organization/department does not require any further involvement in this study
<input checked="" type="checkbox"/>	Please keep us informed throughout the project
	My organization's area of interest for this project includes (please indicate, if applicable):

Please fax, email or mail this form back to:

Jean-Louis Gaudet
 exp Services Inc.

Fax: (905) 793-0641
 E-mail: jeanlouis.gaudet@exp.com

Mailing address:
 1595 Clark Blvd
 Brampton, ON L6T 4V1





June 19, 2015

NAME
ADDRESS

Re: City of Elliot Lake Waste Management Plan Environmental Assessment

Dear NAME:

The City of Elliot Lake has initiated a study under the *Environmental Assessment Act (EA)* to identify long term disposal capacity for its solid waste. A copy of the draft Environmental Assessment Report for this study is enclosed with this letter. The City is seeking comments on the draft EA report prior to submission to the Ministry of Environment for approval.

This study has been carried out in accordance with the requirements of the *Environmental Assessment Act*. A copy of the draft EA report is also posted on the City of Elliot Lake website. For further information on the study or to submit comments regarding the draft report, please contact:

John Smith
Project Manager
Exp Services, Inc.
1595 Clark Boulevard
Brampton, ON L6T 4V1
Tel: (905) 793-9800
E-mail: john.smith@exp.com

Under the Freedom of Information and Protection of Privacy Act and the Environmental Assessment Act, unless otherwise stated in the submission, any personal information such as name, address, telephone number and property location included in a submission will become part of the public record files for this matter and will be released, if requested, to any person.

Sincerely,

A handwritten signature in black ink, appearing to read "John Smith", is written over a light grey rectangular background.

John Smith
Project Manager

exp Services Inc.



Tracking Details

Shipment Status



Package Status

Package Tracking Number: 330480010108



Delivered

Friday, July 3, 2015 11:46

Signature not required

Service: Purolator Express Pack
 Est. Shipment Weight: 1 lb.
 Shipment Date: Jul 2, 2015
 References: cci inf brm, cci inf brm

From: 1595 CLARK BLVD
 Brampton, ON, CA
 21 RR#1
 To: Little Current, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330480010108	Jul 3, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jul 3, 2015	11:46	Sudbury, ON	Shipment delivered at: RECEPTION of OJIBWAY AUNDECK OMNI KANING 13 HILL ST P0P1G0
Jul 3, 2015	7:28	Sudbury, ON	On vehicle for delivery
Jul 3, 2015	5:52	Sudbury, ON	Arrived at sort facility
Jul 2, 2015	21:51	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jul 2, 2015	18:33	Mississauga (east/est), ON	Picked up by Purolator from EXP SERVICES INC at 1595 CLARK BLVD BRAMPTON L6T4V1 ON
Jul 2, 2015	16:18	Purolator	Shipping label created with reference(s): cci inf brm, cci inf brm



Tracking Details

Shipment Status

Shipment Created

Picked Up

In Transit

Delivered

Package Status

Package Tracking Number: 330484432613



Delivered

Thursday, July 9, 2015 1:34 p.m.

Origin signature not required

Service	Purolator Express Pack	From	1595 CLARK BLVD Brampton, ON, CA
Est. Shipment Weight	1 lb.	To	916 BAR RIVER RD Echo Bay, ON, CA
Shipment Date	Jul 8, 2015		
References	CCI INF BRM CCI INF BRM		

Shipment Summary

Tracking #	Deliver By	Status
330484432613	Jul 9, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jul 9, 2015	1:34 p.m.	Sault Ste. Marie, ON	Shipment delivered at: GUARD of BAR RIVER METIS COMMUNITY 916 BAR RIVER RD P0S1C0
Jul 9, 2015	9:49 a.m.	Sault Ste. Marie, ON	On vehicle for delivery
Jul 8, 2015	6:27 p.m.	Mississauga (east/est), ON	Picked up by Purolator from EXP SERVICES INC at 1595 CLARK BLVD BRAMPTON L6T4V1 ON
Jul 8, 2015	4:37 p.m.	Purolator	Shipping label created with reference(s): CCI INF BRM, CCI INF BRM



Tracking Details

Shipment Status



Package Status

Package Tracking Number: 330473998277



Delivered

Friday, June 26, 2015 10:49

Received By: Lynn



Service Purolator Express Pack
 Est. Shipment Weight 2 lb.
 Shipment Date Jun 24, 2015
 References cci infbrm
 cci infbrm

From 1595 CLARK BLVD
 Brampton, ON, CA
 To 295 PICKEREL RIVER RD
 Pickering, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330473998277	Jun 26, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jul 8, 2015	12:26	Sudbury, ON	Shipment delivered to MCQUABBIE at: OTHER of MCQUABBIE 608 HWY 64 P0M1N0
Jun 26, 2015	10:49	Sudbury, ON	Shipment delivered to LYNN at: RECEPTION of SEGUIN CASTLE BLDG CTR 608 HWY 64 HWY P0M1A0
Jun 26, 2015	7:07	Sudbury, ON	On vehicle for delivery
Jun 26, 2015	3:22	Sudbury, ON	Arrived at sort facility
Jun 25, 2015	21:26	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jun 25, 2015	12:52	Bracebridge, ON	Shipment redirected
Jun 25, 2015	9:57	Bracebridge, ON	Appointment required for delivery, receiver will be contacted to reschedule
Jun 24, 2015	22:37	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jun 24, 2015	18:02	Mississauga (east/est), ON	Picked up by Purolator from EXP SERVICES INC at 1595 CLARK BLVD BRAMPTON L6T4V1 ON
Jun 24, 2015	17:58	Mississauga (east/est), ON	Picked up by Purolator from RECALL at 50 DRIVER RD BRAMPTON L6T5V2 ON
Jun 24, 2015	16:55	Purolator	Shipping label created with reference(s): cci infbrm, cci infbrm



Tracking Details

Shipment Status



Package Status

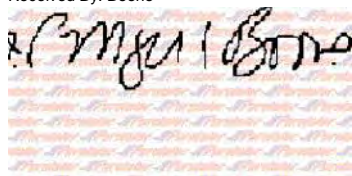
Package Tracking Number: 330473994185



Delivered

Thursday, June 25, 2015 11:38

Received By: Boone



Service: Purolator Express Pack
 Est. Shipment Weight: 2 lb.
 Shipment Date: Jun 24, 2015
 References: cci infbrm

From: 1595 CLARK BLVD
 Brampton, ON, CA
 To: 204 HIGH ST
 Southampton, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330473994185	Jun 25, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jun 25, 2015	11:38	Owen Sound, ON	Shipment delivered to BOONE at: RECEPTION of LANDS & RESOURCES CONSULTATION 204 HIGH ST N0H2L0
Jun 25, 2015	9:31	Owen Sound, ON	On vehicle for delivery
Jun 24, 2015	22:45	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jun 24, 2015	17:58	Mississauga (east/est), ON	Picked up by Purolator from RECALL at 50 DRIVER RD BRAMPTON L6T5V2 ON
Jun 24, 2015	16:52	Purolator	Shipping label created with reference(s): cci infbrm, cci infbrm



Tracking Details

Shipment Status



Package Status

Package Tracking Number: 330474237402



Delivered

Friday, June 26, 2015 11:51

Received By: Abitong



Service Purolator Express Pack
 Est. Shipment Weight 1 lb.
 Shipment Date Jun 25, 2015
 References cci inf brm
 cci inf brm

From 1595 CLARK BLVD
 Brampton, ON, CA
 To 473 A HIGHWAY 17 WEST
 Cutler, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330474237402	Jun 26, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jun 26, 2015	11:51	Sudbury, ON	Shipment delivered to ABITONG at: RECEPTION of MAMAWESWEN, THE NORTH SHORE 17 WEST-473A 473 HWY POP1B0
Jun 26, 2015	7:10	Sudbury, ON	On vehicle for delivery
Jun 26, 2015	3:27	Sudbury, ON	Arrived at sort facility
Jun 25, 2015	20:03	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jun 25, 2015	14:52	Mississauga (east/est), ON	Picked up by Purolator from EXP at 1595 CLARK BLVD BRAMPTON L6T4V1 ON
Jun 25, 2015	9:19	Purolator	Shipping label created with reference(s): cci inf brm, cci inf brm



Tracking Details

Shipment Status



Package Status

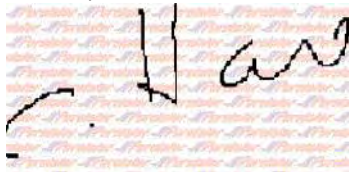
Package Tracking Number: 330474336519



Delivered

Friday, June 26, 2015 11:31

Received By: Hare



Service Purolator Express Pack
 Est. Shipment Weight 1 lb.
 Shipment Date Jun 25, 2015
 References cci inf brm
 cci inf brm

From 1595 CLARK BLVD
 Brampton, ON, CA
 To 53 HWY 551
 M'chigeeng, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330474336519	Jun 26, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jun 26, 2015	11:31	Sudbury, ON	Shipment delivered to HARE at: RECEPTION of M'CHIGEENG FIRST NATION 551-53 53 HWY 551 HWY P0P1G0
Jun 26, 2015	7:05	Sudbury, ON	On vehicle for delivery
Jun 26, 2015	3:25	Sudbury, ON	Arrived at sort facility
Jun 25, 2015	20:20	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jun 25, 2015	14:52	Mississauga (east/est), ON	Picked up by Purolator from EXP at 1595 CLARK BLVD BRAMPTON L6T4V1 ON
Jun 25, 2015	10:23	Purolator	Shipping label created with reference(s): cci inf brm, cci inf brm



Tracking Details

Shipment Status



Package Status

Package Tracking Number: 330474006369



Delivered

Thursday, June 25, 2015 11:27

Received By: Jonathan



Service Purolator Express Pack
 Est. Shipment Weight 2 lb.
 Shipment Date Jun 24, 2015
 References cci infbrm

From 1595 CLARK BLVD
 Brampton, ON, CA
 To 340 MACLAREN ST
 Ottawa, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330474006369	Jun 25, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jun 25, 2015	11:27	Ottawa, ON	Shipment delivered to JONATHAN at: RECEPTION of METIS NATIONAL COUNCIL 340 MACLAREN ST K2P0M6
Jun 25, 2015	7:46	Ottawa, ON	On vehicle for delivery
Jun 24, 2015	22:37	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jun 24, 2015	17:58	Mississauga (east/est), ON	Picked up by Purolator from RECALL at 50 DRIVER RD BRAMPTON L6T5V2 ON
Jun 24, 2015	17:02	Purolator	Shipping label created with reference(s): cci infbrm, cci infbrm



Tracking Details

Shipment Status



Package Status

Package Tracking Number: 330474001725



Delivered

Thursday, June 25, 2015 10:41

Received By: Samantha



Service Purolator Express Pack
 Est. Shipment Weight 2 lb.
 Shipment Date Jun 24, 2015
 References cci infbrm

From 1595 CLARK BLVD
 Brampton, ON, CA
 To 500 OLD ST. PATRICK ST
 Ottawa, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330474001725	Jun 25, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jun 25, 2015	10:41	Ottawa, ON	Shipment delivered to SAMANTHA at: RECEPTION of METIS NATION OF ONTARIO 500 OLD ST. PATRICK ST K1N9G4
Jun 25, 2015	9:12	Ottawa, ON	On vehicle for delivery
Jun 24, 2015	22:44	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jun 24, 2015	17:58	Mississauga (east/est), ON	Picked up by Purolator from RECALL at 50 DRIVER RD BRAMPTON L6T5V2 ON
Jun 24, 2015	16:58	Purolator	Shipping label created with reference(s): cci infbrm, cci infbrm



Tracking Details

Shipment Status



Package Status

Package Tracking Number: 330482018448



Delivered

Wednesday, July 15, 2015 10:00

Received By: Sissench

Signature not available

Service	Purolator Express Pack	From	1595 CLARK BLVD
Est. Shipment Weight	2 lb.		Brampton, ON, CA
Shipment Date	Jul 6, 2015	To	4007 ESPANEIL ST
References	cci inf brm cci inf brm		Massey, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330482018448	Jul 15, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jul 15, 2015	10:00	Sudbury, ON	Shipment delivered to SISSENC at: OTHER of SISSENC 465 SABLE P0P1P0
Jul 7, 2015	16:32	Sudbury, ON	Shipment available for pickup.
Jul 7, 2015	7:39	Sudbury, ON	On vehicle for delivery
Jul 7, 2015	5:59	Sudbury, ON	Arrived at sort facility
Jul 6, 2015	21:29	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jul 6, 2015	18:13	Mississauga (east/est), ON	Picked up by Purolator from EXP SERVICES INC at 1595 CLARK BLVD BRAMPTON L6T4V1 ON
Jul 6, 2015	15:25	Purolator	Shipping label created with reference(s): cci inf brm, cci inf brm



Tracking Details

Shipment Status



Package Status

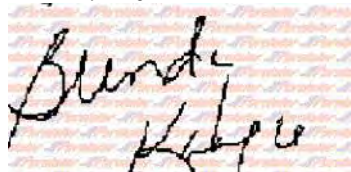
Package Tracking Number: 330482086700



Delivered

Tuesday, July 7, 2015 11:54

Received By: Kahgee



Service: Purolator Express
 Est. Shipment Weight: 2 lb.
 Shipment Date: Jul 6, 2015
 References: cci inf brm, cci inf brm

From: 1595 CLARK BLVD
 Brampton, ON, CA
 To: 6493 HIGHWAY 21
 Southampton, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330482086700	Jul 7, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jul 7, 2015	11:54	Owen Sound, ON	Shipment delivered to KAHGEE at: RECEPTION of CHIEF RANDALL KAHGEE 21-6493 HWY 21 HWY N0H2L0
Jul 7, 2015	9:28	Owen Sound, ON	On vehicle for delivery
Jul 6, 2015	21:20	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jul 6, 2015	18:13	Mississauga (east/est), ON	Picked up by Purolator from EXP SERVICES INC at 1595 CLARK BLVD BRAMPTON L6T4V1 ON
Jul 6, 2015	15:55	Purolator	Shipping label created with reference(s): cci inf brm, cci inf brm



Tracking Details

Shipment Status



Package Status

Package Tracking Number: 330479962863



Delivered

Friday, July 3, 2015 10:46

Origin signature not required

Service Purolator Express
 Est. Shipment Weight 1 lb.
 Shipment Date Jul 2, 2015
 References cci inf brm
 cci inf brm

From 1595 CLARK BLVD
 Brampton, ON, CA
 To 135 LAKESHORE BLVD
 Neyaashiinigmiing, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330479962863	Jul 3, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jul 3, 2015	10:46	Owen Sound, ON	Shipment delivered at: RECEPTION of SCOTT LEE 135 LAKESHORE BLVD N0H2T0
Jul 3, 2015	9:30	Owen Sound, ON	On vehicle for delivery
Jul 2, 2015	18:33	Mississauga (east/est), ON	Picked up by Purolator from EXP SERVICES INC at 1595 CLARK BLVD BRAMPTON L6T4V1 ON
Jul 2, 2015	15:54	Purolator	Shipping label created with reference(s): cci inf brm, cci inf brm



Tracking Details

Shipment Status



Package Status

Package Tracking Number: 330482035004



Delivered

Tuesday, July 7, 2015 15:42

Received By: Carrie



Service Purolator Express
 Est. Shipment Weight 2 lb.
 Shipment Date Jul 6, 2015
 References cci inf brm
 cci inf brm

From 1595 CLARK BLVD
 Brampton, ON, CA
 To 142 OGEMAHMIIKAN RD
 Sheguiandah, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330482035004	Jul 7, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jul 7, 2015	15:42	Sudbury, ON	Shipment delivered to CARRIE at: RECEPTION of CHIEF ORVILLE AGUONIE 142 OGEMAHMIIKAN RD P0P1W0
Jul 7, 2015	8:04	Sudbury, ON	On vehicle for delivery
Jul 7, 2015	5:56	Sudbury, ON	Arrived at sort facility
Jul 6, 2015	21:28	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jul 6, 2015	18:13	Mississauga (east/est), ON	Picked up by Purolator from EXP SERVICES INC at 1595 CLARK BLVD BRAMPTON L6T4V1 ON
Jul 6, 2015	15:32	Purolator	Shipping label created with reference(s): cci inf brm, cci inf brm



Tracking Details

Shipment Status



Package Status

Package Tracking Number: 330482056489



Delivered

Friday, July 17, 2015 11:00

Received By: Frank Cada

Signature not available

Service	Purolator Express	From	1595 CLARK BLVD Brampton, ON, CA
Est. Shipment Weight	2 lb.	To	1079 A SHESHEGWANING RD Sheshegwaning, ON, CA
Shipment Date	Jul 6, 2015		
References	cci inf brmcci cci inf brm		

Shipment Summary

Tracking #	Deliver By	Status
330482056489	Jul 17, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jul 17, 2015	11:00	Sudbury, ON	Shipment delivered to FRANK CADA at: OTHER of FRANK CADA GORE BAY P0P1H0
Jul 15, 2015	13:55	Sudbury, ON	Available for pickup for 5 business days from arrival date at the counter.
Jul 14, 2015	14:51	Sudbury, ON	Available for pickup for 5 business days from arrival date at the counter.
Jul 13, 2015	13:49	Sudbury, ON	Available for pickup for 5 business days from arrival date at the counter.
Jul 10, 2015	14:39	Sudbury, ON	Available for pickup for 5 business days from arrival date at the counter.
Jul 9, 2015	14:51	Sudbury, ON	Available for pickup for 5 business days from arrival date at the counter.
Jul 8, 2015	14:45	Sudbury, ON	Available for pickup for 5 business days from arrival date at the counter.
Jul 7, 2015	14:49	Sudbury, ON	Available for pickup for 5 business days from arrival date at the counter.
Jul 7, 2015	14:46	Sudbury, ON	Shipment available for pickup.
Jul 7, 2015	8:04	Sudbury, ON	On vehicle for delivery
Jul 6, 2015	21:22	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jul 6, 2015	18:13	Mississauga (east/est), ON	Picked up by Purolator from EXP SERVICES INC at 1595 CLARK BLVD BRAMPTON L6T4V1 ON
Jul 6, 2015	15:41	Purolator	Shipping label created with reference(s): cci inf brm, cci inf brmcci



Tracking Details

Shipment Status



Package Status

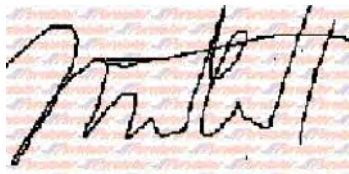
Package Tracking Number: 330476168647



Delivered

Monday, June 29, 2015 8:22

BEAUBOUCHARD



Service Purolator Express Pack
 Est. Shipment Weight 2 lb.
 Shipment Date Jun 26, 2015
 References cci inf brm
 cci inf brm

From 1595 CLARK BLVD
 Brampton, ON, CA
 To 1 MIIGIZI MIKAN
 North Bay, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330476168647	Jun 29, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jun 29, 2015	8:38	North Bay, ON	Shipment delivered at: SHIP DOCK of UNION OF ONTARIO INDIANS 1 MIGIZII MIKAN RD P1B8J8
Jun 29, 2015	8:22	North Bay, ON	Shipment delivered to BEAUBOUCHARD at: SHIP DOCK of THE UNION OF ONTARIO INDIANS 1 MIIGIZI MIKAN P1B8J8
Jun 29, 2015	7:42	North Bay, ON	On vehicle for delivery
Jun 29, 2015	4:04	North Bay, ON	Arrived at sort facility
Jun 26, 2015	22:41	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jun 26, 2015	18:14	Mississauga (east/est), ON	Picked up by Purolator from EXP SERVICES INC at 1595 CLARK BLVD BRAMPTON L6T4V1 ON
Jun 26, 2015	15:20	Purolator	Shipping label created with reference(s): cci inf brm, cci inf brm



Tracking Details

Shipment Status



Package Status

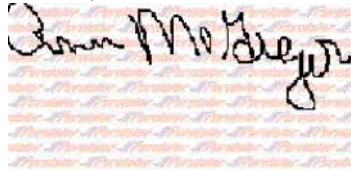
Package Tracking Number: 330482173037



Delivered

Tuesday, July 7, 2015 10:54

Received By: Anne



Service Purolator Express
 Est. Shipment Weight 2 lb.
 Shipment Date Jul 6, 2015
 References cci inf brm

From 1595 CLARK BLVD
 Brampton, ON, CA
 To 46 BAY OF ISLANDS RD
 Birch Island, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330482173037	Jul 7, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jul 7, 2015	10:54	Sudbury, ON	Shipment delivered to ANNE at: RECEPTION of CHIEF FRANKLIN PAIBOMSAI 46 BAY OF ISLANDS RD P0P1A0
Jul 7, 2015	8:04	Sudbury, ON	On vehicle for delivery
Jul 7, 2015	5:55	Sudbury, ON	Arrived at sort facility
Jul 6, 2015	21:28	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jul 6, 2015	18:13	Mississauga (east/est), ON	Picked up by Purolator from EXP SERVICES INC at 1595 CLARK BLVD BRAMPTON L6T4V1 ON
Jul 6, 2015	16:41	Purolator	Shipping label created with reference(s): cci inf brm, cci inf brm



Tracking Details

Shipment Status



Package Status

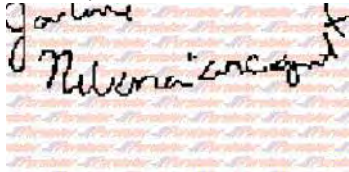
Package Tracking Number: 330479955586



Delivered

Friday, July 3, 2015 10:34

Received By: Jamie



Service Purolator Express Pack
 Est. Shipment Weight 3 lb.
 Shipment Date Jul 2, 2015
 References cci inf brmcci
 cci inf brm

From 1595 CLARK BLVD
 Brampton, ON, CA
 To 25 RESERVE RD
 Naughton, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330479955586	Jul 3, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jul 3, 2015	10:34	Sudbury, ON	Shipment delivered to JAMIE at: RECEPTION of EDWARD STEVEN MILLER 25 RESERVE RD P0M2M0
Jul 3, 2015	7:40	Sudbury, ON	On vehicle for delivery
Jul 3, 2015	3:45	Sudbury, ON	Arrived at sort facility
Jul 3, 2015	3:18	Sudbury, ON	Arrived at sort facility
Jul 2, 2015	21:42	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jul 2, 2015	18:33	Mississauga (east/est), ON	Picked up by Purolator from EXP SERVICES INC at 1595 CLARK BLVD BRAMPTON L6T4V1 ON
Jul 2, 2015	15:51	Purolator	Shipping label created with reference(s): cci inf brm, cci inf brmcci



Tracking Details

Shipment Status



Package Status

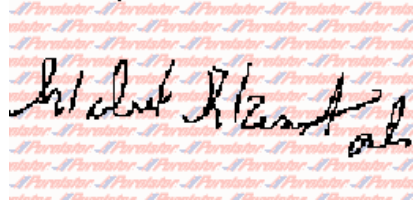
Package Tracking Number: 330484395802



Delivered

Thursday, July 9, 2015 2:29 p.m.

Received By: Mabelle



Service	Purolator Express Pack
Est. Shipment Weight	2 lb.
Shipment Date	Jul 8, 2015
References	CCI INF BRM CCI INF BRM

From	1595 CLARK BLVD Brampton, ON, CA
To	19 A COMPLEX DR Wkwemikong, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330484395802	Jul 9, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jul 9, 2015	2:29 p.m.	Sudbury, ON	Shipment delivered to MABELLE at: RECEPTION of BAND ADMINISTRATION OFFICE 19A COMPLEX DR POP2J0
Jul 9, 2015	7:30 a.m.	Sudbury, ON	On vehicle for delivery
Jul 9, 2015	5:24 a.m.	Sudbury, ON	Arrived at sort facility
Jul 8, 2015	9:31 p.m.	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jul 8, 2015	6:27 p.m.	Mississauga (east/est), ON	Picked up by Purolator from EXP SERVICES INC at 1595 CLARK BLVD BRAMPTON L6T4V1 ON
Jul 8, 2015	4:14 p.m.	Purolator	Shipping label created with reference(s): CCI INF BRM, CCI INF BRM

Tracking Details

Shipment Status



Package Status

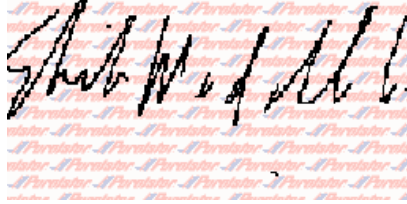
Package Tracking Number: 330484405676



Delivered

Thursday, July 9, 2015 2:41 p.m.

Received By: Shella



Service	Purolator Express Pack
Est. Shipment Weight	2 lb.
Shipment Date	Jul 8, 2015
References	CCI INF BRM CCI INF BRM

From	1595 CLARK BLVD Brampton, ON, CA
To	15 PONTIAC AVE Wkwemikong, ON, CA

Shipment Summary

Tracking #	Deliver By	Status
330484405676	Jul 9, 2015	Delivered

Packages 1 to 1 of 1

History

Date	Local Time	City	Description
Jul 9, 2015	2:41 p.m.	Sudbury, ON	Shipment delivered to SHELLA at: RECEPTION of WIKWEMIKONG UNCEDED INDIAN RES 15 PONTIAC AVE P0P2J0
Jul 9, 2015	7:30 a.m.	Sudbury, ON	On vehicle for delivery
Jul 9, 2015	5:26 a.m.	Sudbury, ON	Arrived at sort facility
Jul 8, 2015	9:31 p.m.	Toronto Sort Ctr/ctr Tri, ON	Arrived at sort facility
Jul 8, 2015	6:27 p.m.	Mississauga (east/est), ON	Picked up by Purolator from EXP SERVICES INC at 1595 CLARK BLVD BRAMPTON L6T4V1 ON
Jul 8, 2015	4:20 p.m.	Purolator	Shipping label created with reference(s): CCI INF BRM, CCI INF BRM



AUNDECK OMNI KANING

Administration Office
R.R.#1, Compartment # 21
Little Current, Ontario
POB 1K0
Phone: (705) 368-2228
Fax: (705) 368-3563
www.aundeckomnikaningfn.com

July 6, 2015

Exp Services Inc.
Attn: Project Manager
1595 Clark Boulevard
Brampton, Ontario
L6T 4V1

Dear John Smith, Project Manager

Re: City of Elliot Lake Waste Management Plan Environmental Assessment

The recent correspondence notifying of changes, amendments, alterations and/or modifications to existing physical land and water structures has been received and acknowledged by the Aundeck Omni Kaning First Nation.

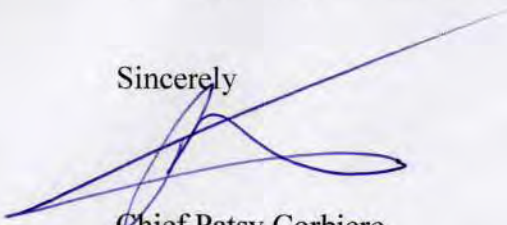
The proposed developments may affect First Nation communities located near or within the proposed area either directly or indirectly which is a matter of concern. As per legislation, the "duty to consult" with First Nations is an imperative rule of law and thank you for observing and respecting the First Nation right to be consulted on these matters.

As part of the "duty to consult", we would like to express our appreciation for your efforts to include the Aundeck Omni Kaning in correspondence related to this matter. Further interest or need for direct consultation is not required at this time, however, it is still the duty to inform and consult those First Nations who will require or be affected by this proposal.

On behalf of the Chief and Council of the Aundeck Omni Kaning (AOK) First Nation, our sincerest best wishes with your future project and endeavors proposed for future development.

Thank you for your time and consideration in this matter.

Sincerely



Chief Patsy Corbiere

DRAFT ESR Distribution List

Anjala Puvananathan Director, Ontario Region Canadian Environmental Assessment Agency 55 St. Clair Avenue East, Suite 907 Toronto ON M4T 1M2	Ministry of Government Services 77 Wellesley Street West 8th Floor, Ferguson Block Toronto ON M7A 1N3
Lyndon Kivi, Fish Habitat Biologist Department of Fisheries and Oceans Northern Ontario District, Great Lakes Area Central and Arctic Region P.O. Box 649 Kenora, ON P9N 3X6	Municipal Services Office – North (Sudbury) Ministry of Municipal Affairs & Housing Ms. Bridget Schulte-Hostedde, Manager (A) Community Planning and Development 159 Cedar Street, Suite 401 Sudbury ON P3E 6A5
Ms. Kitty Ma Regional Environmental Assessment Coordinator Health Canada, Ontario Region 180 Queen Street West Toronto, ON M5V 3L7	Sudbury District Ministry of Natural Resources 3767 Hwy 69 S, Suite 5 Sudbury, ON P3G 1E7 Attn: Scott Dingwall, District Planner
Mr. David Zeit Environmental Officer Transport Canada – Ontario Region (PHE) 4900 Yonge Street North York, ON M2N 6A5	Alison Drummond, Director Corporate Policy Secretariat Ministry of Northern Development and Mines Rm. 5630, Whitney Block, 99 Wellesley St. W Toronto, ON M7A 1W3
Ms. Amy Didrikson, Heritage Planner Culture Services Unit, Programs and Services Branch Ministry of Tourism, Culture and Sport 401 Bay Street, Suite 1700 Toronto ON M7A 0A7	David Cooper Manager – Environmental and Land Use Policy Ministry of Agriculture, Food and Rural Affairs 3rd Floor 1 Stone Road West Guelph, ON N1G 4Y2
Paul McCue Senior Program Consultant Ministry of Health and Long-Term Care Environmental Health Policy and Programs Section 21st Floor, 393 University Avenue Toronto ON M7A 2S1	Rainbow District School Board 69 Young Street Sudbury, Ontario P3E 3G5
Dr. Penny Sutcliffe Medical Officer of Health Ministry of Health and Long-Term Care Sudbury and District Health Unit 1300 Paris Street Sudbury, ON P3E 3A3	Ministry of Community and Social Services 199 Larch Street 10th Floor Suite 1002 Sudbury ON P3E 5P9
Mr. Tony Amalfa, Manager Environmental Health Policy & Programs Ministry of Health and Long-Term Care 393 University Avenue, 21st Floor Toronto ON M7A 2S1	



Canadian Environmental
Assessment Agency

Agence canadienne
d'évaluation environnementale

55 St. Clair Avenue East,
Room 907
Toronto ON M4T 1M2

55, avenue St. Clair Est,
pièce 907
Toronto ON M4T 1M2

July 8, 2015

Sent by email

John Smith
Exp Services, Inc.
1595 Clark Boulevard
Brampton, ON L6T4V1
John.smith@exp.com

Dear Mr. Smith:

Re: Information on the *Canadian Environmental Assessment Act, 2012*

Thank you for your correspondence of June 26, 2015 regarding the City of Elliot Lake Waste Management Plan.

The *Canadian Environmental Assessment Act, 2012* (CEAA 2012) focuses federal environmental reviews on projects that have the potential to cause significant adverse environmental effects in areas of federal jurisdiction and applies to physical activities described in the *Regulations Designating Physical Activities* (the Regulations). Based on the information provided, your project does not appear to be described in the Regulations. **Kindly review the Regulations to confirm applicability to the proposed project.**

If you believe the project is not subject to a federal environmental assessment, and do not submit a project description, we kindly request that you remove the Agency from your distribution list. If you have questions, please get in touch with our office through the switchboard at 416-952-1576. The attachment that follows provides web links to useful legislation, regulation, and guidance documents.

Sincerely,

Anjala Puvananathan
Director, Ontario Region
Canadian Environmental Assessment Agency

Attachment – Useful Legislation, Regulation, and Guidance Documents

Attachment – Useful Legislation, Regulation, and Guidance Documents

For more information on CEAA 2012, please access the following links on the Canadian Environmental Assessment Agency's (the Agency) website:

Overview of CEAA 2012

<http://www.ceaa.gc.ca/default.asp?lang=En&n=16254939-1>

Regulations Designating Physical Activities, and
Prescribed Information for a Description of a Designated Project Regulations
<http://www.ceaa.gc.ca/default.asp?lang=En&n=9EC7CAD2-1>

If your project is in a federally designated wildlife area or migratory bird sanctuary please check section 1 of the Regulations, which details the designated projects specific to those locations.

If it appears that CEAA 2012 may apply to your proposed project, you must provide the Agency with a description of the proposed project. Please see the link below to the Agency's guide to preparing a project description.

Guide to Preparing a Description of a Designated Project

[http://www.ceaa.gc.ca/63D3D025-2236-49C9-A169-DD89A36DA0E6/Guide to Preparing a Description of a Designated Project under CEAA 2012.pdf](http://www.ceaa.gc.ca/63D3D025-2236-49C9-A169-DD89A36DA0E6/Guide%20to%20Preparing%20a%20Description%20of%20a%20Designated%20Project%20under%20CEAA%202012.pdf)



June 26, 2015

Anjala Puvananathan
Director, Ontario Region
Canadian Environmental Assessment Agency
55 St. Clair Avenue East, Suite 907
Toronto ON M4T 1M2

Re: City of Elliot Lake Waste Management Plan Environmental Assessment

Dear Anjala Puvananathan,

The City of Elliot Lake has initiated a study under the *Environmental Assessment Act (EA)* to identify long term disposal capacity for its solid waste. A copy of the draft Environmental Assessment Report for this study is enclosed with this letter. The City is seeking comments on the draft EA report prior to submission to the Ministry of Environment for approval.

This study has been carried out in accordance with the requirements of the *Environmental Assessment Act*. A copy of the draft EA report is also posted on the City of Elliot Lake website. For further information on the study or to submit comments regarding the draft report, please contact:

John Smith
Project Manager
Exp Services, Inc.
1595 Clark Boulevard
Brampton, ON L6T 4V1
Tel: (905) 793-9800
E-mail: john.smith@exp.com

Under the Freedom of Information and Protection of Privacy Act and the Environmental Assessment Act, unless otherwise stated in the submission, any personal information such as name, address, telephone number and property location included in a submission will become part of the public record files for this matter and will be released, if requested, to any person.

Sincerely,

A handwritten signature in black ink, appearing to read 'John Smith', is written over a light blue horizontal line.

John Smith
Project Manager
exp Services Inc.

**Ministry of Tourism,
Culture and Sport**

Culture Services Unit
Programs and Services Branch
401 Bay Street, Suite 1700
Toronto ON M7A 0A7
Tel: 416 314 7643
Fax: 416 212 1802

**Ministère du Tourisme,
de la Culture et du Sport**

Unité des services culturels
Direction des programmes et des services
401, rue Bay, Bureau 1700
Toronto ON M7A 0A7
Tél: 416 314 7643
Télééc: 416 212 1802



09 July 2015

Via Email

John Smith
Project Manager
Exp Services Inc
1595 Clark Blvd
Brampton, ON L6T 4V1
john.smith@exp.com

Dear Mr. Smith:

Our File No. : 0003086
Proponent : City of Elliot Lake
Subject : Individual EA for the Solid Waste Management Plan and Expansion of the Existing Solid Waste Disposal Site
Location : Approximately 1 km north of Esten Lake, City of Elliot Lake, District of Algoma

As part of the *Environmental Assessment Act* process, the Ministry of Tourism, Culture and Sport (MTCS) has an interest in the conservation of cultural heritage resources including archaeological resources, built heritage resources and cultural heritage landscapes

Thank you for circulating the draft Terms of Reference (ToR) for the above-noted project and providing MTCS with the opportunity to review them. We offer the following comments.

Project Summary

The City-owned solid waste disposal site, located 1.5 km south of the City of Elliot Lake and 1 km north of Esten Lake is expected to reach capacity by 2017. The alternatives presented in the draft ToR deal with solid waste disposal methods that will meet the City's needs for the next 20 to 25 years.

The preferred alternative is to enlarge the existing solid waste disposal site by expanding the area to the southeast.

Comments

6.1 Social-Cultural-Economic Environment

The protection of cultural heritage resources falls within this segment of the EA process. Yet Table 4 does not list the consideration of archaeological resources, built heritage resources or cultural heritage landscapes as screening criteria.

Table 4 should be modified by adding cultural heritage resources and the associated studies (archaeological assessments and heritage impact assessments); all subsequent tables created

for each alternative presented should be modified accordingly as should all sections listing and describing social/cultural components. Since the self-screening identified that, as the project currently stands, there is no need for any assessments, this could be recorded as “N/A” within the tables.

MTCS acknowledges that the draft ToR speaks to cultural heritage resources in Section 8.5. However, including this as a criteria in each of the tables provides the reader immediate information on this matter.

10 Potential Environmental Effects

In Section 10.5.5, please replace “recognised” with “licensed consultant”, as only this category of archaeologist is permitted, under the *Ontario Heritage Act*, to provide consulting services for archaeological assessments.

Mapping of Study Area

It would be beneficial to provide a legal description so as to facilitate accurate reference to the subject property.

Figures 1 and 3 of the Existing Conditions Report indicate a larger area for the proposed expansion than what is depicted in Figure 5 (entitled Drawing No. 4). Has the expansion area been reduced in the intervening time that these documents were issued? Please clarify.

Final Remarks

Thank you for the opportunity to comment on the draft Terms of Reference. If they are further modified, we would be pleased to provide additional comments.

Should you have any questions on the above, please feel free to contact the undersigned.

Yours truly,

Katherine Kirzati
Heritage Planner
katherine.kirzati@ontario.ca

July 14, 2015

MEMORANDUM

To: Andrew Gentile,
EA Project Coordination Section
EAAB

From: Barb Slattery
APEP, Technical Support
West Central Region

**RE: Draft EA Document
City of Elliot Lake Solid Waste Management Plan
Study Report**

As per your request of June 22, 2015 the Draft Study Report prepared by **exp** Services Inc. has been reviewed and the following comments are provided for your consideration.

Following the completion of the Solid Waste Management Plan in 2012, the City moved forward on two fronts: to implement actions that will divert waste from final disposal and assess options for increasing final disposal capacity. Recognizing that diversion efforts while worthwhile, would not address the current capacity issues by 2017, the City also actively pursued a further assessment of options for increasing capacity. To that end, the City initiated an EA process in 2013 to confirm the preferred option of increasing landfill capacity at the existing facility.

Capacity expansion alternative methods that were further investigated included:

- Expansion of the landfill to the north and south;
- Expansion of the landfill to the west;
- Expansion of the landfill to the southwest;
- Expansion of the landfill to the southeast; and
- Vertical expansion.

The initial assessment determined that expansion to the north and south would not provide sufficient capacity to meet needs for the next 25 years. Similarly, expansion to the west would be minimal due to the presence of an unevaluated wetland, high water table and possible interference of the existing sand filter system for leachate treatment. Vertical expansion was also discarded as it would result in grades that would be too steep for the safe operation of landfill equipment. This resulted in the further consideration of the southeast and east expansion options which concluded that expansion to the southeast will be pursued as costs associated with a simple eastern expansion would be greater due to the need for excavation.

The EA states that more leachate will be generated due to the expansion and continued deposition of waste in this location. While it is intended that leachate will continue to be directed

to the existing sand filter, in the event that all of the leachate is not being captured, an additional leachate collection system would be constructed at a later time, with leachate being directed to the sand filter or to the municipal sewage treatment facility.

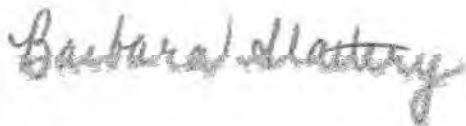
The consultant should be asked to advise whether it is possible to provide a more precise estimate as to how leachate production will change if the expansion proceeds as planned, and estimate the likelihood that either the collection system and/or sending leachate to the sewage treatment facility will be required. This is reasonable to request as an assessment of the ability to expand the existing sand filter and/or construct the required leachate collection system should be at least preliminarily discussed and shown to be viable as it is a consequence of the proposed expansion. Similarly, there should be at least a cursory description as to how leachate would be sent to the sewage treatment facility (trucked vs. piped), what the impacts of this will be and with confirmation of available reserve treatment capacity for leachate at the facility. At present, the document states that these issues will be addressed at the Part V ECA phase. Given the importance of this as part of the preferred alternative, it is not unreasonable to request that its viability be demonstrated in at least a preliminary manner as part of the EA.

It is also expected that the final EA document will contain all of the figures that are referenced in the draft, but were not included.

Considerable attention has been given to the discussion of monitoring, reporting and response protocols. As this is an existing landfill, these matters are already being addressed through the existing Approval A560810 by conditions 45 through 57. It is not clear whether the Draft EA is proposing to address these matters through different conditions. If that is the case, the final EA should include some discussion as to the requirements of the current conditions of approval, and why changes are being proposed.

Regarding stakeholder and First Nations consultation, the Draft EA is somewhat scant in the way it has documented the notification and consultation that has taken place. A list of the First Nations that were consulted has been provided but the only documentation is a table that provides a summary description of the issues that were raised. The final EA should include a more complete record of all consultation including copies of the notices that were initially sent out and the information that was provided, records of any correspondence received, and where issues were raised, the manner in which those issues have been or are going to be addressed.

This concludes the review of the Draft EA document. Should you have questions or wish to discuss these comments, please contact me either at (905) 521-7864 or at Barbara.slattery@ontario.ca



cc. Rosanna White, NR

Ministry of the
Environment
and Climate Change

Environmental Approvals
Branch
135 St. Clair Ave West
1st Floor, Toronto ON
M4V 1P5
Tel.: 416 314-8001
Fax: 416 314-8452

Ministère de l'Environnement et
de
l'Action en matière de
changement climatique

Direction des autorisations
environnementales
135, avenue St. Clair Ouest
Étage 1 Toronto ON M4V 1P5
Tél. : 416 314-8001
Télééc. :416 314-8452



July 17, 2015

MEMORANDUM:

TO: Andrew Gentile, Special Project Officer
Environmental Assessment Project Coordination Section
Environmental Assessment and Approvals Branch

FROM: Dickson Odame-Osafo, P. Eng.
Senior Engineer, Waste Media,
Environmental Approvals Branch

RE: REVIEW OF PROPOSED DRAFT EA FOR THE CITY OF ELLIOT LAKE SOLID
WASTE MANAGEMENT PLAN ENVIRONMENTAL ASSESSMENT
EA FILE NO. 02-08-01 AND EAIMS NO. 07052

I have completed a review of the document entitled "*City of Elliot Lake (City) Solid Waste Management Plan, Draft EA, dated June, 2015 (Report), prepared by Exp Services Inc.* It is understood that the City is the proponent of the EA and is the owner and operator of the resulting Solid Waste Management Plan (plan). The report requested the Ministry of the Environment and Climate Change (Ministry) comments as part of the public participation process. The approved Terms of Reference for the plan's Environmental Assessment, were previously reviewed and approved by the Ministry.

In completion of this review, I employed the information provided in the Ministry's document entitled "MOE Procedural Manual: Technical Review of Environmental Assessment Documents, dated March 2003". The following comments are provided:

1.0 Background

1.1 The purpose of the undertaking is to develop a long-term solid waste management plan for the City over a 25-year planning period, and it involved the development of the solid waste management plan document itself and an evaluation of various options from which a preferred facility was selected. The development of the report was completed to assess the development and operation and provides a broad scope of the project, prepared in accordance with the *Environmental Assessment Act*. The report noted that a range of alternatives were evaluated for the proposal, using evaluation methodologies and criteria to select the preferred option which met the requirements for the various components of the project. Among the alternatives, an expansion of the existing City-owned landfill site was selected as the preferred option.

The broad scope of the work considered in the environmental assessment for the undertaking, reasonably addresses impacts that may be associated with the proposal. It appears the EA will cover the requirements for the evaluation of waste management facility, and undertakes to address impacts that may be associated with the proposal. I find that the draft EA reasonably covers the scope of work provided in the approved ToR and as required under Part V, EPA approvals, subject to the following comments:

2.0 Landfill and Infrastructural System Capacities

- 2.1 The Report specifies the required capacity for the proposed expanded site to service the City's waste disposal needs over the 25-year planned period, is approximately 300,000 m³ and therefore would employ the Ontario Reg. 232/98, "*Landfill Standards, A Guideline on the Regulatory Requirements for New or Expanding Landfilling Sites*", in the design, operation, closure and post-closure care of the site. Thus, all applicable Ministry policies, standards and guidelines such as Reasonable Use Policy (Guideline B-7), etc., should be considered in the design and development of the Site under EPA.
- 2.2 The EA document/report should include an estimation of the volumetric capacity and the remaining capacity of the existing waste disposal site, as well as the volumetric capacity for the expanding fill area of 0.79 hectare, and thus to confirm the sufficiency of space within the City-owned land of 15.7 hectares site, to accommodate the entire volumetric air space required (existing remaining volume plus expansion volume) for the expanded landfill site. Please note: except for limitation on final contours, if applicable, the volumetric capacity for the landfill does not include the volume of the final cover.
- 2.3 The EA document/report should include a conceptual general site plan, defining the existing waste fill area, the proposed expansion waste fill area and subgrade contours, final contours, buffer/contaminant attenuation zones and the overall landfill site boundaries.
- 2.4 The Report specifies Comparative Evaluation Criteria for selection of the preferred alternative to deal with potential for adverse effects on components of the natural environment - groundwater and surface water quality/quantity, among others, and the mitigation included natural attenuation within the underlying thin overburden soil and/or the existing infrastructure (assumed to be the existing 1500 m² sand filter bed and its associated systems (system)). As noted in the report, it is expected to see the final design of the site during the EPA application, to include an evaluation of the system performance by modelling or alternative appropriate method, to ensure adequate attenuation of the increased leachate generation due to the landfill expansion.
- 2.5 Please note: any alteration of the existing system or installation of new system or stormwater management facilities, will require an approval under Section 20.2 of Part II.1 of the EPA.

3.0 Site Evaluation

- 3.1 The Comparative Evaluation Criteria for selection of the preferred alternative to deal with potential for adverse effects on components of the natural environment, lists examples such as geologic and hydrogeologic features and conditions, groundwater/surface water quality and quantity, etc. These components for the evaluation should include a geotechnical feasibility of the preferred alternative,

as noted in the review of the ToR, particularly, the feasibility of achieving stable subgrades for waste disposal in areas of thin overburden with possible high phreatic surface.

4.0. **Design Considerations**

4.1 Section 11.2 of the report lists the final design considerations to be applied under all relevant regulatory requirements. It should be noted the governing regulatory instrument for the design, operation, closure and post closure monitoring and inspection of the proposed landfill expansion is the O. Reg. 232/98, under the EPA approval, and thus the application for approval under EPA must evaluate all design considerations required by O. Reg. 232/98 of which the list in section 11.2 of the report, is only partial.

4.2 Section 11.2, paragraph 2 of the report also describes a perimeter berm constructed around the footprint of the expansion area, and keyed at least, 600 mm into the underlying soil for leachate containment. However, a preceding statement in this paragraph notes a thin overburden soil, and also that the subgrade of the fill area will be excavated to near the bedrock elevation. As noted in comment 3.1 above, clarify the design contradiction at the founding levels of the fill area subgrade and the perimeter berm. It is expected that detailed description of the design of the proposed leachate management system and the perimeter berm, including the soil properties such as permeability, will be provided in the EPA application.

5.0 **Compliance of Relevant Legislation**

5.1 The EA Report describes the preferred site as having part of the active landfill site area to be poorly drained and contains marshy soil - wetland and possibly standing water. The EA and hence the design of the preferred site, must ensure and confirm compliance with the "Adams Mine Lake Act".

6.0 **General**

6.1 References are made to Figures (e.g. Figures 4, 5, 6, etc.) which are not included in the report and must be available in the final EA document for review. Also, it is noticed there are repetitive designations for Appendices in the EA document/report due to the use of same letters of the alphabet for Appendices in the main body of the report as well as its attached documents. For ease of reference and to avoid confusion, appropriate designations should be used to differentiate the appendices in different places in the document/report.

If you have any questions on the above, please contact me at (416) 314-8274.

Dickson Odame-Osafo, P. Eng.

July 29, 2015

MEMORANDUM

To: Andrew Gentile
Special Project Officer
Environmental Assessment Services

From: Alisdair Brown
Regional Hydrogeologist
Technical Support Section, Northern Region

Re: Draft Environmental Assessment
Solid Waste Management Plan
Elliot Lake, Ontario

As requested, I have reviewed from a hydrogeology perspective the Environmental Assessment prepared by exp Services Inc. (*“the consultant”, “exp”*) entitled *“Draft, City of Elliot Lake, Solid Waste Management Plan, Environmental Assessment, Study Report”* dated June 2015. The assessment report includes as Appendices the following three reports also prepared by exp:

- *“City of Elliot Lake, Solid Waste Management Plan”* dated February 2012;
- *“City of Elliot Lake, Proposed Landfill Expansion Design Brief”* dated May 26, 2014; and
- *“City of Elliot Lake, Groundwater and Surface Water Assessment, Proposed Elliot Lake Landfill Expansion”* dated June 10, 2014.

Through the EA, the consultant has determined that the preferred method of waste management is increased diversion and an expansion to the existing City of Elliot Lake Waste Disposal Site. Based on ground conditions and topography, the expansion will be to the east and southeast of the existing fill area. The existing fill area is already serviced by a leachate collection system which discharges through a sand filter located on the west side of the fill area. The consultant believes that with the shallow soils at the site, the new expansion will also require a leachate collection system, and suggests that it could discharge to the existing sand filter, an expanded version of the existing sand filter, or to the nearby municipal wastewater treatment plant.

The Terms of Reference focus on an Environmental Assessment for the Municipal Waste Management Plan, and do not require a great deal of detail with respect to groundwater investigation for the alternates or the preferred alternative. As such, it is my opinion that the draft report presented generally meets the requirements of the Terms of Reference, but needs to be filled out with available groundwater information. The following specific items need to be included in the final Environmental Assessment report pertaining to the proposed landfill expansion:

- In the Groundwater Assessment, the consultant makes reference to an existing groundwater monitoring program. However, nowhere has there been provided any information on this monitoring program – neither monitoring locations, monitoring frequencies, monitoring parameters or monitoring results have been provided. This information is needed to support the contention that the existing waste disposal site is performing as designed, and that this conclusion is based on a comprehensive monitoring program;
- The consultant has proposed that the expansion will likely require leachate collection, and has suggested a likely option for treatment of the leachate would be discharge through either the existing sand filter or a newly constructed sand filter. The consultant bases this recommendation on monitoring results which illustrate the effective performance of the existing sand filter. However, no evidence of this performance in the form of the monitoring results has been presented. This data is required to support the contention that the current filter bed is performing adequately; and
- The consultant has provided recommendations for a groundwater monitoring program which will include new wells and continuing the current monitoring program. However, the existing monitoring program has not been described.

If you have any questions regarding the above comments and recommendations, do not hesitate to contact me. The purpose of the preceding review is to provide advice to the Ministry of the Environment and Climate Change regarding groundwater conditions based on the information provided in the above referenced documents. The conclusions, opinions and recommendations of the reviewer are based on information provided by others, except where otherwise specifically noted. The Ministry cannot guarantee that the information that has been provided by others is accurate or complete. A lack of specific comment by the reviewer is not to be construed as endorsing the content or views expressed in the reviewed material.

Alisdair Brown, P.Eng.
Regional Hydrogeologist

Elliot Lake Solid Waste Management EA – Summary of Comments on Draft ESR and Responses

Date / Reviewer	Comment	Response
<p>July 9, 2015 Katherine Kirzati, Heritage Planner Ministry of Tourism, Culture and Sport Culture Services Unit</p>	<p>6.1 Social-Cultural-Economic Environment</p> <p>The protection of cultural heritage resources falls within this segment of the EA process. Yet Table 4 does not list the consideration of archaeological resources, built heritage resources or cultural heritage landscapes as screening criteria.</p> <p>Table 4 should be modified by adding cultural heritage resources and the associated studies (archaeological assessments and heritage impact assessments); all subsequent tables created for each alternative presented should be modified accordingly as should all sections listing and describing social/cultural components. Since the self-screening identified that, as the project currently stands, there is no need for any assessments, this could be recorded as “N/A” within the tables.</p> <p>MTCS acknowledges that the draft ToR speaks to cultural heritage resources in Section 8.5. However, including this as a criteria in each of the tables provides the reader immediate information on this matter.</p>	<p>The following criteria were added to the evaluation criteria in Table 4 and carried forward to the other evaluation tables:</p> <ul style="list-style-type: none"> • Potential impact on cultural heritage resources • Potential impact on archaeological resources
<p>KK MTCS</p>	<p>10 Potential Environmental Effects</p> <p>In Section 10.5.5, please replace “recognised” with “licensed consultant”, as only this category of archaeologist is permitted, under the Ontario Heritage Act, to provide consulting services for archaeological assessments.</p>	<p>Edit made.</p>
<p>KK MTCS</p>	<p>Mapping of Study Area</p> <p>It would be beneficial to provide a legal description so as to facilitate accurate reference to the subject property.</p>	<p>Legal description of property added in section 2.2.1.</p>
<p>KK MTCS</p>	<p>Mapping of Study Area</p> <p>Figures 1 and 3 of the Existing Conditions Report indicate a larger area for the proposed expansion than what is depicted in Figure 5 (entitled Drawing No. 4). Has the expansion area been reduced in the intervening time that these documents were issued? Please clarify.</p>	<p>The area noted as “approximate expansion boundary” in Figures 1 and 3 of the Existing Conditions Report was an estimated possible expansion limit provided to LGL to provide context to their scope of work. The expansion boundary as described in Section 11 of the ESR is the proposed expansion boundary.</p>

Date / Reviewer	Comment	Response
<p>July 29, 2015 Alisdair Brown, P.Eng. Regional Hydrogeologist Ministry of the Environment and Climate Change</p> <p>AB MOECC</p>	<p>The Terms of Reference focus on an Environmental Assessment for the Municipal Waste Management Plan, and do not require a great deal of detail with respect to groundwater investigation for the alternates or the preferred alternative. As such, it is my opinion that the draft report presented generally meets the requirements of the Terms of Reference, but needs to be filled out with available groundwater information. The following specific items need to be included in the final Environmental Assessment report pertaining to the proposed landfill expansion:</p> <ul style="list-style-type: none"> • In the Groundwater Assessment, the consultant makes reference to an existing groundwater monitoring program. However, nowhere has there been provided any information on this monitoring program – neither monitoring locations, monitoring frequencies, monitoring parameters or monitoring results have been provided. This information is needed to support the contention that the existing waste disposal site is performing as designed, and that this conclusion is based on a comprehensive monitoring program • The consultant has proposed that the expansion will likely require leachate collection, and has suggested a likely option for treatment of the leachate would be discharge through either the existing sand filter or a newly constructed sand filter. The consultant bases this recommendation on monitoring results which illustrate the effective performance of the existing sand filter. However, no evidence of this performance in the form of the monitoring results has been presented. This data is required to support the contention that the current filter bed is performing adequately • The consultant has provided recommendations for a groundwater monitoring program which will include new wells and continuing the current monitoring program. However, the existing monitoring program has not been described. 	<p>Information on monitoring program (as per bullet) added in Section 11.3.1 of the ESR</p> <p>Summary information on monitoring results for 2011 included in Section 11.3.1. This includes a number of time-series graphs that compare “Sample Hatch,” LW 1 and LW 2 sample results for leachate indicator contaminants Fe, Mn, Na, hardness, alkalinity, nitrate and TDS. Sample results date back to 2003 (alkalinity and TDS were only monitored in 2013 and 2014).</p> <p>The “Sample Hatch” samples represent undiluted leachate. Monitoring wells LW 1 and LW 2 are located less than 30 m downgradient of the Sample Hatch. Results consistently show that contaminant levels in LW 1 and LW 2 are significantly lower than in the Sample Hatch. Given the proximity of the sample locations, it has been concluded that the sand filter bed has been effective in attenuating leachate contaminant levels.</p> <p>Information on monitoring program added in Section 11.3.1 of ESR</p>
<p>July 14, 2015 Barb Slattery APEP, Technical Support Ministry of the Environment and Climate Change</p>	<p>The consultant should be asked to advise whether it is possible to provide a more precise estimate as to how leachate production will change if the expansion proceeds as planned, and estimate the likelihood that either the collection system and/or sending leachate to the sewage treatment facility will be required. This is reasonable to request as an assessment of the ability to expand the existing sand filter and/or construct the required leachate collection system should be at least preliminarily discussed and shown to be viable as it is a consequence of the proposed expansion.</p>	<p>Discussion on increase in possible leachate generation from the expansion has been added to Section 11.3.2</p>

Date / Reviewer	Comment	Response
BS MOECC	Similarly, there should be at least a cursory description as to how leachate would be sent to the sewage treatment facility (trucked vs. piped), what the impacts of this will be and with confirmation of available reserve treatment capacity for leachate at the facility. At present, the document states that these issues will be addressed at the Part V ECA phase. Given the importance of this as part of the preferred alternative, it is not unreasonable to request that its viability be demonstrated in at least a preliminary manner as part of the EA.	Discussion on how leachate may be transported to WWTP has been added to Section 11.3.2
BS MOECC	It is also expected that the final EA document will contain all of the figures that are referenced in the draft, but were not included.	Figures 4, 5 and 6 are present in the document. These figures are not included in the "List of Figures" in the table of contents. This will be updated.
BS MOECC	Considerable attention has been given to the discussion of monitoring, reporting and response protocols. As this is an existing landfill, these matters are already being addressed through the existing Approval A560810 by conditions 45 through 57. It is not clear whether the Draft EA is proposing to address these matters through different conditions. If that is the case, the final EA should include some discussion as to the requirements of the current conditions of approval, and why changes are being proposed.	The proposed landfill expansion is primarily to the east, where site conditions indicate shallow soils in a rather narrow and relatively steep valley. There is therefore a risk of leachate seepage to surface in the east end of the fill area, which is why the EA proposes limiting leachate expansion in this direction through the use of leachate barriers and capture systems. The groundwater and surface water assessment provide some preliminary estimates as to what should be included in the monitoring program, but this will be addressed further in detailed design. Once those details are provided, whether or not conditions 45 through 57 or Schedule B of the approval should be modified (or how) will be discussed.
BS MOECC	Regarding stakeholder and First Nations consultation, the Draft EA is somewhat scant in the way it has documented the notification and consultation that has taken place. A list of the First Nations that were consulted has been provided but the only documentation is a table that provides a summary description of the issues that were raised. The final EA should include a more complete record of all consultation including copies of the notices that were initially sent out and the information that was provided, records of any correspondence received, and where issues were raised, the manner in which those issues have been or are going to be addressed.	Copy of correspondence to be added.
July 17, 2015 Dickson Odame-Osafo, Senior Engineer, Waste Media, Environmental Approvals Branch Ministry of the Environment and Climate Change	Landfill and Infrastructural System Capacities The Report specifies the required capacity for the proposed expanded site to service the City's waste disposal needs over the 25-year planned period, is approximately 300,000 m3 and therefore would employ the Ontario Reg. 232/98, "Landfill Standards, A Guideline on the Regulatory Requirements for New or Expanding Landfilling Sites", in the design, operation, closure and post- closure care of the site. Thus, all applicable Ministry policies, standards and guidelines such as Reasonable Use Policy (Guideline B-7), etc., should be considered in the design and development of the Site under EPA.	Reference to Guideline B-7 and Procedure B-7-1 added in Section 13.

Date / Reviewer	Comment	Response
DOO MOECC	The EA document/report should include an estimation of the volumetric capacity and the remaining capacity of the existing waste disposal site, as well as the volumetric capacity for the expanding fill area of 0.79 hectare, and thus to confirm the sufficiency of space within the City-owned land of 15.7 hectares site, to accommodate the entire volumetric air space required (existing remaining volume plus expansion volume) for the expanded landfill site. Please note: except for limitation on final contours, if applicable, the volumetric capacity for the landfill does not include the volume of the final cover.	The EA report estimates the remaining volumetric capacity of the landfill site and the anticipated required additional capacity required.
DOO MOECC	The EA document/report should include a conceptual general site plan, defining the existing waste fill area, the proposed expansion waste fill area and subgrade contours, final contours, buffer/contaminant attenuation zones and the overall landfill site boundaries.	Site plan provided in Section 11.2 Final contours would not be visible in the site plan map and have therefore been provided in separate figure.
DOO MOECC	The Report specifies Comparative Evaluation Criteria for selection of the preferred alternative to deal with potential for adverse effects on components of the natural environment - groundwater and surface water quality/quantity, among others, and the mitigation included natural attenuation within the underlying thin overburden soil and/or the existing infrastructure (assumed to be the existing 1500 m2 sand filter bed and its associated systems (system)). As noted in the report, it is expected to see the final design of the site during the EPA application, to include an evaluation of the system performance by modelling or alternative appropriate method, to ensure adequate attenuation of the increased leachate generation due to the landfill expansion.	The final design of the site (to be submitted with the EPA application) will include an evaluation of the system performance by modelling or alternative appropriate method, to ensure adequate attenuation of the increased leachate generation due to the landfill expansion
DOO MOECC	Please note: any alteration of the existing system or installation of new system or stormwater management facilities, will require an approval under Section 20.2 of Part II.1 of the EPA.	Mention of this approval requirement has been added to Section 13.
DOO MOECC	<p>Site Evaluation</p> <p>The Comparative Evaluation Criteria for selection of the preferred alternative to deal with potential for adverse effects on components of the natural environment, lists examples such as geologic and hydrogeologic features and conditions, groundwater/surface water quality and quantity, etc. These components for the evaluation should include a geotechnical feasibility of the preferred alternative, as noted in the review of the ToR, particularly, the feasibility of achieving stable subgrades for waste disposal in areas of thin overburden with possible high phreatic surface.</p>	A Geotechnical criteria was added as an evaluation criteria in Table 12, which compares Method 3 – Eastward Expansion and Method 4 – Southwest Expansion.
DOO MOECC	<p>Design Considerations</p> <p>Section 11.2 of the report lists the final design considerations to be applied under all relevant regulatory requirements. It should be noted the governing regulatory instrument for the design, operation, closure and post closure monitoring and inspection of the proposed landfill expansion is the O. Reg. 232/98, under the EPA approval, and thus the application for approval under EPA must evaluate all design considerations required by O. Reg. 232/98 of which the list in section 11.2 of the report, is only partial.</p>	Reference added to section 13, which lists approval requirements. Wording around list of design considerations softened to note that the list includes but is not limited to the listed design considerations.

Date / Reviewer	Comment	Response
DOO MOECC	Section 11.2, paragraph 2 of the report also describes a perimeter berm constructed around the footprint of the expansion area, and keyed at least, 600 mm into the underlying soil for leachate containment. However, a preceding statement in this paragraph notes a thin overburden soil, and also that the subgrade of the fill area will be excavated to near the bedrock elevation. As noted in comment 3.1 above, clarify the design contradiction at the founding levels of the fill area subgrade and the perimeter berm. It is expected that detailed description of the design of the proposed leachate management system and the perimeter berm, including the soil properties such as permeability, will be provided in the EPA application.	The specifications for the berm footings will be established only after completion of a comprehensive geotechnical investigation. In shallow soils, it is likely that the berm will be keyed into bedrock, even if the soils are >600 mm in places. In thicker soils, the 600 mm specification may be more appropriate, but only after completion of the geotechnical investigation and design.
DOO MOECC	<p>Compliance of Relevant Legislation</p> <p>The EA Report describes the preferred site as having part of the active landfill site area to be poorly drained and contains marshy soil - wetland and possibly standing water. The EA and hence the design of the preferred site, must ensure and confirm compliance with the "Adams Mine Lake Act".</p>	<p>The basis for this comment is unclear. The ESR and supporting documents do not state that the active landfill site area is poorly drained and contains marshy soil/wetland and possibly standing water. It does note wetland conditions west of the site, but not within the active landfilling area.</p> <p>The comment makes reference to the Adams Mine Lake Act. The site of the proposed landfill expansion is approximately 470 km (by highway) from the Adams Lake Mine, and Adams Lake Mine is not noted or under consideration in the ESR, therefore the Adams Mine Lake Act will not be contravened.</p>
DOO MOECC	<p>General</p> <p>References are made to Figures (e.g. Figures 4, 5, 6, etc.) which are not included in the report and must be available in the final EA document for review.</p>	<p>Figures 4, 5 and 6 are present in the document. However, these figures are not listed in the "List of Figures" in the table of contents. This will be corrected.</p>
DOO MOECC	<p>Also, it is noticed there are repetitive designations for Appendices in the EA document/report due to the use of same letters of the alphabet for Appendices in the main body of the report as well as its attached documents. For ease of reference and to avoid confusion, appropriate designations should be used to differentiate the appendices in different places in the document/report.</p>	<p>The appendix designations will be updated.</p>
<p>Andrew Gentile Ministry of the Environment and Climate Change</p> <p>(Comments in report)</p>	<p>Table 7: Evaluation of Landfill Expansion Alternative & Table 8: Evaluation of New Landfill Alternative</p> <p>Re: Environmental burden at a global or macro-environmental scale</p> <p>Measure of "Diversion of organics and landfill gas collection systems can reduce emissions" - These are not aspects of the proposed project. Organics collection is a separate policy by the City with separate funding. Landfill gas collection is not being proposed and would only come into the picture of the minister were to impose such a condition; which is unlikely on such a small landfill.</p>	<p>Reference to organics diversion and gas collection removed.</p>

Date / Reviewer	Comment	Response
AG MOECC	Table 7: Evaluation of Landfill Expansion Alternative & Table 8: Evaluation of New Landfill Alternative Re: Net system costs per tonne of waste managed including facility costs, residual disposal, etc. potential impact of "Similar capital and operating cost to existing landfill site (\$79/tonne)" - Please clarify this figure. Section 5.5 states \$174/tonne.	The value in Section 5.5 included both collection and disposal. This has been clarified in Section 5.5.
AG MOECC	Table 7: Evaluation of Landfill Expansion Alternative & Table 8: Evaluation of New Landfill Alternative Re: Potential to increase diversion rate from disposal and/or make best use of residual (post-diversion) waste materials This is independent of landfill expansion and would happen anyway. Keep it simple and consistent to make it easier for reader to compare. Avoid extraneous comments and interpretations like this.	Entry updated to indicate no impact on diversion.
AG MOECC	10.1 Overview You'll see I've changed "will" to "would" throughout Section 10. Stating "will" is considered predecisional – that is, it is presuming approval of the project. We can't have that presumptuous language in place until project has been approved, so the language needs to be conditional.	Agreed
Sepeedeh Shahabadi Ministry of the Environment and Climate Change (Comments in report)	"Purpose of the Undertaking" Section (p3) deleted	Agreed
SS MOECC	Figure 1: Study Area Map (p4) Add a scale to this figure	New study area map prepared. Includes scale.
SS MOECC	2.2.1 Waste Disposal Site, p5 2 nd paragraph Re fill rate - Also state in tonnes	Fill rate in tonnes added.
SS MOECC	2.2.2.1 Residential Update MNR name	Updated
SS MOECC	3.1.3 Environmental Assessment Process This does not include the steps associated with the ToR. Please add. Add: "more information on consultation conducted for this process is available in section 14 and in the Record of Consultation."	Line added to indicate TOR development. Sentence with respect to section 14 and consultation added.
SS MOECC	Table 3: Terms of Reference Requirements Consistency of periods in this column	Periods updated
SS MOECC	4.2 Natural Environment Re Heron nesting sites - State locations for consistency with other bullets	added
SS MOECC	5.3 Landfill Re bullets on landfill regulatory requirements - This should be moved to section 13, Required Approvals, not appropriate here since requirements are not equally described equally for the other approaches.	Agreed, information moved to section 13

Date / Reviewer	Comment	Response
SS MOECC	Table 5: Evaluation of Thermal Processing Disposal Alternative Re: Consumption / preservation of non-renewable environmental resources net result of “No significant impact or benefit to recycling” - What does this mean? Please revise with more clarity.	Clarified.
SS MOECC	Table 9: Evaluation of Waste Export Alternative Re: measures to mitigate for ‘Environmental burden at a global or macro-environmental scale’ and ‘Consumption / preservation of non-renewable environmental resources’ - Use of bio diesel or other carbon neutral alternative fuels.	Mitigation measures noted.
SS MOECC	Table 9: Evaluation of Waste Export Alternative Re: Potential for destruction or disruption of sensitive terrestrial and/or aquatic habitats at an eventual site - This logic is limited in that it only considers local impacts. This is simply outsourcing impacts to another community and this and this should be explained. The other site would be filled or need to expand more quickly due to this additional input.	Clarified
SS MOECC	Table 9: Evaluation of Waste Export Alternative Re: Sensitivity of system costs and affordability to external financial influences - Add fuel price susceptibility. See table 5.	Added
SS MOECC	Table 11: Summary of Alternative Disposal System Advantages and Disadvantages Re: definitions White crescent moon definition should be added to this key.	White crescent moon added in error. Removed.
SS MOECC	Table 12: Comparative Evaluation of Alternative Methods Missing entry in cell in ‘preferred’ column	Missing entry added.

Jean Louis Gaudet

From: Jean Louis Gaudet
Sent: January-26-16 12:03 PM
To: Jean Louis Gaudet
Subject: FW: Elliot Lake draft EA - comment back from Katherine Kirzati

From: Gentile, Andrew (MOECC) [<mailto:Andrew.Gentile@ontario.ca>]
Sent: Thursday, December 17, 2015 3:15 PM
To: John Smith <john.smith@exp.com>
Subject: Elliot Lake draft EA - comment back from Katherine Kirzati

Hi John – Please see below and address in the Final EA:

Thanks, Andrew.

I'm ok with the proponent's responses regarding cultural heritage resources. I would add the additional comment, which is par for the course for any undertaking:

If deeply buried archaeological finds are discovered during construction activities, MTCS should be notified promptly as a licensed archaeologist may be required to immediately monitor the site.

In the event that human remains are found, the local police must be notified immediately, followed at once by notification to MTCS.

Andrew Gentile | Special Project Officer | Environmental Assessment Services | Ontario Ministry of the Environment and Climate Change
135 St. Clair Ave. W. 1st Floor, Toronto ON M4V 1P5 | T: 416.314.8221 F: 416.314.8452 E: andrew.gentile@ontario.ca

Appendix F: Natural Heritage Inventory Report

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ELLIOT LAKE LANDFILL EXPANSION EXISTING CONDITIONS REPORT

prepared for



by



APRIL 2015
LGL PROJECT TA8444

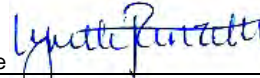
ELLIOT LAKE LANDFILL EXPANSION EXISTING CONDITIONS REPORT

Digital signature



Arnel Fausto, M.Sc.
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APRIL 2015
LGL PROJECT TA8444

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1.0 INTRODUCTION

The existing municipal landfill, which services the community of Elliot Lake, began operations in 1982 and is expected to reach capacity in 2017 (Pinchin Environmental, 2012). As a result, the City of Elliot Lake (City) has initiated an Environmental Assessment (EA) for the proposed expansion of the landfill in accordance with Ontario Regulation 101/07 under the *Environmental Assessment Act*. The landfill is located on Scott Road, within the municipal boundaries of the City in Esten Township (Figure 1). The site receives non-hazardous, solid industrial, commercial and domestic waste and is currently approved for the disposal of 842,000m³. The landfill site occupies an area of 15.7 ha within in an elongated bedrock depression open to the east and west, and is confined to the north and south by steep, treed slopes of bedrock. Surface drainage is directed toward a wetland feature located on the west side of the landfill site which drains through First Creek and Angel Creek to Esten Lake.

LGL Limited has been retained by exp Services Inc. to conduct an investigation of the natural environment in the immediate vicinity of the Elliot Lake Landfill in relation to the proposed expansion of the landfill site. The expansion of landfill capacity is anticipated to occur within the property already owned by the City, and designated as landfill. The information contained herein is intended to identify and assess the potential effects of the proposed undertaking consistent with the process described in the Government of Ontario's *Guide to Environmental Assessment Requirements for Waste Management Projects* (2007). On May 11, 2009 the Minister of the Environment approved the terms of reference (available at: www.cityoffelliottlake.com) for the City of Elliot Lake Waste Management Plan.

LGL initially conducted a desktop review and site screening of the landfill property in 2012. In response to Ministry of Natural Resources and Forestry (MNRF) comments and further consultation (Appendix F), additional field investigation was conducted in 2014 to document existing conditions as they pertain to natural heritage. This work was carried out according to the approved terms of reference for the project and the requirements of the Environmental Assessment Act.

1.1 POLICY CONTEXT

The legislative context of the proposed undertaking is governed by the Provincial Policy Statement and Ontario Regulation 101/07 as summarized below.

1.1.1 Provincial Policy Statement

Section 1.6.8 of the Provincial Policy Statement (MMAH 2014) states that the location and design of waste management facilities are governed by provincial legislation as documented in the excerpt of the policy below:

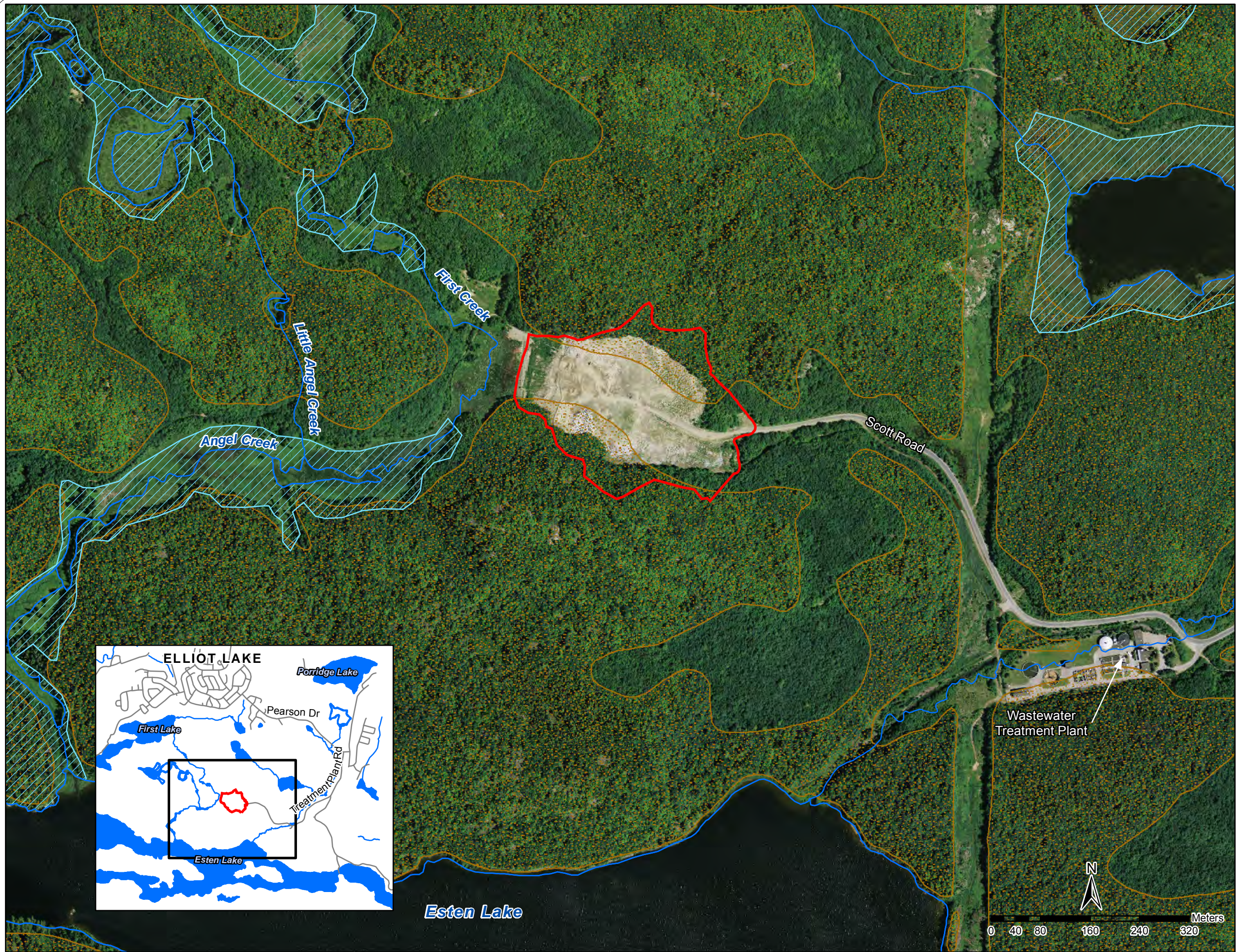
1.6.10.1 Waste management systems need to be provided that are of an appropriate size and type to accommodate present and future requirements, and facilitate, encourage and promote reduction, reuse and recycling objectives. Planning authorities should consider the implications of development and land use patterns on waste generation, management and diversion.

Waste management systems shall be located and designed in accordance with provincial legislation and standards.

1.1.2 Ontario Regulation 101/07 Waste Management Projects

Ontario Regulation 101/07 for Waste Management Projects, Part II designates the undertakings related to waste disposal for which an EA must be conducted. Given that the City has identified the need for an added 375,000m³ of landfill capacity in order to accommodate an additional 25 years of waste, the project meets the definition of an undertaking for which a full EA is necessary (Part II, Section 4.0):

4. A change to a landfilling site or dump is defined as a major commercial or business enterprise or activity and is designated as an undertaking to which the Act applies, if the total waste disposal volume of the landfilling site or dump after the change would exceed by more than 100,000 cubic metres the total waste disposal volume that the landfilling site or dump was authorized to have under the Environmental Protection Act before the change. O. Reg. 101/07, s. 4.



LEGEND

-  Approximate Expansion Boundary
-  Unevaluated Wetland (LIO, 2012-11-14)
-  Wooded Area (LIO, 2012-11-14)
-  Waterbody (LIO, 2012-11-14)
-  Watercourse (LIO, 2012-11-14)

Ortho Source: Forest Resource Inventory, MNR
 Produced by LGL Limited under Licence with the
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Elliot Lake Landfill

Existing Conditions:
 Background Review



Project	TA8444	Figure	1
Date	December, 2014	Prepared By:	KC
Scale	1:6,000	Verified By:	LKR



2.0 BACKGROUND REVIEW

Documentation of existing conditions included a desktop assessment of orthoimagery and a review of background data from secondary sources to establish natural heritage conditions within the area. The review of existing background documentation and data layers, including the following resources:

- Site aerial imagery;
- Mapping of physiography and soils;
- Ontario Breeding Bird Atlas (OBBA) dataset;
- FrogWatch Canada database;
- The Crown Land Use Policy Atlas;
- Provincial Water Quality Network (PWQN);
- Ministry of Northern Development and Mines Ontario Geologic Survey maps; and,
- MNR Natural Heritage Information Centre (Biodiversity Explorer) database;
- MNR Natural Resources and Values Information System (NRVIS);
- MNR Blind River Area Office (J. Trottier, pers. comm., 2013);
- Land Information Ontario (LIO) data layers;
- Provincial Parks website;
- Provincial Policy Statement: Section 1.6.10 Waste Management (2014);
- Annual Monitoring Report for the Elliot Lake Landfill (2011);
- City of Elliot Lake Waste Management Plan, Environmental Assessment Terms of Reference (2008);
- City of Elliot Lake Waste Management Plan, Environmental Assessment Terms of Reference Record of Consultation (2008);
- City of Elliot Lake Official Plan (2006); and,
- Report on the public Hearing on the Application for Approval of a Waste Disposal Site, Town of Elliot Lake (1982).

The study area defined for the purpose of this report focused on the area proposed for landfill expansion; however, in the review of background information a larger area was investigated to determine where adjacent natural features exist that may experience impact from activities associated with the landfill expansion and operation.

Secondary source information was compiled and analyzed in order to develop a general description of the terrestrial and aquatic ecosystems, vegetation and wildlife within the project area. In addition, MNRF was consulted to confirm information collected and/or to provide additional information regarding the natural heritage system and potential for species at risk in the project area.

The following subsections summarize information pertaining to natural environment obtained for the project area through desktop review and consultation.

2.1 PHYSIOGRAPHY

The study area is situated on Precambrian bedrock sloping from east to west (Pinchin, 2012). The stratigraphy of the area has been described by Morrison Beatty Limited (1980) as a bedrock depression underlain with a fine to medium silt overlying sandy glacial till.

2.2 PROVINCIAL PARKS

Within the Crown Land Use Policy Atlas administered by the Ministry of Natural Resources (MNRF), and the Provincial Parks and Conservation Reserves layers maintained by Land Information Ontario, there were no provincial parks found within a 10 km x 10 km area that included the landfill site. Likewise, a search of the Ontario Provincial Parks website did not identify any provincial parks adjacent to the site.

2.3 CONSERVATION RESERVES

Based on the Crown Land Use Policy Atlas, administered by the Ministry of Natural Resources (MNRF), and the Provincial Parks, and Conservation Reserves layers maintained by Land Information Ontario (LIO) there were no conservation reserves identified within a 10km x 10 km area that included the landfill site.

2.4 AREAS OF NATURAL AND SCIENTIFIC INTEREST (ANSIs)

Records contained within the MNRF Natural Resources and Values Information System (NRVIS) did not include any Earth Science or Life Science ANSIs located adjacent to the site. Communication with the Blind River Area MNRF office (J. Trottier, 2013) confirmed this finding.

2.5 WETLANDS

Using the resources listed in Section 2.0 the review area was screened for wetland features (Figure 1). Provincially significant wetlands (PSWs) are designated as such through a provincial protocol developed by the MNRF; namely, the Ontario Wetland Evaluation System (OWES). No PSWs were documented within the vicinity of the landfill site as shown in Figure 1 in NRVIS or LIO mapping available through the MNRF. Locally significant wetlands were considered to be those documented in the LIO database as evaluated but not provincially significant. No locally significant wetlands were documented within the vicinity of the landfill site as shown in Figure 1. Unevaluated wetlands were the only type of wetlands documented within the area investigated through the database search.

Communication with the Blind River Area MNRF office (Trottier, 2013) indicated that no wetlands within Esten Township have ever been evaluated for significance; thus, all wetlands documented are identified as ‘unevaluated’.

2.6 WOODLANDS

To identify woodlands in the vicinity of the site, LIO data layers were consulted. The natural area within the site boundary and adjacent land is comprised of large contiguous woodlands typical of this area. This area falls within the Northshore Forest MNRF Forest Management Unit. No information was found to suggest an evaluation of significance for woodlands in the area had been completed.

2.7 VALLEYLANDS (TOPOGRAPHY)

Using contour mapping available in LIO data layers it was determined that the site consists of a relatively flat area currently used as the receiving area for waste to the west of the property boundary (Appendix A, Figure 1). The area within the property boundary to the northeast and southeast of the active landfill area slopes significantly to form steep ridges on either side. The overall elevation difference that exists on the site extends up to 50m with the bedrock depression containing the active landfill area sloping from east to west, draining toward the adjacent wetland.

2.8 ENVIRONMENTALLY SIGNIFICANT AREAS

City of Elliot Lake Official Plan was used to document areas considered environmentally significant to include:

- Environmental Protection Areas;
- Deer Yards;
- Moose Aquatic Feeding Areas;
- Moose Wintering Areas; and,
- Areas identified as providing habitat for ‘sensitive wildlife’.

Features documented in the area of the landfill include an environmentally significant area for sensitive wildlife to the west (Figure 2). It appears this area is associated with First Creek. No further detail was provided regarding species utilizing the area.

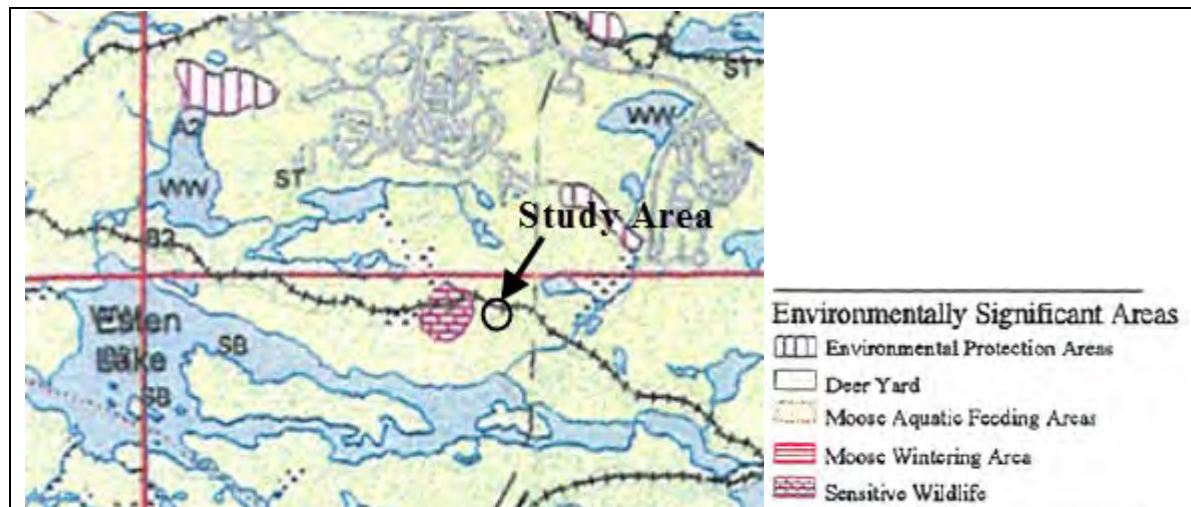


Figure 2. Environmentally Significant Areas (sensitive wildlife) in the area of the Landfill (as identified in the City of Elliot Lake Official Plan, Planscape 2006, Schedule C).

2.9 SURFACE WATER FEATURES

The LIO data layer was used to determine the location of waterbodies and their proximity to the landfill site as shown in Figure 1. Drainage at the landfill site is documented as flowing in a westward direction to the adjacent wetland feature where it drains via First Creek to Angel Creek and then into Esten Lake (Pinchin, 2012). Consultation with the Area Management Biologist with the Blind River Area MNR (Mr. Jim Trottier) indicated that fish habitat is likely present in First Creek and the unnamed tributaries and wetlands in the vicinity of the landfill (Trottier, 2013). Mr. Trottier also indicated that Esten Lake is designated as a Lake Trout lake by MNR and is also known to provide habitat for Lake Whitefish, Cisco, Rainbow Smelt, Northern Pike, Longnose Sucker, White Sucker, Rock Bass, Pumpkinseed, Smallmouth Bass, Yellow Perch, Iowa Darter and Cyprinidae. According to Mr. Trottier, the other unnamed watercourses within 1km of the lake likely provide habitat for cyprinids and other small-bodied fish species at a minimum.

In 1998, the City of Elliot Lake constructed a leachate collection and sand filter treatment system at the west boundary of the landfill to minimize impacts on the natural environment. The sand filter bed is designed to decrease the concentration of metals, convert ammonia and nitrite into nitrate, and reduce the concentration of suspended solids. The landfill operates under the Amended Provisional Certificate of Approval No. A560810 (2006) which includes a number of conditions to minimize adverse effects on the natural environment including the maintenance of the leachate collection and sand filtration system, and monitoring of the leachate, surface water and groundwater. The annual monitoring report for 2011 indicated the following results where surface water quality was monitored (Pinchin 2012):

- Surface water collected at four stations (including two background and two exposure stations) in 2011 was found to frequently exceed the provincial water quality objectives (PWQOs) for iron, aluminium, cadmium and cobalt; however, water samples collected from the background stations also exceeded the PWQOs for these parameters. Therefore, the report concluded that landfill leachate impacts were not readily distinguishable in the 2011 surface water quality monitoring effort;

- Analytical results for surface water quality at sites downstream of the landfill in 2011 were similar to historical results (spring, summer and fall 2004-2010) for those stations; and,
- A trend was noted of increasing trace metal levels in surface water samples collected both upstream and downstream of the landfill site. The report conceded that the trend of increasing trace metal levels in surface water is not solely attributable to landfill leachate impacts.

2.10 WILDLIFE AND WILDLIFE HABITAT

Wildlife Habitat is defined by MNRF as ‘an area where plants, animals and other organisms live or have the potential to live and find adequate amounts of food, water, shelter and space to sustain their population, including an area where a species concentrates at a vulnerable point in its annual or life cycle and an area that is important to a migratory or non-migratory species’ (OMNR, 2000). The project study area is located within Ecoregion 5E as defined by MNRF; therefore, significant wildlife habitat (SWH) within the project area is that which meets the criteria referenced in the Ecoregion 5E Criterion Schedule established by MNRF.

The identification of wildlife habitat during the review of background information included the use of the databases listed in Table 1 for the purpose indicated.

Table 1: Records of Wildlife Habitat Searched.

Database	Records Searched	Results
Bird Studies Canada	Important Bird Areas	The site is located greater than 30km from the nearest IBA (Manitoulin Island North Shore).
Ontario Breeding Bird Atlas	Data for 10x10 km square (17LM73)	Included in Table 1, Appendix D
Frog Watch Ontario	All of Ontario	No records available for the project area.
MNRF Biodiversity Explorer	Wildlife Concentration Areas	None identified in 10x10km area that included the landfill site.
MNRF Renewable Energy Atlas	Bat Hibernacula Crown Game Preserves Wilderness Areas Enhanced Management Areas	The nearest known hibernacula are greater than 25km from the landfill site. None of the other features listed were found within the study area.
MNRF NHIC Biodiversity Explorer	Species at Risk	Milksnake (SC)
Ministry of Northern Development and Mines	Abandoned mines – these features can provide wildlife habitat in the form of bat hibernacula and wildlife denning sites.	No mapped abandoned mines overlap into the project area. (Appendix A)

Database	Records Searched	Results
Geology Ontario (Brunton and Dodge 2008)	Karst Geology – these features can result in cave and fissure formations to provide wildlife habitat in the form of bat hibernacula.	No mapped karsts overlap into the project area. (Appendix A)
Distribution of Alvar Communities (Reschke et al. 1999)	Alvars occur on flat limestone or dolostone bedrock where soils are thin or absent. These features support distinctive and often rare species of flora and fauna.	Mapped alvar communities are largely associated with the Great Lakes shorelines. No known alvar communities extend into the project area (Appendix A)

Communication with the Blind River Area MNRF office (J. Trottier, 2013) indicated that the lack of documented wildlife habitat for this area is likely a reflection of the limited inventory completed in past studies, rather than an absence of habitat availability.

2.11 RARE SPECIES AND SPECIES AT RISK

2.11.1 NHIC Biodiversity Explorer

A search of the NHIC Biodiversity Explorer database was completed to identify where records for species listed as Endangered (END), Threatened (THR), or Special Concern (SC) and those considered rare (S1-S3 rank) occur within a 4 km² search area that included the landfill site (as shown in Appendix A). Milksnake was the only record available for the search area. The most recent observation for the species documented within the database was July 26, 1990.

2.11.2 Agency Consultation

Agency consultation included contact with the Area Management Biologist for the Ministry of Natural Resources and Forestry (MNRF) Blind River Area Office (J. Trottier, 2013) to obtain additional information regarding rare species in the area. Mr. Trottier indicated that of the Species at Risk known to occur within the larger Sault Ste. Marie District, Whip-poor-will, Blanding’s Turtle, and Least Bittern were those most likely to occur in the area around the landfill site. The potential for available habitat within the site for the species identified by MNRF is further considered in Section 4.0.

2.11.3 Screening of Background Data

Bird data obtained from the OBBA and listed in Appendix D was screened for bird SAR for further consideration in Section 4.0. A total of 10 birds afforded protection under Schedule 1 of the federal Species at Risk Act (SARA) or listed as Species at Risk in Ontario (SARO) were identified; including 4 provincially Threatened bird SAR (Bobolink, Barn Swallow, Chimney Swift and Bank Swallow) and 5 Special Concern species (Canada Warbler, Common Nighthawk, Eastern Wood Pewee, Olive-sided Flycatcher and Wood Thrush). In addition to those species listed as at risk provincially, records for the area included the Rusty Blackbird, a species afforded protection under the federal SARA.

2.11.4 Conservation Priorities – Partners in Flight (PIF)

The study area is located within Boreal Hardwood Transition, Bird Conservation Region (BCR) 12. Data obtained from the Breeding Bird Atlas (OBBA) was screened against the list of birds considered by Ontario Partners in Flight (2008) to be conservation priorities for BCR 12. A total of 120 species were documented in OBBA records for the larger area identified as 17LM73 (shown in Appendix A). Thirty-one of those documented were considered priority species as identified in Appendix D, Table 1.

2.12 SUMMARY OF BACKGROUND REVIEW

The background review conducted for the Elliot Lake Landfill and adjacent natural areas documents the site as one bounded by steep treed ridges of bedrock to the north and south, with a sensitive wetland feature located immediately to the west. The access road into the site approaches from the east and is surrounded by similar treed topography both to the north and south. A hydro corridor cuts through the woodland feature in a north-south direction just east of the landfill site.

Significant natural features were not identified for any ANSIs, PSWs, or significant wildlife habitat; however, information provided by the Blind River Area MNRF office indicated that the area is not well surveyed, and has therefore not been subject to a provincial evaluation for wetlands or wildlife habitat.

3.0 EXISTING CONDITIONS

3.1 FIELD INVESTIGATION METHODOLOGY

Field investigations were conducted to confirm the extent of existing background information and to collect natural heritage information within the landfill site property, with extra time and effort expended to cover areas where expansion activities are proposed to occur (Figure 3). Table 2 provides a summary of the field work completed in 2012 and 2014. Investigations were conducted under the following weather conditions:

- overcast skies with a temperature of 5°C on December 4, 2012;
- partly sunny with a daytime temperature of 18°C and 21°C °C on June 17-18, 2014;
- partly sunny skies with a daytime temperature of 18°C and 23°C on July 16-17, 2014; and,
- cloudy skies, with periods of fog and rain (1 mm) and a temperature of 15°C on August 20th, 2014.

Table 2: Field Investigation Conducted within the Project Site.

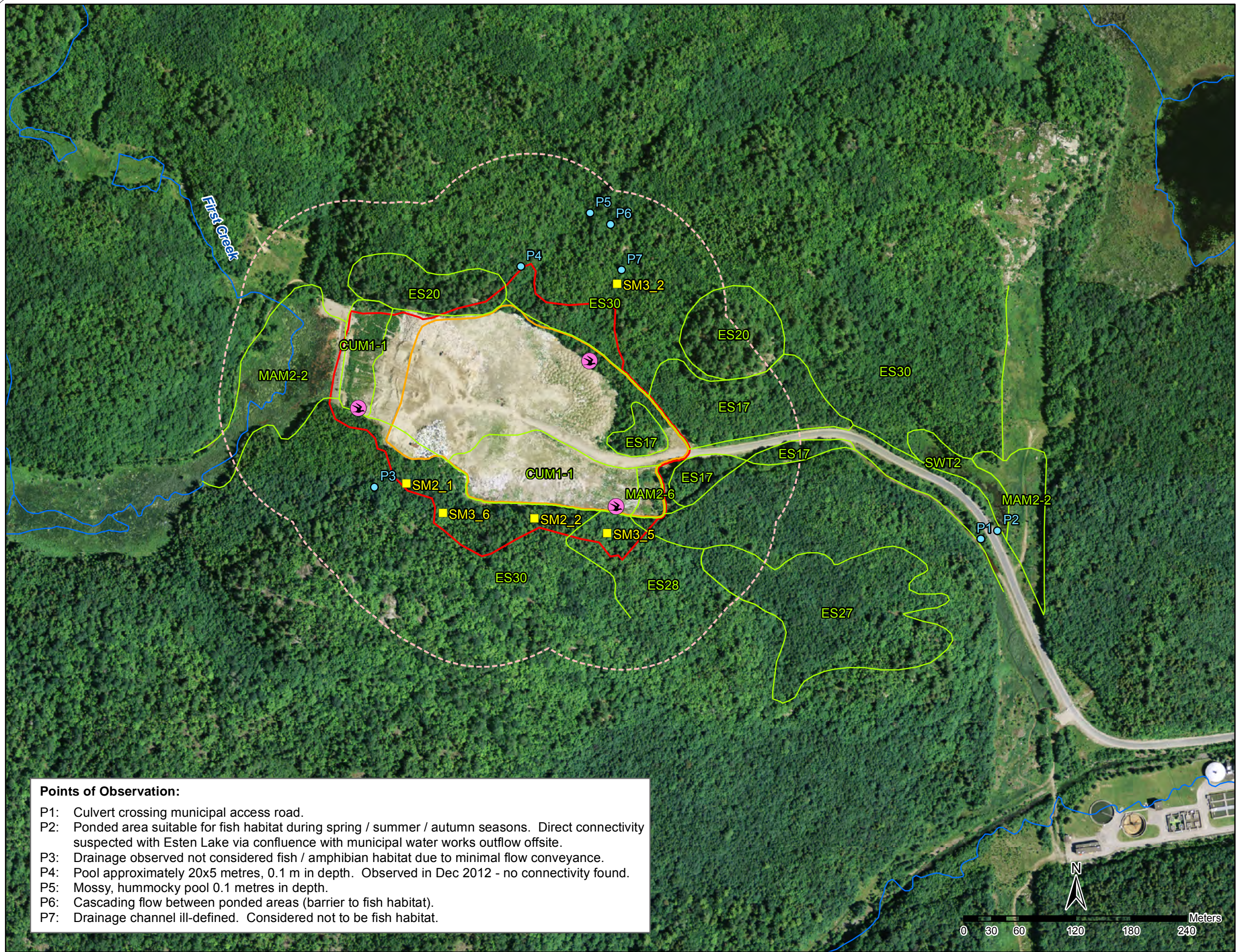
Ecological Component	Field Method/ Protocol	Field Staff	Survey Dates
Botanical Inventory, Vegetation and vegetation communities	<ul style="list-style-type: none"> • Pedestrian survey using a plotless method Ecological Land Classification for Southern Ontario (Lee et al. 1998) • Wetland Evaluation System for Southern Ontario – Third Edition Version 3.2 (MNRF 2013) • Screening for species at risk 	JCN, LCM	Dec. 4, 2012 June 17-18, 2014 July 16-17, 2014 August 20, 2014
Birds	<ul style="list-style-type: none"> • Pedestrian surveys for breeding birds according to the Ontario Breeding Bird Atlas Protocol (2001) • Stick nest, snag and cavity tree screening 	VLG, DTS	June 17-18, 2014 July 16-17, 2014
Wildlife Habitat	<ul style="list-style-type: none"> • Incidental observations • Stick nest, snag and cavity tree screening 	VLG, DTS, JCN, LKR, LCM, MJO	Dec. 4, 2012 June 17-18, 2014 July 16-17, 2014 August 20, 2014
Aquatic Habitat	<ul style="list-style-type: none"> • Screening of area for surface water features and potential fish habitat 	MJO, DTS, LKR	Dec. 4, 2012 June 17-18, 2014 July 16-17, 2014 August 20, 2014
Reptiles and amphibians	<ul style="list-style-type: none"> • Pedestrian surveys • Incidental observations • Amphibian vocalization surveys according Marsh Monitoring Program Protocol (2000). 	VLG, DTS	June 17-18, 2014 July 16-17, 2014 August 20, 2014
Bats	<ul style="list-style-type: none"> • Incidental observations, noting large cavity trees • Acoustical monitoring of wooded vegetation communities using SM2BAT+ and SM3BAT automated 16-bit full-spectrum recording devices equipped with ultrasonic microphones (Wildlife Acoustics Inc.) 	VLG, DTS, LCM, JCN, MJO	Dec. 4, 2012 June 17-July 8, 2014

Table 2 Field Staff Legend

JCN – Jennifer Noël – Senior Botanist, Butternut Health Assessor, ISA Certified Arborist, OWES and ELC certified
LMC – Lisa Catcher – Botanist, Butternut Health Assessor, ISA Certified Arborist, OWES and ELC certified
VLG – Victoria Garofalo – Field Biologist, Botanist
DTS - Dave Smith – Fish and Wildlife Technician
MJO – Martin O’Halloran – Senior Fish and Wildlife Technologist, ISA Certified Arborist
LKR - Lynette Renzetti – Planning Ecologist

It should be noted that large numbers of Black Bears are attracted to the landfill site from the spring until late fall. Areas where the bears were frequently found included the active landfill area, and the adjacent wooded areas immediately north and south of the area receiving household waste, particularly at the west end of the site. Bears are known to frequent the site in relatively large numbers (19-20 individuals) in the spring and summer months. The presence of habituated bears, such as those observed on site, posed a safety risk for staff conducting biological surveys for the project. As a result of field personnel encounter with an errant bear during the June investigations, additional safety procedures and precautions were implemented and subsequent pedestrian survey (in July and August) was limited to woodland edges to the extent of where bat detection equipment was deployed (Figure 3). Areas beyond that point were surveyed during bear hibernation (December 2012) or through the use of binoculars, or other means (e.g. listening for vocal calls of breeding birds and amphibians).

The following subsections describe the results obtained for existing conditions pertaining to vegetation, wildlife and surface water features within the landfill boundary, and in adjacent areas to the extent possible.



LEGEND

- Approximate Expansion Boundary
- Extent of Dumping
- Adjacent Lands (as defined in MNR 2010)
- Points of Observation
- Breeding Bird Station
- Bat Detector Location
- Vegetation Communities Boundary
- ES17** Poplar - White Birch Forest
- ES20** White Pine - Red Pine - White Spruce - White Birch - Trembling Aspen Forest
- ES27** Sugar Maple - White Birch - Poplar - White Pine Forest
- ES28** Sugar Maple - Hemlock - Forest
- ES30** Hemlock - Yellow Birch Forest
- MAM2-2** Reed Canary Meadow Marsh
- MAM2-6** Sedge Meadow Marsh
- SWT2** Alder and Willow Thicket Swamp
- Watercourse (LIO)
- Waterbody (LIO)

Ortho Source: Forest Resource Inventory, MNR
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Elliot Lake Landfill
 Existing Conditions:
 Field Investigation



Points of Observation:

P1: Culvert crossing municipal access road.
 P2: Poned area suitable for fish habitat during spring / summer / autumn seasons. Direct connectivity suspected with Esten Lake via confluence with municipal water works outflow offsite.
 P3: Drainage observed not considered fish / amphibian habitat due to minimal flow conveyance.
 P4: Pool approximately 20x5 metres, 0.1 m in depth. Observed in Dec 2012 - no connectivity found.
 P5: Mossy, hummocky pool 0.1 metres in depth.
 P6: Cascading flow between ponded areas (barrier to fish habitat).
 P7: Drainage channel ill-defined. Considered not to be fish habitat.

Project	TA8444	Figure	3
Date	November, 2014	Prepared By:	KC
Scale	1:4,000	Verified By:	LKR

3.1.1 Vegetation Communities

A floristic survey was completed on December 4th, 2012 and subsequently on June 17-18, July 16-17 and August 20, 2014 to include the classification of vegetation communities according to the *Field Guide to Forest Ecosystems of Central Ontario* (Chambers et al. 1997) for forested communities; and, the *Ecological Land Classification for Southern Ontario: First Approximation and Its Application* (Lee et al. 1998) for non-forest communities. The site was sampled using a plot-less method for the purpose of determining general composition and structure of the vegetation. Plant species status was reviewed for Ontario (NHIC, 2012) only, as there is no local plant list available for this area. Vascular Plant nomenclature follows Newmaster and Ragupathy (2008). Vegetation within the proposed expansion area was investigated through pedestrian survey while observations for adjacent areas were recorded using information visible from the extent of pedestrian survey.

3.1.2 Wildlife and Wildlife Habitat

In-season wildlife observations were completed June 17-18th, and July 16-17th, 2014 through pedestrian survey of the site, with additional incidental observations made during December 2012 and August 2014 visits. Wildlife was documented through visual and auditory observations, as well as by incidental collection of indirect evidence of habitat use, including the presence of burrows, scat, trails, tracks, road kill or other indication of presence within the site.

3.1.2.1 Bats

Three types of significant bat habitat are recognized by the MNRF, to include:

- bat hibernacula;
- bat maternity roost sites; and,
- bat migration stopover sites.

Little is known regarding the location and characteristics of bat migratory stopover habitat in Ontario and for that reason, there are currently no provincial criteria for identifying this type of habitat (OMNR 2012). Therefore, the identification of maternity roosting sites and hibernacula was the focus of the 2012/2014 surveys conducted for bats on the landfill site.

During the spring and early summer, most Ontario bat species rely on forest habitat that supports a number (>10/ha) of large-diameter (>25 cm diameter at breast height (DBH)) trees in various states of decay, that provide cavities with a warm, humid microclimate to optimize gestation and growth of bat offspring (Kunz and Anthony, 1982, OMNR 2012). In August and September, bats begin to congregate at the entrance of caves or mine shafts used as hibernacula during the winter (Norquay et al. 2013). During winter, suitable hibernacula maintain temperatures slightly above freezing, a consistent air flow and high humidity levels (Raesly and Gates, 1987). Habitat surveys conducted in 2012 and 2014 within the project area aimed to identify candidate maternity roosting habitat and candidate hibernacula.

Work conducted on site in 2012 was completed in December, under leaf off condition. At that time the woodlands surrounding the active landfill were characterized as dominated by coniferous forest (ES20 and ES30) with three small pockets of deciduous/deciduous mixed communities (ES17, ES25 and ES28). Although most of these community types (all except ES20) are associated with Candidate Significant Wildlife Habitat (SWH) for Bat Maternity Colonies in Eco-region 5E, the forest communities were observed to be generally young with trees of 10-20cm DBH. The community not included in the list of ELC most likely to provide Candidate SWH of this type (ES20 - White Pine-Red Pine-White Spruce-White Birch-Trembling Aspen Forest) was where larger trees (up to 35cm DBH) were observed. Based on the information collected in December 2012, the potential for the forest communities adjacent to the active landfill to provide SWH for maternity roosting was considered to be low as the presence of appropriate snag trees as identified through MNRF protocol and described above was not observed.

As far as hibernacula is concerned, background review of areas with known karst and alvar formations or abandoned mines (Section 2.10) did not indicate the presence of known features with the potential to function as hibernacula sites. Although rocky outcrops were observed onsite during pedestrian surveys carried out in December 2012 and June, July, and August 2014, no potential hibernacula was found in the form of caves, abandoned mines, or deep rock crevices.

Overall, the potential for habitat within the project area to provide maternity roost sites and hibernacula was considered low as a result of winter 2012 and spring 2014 surveys. However, with the uplisting of the 3 myotis species of bats in January 2014 and June 2014, acoustic survey of the area to determine presence/absence of SAR bats (Eastern Small-footed Myotis (END), Little Brown Myotis (END) and Northern Myotis (END)) was planned to ensure compliance with the *Endangered Species Act, 2007* (ESA)). For this purpose, acoustic surveys were conducted within the proposed expansion area of the landfill that coincides with woodland habitat through the deployment of bat detection equipment to record bat echolocation in 2014. SM2BAT+ and SM3BAT automated 16-bit full-spectrum acoustical recording devices equipped with ultrasonic microphones (Wildlife Acoustics Inc.) were mounted on trees throughout the woodland to provide the greatest area coverage possible (as shown in Figure 3). External 6V batteries were used to prolong the units' recording life. A total of 5 detectors were deployed on June 17, 2014 and retrieved on July 17, 2014, with the last recording documented on July 6, 2014. Detectors were set to record between 20:00h and 06:00 h to capture the most active periods of bat activity. A total of 20 nights of activity were recorded during the duration of deployment. Locations of detectors were recorded using a handheld GPS and field observations regarding the surrounding vegetation and tree canopy were recorded. The original plan for deployment locations to include two detectors in the area north of the active landfill and 3 detectors to the south had to be adjusted in the field as a result of the 'hot spot' of bear activity identified by the operations staff at the site and LGL staff observation. As a result, no equipment was deployed near the ES20 community in the area northwest of the active landfill as had been originally planned.

3.1.2.2 Birds

Breeding bird surveys were completed in accordance with the Ontario Breeding Bird Atlas Protocol (2001), which also included the completion of point counts at the stations depicted in Figure 3. Species were documented according to visual sightings as well as based on songs, or calls heard. Active or inactive nests were documented where applicable, as well as any relevant breeding evidence that would confirm the presence of nesting birds in the area.

3.1.2.3 Amphibians

Amphibian vocalization surveys were also planned according to Marsh Monitoring Program Protocol (2000) on calm, mild evenings to determine what species are present, and their relative abundance on site. Typically, surveys are conducted over three nights, with at least 15 days apart during the spring and/or summer with specific temperature guidelines. Three minute surveys are completed, with species and calling codes recorded. It should be noted that only one night of survey was completed during the 2014 visits because night access to the site was determined to be limited by safety concerns associated with bear activity.

3.1.3 Aquatic Habitat

The area within the landfill site was also traversed to document the topography of the landscape and the presence of surface water features. A pedestrian survey to locate lakes, watercourses, and wetlands within the accessible landfill property was conducted in December 2012, and hydroperiods of accessible features were observed once per month in June, July and August 2014. Locations of watercourses, pools and ponds which retained or conveyed water during the site investigation were recorded with GPS, photographed and described with general notes regarding morphology and flow conveyance. Evidence of surface water features was found to include wetland communities, isolated pools and watercourses. The wetland units are further described in Section 3.2 (Vegetation Communities) and the remaining surface water features identified are described in Section 3.4 (Aquatic Habitat).

3.2 VEGETATION COMMUNITIES

Natural heritage features surrounding the site include five forest vegetation communities, three wetland communities and a cultural meadow. The area surrounding the landfill is dominated by coniferous forest (ES20 and ES30) with three small pockets of deciduous/deciduous mixed communities (ES17, ES25 and ES28). Low depressions along the edge of the landfill and wetland features along a creek bound the site to the east and west (MAM2-2, MAM2-6 and SWT2). Old field species (CUM1-1) are found colonizing abandoned or previously cleared areas. Community edges bordering the landfill have varying degrees of disturbance due to prevailing winds and scavenging animals. A weigh station and access road are located at the entrance and gate to the landfill (Appendix B, Photos 22 and 23).

A detailed description of the forest, anthropogenic and wetland communities within the study area is provided below and mapped in Figure 3. A list of plant species observed within the site is found in Appendix C, Table 1.

3.2.1 Forest Communities

Poplar – White Birch Forest (ES17)

This forest community is located along the northern edge of the active landfill and is a young early successional vegetation community (Appendix B, Photo 9). Portions of this community have been bisected by roads. Trees are small in size and generally the same age. This community contains a large volume of refuse. This vegetation community is dominated entirely of White Birch (*Betula papyrifera*). Little to no understory is found within this forest with the ground cover reflecting the disturbed influence with the presence of non-native early successional species. Species found include Common St. John's-wort (*Hypericum perforatum*), White Sweet Clover (*Melilotus alba*), Wild Carrot (*Daucus carota*), and Yarrow (*Achillea millefolium* var. *occidentalis*). These species are not abundant with presence often associated along the edge areas, with reduced density away from road and landfill. Bear were observed entering this community north of road (Appendix B, Photo 24).

White Pine-Red Pine-White Spruce- White Birch-Trembling Aspen Forest (ES20)

This forest is also located on the north side of the landfill and found in small pockets perched on top of bedrock cliffs (Appendix B, Photo 6,17, and 25). Mature White Pine trees dominate this vegetation community with associations of Red Oak (*Quercus rubra*), White Cedar (*Thuja occidentalis*), Hemlock (*Tsuga canadensis*), White Birch and Balsam Fir (*Abies balsamifera*). Trees are quite large for the area and measure between 20 and 35 cm diameter at breast height (DBH). This community is rich in fern species, such as wood ferns (*Dryopteris intermedia* and *D. cristata*) and Rock Polypody (*Polypodium virginianum*). Ground cover is sparse and contains small densities of ferns and Common Pipsissewa (*Chimaphila umbellata* ssp. *cisatlantica*).

Sugar Maple-White Birch- Poplar-White Pine Forest (ES27)

This forest is situated south and south east of the access road and landfill (Appendix B, Photo 5). This community occurs on top of a large rock outcrop that contains a plateau in which a mixture of Sugar Maple (*Acer saccharum*), Red Maple (*Acer rubrum*) and White Birch thrive. Trees are relatively small in size, with the majority measuring less than 15 cm DBH. Ground cover is sparse; however this is likely due to time of year since this location was only accessible during the bear hibernation period (Dec. 2012) for safety reasons. Although lichens and mosses were the dominant ground cover these taxa covered only a small area of the community. Some areas within this community contained little depressions that likely collect water temporarily in the spring.

Sugar-Maple-Hemlock-Yellow-Birch Forest (ES28)

This forest is situated south of the landfill (Appendix B, Photo 26). This community occurs on the rock outcrops and slopes adjacent down to the landfill. This forest contains a mixture of Sugar Maple (*Acer saccharum*), Hemlock (*Tsuga canadensis*) Red Oak (*Quercus rubra*), and White Birch (*Betula papyrifera*). There is a mixture of tree sizes that range from less than 10 to 25 cm DBH. Ground cover is sparse and consists of maple seedlings and ferns. Garbage was prevalent throughout the site suggesting the level of disturbance could be contributing to the lack of ground cover.

Hemlock-Yellow Birch Forest (ES30)

This forest type is the largest forest community within the study area (Appendix B, Photos 1 to 4, and 31). It is found surrounding the landfill both to the north and south. The forest occurs on the top and slopes of the large rock outcrop island within the area. It is dominated by Hemlock and Cedar with occasional Yellow Birch, Red Oak, Sugar Maple, Large Toothed Aspen, and White Spruce. Ground cover is sparse; however, ferns, lichen, club moss (*Lycopodium annotinum* and *Lycopodium dendoideum*) and forbs such as Bunchberry (*Cornus canadensis*) and Goldthread (*Coptis trifolia*). A large number of cedar trees on the south side of the road near the entrance to the site had portions of the bark peeled off, likely evidence of wildlife activity (Appendix B, Photo 10 and 27). Tree roots were exposed on the rock slopes as the soil has been displaced by bears (Appendix B. Photo 28).

3.2.2 Wetland Communities

Alder and Willow Thicket Swamp (SWT2)

This small wetland community is north of the road near the hydro corridor located east of the landfill (Appendix B, Photo 12). The canopy is dominated by a combination of willow (*Salix* sp.) and alder (*Alnus incana* ssp. *rugosa*) shrubs. Ground cover is dominated by wetland grasses (*Phalaris arundinaceae*) and sensitive fern (*Onoclea sensibilis*).

Reed Canary Meadow Marsh (MAM2-2)

This wetland vegetation community occurs in two locations within the study area. The first is directly west of the berm of the landfill and is associated with a creek (Appendix B, Photo 8). The other is situated in a depression along the hydro corridor (Appendix B, Photo 11). Both communities are dominated by Reed Canary Grass (*Phalaris arundinacea*) with minor associations of Canada Rush (*Juncus canadensis*), Rattlesnake Grass (*Glyceria canadensis*), and Willow Herb (*Epilobium* sp.).

Sedge Meadow Marsh (MAM2-6)

This wetland community has established as a result of poor soil drainage, site disturbance, and surface water drainage and pooling in the eastern edge of the landfill near the access road. This feature is not hydrologically connected to the reed canary marsh along First Creek. Wetland plants have established within depressions and among the fill piles (Appendix B, Photo 29). The community is dominated by Fringed Sedge (*Carex crinita*) and Bebb's Sedge (*Carex bebbii*).

3.2.3 Cultural Communities

Old Field Cultural Meadow (CUM1-1)

The old field meadow is associated with previously disturbed lands that have been left to colonize naturally (Appendix B, Photo 7). This is occurring along the supporting bank/wall of the landfill and slope to the wetland below as well as within less active portions of the landfill (Appendix B, Photo 30). This area contains a mixture of introduced non-native plants species which consist of common St. John's-wort, White Sweet Clover, Ribgrass (*Plantago lanceolata*), Hawkweeds (*Hieracium* sp.), Common Dandelion (*Taraxacum officinale*) and Ox-eye Daisy (*Leucanthemum vulgare*). The water adjacent to the berm of the wetland was orange in colour indicating the water is high in iron or other form of precipitate. The species found here are also found along the edge of the landfill where disturbance has been reduced for some time.

3.2.4 Flora

A total of 114 vascular plant species were recorded during the field investigations. Six of these plants could only be identified to genus and are not included in the following calculations. Thirty five of the species listed, or 32% of the flora, are not native to the area. Introduced taxa are denoted in the table with an "*" next to the species name. They are generally found adjacent to the landfill and in previously disturbed communities. No species considered Special Concern (SC), Threatened (T) or Endangered (END) by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and/or the Committee on the Status of Species at Risk in Ontario (COSSARO)/MNR were noted during the field investigation

3.3 WILDLIFE AND WILDLIFE HABITAT

Wildlife observations were completed over the course of multiple seasons in December 2012 and June, July and August 2014. The visit in December 2012 primarily provided evidence of habitat use which could be best observed under leaf off condition, such as presence of stick nests and screening for trees with cavities. Incidental observations of wildlife and habitat use were also made during the August 2014 field visit, while the June/July visits were focused on targeted wildlife surveys. Direct visual and auditory species observations were made in addition to incidental wildlife observations of species and habitat using evidence such as burrows, scat, tracks, trails, or road kill. A total of 33 species were documented over all of the surveys (Table 3). A complete list of species documented on site to include background data, as well as observations made by LGL is included in Appendix D.

3.3.1 Birds

Breeding bird surveys and incidental observations revealed the presence of 26 species of birds using the site (Table 3). The most abundant species observed on site were scavenger species, including American Crow (*Corvus brachyrhynchos*), Common Raven (*Corvus corax*), Herring Gull (*Larus argentatus*), Ring-billed Gull (*Larus delawarensis*), and Turkey Vulture (*Cathartes aura*). No active or inactive nests were found within the study area. Given the size of the study area, 3 point count locations were used, as indicated in Figure 3. Locations were chosen around the edge of the existing landfill so that species within more naturalized vegetation communities could be documented.

Of all bird species observed, 19 are considered migratory and are protected under the *Migratory Birds Convention Act* (MBCA), which prohibits the killing, capturing, injuring, taking or disturbing of migratory birds (including eggs) or the damaging, destroying, removing or disturbing of nests. The typical breeding season for migratory birds in this area of Ontario is considered April 1-August 31 according to Environment Canada. A further 4 bird species are afforded protection under the *Fish and Wildlife Conservation Act* (FWCA) as specially protected birds.

One bird species documented within the study area is listed as at risk provincially (Bald Eagle), and several others are considered higher level priority species for the Bird Conservation Region (BCR) 12, including Bald Eagle (*Haliaeetus leucocephalus*), Black-throated Blue Warbler (*Dendroica caerulescens*), Black-throated Green Warbler (*Dendroica virens*), Broad-winged Hawk (*Buteo platypterus*), Common Yellowthroat (*Geothlypis trichas*), and White-throated Sparrow (*Zonotrichia albicollis*). There are also multiple species that are considered area-sensitive and/or interior species according to the Significant Wildlife Habitat Technical Guide (2000) as indicated in Table 3.

Table 3: Wildlife Data Collected by LGL limited for Elliot Lake Landfill Site, 2014.

Type	Scientific Name	Common Name	LGL Limited, Dec 2012	LGL Limited, 2014	G Rank	S Rank	COSEWIC	SARA	SARO	FWCA	MBCA	SWH-TG	Interior Species	PIF Ontario Landbird Priority Species (BCR 12)
Amphibian	<i>Hyla versicolor</i>	Gray Treefrog		X	G5	S5				P				
Amphibian	<i>Rana clamitans</i>	Green Frog		X	G5	S5								
Bird	<i>Corvus brachyrhynchos</i>	American Crow		X	G5	S5B								
Bird	<i>Setophaga ruticilla</i>	American Redstart		X	G5	S5B					X	X		
Bird	<i>Turdus migratorius</i>	American Robin		X	G5	S5B					X			
Bird	<i>Haliaeetus leucocephalus</i>	Bald Eagle	X	X	G5	S2N,S4B			SC	P		X		X
Bird	<i>Mniotilta varia</i>	Black and White Warbler		X	G5	S5B					X	X	X	
Bird	<i>Poecile atricapillus</i>	Black-capped Chickadee		X	G5	S5					X			
Bird	<i>Dendroica caerulescens</i>	Black-throated Blue Warbler		X	G5	S5B					X	X		X
Bird	<i>Dendroica virens</i>	Black-throated Green Warbler		X	G5	S5B					X	X		X
Bird	<i>Buteo platypterus</i>	Broad-winged Hawk	X		G5	S5B				P		X		X
Bird	<i>Corvus corax</i>	Common Raven	X	X	G5	S5				P			X	
Bird	<i>Geothlypis trichas</i>	Common Yellowthroat		X	G5	S5B					X			X
Bird	<i>Picoides pubescens</i>	Downy Woodpecker		X	G5	S5					X			
Bird	<i>Sturnus vulgaris</i>	European Starling	X	X	G5	SNA								
Bird	<i>Catharus guttatus</i>	Hermit Thrush		X	G5	S5B					X	X	X	
Bird	<i>Larus argentatus</i>	Herring Gull	X	X	G5	S5B,S5N					X			
Bird	<i>Passerina cyanea</i>	Indigo Bunting		X	G5	S4B					X			
Bird	<i>Anas platyrhynchos</i>	Mallard		X	G5	S5					X			
Bird	<i>Seiurus aurocapilla</i>	Ovenbird		X	G5	S4B					X	X	X	
Bird	<i>Vireo olivaceus</i>	Red-eyed Vireo		X	G5	S5B					X		X	
Bird	<i>Agelaius phoeniceus</i>	Red-winged Blackbird		X	G5	S4								
Bird	<i>Larus delawarensis</i>	Ring-billed Gull	X	X	G5	S5B,S4N					X			

Type	Scientific Name	Common Name	LGL Limited, Dec 2012	LGL Limited, 2014	G Rank	S Rank	COSEWIC	SARA	SARO	FWCA	MBCA	SWH-TG	Interior Species	PIF Ontario Landbird Priority Species (BCR 12)
Bird	<i>Melospiza melodia</i>	Song Sparrow		X	G5	S5B					X			
Bird	<i>Cathartes aura</i>	Turkey Vulture		X	G5	S5B				P				
Bird	<i>Zonotrichia albicollis</i>	White-throated Sparrow		X	G5	S5B					X			X
Bird	<i>Troglodytes troglodytes</i>	Winter Wren		X	G5	S5B					X	X	X	
Bird	<i>Dendroica petechia</i>	Yellow Warbler		X	G5	S5B					X			
Mammals	<i>Ursus americanus</i>	American Black Bear	X	X	G5	S5				G				
Mammals	<i>Lasiurus borealis</i>	Eastern Red Bat		X	G5	S4				P				
Mammals	<i>Lasiurus cinereus</i>	Hoary Bat		X	G5	S4				P				
Mammals	<i>Myotis septentrionalis</i>	Northern Myotis		X	G4	S3	END		END	P				
Mammals	<i>Vulpes vulpes</i>	Red Fox	X		G5	S5				F				
Mammals	<i>Tamiasciurus hudsonicus</i>	Red Squirrel	X	X	G5	S5				F				
Mammals	<i>Lasionycteris noctivagans</i>	Silver-haired Bat		X	G5	S4				P				
Mammals	<i>Lepus americanus</i>	Snowshoe Hare	X		G5	S5				G				
Mammals	<i>Odocoileus virginianus</i>	White-tailed Deer	X		G5	S5				G				

Table 3 Legend

Global Rank (G- Rank): assigned by a consensus of the network of Conservation Data Centres (CDCs), scientific experts and The Nature Conservancy to designate a rarity rank based on the range-wide status of species, subspecies or variety, according to the following: G5-very common; demonstrably secure under present conditions

Provincial (or Subnational) ranks (S-Rank) are used by the Natural Heritage Information Centre to set protection priorities for rare species and natural communities.

Provincial ranks are assigned in a manner similar to that described for global ranks, but consider only those factors within the political boundaries of Ontario.

S1-critically imperilled; critically imperilled in the nation or state/province because of extreme rarity

S2-imperilled; imperilled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer)

S3-vulnerable; vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines

S4-apparently secure; uncommon but not rare; some cause for long-term concern due to declines or other factors

S5-secure; common, widespread and abundant in the nation or state/province

S?-not ranked yet- species rank not yet assigned

SZB-breeding migrants/vagrants; SZN-non-breeding migrants/vagrants

COSEWIC – Committee on the Status of Endangered Wildlife in Canada

NAR- not at risk; a wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances

THR-threatened; a wildlife species likely to become endangered if limiting factors are not reversed

END-endangered; a wildlife species facing imminent extirpation or extinction

EXT-extirpated; a species no longer existing in the wild in Canada but occurring elsewhere

SC-special concern; a wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats

DD-data deficient; a wildlife species for which there is inadequate information to make a direct, or indirect, assessment of its risk of extinction

SARO –Species at Risk in Ontario

END-Endangered; a species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's ESA

EXP-Extirpated; a species that no longer exists in the wild in Ontario but exists elsewhere

THR-Threatened; a species that is at risk of becoming endangered in Ontario if limiting factors are not reversed

SC-Special Concern; a species with characteristics that make it sensitive to human activities or natural events

FWCA –Fish and Wildlife Conservation Act, 1997

P-protected species, G – game species, F – furbearing species

MBCA –Migratory Birds Convention Act, 1994

X-protected

SWH-TG – Species with specific habitat requirements and considered 'area sensitive' as a result (Ontario Ministry of Natural Resources (OMNR). 2000. Significant Wildlife Habitat Technical Guide. Queen's Printer for Ontario. Ontario, Canada.)

Interior Species – 'X' indicates species requires interior habitat

Priority Species – species considered by Bird Studies Canada to be conservation priorities for the area as viewed at: <http://www.bsc-eoc.org/conservation/conservmain.html>

3.3.2 Amphibians & Reptiles

Areas of pooling water and other surface water features were the focus of vocalization surveys for amphibians. Pools were considered to result from landform depressions that temporarily fill with water following heavy rainfall or snowmelt. Pools can offer habitat for amphibian breeding and rearing in isolation from predators (particularly fish) if water persists long enough to allow for breeding and subsequent development of the larvae. However, pools identified on site were much smaller than what would be considered SWH habitat for amphibian woodland breeding (>500m²). For safety reasons, survey points for amphibian vocalization were limited to the accessible forest edge in proximity of the MAM2-2 community west of the landfill and the pools identified north of the existing landfill. As well, the wetland communities observed adjacent to the access road into the facility were targeted for surveys. The amphibian vocalization survey revealed limited amphibian calling within the study area. Gray Treefrogs (*Hyla versicolor*) and Green Frogs (*Lithobates clamitans*) were each heard calling at a level 1 during the June survey. The Green Frog was heard within the small wetland pocket (SWT2) near the access road into the facility, while the Gray Treefrogs were heard infrequently calling from within the wooded areas.

The largest MAM2-2 community was accessed from an area adjacent to the landfill site during the appropriate season to observe basking turtles (June 2014); however, none were found. Water quality and limited food sources observed in this area were considered to reduce the likelihood of turtles using the area. Subsequent visits to this location during the basking season were hampered by bear activity. The fairly steep embankment just east of the largest MAM2-2 wetland community was also searched for evidence of nesting turtles, but without success. With the presence of so many scavenger species (vultures, eagles, ravens, etc.) in the vicinity of the landfill, the likelihood of successful nesting attempts by reptiles in open gravel or sandy areas that are adjacent to the landfill would likely be low. If occurring, high predation rates by the scavengers may be reducing the population sizes of both reptiles and amphibians in the area, or cause these animals to migrate to different territories with fewer predators. In summary, no reptiles were documented within the study area during field surveys.

3.3.3 Bats

Given that the pattern of echolocation emitted by bats is generally species specific, the call data recorded for the site in June and July 2014 was analysed using automated classification software (Kaleidoscope Pro v2.0.7, Wildlife Acoustics, Inc.) to identify the species utilizing the area according to the echolocation patterns recorded. Only classifiers for the eight bat species found in Ontario were used (Bats of North American v2.0.5) in the automated classification process. Given that the primary intent of the survey was to identify the presence of SAR bats in the project area, the sensitivity setting used to classify calls to species level was set to 'accurate', as recommended by I. Agranat, Developer of Kaleidoscope Software (Wildlife Acoustics, pers. comm. 2013). During processing, the software also recognizes signals created by background noise such as rain or wind and screens these noise files out to exclude them from analysis. Only files containing bat call characteristics were retained for classification analysis. Output of the classification results were provided in a ".csv" file which was then converted to an Excel table for further analysis (Appendix E).

Although a significant amount of total precipitation was noted on the day of deployment, weather conditions overall were mostly dry, with a daytime highs averaging 25°C and a night time low averaging 11.2°C (weather details are included in Appendix E). A total of 1,381 recordings were made during acoustical monitoring of the wooded areas within the project area. Of the calls recorded, 38 were classified by the Kaleidoscope software as ‘noise’ meaning that the signal recorded was not produced by a bat or that the bat signal was masked by noise, due to the bat signal being too weak or noise being too strong (examples of these files are included in Appendix E).

An additional 557 calls resulted in ‘no ID’ using the call library of the Kaleidoscope software and automated classification (examples of these files are included in Appendix E).

Of the calls recorded, 493 were identified to the species level to include the following four bat species (Table 4):

- Hoary Bat;
- Silver-haired Bat;
- Eastern Red Bat; and,
- Northern Myotis (Endangered).

Table 4: Bat Calls Recorded in Wooded Areas Adjacent to the Elliot Lake Landfill, 2014.

Bat Detector (locations shown in Figure 2)	Hoary Bat (LACI)	Silver- haired Bat (LANO)	Eastern Red Bat (LABO)	Northern Myotis (MYSE)	No ID	Noise	Total
SM2-1		16		7	34	38	85
SM2-2	53	2			74	55	184
SM3-2	18	3			146	26	193
SM3-5	101	2			119	73	295
SM3-6	299	1	1		184	139	624
Total	471	24	1	7	557	331	1381

The majority of bat activity recorded in the study area was attributed to Hoary Bat (96% of calls identified to species level). An additional 14 calls (3% of total identified to species level) were attributed to Silver-haired Bat and one of the calls was assigned to Eastern Red Bat. The timing of recorded bat calls (including those of Hoary Bat for which the majority of calls were recorded) was not clustered to demonstrate a mass exit or entrance movement among the bats at any particular time (sunset, sunrise), but rather generally distributed equally throughout the 8pm to 6 am timeframe during which calls were recorded (as shown in Appendix E).

One of the primary goals of the 2014 acoustic monitoring conducted on the project site was to determine if SAR bats are using the woodland habitat that has the potential to be impacted by the landfill expansion. Northern Myotis (MYSE) was the only SAR bat recorded during the survey. Seven of the calls recorded were attributed to this species, all of which were recorded at location SM2-1 located at the south-west limit of the proposed expansion boundary (Figures 3 and 4).

MYSE is generally a forest interior species that require adequate canopy closure for both roost and foraging habitat (Lausen 2009). The literature suggests that the most probable areas of MYSE habitat will be in hardwood or mixed forests with primarily closed canopies and mid-decay stage, large-diameter snags (Foster and Kurta 1999). Preferred habitat for this species is described for Ecoregion 5E as ‘contiguous tracts of older forest cover for foraging and roosting in snags and trees’ (OMNR 2012). The character of the forest in the area of SM2_1 contains a mixture of mid aged Sugar Maple and Hemlock trees with an under storey of young maple, Hemlock, Balsam Fir and White Birch. Trees are generally small in size with some individual more mature canopy trees scattered throughout. Due to the presence of wildlife (mostly bears) the understorey is limited and characterized as open, and highly disturbed (Figure 4). Sugar Maple seedlings, honeysuckle and ferns have managed to establish and a small opening in the canopy occurs to the west of the detector in the direction of the wetland. Topography is relatively flat here compared to the remaining rocky slopes typical of this community.



Figure 4. Conditions and vegetation typical of the area where SM2_1 detector was installed (location shown in Figure 3).

Although the numbers of MYSE calls recorded do not meet the criteria defined by the MNRF for SWH of maternity roosting (>20 MYSE), this species is listed as Endangered under SARO and requires further consultation with the MNRF Bind River Area Office to ensure the project is in compliance with the ESA.

3.3.4 Other Mammals

A total of 9 mammals (including the four aforementioned bat species) were documented on site. The dominant species observed were common scavengers to disturbed, anthropogenic sites and included primarily American Black Bears (*Ursus americanus*) within the active landfill area. Of the 9 mammals observed, 4 are specially protected under the FWCA, while the remaining 5 species are considered furbearing or game species. No dens, burrows, or nests of any kind were observed during the surveys, however, evidence of bear activity was also observed within the ES30 forest communities adjacent to the landfill. Garbage had been pulled into the forest, as well as rub and/or scratch marks on many of the cedar trees in the area indicate that the bears are using the landfill for scavenging, and the forested areas are their primary territory. Several bears were also observed utilizing the wooded areas during the June and July surveys.

3.3.5 Wildlife Habitat

In terms of potential wildlife habitat, the area within the landfill is generally characterized as homogeneous and disturbed, and does not represent suitable wildlife habitat, but exists primarily as a foraging opportunity for scavenging species. Waste from the existing landfill site can be seen to a lesser extent infiltrating (likely a combination of activity by scavengers and weather events) into the wooded areas that are surrounding the landfill. Areas directly adjacent to the landfill demonstrate disturbance; however, naturalized forest exists within approximately 50m of the landfill edge. The large, contiguous forest communities beyond this point would be considered high quality habitat for many species. The list of observed species does not necessarily reflect a high diversity of species or many rare/sensitive species that might typically be found within the interior habitat associated with the forest communities. Several factors may have influenced survey results including noise constraints within the active landfill, presence of many bears on site, and topography. Similarly, several of these aspects may limit wildlife use of the area. While not directly surveyed, it is assumed that natural areas that lie beyond the landfill (as shown in air photos) are high quality habitat based on size and continuity.

No potential hibernacula were identified on the site, nor were any dens, burrows, or nests. No tree snags or cavities were documented on site; however, there is good natural variability in the diameter and species of trees observed within the forests. The wooded areas may provide nesting opportunities for forest nesting birds; however, the disturbed edges of the landfill do not represent high quality areas for breeding opportunities, particularly for area-sensitive or interior species that would be less tolerant of edge effects (such as increased wind, human disturbance, exposure, or light). Areas further from the edge would experience reduced edge effects, and thus represent better habitat quality. Expansion of the landfill into existing edge areas would create new edges into existing natural habitat, thus potentially displacing species that are more sensitive to the disturbance experienced around edges.

The wetlands observed on site include one larger community to the west of the landfill associated with First Creek, as well as two smaller wetlands to the east of the landfill and north of the access road. All of these wetlands represent potential habitat for amphibian breeding or reptiles; however, data collected during the amphibian calling survey indicated limited use of these areas. The larger MAM2-2 wetland as it occurs at the western limit of the site was observed to have debris from the landfill, a film on the surface of the water and staining of the surrounding vegetation and substrate (possibly from iron inputs) which could affect the quality of the water and the availability of food for turtles. As well, the site was found to be dominated by cattails such that little in the way of basking sites could be observed.

While both wetland communities have the ability to act as wildlife habitat, lack of observations for wildlife in these areas may indicate low usage. Amphibians and reptiles may be avoiding these areas, or are unable to thrive due to factors related to the presence of many scavengers, exposure, high noise levels, or vehicle traffic. These factors could all potentially contribute to the limited use of the area, or reduced fecundity, which may explain the lack of wildlife observations within what otherwise, appears to be habitat of good quality.

3.3.6 Wildlife Species at Risk

Of the 37 species of wildlife observed on site, only two are identified as species at risk; the Bald Eagle, and Northern Myotis (*Myotis septentrionalis*). The Bald Eagle is currently listed as Special Concern, while the Northern Myotis is listed as Endangered provincially under the *Endangered Species Act*, (2007). The Northern Myotis is also listed as Endangered by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC).

The Bald Eagles on site were observed during all visits, and were present in numbers ranging from approximately 1-5 individuals at a time on site and groups composed of both adults and juvenile birds. These birds are commonly observed scavenging, and were actively observed doing so within the landfill. The December 2012 visit also included targeted searching for stick nests, however, none were found.

The Northern Myotis was detected during acoustical monitoring with 7 vocalizations recorded from one of the five detectors (SM2-1) installed. The number of vocalizations in comparison to other bat species recorded may indicate that this Endangered bat is fewer in number than the other more common species. The lack of recordings for this species at any other detector on the site may also suggest that the habitat requirements of this species are more particular, or that this bat is indeed a primarily interior species in comparison to the Hoary Bat (*Lasiurus cinereus*), which was widely and conspicuously observed. MNRF consultation is required to further determine whether SAR bats have the potential to be impacted by proposed project activities.

3.4 AQUATIC HABITAT

Evidence of surface water features (excluding wetlands which are addressed in Section 3.2) was observed throughout the 2012 and 2014 site investigation to occur in two forms: intermittent ponded areas and watercourses. Site investigation focused on confirming the direction of drainage with respect to the landfill site and determining connectivity of any identified surface water features to fish habitat, where possible, to then identify potential impacts of the proposed landfill expansion on surface water quality of the adjacent watercourse (First Creek).

Due to the bear activity and associated safety concerns on site, the majority of the pedestrian survey as it relates to surface water features was conducted in December 2012. The intent was to identify potential fish and/or amphibian habitat located in or near the landfill study area. Fish habitat is defined in the *Fisheries Act* as spawning grounds and nursery, rearing, food supply, and migration areas on which fish depend directly or indirectly in order to carry out their life processes. Amphibian aquatic habitat was found to be associated with some of the surface water features identified as discussed in Section 3.3.2. The hydroperiod (time and degree of water retention) of waterbodies was observed, where safely accessible, in the June to August 2014 visits.

Of the surface water features documented during the 2012 visit, two flow conveyance systems were considered to have potential to provide direct fish habitat. An unnamed tributary on the east end of the landfill area (Figure 3, P2) is ponded in the area upstream of a corrugated steel pipe culvert (Appendix B, Photos 18 to 20). Observations of fish or amphibians were not made during the initial site investigation which was not unexpected given the time of year (December). The surface of the feature was frozen; and, in shallow areas which easily freeze completely during the winter season (as is the case for all features identified in areas immediately adjacent to the landfill). For this reason, fish migration from the area is expected. Connectivity from P2 to the municipal wastewater treatment plant outflow, located to the south, suggests direct connectivity of this feature to Esten Lake. The First Creek system located west of the landfill, including the MAM2-2 community (Figure 3; Appendix B, Photos 7 and 8), is thought to provide fish habitat due to its connectivity with First Lake and Esten Lake.



The pools observed north of the landfill were shallow, approximately 0.1m in depth for most, likely formed during an event of abundant surface runoff (precipitation the previous day). These pools would be expected to dry quickly and not offer vernal pool function for the duration required for spawning or rearing of fish or amphibians (Appendix B, Photos 10 to 13).



4.0 SCREENING FOR SPECIES AT RISK



In order to determine the potential for SAR to occur within the project area, a review of secondary source background information was conducted to identify species listed under the provincial Endangered Species Act, 2007, or afforded protection under Schedule 1 of the federal Species at Risk Act (described in Section 2.11). As documented in Section 2.0 the review of secondary sources included a search of the NHIC Biodiversity Explorer records to determine species at risk with potential to be in the project area using a 4 km² search area to include the landfill site. As well, the MNRF Blind River Area Office (J. Trottier 2013 as provided in Appendix F) was contacted to determine if additional records for SAR were available for the project area. Data lists, generated using available background information from the OBBA, were also screened for bird species at risk (Appendix D, Table 1). In addition to those efforts, a list of species at risk for the Algoma Region was generated using the information provided on the MNRF's website (<http://www.mnr.gov.on.ca>) to screen the project area for available SAR habitat.

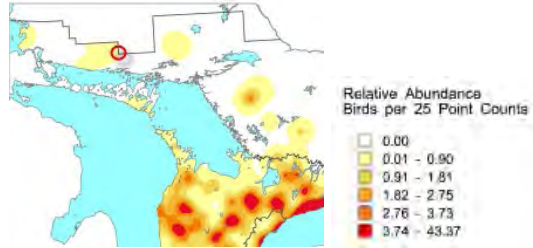
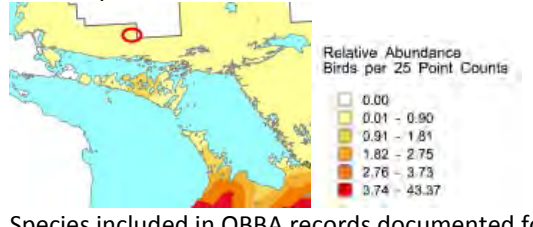

Finally, any SAR documented to occur on site during the 2012 and 2014 field investigations were included in further consideration of impacts to SAR as they relate to the project. Table 5 lists all of the provincially protected SAR identified through this process (NHIC, OBBA database, MNRF SAR website, MNRF consultation and field investigation) along with their habitat requirements and an indication of whether potential habitat exists within or adjacent to the landfill site, based on existing conditions. Similarly, Table 6 provides the same level of consideration to any species identified as protected under SARA Schedule 1, not already included in Table 5. Where SAR is documented to occur on the project site, consultation with the MNRF Blind River Area Office is ongoing.


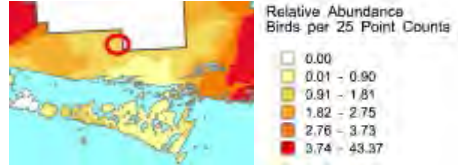

Table 5: Screening for Species-at-Risk identified under the Endangered Species Act, 2007 in the area of the Elliot Lake Landfill.


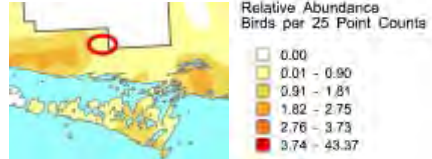
Group	Species	Designation (COSSARO)	ESA Protection (MNRF, 2014)	Habitat Description (MNRF 2014 unless otherwise indicated)	Background Information/Agency Liaison	How Addressed in Field Survey	Results/Habitat Potential	Further Effort Recommended
Plants	Flooded Jellyskin (<i>Leptogium rivulare</i>)	Threatened	Species and General Habitat Protection	Flooded Jellyskin is mainly found growing on the bark at the base of trees that are periodically flooded, typically during the spring. The trees are species that can withstand substantial flooding such as: Black Ash, Red Maple, American Elm and more rarely, Balsam Poplar. It can also be found growing on rocks that are subject to similar periodic flooding.	 <p>Mapping of species occurrence as of Feb. 2012 (above) as published on MNRF SAR website does not include any records for the study area.</p> <p>Included in MNRF SAR website list for Algoma Region.</p>	Pedestrian surveys of vegetation communities were completed in June, July and August 2014.	Species was not observed in areas that are known to be periodically flooded during the 2014 field surveys.	No further effort is recommended at this time.
Plants	Gattinger's Agalinis (<i>Agalinis gattingeri</i>)	Endangered	Species and General Habitat Protection	Grows in dry prairie, dry open woodlands, dry roadsides, glades, bluffs and alvars. In Ontario, species is found in dry tallgrass prairie in Lambton County and on alvars in Bruce County and Manitoulin Island. Grows in shallow soil on nearly bare ground between tussocks of grass. Produces a very small flower late in the season.	<p>In Ontario 22 known sites on Manitoulin Island are documented as well as additional sites on Bruce Peninsula and Walpole Island.</p> <p>Mapping of species occurrence as of Feb. 2012 as published on MNRF SAR website does not include any records north of Manitoulin.</p> <p>Included in MNRF SAR website list for Algoma Region.</p>	Pedestrian surveys of vegetation communities were completed in June, July and August 2014.	No prairie communities found within the site. The open meadow contains only non-native disturbance tolerant species.	No further effort is recommended at this time.
Plants	Hill's Thistle (<i>Cirsium hillii</i>)	Threatened	Species and General Habitat Protection	Perennial thistle 25-60cm in height. In Ontario this species is found in open alvar grasslands, surrounded by forests of Jack Pine, White Spruce and Eastern White Cedar. Also in open sunny areas of prairie and sand dunes. Often found with other species at risk including Lakeside Daisy and Houghton's Goldenrod.	<p>In Ontario the species is mainly found on Manitoulin Island and on the west side of the Bruce Peninsula.</p> <p>Mapping of species occurrence as of Feb. 2012 as published on MNRF SAR website does not include any records north of Manitoulin.</p> <p>Included in MNRF SAR website list for Algoma Region.</p>	Pedestrian surveys of vegetation communities were completed in June, July and August 2014.	No alvar or prairie habitat on site. No suitable habitat present.	No further effort is recommended at this time.
Plants	Houghton's Goldenrod (<i>Solidago houghtonii</i>)	Threatened	Species and General Habitat Protection	In Ontario, Houghton's Goldenrod grows primarily on open alvars, which are barren-looking landscapes of exposed bedrock with very little soil. This rare habitat is kept relatively open and sunny by natural disturbances, such as drought and fire, which prevent shade-producing shrubs and trees from taking over. Houghton's Goldenrod is also found in the relatively low wetland areas between sand dunes associated with Great Lakes shorelines.	<p>Houghton's Goldenrod grows almost exclusively near the north shores of Lake Huron and Lake Michigan.</p>  <p>Mapping of species occurrence as of Feb. 2012 (above) as published on MNRF SAR website does not include any records north of Manitoulin.</p> <p>Included in MNRF SAR website list for Algoma Region.</p>	Pedestrian surveys of vegetation communities were completed in June, July and August 2014.	No alvar or sandy dune habitat on site. Vegetation communities surrounding landfill have relatively closed canopies. Soil conditions are also not favourable to support this species. Searched clearings, however species was not documented in 2014 vegetation surveys.	No further effort is recommended at this time.

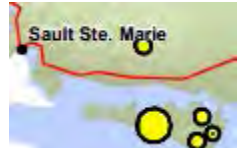
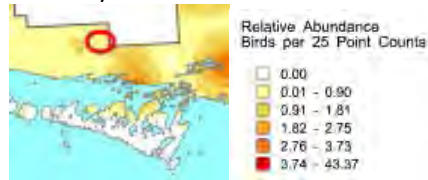

Group	Species	Designation (COSSARO)	ESA Protection (MNRF, 2014)	Habitat Description (MNRF 2014 unless otherwise indicated)	Background Information/Agency Liaison	How Addressed in Field Survey	Results/Habitat Potential	Further Effort Recommended
Insects	Rusty-patched Bumble Bee	Endangered	Species and General Habitat Protection (General Habitat Description)	This species, like other bumble bees, can be found in open habitat such as mixed farmland, urban settings, savannah, open woods and sand dunes. The most recent sightings have been in oak savannah, which contains both woodland and grassland flora and fauna.	The species has suffered rapid, severe decline throughout its entire range since the 1970s with only a handful of specimens collected in recent years in Ontario. The only locality within Ontario where the Rusty-patched Bumble Bee has been seen since 2002 is Pinery Provincial Park (Lambton County) despite widespread surveys in Ontario. Species occurrence as of May 24, 2013 as published on MNRF SAR website does not include records for the Elliot Lake area. Species included in MNRF SAR list for Algoma Region.	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014. No targeted insect surveys were conducted for this species.	Host plants represent commonly occurring plants (e.g. goldenrod, asters, dandelion, and milkweed). Greatest potential on the project site for the host plants associated with the species occurs in the CUM communities along the berm to the west of the active landfill, and the less active portion of the landfill south of the access road. Densities of these plants are limited on the site. No concentrations of bee species were observed during field investigation.	No further effort is recommended at this time.
Mammals	Eastern Small-footed Myotis (<i>Myotis leibii</i>)	Endangered (as of April 2014 EBR posting of COSSARO results)	Species and General Habitat Protection	The Eastern Small-footed Bat has one of the smallest overall distributions – limited to northeastern U.S, southern Ontario and very small portion of southwestern Quebec.	Available data for the species (up to 1993) includes records in the area of Espanola (Ontario Nature bat atlas at: http://www.ontarionature.org/discover/resources/PDFs/atlas/mammal_atlas_bats.pdf)  Species was considered as a result of review of site conditions and proposed tree removal.	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in Dec. 2012 and June, July and August 2014. Acoustical surveys for bats were conducted to collect a minimum of 20 survey nights (dusk to dawn) of data across the project area.	The major threat identified for the species occurs in the form of a fungus that affects bats during hibernation. No potential hibernacula were identified on the site. Acoustic monitoring of woodland habitat did not document calls for this species.	No further effort is recommended at this time.
Mammals	Little Brown Myotis (<i>Myotis lucifugus</i>)	Endangered	Species and General Habitat Protection	Little Brown Myotis are threatened by a disease known as white nose syndrome, caused by a fungus which grows in humid cold environments, such as the caves and mines where bats hibernate. Hibernacula include the use of caves and abandoned mines. Roosting habitat includes snags in mature mixed wood, deciduous or coniferous forest ecosites. Foraging habitat is generally associated with aquatic features and associated riparian habitats.	The little brown bat is widespread in southern Ontario and found as far north as Moose Factory and Favourable Lake. Available data for the species (up to 1993) includes records in the area of Espanola and Blind River (Ontario Nature bat atlas at: http://www.ontarionature.org/discover/resources/PDFs/atlas/mammal_atlas_bats.pdf)  Species was considered as a result of review of site conditions and proposed tree removal.	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in Dec. 2012 and June, July and August 2014. Acoustical surveys for bats were conducted to collect a minimum of 20 survey nights (dusk to dawn) of data across the project area.	The major threat identified for the species occurs in the form of a fungus that affects bats during hibernation. No potential hibernacula were identified on the site. Acoustic monitoring of woodland habitat did not document calls for this species.	No further effort is recommended at this time.


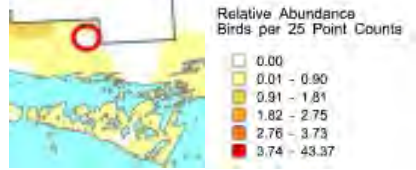

Group	Species	Designation (COSSARO)	ESA Protection (MNRF, 2014)	Habitat Description (MNRF 2014 unless otherwise indicated)	Background Information/Agency Liaison	How Addressed in Field Survey	Results/Habitat Potential	Further Effort Recommended
Mammals	Northern Myotis (<i>Myotis septentrionalis</i>)	Endangered	Species and General Habitat Protection	Northern Myotis are threatened by a disease known as white nose syndrome, caused by a fungus which grows in humid cold environments, such as the caves and mines where bats hibernate. Hibernation occurs from October or November to March or April, most often in caves or abandoned mines. Northern Myotis are associated with boreal forests, choosing to roost under loose bark and in the cavities of trees. In Ontario, the criteria for Significant Wildlife Habitat in the form of Maternity colonies is identified as mature (dominant trees > 80yrs old) deciduous or mixed forest stands with >10/ha large diameter (>25cm DBH) wildlife trees (MNRF 2012).	The northern Myotis is found throughout forested areas in southern Ontario, to the north shore of Lake Superior and occasionally as far north as Moosonee, and west to Lake Nipigon. Available data for the species (up to 1993) includes records in the area of Espanola (Ontario Nature bat atlas at: http://www.ontarionature.org/discover/resources/PDFs/atlas/mammal_atlas_bats.pdf)  Species was considered as a result of review of site conditions and proposed tree removal.	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014. Acoustical surveys for bats were conducted to collect a minimum of 20 survey nights (dusk to dawn) of data across the project area.	The major threat identified for the species occurs in the form of a fungus that affects bats during hibernation. No potential hibernacula were identified on the site. Calls of bat activity analysed to the species level included 7 calls for this species at one location. Trees adjacent to this location are largely comprised of young trees of <25cm DBH.	It is anticipated that avoidance of disturbance to any potential roosting activity could be achieved through use of timing windows to avoid roosting periods. This period generally follows the same restrictions as that for breeding birds. Further consultation with MNRF is required to determine if the proposed activity represents a potential to impact the species and whether a Permit would be required under the ESA.
Birds	Bald eagle (<i>Haliaeetus leucocephalus</i>)	Special Concern	N/A	Prefers deciduous and mixed-deciduous forest; and habitat close to water bodies such as lakes and rivers; Roost in super canopy trees such as Pine.	 Species occurrence as of Feb. 2012 as published on MNRF SAR website (above) does not include records for the project area. Species included in MNRF SAR list for Algoma Region.	Screening of site in December 2012 to include screening for stick nests. Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014, to include breeding bird surveys.	A group of juvenile and adult eagles was observed feeding on material on active landfill in December 2012; no stick nests were observed in the project area at that time. Many individuals were observed during June-Aug surveys also, however, again no stick nests were observed. Birds likely using the landfill for scavenging purposes rather than breeding.	No further effort is recommended at this time.




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Birds	Bank Swallow	Threatened (as of April 2014 EBR posting of COSSARO results)	Species and General Habitat Protection	The Bank Swallow nests in colonies in streamside banks across much of North America. Bank Swallows live in low areas along rivers, streams, ocean coasts, or reservoirs. Their territories usually include vertical cliffs or banks where they nest in colonies of 10 to 2,000 nests. Though in the past Bank Swallows were most commonly found around natural bluffs or eroding streamside banks, more and more often these swallows populate human-made sites, such as sand and gravel quarries or road cuts. (Source: Cornell Lab of Ornithology)	The bank swallow is found all across southern Ontario, with sparser populations scattered across northern Ontario. The largest populations are found along the Lake Erie and Lake Ontario shorelines, and the Saugeen River. According to the OBBA, 2 nd Atlas records for the species include the area of Elliot Lake (red circle, below), in relatively low abundance.  Species included in OBBA records documented for the search area (17LM73).	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014. Breeding Bird surveys were conducted in June and July 2014.	No suitable habitat present in form of bluffs or cliffs. Species was not documented in 2014 breeding bird surveys.	No further effort is recommended at this time.
Birds	Barn swallow (<i>Hirundo rustica</i>)	Threatened	Species and General Habitat Protection (General Habitat Description)	Often use manmade structures to build cup-shaped mud nests. They nest inside or outside of buildings, under bridges, in road culverts, and on rock faces near foraging habitat in the form of farmland; lake/river shorelines; wooded clearings; and wetlands. General habitat protection is provided for the area up to 200m from a nest.	In Ontario the species is found throughout the southern part of the province and as far north as Hudson Bay. According to the OBBA, 2 nd Atlas records for the species include the area of Elliot Lake (red circle, below), in relatively low abundance.  Species included in OBBA records documented for the search area (17LM73).	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014, including breeding bird surveys.	No known structures with the potential to provide nesting sites are identified for removal or destruction. Species was not documented in 2014 breeding bird surveys.	No further effort is recommended at this time.
Birds	Black Tern (<i>Chlidonias niger</i>)	Special Concern	N/A	Black Terns build floating nests in loose colonies in shallow marshes, especially in cattails. In winter they migrate to the coast of northern South America.	 Species occurrence as of Feb. 2012 as published on MNR SAR website (above) does not include records for Elliot Lake area. Species included in MNR SAR list for Algoma Region.	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014, including breeding bird surveys.	Suitable habitat available in the MAM community associated with First Creek, west of the landfill. Species was not documented in 2014 breeding bird surveys.	No further effort is recommended at this time.


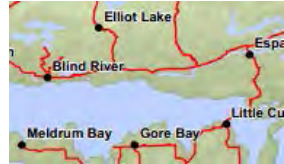

Group	Species	Designation (COSSARO)	ESA Protection (MNR, 2014)	Habitat Description (MNR 2014 unless otherwise indicated)	Background Information/Agency Liaison	How Addressed in Field Survey	Results/Habitat Potential	Further Effort Recommended
Birds	Bobolink (<i>Dolichonyx oryziborus</i>)	Threatened	Species and General Habitat Protection (General Habitat Description)	Bobolink is an obligate-grassland species (i.e., it requires grasslands). With the loss of most of their preferred native grassland habitats, Bobolink and Eastern Meadowlark now nest most commonly in a variety of anthropogenic (i.e., human-created) grassland habitats that effectively mimic the structural attributes of native prairie (MNR Recovery Strategy, McCracken et al. 2013). Often build their small nests on the ground in open grasslands or hay fields. Prior to fall migration, they group into small flocks in the interface between marshy wetlands and agricultural areas. General habitat protection is provided for the area up to 300m from a nest.	In Ontario this species is widely distributed to include the Elliot Lake area.  Species occurrence as of Feb. 2012 as published on MNR SAR website (above) includes records in proximity to the project area. Species included in MNR SAR list for Algoma Region and in OBBA records documented for the search area (17LM73).	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014, including breeding bird surveys.	Grassland species – no suitable habitat available. Species was not documented in 2014 breeding bird surveys.	No further effort is recommended at this time.
Birds	Canada warbler (<i>Cardellina Canadensis</i>)	Special Concern	n/a	The Canada Warbler breeds in a range of deciduous and coniferous, usually wet forest types, all with a well-developed, dense shrub layer. Dense shrub and understory vegetation help conceal Canada Warbler nests that are usually located on or near the ground on mossy logs or roots, along stream banks or on hummocks.	This species' primary breeding range is in the Boreal Shield, extending north into the Hudson Plains and south into the Mixedwood Plains. Although the Canada Warbler breeds at low densities across its range, in Ontario, it is most abundant along the Southern Shield. According to the OBBA, 2 nd Atlas records for the species include the area of Elliot Lake (red circle, below).  Species included in OBBA records documented for the search area (17LM73).	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014, including breeding bird surveys.	Habitat exists on site; however, this bird is considered an interior species and is unlikely to be found in disturbed forest edges adjacent to landfill. Species was not documented in 2014 breeding bird surveys.	No further effort is recommended at this time.
Birds	Chimney Swift (<i>Chaetura pelagica</i>)	Threatened	Species and General Habitat Protection (General Habitat Description)	Before European settlement Chimney Swifts mainly nested on cave walls and in hollow trees or tree cavities in old growth forests. Today, they are more likely to be found in and around urban settlements where they nest and roost (rest or sleep) in chimneys and other manmade structures. They also tend to stay close to water as this is where the flying insects they eat congregate.	In Ontario, it is most widely distributed in the Carolinian zone in the south and southwest of the province, but has been detected throughout most of the province south of the 49th parallel.  Species occurrence as of Feb. 2012 as published on MNR SAR website (above) does not include records for Elliot Lake area. Species included in OBBA records documented for the search area (17LM73).	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014, including breeding bird surveys.	Potential habitat within the Project Area does not occur in the form of appropriate chimneys. Species was not documented in 2014 breeding bird surveys.	No further effort is recommended at this time.

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Birds	Common Nighthawk (<i>Chordeiles minor</i>)	Special concern	N/A	Generally prefer open, vegetation-free habitats, including dunes, beaches, recently harvested forests, burnt-over areas, logged areas, rocky outcrops, rocky barrens, grasslands, pastures, peat bogs, marshes, lakeshores, and river banks. This species also inhabits mixed and coniferous forests. Can also be found in urban areas (nest on flat rooftops) (MNR, 2013b: MNR, 2014).	The range of the Common Nighthawk spans most of North and Central America. In Canada, the species is found in all provinces and territories except Nunavut. In Ontario, the Common Nighthawk occurs throughout the province except for the coastal regions of James Bay and Hudson Bay. It winters in South America where it is concentrated in Peru, Ecuador and Brazil. Species included in OBBA records documented for the search area (17LM73).	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014, including breeding bird surveys.	Habitat exists on site; however, no individuals were heard during evening amphibian surveys or observed during daytime surveys.	Avoidance of disturbance to this species could be achieved through use of timing windows to avoid vegetation removal during breeding season. No further effort is recommended at this time.
Birds	Eastern Meadowlark (<i>Sturnella magna</i>)	Threatened	Species and General Habitat Protection (General Habitat Description)	Eastern Meadowlarks breed primarily in moderately tall grasslands, such as pastures and hayfields, but are also found in alfalfa fields, weedy borders of croplands, roadsides, orchards, airports, shrubby overgrown fields, or other open areas. Small trees, shrubs or fence posts are used as elevated song perches. General habitat protection is provided for the area up to 300m from a nest.	In Ontario, the Eastern Meadowlark is primarily found south of the Canadian Shield but it also inhabits the Lake Nipissing, Timiskaming and Lake of the Woods areas.  Species occurrence as of Feb. 2012 as published on MNR SAR website (above) includes records in proximity to the project area. Species included in MNR SAR list for Algoma Region.	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014, including breeding bird surveys.	Grassland species – no suitable habitat of this type available Species was not documented in 2014 breeding bird surveys.	No further effort is recommended at this time.
Birds	Eastern Wood Pewee (<i>Contopus virens</i>)	Special Concern	N/A	Eastern Wood-Pewees are most common in deciduous forest and woodland, but you may find them in nearly any forested habitat, even smaller woodlots, for breeding as long as it is fairly open. (Source: Cornell Lab of Ornithology)	The eastern wood-pewee is found across most of southern and central Ontario, and in northern Ontario as far north as Red Lake, Lake Nipigon and Timmins. According to the OBBA, 2 nd Atlas records for the species include the area of Elliot Lake (red circle, below), in relatively low abundance.  Species included in OBBA records documented for the search area (17LM73).	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014, including breeding bird surveys.	Site offers woodland habitat suitable for this species. Species was not documented in 2014 breeding bird surveys.	Avoidance of disturbance to this species could be achieved through use of timing windows to avoid vegetation removal during breeding season. No further effort is recommended at this time.

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Birds	Least Bittern (<i>Ixobrychus exilis</i>)	Threatened	Species and General Habitat Protection	In Ontario, the Least Bittern is found in a variety of wetland habitats, but strongly prefers cattail marshes with a mix of open pools and channels. This bird builds its nest above the marsh water in stands of dense vegetation, hidden among the cattails. The nests are almost always built near open water, which is needed for foraging. This species eats mostly frogs, small fish, and aquatic insects.	In Ontario, the Least Bittern is mostly found south of the Canadian Shield, especially in the central and eastern part of the province. Small numbers also breed occasionally in northwest Ontario.  Species occurrence as of Feb. 2012 as published on MNRF SAR website (above) includes records in proximity to the project area. MNRF consultation (J. Trottier, pers. comm. 2013) indicates there are records for this species within 15 km of the landfill site. Species included in MNRF SAR list for Algoma Region.	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014, including breeding bird surveys.	Suitable habitat available in the MAM community associated with First Creek, west of the landfill. Species was not documented in 2014 breeding bird surveys.	No further effort is recommended at this time.
Birds	Olive-sided Flycatcher	Special concern	N/A	The Olive-sided flycatcher is most often found along natural forest edges and openings. It will use forests that have been logged or burned, if there are ample tall snags and trees to use for foraging perches. Olive-sided flycatchers' breeding habitat usually consists of coniferous or mixed forest adjacent to rivers or wetlands. In Ontario, Olive-sided flycatchers commonly nest in conifers such as White and Black Spruce, Jack Pine and Balsam Fir.	In Ontario, this species is widely distributed throughout the central and northern areas of the province. According to the OBBA, 2 nd Atlas records for the species include the area of Elliot Lake (red circle, below), in relatively low abundance.  Species included in OBBA records documented for the search area (17LM73).	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014, including breeding bird surveys.	Suitable habitat exists on site. Species was not documented in 2014 breeding bird surveys.	Avoidance of disturbance to this species could be achieved through use of timing windows to avoid vegetation removal during breeding season. No further effort is recommended at this time.
Birds	Peregrine Falcon (<i>Falco peregrinus</i>)	Special Concern	N/A	Peregrine Falcons usually nest on tall, steep cliff ledges close to large bodies of water. Although most people associate Peregrine Falcons with rugged wilderness, some of these birds have adapted well to city life. Urban peregrines raise their young on ledges of tall buildings, even in busy downtown areas.	Although Peregrine Falcons now nest in and around Toronto and several other southern Ontario cities, the majority of Ontario's breeding population is found around Lake Superior in northwestern Ontario.  Species occurrence as of Feb. 2012 as published on MNRF SAR website (above) includes records in the vicinity of the project area. Species included in MNRF SAR list for Algoma Region.	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014, including breeding bird surveys.	None of the preferred nesting locations for the species (tall human-made structures such as buildings or bridges, or natural cliff ledges) are available within the Project Area. Species was not documented in 2014 breeding bird surveys.	No further effort is recommended at this time.

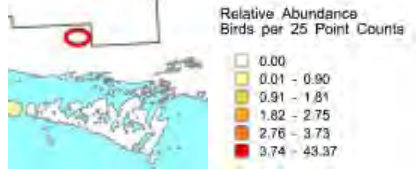
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Birds	Whip-poor-will (<i>Caprimulgus vociferous</i>)	Threatened	Species and General Habitat Protection	The Eastern Whip-poor-will is usually found in areas with a mix of open and forested areas, such as savannahs, open woodlands or openings in more mature, deciduous, coniferous and mixed forests. It forages in these open areas and uses forested areas for roosting (resting and sleeping) and nesting. It lays its eggs directly on the forest floor, where its colouring means it will easily remain undetected by visual predators.	Although Eastern Whip-poor-wills were once widespread throughout the central Great Lakes region of Ontario, their distribution in this area is now fragmented.  Species occurrence as of Feb. 2012 as published on MNRF SAR website (above) includes records in the vicinity of the project area. Species included as a result of MNRF consultation (J. Trottier, pers. comm. 2013) and inclusion in MNRF SAR list for Algoma Region.	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014, including breeding bird surveys.	Habitat exists on site; however, no individuals were heard during evening amphibian surveys or observed during daytime surveys.	Avoidance of disturbance to this species could be achieved through use of timing windows to avoid vegetation removal during breeding season. No further effort is recommended at this time.
Birds	Wood Thrush (<i>Hylocichla mustelina</i>)	Special Concern	N/A	The Wood Thrush lives in mature deciduous and mixed (conifer-deciduous) forests. They seek moist stands of trees with well-developed undergrowth and tall trees for singing perches. These birds prefer large forests, but will also use smaller stands of trees. They build their nests in living saplings, trees or shrubs, usually in sugar maple or American beech.	The wood thrush is found all across southern Ontario. It is also found, but less common, along the north shore of Lake Huron, as far west as the southeastern tip of Lake Superior. There is a very small population near Lake of the Woods in northwestern Ontario, and there have been scattered sightings in the mixed forest of northern Ontario. According to the OBBA, 2 nd Atlas records for the species include the area of Elliot Lake (red circle, below), in relatively low abundance.  Species included in OBBA records documented for the search area (17LM73).	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014, including breeding bird surveys.	Site offers woodland habitat suitable for this species. Species was not documented in 2014 breeding bird surveys.	Avoidance of disturbance to this species could be achieved through use of timing windows to avoid vegetation removal during breeding season. No further effort is recommended at this time.
Reptiles	Blanding's Turtle (<i>Emydoidea blandingii</i>)	Threatened	Species and General Habitat Protection (General Habitat Description)	Generally occur in freshwater lakes, permanent or temporary pools, slow-flowing streams, marshes and swamps. The species prefers shallow water that is rich in nutrients, organic soils and dense vegetation. Adults dig their nest in a variety of loose substrates, including sand, organic soil, gravel and cobblestone. Overwintering occurs in permanent pools that average one metre in depth, or in slow-flowing streams. This species is known to travel long distances overland (7 km) in search of food or a mate.	Blanding's Turtles can be found throughout southern, central and eastern Ontario.  Species occurrence as of Feb. 2012 as published on MNRF SAR website (above) includes records in the vicinity of the project area. Species included as a result of MNRF consultation (J. Trottier, pers. comm. 2013) and inclusion in MNRF SAR list for Algoma Region.	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014.	Potential habitat in the form of the MAM community associated with First Creek; however, quality of water and limited food sources observed reduces quality of habitat. Embankment leading up to landfill was also searched for evidence of nesting turtles, but with no success. Species was not documented during 2014 wildlife surveys.	No further effort is recommended at this time.

Group	Species	Designation (COSSARO)	ESA Protection (MNR, 2014)	Habitat Description (MNR 2014 unless otherwise indicated)	Background Information/Agency Liaison	How Addressed in Field Survey	Results/Habitat Potential	Further Effort Recommended
Reptiles	Milksnake (<i>Lampropeltis triangulum</i>)	Special concern	N/A	The Milksnake can be found in a range of habitats including rocky outcrops, fields and forest edges. In southern Ontario, it is often found in old farm fields and farm buildings where there is an abundance of mice. The Milksnake hibernates underground, in rotting logs or in the foundations of old buildings.	In Ontario, it is widespread and locally common in southern Ontario, and can be found as far north as Lake Nipissing and Sault Ste. Marie.  Species occurrence as of Feb. 2012 as published on MNR SAR website (above) includes records in the vicinity of the project area. Species included in MNR SAR list for Algoma Region and recorded in NHIC.	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014.	No specialized habitat for the species is identified on site (e.g. hibernacula). Habitat generalist, therefore potential for incidental encounter within Project Area.	Potential for impacts will be avoided through general mitigation for vegetation and wildlife. Educational materials provided to operations staff are also recommended to aid in the identification and protection of this species.
Reptiles	Snapping Turtle (<i>Chelydra serpentina</i>)	Special concern	N/A	Often found in many types of freshwater bodies, including ponds with soft mud bottom, slow-moving streams, persistent wetland areas, as well as man-made features like golf course ponds or irrigation channels. (SARA Public Registry). Snapping turtles prefer shallow water so they can hide under soft mud and leaf litter with only their noses exposed. During the nesting season females travel in search of suitable nesting sites, usually gravelly or sandy areas along streams. Snapping Turtles often take advantage of man-made structures for nest sites, including roads (especially gravel shoulders), dams and aggregate pits. Overwintering habitat is in the form of ponds of sufficient depth not to freeze in the winter season.	In Ontario this species is primarily limited to the southern part of the province.  Species occurrence as of Feb. 2012 as published on MNR SAR website (above) includes records in the vicinity of the project area. Species included in MNR SAR list for Algoma Region.	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014.	Potential habitat in the form of the MAM community associated with First Creek; however, quality of water and food sources as observed from water's edge suggest low habitat quality in vicinity of the landfill. Embankment leading up to landfill was also searched for evidence of nesting turtles, but with no success. Species was not documented during 2014 wildlife surveys.	No further effort is recommended at this time.
Fish	Lake Sturgeon (<i>Acipenser fulvescens</i>)	Threatened	Species and General Habitat Protection	The Lake Sturgeon lives almost exclusively in freshwater lakes and rivers with soft bottoms of mud, sand or gravel. They are usually found at depths of five to 20 metres. They spawn in relatively shallow, fast-flowing water (usually below waterfalls, rapids, or dams) with gravel and boulders at the bottom. However, they will spawn in deeper water where habitat is available. They also are known to spawn on open shoals in large rivers with strong currents.	In Ontario, the Lake Sturgeon is found in the rivers of the Hudson Bay basin, the Great Lakes basin and their major connecting waterways, including the St. Lawrence River. Mandrak and Crossman (1992) includes records for the species along the shoreline of Lake Huron in the area of Blind River, ON (shown below).  No more recent occurrence data was available on MNR website. Species included in MNR SAR list for Algoma Region.	Pedestrian survey of accessible aquatic habitat associated with surface water features in December 2012 and June – August 2014. No fish surveys were conducted within the project area.	No habitat occurs within 120m of the project activity.	No further effort is recommended at this time.

Group	Species	Designation (COSSARO)	ESA Protection (MNRF, 2014)	Habitat Description (MNRF 2014 unless otherwise indicated)	Background Information/Agency Liaison	How Addressed in Field Survey	Results/Habitat Potential	Further Effort Recommended
Fish	Northern Brook Lamprey (<i>Ichthyomyzon fossor</i>)	Special Concern	N/A	The Northern brook lamprey inhabits clear, coolwater streams. The larval stage requires soft substrates such as silt and sand for burrowing which are often found in the slow-moving portions of a stream. Adults are found in areas associated with spawning, including fast flowing riffles comprised of rock or gravel. Spawning occurs in May and June. Males construct small, often inconspicuous, nests by picking up pebbles with their mouths and moving them to form the rims of shallow depressions. The sticky eggs are deposited in the nest and adhere to the substrate.	In Ontario, it lives in rivers draining into Lakes Superior, Huron and Erie, and the Ottawa River.  Species occurrence as of Feb. 2012 as published on MNRF SAR website (above) does not include records in the vicinity of the project area. Species included in MNRF SAR list for Algoma Region.	Pedestrian survey of accessible aquatic habitat associated with surface water features in December 2012 and June – August 2014. No fish surveys were conducted within the project area.	First Creek represents fish habitat located within 120m of the project activity. The setback of the landfill from the creek is such that potential impact would be limited to that associated with impairment of water quality as a result of leachate, sedimentation, etc.	General mitigation for protection of surface water quality is anticipated to avoid harm to fish SAR. No further effort is recommended at this time.
Fish	Redside Dace (<i>Clinostomus elongatus</i>)	Endangered	Species and General Habitat Protection (General Habitat Description)	The Redside dace is found in pools and slow-moving areas of small streams and headwaters with a gravel bottom. They are generally found in areas with overhanging grasses and shrubs, and can leap up to 10 cm out of the water to catch insects. During spawning, they can be found in shallow parts of streams, which are also popular spawning areas for other minnow species.	In Canada, Redside dace are found in a few tributaries of Lake Huron, in streams flowing into western Lake Ontario, the Holland River (which flows into Lake Simcoe), and Irvine Creek of the Grand River system (which flows into Lake Erie).  Species occurrence as of Feb. 2012 as published on MNRF SAR website (above) does not include records in the vicinity of the project area. Species included in MNRF SAR list for Algoma Region.	Pedestrian survey of accessible aquatic habitat associated with surface water features in December 2012 and June – August 2014. No fish surveys were conducted within the project area.	First Creek represents fish habitat located within 120m of the project activity. The setback of the landfill from the creek is such that potential impact would be limited to that associated with impairment of water quality as a result of leachate, sedimentation, etc.	General mitigation for protection of surface water quality is anticipated to avoid harm to fish SAR. No further effort is recommended at this time.
Fish	Shortjaw Cisco	Threatened	Species and General Habitat Protection	The Shortjaw Cisco spends most of the year in deep water, usually between 55 to 180 metres in depth. During the breeding season, which can be spring or fall depending on the lake, it migrates to shallower water (10 to 60 metres) to mate and lay eggs. It feeds on tiny aquatic animals, called zooplankton, but also eats aquatic insects, crustaceans, and freshwater shrimp.	The Shortjaw Cisco lives in the Great Lakes, and a few large lakes in Ontario, Manitoba, Saskatchewan, Alberta and North West Territories. In Ontario, it is found in Lake Superior, Lake Nipigon and in some smaller inland lakes. It is considered extirpated from lakes Michigan, Erie and Huron.  Species occurrence as of Feb. 2012 as published on MNRF SAR website (above) does not include records in the vicinity of the project area. Species included in MNRF SAR list for Algoma Region.	Pedestrian survey of accessible aquatic habitat associated with surface water features in December 2012 and June – August 2014. No fish surveys were conducted within the project area.	No habitat occurs within 120m of the project activity.	No further effort is recommended at this time.

Sources: MNRF 2014. Species at Risk information website as accessed at: http://www.mnr.gov.on.ca/en/Business/Species/2ColumnSubPage/MNR_SAR_BIRDS_AT_RISK_EN.html
 MNRF SAR website for Algoma Region list: <https://www.ontario.ca/environment-and-energy/species-risk-region?name=Algoma>
 OBBA database for Square 17LM73 as accessed at: <http://www.birdsontario.org/atlas/>
 NHIC database as viewed at: <http://www.mnr.gov.on.ca/en/Business/NHIC/>
 Cornell Lab of Ornithology: <http://www.allaboutbirds.org/guide>

Table 6: Screening for Species-at-Risk in the area of the Elliot Lake Landfill afforded protection under Schedule 1 of the Species at Risk Act (SARA).

Group	Species	Designation (COSEWIC)	SARA Protection (Environment Canada, 2014)	Habitat Description (SAR Public Registry 2014)	Background Information/Agency Liaison	How Addressed in Field Survey	Results/Habitat Potential	Further Effort Recommended
Birds	Rusty Blackbird	Special Concern	SARA Schedule 1	The Rusty Blackbird nests in the boreal forest and favours the shores of wetlands such as slow-moving streams, peat bogs, marshes, swamps, beaver ponds and pasture edges. In wooded areas, the Rusty Blackbird only rarely enters the forest interior. During the winter, the Rusty Blackbird mainly frequents damp forests and, to a lesser extent, cultivated fields.	<p>According to the OBBA, 2nd Atlas records for the species do not include the area of Elliot Lake (red circle, below).</p>  <p>Species included in OBBA records documented for the search area (17LM73).</p>	Pedestrian surveys of vegetation communities and associated wildlife habitat were completed in June, July and August 2014, including breeding bird surveys.	Potential habitat exists in the form of forest edges, as well as the MAM community associated with First Creek. Species was not documented during 2014 wildlife surveys.	Avoidance of disturbance to this species could be achieved through use of timing windows to avoid vegetation removal during breeding season.

Sources: Environment Canada 2014. COSEWIC Species at Risk information website as accessed at: <http://www.cosewic.gc.ca/eng>
SAR Registry 2014 as accessed at: http://www.sararegistry.gc.ca/species/speciesDetails_e.cfm?sid=907

5.0 SUMMARY OF SITE CONSTRAINTS AND POTENTIAL IMPACTS

The Elliot Lake Landfill is located in a bedrock depression surrounded by steep treed ridges to the north and south and a mineral marsh to the west. Entrance to the site is by means of an asphalt access road from the east. The access road crosses a north-south hydro corridor as it approaches the landfill site, but is generally bounded by deciduous and mixed forest communities. Future expansion of the active landfill area is constrained by the wetland feature and the property boundary limit to the west. These site features limit the potential for expansion of the waste volume and storage capacity to the forested adjacent areas to the north, east and south of the existing active landfill. The existing site topography also poses challenges for expansion to occur to the north and south of the active landfill and therefore, the proposed landfill expansion boundary appears irregular in some areas.

Forested and wetland communities are the more sensitive features found within 120m of proposed expansion. Where forested communities are affected, impacts are anticipated to be in the form of vegetation removal to accommodate the expansion of the facility. The removal of trees is associated with the loss of habitat for wildlife, and although activity in the forest edges appeared to be limited in the surveys conducted, the adjacent contiguous woodland where higher quality habitat occurs would experience edge disturbance effects associated with expansion activities. Examples of edge disturbance includes exposure to noise, light, and wind effects associated with landfill construction and operation in areas of woodland which was previously buffered from these disturbances by existing vegetation. Such disturbances may alter the present structure and composition of vegetation communities to favour more edge tolerant species.

Wetland communities do not occur in the direct vicinity of the area proposed for landfill expansion; however, the MAM2-2 community associated with First Creek to the west of the site has the potential to be impacted by overland drainage, given that topography slopes toward this feature. The landfill was initially designed to operate as a natural attenuation site, and the potential impacts to the water quality of First Creek are currently mitigated through leachate treatment (exp 2014). A leachate collection and sand filter/wetland treatment system was installed at the west boundary of the landfill in 1998. Leachate is currently collected and filtered through a 1,500m² sand filter bed to attenuate metal concentrations, convert ammonia and nitrite into nitrate, and reduce suspended solids of the effluent discharged from the landfill site. As the site is expanded, groundwater and surface water monitoring will continue to confirm the ability of the existing sand filtration leachate system to treat leachate to acceptable water quality standards (exp 2014). Expansion of the existing system will be completed if needed (exp 2014).

Where impacts are unavoidable, efforts to reduce impacts through vegetation management plans, vegetation protection measures, silt/sediment controls to protect aquatic habitat and timing windows to avoid impacting wildlife or aquatic habitat and communities should be employed. Where feasible, expansion should occur within already disturbed areas to minimize impacts to the adjacent woodlands. Pre-stressing of trees and vegetation to edge effects may also allow the adjacent forest community to acclimatize to edge conditions in advance of future expansion of the active landfill area.

Site-specific mitigation measures may be required, such as specific avoidance of habitat trees or timing windows specific to wildlife habitat. SAR and SAR habitat have been identified in the project area, and it is anticipated that the MNRF may require additional information through steps such as the completion of the Information Gathering Form or other pre-consultation to determine if potential impacts to SAR or SAR habitat are identified.

6.0 GENERAL MITIGATION MEASURES

As works associated with the construction and operation of the Elliot Lake Landfill are further determined, mitigation measures that are site-specific should be developed to protect both terrestrial and aquatic environments. Where feasible, avoidance of natural heritage features would provide the least impact. Where this is not possible, the following protective mitigation measures and timing windows should be employed at a minimum.

General mitigation measures for vegetation include the following:

- Temporary protection fencing along the edge of disturbance to protect the adjacent vegetation;
- Seed areas with native seed mix on all areas disturbed to stabilize soils that will not be used as part of the landfill;
- Minimize the foot print of the landfill to only areas required for the expansion;
- Utilize grading methods that will reduce impacts to the surrounding vegetation;
- Use existing paved and gravel paths to access the active areas of the landfill to reduce impacts to natural vegetation where feasible;
- Install permanent fencing to exclude wildlife from dispersing refuse into the adjacent forest and protect adjacent natural vegetation; and,
- Utilize methods that reduce impacts to the remaining vegetation as they relate to the blasting of rock outcrops, should that be necessary.

General mitigation measures for wildlife and wildlife habitat (including aquatic habitat) include the following:

- Any vegetation removal (including dead standing trees) may be influenced by conditions set by the *Migratory Birds Convention Act* (MBCA) including, but not limited to, timing restrictions during breeding season for tree pruning or removal during construction activities. The breeding bird season for this area typically extends from April 1-August 31;
- Construction activities planned during the breeding season should only be completed after a qualified avian biologist has completed a bird nesting survey to ensure no impacts to breeding birds to maintain compliance with the MBCA;
- To avoid contravention of Section 9 of the ESA, tree removal should only occur during the window of September 1 to April 31 (to avoid the peak roosting period for northern myotis);
- Appropriate setbacks should be applied to the wetland associated with First Creek in order to maintain the character and quality of the natural areas providing habitat;
- Minimize footprint within the expansion area in proximity to First Creek and the sloped embankment that drains toward the creek;

- Consider the creation of educational materials for operations staff to aid in the identification and protection of species listed as Special Concern under the ESA with the potential to utilize the active landfill (e.g. Milksnake);
- Review the existing leachate system's performance and suitability for an expanded landfill operation is necessary to ensure protection of the water quality of First Creek and the associated wetland and fish habitat; and,
- Review the current practices of landfill operation to further reduce the accessibility and attraction of the landfill site to bears, through the consideration of some of the above listed mitigation strategies and others as they best relate to the reduction of nuisance bear activity on site.

6.1 ENVIRONMENTAL MONITORING

As the project location is within 120m of a wetland, watercourse and associated fish habitat, environmental monitoring of the site is important to assess the effects of the landfill on the adjacent lands and watercourse and employ corrective measures should they be determined necessary. Environmental effects monitoring is on-going as part of the landfill operations and includes surface water sampling to ensure that water quality results comply with the conditions of the Certificate of Approval (C of A) and other prevailing environmental regulatory requirements. No additional environmental monitoring is recommended beyond what would be required as part of the site's C of A to protect surface water features and associated habitat.

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APPENDIX A BACKGROUND REVIEW

Figure 1: Elevation in area of Elliot Lake Landfill



LEGEND

-  Approximate Expansion Boundary
-  310 Elevation (metres above MSL)
-  10 m Interval Contour (LIO, 2012-11-14)
-  Road (LIO, 2012-11-14)
-  Watercourse (LIO, 2012-11-14)
-  Waterbody (LIO, 2012-11-14)

Ortho Source: Forest Resource Inventory, MNR
 Produced by LGL Limited under Licence with the
 Ontario Ministry of Natural Resources © Queen's
 Printer for Ontario, 2013.

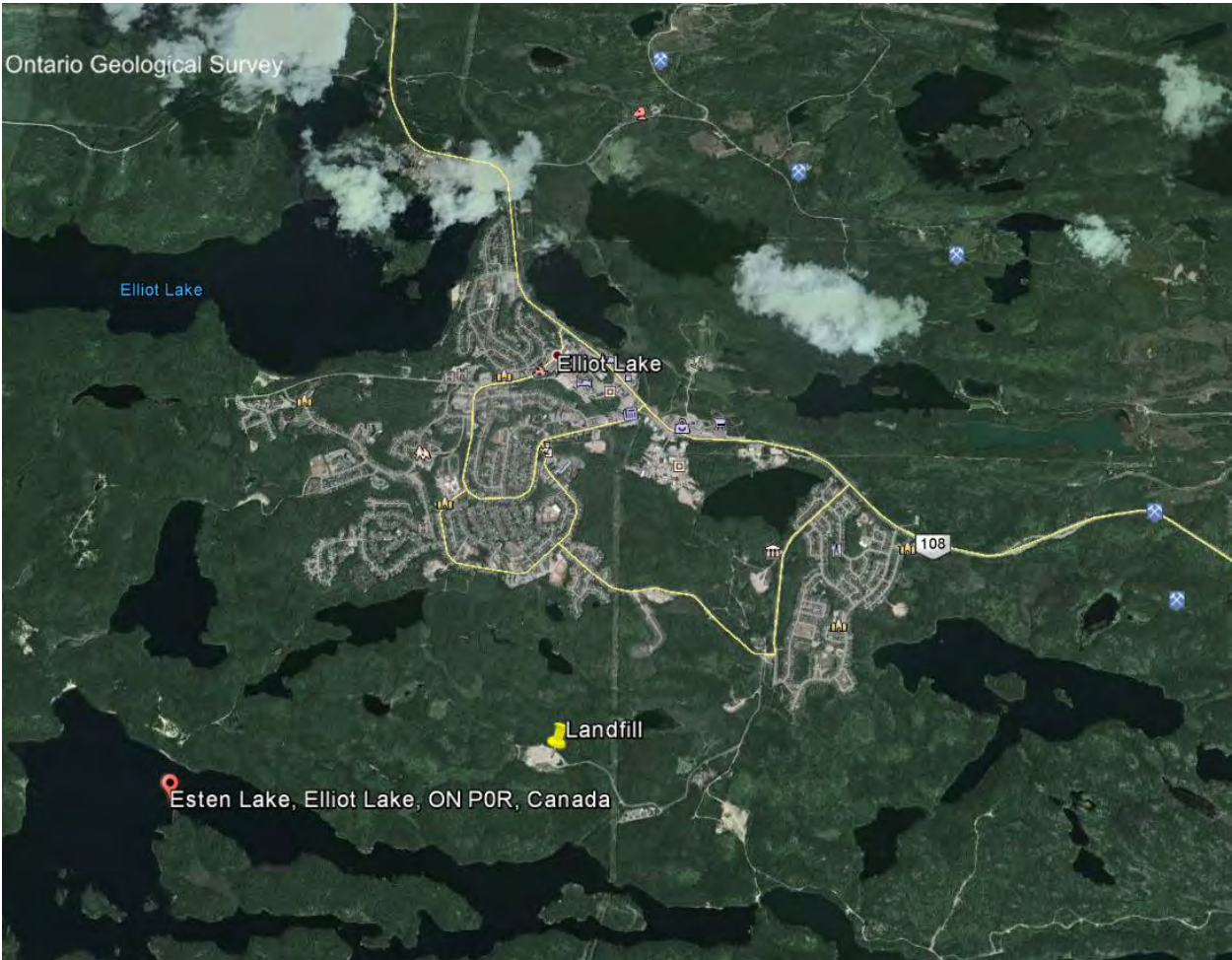
**Elliot Lake Landfill:
 Elevation**



Project	TA8444	Figure	2
Date	November, 2014	Prepared By:	KC
Scale	1:6,000	Verified By:	LKR

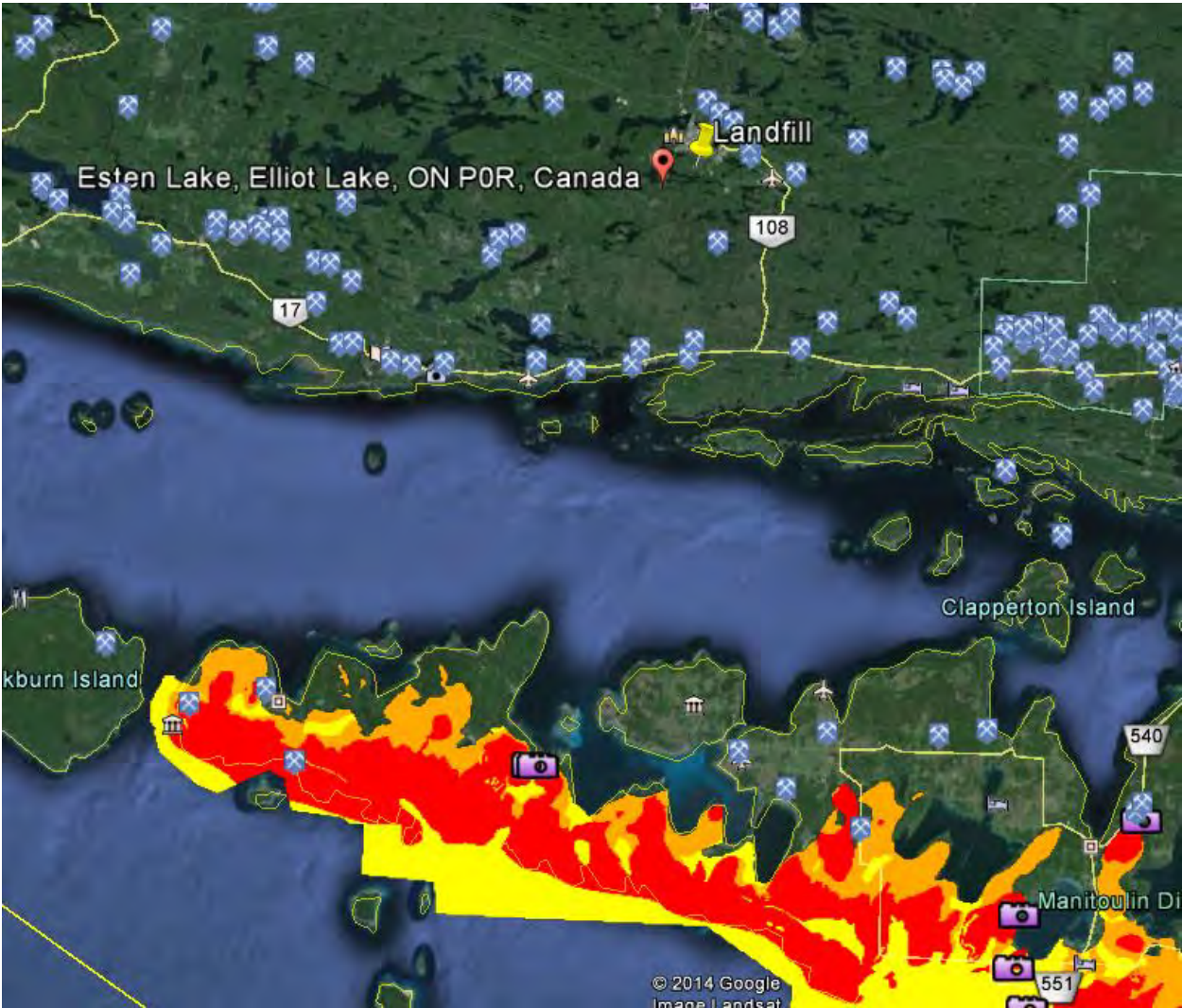
Appendix A, Figure 2: Records for Abandoned Mines and Karst Features as accessed through the Ministry of Northern Development and Mines available GIS data layers

Mines (in blue) – none located near the project site.

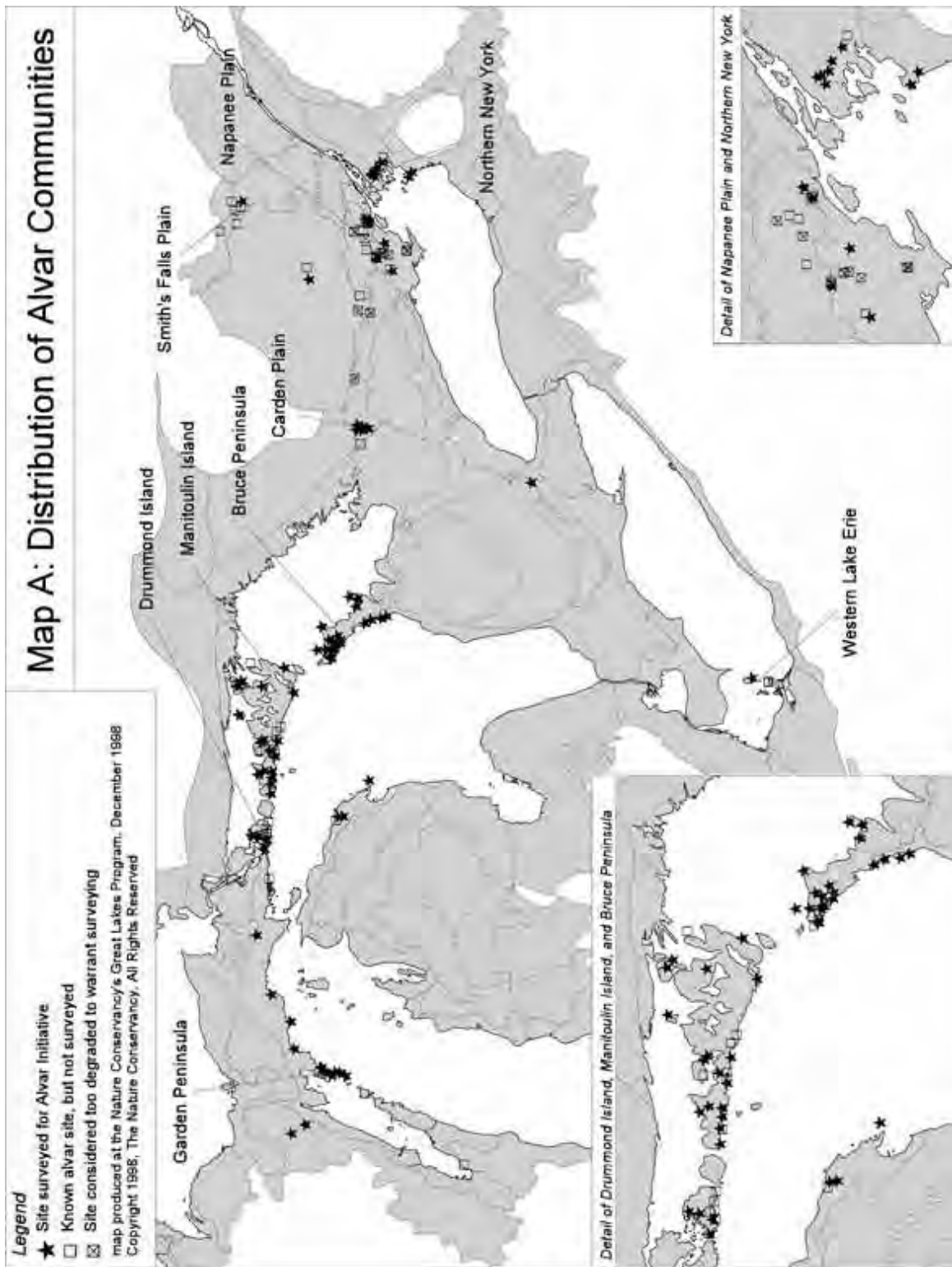


Appendix A: Records for Abandoned Mines and Karst Features as accessed through the Ministry of Northern Development and Mines available GIS data layers

Karst features (in yellow, orange and red) – none located near project site.

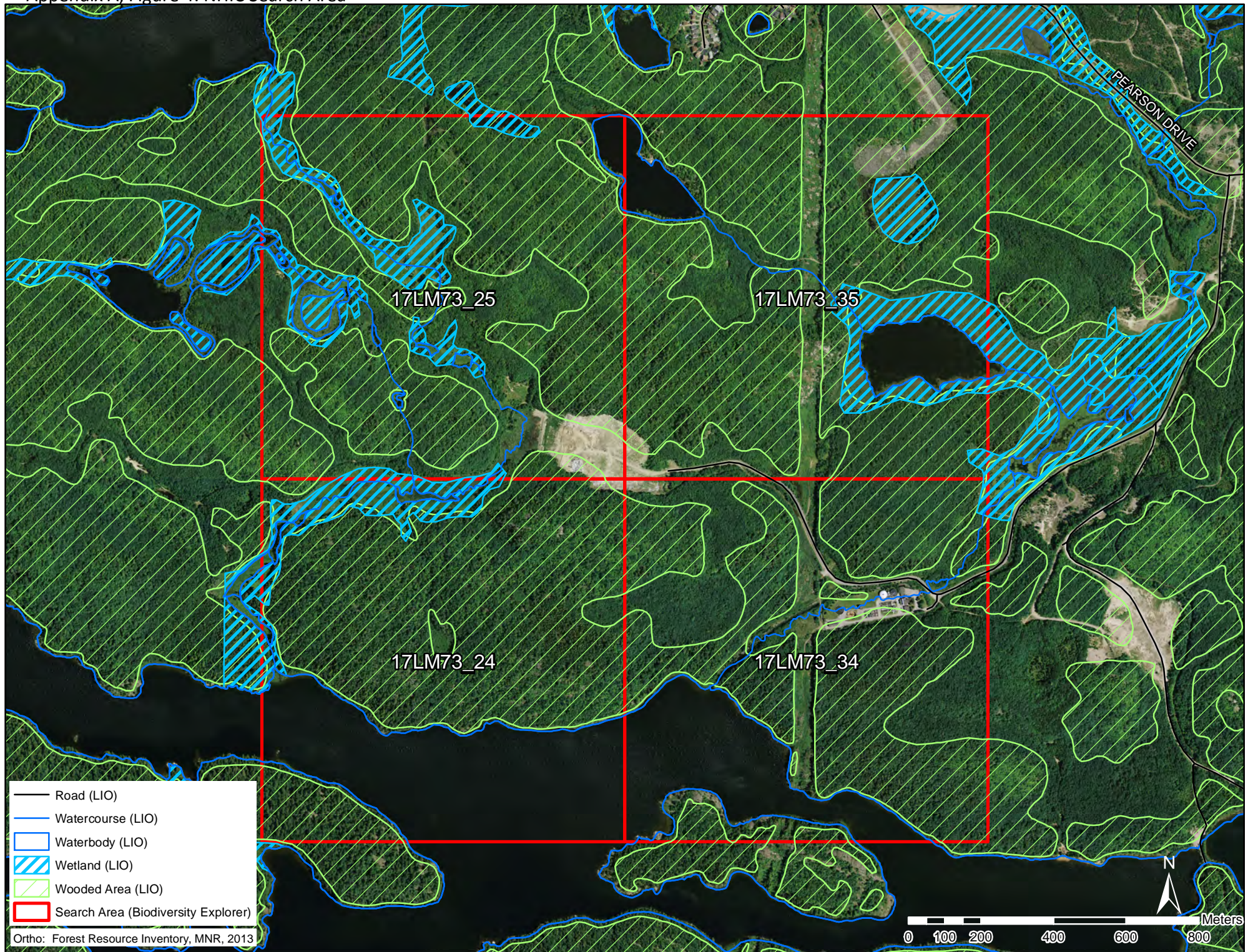


Appendix A, Figure 3: Known Alvars in the Great Lakes Area Conserving Great Lakes Alvars



Reproduced from Reschke, C. Reid, R., Jones J., Feeney, and H.Potter. 1999. Conserving Great Lakes Alvars. The Nature Conservancy Great Lakes Program. 251pp.

Appendix A, Figure 4: NHIC Search Area



Appendix A: Results of NHIC Search for area shown in Appendix A, Figure 4

Scientific Name	Common Name	G-rank	S-rank	Committee on the Status of Endangered Wildlife in Canada (COSEWIC) Status	Species At Risk in Ontario (SARO) Status	UTM Zone	Easting (nearest km)	Northing (nearest km)	Last Observed Date
<i>Lampropeltis triangulum</i>	Milksnake	G5	S3	SC	SC	17	373000	5138000	26/07/1990

Ontario Breeding Bird Atlas 2001 - 2005

Roadside Point Count Coordinates

No.	Easting	Northing
01	378438	5136457
02	375257	5136926
03	374194	5134058
04	375394	5133683
05	375986	5133444
06	375006	5139633
07	375076	5134069
08	370411	5135392
09	378942	5135996
10	374434	5136571
11	373559	5136368
12	373829	5138183
13	373225	5136993
14	371818	5134934
15	374492	5134467
16	371764	5136542
17	373622	5134708
18	372225	5137506
19	374082	5134909
20	371333	5135050
21	376461	5139305
22	379580	5135654
23	377103	5136739
24	374423	5135848
25	372315	5135038
26	370200	5137162
27	372771	5138078
28	374641	5134986
29	372963	5135027
30	371257	5136476
31	374791	5135468
32	378798	5136805
33	378867	5137304
34	376515	5136578
35	378478	5138302
36	377788	5138045
37	372815	5136512
38	377906	5137513
39	374529	5139775
40	372321	5136587
41	371823	5139681
42	374132	5137163
43	379545	5138253
44	375957	5139296
45	378456	5137597
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48	379075	5137761
49	372734	5139714
50	372755	5137563

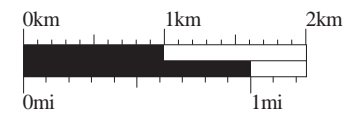
Legend

- Wooded Areas
- Water Bodies
- Water Bodies Water Area
- Water Bodies Wetland Area
- Wetlands
- ANSI
- Pits and Quarries
- Parks and Reserves
- Public Road
- Private Road
- Track
- Trail
- Railway
- Contour Lines
- Lots
- Roadside Point Count Locations
- Fences
- Wall
- Hedge
- Feature Outline
- Race Track
- Building Points
- Building Polygons
- Airports
- Petroleum Tank
- Water Tank
- Survey Monuments
- Smoke Stack
- Towers
- Named Places
- Pipelines
- Transmission Line

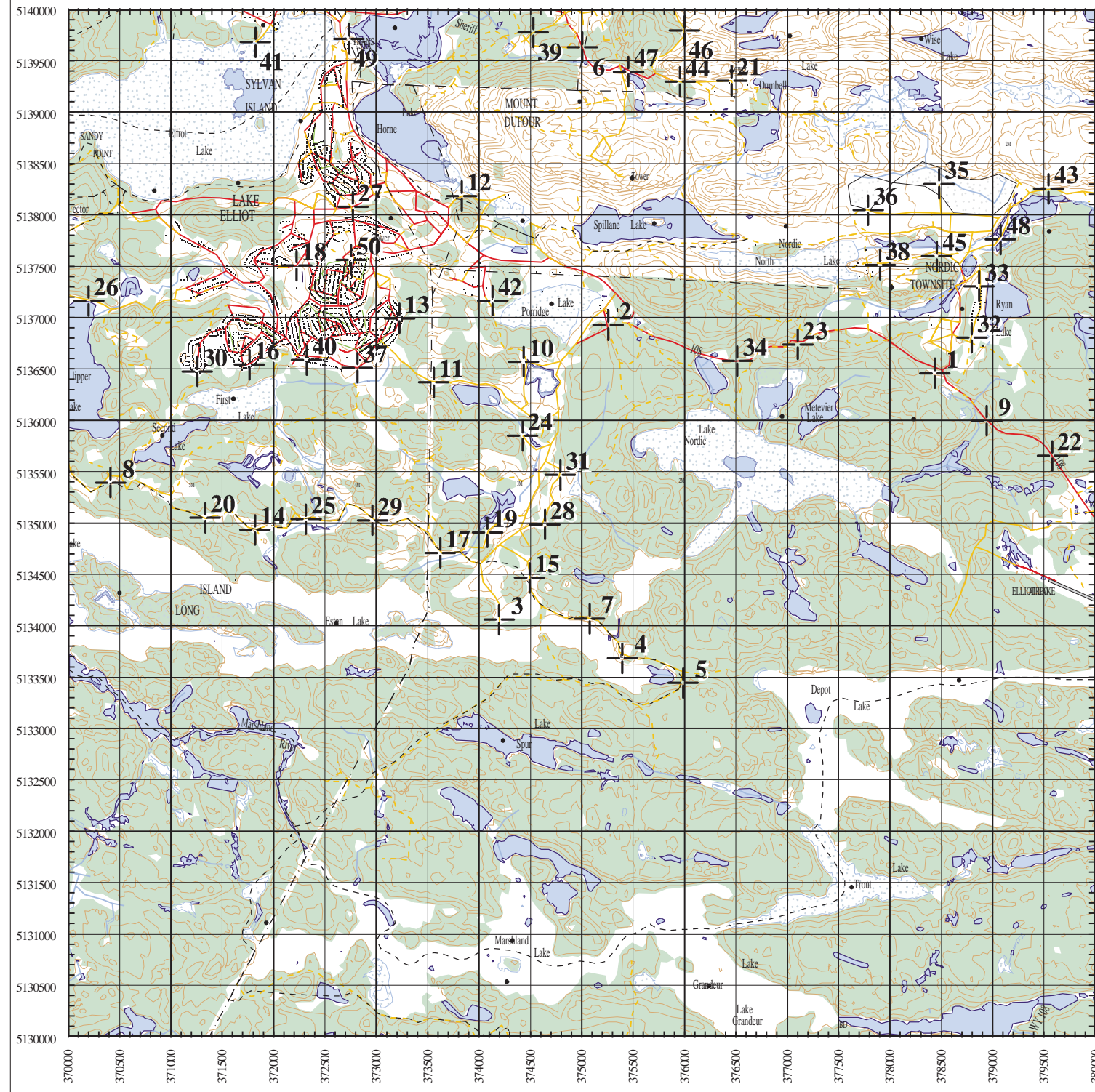
North American Datum 1983
 Universal Transverse Mercator (6 degrees) projection
 Zone 17, Central Meridian 81 degrees W.
 Grid Interval 1000 meters
 Contour Interval 10 meters
 Some features on the Breeding Bird Atlas field maps may not have been updated since the early 1980's.

Atlas Square: 17LM73 Region: 34

(NAD27 - 17LB73)



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 Map may only be used for Ontario Breeding Bird Atlas Work



APPENDIX B PHOTO APPENDIX



Photo 1: Hemlock forest is the dominant vegetation community throughout the study area.



Photo 2: West view of Hemlock forest on rocky hill (outcrop) south of landfill. Notice the steep topography of the area.



Photo 3: North view of drainage feature within Hemlock forest north of landfill.. Pooled surface water approximately 20m x 5m. (Figure 3, P4)



Photo 4: South view of landfill from the drainage feature within Hemlock forest (ES30).



Photo 5: Sugar Maple and Birch forest (ES27) south of the landfill.



Photo 6: View of Pine forest (ES20) on hill/outcrop north of the landfill.



Photo 7: Meadow species (CUM1-1) colonizing the landfill berm.



Photo 8: View of wetland (MAM2-2) facing west . Photo taken from edge of active landfill.



Photo 9: Birch forest (ES17) along road to landfill site.



Photo 10: Damage to Cedar trees within Hemlock forest south of landfill and access road.



Photo 12: Upstream of P6 ,channel ill-defined. Photo taken at P7 (Figure 3).



Photo 12: Alder and Willow thicket swamp (SWT2) north of the access road.



Photo 13: Small ephemeral drainage feature south of the landfill (At P3, Figure 3), draining west toward wetland.



Photo 14: Cascading flow between ponding features at locations P5 and P6 (Figure 3).



Photo 15: Mossy, hummocky pool approximately 0.1m depth at P5 (Figure 3).



Photo 16: Typical topography of the area.



Photo 17: Cliff face near Pine Forest (ES20).



Photo 18: Pond/Reed Canary Meadow Marsh (MAM2) on the north side (upstream) of the municipal access road and within the Hydro Corridor.



Photo 19: Drainage ditch/inundated old road on the south side of the municipal access road. Wetland plants have established within it.



Photo 20: Culvert crossing the municipal access road into the landfill site, that drains the wetland to the north along a ditch to the south.



Photo 21: Sloping topography at the upstream limit of ponded area at P2 (Figure 3).



Photo 22: New signs, office space and gate observed during the 2014 field investigation.



Photo 23: New paved ramp and weigh station installed at the entrance to the landfill.

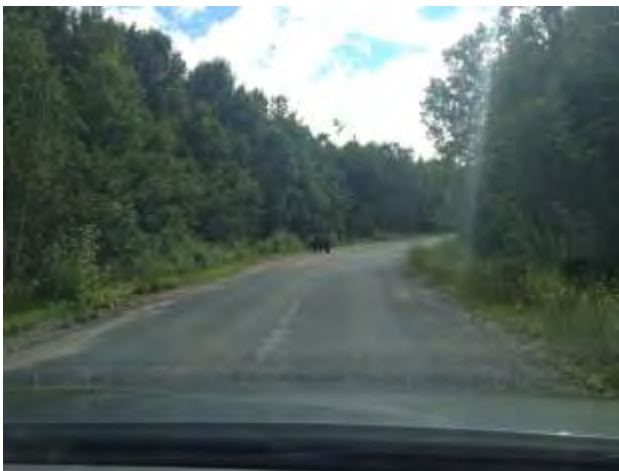


Photo 24: Bear entering the Poplar – White Birch Forest (ES17) north side of the municipal access road.



Photo 25: White Pine forest (ES20) along the north west border near the active part of the landfill.



Photo 26: Sugar Maple – Hemlock forest (ES 28) south of the landfill. View of bat detector (SM3-5) affixed to a maple tree.



Photo 27: Wildlife damage at base of tree within Hemlock forest (ES30).



Photo 28: Wildlife exposed tree roots on rocky slopes from displaced soils within the Hemlock forest (ES30) on the south side of the landfill.



Photo 29: Sedge meadow marsh (MAS2-6) along the south east edges of the landfill.



Photo 30: Cultural meadow (CUM1-1) establishing on the less active portion of the landfill along the south.



Photo 31: View of bat detector SM2-2 within the Hemlock forest (ES30) south of the landfill.



Photo 32: View of bat detector SM2-1 within the Hemlock forest (ES30). This is an active wildlife area.



Photo 33: View of bat detector SM3-2 within the Hemlock forest (ES30) north of the landfill. This is an active wildlife area.



Photo 34: Herring and Ring-billed Gulls dominant within active landfill. Bald Eagle also seen perching in dead standing tree in right side of photo.



Photo 35: Herring and Ring-billed Gulls and Black Bears frequent the landfill.



Photo 36: Turkey Vultures, Common Ravens, and American Crows are common scavenger species found within the landfill.



Photos 37A and 37B: American Black Bears (A) and their tracks (B) are evident throughout the landfill.



Photo 38: MAM(2-2) community at western limit of landfill, facing northwest.



Photo 39: MAM(2-2) community and adjacent embankment, facing south. Note: landfill waste and filmy sludge material within aquatic habitat.



Photo 40: MAM (2-2) community, facing south. Note: landfill waster and filmy sludge material within aquatic habitat.



Photo 41: east facing embankment between landfill and MAM(2-2) community, facing southeast.

APPENDIX C VASCULAR PLANT LIST

Scientific Name	Common Name	GRank ¹	SRank ²	MNR ³	COSEWIC ⁴	Vegetation Communities								
						CUM1-1	ES17	ES20	ES27	ES 28	ES30	MAM2	MAM2-6	SWT2
* <i>Prunella vulgaris ssp. vulgaris</i>	common heal-all	G5T?	SE3			x								
	PLANTAGINACEAE	PLANTAIN FAMILY												
* <i>Plantago lanceolata</i>	ribgrass	G5	SE5			x	x							
* <i>Plantago major</i>	common plantain	G5	SE5			x								
	SCROPHULARIACEAE	FIGWORT FAMILY												
* <i>Verbascum thapsus</i>	common mullein	G?	SE5			x	x							
	SCROPHULARIACEAE	FIGWORT FAMILY												
* <i>Veronica anagallis-aquatica</i>	water speedwell	G5	SE5											x
	CAPRIFOLIACEAE	HONEYSUCKLE FAMILY												
<i>Sambucus racemosa var. racemosa</i>	red-berried elderberry	G5T4T5	S5							x	x			
	ASTERACEAE	ASTER FAMILY												
<i>Achillea millefolium var. occidentalis</i>	woolly yarrow	G5T5	S5			x	x							
<i>Ambrosia artemisiifolia</i>	common ragweed	G5	S5			x								
<i>Anaphalis margaritacea</i>	pearly everlasting	G5	S5			x	x							
* <i>Arctium minus</i>	common burdock	G?T?	SE5			x								
<i>Aster lanceolatus ssp. lanceolatus</i>	tall white aster	G5T?	S5			x								
<i>Aster sp.</i>	aster													x
* <i>Cichorium intybus</i>	chicory	G?	SE5			x								
<i>Conyza canadensis</i>	horseweed	G5	S5			x								
<i>Erigeron strigosus</i>	daisy fleabane	G5	S5			x								
<i>Eupatorium maculatum var. maculatum</i>	spotted joe-pye-weed	G5T5	S5										x	x
<i>Euthamia graminifolia</i>	flat-topped bushy goldenrod	G5	S5			x							x	
* <i>Hieracium aurantiacum</i>	devil's paintbrush	G?	SE5			x								
* <i>Hieracium caespitosum</i>	field hawkweed		SE5			x	x							
* <i>Leontodon autumnalis ssp. autumnalis</i>	fall hawkbit	G?T?	SE5			x								
* <i>Leucanthemum vulgare</i>	ox-eye daisy	G?	SE5			x	x							
* <i>Matricaria maritima ssp. maritima</i>	seaside camomile	G5T?	SE?			x								
<i>Solidago canadensis var. scabra</i>	tall goldenrod	G5	S5			x	x					x		
<i>Solidago rugosa ssp. rugosa</i>	rough goldenrod	G5T?	S5			x							x	
* <i>Sonchus arvensis ssp. arvensis</i>	field sow-thistle	G?T?	SE5			x								
<i>Symphotrichum cordifolium</i>	heart-leaved aster	G5	S5								x			

Scientific Name	Common Name	GRank ¹	SRank ²	MNR ³	COSEWIC ⁴	Vegetation Communities								
						CUM1-1	ES17	ES20	ES27	ES 28	ES30	MAM2	MAM2-6	SWT2
* <i>Tanacetum vulgare</i>	common tansy	G?	SE5			x	x							
* <i>Taraxacum officinale</i>	common dandelion	G5	SE5			x								
ALISMATACEAE	WATER-PLANTAIN FAMILY													
<i>Alisma plantago-aquatica</i>	common water-plantain	G5	S5									x		
JUNCACEAE	RUSH FAMILY													
<i>Juncus canadensis</i>	Canada rush	G5	S5									x		
<i>Juncus effusus ssp. solutus</i>	soft rush	G5T?	S5										x	
<i>Juncus tenuis</i>	path rush	G5	S5			x							x	
CYPERACEAE	SEDGE FAMILY													
<i>Carex bebbii</i>	Bebb's sedge	G5	S5			x							x	
<i>Carex crinita</i>	fringed sedge	G5	S5										x	
<i>Carex granularis</i>	meadow sedge	G5	S5								x			
<i>Carex intumescens</i>	bladder sedge	G5	S5								x		x	
<i>Carex sp.</i>	sedge						x			x	x			x
<i>Scirpus atrovirens</i>	dark-green bulrush	G5?	S5			x								
<i>Scirpus cyperinus</i>	wool-grass	G5	S5										x	
POACEAE	GRASS FAMILY													
* <i>Agrostis gigantea</i>	red-top	G4G5	SE5										x	
* <i>Agrostis stolonifera</i>	redtop	G5	S5			x								
<i>Bromus sp.</i>	brome		S?						x	x				
* <i>Dactylis glomerata</i>	orchard grass	G?	SE5			x								
<i>Danthonia spicata</i>	poverty oat grass	G5	S5			x	x	x		x				
<i>Glyceria canadensis</i>	rattlesnake grass	G5	S4S5									x	x	
<i>Panicum capillare</i>	witch grass	G5	S5			x								
<i>Phalaris arundinacea</i>	reed canary grass	G5	S5			x	x					x		x
* <i>Phleum pratense</i>	timothy	G?	SE5			x								
<i>Poa compressa</i>	Canada blue grass	G?	S5			x								
TYPHACEAE	CATTAIL FAMILY													
<i>Typha latifolia</i>	broad-leaved cattail	G5	S5									x		

*introduced

Table Acronyms

1) G-Rank Global Rank

Global ranks are assigned by a consensus of the network of Conservation Data Centres, scientific experts, and the Nature Conservancy to designate a rarity rank based on the range-wide status of a species, subspecies or variety.

The most important factors considered in assigning global ranks are the total number of known, extant sites world-wide, and the degree to which they are potentially or actively threatened with destruction. Other criteria the number of known populations considered to be securely protected, the size of the various populations, and the ability of the taxon to persist at its known sites. The taxonomic distinctness of each taxon has also been considered.

Hybrids, introduced species, and taxonomically dubious species, subspecies and varieties have not been included.

- G1= Extremely rare; usually 5 or fewer occurrences in the overall range or very few remaining individuals; or because of some factor(s) making it especially vulnerable to extinction.
- G2 = Very rare; usually between 5 and 20 occurrences in the overall range or with many individuals in fewer occurrences; or because of some factor(s) making it vulnerable to extinction.
- G3 = Rare to uncommon; usually between 20 and 100 occurrences; may have fewer occurrences, but with a large number of individuals in some populations; may be susceptible to large-scale disturbances.
- G4 = Common; usually more than 100 occurrences; usually not susceptible to immediate threats.
- G5 = Very common; demonstrably secure under present conditions.
- GH = Historic, no records in the past 20 years.
- GU = Status uncertain, often because of low search effort or cryptic nature of the species; more data needed.
- GX = Globally extinct. No recent records despite specific searches.
- ? = Denotes inexact numeric rank (i.e. G4?).
- G" " = A "G" (or "T") followed by a blank space means that the NHIC has not yet obtained the Global Rank from The Nature Conservancy.
- G? = Unranked, or, if following a ranking, rank tentatively assigned (e.g. G3?).
- Q = Denotes that the taxonomic status of the species, subspecies, or variety is questionable.
- T = Denotes that the rank applies to a subspecies or variety.

2) S-Rank Provincial Rank

Provincial (or Sub-national) ranks are used by the Ontario Ministry of Natural Resources Natural Heritage Information Centre (NHIC) to set protection priorities for rare species and natural communities. These ranks are not legal designations. Provincial ranks are assigned in a manner similar to that described for the global ranks, but consider only those factors within the political boundaries of Ontario. By comparing the global and provincial ranks, the status, rarity, and the urgency of conservation needs can be ascertained. The NHIC evaluates provincial ranks on a continual basis and produces updated list at least annually.

- S1 = Critically imperiled in Ontario because of extreme rarity (often 5 or fewer occurrences) or because of some factor (s) such as very steep declines making it especially vulnerable to extirpation.
- S2 = Imperiled in Ontario because of rarity due to very restricted range, very few populations (often 20 or fewer occurrences) steep declines or other factors making it very vulnerable to extirpation.
- S3 = Vulnerable in Ontario due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines, or other factors making it vulnerable to extirpation.
- S4 = Apparently secure - uncommon but not rare; some cause for long-term concern due to declines or other factors.
- S5 = Secure - common, widespread, and abundant in Ontario.
- SX = Presumed Extirpated - specie or community is believed to be extirpated from Ontario.

SNR = Unranked - conservation status in Ontario not yet assessed
 SU = Unrankable - currently unrankable due to lack of information or due to substantially conflicting information about status or trends.
 SNA = Not applicable - a conservation status rank is not applicable because the species is not a suitable target for conservation activities.
 S##S# = Range rank - a numeric range rank (e.g. S2S3) is used to indicate any range of uncertainty about the status of the species or community.
 Ranges cannot skip more than one rank (e.g. SU is used rather than S1S4).

3) COSEWIC Committee On The Status Of Endangered Wildlife in Canada

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assesses the national status of wild species that are considered to be at risk in Canada.

Extinct (X)	A wildlife species that no longer exists.
Extirpated (XT)	A wildlife species no longer existing in the wild in Canada, but occurring elsewhere.
Endangered (E)	A wildlife species facing imminent extirpation or extinction.
Threatened (T)	A wildlife species likely to become endangered if limiting factors are not reversed.
Special Concern (SC)	A wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats.
Not at Risk (NAR)	A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.
Data Deficient (DD)	A category that applies when the available information is insufficient (a) to resolve a wildlife species' eligibility for assessment or (b) to permit an assessment of the wildlife species' risk of extinction.

4) COSSARO/OMNR Committee On The Status Of Species At Risk In Ontario/Ontario Ministry Of Natural Resources

The Committee on the Status of Species at Risk in Ontario (COSSARO)/Ontario Ministry of Natural Resources (OMNR) assess the provincial status of wild species that are considered to be at risk in Ontario.

Extinct (EXT)	A species that no longer exists anywhere.
Extirpated (EXP)	A species that no longer exist in the wild in Ontario but still occurs elsewhere.
Endangered (Regulated) (END-R)	A species facing imminent extinction or extirpation in Ontario which has been regulated under Ontario's <i>Endangered Species Act</i> .
Endangered (END)	A species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's Endangered Species Act.
Threatened (THR)	A species that is at risk of becoming endangered in Ontario if limiting factors are not reversed.
Special Concern (SC)	A species with characteristics that make it sensitive to human activities or natural events.
Not at Risk (NAR)	A species that has been evaluated and found to be not at risk.
Data Deficient (DD)	A species for which there is insufficient information for a provincial status recommendations.

APPENDIX D WILDLIFE LIST

Appendix D, Table 1; Wildlife List for species identified in Background Review and Field Investigation (LGL 2012, 2014).

Type	Scientific Name	Common Name	OBBA 17LM73 (2001-2005)	LGL Limited (Dec 2012)	LGL Limited (June - Aug 2014)	G Rank	S Rank	COSEWIC	SARA	SARO	FWCA	MBCA	SWH-TG Area Sensitive Species	Interior Species	PIF Ontario Landbird Priority Species (BCR 12)
Amphibian	<i>Hyla versicolor</i>	Gray Treefrog			X	G5	S5				P				
Amphibian	<i>Rana clamitans</i>	Green Frog			X	G5	S5								
Bird	<i>Empidonax alnorum</i>	Alder Flycatcher	X			G5	S5B					X			
Bird	<i>Botaurus lentiginosus</i>	American Bittern	X			G4	S4B					X	X		
Bird	<i>Anas rubripes</i>	American Black Duck	X			G5	S4					X			
Bird	<i>Corvus brachyrhynchos</i>	American Crow	X		X	G5	S5B								
Bird	<i>Carduelis tristis</i>	American Goldfinch	X			G5	S5B					X			
Bird	<i>Falco sparverius</i>	American Kestrel	X			G5	S4				P				
Bird	<i>Setophaga ruticilla</i>	American Redstart	X		X	G5	S5B					X	X		
Bird	<i>Turdus migratorius</i>	American Robin	X		X	G5	S5B					X			
Bird	<i>Scolopax minor</i>	American Woodcock	X			G5	S4B					X			
Bird	<i>Haliaeetus leucocephalus</i>	Bald Eagle		X	X	G5	S2N,S4B			SC	P		X		X
Bird	<i>Icterus galbula</i>	Baltimore Oriole	X			G5	S4B					X			
Bird	<i>Riparia riparia</i>	Bank Swallow	X			G5	S4B	THR		THR		X			X
Bird	<i>Hirundo rustica</i>	Barn Swallow	X			G5	S4B	THR		THR		X			X
Bird	<i>Strix varia</i>	Barred Owl	X			G5	S5				P		X	X	
Bird	<i>Ceryle alcyon</i>	Belted Kingfisher	X			G5	S4B				P				X
Bird	<i>Mniotilta varia</i>	Black and White Warbler	X		X	G5	S5B					X	X	X	
Bird	<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo	X			G5	S5B					X			X
Bird	<i>Dendroica fusca</i>	Blackburnian Warbler	X			G5	S5B					X	X	X	X
Bird	<i>Poecile atricapillus</i>	Black-capped Chickadee	X		X	G5	S5					X			
Bird	<i>Dendroica caerulescens</i>	Black-throated Blue Warbler	X		X	G5	S5B					X	X		X
Bird	<i>Dendroica virens</i>	Black-throated Green Warbler	X		X	G5	S5B					X	X		X
Bird	<i>Cyanocitta cristata</i>	Blue Jay	X			G5	S5				P				
Bird	<i>Dolichonyx oryzivorus</i>	Bobolink	X			G5	S4B	THR		THR		X	X		X
Bird	<i>Buteo platypterus</i>	Broad-winged Hawk	X	X		G5	S5B				P		X		X
Bird	<i>Toxostoma rufum</i>	Brown Thrasher	X			G5	S4B					X			X
Bird	<i>Molothrus ater</i>	Brown-headed Cowbird	X			G5	S4B								
Bird	<i>Branta canadensis</i>	Canada Goose	X			G5	S5					X			
Bird	<i>Wilsonia canadensis</i>	Canada Warbler	X			G5	S4B	THR	THR	SC		X	X	X	X
Bird	<i>Sterna caspia</i>	Caspian Tern	X			G5	S3B					X			

Type	Scientific Name	Common Name	OBBA 17LM73 (2001-2005)	LGL Limited (Dec 2012)	LGL Limited (June - Aug 2014)	G Rank	S Rank	COSEWIC	SARA	SARO	FWCA	MBCA	SWH-TG Area Sensitive Species	Interior Species	PIF Ontario Landbird Priority Species (BCR 12)
Bird	<i>Bombycilla cedrorum</i>	Cedar Waxwing	X			G5	S5B					X			
Bird	<i>Dendroica pensylvanica</i>	Chestnut-sided Warbler	X			G5	S5B					X			X
Bird	<i>Chaetura pelagica</i>	Chimney Swift	X			G5	S4B,S4N	THR	THR	THR		X			X
Bird	<i>Spizella passerina</i>	Chipping Sparrow	X			G5	S5B					X			
Bird	<i>Bucephala clangula</i>	Common Goldeneye	X			G5	S5					X	X		
Bird	<i>Quiscalus quiscula</i>	Common Grackle	X			G5	S5B								
Bird	<i>Gavia immer</i>	Common Loon	X			G5	S5B,S5N					X	X		
Bird	<i>Mergus merganser</i>	Common Merganser	X			G5	S5B,S5N					X	X		
Bird	<i>Chordeiles minor</i>	Common Nighthawk	X			G5	S4B	THR	THR	SC		X			X
Bird	<i>Corvus corax</i>	Common Raven	X	X	X	G5	S5				P			X	
Bird	<i>Gallinago gallinago</i>	Common Snipe	X									X			
Bird	<i>Geothlypis trichas</i>	Common Yellowthroat	X		X	G5	S5B					X			X
Bird	<i>Junco hyemalis</i>	Dark-eyed Junco	X			G5	S5B					X			
Bird	<i>Phalacrocorax auritus</i>	Double-crested Cormorant	X			G5	S5B								
Bird	<i>Picoides pubescens</i>	Downy Woodpecker	X		X	G5	S5					X			
Bird	<i>Sialia sialis</i>	Eastern Bluebird	X			G5	S5B					X			
Bird	<i>Tyrannus tyrannus</i>	Eastern Kingbird	X			G5	S4B					X			
Bird	<i>Sayornis phoebe</i>	Eastern Phoebe	X			G5	S5B					X			
Bird	<i>Contopus virens</i>	Eastern Wood Pewee	X			G5	S4B	SC		SC		X			X
Bird	<i>Sturnus vulgaris</i>	European Starling	X	X	X	G5	SNA								
Bird	<i>Coccothraustes vespertinus</i>	Evening Grosbeak	X			G5	S4B					X			
Bird	<i>Dumetella carolinensis</i>	Gray Catbird	X			G5	S4B					X			
Bird	<i>Ardea herodias</i>	Great Blue Heron	X			G5	S4					X			
Bird	<i>Myiarchus crinitus</i>	Great Crested Flycatcher	X			G5	S4B					X			
Bird	<i>Bubo virginianus</i>	Great Horned Owl	X			G5	S4				P				
Bird	<i>Picoides villosus</i>	Hairy Woodpecker	X			G5	S5					X	X		
Bird	<i>Catharus guttatus</i>	Hermit Thrush	X		X	G5	S5B					X	X	X	
Bird	<i>Larus argentatus</i>	Herring Gull	X	X	X	G5	S5B, S5N					X			
Bird	<i>Lophodytes cucullatus</i>	Hooded Merganser	X			G5	S5B,S5N					X			
Bird	<i>Troglodytes aedon</i>	House Wren	X			G5	S5B					X			
Bird	<i>Passerina cyanea</i>	Indigo Bunting	X		X	G5	S4B					X			

Type	Scientific Name	Common Name	OBBA 17LM73 (2001-2005)	LGL Limited (Dec 2012)	LGL Limited (June - Aug 2014)	G Rank	S Rank	COSEWIC	SARA	SARO	FWCA	MBCA	SWH-TG Area Sensitive Species	Interior Species	PIF Ontario Landbird Priority Species (BCR 12)
Bird	<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak	X			G5	S4B					X			X
Bird	<i>Regulus calendula</i>	Ruby-crowned Kinglet	X			G5	S4B					X			
Bird	<i>Archilochus colubris</i>	Ruby-throated Hummingbird	X			G5	S5B					X			
Bird	<i>Bonasa umbellus</i>	Ruffed Grouse	X			G5	S4				G				X
Bird	<i>Euphagus carolinus</i>	Rusty Blackbird	X			G4	S4B	SC	SC		P				X
Bird	<i>Grus canadensis tabida</i>	Sandhill Crane	X			G5	S5B					X	X		
Bird	<i>Passerculus sandwichensis</i>	Savannah Sparrow	X			G5	S4B					X	X		
Bird	<i>Cistothorus platensis</i>	Sedge Wren	X			G5	S4B					X			X
Bird	<i>Vireo solitarius</i>	Solitary Vireo (Blue-headed vireo)	X			G5	S5B					X	X	X	
Bird	<i>Melospiza melodia</i>	Song Sparrow	X		X	G5	S5B					X			
Bird	<i>Actitis macularius</i>	Spotted Sandpiper	X			G5	S5					X			
Bird	<i>Catharus ustulatus</i>	Swainson's Thrush	X			G5	S4B					X		X	
Bird	<i>Melospiza georgiana</i>	Swamp Sparrow	X			G5	S5B					X			X
Bird	<i>Vermivora peregrina</i>	Tennessee Warbler	X			G5	S5B					X			
Bird	<i>Tachycineta bicolor</i>	Tree Swallow	X			G5	S4B					X			
Bird	<i>Cathartes aura</i>	Turkey Vulture	X		X	G5	S5B				P				
Bird	<i>Catharus fuscescens</i>	Veery	X			G5	S4B					X	X	X	X
Bird	<i>Pooecetes gramineus</i>	Vesper Sparrow	X			G5	S4B					X			
Bird	<i>Rallus limicola</i>	Virginia Rail	X			G5	S5B					X			
Bird	<i>Sitta carolinensis</i>	White-breasted Nuthatch	X			G5	S5					X	X		
Bird	<i>Zonotrichia albicollis</i>	White-throated Sparrow	X		X	G5	S5B					X			X
Bird	<i>Loxia leucoptera</i>	White-winged Crossbill	X			G5	S5B					X		X	
Bird	<i>Wilsonia pusilla</i>	Wilson's Warbler	X			G5	S4B					X			
Bird	<i>Troglodytes troglodytes</i>	Winter Wren	X		X	G5	S5B					X	X	X	
Bird	<i>Aix sponsa</i>	Wood Duck	X			G5	S5					X			
Bird	<i>Hylocichla mustelina</i>	Wood Thrush	X			G5	S4B	THR		SC		X		X	X
Bird	<i>Dendroica palmarum palmarum</i>	Yellow Palm Warbler	X			G5TU	S1B					X			
Bird	<i>Dendroica petechia</i>	Yellow Warbler	X		X	G5	S5B					X			
Bird	<i>Empidonax flaviventris</i>	Yellow-bellied Flycatcher	X			G5	S5B					X			
Bird	<i>Sphyrapicus varius</i>	Yellow-bellied Sapsucker	X			G5	S5B					X	X		X
Bird	<i>Dendroica coronata</i>	Yellow-rumped Warbler	X			G5	S5B					X			

Type	Scientific Name	Common Name	OBBA 17LM73 (2001-2005)	LGL Limited (Dec 2012)	LGL Limited (June - Aug 2014)	G Rank	S Rank	COSEWIC	SARA	SARO	FWCA	MBCA	SWH-TG Area Sensitive Species	Interior Species	PIF Ontario Landbird Priority Species (BCR 12)
Mammals	<i>Ursus americanus</i>	American Black Bear		X	X	G5	S5				G				
Mammals	<i>Lasiurus borealis</i>	Eastern Red Bat			X	G5	S4				P				
Mammals	<i>Lasiurus cinereus</i>	Hoary Bat			X	G5	S4				P				
Mammals	<i>Myotis septentrionalis</i>	Northern Long-eared Bat			X	G4	S3	END		END	P				
Mammals	<i>Vulpes vulpes</i>	Red Fox		X		G5	S5				F				
Mammals	<i>Tamiasciurus hudsonicus</i>	Red Squirrel		X	X	G5	S5				F				
Mammals	<i>Lasionycteris noctivagans</i>	Silver-haired Bat			X	G5	S4				P				
Mammals	<i>Lepus americanus</i>	Snowshoe Hare		X		G5	S5				G				
Mammals	<i>Odocoileus virginianus</i>	White-tailed Deer		X		G5	S5				G				

Legend

Global Rank (G- Rank): assigned by a consensus of the network of Conservation Data Centres (CDCs), scientific experts and The Nature Conservancy to designate a rarity rank based on the range-wide status of species, subspecies or variety, according to the following: G5-very common; demonstrably secure under present conditions

Provincial (or Subnational) ranks (S-Rank) are used by the Natural Heritage Information Centre to set protection priorities for rare species and natural communities. Provincial ranks are assigned in a manner similar to that described for global ranks, but consider only those factors within the political boundaries of Ontario.

S1-critically imperilled; critically imperilled in the nation or state/province because of extreme rarity

S2-imperilled; imperilled in the nation or state/province because of rarity due to very restricted range, very few populations (often 20 or fewer)

S3-vulnerable; vulnerable in the nation or state/province due to a restricted range, relatively few populations (often 80 or fewer), recent and widespread declines

S4-apparently secure; uncommon but not rare; some cause for long-term concern due to declines or other factors

S5-secure; common, widespread and abundant in the nation or state/province

S?-not ranked yet- species rank not yet assigned

SZB-breeding migrants/vagrants; SZN-non-breeding migrants/vagrants

COSEWIC – Committee on the Status of Endangered Wildlife in Canada

NAR- not at risk; a wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances

THR-threatened; a wildlife species likely to become endangered if limiting factors are not reversed

END-endangered; a wildlife species facing imminent extirpation or extinction

EXT-extirpated; a species no longer existing in the wild in Canada but occurring elsewhere

SC-special concern; a wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats

DD-data deficient; a wildlife species for which there is inadequate information to make a direct, or indirect, assessment of its risk of extinction

SARA – Species at Risk Act

Schedule 1- official list of wildlife species at risk

THR-threatened; a wildlife species likely to become endangered if limiting factors are not reversed

END-endangered; a wildlife species facing imminent extirpation or extinction

EXT-extirpated; a species no longer existing in the wild in Canada but occurring elsewhere

SC-special concern; a wildlife species that may become a threatened or an endangered species because of a combination of biological characteristics and identified threats

SARO –Species at Risk in Ontario

*indicates recent species status change (as per EBR Registry 012-1553, posted April 11, 2014)

END-Endangered; a species facing imminent extinction or extirpation in Ontario which is a candidate for regulation under Ontario's ESA

EXP-Extirpated; a species that no longer exists in the wild in Ontario but exists elsewhere

THR-Threatened; a species that is at risk of becoming endangered in Ontario if limiting factors are not reversed

SC-Special Concern; a species with characteristics that make it sensitive to human activities or natural events

FWCA –Fish and Wildlife Conservation Act, 1997

P - protected species, G – game species, F – furbearing species

MBCA –Migratory Birds Convention Act, 1994

X-protected species

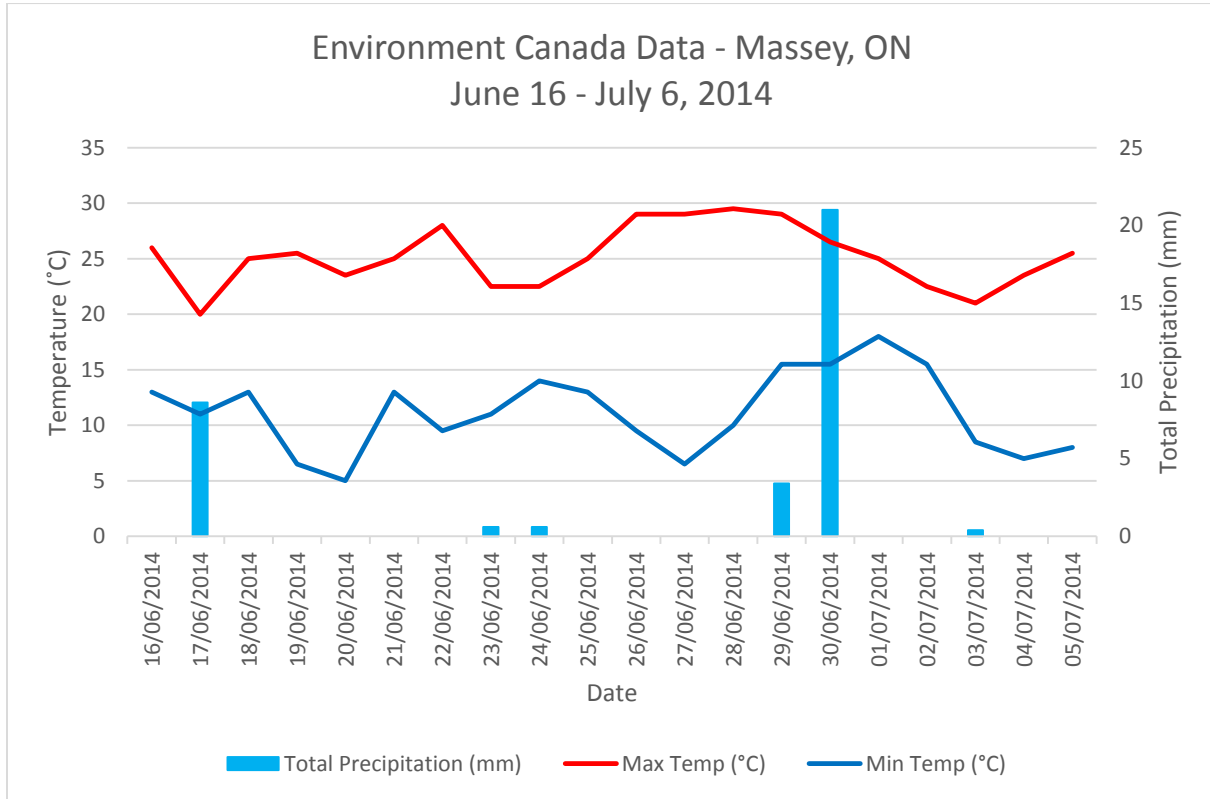
SWH-TG – Species with specific habitat requirements and considered ‘area sensitive’ as a result (Ontario Ministry of Natural Resources (OMNR). 2000. Significant Wildlife Habitat Technical Guide. Queen’s Printer for Ontario. Ontario, Canada.)

Interior Species – ‘X’ indicates species requires interior habitat

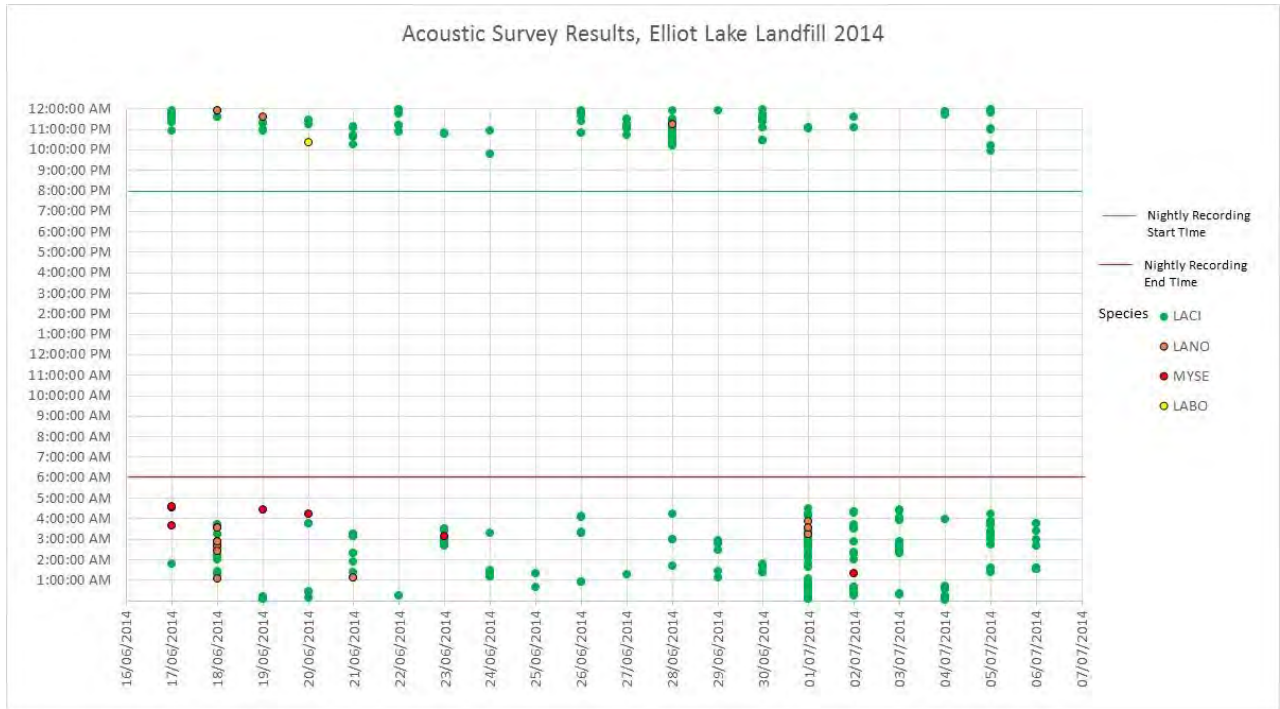
Priority Species – species considered by Bird Studies Canada to be conservation priorities for the area as viewed at: <http://www.bsc-eoc.org/conservation/conservmain.html>

APPENDIX E BAT ACOUSTIC SURVEY RESULTS

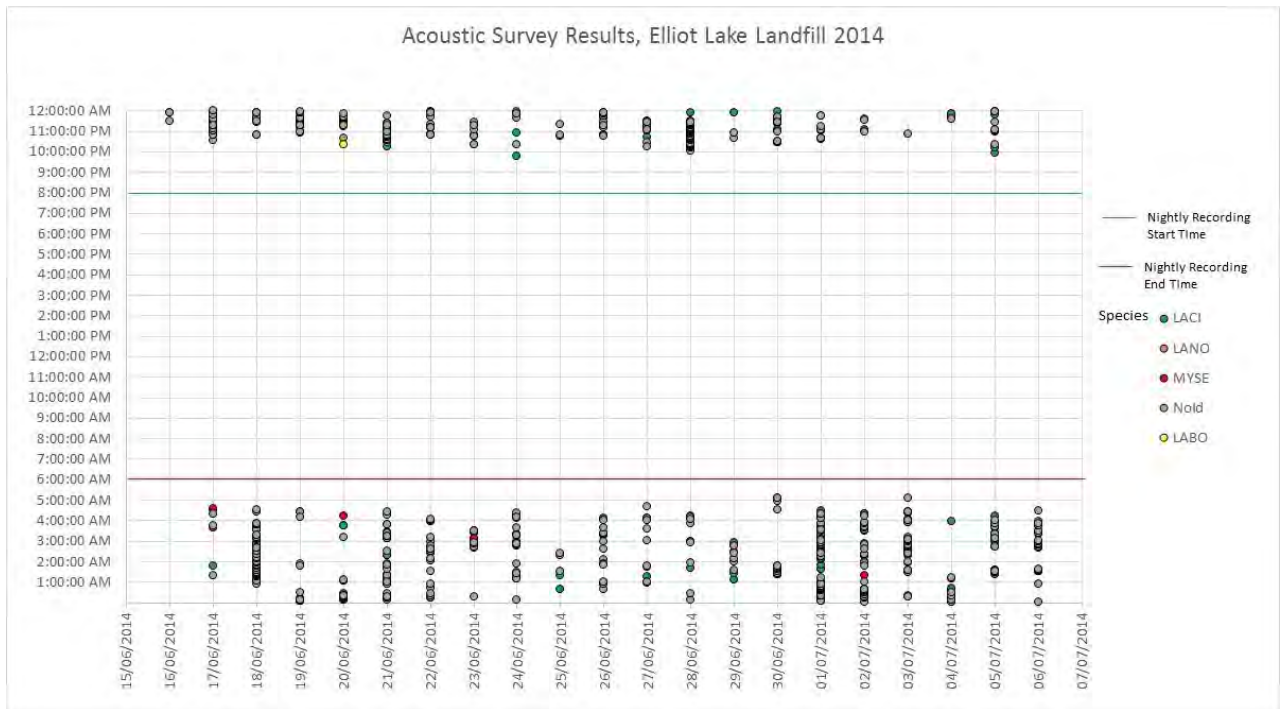
Appendix E: Weather Conditions during the Acoustical Monitoring Survey conducted for Bats from June 17 to July 6, 2014, as recorded by Environment Canada in Massey, Ontario (approximately 45 km from the landfill site).



Appendix E: Vocalization of bats recorded during 2014 acoustic survey to include only individuals classified to species.

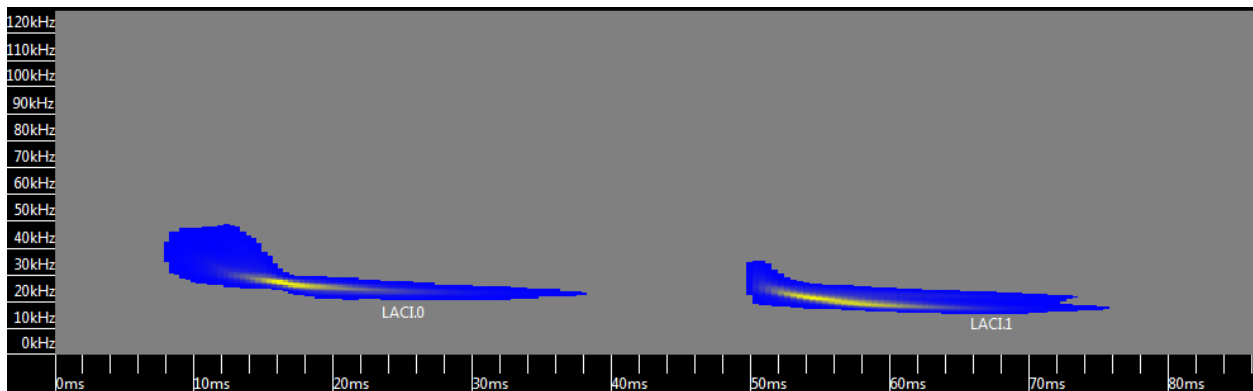
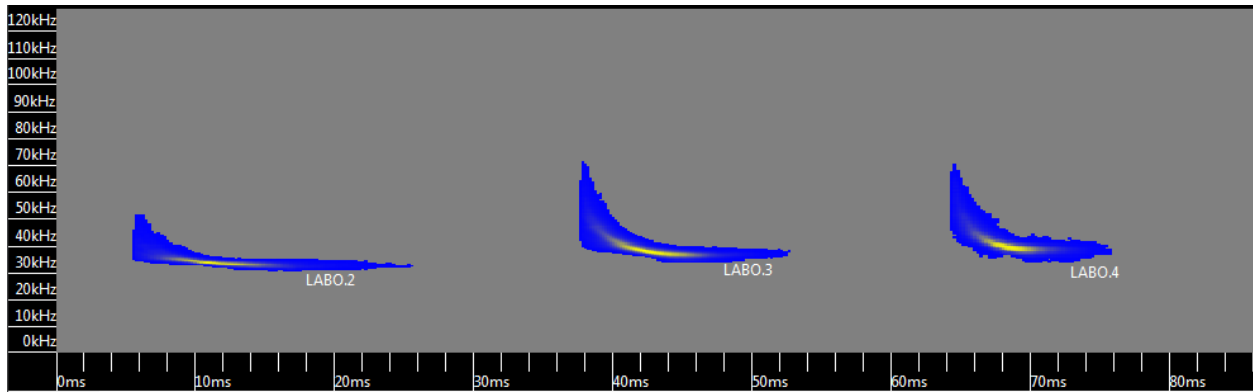
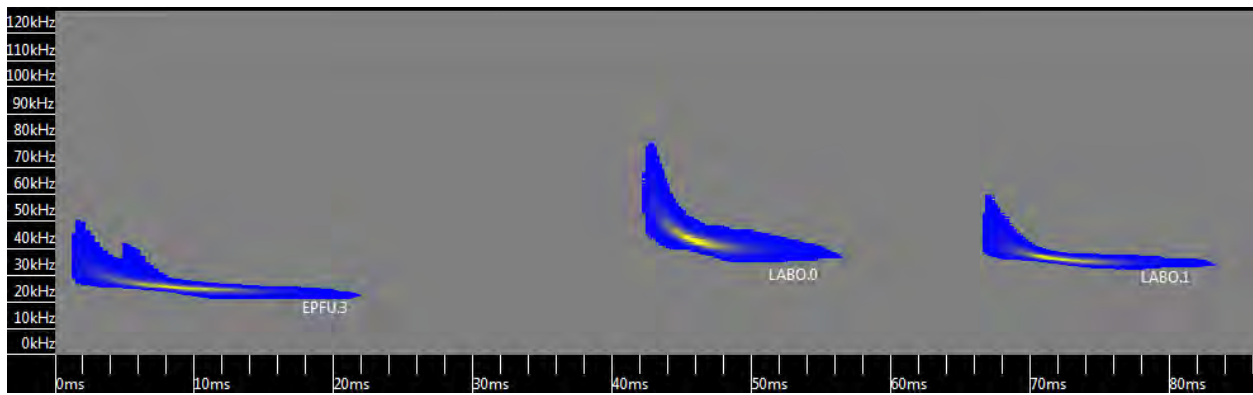
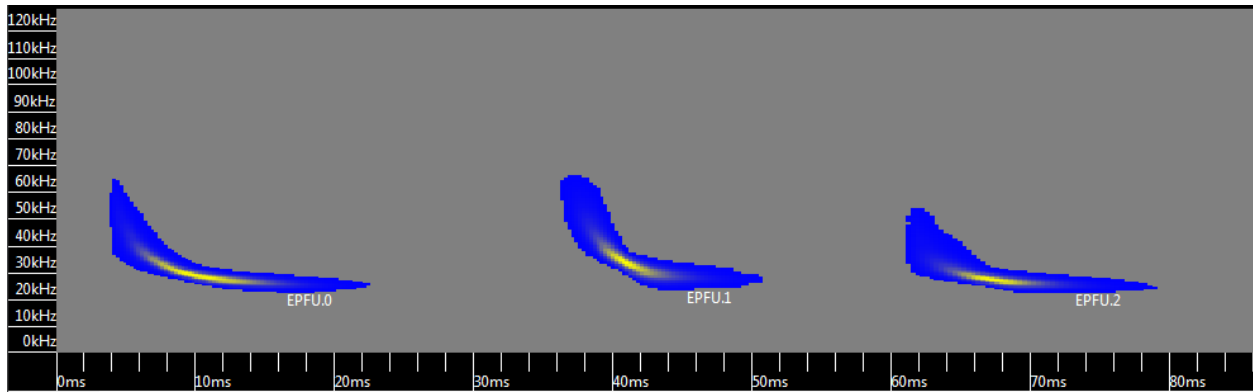


Vocalization of bats recorded during 2014 acoustic survey including individuals not able to identified at the species level.

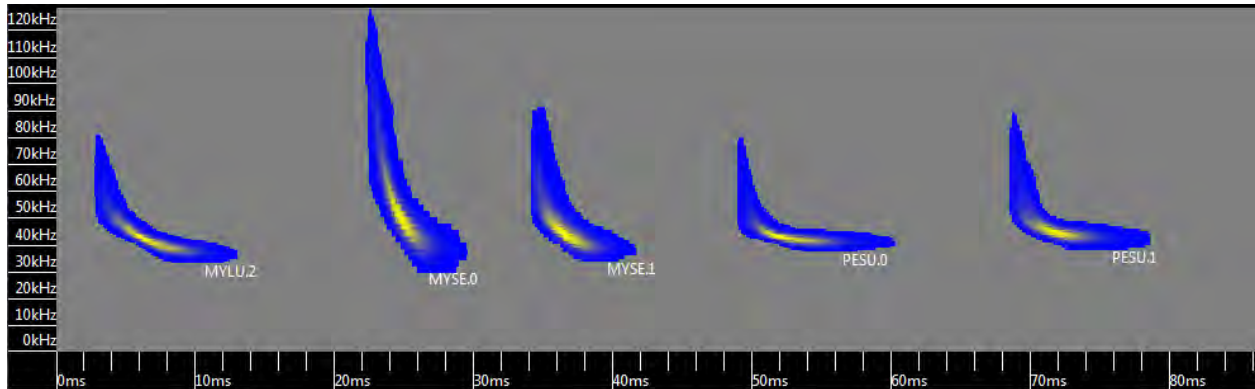
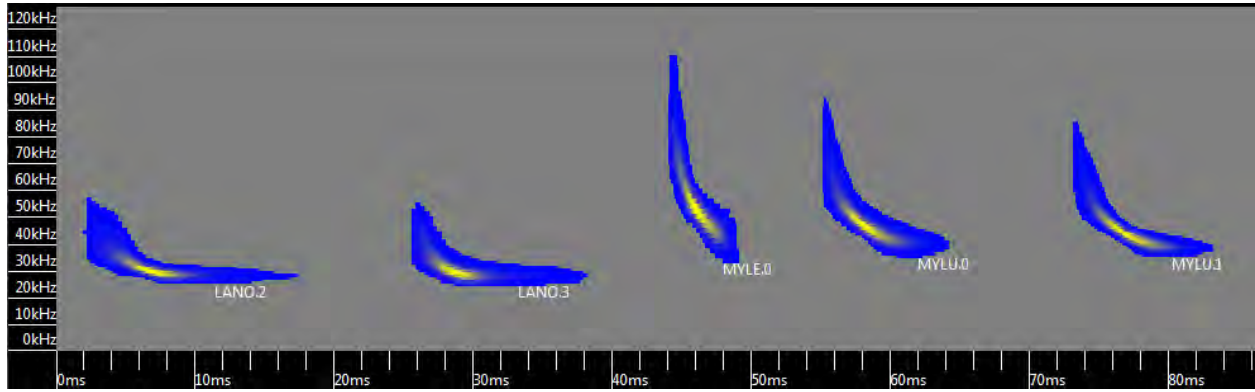
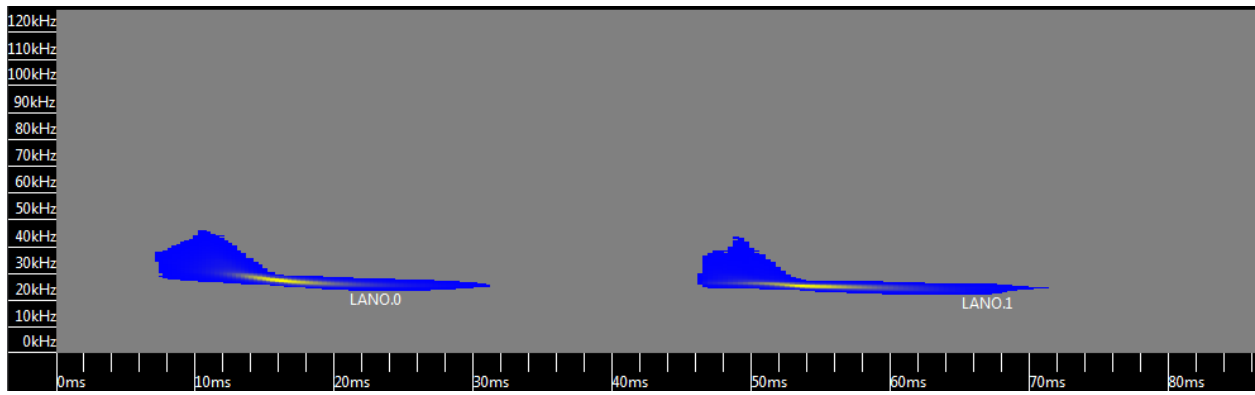


Appendix E:

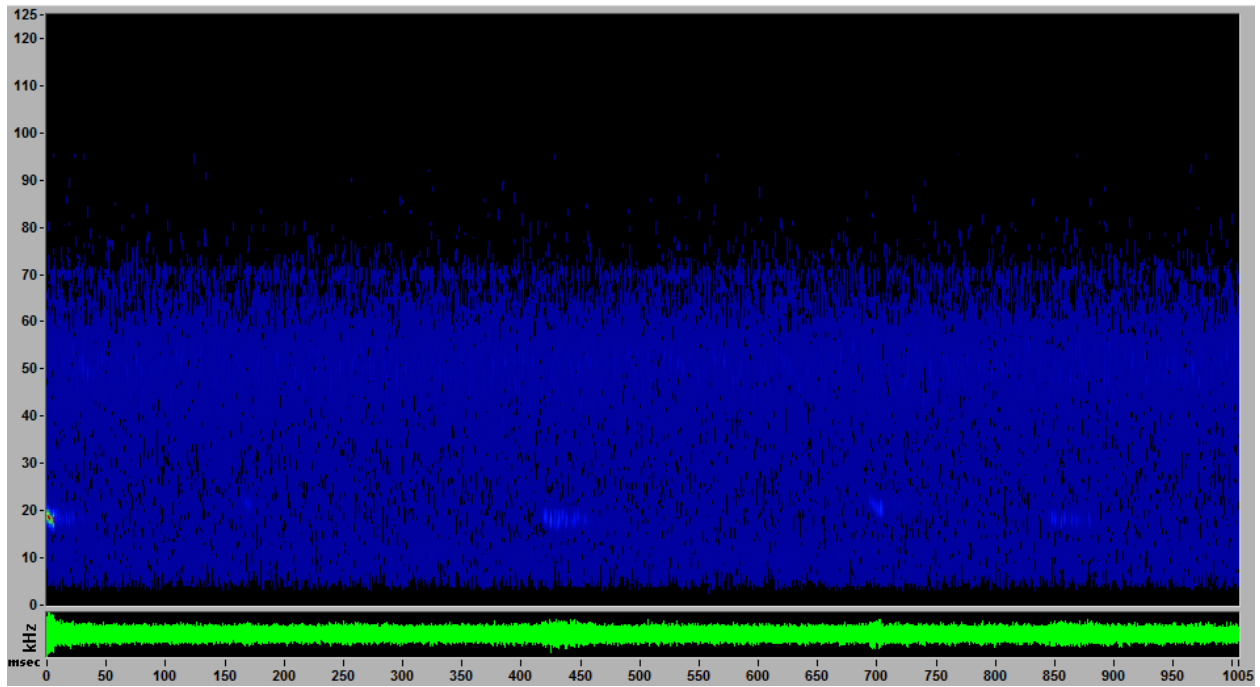
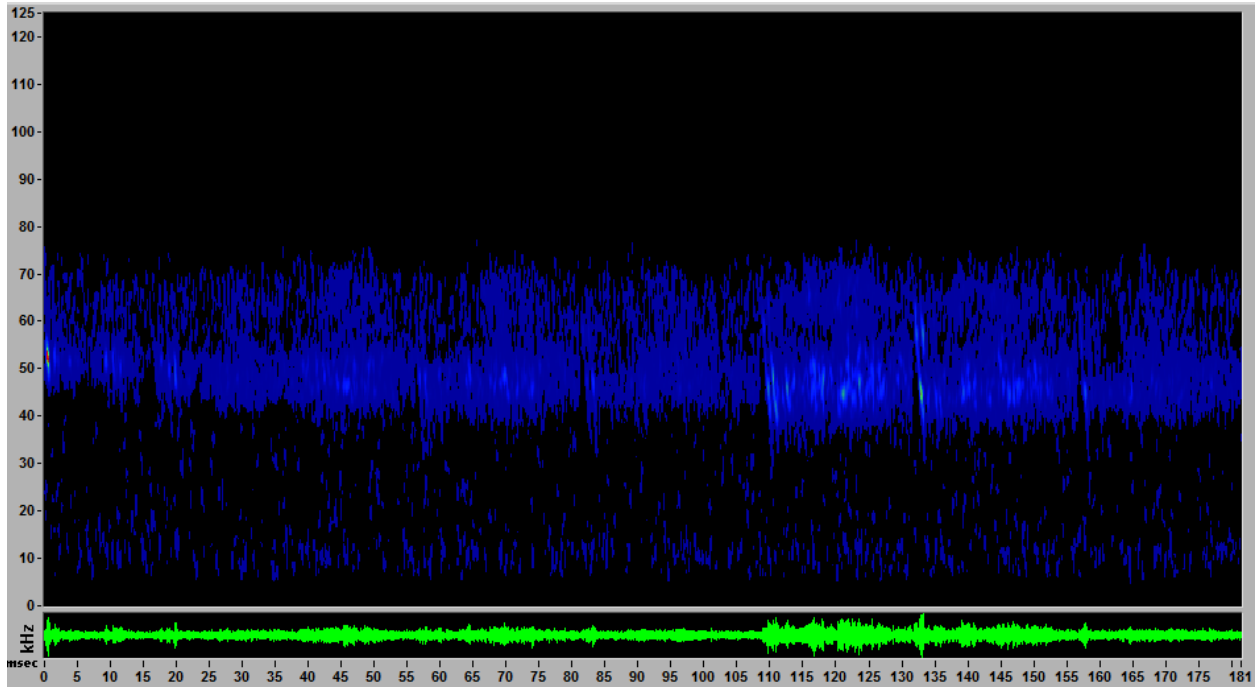
Kaleidoscope Virtual Call Library - visual representation of the call “clusters” (archetypal call shapes) for the eight Ontario species:



Appendix E:

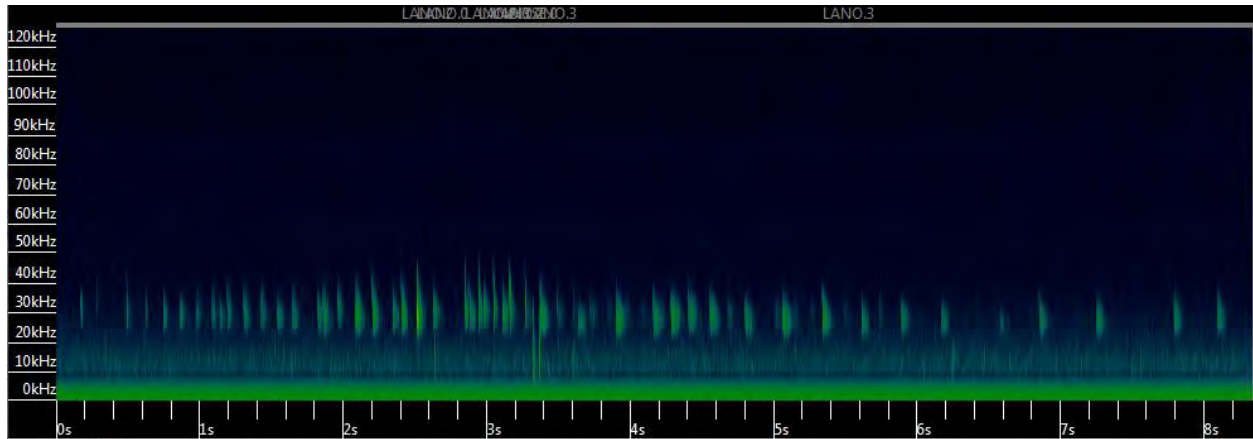


Appendix E: Examples of Noise Files

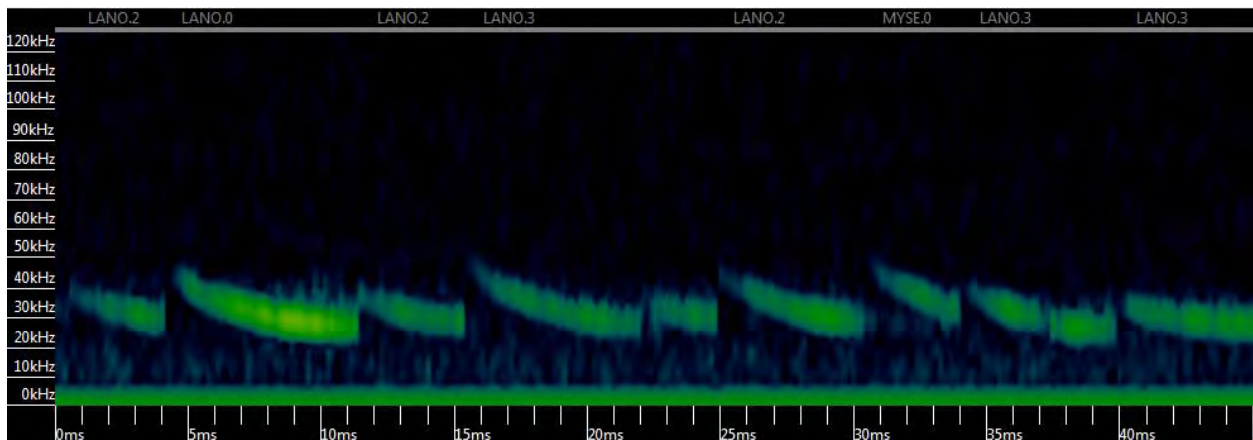


Appendix E: Examples of NoID files:

Kaleidoscope uncompressed view:

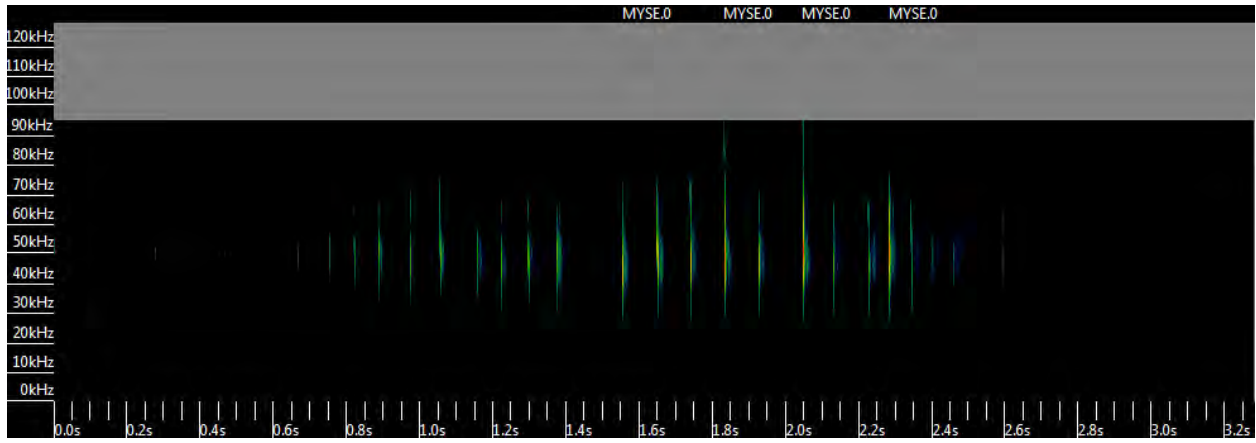


Kaleidoscope time compressed view:

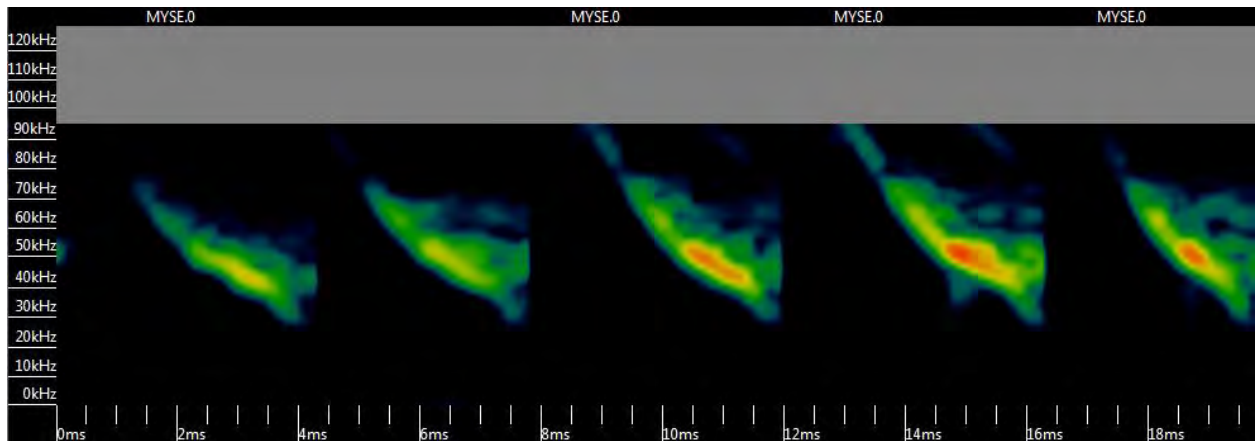


Appendix E: Examples of MYSE (Northern Myotis) files:

MYSE uncompressed view in Kaleidoscope with pulse-by-pulse classifications:



MYSE time compressed view in Kaleidoscope with pulse-by-pulse classifications:



Appendix E: Results of Acoustic Monitoring for Bats, Elliot Lake Landfill, 2014

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM2-1	CNRL10_20140617_033843.wav		0	0	1.68 CNRL10_0_20140617_033843_000	17/06/2014	3:38:43	3	16/06/2014	15:38:43	15	MYSE	2	2	0.142829	1
Elliot Lake SM2-1	CNRL10_20140617_043316.wav		0	0	4.316 CNRL10_0_20140617_043316_000	17/06/2014	4:33:16	4	16/06/2014	16:33:16	16	MYSE	2	2	0.139761	1
Elliot Lake SM2-1	CNRL10_20140617_043351.wav		0	0	1.785 CNRL10_0_20140617_043351_000	17/06/2014	4:33:51	4	16/06/2014	16:33:51	16	MYSE	5	5	0.449117	1
Elliot Lake SM2-1	CNRL10_20140618_010337.wav		0	0	1.417 CNRL10_0_20140618_010337_000	18/06/2014	1:03:37	1	17/06/2014	13:03:37	13	LANO	9	7	0.524001	1
Elliot Lake SM2-1	CNRL10_20140618_010343.wav		0	0	1.152 CNRL10_0_20140618_010343_000	18/06/2014	1:03:43	1	17/06/2014	13:03:43	13	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140618_010358.wav		0	0	1.087 CNRL10_0_20140618_010358_000	18/06/2014	1:03:58	1	17/06/2014	13:03:58	13	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140618_023853.wav		0	0	1.029 CNRL10_0_20140618_023853_000	18/06/2014	2:38:53	2	17/06/2014	14:38:53	14	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140618_023913.wav		0	0	1.333 CNRL10_0_20140618_023913_000	18/06/2014	2:39:13	2	17/06/2014	14:39:13	14	LANO	10	10	0.601958	1
Elliot Lake SM2-1	CNRL10_20140618_025226.wav		0	0	1.089 CNRL10_0_20140618_025226_000	18/06/2014	2:52:26	2	17/06/2014	14:52:26	14	LANO	7	5	0.435695	1
Elliot Lake SM2-1	CNRL10_20140618_025331.wav		0	0	1.083 CNRL10_0_20140618_025331_000	18/06/2014	2:53:31	2	17/06/2014	14:53:31	14	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140618_025338.wav		0	0	1.123 CNRL10_0_20140618_025338_000	18/06/2014	2:53:38	2	17/06/2014	14:53:38	14	LANO	4	4	0.42221	1
Elliot Lake SM2-1	CNRL10_20140618_025349.wav		0	0	1.307 CNRL10_0_20140618_025349_000	18/06/2014	2:53:49	2	17/06/2014	14:53:49	14	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140618_030431.wav		0	0	1.159 CNRL10_0_20140618_030431_000	18/06/2014	3:04:31	3	17/06/2014	15:04:31	15	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140618_030952.wav		0	0	1.149 CNRL10_0_20140618_030952_000	18/06/2014	3:09:52	3	17/06/2014	15:09:52	15	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140618_031243.wav		0	0	1.255 CNRL10_0_20140618_031243_000	18/06/2014	3:12:43	3	17/06/2014	15:12:43	15	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140618_031257.wav		0	0	1.411 CNRL10_0_20140618_031257_000	18/06/2014	3:12:57	3	17/06/2014	15:12:57	15	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140618_031301.wav		0	0	1.204 CNRL10_0_20140618_031301_000	18/06/2014	3:13:01	3	17/06/2014	15:13:01	15	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140618_033229.wav		0	0	1.453 CNRL10_0_20140618_033229_000	18/06/2014	3:32:29	3	17/06/2014	15:32:29	15	LANO	6	6	0.502242	1
Elliot Lake SM2-1	CNRL10_20140618_033234.wav		0	0	1.321 CNRL10_0_20140618_033234_000	18/06/2014	3:32:34	3	17/06/2014	15:32:34	15	LANO	7	7	0.565585	1
Elliot Lake SM2-1	CNRL10_20140618_033240.wav		0	0	1.02 CNRL10_0_20140618_033240_000	18/06/2014	3:32:40	3	17/06/2014	15:32:40	15	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140619_042604.wav		0	0	2.355 CNRL10_0_20140619_042604_000	19/06/2014	4:26:04	4	18/06/2014	16:26:04	16	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140619_042609.wav		0	0	5.364 CNRL10_0_20140619_042609_000	19/06/2014	4:26:09	4	18/06/2014	16:26:09	16	MYSE	4	3	0.098485	1
Elliot Lake SM2-1	CNRL10_20140619_231454.wav		0	0	1.671 CNRL10_0_20140619_231454_000	19/06/2014	23:14:54	23	19/06/2014	11:14:54	11	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140620_031120.wav		0	0	1.655 CNRL10_0_20140620_031120_000	20/06/2014	3:11:20	3	19/06/2014	15:11:20	15	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140620_041255.wav		0	0	3.2 CNRL10_0_20140620_041255_000	20/06/2014	4:12:55	4	19/06/2014	16:12:55	16	MYSE	2	2	0.134843	1
Elliot Lake SM2-1	CNRL10_20140621_005736.wav		0	0	1.819 CNRL10_0_20140621_005736_000	21/06/2014	0:57:36	0	20/06/2014	12:57:36	12	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140621_010048.wav		0	0	1.377 CNRL10_0_20140621_010048_000	21/06/2014	1:00:48	1	20/06/2014	13:00:48	13	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140622_001857.wav		0	0	1.38 CNRL10_0_20140622_001857_000	22/06/2014	0:18:57	0	21/06/2014	12:18:57	12	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140622_004353.wav		0	0	1.813 CNRL10_0_20140622_004353_000	22/06/2014	0:43:53	0	21/06/2014	12:43:53	12	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140622_013257.wav		0	0	2.475 CNRL10_0_20140622_013257_000	22/06/2014	1:32:57	1	21/06/2014	13:32:57	13	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140622_030010.wav		0	0	2.112 CNRL10_0_20140622_030010_000	22/06/2014	3:00:10	3	21/06/2014	15:00:10	15	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140623_030824.wav		0	0	3.075 CNRL10_0_20140623_030824_000	23/06/2014	3:08:24	3	22/06/2014	15:08:24	15	MYSE	2	2	0.134811	1
Elliot Lake SM2-1	CNRL10_20140624_041326.wav		0	0	1.26 CNRL10_0_20140624_041326_000	24/06/2014	4:13:26	4	23/06/2014	16:13:26	16	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140624_041635.wav		0	0	3.388 CNRL10_0_20140624_041635_000	24/06/2014	4:16:35	4	23/06/2014	16:16:35	16	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140624_041727.wav		0	0	1.721 CNRL10_0_20140624_041727_000	24/06/2014	4:17:27	4	23/06/2014	16:17:27	16	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140624_041738.wav		0	0	2.564 CNRL10_0_20140624_041738_000	24/06/2014	4:17:38	4	23/06/2014	16:17:38	16	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140624_041808.wav		0	0	1.843 CNRL10_0_20140624_041808_000	24/06/2014	4:18:08	4	23/06/2014	16:18:08	16	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140624_042005.wav		0	0	1.82 CNRL10_0_20140624_042005_000	24/06/2014	4:20:05	4	23/06/2014	16:20:05	16	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140624_042113.wav		0	0	1.299 CNRL10_0_20140624_042113_000	24/06/2014	4:21:13	4	23/06/2014	16:21:13	16	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140702_235204.wav		0	0	1.889 CNRL10_0_20140624_235204_000	24/06/2014	23:52:04	23	24/06/2014	11:52:04	11	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140626_003940.wav		0	0	1.279 CNRL10_0_20140626_003940_000	26/06/2014	0:39:40	0	25/06/2014	12:39:40	12	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140626_020442.wav		0	0	1.173 CNRL10_0_20140626_020442_000	26/06/2014	2:04:42	2	25/06/2014	14:04:42	14	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140627_033641.wav		0	0	3.125 CNRL10_0_20140627_033641_000	27/06/2014	3:36:41	3	26/06/2014	15:36:41	15	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140627_040613.wav		0	0	2.688 CNRL10_0_20140627_040613_000	27/06/2014	4:06:13	4	26/06/2014	16:06:13	16	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140627_040618.wav		0	0	4.248 CNRL10_0_20140627_040618_000	27/06/2014	4:06:18	4	26/06/2014	16:06:18	16	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140627_044003.wav		0	0	2.505 CNRL10_0_20140627_044003_000	27/06/2014	4:40:03	4	26/06/2014	16:40:03	16	Nold	0	0	0	1
Elliot Lake SM2-1	CNRL10_20140702_011755.wav		0	0	3.284 CNRL10_0_20140702_011755_000	02/07/2014	1:17:55	1	01/07/2014	13:17:55	13	MYSE	4	4	0.372378	1
Elliot Lake SM2-2	KINBASKET01_20140617_223511.wav		0	0	1.827 KINBASKET01_0_20140617_223511_000	17/06/2014	22:35:11	22	17/06/2014	10:35:11	10	Nold	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140617_225643.wav		0	0	2.764 KINBASKET01_0_20140617_225643_000	17/06/2014	22:56:43	22	17/06/2014	10:56:43	10	LACI	5	5	0.563648	1
Elliot Lake SM2-2	KINBASKET01_20140617_232257.wav		0	0	1.808 KINBASKET01_0_20140617_232257_000	17/06/2014	23:22:57	23	17/06/2014	11:22:57	11	LACI	3	3	0.38465	1
Elliot Lake SM2-2	KINBASKET01_20140617_233503.wav		0	0	3.687 KINBASKET01_0_20140617_233503_000	17/06/2014	23:35:03	23	17/06/2014	11:35:03	11	LACI	5	5	0.569589	1
Elliot Lake SM2-2	KINBASKET01_20140617_233602.wav		0	0	1.259 KINBASKET01_0_20140617_233602_000	17/06/2014	23:36:02	23	17/06/2014	11:36:02	11	LACI	4	4	0.504443	1
Elliot Lake SM2-2	KINBASKET01_20140617_233948.wav		0	0	1.273 KINBASKET01_0_20140617_233948_000	17/06/2014	23:39:48	23	17/06/2014	11:39:48	11	Nold	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140617_234139.wav		0	0	2.347 KINBASKET01_0_20140617_234139_000	17/06/2014	23:41:39	23	17/06/2014	11:41:39	11	LACI	4	4	0.493951	1
Elliot Lake SM2-2	KINBASKET01_20140617_234150.wav		0	0	1.028 KINBASKET01_0_20140617_234150_000	17/06/2014	23:41:50	23	17/06/2014	11:41:50	11	LACI	3	3	0.38265	1
Elliot Lake SM2-2	KINBASKET01_20140617_234153.wav		0	0	1.552 KINBASKET01_0_20140617_234153_000	17/06/2014	23:41:53	23	17/06/2014	11:41:53	11	LACI	2	2	0.211434	1
Elliot Lake SM2-2	KINBASKET01_20140617_234401.wav		0	0	2.028 KINBASKET01_0_20140617_234401_000	17/06/2014	23:44:01	23	17/06/2014	11:44:01	11	Nold	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140617_234522.wav		0	0	2.139 KINBASKET01_0_20140617_234522_000	17/06/2014	23:45:22	23	17/06/2014	11:45:22	11	Nold	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140617_235356.wav		0	0	2.248 KINBASKET01_0_20140617_235356_000	17/06/2014	23:53:56	23	17/06/2014	11:53:56	11	Nold	0	0	0	1

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM2-2	KINBASKET01_20140617_235401.wav	0	0	2.447	KINBASKET01_0_20140617_235401_000	17/06/2014	23:54:01	23	17/06/2014	11:54:01	11	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140617_235512.wav	0	0	2.105	KINBASKET01_0_20140617_235512_000	17/06/2014	23:55:12	23	17/06/2014	11:55:12	11	LACI	2	2	0.263921	1
Elliot Lake SM2-2	KINBASKET01_20140618_030653.wav	0	0	3.179	KINBASKET01_0_20140618_030653_000	18/06/2014	3:06:53	3	17/06/2014	15:06:53	15	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140618_235506.wav	0	0	4.625	KINBASKET01_0_20140618_235506_000	18/06/2014	23:55:06	23	18/06/2014	11:55:06	11	LANO	7	7	0.389755	1
Elliot Lake SM2-2	KINBASKET01_20140619_002812.wav	0	0	2.571	KINBASKET01_0_20140619_002812_000	19/06/2014	0:28:12	0	18/06/2014	12:28:12	12	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140619_232016.wav	0	0	1.013	KINBASKET01_0_20140619_232016_000	19/06/2014	23:20:16	23	19/06/2014	11:20:16	11	LACI	2	2	0.204036	1
Elliot Lake SM2-2	KINBASKET01_20140619_233553.wav	0	0	2.529	KINBASKET01_0_20140619_233553_000	19/06/2014	23:35:53	23	19/06/2014	11:35:53	11	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140619_234230.wav	0	0	1.012	KINBASKET01_0_20140619_234230_000	19/06/2014	23:42:30	23	19/06/2014	11:42:30	11	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140620_231501.wav	0	0	1.008	KINBASKET01_0_20140620_231501_000	20/06/2014	23:15:01	23	20/06/2014	11:15:01	11	LACI	2	2	0.227498	1
Elliot Lake SM2-2	KINBASKET01_20140620_232658.wav	0	0	3.137	KINBASKET01_0_20140620_232658_000	20/06/2014	23:26:58	23	20/06/2014	11:26:58	11	LACI	3	3	0.355488	1
Elliot Lake SM2-2	KINBASKET01_20140620_232712.wav	0	0	3.248	KINBASKET01_0_20140620_232712_000	20/06/2014	23:27:12	23	20/06/2014	11:27:12	11	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140620_232737.wav	0	0	1.009	KINBASKET01_0_20140620_232737_000	20/06/2014	23:27:37	23	20/06/2014	11:27:37	11	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140620_232744.wav	0	0	2.753	KINBASKET01_0_20140620_232744_000	20/06/2014	23:27:44	23	20/06/2014	11:27:44	11	LACI	2	2	0.180421	1
Elliot Lake SM2-2	KINBASKET01_20140621_001720.wav	0	0	1.012	KINBASKET01_0_20140621_001720_000	21/06/2014	0:17:20	0	20/06/2014	12:17:20	12	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140621_002652.wav	0	0	1.021	KINBASKET01_0_20140621_002652_000	21/06/2014	0:26:52	0	20/06/2014	12:26:52	12	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140621_005839.wav	0	0	3.131	KINBASKET01_0_20140621_005839_000	21/06/2014	0:58:39	0	20/06/2014	12:58:39	12	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140621_012153.wav	0	0	2.279	KINBASKET01_0_20140621_012153_000	21/06/2014	1:21:53	1	20/06/2014	13:21:53	13	LACI	2	2	0.263619	1
Elliot Lake SM2-2	KINBASKET01_20140621_014300.wav	0	0	2.916	KINBASKET01_0_20140621_014300_000	21/06/2014	1:43:00	1	20/06/2014	13:43:00	13	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140621_015222.wav	0	0	1.005	KINBASKET01_0_20140621_015222_000	21/06/2014	1:52:22	1	20/06/2014	13:52:22	13	LACI	2	2	0.234317	1
Elliot Lake SM2-2	KINBASKET01_20140621_021849.wav	0	0	1.019	KINBASKET01_0_20140621_021849_000	21/06/2014	2:18:49	2	20/06/2014	14:18:49	14	LACI	2	2	0.21832	1
Elliot Lake SM2-2	KINBASKET01_20140621_021959.wav	0	0	3.447	KINBASKET01_0_20140621_021959_000	21/06/2014	2:19:59	2	20/06/2014	14:19:59	14	LACI	4	4	0.472984	1
Elliot Lake SM2-2	KINBASKET01_20140621_022958.wav	0	0	1.763	KINBASKET01_0_20140621_022958_000	21/06/2014	2:29:58	2	20/06/2014	14:29:58	14	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140621_032821.wav	0	0	2.764	KINBASKET01_0_20140621_032821_000	21/06/2014	3:28:21	3	20/06/2014	15:28:21	15	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140621_034840.wav	0	0	2.932	KINBASKET01_0_20140621_034840_000	21/06/2014	3:48:40	3	20/06/2014	15:48:40	15	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140621_034846.wav	0	0	1.588	KINBASKET01_0_20140621_034846_000	21/06/2014	3:48:46	3	20/06/2014	15:48:46	15	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140621_221503.wav	0	0	2.143	KINBASKET01_0_20140621_221503_000	21/06/2014	22:15:03	22	21/06/2014	10:15:03	10	LACI	4	4	0.433983	1
Elliot Lake SM2-2	KINBASKET01_20140621_223803.wav	0	0	1.701	KINBASKET01_0_20140621_223803_000	21/06/2014	22:38:03	22	21/06/2014	10:38:03	10	LACI	3	3	0.381513	1
Elliot Lake SM2-2	KINBASKET01_20140621_224015.wav	0	0	1.241	KINBASKET01_0_20140621_224015_000	21/06/2014	22:40:15	22	21/06/2014	10:40:15	10	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140621_224018.wav	0	0	1.388	KINBASKET01_0_20140621_224018_000	21/06/2014	22:40:18	22	21/06/2014	10:40:18	10	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140621_230352.wav	0	0	2.648	KINBASKET01_0_20140621_230352_000	21/06/2014	23:03:52	23	21/06/2014	11:03:52	11	LACI	2	2	0.21408	1
Elliot Lake SM2-2	KINBASKET01_20140621_232224.wav	0	0	1.78	KINBASKET01_0_20140621_232224_000	21/06/2014	23:22:24	23	21/06/2014	11:22:24	11	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140621_234358.wav	0	0	4.215	KINBASKET01_0_20140621_234358_000	21/06/2014	23:43:58	23	21/06/2014	11:43:58	11	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140622_001256.wav	0	0	2.028	KINBASKET01_0_20140622_001256_000	22/06/2014	0:12:56	0	21/06/2014	12:12:56	12	LACI	4	4	0.481995	1
Elliot Lake SM2-2	KINBASKET01_20140622_001541.wav	0	0	1.983	KINBASKET01_0_20140622_001541_000	22/06/2014	0:15:41	0	21/06/2014	12:15:41	12	LACI	2	2	0.220979	1
Elliot Lake SM2-2	KINBASKET01_20140622_004122.wav	0	0	2.625	KINBASKET01_0_20140622_004122_000	22/06/2014	0:41:22	0	21/06/2014	12:41:22	12	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140622_020237.wav	0	0	2.752	KINBASKET01_0_20140622_020237_000	22/06/2014	2:02:37	2	21/06/2014	14:02:37	14	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140622_022521.wav	0	0	1.819	KINBASKET01_0_20140622_022521_000	22/06/2014	2:25:21	2	21/06/2014	14:25:21	14	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140622_023138.wav	0	0	2.145	KINBASKET01_0_20140622_023138_000	22/06/2014	2:31:38	2	21/06/2014	14:31:38	14	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140622_024242.wav	0	0	1.909	KINBASKET01_0_20140622_024242_000	22/06/2014	2:42:42	2	21/06/2014	14:42:42	14	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140622_224811.wav	0	0	4.217	KINBASKET01_0_20140622_224811_000	22/06/2014	22:48:11	22	22/06/2014	10:48:11	10	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140622_224819.wav	0	0	4.08	KINBASKET01_0_20140622_224819_000	22/06/2014	22:48:19	22	22/06/2014	10:48:19	10	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140622_231107.wav	0	0	2.592	KINBASKET01_0_20140622_231107_000	22/06/2014	23:11:07	23	22/06/2014	11:11:07	11	LACI	4	4	0.494273	1
Elliot Lake SM2-2	KINBASKET01_20140622_231445.wav	0	0	1.004	KINBASKET01_0_20140622_231445_000	22/06/2014	23:14:45	23	22/06/2014	11:14:45	11	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140622_231958.wav	0	0	3.527	KINBASKET01_0_20140622_231958_000	22/06/2014	23:19:58	23	22/06/2014	11:19:58	11	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140622_234308.wav	0	0	1.725	KINBASKET01_0_20140622_234308_000	22/06/2014	23:43:08	23	22/06/2014	11:43:08	11	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140622_234509.wav	0	0	1.717	KINBASKET01_0_20140622_234509_000	22/06/2014	23:45:09	23	22/06/2014	11:45:09	11	LACI	2	2	0.245802	1
Elliot Lake SM2-2	KINBASKET01_20140623_222101.wav	0	0	1.412	KINBASKET01_0_20140623_222101_000	23/06/2014	22:21:01	22	23/06/2014	10:21:01	10	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140623_224522.wav	0	0	2.376	KINBASKET01_0_20140623_224522_000	23/06/2014	22:45:22	22	23/06/2014	10:45:22	10	LACI	3	3	0.38429	1
Elliot Lake SM2-2	KINBASKET01_20140623_224537.wav	0	0	3.817	KINBASKET01_0_20140623_224537_000	23/06/2014	22:45:37	22	23/06/2014	10:45:37	10	LACI	7	7	0.65484	1
Elliot Lake SM2-2	KINBASKET01_20140623_224713.wav	0	0	1.861	KINBASKET01_0_20140623_224713_000	23/06/2014	22:47:13	22	23/06/2014	10:47:13	10	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140623_225021.wav	0	0	3.303	KINBASKET01_0_20140623_225021_000	23/06/2014	22:50:21	22	23/06/2014	10:50:21	10	LACI	4	4	0.484706	1
Elliot Lake SM2-2	KINBASKET01_20140624_031839.wav	0	0	1.008	KINBASKET01_0_20140624_031839_000	24/06/2014	3:18:39	3	23/06/2014	15:18:39	15	LACI	2	2	0.241704	1
Elliot Lake SM2-2	KINBASKET01_20140624_032203.wav	0	0	2.519	KINBASKET01_0_20140624_032203_000	24/06/2014	3:22:03	3	23/06/2014	15:22:03	15	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140624_040935.wav	0	0	1.98	KINBASKET01_0_20140624_040935_000	24/06/2014	4:09:35	4	23/06/2014	16:09:35	16	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140624_041632.wav	0	0	3.472	KINBASKET01_0_20140624_041632_000	24/06/2014	4:16:32	4	23/06/2014	16:16:32	16	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140624_042132.wav	0	0	1.94	KINBASKET01_0_20140624_042132_000	24/06/2014	4:21:32	4	23/06/2014	16:21:32	16	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140624_214622.wav	0	0	1.016	KINBASKET01_0_20140624_214622_000	24/06/2014	21:46:22	21	24/06/2014	9:46:22	9	LACI	2	2	0.234546	1
Elliot Lake SM2-2	KINBASKET01_20140624_225523.wav	0	0	1.939	KINBASKET01_0_20140624_225523_000	24/06/2014	22:55:23	22	24/06/2014	10:55:23	10	LACI	2	2	0.164507	1
Elliot Lake SM2-2	KINBASKET01_20140625_004007.wav	0	0	2.367	KINBASKET01_0_20140625_004007_000	25/06/2014	0:40:07	0	24/06/2014	12:40:07	12	LACI	3	3	0.356457	1

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM2-2	KINBASKET01_20140625_224509.wav	0	0	3.829	KINBASKET01_0_20140625_224509_000	25/06/2014	22:45:09	22	25/06/2014	10:45:09	10	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140626_005457.wav	0	0	1.472	KINBASKET01_0_20140626_005457_000	26/06/2014	0:54:57	0	25/06/2014	12:54:57	12	LACI	2	2	0.242224	1
Elliot Lake SM2-2	KINBASKET01_20140626_005524.wav	0	0	1.696	KINBASKET01_0_20140626_005524_000	26/06/2014	0:55:24	0	25/06/2014	12:55:24	12	LACI	3	3	0.388711	1
Elliot Lake SM2-2	KINBASKET01_20140626_005532.wav	0	0	1.504	KINBASKET01_0_20140626_005532_000	26/06/2014	0:55:32	0	25/06/2014	12:55:32	12	LACI	3	3	0.331827	1
Elliot Lake SM2-2	KINBASKET01_20140626_005603.wav	0	0	1.016	KINBASKET01_0_20140626_005603_000	26/06/2014	0:56:03	0	25/06/2014	12:56:03	12	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140626_032253.wav	0	0	1.636	KINBASKET01_0_20140626_032253_000	26/06/2014	3:22:53	3	25/06/2014	15:22:53	15	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140626_033747.wav	0	0	5.009	KINBASKET01_0_20140626_033747_000	26/06/2014	3:37:47	3	25/06/2014	15:37:47	15	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140626_224734.wav	0	0	2.615	KINBASKET01_0_20140626_224734_000	26/06/2014	22:47:34	22	26/06/2014	10:47:34	10	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140626_225041.wav	0	0	1.276	KINBASKET01_0_20140626_225041_000	26/06/2014	22:50:41	22	26/06/2014	10:50:41	10	LACI	4	4	0.501377	1
Elliot Lake SM2-2	KINBASKET01_20140626_225045.wav	0	0	1.975	KINBASKET01_0_20140626_225045_000	26/06/2014	22:50:45	22	26/06/2014	10:50:45	10	LACI	5	5	0.542511	1
Elliot Lake SM2-2	KINBASKET01_20140626_231507.wav	0	0	1.927	KINBASKET01_0_20140626_231507_000	26/06/2014	23:15:07	23	26/06/2014	11:15:07	11	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140626_234851.wav	0	0	1.971	KINBASKET01_0_20140626_234851_000	26/06/2014	23:48:51	23	26/06/2014	11:48:51	11	LACI	3	3	0.345306	1
Elliot Lake SM2-2	KINBASKET01_20140627_011629.wav	0	0	4.04	KINBASKET01_0_20140627_011629_000	27/06/2014	1:16:29	1	26/06/2014	13:16:29	13	LACI	3	3	0.311851	1
Elliot Lake SM2-2	KINBASKET01_20140627_222821.wav	0	0	3.973	KINBASKET01_0_20140627_222821_000	27/06/2014	22:28:21	22	27/06/2014	10:28:21	10	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140627_231026.wav	0	0	1.533	KINBASKET01_0_20140627_231026_000	27/06/2014	23:10:26	23	27/06/2014	11:10:26	11	LACI	2	2	0.257557	1
Elliot Lake SM2-2	KINBASKET01_20140627_231419.wav	0	0	2.024	KINBASKET01_0_20140627_231419_000	27/06/2014	23:14:19	23	27/06/2014	11:14:19	11	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140628_035108.wav	0	0	1.472	KINBASKET01_0_20140628_035108_000	28/06/2014	3:51:08	3	27/06/2014	15:51:08	15	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140628_040835.wav	0	0	1.479	KINBASKET01_0_20140628_040835_000	28/06/2014	4:08:35	4	27/06/2014	16:08:35	16	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140628_041210.wav	0	0	2.96	KINBASKET01_0_20140628_041210_000	28/06/2014	4:12:10	4	27/06/2014	16:12:10	16	LACI	4	4	0.432331	1
Elliot Lake SM2-2	KINBASKET01_20140628_225746.wav	0	0	1.013	KINBASKET01_0_20140628_225746_000	28/06/2014	22:57:46	22	28/06/2014	10:57:46	10	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140628_235617.wav	0	0	1.015	KINBASKET01_0_20140628_235617_000	28/06/2014	23:56:17	23	28/06/2014	11:56:17	11	LACI	2	2	0.201625	1
Elliot Lake SM2-2	KINBASKET01_20140629_024512.wav	0	0	3.521	KINBASKET01_0_20140629_024512_000	29/06/2014	2:45:12	2	28/06/2014	14:45:12	14	LACI	4	4	0.449732	1
Elliot Lake SM2-2	KINBASKET01_20140629_025457.wav	0	0	1.123	KINBASKET01_0_20140629_025457_000	29/06/2014	2:54:57	2	28/06/2014	14:54:57	14	LACI	3	3	0.343583	1
Elliot Lake SM2-2	KINBASKET01_20140630_234127.wav	0	0	1.852	KINBASKET01_0_20140630_234127_000	30/06/2014	23:41:27	23	30/06/2014	11:41:27	11	LACI	4	4	0.513525	1
Elliot Lake SM2-2	KINBASKET01_20140630_234131.wav	0	0	1.003	KINBASKET01_0_20140630_234131_000	30/06/2014	23:41:31	23	30/06/2014	11:41:31	11	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140701_002518.wav	0	0	1.759	KINBASKET01_0_20140701_002518_000	01/07/2014	0:25:18	0	30/06/2014	12:25:18	12	LACI	2	2	0.214706	1
Elliot Lake SM2-2	KINBASKET01_20140701_002525.wav	0	0	1.017	KINBASKET01_0_20140701_002525_000	01/07/2014	0:25:25	0	30/06/2014	12:25:25	12	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140701_002551.wav	0	0	1.013	KINBASKET01_0_20140701_002551_000	01/07/2014	0:25:51	0	30/06/2014	12:25:51	12	LACI	2	2	0.192888	1
Elliot Lake SM2-2	KINBASKET01_20140701_002628.wav	0	0	1.648	KINBASKET01_0_20140701_002628_000	01/07/2014	0:26:28	0	30/06/2014	12:26:28	12	LACI	2	2	0.225869	1
Elliot Lake SM2-2	KINBASKET01_20140701_002652.wav	0	0	1.763	KINBASKET01_0_20140701_002652_000	01/07/2014	0:26:52	0	30/06/2014	12:26:52	12	LACI	4	4	0.466029	1
Elliot Lake SM2-2	KINBASKET01_20140701_003512.wav	0	0	1.008	KINBASKET01_0_20140701_003512_000	01/07/2014	0:35:12	0	30/06/2014	12:35:12	12	LACI	2	2	0.230578	1
Elliot Lake SM2-2	KINBASKET01_20140701_021539.wav	0	0	1.891	KINBASKET01_0_20140701_021539_000	01/07/2014	2:15:39	2	30/06/2014	14:15:39	14	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140701_023210.wav	0	0	1.871	KINBASKET01_0_20140701_023210_000	01/07/2014	2:32:10	2	30/06/2014	14:32:10	14	LACI	3	3	0.365885	1
Elliot Lake SM2-2	KINBASKET01_20140701_032101.wav	0	0	11.813	KINBASKET01_0_20140701_032101_000	01/07/2014	3:21:01	3	30/06/2014	15:21:01	15	LACI	22	22	0.884931	1
Elliot Lake SM2-2	KINBASKET01_20140701_032209.wav	0	0	1.019	KINBASKET01_0_20140701_032209_000	01/07/2014	3:22:09	3	30/06/2014	15:22:09	15	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140701_033636.wav	0	0	2.444	KINBASKET01_0_20140701_033636_000	01/07/2014	3:36:36	3	30/06/2014	15:36:36	15	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140701_034334.wav	0	0	1.004	KINBASKET01_0_20140701_034334_000	01/07/2014	3:43:34	3	30/06/2014	15:43:34	15	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140701_034946.wav	0	0	1.817	KINBASKET01_0_20140701_034946_000	01/07/2014	3:49:46	3	30/06/2014	15:49:46	15	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140701_035026.wav	0	0	2.747	KINBASKET01_0_20140701_035026_000	01/07/2014	3:50:26	3	30/06/2014	15:50:26	15	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140701_035211.wav	0	0	4.5	KINBASKET01_0_20140701_035211_000	01/07/2014	3:52:11	3	30/06/2014	15:52:11	15	LANO	14	10	0.519944	1
Elliot Lake SM2-2	KINBASKET01_20140701_040736.wav	0	0	1.512	KINBASKET01_0_20140701_040736_000	01/07/2014	4:07:36	4	30/06/2014	16:07:36	16	LACI	2	2	0.24056	1
Elliot Lake SM2-2	KINBASKET01_20140701_040759.wav	0	0	3.891	KINBASKET01_0_20140701_040759_000	01/07/2014	4:07:59	4	30/06/2014	16:07:59	16	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140701_040816.wav	0	0	3.088	KINBASKET01_0_20140701_040816_000	01/07/2014	4:08:16	4	30/06/2014	16:08:16	16	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140701_041351.wav	0	0	1.791	KINBASKET01_0_20140701_041351_000	01/07/2014	4:13:51	4	30/06/2014	16:13:51	16	LACI	2	2	0.248653	1
Elliot Lake SM2-2	KINBASKET01_20140701_041830.wav	0	0	3.763	KINBASKET01_0_20140701_041830_000	01/07/2014	4:18:30	4	30/06/2014	16:18:30	16	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140701_223815.wav	0	0	1.141	KINBASKET01_0_20140701_223815_000	01/07/2014	22:38:15	22	01/07/2014	10:38:15	10	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140701_223839.wav	0	0	1.284	KINBASKET01_0_20140701_223839_000	01/07/2014	22:38:39	22	01/07/2014	10:38:39	10	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140701_224127.wav	0	0	1.813	KINBASKET01_0_20140701_224127_000	01/07/2014	22:41:27	22	01/07/2014	10:41:27	10	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140701_224140.wav	0	0	1.183	KINBASKET01_0_20140701_224140_000	01/07/2014	22:41:40	22	01/07/2014	10:41:40	10	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140701_234532.wav	0	0	1.025	KINBASKET01_0_20140701_234532_000	01/07/2014	23:45:32	23	01/07/2014	11:45:32	11	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140702_015652.wav	0	0	1.008	KINBASKET01_0_20140702_015652_000	02/07/2014	1:56:52	1	01/07/2014	13:56:52	13	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140702_024904.wav	0	0	1.711	KINBASKET01_0_20140702_024904_000	02/07/2014	2:49:04	2	01/07/2014	14:49:04	14	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140702_225931.wav	0	0	1.269	KINBASKET01_0_20140702_225931_000	02/07/2014	22:59:31	22	02/07/2014	10:59:31	10	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140703_013523.wav	0	0	1.473	KINBASKET01_0_20140703_013523_000	03/07/2014	1:35:23	1	02/07/2014	13:35:23	13	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140703_015731.wav	0	0	2.477	KINBASKET01_0_20140703_015731_000	03/07/2014	1:57:31	1	02/07/2014	13:57:31	13	Noid	0	0	0	1
Elliot Lake SM2-2	KINBASKET01_20140703_020048.wav</															

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM3-2	SM300509_0_20140617_225032.wav	0	0	6.051	SM300509_0_0_20140617_225032_000	17/06/2014	22:50:32	22	17/06/2014	10:50:32	10	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140617_230307.wav	0	0	6.564	SM300509_0_0_20140617_230307_000	17/06/2014	23:03:07	23	17/06/2014	11:03:07	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140617_230639.wav	0	0	13.062	SM300509_0_0_20140617_230639_000	17/06/2014	23:06:39	23	17/06/2014	11:06:39	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140617_231645.wav	0	0	9.212	SM300509_0_0_20140617_231645_000	17/06/2014	23:16:45	23	17/06/2014	11:16:45	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140617_231727.wav	0	0	4.857	SM300509_0_0_20140617_231727_000	17/06/2014	23:17:27	23	17/06/2014	11:17:27	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140617_231807.wav	0	0	7.875	SM300509_0_0_20140617_231807_000	17/06/2014	23:18:07	23	17/06/2014	11:18:07	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140617_232505.wav	0	0	5.25	SM300509_0_0_20140617_232505_000	17/06/2014	23:25:05	23	17/06/2014	11:25:05	11	LACI	2	2	0.179188	1
Elliot Lake SM3-2	SM300509_0_20140617_232614.wav	0	0	6.761	SM300509_0_0_20140617_232614_000	17/06/2014	23:26:14	23	17/06/2014	11:26:14	11	LACI	2	2	0.21228	1
Elliot Lake SM3-2	SM300509_0_20140617_232700.wav	0	0	9.813	SM300509_0_0_20140617_232700_000	17/06/2014	23:27:00	23	17/06/2014	11:27:00	11	LACI	3	3	0.365487	1
Elliot Lake SM3-2	SM300509_0_20140617_232714.wav	0	0	14.999	SM300509_0_0_20140617_232714_000	17/06/2014	23:27:14	23	17/06/2014	11:27:14	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140617_232736.wav	0	0	6.644	SM300509_0_0_20140617_232736_000	17/06/2014	23:27:36	23	17/06/2014	11:27:36	11	LACI	2	2	0.206777	1
Elliot Lake SM3-2	SM300509_0_20140617_232830.wav	0	0	6.959	SM300509_0_0_20140617_232830_000	17/06/2014	23:28:30	23	17/06/2014	11:28:30	11	LACI	4	4	0.479119	1
Elliot Lake SM3-2	SM300509_0_20140617_235904.wav	0	0	8.186	SM300509_0_0_20140617_235904_000	17/06/2014	23:59:04	23	17/06/2014	11:59:04	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_005303.wav	0	0	10.436	SM300509_0_0_20140618_005303_000	18/06/2014	0:53:03	0	17/06/2014	12:53:03	12	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_010358.wav	0	0	7.29	SM300509_0_0_20140618_010358_000	18/06/2014	1:03:58	1	17/06/2014	13:03:58	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_011555.wav	0	0	4.666	SM300509_0_0_20140618_011555_000	18/06/2014	1:15:55	1	17/06/2014	13:15:55	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_011757.wav	0	0	5.098	SM300509_0_0_20140618_011757_000	18/06/2014	1:17:57	1	17/06/2014	13:17:57	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_011835.wav	0	0	9.055	SM300509_0_0_20140618_011835_000	18/06/2014	1:18:35	1	17/06/2014	13:18:35	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_012014.wav	0	0	6.218	SM300509_0_0_20140618_012014_000	18/06/2014	1:20:14	1	17/06/2014	13:20:14	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_012134.wav	0	0	7.568	SM300509_0_0_20140618_012134_000	18/06/2014	1:21:34	1	17/06/2014	13:21:34	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_012215.wav	0	0	5.478	SM300509_0_0_20140618_012215_000	18/06/2014	1:22:15	1	17/06/2014	13:22:15	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_012410.wav	0	0	10.65	SM300509_0_0_20140618_012410_000	18/06/2014	1:24:10	1	17/06/2014	13:24:10	13	LACI	5	3	0.185601	1
Elliot Lake SM3-2	SM300509_0_20140618_012434.wav	0	0	9.819	SM300509_0_0_20140618_012434_000	18/06/2014	1:24:34	1	17/06/2014	13:24:34	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_012513.wav	0	0	12.59	SM300509_0_0_20140618_012513_000	18/06/2014	1:25:13	1	17/06/2014	13:25:13	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_012602.wav	0	0	5.615	SM300509_0_0_20140618_012602_000	18/06/2014	1:26:02	1	17/06/2014	13:26:02	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_012620.wav	0	0	5.408	SM300509_0_0_20140618_012620_000	18/06/2014	1:26:20	1	17/06/2014	13:26:20	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_012850.wav	0	0	8.38	SM300509_0_0_20140618_012850_000	18/06/2014	1:28:50	1	17/06/2014	13:28:50	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_013349.wav	0	0	8.443	SM300509_0_0_20140618_013349_000	18/06/2014	1:33:49	1	17/06/2014	13:33:49	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_013405.wav	0	0	7.599	SM300509_0_0_20140618_013405_000	18/06/2014	1:34:05	1	17/06/2014	13:34:05	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_013442.wav	0	0	9.185	SM300509_0_0_20140618_013442_000	18/06/2014	1:34:42	1	17/06/2014	13:34:42	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_013632.wav	0	0	8.449	SM300509_0_0_20140618_013632_000	18/06/2014	1:36:32	1	17/06/2014	13:36:32	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_014117.wav	0	0	8.736	SM300509_0_0_20140618_014117_000	18/06/2014	1:41:17	1	17/06/2014	13:41:17	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_014848.wav	0	0	6.995	SM300509_0_0_20140618_014848_000	18/06/2014	1:48:48	1	17/06/2014	13:48:48	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_015007.wav	0	0	12.255	SM300509_0_0_20140618_015007_000	18/06/2014	1:50:07	1	17/06/2014	13:50:07	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_015043.wav	0	0	7.861	SM300509_0_0_20140618_015043_000	18/06/2014	1:50:43	1	17/06/2014	13:50:43	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_015146.wav	0	0	4.782	SM300509_0_0_20140618_015146_000	18/06/2014	1:51:46	1	17/06/2014	13:51:46	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_015723.wav	0	0	5.837	SM300509_0_0_20140618_015723_000	18/06/2014	1:57:23	1	17/06/2014	13:57:23	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_022513.wav	0	0	14.999	SM300509_0_0_20140618_022513_000	18/06/2014	2:25:13	2	17/06/2014	14:25:13	14	LANO	14	8	0.420509	1
Elliot Lake SM3-2	SM300509_0_20140618_023958.wav	0	0	9.163	SM300509_0_0_20140618_023958_000	18/06/2014	2:39:58	2	17/06/2014	14:39:58	14	LACI	7	7	0.6449	1
Elliot Lake SM3-2	SM300509_0_20140618_024015.wav	0	0	7.369	SM300509_0_0_20140618_024015_000	18/06/2014	2:40:15	2	17/06/2014	14:40:15	14	LACI	4	4	0.436938	1
Elliot Lake SM3-2	SM300509_0_20140618_024139.wav	0	0	5.799	SM300509_0_0_20140618_024139_000	18/06/2014	2:41:39	2	17/06/2014	14:41:39	14	LACI	2	2	0.180146	1
Elliot Lake SM3-2	SM300509_0_20140618_232746.wav	0	0	7.624	SM300509_0_0_20140618_232746_000	18/06/2014	23:27:46	23	18/06/2014	11:27:46	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_235529.wav	0	0	7.551	SM300509_0_0_20140618_235529_000	18/06/2014	23:55:29	23	18/06/2014	11:55:29	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140618_235543.wav	0	0	6.338	SM300509_0_0_20140618_235543_000	18/06/2014	23:55:43	23	18/06/2014	11:55:43	11	LACI	4	4	0.49288	1
Elliot Lake SM3-2	SM300509_0_20140619_015307.wav	0	0	3.05	SM300509_0_0_20140619_015307_000	19/06/2014	1:53:07	1	18/06/2014	13:53:07	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140619_041147.wav	0	0	5.179	SM300509_0_0_20140619_041147_000	19/06/2014	4:11:47	4	18/06/2014	16:11:47	16	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140619_231451.wav	0	0	6.324	SM300509_0_0_20140619_231451_000	19/06/2014	23:14:51	23	19/06/2014	11:14:51	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140619_231712.wav	0	0	3.542	SM300509_0_0_20140619_231712_000	19/06/2014	23:17:12	23	19/06/2014	11:17:12	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140619_232137.wav	0	0	4.678	SM300509_0_0_20140619_232137_000	19/06/2014	23:21:37	23	19/06/2014	11:21:37	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140619_232239.wav	0	0	7.611	SM300509_0_0_20140619_232239_000	19/06/2014	23:22:39	23	19/06/2014	11:22:39	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140619_233104.wav	0	0	9.931	SM300509_0_0_20140619_233104_000	19/06/2014	23:31:04	23	19/06/2014	11:31:04	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140619_233127.wav	0	0	3.007	SM300509_0_0_20140619_233127_000	19/06/2014	23:31:27	23	19/06/2014	11:31:27	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140619_233445.wav	0	0	12.415	SM300509_0_0_20140619_233445_000	19/06/2014	23:34:45	23	19/06/2014	11:34:45	11	LANO	13	10	0.486042	1
Elliot Lake SM3-2	SM300509_0_20140619_233643.wav	0	0	7.032	SM300509_0_0_20140619_233643_000	19/06/2014	23:36:43	23	19/06/2014	11:36:43	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140619_233714.wav	0	0	8.088	SM300509_0_0_20140619_233714_000	19/06/2014	23:37:14	23	19/06/2014	11:37:14	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140619_233841.wav	0	0	7.477	SM300509_0_0_20140619_233841_000	19/06/2014	23:38:41	23	19/06/2014	11:38:41	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140619_233853.wav	0	0	8.271	SM300509_0_0_20140619_233853_000	19/06/2014	23:38:53	23	19/06/2014	11:38:53	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140619_233922.wav	0	0	9.596	SM300509_0_0_20140619_233922_000	19/06/2014	23:39:22	23	19/06/2014	11:39:22	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140619_234016.wav	0	0	11.303	SM300509_0_0_20140619_234016_000	19/06/2014	23:40:16	23	19/06/2014	11:40:16	11	Noid	0	0	0	1

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM3-2	SM300509_0_20140619_235432.wav	0	0	11.158	SM300509_0_0_20140619_235432_000	19/06/2014	23:54:32	23	19/06/2014	11:54:32	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140619_235548.wav	0	0	6.907	SM300509_0_0_20140619_235548_000	19/06/2014	23:55:48	23	19/06/2014	11:55:48	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140619_235725.wav	0	0	6.494	SM300509_0_0_20140619_235725_000	19/06/2014	23:57:25	23	19/06/2014	11:57:25	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_000634.wav	0	0	12.892	SM300509_0_0_20140620_000634_000	20/06/2014	0:06:34	0	19/06/2014	12:06:34	12	LACI	16	9	0.571815	1
Elliot Lake SM3-2	SM300509_0_20140620_000825.wav	0	0	4.807	SM300509_0_0_20140620_000825_000	20/06/2014	0:08:25	0	19/06/2014	12:08:25	12	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_000935.wav	0	0	7.112	SM300509_0_0_20140620_000935_000	20/06/2014	0:09:35	0	19/06/2014	12:09:35	12	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_001220.wav	0	0	11.042	SM300509_0_0_20140620_001220_000	20/06/2014	0:12:20	0	19/06/2014	12:12:20	12	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_001506.wav	0	0	8.396	SM300509_0_0_20140620_001506_000	20/06/2014	0:15:06	0	19/06/2014	12:15:06	12	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_001832.wav	0	0	8.374	SM300509_0_0_20140620_001832_000	20/06/2014	0:18:32	0	19/06/2014	12:18:32	12	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_010407.wav	0	0	10.719	SM300509_0_0_20140620_010407_000	20/06/2014	1:04:07	1	19/06/2014	13:04:07	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_010422.wav	0	0	9.223	SM300509_0_0_20140620_010422_000	20/06/2014	1:04:22	1	19/06/2014	13:04:22	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_010536.wav	0	0	7.062	SM300509_0_0_20140620_010536_000	20/06/2014	1:05:36	1	19/06/2014	13:05:36	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_231813.wav	0	0	10.541	SM300509_0_0_20140620_231813_000	20/06/2014	23:18:13	23	20/06/2014	11:18:13	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_232002.wav	0	0	5.517	SM300509_0_0_20140620_232002_000	20/06/2014	23:20:02	23	20/06/2014	11:20:02	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_232019.wav	0	0	9.49	SM300509_0_0_20140620_232019_000	20/06/2014	23:20:19	23	20/06/2014	11:20:19	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_232111.wav	0	0	4.884	SM300509_0_0_20140620_232111_000	20/06/2014	23:21:11	23	20/06/2014	11:21:11	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_232120.wav	0	0	7.207	SM300509_0_0_20140620_232120_000	20/06/2014	23:21:20	23	20/06/2014	11:21:20	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_232537.wav	0	0	8.795	SM300509_0_0_20140620_232537_000	20/06/2014	23:25:37	23	20/06/2014	11:25:37	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_232551.wav	0	0	8.356	SM300509_0_0_20140620_232551_000	20/06/2014	23:25:51	23	20/06/2014	11:25:51	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_233131.wav	0	0	7.476	SM300509_0_0_20140620_233131_000	20/06/2014	23:31:31	23	20/06/2014	11:31:31	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_233142.wav	0	0	4.162	SM300509_0_0_20140620_233142_000	20/06/2014	23:31:42	23	20/06/2014	11:31:42	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_233150.wav	0	0	5.092	SM300509_0_0_20140620_233150_000	20/06/2014	23:31:50	23	20/06/2014	11:31:50	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_233228.wav	0	0	5.335	SM300509_0_0_20140620_233228_000	20/06/2014	23:32:28	23	20/06/2014	11:32:28	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_233311.wav	0	0	6.043	SM300509_0_0_20140620_233311_000	20/06/2014	23:33:11	23	20/06/2014	11:33:11	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_233521.wav	0	0	8.68	SM300509_0_0_20140620_233521_000	20/06/2014	23:35:21	23	20/06/2014	11:35:21	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_233710.wav	0	0	4.361	SM300509_0_0_20140620_233710_000	20/06/2014	23:37:10	23	20/06/2014	11:37:10	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_233844.wav	0	0	5.771	SM300509_0_0_20140620_233844_000	20/06/2014	23:38:44	23	20/06/2014	11:38:44	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_233944.wav	0	0	10.996	SM300509_0_0_20140620_233944_000	20/06/2014	23:39:44	23	20/06/2014	11:39:44	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_234047.wav	0	0	5.144	SM300509_0_0_20140620_234047_000	20/06/2014	23:40:47	23	20/06/2014	11:40:47	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140620_235227.wav	0	0	8.226	SM300509_0_0_20140620_235227_000	20/06/2014	23:52:27	23	20/06/2014	11:52:27	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_000831.wav	0	0	4.856	SM300509_0_0_20140621_000831_000	21/06/2014	0:08:31	0	20/06/2014	12:08:31	12	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_001325.wav	0	0	5.853	SM300509_0_0_20140621_001325_000	21/06/2014	0:13:25	0	20/06/2014	12:13:25	12	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_001457.wav	0	0	5.735	SM300509_0_0_20140621_001457_000	21/06/2014	0:14:57	0	20/06/2014	12:14:57	12	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_001553.wav	0	0	10.893	SM300509_0_0_20140621_001553_000	21/06/2014	0:15:53	0	20/06/2014	12:15:53	12	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_010352.wav	0	0	11.349	SM300509_0_0_20140621_010352_000	21/06/2014	1:03:52	1	20/06/2014	13:03:52	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_010554.wav	0	0	6.034	SM300509_0_0_20140621_010554_000	21/06/2014	1:05:54	1	20/06/2014	13:05:54	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_010604.wav	0	0	5.481	SM300509_0_0_20140621_010604_000	21/06/2014	1:06:04	1	20/06/2014	13:06:04	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_010654.wav	0	0	8.075	SM300509_0_0_20140621_010654_000	21/06/2014	1:06:54	1	20/06/2014	13:06:54	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_010710.wav	0	0	10.993	SM300509_0_0_20140621_010710_000	21/06/2014	1:07:10	1	20/06/2014	13:07:10	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_010803.wav	0	0	9.836	SM300509_0_0_20140621_010803_000	21/06/2014	1:08:03	1	20/06/2014	13:08:03	13	LACI	4	4	0.497051	1
Elliot Lake SM3-2	SM300509_0_20140621_010824.wav	0	0	7.638	SM300509_0_0_20140621_010824_000	21/06/2014	1:08:24	1	20/06/2014	13:08:24	13	LANO	8	7	0.402691	1
Elliot Lake SM3-2	SM300509_0_20140621_010855.wav	0	0	7.262	SM300509_0_0_20140621_010855_000	21/06/2014	1:08:55	1	20/06/2014	13:08:55	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_010946.wav	0	0	11.598	SM300509_0_0_20140621_010946_000	21/06/2014	1:09:46	1	20/06/2014	13:09:46	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_011203.wav	0	0	8.959	SM300509_0_0_20140621_011203_000	21/06/2014	1:12:03	1	20/06/2014	13:12:03	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_011243.wav	0	0	5.941	SM300509_0_0_20140621_011243_000	21/06/2014	1:12:43	1	20/06/2014	13:12:43	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_011306.wav	0	0	4.065	SM300509_0_0_20140621_011306_000	21/06/2014	1:13:06	1	20/06/2014	13:13:06	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_011331.wav	0	0	9.588	SM300509_0_0_20140621_011331_000	21/06/2014	1:13:31	1	20/06/2014	13:13:31	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_011535.wav	0	0	7.829	SM300509_0_0_20140621_011535_000	21/06/2014	1:15:35	1	20/06/2014	13:15:35	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_011701.wav	0	0	6.755	SM300509_0_0_20140621_011701_000	21/06/2014	1:17:01	1	20/06/2014	13:17:01	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_011822.wav	0	0	10.722	SM300509_0_0_20140621_011822_000	21/06/2014	1:18:22	1	20/06/2014	13:18:22	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_014429.wav	0	0	8.73	SM300509_0_0_20140621_014429_000	21/06/2014	1:44:29	1	20/06/2014	13:44:29	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_041602.wav	0	0	6.571	SM300509_0_0_20140621_041602_000	21/06/2014	4:16:02	4	20/06/2014	16:16:02	16	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_042708.wav	0	0	9.558	SM300509_0_0_20140621_042708_000	21/06/2014	4:27:08	4	20/06/2014	16:27:08	16	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_222807.wav	0	0	8.463	SM300509_0_0_20140621_222807_000	21/06/2014	22:28:07	22	21/06/2014	10:28:07	10	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_223246.wav	0	0	8.347	SM300509_0_0_20140621_223246_000	21/06/2014	22:32:46	22	21/06/2014	10:32:46	10	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_223356.wav	0	0	3.428	SM300509_0_0_20140621_223356_000	21/06/2014	22:33:56	22	21/06/2014	10:33:56	10	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_223617.wav	0	0	6.085	SM300509_0_0_20140621_223617_000	21/06/2014	22:36:17	22	21/06/2014	10:36:17	10	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_224148.wav	0	0	6.892	SM300509_0_0_20140621_224148_000	21/06/2014	22:41:48	22	21/06/2014	10:41:48	10	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_224412.wav	0	0	9.653	SM300509_0_0_20140621_224412_000	21/06/2014	22:44:12	22	21/06/2014	10:44:12	10	Noid	0	0	0	1

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM3-2	SM300509_0_20140621_224425.wav	0	0	7.616	SM300509_0_0_20140621_224425_000	21/06/2014	22:44:25	22	21/06/2014	10:44:25	10	LACI	2	2	0.230025	1
Elliot Lake SM3-2	SM300509_0_20140621_224438.wav	0	0	10.935	SM300509_0_0_20140621_224438_000	21/06/2014	22:44:38	22	21/06/2014	10:44:38	10	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_224454.wav	0	0	9.29	SM300509_0_0_20140621_224454_000	21/06/2014	22:44:54	22	21/06/2014	10:44:54	10	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_224517.wav	0	0	8.435	SM300509_0_0_20140621_224517_000	21/06/2014	22:45:17	22	21/06/2014	10:45:17	10	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_230652.wav	0	0	6.495	SM300509_0_0_20140621_230652_000	21/06/2014	23:06:52	23	21/06/2014	11:06:52	11	LACI	3	3	0.288076	1
Elliot Lake SM3-2	SM300509_0_20140621_231305.wav	0	0	8.907	SM300509_0_0_20140621_231305_000	21/06/2014	23:13:05	23	21/06/2014	11:13:05	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_231328.wav	0	0	4.366	SM300509_0_0_20140621_231328_000	21/06/2014	23:13:28	23	21/06/2014	11:13:28	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_231339.wav	0	0	3.032	SM300509_0_0_20140621_231339_000	21/06/2014	23:13:39	23	21/06/2014	11:13:39	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_231351.wav	0	0	7.302	SM300509_0_0_20140621_231351_000	21/06/2014	23:13:51	23	21/06/2014	11:13:51	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_231436.wav	0	0	4.647	SM300509_0_0_20140621_231436_000	21/06/2014	23:14:36	23	21/06/2014	11:14:36	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140621_232351.wav	0	0	8.814	SM300509_0_0_20140621_232351_000	21/06/2014	23:23:51	23	21/06/2014	11:23:51	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140622_002505.wav	0	0	6.823	SM300509_0_0_20140622_002505_000	22/06/2014	0:25:05	0	21/06/2014	12:25:05	12	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140622_020838.wav	0	0	9.185	SM300509_0_0_20140622_020838_000	22/06/2014	2:08:38	2	21/06/2014	14:08:38	14	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140622_023140.wav	0	0	8.406	SM300509_0_0_20140622_023140_000	22/06/2014	2:31:40	2	21/06/2014	14:31:40	14	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140622_031002.wav	0	0	6.869	SM300509_0_0_20140622_031002_000	22/06/2014	3:10:02	3	21/06/2014	15:10:02	15	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140622_225151.wav	0	0	3.71	SM300509_0_0_20140622_225151_000	22/06/2014	22:51:51	22	22/06/2014	10:51:51	10	LACI	2	2	0.222376	1
Elliot Lake SM3-2	SM300509_0_20140622_231220.wav	0	0	11.866	SM300509_0_0_20140622_231220_000	22/06/2014	23:12:20	23	22/06/2014	11:12:20	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140622_235526.wav	0	0	9.107	SM300509_0_0_20140622_235526_000	22/06/2014	23:55:26	23	22/06/2014	11:55:26	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140622_235539.wav	0	0	6.488	SM300509_0_0_20140622_235539_000	22/06/2014	23:55:39	23	22/06/2014	11:55:39	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140622_235612.wav	0	0	6.649	SM300509_0_0_20140622_235612_000	22/06/2014	23:56:12	23	22/06/2014	11:56:12	11	LACI	4	4	0.501683	1
Elliot Lake SM3-2	SM300509_0_20140622_235654.wav	0	0	13.001	SM300509_0_0_20140622_235654_000	22/06/2014	23:56:54	23	22/06/2014	11:56:54	11	LACI	8	8	0.7048	1
Elliot Lake SM3-2	SM300509_0_20140623_001706.wav	0	0	6.07	SM300509_0_0_20140623_001706_000	23/06/2014	0:17:06	0	22/06/2014	12:17:06	12	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140623_230522.wav	0	0	4.94	SM300509_0_0_20140623_230522_000	23/06/2014	23:05:22	23	23/06/2014	11:05:22	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140623_232740.wav	0	0	3.02	SM300509_0_0_20140623_232740_000	23/06/2014	23:27:40	23	23/06/2014	11:27:40	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140624_000812.wav	0	0	5.884	SM300509_0_0_20140624_000812_000	24/06/2014	0:08:12	0	23/06/2014	12:08:12	12	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140624_025754.wav	0	0	4.349	SM300509_0_0_20140624_025754_000	24/06/2014	2:57:54	2	23/06/2014	14:57:54	14	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140624_031402.wav	0	0	10.252	SM300509_0_0_20140624_031402_000	24/06/2014	3:14:02	3	23/06/2014	15:14:02	15	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140624_031835.wav	0	0	14.373	SM300509_0_0_20140624_031835_000	24/06/2014	3:18:35	3	23/06/2014	15:18:35	15	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140624_031857.wav	0	0	6.155	SM300509_0_0_20140624_031857_000	24/06/2014	3:18:57	3	23/06/2014	15:18:57	15	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140624_233932.wav	0	0	6.845	SM300509_0_0_20140624_233932_000	24/06/2014	23:39:32	23	24/06/2014	11:39:32	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140624_235843.wav	0	0	4.863	SM300509_0_0_20140624_235843_000	24/06/2014	23:58:43	23	24/06/2014	11:58:43	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140625_013315.wav	0	0	4.74	SM300509_0_0_20140625_013315_000	25/06/2014	1:33:15	1	24/06/2014	13:33:15	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140625_021932.wav	0	0	3.672	SM300509_0_0_20140625_021932_000	25/06/2014	2:19:32	2	24/06/2014	14:19:32	14	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140625_224951.wav	0	0	5.483	SM300509_0_0_20140625_224951_000	25/06/2014	22:49:51	22	25/06/2014	10:49:51	10	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140625_232103.wav	0	0	8.435	SM300509_0_0_20140625_232103_000	25/06/2014	23:21:03	23	25/06/2014	11:21:03	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140626_023805.wav	0	0	8.316	SM300509_0_0_20140626_023805_000	26/06/2014	2:38:05	2	25/06/2014	14:38:05	14	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140626_025805.wav	0	0	10.749	SM300509_0_0_20140626_025805_000	26/06/2014	2:58:05	2	25/06/2014	14:58:05	14	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140626_040416.wav	0	0	4.574	SM300509_0_0_20140626_040416_000	26/06/2014	4:04:16	4	25/06/2014	16:04:16	16	LACI	3	3	0.321079	1
Elliot Lake SM3-2	SM300509_0_20140627_005913.wav	0	0	9.033	SM300509_0_0_20140627_005913_000	27/06/2014	0:59:13	0	26/06/2014	12:59:13	12	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140627_010059.wav	0	0	6.591	SM300509_0_0_20140627_010059_000	27/06/2014	1:00:59	1	26/06/2014	13:00:59	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140627_014459.wav	0	0	6.724	SM300509_0_0_20140627_014459_000	27/06/2014	1:44:59	1	26/06/2014	13:44:59	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140627_014700.wav	0	0	7.226	SM300509_0_0_20140627_014700_000	27/06/2014	1:47:00	1	26/06/2014	13:47:00	13	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140627_030103.wav	0	0	4.473	SM300509_0_0_20140627_030103_000	27/06/2014	3:01:03	3	26/06/2014	15:01:03	15	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140627_040234.wav	0	0	6.574	SM300509_0_0_20140627_040234_000	27/06/2014	4:02:34	4	26/06/2014	16:02:34	16	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140627_231322.wav	0	0	3.318	SM300509_0_0_20140627_231322_000	27/06/2014	23:13:22	23	27/06/2014	11:13:22	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140627_231621.wav	0	0	3.66	SM300509_0_0_20140627_231621_000	27/06/2014	23:16:21	23	27/06/2014	11:16:21	11	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140628_000741.wav	0	0	7.6	SM300509_0_0_20140628_000741_000	28/06/2014	0:07:41	0	27/06/2014	12:07:41	12	Noid	0	0	0	1
Elliot Lake SM3-2	SM300509_0_20140628_015706.wav	0	0	3.525	SM300509_0_0_20140628_015706_000	28/06/2014	1:57:06	1	27/06/2014	13:57:06	13	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140616_233005.wav	0	0	4.743	SM300687_0_0_20140616_233005_000	16/06/2014	23:30:05	23	16/06/2014	11:30:05	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140616_235350.wav	0	0	4.899	SM300687_0_0_20140616_235350_000	16/06/2014	23:53:50	23	16/06/2014	11:53:50	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140617_034508.wav	0	0	5.919	SM300687_0_0_20140617_034508_000	17/06/2014	3:45:08	3	16/06/2014	15:45:08	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140617_041955.wav	0	0	3.961	SM300687_0_0_20140617_041955_000	17/06/2014	4:19:55	4	16/06/2014	16:19:55	16	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140617_231654.wav	0	0	6.14	SM300687_0_0_20140617_231654_000	17/06/2014	23:16:54	23	17/06/2014	11:16:54	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140617_232014.wav	0	0	6.895	SM300687_0_0_20140617_232014_000	17/06/2014	23:20:14	23	17/06/2014	11:20:14	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140617_232348.wav	0	0	6.745	SM300687_0_0_20140617_232348_000	17/06/2014	23:23:48	23	17/06/2014	11:23:48	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140617_233356.wav	0	0	3.441	SM300687_0_0_20140617_233356_000	17/06/2014	23:33:56	23	17/06/2014	11:33:56	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140617_233555.wav	0	0	6.566	SM300687_0_0_20140617_233555_000	17/06/2014	23:35:55	23	17/06/2014	11:35:55	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140617_234247.wav	0	0	13.731	SM300687_0_0_20140617_234247_000	17/06/2014	23:42:47	23	17/06/2014	11:42:47	11	LACI	2	2	0.201136	1
Elliot Lake SM3-5	SM300687_0_20140617_234749.wav	0	0	5.798	SM300687_0_0_20140617_234749_000	17/06/2014	23:47:49	23	17/06/2014	11:47:49	11	Noid	0	0	0	1

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM3-5	SM300687_0_20140617_235925.wav	0	0	12.351	SM300687_0_0_20140617_235925_000	17/06/2014	23:59:25	23	17/06/2014	11:59:25	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140618_011711.wav	0	0	3.393	SM300687_0_0_20140618_011711_000	18/06/2014	1:17:11	1	17/06/2014	13:17:11	13	LACI	2	2	0.230732	1
Elliot Lake SM3-5	SM300687_0_20140618_023504.wav	0	0	5.952	SM300687_0_0_20140618_023504_000	18/06/2014	2:35:04	2	17/06/2014	14:35:04	14	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140618_030703.wav	0	0	4.586	SM300687_0_0_20140618_030703_000	18/06/2014	3:07:03	3	17/06/2014	15:07:03	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140618_031237.wav	0	0	7.202	SM300687_0_0_20140618_031237_000	18/06/2014	3:12:37	3	17/06/2014	15:12:37	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140618_031626.wav	0	0	10.131	SM300687_0_0_20140618_031626_000	18/06/2014	3:16:26	3	17/06/2014	15:16:26	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140618_034759.wav	0	0	5.823	SM300687_0_0_20140618_034759_000	18/06/2014	3:47:59	3	17/06/2014	15:47:59	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140618_034809.wav	0	0	5.54	SM300687_0_0_20140618_034809_000	18/06/2014	3:48:09	3	17/06/2014	15:48:09	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140618_035053.wav	0	0	7.662	SM300687_0_0_20140618_035053_000	18/06/2014	3:50:53	3	17/06/2014	15:50:53	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140618_035157.wav	0	0	6.414	SM300687_0_0_20140618_035157_000	18/06/2014	3:51:57	3	17/06/2014	15:51:57	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140618_224853.wav	0	0	4.333	SM300687_0_0_20140618_224853_000	18/06/2014	22:48:53	22	18/06/2014	10:48:53	10	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140618_233445.wav	0	0	3.913	SM300687_0_0_20140618_233445_000	18/06/2014	23:34:45	23	18/06/2014	11:34:45	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140618_233515.wav	0	0	13.773	SM300687_0_0_20140618_233515_000	18/06/2014	23:35:15	23	18/06/2014	11:35:15	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140618_233546.wav	0	0	3.404	SM300687_0_0_20140618_233546_000	18/06/2014	23:35:46	23	18/06/2014	11:35:46	11	LACI	3	3	0.363214	1
Elliot Lake SM3-5	SM300687_0_20140618_233607.wav	0	0	11.095	SM300687_0_0_20140618_233607_000	18/06/2014	23:36:07	23	18/06/2014	11:36:07	11	LACI	2	2	0.161431	1
Elliot Lake SM3-5	SM300687_0_20140618_233708.wav	0	0	6.676	SM300687_0_0_20140618_233708_000	18/06/2014	23:37:08	23	18/06/2014	11:37:08	11	LACI	5	5	0.541059	1
Elliot Lake SM3-5	SM300687_0_20140618_233848.wav	0	0	5.17	SM300687_0_0_20140618_233848_000	18/06/2014	23:38:48	23	18/06/2014	11:38:48	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140618_234107.wav	0	0	4.642	SM300687_0_0_20140618_234107_000	18/06/2014	23:41:07	23	18/06/2014	11:41:07	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140619_014750.wav	0	0	3.426	SM300687_0_0_20140619_014750_000	19/06/2014	1:47:50	1	18/06/2014	13:47:50	13	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140620_001419.wav	0	0	4.829	SM300687_0_0_20140620_001419_000	20/06/2014	0:14:19	0	19/06/2014	12:14:19	12	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140620_001655.wav	0	0	8.844	SM300687_0_0_20140620_001655_000	20/06/2014	0:16:55	0	19/06/2014	12:16:55	12	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140620_001845.wav	0	0	3.033	SM300687_0_0_20140620_001845_000	20/06/2014	0:18:45	0	19/06/2014	12:18:45	12	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140620_001947.wav	0	0	3.846	SM300687_0_0_20140620_001947_000	20/06/2014	0:19:47	0	19/06/2014	12:19:47	12	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140620_002107.wav	0	0	3.327	SM300687_0_0_20140620_002107_000	20/06/2014	0:21:07	0	19/06/2014	12:21:07	12	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140620_002238.wav	0	0	4.379	SM300687_0_0_20140620_002238_000	20/06/2014	0:22:38	0	19/06/2014	12:22:38	12	LACI	3	3	0.347923	1
Elliot Lake SM3-5	SM300687_0_20140620_002743.wav	0	0	4.035	SM300687_0_0_20140620_002743_000	20/06/2014	0:27:43	0	19/06/2014	12:27:43	12	LACI	20	18	0.824638	1
Elliot Lake SM3-5	SM300687_0_20140620_034603.wav	0	0	5.747	SM300687_0_0_20140620_034603_000	20/06/2014	3:46:03	3	19/06/2014	15:46:03	15	LACI	5	5	0.557933	1
Elliot Lake SM3-5	SM300687_0_20140620_034619.wav	0	0	3.023	SM300687_0_0_20140620_034619_000	20/06/2014	3:46:19	3	19/06/2014	15:46:19	15	LACI	2	2	0.174724	1
Elliot Lake SM3-5	SM300687_0_20140620_224125.wav	0	0	3.021	SM300687_0_0_20140620_224125_000	20/06/2014	22:41:25	22	20/06/2014	10:41:25	10	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140621_014158.wav	0	0	3.009	SM300687_0_0_20140621_014158_000	21/06/2014	1:41:58	1	20/06/2014	13:41:58	13	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140621_014342.wav	0	0	4.642	SM300687_0_0_20140621_014342_000	21/06/2014	1:43:42	1	20/06/2014	13:43:42	13	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140621_031913.wav	0	0	3.012	SM300687_0_0_20140621_031913_000	21/06/2014	3:19:13	3	20/06/2014	15:19:13	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140621_032011.wav	0	0	3.483	SM300687_0_0_20140621_032011_000	21/06/2014	3:20:11	3	20/06/2014	15:20:11	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140621_032217.wav	0	0	3.039	SM300687_0_0_20140621_032217_000	21/06/2014	3:22:17	3	20/06/2014	15:22:17	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140621_032335.wav	0	0	8.84	SM300687_0_0_20140621_032335_000	21/06/2014	3:23:35	3	20/06/2014	15:23:35	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140621_032506.wav	0	0	4.395	SM300687_0_0_20140621_032506_000	21/06/2014	3:25:06	3	20/06/2014	15:25:06	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140621_224845.wav	0	0	6.224	SM300687_0_0_20140621_224845_000	21/06/2014	22:48:45	22	21/06/2014	10:48:45	10	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140622_023649.wav	0	0	5.657	SM300687_0_0_20140622_023649_000	22/06/2014	2:36:49	2	21/06/2014	14:36:49	14	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140622_024710.wav	0	0	5.425	SM300687_0_0_20140622_024710_000	22/06/2014	2:47:10	2	21/06/2014	14:47:10	14	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140622_035809.wav	0	0	4.285	SM300687_0_0_20140622_035809_000	22/06/2014	3:58:09	3	21/06/2014	15:58:09	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140622_035929.wav	0	0	4.718	SM300687_0_0_20140622_035929_000	22/06/2014	3:59:29	3	21/06/2014	15:59:29	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140622_040201.wav	0	0	5.834	SM300687_0_0_20140622_040201_000	22/06/2014	4:02:01	4	21/06/2014	16:02:01	16	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140622_040357.wav	0	0	5.55	SM300687_0_0_20140622_040357_000	22/06/2014	4:03:57	4	21/06/2014	16:03:57	16	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140622_230952.wav	0	0	5.296	SM300687_0_0_20140622_230952_000	22/06/2014	23:09:52	23	22/06/2014	11:09:52	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140622_231009.wav	0	0	10.088	SM300687_0_0_20140622_231009_000	22/06/2014	23:10:09	23	22/06/2014	11:10:09	11	LACI	3	3	0.380447	1
Elliot Lake SM3-5	SM300687_0_20140622_231058.wav	0	0	6.191	SM300687_0_0_20140622_231058_000	22/06/2014	23:10:58	23	22/06/2014	11:10:58	11	LACI	5	5	0.550257	1
Elliot Lake SM3-5	SM300687_0_20140622_231232.wav	0	0	3.024	SM300687_0_0_20140622_231232_000	22/06/2014	23:12:32	23	22/06/2014	11:12:32	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140622_235639.wav	0	0	7.762	SM300687_0_0_20140622_235639_000	22/06/2014	23:56:39	23	22/06/2014	11:56:39	11	LACI	4	4	0.457748	1
Elliot Lake SM3-5	SM300687_0_20140623_030350.wav	0	0	9.269	SM300687_0_0_20140623_030350_000	23/06/2014	3:03:50	3	22/06/2014	15:03:50	15	LACI	3	3	0.298858	1
Elliot Lake SM3-5	SM300687_0_20140623_033040.wav	0	0	5.177	SM300687_0_0_20140623_033040_000	23/06/2014	3:30:40	3	22/06/2014	15:30:40	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140624_024656.wav	0	0	5.043	SM300687_0_0_20140624_024656_000	24/06/2014	2:46:56	2	23/06/2014	14:46:56	14	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140624_025023.wav	0	0	8.002	SM300687_0_0_20140624_025023_000	24/06/2014	2:50:23	2	23/06/2014	14:50:23	14	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140624_025224.wav	0	0	5.772	SM300687_0_0_20140624_025224_000	24/06/2014	2:52:24	2	23/06/2014	14:52:24	14	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140624_033918.wav	0	0	5.43	SM300687_0_0_20140624_033918_000	24/06/2014	3:39:18	3	23/06/2014	15:39:18	15	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140624_222010.wav	0	0	5.523	SM300687_0_0_20140624_222010_000	24/06/2014	22:20:10	22	24/06/2014	10:20:10	10	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140626_015405.wav	0	0	4.076	SM300687_0_0_20140626_015405_000	26/06/2014	1:54:05	1	25/06/2014	13:54:05	13	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140626_040203.wav	0	0	6.549	SM300687_0_0_20140626_040203_000	26/06/2014	4:02:03	4	25/06/2014	16:02:03	16	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140626_232123.wav	0	0	4.002	SM300687_0_0_20140626_232123_000	26/06/2014	23:21:23	23	26/06/2014	11:21:23	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140626_232331.wav	0	0	3.033	SM300687_0_0_20140626_232331_000	26/06/2014	23:23:31	23	26/06/2014	11:23:31	11	LACI	2	2	0.194287	1

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM3-5	SM300687_0_20140626_232520.wav	0	0	4.403	SM300687_0_0_20140626_232520_000	26/06/2014	23:25:20	23	26/06/2014	11:25:20	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140626_233903.wav	0	0	4.335	SM300687_0_0_20140626_233903_000	26/06/2014	23:39:03	23	26/06/2014	11:39:03	11	LACI	2	2	0.175615	1
Elliot Lake SM3-5	SM300687_0_20140626_234530.wav	0	0	3.017	SM300687_0_0_20140626_234530_000	26/06/2014	23:45:30	23	26/06/2014	11:45:30	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140626_235205.wav	0	0	3.235	SM300687_0_0_20140626_235205_000	26/06/2014	23:52:05	23	26/06/2014	11:52:05	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140626_235333.wav	0	0	4.566	SM300687_0_0_20140626_235333_000	26/06/2014	23:53:33	23	26/06/2014	11:53:33	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140626_235354.wav	0	0	4.106	SM300687_0_0_20140626_235354_000	26/06/2014	23:53:54	23	26/06/2014	11:53:54	11	LACI	2	2	0.211934	1
Elliot Lake SM3-5	SM300687_0_20140626_235415.wav	0	0	3.473	SM300687_0_0_20140626_235415_000	26/06/2014	23:54:15	23	26/06/2014	11:54:15	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140627_221425.wav	0	0	3.439	SM300687_0_0_20140627_221425_000	27/06/2014	22:14:25	22	27/06/2014	10:14:25	10	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140628_014036.wav	0	0	3.511	SM300687_0_0_20140628_014036_000	28/06/2014	1:40:36	1	27/06/2014	13:40:36	13	LACI	2	2	0.267379	1
Elliot Lake SM3-5	SM300687_0_20140628_040910.wav	0	0	6.829	SM300687_0_0_20140628_040910_000	28/06/2014	4:09:10	4	27/06/2014	16:09:10	16	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140629_024608.wav	0	0	7.195	SM300687_0_0_20140629_024608_000	29/06/2014	2:46:08	2	28/06/2014	14:46:08	14	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140629_223958.wav	0	0	3.027	SM300687_0_0_20140629_223958_000	29/06/2014	22:39:58	22	29/06/2014	10:39:58	10	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140629_225644.wav	0	0	3.01	SM300687_0_0_20140629_225644_000	29/06/2014	22:56:44	22	29/06/2014	10:56:44	10	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140629_235508.wav	0	0	7.013	SM300687_0_0_20140629_235508_000	29/06/2014	23:55:08	22	29/06/2014	11:55:08	11	LACI	4	4	0.45085	1
Elliot Lake SM3-5	SM300687_0_20140630_012335.wav	0	0	3.114	SM300687_0_0_20140630_012335_000	30/06/2014	1:23:35	1	29/06/2014	13:23:35	13	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140630_012408.wav	0	0	3.493	SM300687_0_0_20140630_012408_000	30/06/2014	1:24:08	1	29/06/2014	13:24:08	13	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140630_045646.wav	0	0	5.658	SM300687_0_0_20140630_045646_000	30/06/2014	4:56:46	4	29/06/2014	16:56:46	16	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140630_050631.wav	0	0	3.924	SM300687_0_0_20140630_050631_000	30/06/2014	5:06:31	5	29/06/2014	17:06:31	17	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140630_050655.wav	0	0	9.128	SM300687_0_0_20140630_050655_000	30/06/2014	5:06:55	5	29/06/2014	17:06:55	17	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140630_223208.wav	0	0	8.387	SM300687_0_0_20140630_223208_000	30/06/2014	22:32:08	22	30/06/2014	10:32:08	10	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140630_232220.wav	0	0	3.151	SM300687_0_0_20140630_232220_000	30/06/2014	23:22:20	23	30/06/2014	11:22:20	11	LACI	3	3	0.35682	1
Elliot Lake SM3-5	SM300687_0_20140630_232230.wav	0	0	5.638	SM300687_0_0_20140630_232230_000	30/06/2014	23:22:30	23	30/06/2014	11:22:30	11	LACI	7	7	0.666749	1
Elliot Lake SM3-5	SM300687_0_20140630_232250.wav	0	0	3.25	SM300687_0_0_20140630_232250_000	30/06/2014	23:22:50	23	30/06/2014	11:22:50	11	LACI	4	4	0.465512	1
Elliot Lake SM3-5	SM300687_0_20140630_232704.wav	0	0	7.273	SM300687_0_0_20140630_232704_000	30/06/2014	23:27:04	23	30/06/2014	11:27:04	11	LACI	8	8	0.666292	1
Elliot Lake SM3-5	SM300687_0_20140630_232717.wav	0	0	8.31	SM300687_0_0_20140630_232717_000	30/06/2014	23:27:17	23	30/06/2014	11:27:17	11	LACI	3	3	0.376173	1
Elliot Lake SM3-5	SM300687_0_20140630_232730.wav	0	0	3.202	SM300687_0_0_20140630_232730_000	30/06/2014	23:27:30	23	30/06/2014	11:27:30	11	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140630_233044.wav	0	0	6.186	SM300687_0_0_20140630_233044_000	30/06/2014	23:30:44	23	30/06/2014	11:30:44	11	LACI	7	7	0.670367	1
Elliot Lake SM3-5	SM300687_0_20140630_233058.wav	0	0	4.491	SM300687_0_0_20140630_233058_000	30/06/2014	23:30:58	23	30/06/2014	11:30:58	11	LACI	3	3	0.382145	1
Elliot Lake SM3-5	SM300687_0_20140630_233122.wav	0	0	3.348	SM300687_0_0_20140630_233122_000	30/06/2014	23:31:22	23	30/06/2014	11:31:22	11	LACI	3	3	0.370393	1
Elliot Lake SM3-5	SM300687_0_20140630_233748.wav	0	0	3.076	SM300687_0_0_20140630_233748_000	30/06/2014	23:37:48	23	30/06/2014	11:37:48	11	LACI	3	3	0.382495	1
Elliot Lake SM3-5	SM300687_0_20140630_233757.wav	0	0	14.999	SM300687_0_0_20140630_233757_000	30/06/2014	23:37:57	23	30/06/2014	11:37:57	11	LACI	24	21	0.835419	1
Elliot Lake SM3-5	SM300687_0_20140630_234108.wav	0	0	5.348	SM300687_0_0_20140630_234108_000	30/06/2014	23:41:08	23	30/06/2014	11:41:08	11	LACI	2	2	0.213666	1
Elliot Lake SM3-5	SM300687_0_20140630_235727.wav	0	0	9.285	SM300687_0_0_20140630_235727_000	30/06/2014	23:57:27	23	30/06/2014	11:57:27	11	LACI	12	12	0.746679	1
Elliot Lake SM3-5	SM300687_0_20140701_000427.wav	0	0	8.151	SM300687_0_0_20140701_000427_000	01/07/2014	0:04:27	0	30/06/2014	12:04:27	12	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140701_000448.wav	0	0	5.28	SM300687_0_0_20140701_000448_000	01/07/2014	0:04:48	0	30/06/2014	12:04:48	12	LACI	9	8	0.616256	1
Elliot Lake SM3-5	SM300687_0_20140701_000457.wav	0	0	4.914	SM300687_0_0_20140701_000457_000	01/07/2014	0:04:57	0	30/06/2014	12:04:57	12	LACI	2	2	0.255575	1
Elliot Lake SM3-5	SM300687_0_20140701_000702.wav	0	0	3.009	SM300687_0_0_20140701_000702_000	01/07/2014	0:07:02	0	30/06/2014	12:07:02	12	LACI	4	4	0.486792	1
Elliot Lake SM3-5	SM300687_0_20140701_000708.wav	0	0	7.931	SM300687_0_0_20140701_000708_000	01/07/2014	0:07:08	0	30/06/2014	12:07:08	12	LACI	2	2	0.22888	1
Elliot Lake SM3-5	SM300687_0_20140701_001046.wav	0	0	8.011	SM300687_0_0_20140701_001046_000	01/07/2014	0:10:46	0	30/06/2014	12:10:46	12	LACI	16	16	0.820896	1
Elliot Lake SM3-5	SM300687_0_20140701_001307.wav	0	0	7.429	SM300687_0_0_20140701_001307_000	01/07/2014	0:13:07	0	30/06/2014	12:13:07	12	LACI	6	6	0.632011	1
Elliot Lake SM3-5	SM300687_0_20140701_001920.wav	0	0	5.113	SM300687_0_0_20140701_001920_000	01/07/2014	0:19:20	0	30/06/2014	12:19:20	12	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140701_001947.wav	0	0	3.246	SM300687_0_0_20140701_001947_000	01/07/2014	0:19:47	0	30/06/2014	12:19:47	12	LACI	4	4	0.481974	1
Elliot Lake SM3-5	SM300687_0_20140701_002020.wav	0	0	3.062	SM300687_0_0_20140701_002020_000	01/07/2014	0:20:20	0	30/06/2014	12:20:20	12	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140701_002036.wav	0	0	5.772	SM300687_0_0_20140701_002036_000	01/07/2014	0:20:36	0	30/06/2014	12:20:36	12	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140701_002125.wav	0	0	3.118	SM300687_0_0_20140701_002125_000	01/07/2014	0:21:25	0	30/06/2014	12:21:25	12	LACI	2	2	0.187536	1
Elliot Lake SM3-5	SM300687_0_20140701_002140.wav	0	0	3.353	SM300687_0_0_20140701_002140_000	01/07/2014	0:21:40	0	30/06/2014	12:21:40	12	LACI	2	2	0.220645	1
Elliot Lake SM3-5	SM300687_0_20140701_002147.wav	0	0	5.622	SM300687_0_0_20140701_002147_000	01/07/2014	0:21:47	0	30/06/2014	12:21:47	12	LACI	2	2	0.253319	1
Elliot Lake SM3-5	SM300687_0_20140701_003444.wav	0	0	3.259	SM300687_0_0_20140701_003444_000	01/07/2014	0:34:44	0	30/06/2014	12:34:44	12	LACI	2	2	0.245795	1
Elliot Lake SM3-5	SM300687_0_20140701_003633.wav	0	0	7.744	SM300687_0_0_20140701_003633_000	01/07/2014	0:36:33	0	30/06/2014	12:36:33	12	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140701_003833.wav	0	0	3.132	SM300687_0_0_20140701_003833_000	01/07/2014	0:38:33	0	30/06/2014	12:38:33	12	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140701_003841.wav	0	0	3.415	SM300687_0_0_20140701_003841_000	01/07/2014	0:38:41	0	30/06/2014	12:38:41	12	LACI	4	4	0.472173	1
Elliot Lake SM3-5	SM300687_0_20140701_003850.wav	0	0	6.593	SM300687_0_0_20140701_003850_000	01/07/2014	0:38:50	0	30/06/2014	12:38:50	12	LACI	5	4	0.304189	1
Elliot Lake SM3-5	SM300687_0_20140701_004019.wav	0	0	4.95	SM300687_0_0_20140701_004019_000	01/07/2014	0:40:19	0	30/06/2014	12:40:19	12	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140701_004029.wav	0	0	3.417	SM300687_0_0_20140701_004029_000	01/07/2014	0:40:29	0	30/06/2014	12:40:29	12	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140701_004037.wav	0	0	7.222	SM300687_0_0_20140701_004037_000	01/07/2014	0:40:37	0	30/06/2014	12:40:37	12	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140701_004049.wav	0	0	6.187	SM300687_0_0_20140701_004049_000	01/07/2014	0:40:49	0	30/06/2014	12:40:49	12	LACI	6	6	0.597786	1
Elliot Lake SM3-5	SM300687_0_20140701_004100.wav	0	0	7.153	SM300687_0_0_20140701_004100_000	01/07/2014	0:41:00	0	30/06/2014	12:41:00	12	LACI	4	4	0.470369	1
Elliot Lake SM3-5	SM300687_0_20140701_004319.wav	0	0	3.035	SM300687_0_0_20140701_004319_000	01/07/2014	0:43:19	0	30/06/2014	12:43:19	12	Noid	0	0	0	1
Elliot Lake SM3-5	SM300687_0_20140701_004338.wav	0	0	6.454	SM											

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM3-5	SM300687_0_0_20140701_004354.wav	0	0	3.166	SM300687_0_0_20140701_004354_000	01/07/2014	0:43:54	0	30/06/2014	12:43:54	12	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140701_004448.wav	0	0	4.319	SM300687_0_0_20140701_004448_000	01/07/2014	0:44:48	0	30/06/2014	12:44:48	12	LACI	2	2	0.228903	1
Elliot Lake SM3-5	SM300687_0_0_20140701_004503.wav	0	0	3.427	SM300687_0_0_20140701_004503_000	01/07/2014	0:45:03	0	30/06/2014	12:45:03	12	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140701_004642.wav	0	0	3.107	SM300687_0_0_20140701_004642_000	01/07/2014	0:46:42	0	30/06/2014	12:46:42	12	LACI	2	2	0.206814	1
Elliot Lake SM3-5	SM300687_0_0_20140701_004701.wav	0	0	3.09	SM300687_0_0_20140701_004701_000	01/07/2014	0:47:01	0	30/06/2014	12:47:01	12	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140701_004837.wav	0	0	3.259	SM300687_0_0_20140701_004837_000	01/07/2014	0:48:37	0	30/06/2014	12:48:37	12	LACI	3	3	0.400153	1
Elliot Lake SM3-5	SM300687_0_0_20140701_004856.wav	0	0	3.074	SM300687_0_0_20140701_004856_000	01/07/2014	0:48:56	0	30/06/2014	12:48:56	12	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140701_004905.wav	0	0	5.167	SM300687_0_0_20140701_004905_000	01/07/2014	0:49:05	0	30/06/2014	12:49:05	12	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140701_004920.wav	0	0	5.763	SM300687_0_0_20140701_004920_000	01/07/2014	0:49:20	0	30/06/2014	12:49:20	12	LACI	2	2	0.279598	1
Elliot Lake SM3-5	SM300687_0_0_20140701_005111.wav	0	0	9.691	SM300687_0_0_20140701_005111_000	01/07/2014	0:51:11	0	30/06/2014	12:51:11	12	LACI	10	5	0.274423	1
Elliot Lake SM3-5	SM300687_0_0_20140701_005136.wav	0	0	6.098	SM300687_0_0_20140701_005136_000	01/07/2014	0:51:36	0	30/06/2014	12:51:36	12	LACI	2	2	0.243875	1
Elliot Lake SM3-5	SM300687_0_0_20140701_005303.wav	0	0	12.66	SM300687_0_0_20140701_005303_000	01/07/2014	0:53:03	0	30/06/2014	12:53:03	12	LACI	10	8	0.589103	1
Elliot Lake SM3-5	SM300687_0_0_20140701_005328.wav	0	0	3.481	SM300687_0_0_20140701_005328_000	01/07/2014	0:53:28	0	30/06/2014	12:53:28	12	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140701_005338.wav	0	0	9.119	SM300687_0_0_20140701_005338_000	01/07/2014	0:53:38	0	30/06/2014	12:53:38	12	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140701_010517.wav	0	0	4.248	SM300687_0_0_20140701_010517_000	01/07/2014	1:05:17	1	30/06/2014	13:05:17	13	LACI	2	2	0.231503	1
Elliot Lake SM3-5	SM300687_0_0_20140701_011351.wav	0	0	3.108	SM300687_0_0_20140701_011351_000	01/07/2014	1:13:51	1	30/06/2014	13:13:51	13	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140701_013640.wav	0	0	8.659	SM300687_0_0_20140701_013640_000	01/07/2014	1:36:40	1	30/06/2014	13:36:40	13	LACI	17	17	0.843206	1
Elliot Lake SM3-5	SM300687_0_0_20140701_013654.wav	0	0	3.26	SM300687_0_0_20140701_013654_000	01/07/2014	1:36:54	1	30/06/2014	13:36:54	13	LACI	9	9	0.724068	1
Elliot Lake SM3-5	SM300687_0_0_20140701_014929.wav	0	0	5.109	SM300687_0_0_20140701_014929_000	01/07/2014	1:49:29	1	30/06/2014	13:49:29	13	LACI	3	3	0.406989	1
Elliot Lake SM3-5	SM300687_0_0_20140701_020436.wav	0	0	3.303	SM300687_0_0_20140701_020436_000	01/07/2014	2:04:36	2	30/06/2014	14:04:36	14	LACI	3	3	0.385482	1
Elliot Lake SM3-5	SM300687_0_0_20140701_020949.wav	0	0	3.207	SM300687_0_0_20140701_020949_000	01/07/2014	2:09:49	2	30/06/2014	14:09:49	14	LACI	2	2	0.195113	1
Elliot Lake SM3-5	SM300687_0_0_20140701_020958.wav	0	0	4.455	SM300687_0_0_20140701_020958_000	01/07/2014	2:09:58	2	30/06/2014	14:09:58	14	LACI	2	2	0.20906	1
Elliot Lake SM3-5	SM300687_0_0_20140701_021420.wav	0	0	5.787	SM300687_0_0_20140701_021420_000	01/07/2014	2:14:20	2	30/06/2014	14:14:20	14	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140701_021922.wav	0	0	3.352	SM300687_0_0_20140701_021922_000	01/07/2014	2:19:22	2	30/06/2014	14:19:22	14	LACI	4	4	0.453333	1
Elliot Lake SM3-5	SM300687_0_0_20140701_022435.wav	0	0	3.342	SM300687_0_0_20140701_022435_000	01/07/2014	2:24:35	2	30/06/2014	14:24:35	14	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140701_023307.wav	0	0	5.57	SM300687_0_0_20140701_023307_000	01/07/2014	2:33:07	2	30/06/2014	14:33:07	14	LACI	8	8	0.702911	1
Elliot Lake SM3-5	SM300687_0_0_20140701_023634.wav	0	0	3.337	SM300687_0_0_20140701_023634_000	01/07/2014	2:36:34	2	30/06/2014	14:36:34	14	LACI	2	2	0.209685	1
Elliot Lake SM3-5	SM300687_0_0_20140701_024340.wav	0	0	6.053	SM300687_0_0_20140701_024340_000	01/07/2014	2:43:40	2	30/06/2014	14:43:40	14	LACI	2	2	0.234832	1
Elliot Lake SM3-5	SM300687_0_0_20140701_024701.wav	0	0	4.574	SM300687_0_0_20140701_024701_000	01/07/2014	2:47:01	2	30/06/2014	14:47:01	14	LACI	3	3	0.370887	1
Elliot Lake SM3-5	SM300687_0_0_20140701_024855.wav	0	0	3.277	SM300687_0_0_20140701_024855_000	01/07/2014	2:48:55	2	30/06/2014	14:48:55	14	LACI	4	4	0.480305	1
Elliot Lake SM3-5	SM300687_0_0_20140701_024902.wav	0	0	3.225	SM300687_0_0_20140701_024902_000	01/07/2014	2:49:02	2	30/06/2014	14:49:02	14	LACI	9	9	0.722291	1
Elliot Lake SM3-5	SM300687_0_0_20140701_024909.wav	0	0	3.288	SM300687_0_0_20140701_024909_000	01/07/2014	2:49:09	2	30/06/2014	14:49:09	14	LACI	3	3	0.372148	1
Elliot Lake SM3-5	SM300687_0_0_20140701_024924.wav	0	0	6.988	SM300687_0_0_20140701_024924_000	01/07/2014	2:49:24	2	30/06/2014	14:49:24	14	LACI	8	8	0.691674	1
Elliot Lake SM3-5	SM300687_0_0_20140701_024944.wav	0	0	5.472	SM300687_0_0_20140701_024944_000	01/07/2014	2:49:44	2	30/06/2014	14:49:44	14	LACI	9	9	0.714302	1
Elliot Lake SM3-5	SM300687_0_0_20140701_025605.wav	0	0	3.354	SM300687_0_0_20140701_025605_000	01/07/2014	2:56:05	2	30/06/2014	14:56:05	14	LACI	2	2	0.198825	1
Elliot Lake SM3-5	SM300687_0_0_20140701_025615.wav	0	0	3.104	SM300687_0_0_20140701_025615_000	01/07/2014	2:56:15	2	30/06/2014	14:56:15	14	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140701_025634.wav	0	0	3.023	SM300687_0_0_20140701_025634_000	01/07/2014	2:56:34	2	30/06/2014	14:56:34	14	LACI	5	5	0.525367	1
Elliot Lake SM3-5	SM300687_0_0_20140701_025643.wav	0	0	3.259	SM300687_0_0_20140701_025643_000	01/07/2014	2:56:43	2	30/06/2014	14:56:43	14	LACI	3	3	0.29017	1
Elliot Lake SM3-5	SM300687_0_0_20140701_025722.wav	0	0	4.646	SM300687_0_0_20140701_025722_000	01/07/2014	2:57:22	2	30/06/2014	14:57:22	14	LACI	6	6	0.597621	1
Elliot Lake SM3-5	SM300687_0_0_20140701_030158.wav	0	0	3.363	SM300687_0_0_20140701_030158_000	01/07/2014	3:01:58	3	30/06/2014	15:01:58	15	LACI	4	4	0.467646	1
Elliot Lake SM3-5	SM300687_0_0_20140701_030207.wav	0	0	11.805	SM300687_0_0_20140701_030207_000	01/07/2014	3:02:07	3	30/06/2014	15:02:07	15	LACI	15	15	0.821518	1
Elliot Lake SM3-5	SM300687_0_0_20140701_030223.wav	0	0	5.138	SM300687_0_0_20140701_030223_000	01/07/2014	3:02:23	3	30/06/2014	15:02:23	15	LACI	8	8	0.683916	1
Elliot Lake SM3-5	SM300687_0_0_20140701_030233.wav	0	0	4.755	SM300687_0_0_20140701_030233_000	01/07/2014	3:02:33	3	30/06/2014	15:02:33	15	LACI	2	2	0.188523	1
Elliot Lake SM3-5	SM300687_0_0_20140701_030342.wav	0	0	6.06	SM300687_0_0_20140701_030342_000	01/07/2014	3:03:42	3	30/06/2014	15:03:42	15	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140701_030354.wav	0	0	5.96	SM300687_0_0_20140701_030354_000	01/07/2014	3:03:54	3	30/06/2014	15:03:54	15	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140701_030410.wav	0	0	3.176	SM300687_0_0_20140701_030410_000	01/07/2014	3:04:10	3	30/06/2014	15:04:10	15	LACI	4	4	0.493934	1
Elliot Lake SM3-5	SM300687_0_0_20140701_030807.wav	0	0	3.075	SM300687_0_0_20140701_030807_000	01/07/2014	3:08:07	3	30/06/2014	15:08:07	15	LACI	2	2	0.171414	1
Elliot Lake SM3-5	SM300687_0_0_20140701_030928.wav	0	0	3.23	SM300687_0_0_20140701_030928_000	01/07/2014	3:09:28	3	30/06/2014	15:09:28	15	LACI	4	4	0.396407	1
Elliot Lake SM3-5	SM300687_0_0_20140701_031025.wav	0	0	10.111	SM300687_0_0_20140701_031025_000	01/07/2014	3:10:25	3	30/06/2014	15:10:25	15	LACI	15	15	0.819322	1
Elliot Lake SM3-5	SM300687_0_0_20140701_031158.wav	0	0	5.129	SM300687_0_0_20140701_031158_000	01/07/2014	3:11:58	3	30/06/2014	15:11:58	15	LACI	9	9	0.721663	1
Elliot Lake SM3-5	SM300687_0_0_20140701_031422.wav	0	0	3.124	SM300687_0_0_20140701_031422_000	01/07/2014	3:14:22	3	30/06/2014	15:14:22	15	LANO	6	6	0.454813	1
Elliot Lake SM3-5	SM300687_0_0_20140701_031434.wav	0	0	3.292	SM300687_0_0_20140701_031434_000	01/07/2014	3:14:34	3	30/06/2014	15:14:34	15	LACI	2	2	0.187255	1
Elliot Lake SM3-5	SM300687_0_0_20140701_032740.wav	0	0	4.016	SM300687_0_0_20140701_032740_000	01/07/2014	3:27:40	3	30/06/2014	15:27:40	15	LACI	2	2	0.227946	1
Elliot Lake SM3-5	SM300687_0_0_20140701_033153.wav	0	0	3.135	SM300687_0_0_20140701_033153_000	01/07/2014	3:31:53	3	30/06/2014	15:31:53	15	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140701_033324.wav	0	0	3.319	SM300687_0_0_20140701_033324_000	01/07/2014	3:33:24	3	30/06/2014	15:33:24	15	LACI	3	3	0.186915	1
Elliot Lake SM3-5	SM300687_0_0_20140701_033424.wav	0	0	3.282	SM300687_0_0_20140701_033424_000	01/07/2014	3:34:24	3	30/06/2014	15:34:24	15	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140701_033437.wav	0	0	3.21	SM300687_0_0_20140701_033437_000	01/07/2014	3:34:37	3	30/06/2014	15:34:37	15	LANO	5	5	0.399638	1
Elliot Lake SM3-5	SM300687_0_0_20140701_041504.wav	0	0	3.117	SM300687_0_0_20140701_041504_000	01/07/2014										

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM3-5	SM300687_0_0_20140701_042858.wav	0	0	3.258	SM300687_0_0_20140701_042858_000	01/07/2014	4:28:58	4	30/06/2014	16:28:58	16	LACI	3	3	0.348685	1
Elliot Lake SM3-5	SM300687_0_0_20140702_003626.wav	0	0	6.659	SM300687_0_0_20140702_003626_000	02/07/2014	0:36:26	0	01/07/2014	12:36:26	12	LACI	3	3	0.360201	1
Elliot Lake SM3-5	SM300687_0_0_20140702_003649.wav	0	0	3.032	SM300687_0_0_20140702_003649_000	02/07/2014	0:36:49	0	01/07/2014	12:36:49	12	LACI	2	2	0.228096	1
Elliot Lake SM3-5	SM300687_0_0_20140702_003704.wav	0	0	3.051	SM300687_0_0_20140702_003704_000	02/07/2014	0:37:04	0	01/07/2014	12:37:04	12	LACI	2	2	0.236647	1
Elliot Lake SM3-5	SM300687_0_0_20140702_014610.wav	0	0	3.021	SM300687_0_0_20140702_014610_000	02/07/2014	1:46:10	1	01/07/2014	13:46:10	13	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140702_015929.wav	0	0	3.057	SM300687_0_0_20140702_015929_000	02/07/2014	1:59:29	1	01/07/2014	13:59:29	13	LACI	3	3	0.382582	1
Elliot Lake SM3-5	SM300687_0_0_20140702_025137.wav	0	0	8.242	SM300687_0_0_20140702_025137_000	02/07/2014	2:51:37	2	01/07/2014	14:51:37	14	LACI	2	2	0.243209	1
Elliot Lake SM3-5	SM300687_0_0_20140703_001752.wav	0	0	4.002	SM300687_0_0_20140703_001752_000	03/07/2014	0:17:52	0	02/07/2014	12:17:52	12	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140703_001800.wav	0	0	11.337	SM300687_0_0_20140703_001800_000	03/07/2014	0:18:00	0	02/07/2014	12:18:00	12	LACI	2	2	0.200362	1
Elliot Lake SM3-5	SM300687_0_0_20140703_002139.wav	0	0	6.033	SM300687_0_0_20140703_002139_000	03/07/2014	0:21:39	0	02/07/2014	12:21:39	12	LACI	2	2	0.190374	1
Elliot Lake SM3-5	SM300687_0_0_20140703_012859.wav	0	0	4.862	SM300687_0_0_20140703_012859_000	03/07/2014	1:28:59	1	02/07/2014	13:28:59	13	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140703_013522.wav	0	0	4.441	SM300687_0_0_20140703_013522_000	03/07/2014	1:35:22	1	02/07/2014	13:35:22	13	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140703_050459.wav	0	0	4.842	SM300687_0_0_20140703_050459_000	03/07/2014	5:04:59	5	02/07/2014	17:04:59	17	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140704_233556.wav	0	0	3.016	SM300687_0_0_20140704_233556_000	04/07/2014	23:35:56	23	04/07/2014	11:35:56	11	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140704_234253.wav	0	0	5.194	SM300687_0_0_20140704_234253_000	04/07/2014	23:42:53	23	04/07/2014	11:42:53	11	LACI	3	3	0.340551	1
Elliot Lake SM3-5	SM300687_0_0_20140705_012336.wav	0	0	3.018	SM300687_0_0_20140705_012336_000	05/07/2014	1:23:36	1	04/07/2014	13:23:36	13	LACI	2	2	0.230292	1
Elliot Lake SM3-5	SM300687_0_0_20140705_031832.wav	0	0	3.548	SM300687_0_0_20140705_031832_000	05/07/2014	3:18:32	3	04/07/2014	15:18:32	15	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140705_031852.wav	0	0	4.209	SM300687_0_0_20140705_031852_000	05/07/2014	3:18:52	3	04/07/2014	15:18:52	15	LACI	2	2	0.246862	1
Elliot Lake SM3-5	SM300687_0_0_20140705_032120.wav	0	0	6.012	SM300687_0_0_20140705_032120_000	05/07/2014	3:21:20	3	04/07/2014	15:21:20	15	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140705_032150.wav	0	0	5.566	SM300687_0_0_20140705_032150_000	05/07/2014	3:21:50	3	04/07/2014	15:21:50	15	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140705_032255.wav	0	0	3.982	SM300687_0_0_20140705_032255_000	05/07/2014	3:22:55	3	04/07/2014	15:22:55	15	LACI	3	3	0.342073	1
Elliot Lake SM3-5	SM300687_0_0_20140705_215734.wav	0	0	4.66	SM300687_0_0_20140705_215734_000	05/07/2014	21:57:34	21	05/07/2014	9:57:34	9	LACI	3	3	0.403924	1
Elliot Lake SM3-5	SM300687_0_0_20140705_222147.wav	0	0	7.246	SM300687_0_0_20140705_222147_000	05/07/2014	22:21:47	22	05/07/2014	10:21:47	10	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140706_005424.wav	0	0	3.798	SM300687_0_0_20140706_005424_000	06/07/2014	0:54:24	0	05/07/2014	12:54:24	12	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140706_024041.wav	0	0	6.612	SM300687_0_0_20140706_024041_000	06/07/2014	2:40:41	2	05/07/2014	14:40:41	14	LACI	2	2	0.209757	1
Elliot Lake SM3-5	SM300687_0_0_20140706_024344.wav	0	0	3.567	SM300687_0_0_20140706_024344_000	06/07/2014	2:43:44	2	05/07/2014	14:43:44	14	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140706_024352.wav	0	0	5.424	SM300687_0_0_20140706_024352_000	06/07/2014	2:43:52	2	05/07/2014	14:43:52	14	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140706_024927.wav	0	0	6.219	SM300687_0_0_20140706_024927_000	06/07/2014	2:49:27	2	05/07/2014	14:49:27	14	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140706_025007.wav	0	0	6.658	SM300687_0_0_20140706_025007_000	06/07/2014	2:50:07	2	05/07/2014	14:50:07	14	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140706_032026.wav	0	0	4.688	SM300687_0_0_20140706_032026_000	06/07/2014	3:20:26	3	05/07/2014	15:20:26	15	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140706_032719.wav	0	0	4.23	SM300687_0_0_20140706_032719_000	06/07/2014	3:27:19	3	05/07/2014	15:27:19	15	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140706_032937.wav	0	0	5.585	SM300687_0_0_20140706_032937_000	06/07/2014	3:29:37	3	05/07/2014	15:29:37	15	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140706_035800.wav	0	0	3.662	SM300687_0_0_20140706_035800_000	06/07/2014	3:58:00	3	05/07/2014	15:58:00	15	Nold	0	0	0	1
Elliot Lake SM3-5	SM300687_0_0_20140706_042810.wav	0	0	8.09	SM300687_0_0_20140706_042810_000	06/07/2014	4:28:10	4	05/07/2014	16:28:10	16	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_0_20140616_235435.wav	0	0	7.287	SM300660_0_0_20140616_235435_000	16/06/2014	23:54:35	23	16/06/2014	11:54:35	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_0_20140617_011940.wav	0	0	4.932	SM300660_0_0_20140617_011940_000	17/06/2014	1:19:40	1	16/06/2014	13:19:40	13	LACI	0	0	0	1
Elliot Lake SM3-6	SM300660_0_0_20140617_014554.wav	0	0	8.715	SM300660_0_0_20140617_014554_000	17/06/2014	1:45:54	1	16/06/2014	13:45:54	13	Nold	6	6	0.565143	1
Elliot Lake SM3-6	SM300660_0_0_20140617_231633.wav	0	0	5.789	SM300660_0_0_20140617_231633_000	17/06/2014	23:16:33	23	17/06/2014	11:16:33	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_0_20140617_232205.wav	0	0	3.091	SM300660_0_0_20140617_232205_000	17/06/2014	23:22:05	23	17/06/2014	11:22:05	11	LACI	2	2	0.233114	1
Elliot Lake SM3-6	SM300660_0_0_20140617_232214.wav	0	0	4.182	SM300660_0_0_20140617_232214_000	17/06/2014	23:22:14	23	17/06/2014	11:22:14	11	LACI	5	5	0.526122	1
Elliot Lake SM3-6	SM300660_0_0_20140617_232612.wav	0	0	8.54	SM300660_0_0_20140617_232612_000	17/06/2014	23:26:12	23	17/06/2014	11:26:12	11	LACI	7	7	0.656654	1
Elliot Lake SM3-6	SM300660_0_0_20140617_232756.wav	0	0	4.345	SM300660_0_0_20140617_232756_000	17/06/2014	23:27:56	23	17/06/2014	11:27:56	11	LACI	6	6	0.556026	1
Elliot Lake SM3-6	SM300660_0_0_20140617_232805.wav	0	0	3.053	SM300660_0_0_20140617_232805_000	17/06/2014	23:28:05	23	17/06/2014	11:28:05	11	LACI	2	2	0.226223	1
Elliot Lake SM3-6	SM300660_0_0_20140617_234436.wav	0	0	6.683	SM300660_0_0_20140617_234436_000	17/06/2014	23:44:36	23	17/06/2014	11:44:36	11	LACI	4	4	0.450421	1
Elliot Lake SM3-6	SM300660_0_0_20140618_015921.wav	0	0	4.96	SM300660_0_0_20140618_015921_000	18/06/2014	1:59:21	1	17/06/2014	13:59:21	13	LACI	4	4	0.481663	1
Elliot Lake SM3-6	SM300660_0_0_20140618_015929.wav	0	0	3.107	SM300660_0_0_20140618_015929_000	18/06/2014	1:59:29	1	17/06/2014	13:59:29	13	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_0_20140618_015948.wav	0	0	3.162	SM300660_0_0_20140618_015948_000	18/06/2014	1:59:48	1	17/06/2014	13:59:48	13	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_0_20140618_015955.wav	0	0	4.22	SM300660_0_0_20140618_015955_000	18/06/2014	1:59:55	1	17/06/2014	13:59:55	13	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_0_20140618_020822.wav	0	0	3.013	SM300660_0_0_20140618_020822_000	18/06/2014	2:08:22	2	17/06/2014	14:08:22	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_0_20140618_020920.wav	0	0	5.002	SM300660_0_0_20140618_020920_000	18/06/2014	2:09:20	2	17/06/2014	14:09:20	14	LACI	3	3	0.332453	1
Elliot Lake SM3-6	SM300660_0_0_20140618_020929.wav	0	0	5.067	SM300660_0_0_20140618_020929_000	18/06/2014	2:09:29	2	17/06/2014	14:09:29	14	LACI	4	4	0.482624	1
Elliot Lake SM3-6	SM300660_0_0_20140618_020938.wav	0	0	6.675	SM300660_0_0_20140618_020938_000	18/06/2014	2:09:38	2	17/06/2014	14:09:38	14	LACI	5	5	0.553789	1
Elliot Lake SM3-6	SM300660_0_0_20140618_021036.wav	0	0	3.087	SM300660_0_0_20140618_021036_000	18/06/2014	2:10:36	2	17/06/2014	14:10:36	14	LACI	3	3	0.324659	1
Elliot Lake SM3-6	SM300660_0_0_20140618_021044.wav	0	0	14.972	SM300660_0_0_20140618_021044_000	18/06/2014	2:10:44	2	17/06/2014	14:10:44	14	LACI	9	9	0.720435	1
Elliot Lake SM3-6	SM300660_0_0_20140618_021212.wav	0	0	3.105	SM300660_0_0_20140618_021212_000	18/06/2014	2:12:12	2	17/06/2014	14:12:12	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_0_20140618_022135.wav	0	0	3.22	SM300660_0_0_20140618_022135_000	18/06/2014	2:21:35	2	17/06/2014	14:21:35	14	LACI	2	2	0.198209	1
Elliot Lake SM3-6	SM300660_0_0_20140618_022143.wav	0	0	5.541	SM300660_0_0_20140618_022143_000	18/06/2014	2:21:43	2	17/06/2014	14:21:43	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_0_20140618_023049.wav	0	0	3.251	SM300660_0_0_20140618_023049_000	18/06/2014	2:30:49	2	17/06/2014	14:30:49	14	LACI	2	2	0.18636	1

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM3-6	SM300660_0_20140618_023933.wav	0	0	7.255	SM300660_0_0_20140618_023933_000	18/06/2014	2:39:33	2	17/06/2014	14:39:33	14	LACI	11	11	0.755262	1
Elliot Lake SM3-6	SM300660_0_20140618_024019.wav	0	0	3.333	SM300660_0_0_20140618_024019_000	18/06/2014	2:40:19	2	17/06/2014	14:40:19	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140618_024029.wav	0	0	5.993	SM300660_0_0_20140618_024029_000	18/06/2014	2:40:29	2	17/06/2014	14:40:29	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140618_024059.wav	0	0	6.388	SM300660_0_0_20140618_024059_000	18/06/2014	2:40:59	2	17/06/2014	14:40:59	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140618_024123.wav	0	0	4.535	SM300660_0_0_20140618_024123_000	18/06/2014	2:41:23	2	17/06/2014	14:41:23	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140618_024244.wav	0	0	6.908	SM300660_0_0_20140618_024244_000	18/06/2014	2:42:44	2	17/06/2014	14:42:44	14	LACI	6	4	0.244108	1
Elliot Lake SM3-6	SM300660_0_20140618_024304.wav	0	0	6.269	SM300660_0_0_20140618_024304_000	18/06/2014	2:43:04	2	17/06/2014	14:43:04	14	LACI	3	3	0.30736	1
Elliot Lake SM3-6	SM300660_0_20140618_025140.wav	0	0	6.343	SM300660_0_0_20140618_025140_000	18/06/2014	2:51:40	2	17/06/2014	14:51:40	14	LACI	6	6	0.612528	1
Elliot Lake SM3-6	SM300660_0_20140618_031342.wav	0	0	8.529	SM300660_0_0_20140618_031342_000	18/06/2014	3:13:42	3	17/06/2014	15:13:42	15	LACI	3	3	0.306132	1
Elliot Lake SM3-6	SM300660_0_20140618_031357.wav	0	0	3.159	SM300660_0_0_20140618_031357_000	18/06/2014	3:13:57	3	17/06/2014	15:13:57	15	LACI	3	3	0.362978	1
Elliot Lake SM3-6	SM300660_0_20140618_031610.wav	0	0	3.328	SM300660_0_0_20140618_031610_000	18/06/2014	3:16:10	3	17/06/2014	15:16:10	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140618_034153.wav	0	0	14.999	SM300660_0_0_20140618_034153_000	18/06/2014	3:41:53	3	17/06/2014	15:41:53	15	LACI	43	43	0.934288	1
Elliot Lake SM3-6	SM300660_0_20140618_034212.wav	0	0	14.999	SM300660_0_0_20140618_034212_000	18/06/2014	3:42:12	3	17/06/2014	15:42:12	15	LACI	30	30	0.907304	1
Elliot Lake SM3-6	SM300660_0_20140618_034231.wav	0	0	13.512	SM300660_0_0_20140618_034231_000	18/06/2014	3:42:31	3	17/06/2014	15:42:31	15	LACI	8	8	0.668223	1
Elliot Lake SM3-6	SM300660_0_20140618_042552.wav	0	0	5.678	SM300660_0_0_20140618_042552_000	18/06/2014	4:25:52	4	17/06/2014	16:25:52	16	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140618_043038.wav	0	0	3.664	SM300660_0_0_20140618_043038_000	18/06/2014	4:30:38	4	17/06/2014	16:30:38	16	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140618_224756.wav	0	0	8.624	SM300660_0_0_20140618_224756_000	18/06/2014	22:47:56	22	18/06/2014	10:47:56	10	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140618_232932.wav	0	0	4.734	SM300660_0_0_20140618_232932_000	18/06/2014	23:29:32	23	18/06/2014	11:29:32	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140618_235615.wav	0	0	3.011	SM300660_0_0_20140618_235615_000	18/06/2014	23:56:15	23	18/06/2014	11:56:15	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140619_000535.wav	0	0	3.889	SM300660_0_0_20140619_000535_000	19/06/2014	0:05:35	0	18/06/2014	12:05:35	12	LACI	3	3	0.349113	1
Elliot Lake SM3-6	SM300660_0_20140619_000549.wav	0	0	3.062	SM300660_0_0_20140619_000549_000	19/06/2014	0:05:49	0	18/06/2014	12:05:49	12	LACI	2	2	0.209952	1
Elliot Lake SM3-6	SM300660_0_20140619_000556.wav	0	0	13.406	SM300660_0_0_20140619_000556_000	19/06/2014	0:05:56	0	18/06/2014	12:05:56	12	LACI	20	20	0.857978	1
Elliot Lake SM3-6	SM300660_0_20140619_000614.wav	0	0	3.556	SM300660_0_0_20140619_000614_000	19/06/2014	0:06:14	0	18/06/2014	12:06:14	12	LACI	3	3	0.313849	1
Elliot Lake SM3-6	SM300660_0_20140619_000646.wav	0	0	5.44	SM300660_0_0_20140619_000646_000	19/06/2014	0:06:46	0	18/06/2014	12:06:46	12	LACI	3	3	0.330117	1
Elliot Lake SM3-6	SM300660_0_20140619_000710.wav	0	0	4.065	SM300660_0_0_20140619_000710_000	19/06/2014	0:07:10	0	18/06/2014	12:07:10	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140619_000725.wav	0	0	4.315	SM300660_0_0_20140619_000725_000	19/06/2014	0:07:25	0	18/06/2014	12:07:25	12	LACI	2	2	0.24202	1
Elliot Lake SM3-6	SM300660_0_20140619_000756.wav	0	0	5.922	SM300660_0_0_20140619_000756_000	19/06/2014	0:07:56	0	18/06/2014	12:07:56	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140619_001002.wav	0	0	10.868	SM300660_0_0_20140619_001002_000	19/06/2014	0:10:02	0	18/06/2014	12:10:02	12	LACI	11	11	0.76119	1
Elliot Lake SM3-6	SM300660_0_20140619_001018.wav	0	0	4.783	SM300660_0_0_20140619_001018_000	19/06/2014	0:10:18	0	18/06/2014	12:10:18	12	LACI	4	4	0.477285	1
Elliot Lake SM3-6	SM300660_0_20140619_001036.wav	0	0	5.364	SM300660_0_0_20140619_001036_000	19/06/2014	0:10:36	0	18/06/2014	12:10:36	12	LACI	2	2	0.182605	1
Elliot Lake SM3-6	SM300660_0_20140619_001045.wav	0	0	5.539	SM300660_0_0_20140619_001045_000	19/06/2014	0:10:45	0	18/06/2014	12:10:45	12	LACI	2	2	0.163359	1
Elliot Lake SM3-6	SM300660_0_20140619_225620.wav	0	0	6.118	SM300660_0_0_20140619_225620_000	19/06/2014	22:56:20	22	19/06/2014	10:56:20	10	LACI	2	2	0.198896	1
Elliot Lake SM3-6	SM300660_0_20140619_225717.wav	0	0	3.024	SM300660_0_0_20140619_225717_000	19/06/2014	22:57:17	22	19/06/2014	10:57:17	10	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140619_225905.wav	0	0	4.98	SM300660_0_0_20140619_225905_000	19/06/2014	22:59:05	22	19/06/2014	10:59:05	10	LACI	2	2	0.234549	1
Elliot Lake SM3-6	SM300660_0_20140619_225952.wav	0	0	4.622	SM300660_0_0_20140619_225952_000	19/06/2014	22:59:52	22	19/06/2014	10:59:52	10	LACI	3	3	0.365089	1
Elliot Lake SM3-6	SM300660_0_20140619_231635.wav	0	0	4.086	SM300660_0_0_20140619_231635_000	19/06/2014	23:16:35	23	19/06/2014	11:16:35	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140619_231708.wav	0	0	5.04	SM300660_0_0_20140619_231708_000	19/06/2014	23:17:08	23	19/06/2014	11:17:08	11	LACI	4	4	0.462668	1
Elliot Lake SM3-6	SM300660_0_20140619_231856.wav	0	0	3.011	SM300660_0_0_20140619_231856_000	19/06/2014	23:18:56	23	19/06/2014	11:18:56	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140620_222047.wav	0	0	3.074	SM300660_0_0_20140620_222047_000	20/06/2014	22:20:47	22	20/06/2014	10:20:47	10	LABO	2	2	0.077528	1
Elliot Lake SM3-6	SM300660_0_20140620_231653.wav	0	0	3.98	SM300660_0_0_20140620_231653_000	20/06/2014	23:16:53	23	20/06/2014	11:16:53	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140621_005458.wav	0	0	3.012	SM300660_0_0_20140621_005458_000	21/06/2014	0:54:58	0	20/06/2014	12:54:58	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140621_005601.wav	0	0	3.514	SM300660_0_0_20140621_005601_000	21/06/2014	0:56:01	0	20/06/2014	12:56:01	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140621_010120.wav	0	0	5.149	SM300660_0_0_20140621_010120_000	21/06/2014	1:01:20	1	20/06/2014	13:01:20	13	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140621_013902.wav	0	0	4.41	SM300660_0_0_20140621_013902_000	21/06/2014	1:39:02	1	20/06/2014	13:39:02	13	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140621_015138.wav	0	0	5.893	SM300660_0_0_20140621_015138_000	21/06/2014	1:51:38	1	20/06/2014	13:51:38	13	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140621_030746.wav	0	0	5.872	SM300660_0_0_20140621_030746_000	21/06/2014	3:07:46	3	20/06/2014	15:07:46	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140621_030824.wav	0	0	3.053	SM300660_0_0_20140621_030824_000	21/06/2014	3:08:24	3	20/06/2014	15:08:24	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140621_030847.wav	0	0	7.006	SM300660_0_0_20140621_030847_000	21/06/2014	3:08:47	3	20/06/2014	15:08:47	15	LACI	4	4	0.432095	1
Elliot Lake SM3-6	SM300660_0_20140621_030904.wav	0	0	5.77	SM300660_0_0_20140621_030904_000	21/06/2014	3:09:04	3	20/06/2014	15:09:04	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140621_030944.wav	0	0	8.362	SM300660_0_0_20140621_030944_000	21/06/2014	3:09:44	3	20/06/2014	15:09:44	15	LACI	5	5	0.58773	1
Elliot Lake SM3-6	SM300660_0_20140621_031022.wav	0	0	5.766	SM300660_0_0_20140621_031022_000	21/06/2014	3:10:22	3	20/06/2014	15:10:22	15	LACI	5	5	0.56704	1
Elliot Lake SM3-6	SM300660_0_20140621_031252.wav	0	0	14.999	SM300660_0_0_20140621_031252_000	21/06/2014	3:12:52	3	20/06/2014	15:12:52	15	LACI	27	27	0.894573	1
Elliot Lake SM3-6	SM300660_0_20140621_031311.wav	0	0	19.999	SM300660_0_0_20140621_031311_000	21/06/2014	3:13:11	3	20/06/2014	15:13:11	15	LACI	23	23	0.877886	1
Elliot Lake SM3-6	SM300660_0_20140621_031332.wav	0	0	3.064	SM300660_0_0_20140621_031332_000	21/06/2014	3:13:32	3	20/06/2014	15:13:32	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140621_031340.wav	0	0	4.021	SM300660_0_0_20140621_031340_000	21/06/2014	3:13:40	3	20/06/2014	15:13:40	15	LACI	4	4	0.410376	1
Elliot Lake SM3-6	SM300660_0_20140621_031347.wav	0	0	4.272	SM300660_0_0_20140621_031347_000	21/06/2014	3:13:47	3	20/06/2014	15:13:47	15	LACI	6	6	0.575437	1
Elliot Lake SM3-6	SM300660_0_20140621_031453.wav	0	0	4.822	SM300660_0_0_20140621_031453_000	21/06/2014	3:14:53	3	20/06/2014	15:14:53	15	LACI	2	2	0.164153	1
Elliot Lake SM3-6	SM300660_0_20140621_031513.wav	0	0	3.047	SM300660_0_0_20140621_031513_000	21/06/2014	3:15:13	3	20/06/2014	15:15:13	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140621_225751.wav	0	0	4.002	SM300660_											

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM3-6	SM300660_0_20140621_231858.wav	0	0	3.284	SM300660_0_0_20140621_231858_000	21/06/2014	23:18:58	23	21/06/2014	11:18:58	11	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140622_005339.wav	0	0	8.776	SM300660_0_0_20140622_005339_000	22/06/2014	0:53:39	0	21/06/2014	12:53:39	12	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140622_023810.wav	0	0	4.83	SM300660_0_0_20140622_023810_000	22/06/2014	2:38:10	2	21/06/2014	14:38:10	14	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140623_024033.wav	0	0	9.889	SM300660_0_0_20140623_024033_000	23/06/2014	2:40:33	2	22/06/2014	14:40:33	14	LACI	12	12	0.762	1
Elliot Lake SM3-6	SM300660_0_20140623_024308.wav	0	0	3.018	SM300660_0_0_20140623_024308_000	23/06/2014	2:43:08	2	22/06/2014	14:43:08	14	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140623_024316.wav	0	0	6.42	SM300660_0_0_20140623_024316_000	23/06/2014	2:43:16	2	22/06/2014	14:43:16	14	LACI	5	5	0.503085	1
Elliot Lake SM3-6	SM300660_0_20140623_024641.wav	0	0	6.137	SM300660_0_0_20140623_024641_000	23/06/2014	2:46:41	2	22/06/2014	14:46:41	14	LACI	3	3	0.290869	1
Elliot Lake SM3-6	SM300660_0_20140623_024848.wav	0	0	3.647	SM300660_0_0_20140623_024848_000	23/06/2014	2:48:48	2	22/06/2014	14:48:48	14	LACI	2	2	0.223739	1
Elliot Lake SM3-6	SM300660_0_20140623_025111.wav	0	0	3.797	SM300660_0_0_20140623_025111_000	23/06/2014	2:51:11	2	22/06/2014	14:51:11	14	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140623_025339.wav	0	0	5.647	SM300660_0_0_20140623_025339_000	23/06/2014	2:53:39	2	22/06/2014	14:53:39	14	LACI	5	5	0.575036	1
Elliot Lake SM3-6	SM300660_0_20140623_025433.wav	0	0	8.274	SM300660_0_0_20140623_025433_000	23/06/2014	2:54:33	2	22/06/2014	14:54:33	14	LACI	3	3	0.359096	1
Elliot Lake SM3-6	SM300660_0_20140623_025445.wav	0	0	3.039	SM300660_0_0_20140623_025445_000	23/06/2014	2:54:45	2	22/06/2014	14:54:45	14	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140623_025501.wav	0	0	7.221	SM300660_0_0_20140623_025501_000	23/06/2014	2:55:01	2	22/06/2014	14:55:01	14	LACI	7	7	0.643894	1
Elliot Lake SM3-6	SM300660_0_20140623_032407.wav	0	0	5.842	SM300660_0_0_20140623_032407_000	23/06/2014	3:24:07	3	22/06/2014	15:24:07	15	LACI	7	7	0.635844	1
Elliot Lake SM3-6	SM300660_0_20140623_032900.wav	0	0	8.631	SM300660_0_0_20140623_032900_000	23/06/2014	3:29:00	3	22/06/2014	15:29:00	15	LACI	3	3	0.296044	1
Elliot Lake SM3-6	SM300660_0_20140623_032922.wav	0	0	3.92	SM300660_0_0_20140623_032922_000	23/06/2014	3:29:22	3	22/06/2014	15:29:22	15	LACI	4	4	0.435778	1
Elliot Lake SM3-6	SM300660_0_20140623_033010.wav	0	0	3.01	SM300660_0_0_20140623_033010_000	23/06/2014	3:30:10	3	22/06/2014	15:30:10	15	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140623_033039.wav	0	0	5.816	SM300660_0_0_20140623_033039_000	23/06/2014	3:30:39	3	22/06/2014	15:30:39	15	LACI	5	5	0.537067	1
Elliot Lake SM3-6	SM300660_0_20140623_222240.wav	0	0	8.697	SM300660_0_0_20140623_222240_000	23/06/2014	22:22:40	22	23/06/2014	10:22:40	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140623_231600.wav	0	0	4.09	SM300660_0_0_20140623_231600_000	23/06/2014	23:16:00	23	23/06/2014	11:16:00	11	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140624_010948.wav	0	0	3.072	SM300660_0_0_20140624_010948_000	24/06/2014	1:09:48	1	23/06/2014	13:09:48	13	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140624_011047.wav	0	0	3.016	SM300660_0_0_20140624_011047_000	24/06/2014	1:10:47	1	23/06/2014	13:10:47	13	LACI	2	2	0.205033	1
Elliot Lake SM3-6	SM300660_0_20140624_011132.wav	0	0	3.944	SM300660_0_0_20140624_011132_000	24/06/2014	1:11:32	1	23/06/2014	13:11:32	13	LACI	3	3	0.328879	1
Elliot Lake SM3-6	SM300660_0_20140624_012255.wav	0	0	4.91	SM300660_0_0_20140624_012255_000	24/06/2014	1:22:55	1	23/06/2014	13:22:55	13	LACI	8	8	0.695633	1
Elliot Lake SM3-6	SM300660_0_20140624_012307.wav	0	0	6.866	SM300660_0_0_20140624_012307_000	24/06/2014	1:23:07	1	23/06/2014	13:23:07	13	LACI	9	9	0.71014	1
Elliot Lake SM3-6	SM300660_0_20140624_012338.wav	0	0	3.018	SM300660_0_0_20140624_012338_000	24/06/2014	1:23:38	1	23/06/2014	13:23:38	13	LACI	4	4	0.456538	1
Elliot Lake SM3-6	SM300660_0_20140624_012410.wav	0	0	3.07	SM300660_0_0_20140624_012410_000	24/06/2014	1:24:10	1	23/06/2014	13:24:10	13	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140624_012852.wav	0	0	3.36	SM300660_0_0_20140624_012852_000	24/06/2014	1:28:52	1	23/06/2014	13:28:52	13	LACI	2	2	0.221397	1
Elliot Lake SM3-6	SM300660_0_20140624_015247.wav	0	0	6.273	SM300660_0_0_20140624_015247_000	24/06/2014	1:52:47	1	23/06/2014	13:52:47	13	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140624_040839.wav	0	0	8.254	SM300660_0_0_20140624_040839_000	24/06/2014	4:08:39	4	23/06/2014	16:08:39	16	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140624_040928.wav	0	0	5.201	SM300660_0_0_20140624_040928_000	24/06/2014	4:09:28	4	23/06/2014	16:09:28	16	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140624_235308.wav	0	0	6.366	SM300660_0_0_20140624_235308_000	24/06/2014	23:53:08	23	24/06/2014	11:53:08	11	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140625_011923.wav	0	0	3.519	SM300660_0_0_20140625_011923_000	25/06/2014	1:19:23	1	24/06/2014	13:19:23	13	LACI	3	3	0.389858	1
Elliot Lake SM3-6	SM300660_0_20140625_022524.wav	0	0	7.353	SM300660_0_0_20140625_022524_000	25/06/2014	2:25:24	2	24/06/2014	14:25:24	14	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140626_005955.wav	0	0	3.01	SM300660_0_0_20140626_005955_000	26/06/2014	0:59:55	0	25/06/2014	12:59:55	12	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140626_015033.wav	0	0	7.053	SM300660_0_0_20140626_015033_000	26/06/2014	1:50:33	1	25/06/2014	13:50:33	13	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140626_031707.wav	0	0	3.042	SM300660_0_0_20140626_031707_000	26/06/2014	3:17:07	3	25/06/2014	15:17:07	15	LACI	2	2	0.225998	1
Elliot Lake SM3-6	SM300660_0_20140626_031907.wav	0	0	5.486	SM300660_0_0_20140626_031907_000	26/06/2014	3:19:07	3	25/06/2014	15:19:07	15	LACI	8	8	0.663102	1
Elliot Lake SM3-6	SM300660_0_20140626_031947.wav	0	0	3.045	SM300660_0_0_20140626_031947_000	26/06/2014	3:19:47	3	25/06/2014	15:19:47	15	LACI	2	2	0.179485	1
Elliot Lake SM3-6	SM300660_0_20140626_040603.wav	0	0	5.948	SM300660_0_0_20140626_040603_000	26/06/2014	4:06:03	4	25/06/2014	16:06:03	16	LACI	2	2	0.18653	1
Elliot Lake SM3-6	SM300660_0_20140626_231135.wav	0	0	3.018	SM300660_0_0_20140626_231135_000	26/06/2014	23:11:35	23	26/06/2014	11:11:35	11	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140626_231621.wav	0	0	4.065	SM300660_0_0_20140626_231621_000	26/06/2014	23:16:21	23	26/06/2014	11:16:21	11	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140627_224421.wav	0	0	4.606	SM300660_0_0_20140627_224421_000	27/06/2014	22:44:21	22	27/06/2014	10:44:21	10	LACI	2	2	0.172258	1
Elliot Lake SM3-6	SM300660_0_20140627_230314.wav	0	0	9.913	SM300660_0_0_20140627_230314_000	27/06/2014	23:03:14	23	27/06/2014	11:03:14	11	LACI	17	15	0.75841	1
Elliot Lake SM3-6	SM300660_0_20140627_230619.wav	0	0	4.891	SM300660_0_0_20140627_230619_000	27/06/2014	23:06:19	23	27/06/2014	11:06:19	11	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140627_230723.wav	0	0	4.766	SM300660_0_0_20140627_230723_000	27/06/2014	23:07:23	23	27/06/2014	11:07:23	11	LACI	5	5	0.536207	1
Elliot Lake SM3-6	SM300660_0_20140627_230838.wav	0	0	5.426	SM300660_0_0_20140627_230838_000	27/06/2014	23:08:38	23	27/06/2014	11:08:38	11	LACI	2	2	0.202279	1
Elliot Lake SM3-6	SM300660_0_20140627_231126.wav	0	0	8.556	SM300660_0_0_20140627_231126_000	27/06/2014	23:11:26	23	27/06/2014	11:11:26	11	LACI	6	6	0.535169	1
Elliot Lake SM3-6	SM300660_0_20140627_231424.wav	0	0	4.767	SM300660_0_0_20140627_231424_000	27/06/2014	23:14:24	23	27/06/2014	11:14:24	11	LACI	12	7	0.478266	1
Elliot Lake SM3-6	SM300660_0_20140627_231553.wav	0	0	3.37	SM300660_0_0_20140627_231553_000	27/06/2014	23:15:53	23	27/06/2014	11:15:53	11	LACI	6	4	0.341273	1
Elliot Lake SM3-6	SM300660_0_20140627_232539.wav	0	0	8.897	SM300660_0_0_20140627_232539_000	27/06/2014	23:25:39	23	27/06/2014	11:25:39	11	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140627_232621.wav	0	0	7.886	SM300660_0_0_20140627_232621_000	27/06/2014	23:26:21	23	27/06/2014	11:26:21	11	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140627_232911.wav	0	0	6.474	SM300660_0_0_20140627_232911_000	27/06/2014	23:29:11	23	27/06/2014	11:29:11	11	LACI	9	4	0.24718	1
Elliot Lake SM3-6	SM300660_0_20140627_232926.wav	0	0	10.634	SM300660_0_0_20140627_232926_000	27/06/2014	23:29:26	23	27/06/2014	11:29:26	11	LACI	34	17	0.726471	1
Elliot Lake SM3-6	SM300660_0_20140628_002552.wav	0	0	3.501	SM300660_0_0_20140628_002552_000	28/06/2014	0:25:52	0	27/06/2014	12:25:52	12	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_025522.wav	0	0	4.123	SM300660_0_0_20140628_025522_000	28/06/2014	2:55:22	2	27/06/2014	14:55:22	14	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_025804.wav	0	0	7.492	SM300660_0_0_20140628_025804_000	28/06/2014	2:58:04	2	27/06/2014	14:58:04	14	LACI	2	2	0.191347	1
Elliot Lake SM3-6	SM300660_0_20140628_030004.wav	0	0	3.612	SM300660_0_0_20140628_030004_000	28/06/2014	3:00:04	3	27/06/2014	15:00:04	15	LACI	2	2	0.203243	1
Elliot Lake SM3-6	SM300660_0_20140628_040542.wav	0	0	3.665	SM300660											

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM3-6	SM300660_0_20140628_220323.wav	0	0	3.23	SM300660_0_0_20140628_220323_000	28/06/2014	22:03:23	22	28/06/2014	10:03:23	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_221104.wav	0	0	3.283	SM300660_0_0_20140628_221104_000	28/06/2014	22:11:04	22	28/06/2014	10:11:04	10	LACI	5	4	0.339199	1
Elliot Lake SM3-6	SM300660_0_20140628_221300.wav	0	0	11.645	SM300660_0_0_20140628_221300_000	28/06/2014	22:13:00	22	28/06/2014	10:13:00	10	LACI	22	15	0.722672	1
Elliot Lake SM3-6	SM300660_0_20140628_221320.wav	0	0	7.168	SM300660_0_0_20140628_221320_000	28/06/2014	22:13:20	22	28/06/2014	10:13:20	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_221401.wav	0	0	5.571	SM300660_0_0_20140628_221401_000	28/06/2014	22:14:01	22	28/06/2014	10:14:01	10	LACI	5	4	0.298669	1
Elliot Lake SM3-6	SM300660_0_20140628_221413.wav	0	0	3.337	SM300660_0_0_20140628_221413_000	28/06/2014	22:14:13	22	28/06/2014	10:14:13	10	LACI	2	2	0.26789	1
Elliot Lake SM3-6	SM300660_0_20140628_221526.wav	0	0	3.425	SM300660_0_0_20140628_221526_000	28/06/2014	22:15:26	22	28/06/2014	10:15:26	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_221607.wav	0	0	14.545	SM300660_0_0_20140628_221607_000	28/06/2014	22:16:07	22	28/06/2014	10:16:07	10	LACI	23	17	0.759957	1
Elliot Lake SM3-6	SM300660_0_20140628_221803.wav	0	0	5.322	SM300660_0_0_20140628_221803_000	28/06/2014	22:18:03	22	28/06/2014	10:18:03	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_221813.wav	0	0	3.059	SM300660_0_0_20140628_221813_000	28/06/2014	22:18:13	22	28/06/2014	10:18:13	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_221821.wav	0	0	11.49	SM300660_0_0_20140628_221821_000	28/06/2014	22:18:21	22	28/06/2014	10:18:21	10	LACI	23	21	0.843636	1
Elliot Lake SM3-6	SM300660_0_20140628_222202.wav	0	0	3.882	SM300660_0_0_20140628_222202_000	28/06/2014	22:22:02	22	28/06/2014	10:22:02	10	LACI	3	3	0.353792	1
Elliot Lake SM3-6	SM300660_0_20140628_222234.wav	0	0	5.485	SM300660_0_0_20140628_222234_000	28/06/2014	22:22:34	22	28/06/2014	10:22:34	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_222251.wav	0	0	3.492	SM300660_0_0_20140628_222251_000	28/06/2014	22:22:51	22	28/06/2014	10:22:51	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_222326.wav	0	0	7.993	SM300660_0_0_20140628_222326_000	28/06/2014	22:23:26	22	28/06/2014	10:23:26	10	LACI	15	15	0.827586	1
Elliot Lake SM3-6	SM300660_0_20140628_222340.wav	0	0	4.218	SM300660_0_0_20140628_222340_000	28/06/2014	22:23:40	22	28/06/2014	10:23:40	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_222349.wav	0	0	3.442	SM300660_0_0_20140628_222349_000	28/06/2014	22:23:49	22	28/06/2014	10:23:49	10	LACI	7	7	0.671295	1
Elliot Lake SM3-6	SM300660_0_20140628_222356.wav	0	0	5.601	SM300660_0_0_20140628_222356_000	28/06/2014	22:23:56	22	28/06/2014	10:23:56	10	LACI	8	8	0.695645	1
Elliot Lake SM3-6	SM300660_0_20140628_222406.wav	0	0	14.999	SM300660_0_0_20140628_222406_000	28/06/2014	22:24:06	22	28/06/2014	10:24:06	10	LACI	28	17	0.742549	1
Elliot Lake SM3-6	SM300660_0_20140628_222425.wav	0	0	3.283	SM300660_0_0_20140628_222425_000	28/06/2014	22:24:25	22	28/06/2014	10:24:25	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_222445.wav	0	0	3.024	SM300660_0_0_20140628_222445_000	28/06/2014	22:24:45	22	28/06/2014	10:24:45	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_222454.wav	0	0	7.57	SM300660_0_0_20140628_222454_000	28/06/2014	22:24:54	22	28/06/2014	10:24:54	10	LACI	12	12	0.761126	1
Elliot Lake SM3-6	SM300660_0_20140628_222506.wav	0	0	8.803	SM300660_0_0_20140628_222506_000	28/06/2014	22:25:06	22	28/06/2014	10:25:06	10	LACI	9	9	0.718957	1
Elliot Lake SM3-6	SM300660_0_20140628_222521.wav	0	0	4.69	SM300660_0_0_20140628_222521_000	28/06/2014	22:25:21	22	28/06/2014	10:25:21	10	LACI	4	4	0.482031	1
Elliot Lake SM3-6	SM300660_0_20140628_222801.wav	0	0	3.333	SM300660_0_0_20140628_222801_000	28/06/2014	22:28:01	22	28/06/2014	10:28:01	10	LACI	5	5	0.494907	1
Elliot Lake SM3-6	SM300660_0_20140628_222810.wav	0	0	5.655	SM300660_0_0_20140628_222810_000	28/06/2014	22:28:10	22	28/06/2014	10:28:10	10	LACI	9	8	0.620254	1
Elliot Lake SM3-6	SM300660_0_20140628_222825.wav	0	0	3.485	SM300660_0_0_20140628_222825_000	28/06/2014	22:28:25	22	28/06/2014	10:28:25	10	LACI	5	5	0.573733	1
Elliot Lake SM3-6	SM300660_0_20140628_222901.wav	0	0	6.436	SM300660_0_0_20140628_222901_000	28/06/2014	22:29:01	22	28/06/2014	10:29:01	10	LACI	8	7	0.610169	1
Elliot Lake SM3-6	SM300660_0_20140628_222912.wav	0	0	5.54	SM300660_0_0_20140628_222912_000	28/06/2014	22:29:12	22	28/06/2014	10:29:12	10	LACI	13	8	0.564394	1
Elliot Lake SM3-6	SM300660_0_20140628_222943.wav	0	0	6.78	SM300660_0_0_20140628_222943_000	28/06/2014	22:29:43	22	28/06/2014	10:29:43	10	LACI	4	4	0.488772	1
Elliot Lake SM3-6	SM300660_0_20140628_222954.wav	0	0	14.999	SM300660_0_0_20140628_222954_000	28/06/2014	22:29:54	22	28/06/2014	10:29:54	10	LACI	14	8	0.514465	1
Elliot Lake SM3-6	SM300660_0_20140628_223056.wav	0	0	14.999	SM300660_0_0_20140628_223056_000	28/06/2014	22:30:56	22	28/06/2014	10:30:56	10	LACI	22	22	0.865229	1
Elliot Lake SM3-6	SM300660_0_20140628_223115.wav	0	0	13.501	SM300660_0_0_20140628_223115_000	28/06/2014	22:31:15	22	28/06/2014	10:31:15	10	LACI	17	12	0.664491	1
Elliot Lake SM3-6	SM300660_0_20140628_223132.wav	0	0	14.485	SM300660_0_0_20140628_223132_000	28/06/2014	22:31:32	22	28/06/2014	10:31:32	10	LACI	19	12	0.666402	1
Elliot Lake SM3-6	SM300660_0_20140628_223309.wav	0	0	5.781	SM300660_0_0_20140628_223309_000	28/06/2014	22:33:09	22	28/06/2014	10:33:09	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_223338.wav	0	0	14.999	SM300660_0_0_20140628_223338_000	28/06/2014	22:33:38	22	28/06/2014	10:33:38	10	LACI	21	15	0.722706	1
Elliot Lake SM3-6	SM300660_0_20140628_223507.wav	0	0	3.394	SM300660_0_0_20140628_223507_000	28/06/2014	22:35:07	22	28/06/2014	10:35:07	10	LACI	4	4	0.393186	1
Elliot Lake SM3-6	SM300660_0_20140628_223516.wav	0	0	4.475	SM300660_0_0_20140628_223516_000	28/06/2014	22:35:16	22	28/06/2014	10:35:16	10	LACI	6	5	0.451693	1
Elliot Lake SM3-6	SM300660_0_20140628_223539.wav	0	0	3.054	SM300660_0_0_20140628_223539_000	28/06/2014	22:35:39	22	28/06/2014	10:35:39	10	LACI	4	4	0.458234	1
Elliot Lake SM3-6	SM300660_0_20140628_223604.wav	0	0	3.234	SM300660_0_0_20140628_223604_000	28/06/2014	22:36:04	22	28/06/2014	10:36:04	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_223738.wav	0	0	3.128	SM300660_0_0_20140628_223738_000	28/06/2014	22:37:38	22	28/06/2014	10:37:38	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_223755.wav	0	0	14.999	SM300660_0_0_20140628_223755_000	28/06/2014	22:37:55	22	28/06/2014	10:37:55	10	LACI	31	28	0.883338	1
Elliot Lake SM3-6	SM300660_0_20140628_223819.wav	0	0	8.699	SM300660_0_0_20140628_223819_000	28/06/2014	22:38:19	22	28/06/2014	10:38:19	10	LACI	17	13	0.709827	1
Elliot Lake SM3-6	SM300660_0_20140628_223839.wav	0	0	6.72	SM300660_0_0_20140628_223839_000	28/06/2014	22:38:39	22	28/06/2014	10:38:39	10	LACI	10	9	0.659377	1
Elliot Lake SM3-6	SM300660_0_20140628_223849.wav	0	0	9.011	SM300660_0_0_20140628_223849_000	28/06/2014	22:38:49	22	28/06/2014	10:38:49	10	LACI	11	7	0.500663	1
Elliot Lake SM3-6	SM300660_0_20140628_223944.wav	0	0	6.064	SM300660_0_0_20140628_223944_000	28/06/2014	22:39:44	22	28/06/2014	10:39:44	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_224128.wav	0	0	4.622	SM300660_0_0_20140628_224128_000	28/06/2014	22:41:28	22	28/06/2014	10:41:28	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_224201.wav	0	0	3.32	SM300660_0_0_20140628_224201_000	28/06/2014	22:42:01	22	28/06/2014	10:42:01	10	LACI	10	10	0.72904	1
Elliot Lake SM3-6	SM300660_0_20140628_224221.wav	0	0	14.999	SM300660_0_0_20140628_224221_000	28/06/2014	22:42:21	22	28/06/2014	10:42:21	10	LACI	20	13	0.662524	1
Elliot Lake SM3-6	SM300660_0_20140628_224316.wav	0	0	3.65	SM300660_0_0_20140628_224316_000	28/06/2014	22:43:16	22	28/06/2014	10:43:16	10	LACI	6	5	0.476343	1
Elliot Lake SM3-6	SM300660_0_20140628_224327.wav	0	0	5.901	SM300660_0_0_20140628_224327_000	28/06/2014	22:43:27	22	28/06/2014	10:43:27	10	LACI	11	9	0.60091	1
Elliot Lake SM3-6	SM300660_0_20140628_224338.wav	0	0	9.263	SM300660_0_0_20140628_224338_000	28/06/2014	22:43:38	22	28/06/2014	10:43:38	10	LACI	19	16	0.777091	1
Elliot Lake SM3-6	SM300660_0_20140628_224352.wav	0	0	6.794	SM300660_0_0_20140628_224352_000	28/06/2014	22:43:52	22	28/06/2014	10:43:52	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_224413.wav	0	0	6.264	SM300660_0_0_20140628_224413_000	28/06/2014	22:44:13	22	28/06/2014	10:44:13	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_224441.wav	0	0	3.017	SM300660_0_0_20140628_224441_000	28/06/2014	22:44:41	22	28/06/2014	10:44:41	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_224450.wav	0	0	6.485	SM300660_0_0_20140628_224450_000	28/06/2014	22:44:50	22	28/06/2014	10:44:50	10	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_224533.wav	0	0	9.114	SM300660_0_0_20140628_224533_000	28/06/2014	22:45:33	22	28/06/2014	10:45:33	10	LACI	9	8	0.661863	1
Elliot Lake SM3-6	SM300660_0_20140628_224630.wav	0	0	11.466	SM300660_0_0_20140628_224630_000	28/06/2014										

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM3-6	SM300660_0_20140628_225058.wav	0	0	3.317	SM300660_0_0_20140628_225058_000	28/06/2014	22:50:58	22	28/06/2014	10:50:58	10	LACI	2	2	0.240846	1
Elliot Lake SM3-6	SM300660_0_20140628_225159.wav	0	0	7.048	SM300660_0_0_20140628_225159_000	28/06/2014	22:51:59	22	28/06/2014	10:51:59	10	LACI	14	14	0.810967	1
Elliot Lake SM3-6	SM300660_0_20140628_225211.wav	0	0	12.424	SM300660_0_0_20140628_225211_000	28/06/2014	22:52:11	22	28/06/2014	10:52:11	10	LACI	27	25	0.863897	1
Elliot Lake SM3-6	SM300660_0_20140628_225236.wav	0	0	6.294	SM300660_0_0_20140628_225236_000	28/06/2014	22:52:36	22	28/06/2014	10:52:36	10	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_225249.wav	0	0	9.768	SM300660_0_0_20140628_225249_000	28/06/2014	22:52:49	22	28/06/2014	10:52:49	10	LACI	10	9	0.643699	1
Elliot Lake SM3-6	SM300660_0_20140628_225302.wav	0	0	11.829	SM300660_0_0_20140628_225302_000	28/06/2014	22:53:02	22	28/06/2014	10:53:02	10	LACI	10	8	0.60088	1
Elliot Lake SM3-6	SM300660_0_20140628_225318.wav	0	0	5.128	SM300660_0_0_20140628_225318_000	28/06/2014	22:53:18	22	28/06/2014	10:53:18	10	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_225415.wav	0	0	3.035	SM300660_0_0_20140628_225415_000	28/06/2014	22:54:15	22	28/06/2014	10:54:15	10	LACI	2	2	0.187059	1
Elliot Lake SM3-6	SM300660_0_20140628_225710.wav	0	0	6.896	SM300660_0_0_20140628_225710_000	28/06/2014	22:57:10	22	28/06/2014	10:57:10	10	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_225729.wav	0	0	3.15	SM300660_0_0_20140628_225729_000	28/06/2014	22:57:29	22	28/06/2014	10:57:29	10	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_230034.wav	0	0	8.833	SM300660_0_0_20140628_230034_000	28/06/2014	23:00:34	23	28/06/2014	11:00:34	11	LACI	2	2	0.189722	1
Elliot Lake SM3-6	SM300660_0_20140628_230050.wav	0	0	3.317	SM300660_0_0_20140628_230050_000	28/06/2014	23:00:50	23	28/06/2014	11:00:50	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_230107.wav	0	0	5.042	SM300660_0_0_20140628_230107_000	28/06/2014	23:01:07	23	28/06/2014	11:01:07	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_230257.wav	0	0	4.835	SM300660_0_0_20140628_230257_000	28/06/2014	23:02:57	23	28/06/2014	11:02:57	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_230413.wav	0	0	14.999	SM300660_0_0_20140628_230413_000	28/06/2014	23:04:13	23	28/06/2014	11:04:13	11	LACI	31	25	0.839127	1
Elliot Lake SM3-6	SM300660_0_20140628_230433.wav	0	0	8.494	SM300660_0_0_20140628_230433_000	28/06/2014	23:04:33	23	28/06/2014	11:04:33	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_230446.wav	0	0	8.856	SM300660_0_0_20140628_230446_000	28/06/2014	23:04:46	23	28/06/2014	11:04:46	11	LACI	5	4	0.283067	1
Elliot Lake SM3-6	SM300660_0_20140628_230507.wav	0	0	5.927	SM300660_0_0_20140628_230507_000	28/06/2014	23:05:07	23	28/06/2014	11:05:07	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_230622.wav	0	0	6.623	SM300660_0_0_20140628_230622_000	28/06/2014	23:06:22	23	28/06/2014	11:06:22	11	LACI	3	3	0.30666	1
Elliot Lake SM3-6	SM300660_0_20140628_230633.wav	0	0	3.478	SM300660_0_0_20140628_230633_000	28/06/2014	23:06:33	23	28/06/2014	11:06:33	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_230843.wav	0	0	5.645	SM300660_0_0_20140628_230843_000	28/06/2014	23:08:43	23	28/06/2014	11:08:43	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_230942.wav	0	0	3.03	SM300660_0_0_20140628_230942_000	28/06/2014	23:09:42	23	28/06/2014	11:09:42	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_230953.wav	0	0	7.894	SM300660_0_0_20140628_230953_000	28/06/2014	23:09:53	23	28/06/2014	11:09:53	11	LACI	7	4	0.278203	1
Elliot Lake SM3-6	SM300660_0_20140628_231009.wav	0	0	5.669	SM300660_0_0_20140628_231009_000	28/06/2014	23:10:09	23	28/06/2014	11:10:09	11	LACI	9	6	0.431915	1
Elliot Lake SM3-6	SM300660_0_20140628_231039.wav	0	0	5.149	SM300660_0_0_20140628_231039_000	28/06/2014	23:10:39	23	28/06/2014	11:10:39	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_231425.wav	0	0	10.824	SM300660_0_0_20140628_231425_000	28/06/2014	23:14:25	23	28/06/2014	11:14:25	11	LACI	21	9	0.534618	1
Elliot Lake SM3-6	SM300660_0_20140628_231444.wav	0	0	5.93	SM300660_0_0_20140628_231444_000	28/06/2014	23:14:44	23	28/06/2014	11:14:44	11	LANO	9	9	0.574786	1
Elliot Lake SM3-6	SM300660_0_20140628_231820.wav	0	0	3.145	SM300660_0_0_20140628_231820_000	28/06/2014	23:18:20	23	28/06/2014	11:18:20	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_231830.wav	0	0	8.352	SM300660_0_0_20140628_231830_000	28/06/2014	23:18:30	23	28/06/2014	11:18:30	11	LACI	16	13	0.728251	1
Elliot Lake SM3-6	SM300660_0_20140628_231846.wav	0	0	3.451	SM300660_0_0_20140628_231846_000	28/06/2014	23:18:46	23	28/06/2014	11:18:46	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_231856.wav	0	0	3.266	SM300660_0_0_20140628_231856_000	28/06/2014	23:18:56	23	28/06/2014	11:18:56	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_231959.wav	0	0	3.26	SM300660_0_0_20140628_231959_000	28/06/2014	23:19:59	23	28/06/2014	11:19:59	11	LACI	2	2	0.204316	1
Elliot Lake SM3-6	SM300660_0_20140628_232008.wav	0	0	3.897	SM300660_0_0_20140628_232008_000	28/06/2014	23:20:08	23	28/06/2014	11:20:08	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_232015.wav	0	0	3.134	SM300660_0_0_20140628_232015_000	28/06/2014	23:20:15	23	28/06/2014	11:20:15	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_232032.wav	0	0	3.027	SM300660_0_0_20140628_232032_000	28/06/2014	23:20:32	23	28/06/2014	11:20:32	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_232450.wav	0	0	3.403	SM300660_0_0_20140628_232450_000	28/06/2014	23:24:50	23	28/06/2014	11:24:50	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_232506.wav	0	0	3.609	SM300660_0_0_20140628_232506_000	28/06/2014	23:25:06	23	28/06/2014	11:25:06	11	LACI	4	4	0.445648	1
Elliot Lake SM3-6	SM300660_0_20140628_232658.wav	0	0	3.177	SM300660_0_0_20140628_232658_000	28/06/2014	23:26:58	23	28/06/2014	11:26:58	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140628_232717.wav	0	0	6.835	SM300660_0_0_20140628_232717_000	28/06/2014	23:27:17	23	28/06/2014	11:27:17	11	LACI	6	6	0.584617	1
Elliot Lake SM3-6	SM300660_0_20140628_232821.wav	0	0	3.324	SM300660_0_0_20140628_232821_000	28/06/2014	23:28:21	23	28/06/2014	11:28:21	11	LACI	2	2	0.25127	1
Elliot Lake SM3-6	SM300660_0_20140628_232942.wav	0	0	3.317	SM300660_0_0_20140628_232942_000	28/06/2014	23:29:42	23	28/06/2014	11:29:42	11	LACI	4	4	0.457929	1
Elliot Lake SM3-6	SM300660_0_20140629_010819.wav	0	0	4.79	SM300660_0_0_20140629_010819_000	29/06/2014	1:08:19	1	28/06/2014	13:08:19	13	LACI	4	4	0.495975	1
Elliot Lake SM3-6	SM300660_0_20140629_012625.wav	0	0	4.235	SM300660_0_0_20140629_012625_000	29/06/2014	1:26:25	1	28/06/2014	13:26:25	13	LACI	3	3	0.401654	1
Elliot Lake SM3-6	SM300660_0_20140629_013541.wav	0	0	3.124	SM300660_0_0_20140629_013541_000	29/06/2014	1:35:41	1	28/06/2014	13:35:41	13	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140629_020050.wav	0	0	3.187	SM300660_0_0_20140629_020050_000	29/06/2014	2:00:50	2	28/06/2014	14:00:50	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140629_020741.wav	0	0	3.019	SM300660_0_0_20140629_020741_000	29/06/2014	2:07:41	2	28/06/2014	14:07:41	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140629_022548.wav	0	0	5.816	SM300660_0_0_20140629_022548_000	29/06/2014	2:25:48	2	28/06/2014	14:25:48	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140629_022710.wav	0	0	3.313	SM300660_0_0_20140629_022710_000	29/06/2014	2:27:10	2	28/06/2014	14:27:10	14	LACI	3	3	0.351071	1
Elliot Lake SM3-6	SM300660_0_20140630_012313.wav	0	0	6.762	SM300660_0_0_20140630_012313_000	30/06/2014	1:23:13	1	29/06/2014	13:23:13	13	LACI	3	3	0.302606	1
Elliot Lake SM3-6	SM300660_0_20140630_012323.wav	0	0	3.697	SM300660_0_0_20140630_012323_000	30/06/2014	1:23:23	1	29/06/2014	13:23:23	13	LACI	2	2	0.211265	1
Elliot Lake SM3-6	SM300660_0_20140630_012339.wav	0	0	8.068	SM300660_0_0_20140630_012339_000	30/06/2014	1:23:39	1	29/06/2014	13:23:39	13	LACI	14	14	0.807411	1
Elliot Lake SM3-6	SM300660_0_20140630_012404.wav	0	0	4.165	SM300660_0_0_20140630_012404_000	30/06/2014	1:24:04	1	29/06/2014	13:24:04	13	LACI	3	3	0.31414	1
Elliot Lake SM3-6	SM300660_0_20140630_012415.wav	0	0	4.689	SM300660_0_0_20140630_012415_000	30/06/2014	1:24:15	1	29/06/2014	13:24:15	13	LACI	5	5	0.531902	1
Elliot Lake SM3-6	SM300660_0_20140630_012426.wav	0	0	5.313	SM300660_0_0_20140630_012426_000	30/06/2014	1:24:26	1	29/06/2014	13:24:26	13	LACI	7	7	0.64253	1
Elliot Lake SM3-6	SM300660_0_20140630_012438.wav	0	0	5.686	SM300660_0_0_20140630_012438_000	30/06/2014	1:24:38	1	29/06/2014	13:24:38	13	LACI	4	4	0.488124	1
Elliot Lake SM3-6	SM300660_0_20140630_013236.wav	0	0	3.011	SM300660_0_0_20140630_013236_000	30/06/2014	1:32:36	1	29/06/2014	13:32:36	13	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140630_013824.wav	0	0	3.018	SM300660_0_0_20140630_013824_000	30/06/2014	1:38:24	1	29/06/2014	13:38:24	13	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140630_013848.wav	0	0	3.042	SM300660_0_0_20140630_013848_000	30/06/2014	1:38:48	1	29/06/2014	13:38:48	13	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140630_014															

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM3-6	SM300660_0_20140630_014218.wav	0	0	5.057	SM300660_0_0_20140630_014218_000	30/06/2014	1:42:18	1	29/06/2014	13:42:18	13	LACI	3	3	0.323731	1
Elliot Lake SM3-6	SM300660_0_20140630_014452.wav	0	0	6.744	SM300660_0_0_20140630_014452_000	30/06/2014	1:44:52	1	29/06/2014	13:44:52	13	LACI	14	14	0.806681	1
Elliot Lake SM3-6	SM300660_0_20140630_014513.wav	0	0	4.817	SM300660_0_0_20140630_014513_000	30/06/2014	1:45:13	1	29/06/2014	13:45:13	13	LACI	5	5	0.509815	1
Elliot Lake SM3-6	SM300660_0_20140630_014543.wav	0	0	4.149	SM300660_0_0_20140630_014543_000	30/06/2014	1:45:43	1	29/06/2014	13:45:43	13	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140630_014551.wav	0	0	3.023	SM300660_0_0_20140630_014551_000	30/06/2014	1:45:51	1	29/06/2014	13:45:51	13	LACI	2	2	0.197558	1
Elliot Lake SM3-6	SM300660_0_20140630_014616.wav	0	0	3.013	SM300660_0_0_20140630_014616_000	30/06/2014	1:46:16	1	29/06/2014	13:46:16	13	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140630_014626.wav	0	0	7.983	SM300660_0_0_20140630_014626_000	30/06/2014	1:46:26	1	29/06/2014	13:46:26	13	LACI	2	2	0.207829	1
Elliot Lake SM3-6	SM300660_0_20140630_043044.wav	0	0	10.948	SM300660_0_0_20140630_043044_000	30/06/2014	4:30:44	4	29/06/2014	16:30:44	16	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140630_222618.wav	0	0	3.654	SM300660_0_0_20140630_222618_000	30/06/2014	22:26:18	22	30/06/2014	10:26:18	10	LACI	2	2	0.267871	1
Elliot Lake SM3-6	SM300660_0_20140630_222641.wav	0	0	3.076	SM300660_0_0_20140630_222641_000	30/06/2014	22:26:41	22	30/06/2014	10:26:41	10	LACI	2	2	0.239738	1
Elliot Lake SM3-6	SM300660_0_20140630_222655.wav	0	0	4.352	SM300660_0_0_20140630_222655_000	30/06/2014	22:26:55	22	30/06/2014	10:26:55	10	LACI	3	3	0.319412	1
Elliot Lake SM3-6	SM300660_0_20140630_222710.wav	0	0	5.205	SM300660_0_0_20140630_222710_000	30/06/2014	22:27:10	22	30/06/2014	10:27:10	10	LACI	2	2	0.214142	1
Elliot Lake SM3-6	SM300660_0_20140630_222940.wav	0	0	3.381	SM300660_0_0_20140630_222940_000	30/06/2014	22:29:40	22	30/06/2014	10:29:40	10	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140630_225926.wav	0	0	6.327	SM300660_0_0_20140630_225926_000	30/06/2014	22:59:26	22	30/06/2014	10:59:26	10	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140630_230413.wav	0	0	3.03	SM300660_0_0_20140630_230413_000	30/06/2014	23:04:13	23	30/06/2014	11:04:13	11	LACI	2	2	0.223223	1
Elliot Lake SM3-6	SM300660_0_20140701_030205.wav	0	0	3.348	SM300660_0_0_20140701_030205_000	01/07/2014	3:02:05	3	30/06/2014	15:02:05	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140701_032923.wav	0	0	3.665	SM300660_0_0_20140701_032923_000	01/07/2014	3:29:23	3	30/06/2014	15:29:23	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140701_033440.wav	0	0	5.42	SM300660_0_0_20140701_033440_000	01/07/2014	3:34:40	3	30/06/2014	15:34:40	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140701_230310.wav	0	0	7.832	SM300660_0_0_20140701_230310_000	01/07/2014	23:03:10	23	01/07/2014	11:03:10	11	LACI	5	5	0.565739	1
Elliot Lake SM3-6	SM300660_0_20140701_230342.wav	0	0	5.162	SM300660_0_0_20140701_230342_000	01/07/2014	23:03:42	23	01/07/2014	11:03:42	11	LACI	4	4	0.502841	1
Elliot Lake SM3-6	SM300660_0_20140701_230407.wav	0	0	4.941	SM300660_0_0_20140701_230407_000	01/07/2014	23:04:07	23	01/07/2014	11:04:07	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140701_230423.wav	0	0	3.637	SM300660_0_0_20140701_230423_000	01/07/2014	23:04:23	23	01/07/2014	11:04:23	11	LACI	3	3	0.310496	1
Elliot Lake SM3-6	SM300660_0_20140701_230444.wav	0	0	3.028	SM300660_0_0_20140701_230444_000	01/07/2014	23:04:44	23	01/07/2014	11:04:44	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140701_230544.wav	0	0	5.853	SM300660_0_0_20140701_230544_000	01/07/2014	23:05:44	23	01/07/2014	11:05:44	11	LACI	5	5	0.537451	1
Elliot Lake SM3-6	SM300660_0_20140701_231507.wav	0	0	5.524	SM300660_0_0_20140701_231507_000	01/07/2014	23:15:07	23	01/07/2014	11:15:07	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140701_234439.wav	0	0	6.419	SM300660_0_0_20140701_234439_000	01/07/2014	23:44:39	23	01/07/2014	11:44:39	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_000317.wav	0	0	6.326	SM300660_0_0_20140702_000317_000	02/07/2014	0:03:17	0	01/07/2014	12:03:17	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_001416.wav	0	0	5.554	SM300660_0_0_20140702_001416_000	02/07/2014	0:14:16	0	01/07/2014	12:14:16	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_001455.wav	0	0	5.61	SM300660_0_0_20140702_001455_000	02/07/2014	0:14:55	0	01/07/2014	12:14:55	12	LACI	2	2	0.252548	1
Elliot Lake SM3-6	SM300660_0_20140702_001517.wav	0	0	5.066	SM300660_0_0_20140702_001517_000	02/07/2014	0:15:17	0	01/07/2014	12:15:17	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_001756.wav	0	0	4.125	SM300660_0_0_20140702_001756_000	02/07/2014	0:17:56	0	01/07/2014	12:17:56	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_001950.wav	0	0	14.999	SM300660_0_0_20140702_001950_000	02/07/2014	0:19:50	0	01/07/2014	12:19:50	12	LACI	17	17	0.829924	1
Elliot Lake SM3-6	SM300660_0_20140702_002213.wav	0	0	4.907	SM300660_0_0_20140702_002213_000	02/07/2014	0:22:13	0	01/07/2014	12:22:13	12	LACI	5	5	0.493513	1
Elliot Lake SM3-6	SM300660_0_20140702_002231.wav	0	0	5.817	SM300660_0_0_20140702_002231_000	02/07/2014	0:22:31	0	01/07/2014	12:22:31	12	LACI	2	2	0.215565	1
Elliot Lake SM3-6	SM300660_0_20140702_002241.wav	0	0	4.455	SM300660_0_0_20140702_002241_000	02/07/2014	0:22:41	0	01/07/2014	12:22:41	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_002322.wav	0	0	3.539	SM300660_0_0_20140702_002322_000	02/07/2014	0:23:22	0	01/07/2014	12:23:22	12	LACI	3	3	0.40094	1
Elliot Lake SM3-6	SM300660_0_20140702_002336.wav	0	0	3.629	SM300660_0_0_20140702_002336_000	02/07/2014	0:23:36	0	01/07/2014	12:23:36	12	LACI	4	4	0.460489	1
Elliot Lake SM3-6	SM300660_0_20140702_002405.wav	0	0	3.012	SM300660_0_0_20140702_002405_000	02/07/2014	0:24:05	0	01/07/2014	12:24:05	12	LACI	2	2	0.241214	1
Elliot Lake SM3-6	SM300660_0_20140702_002419.wav	0	0	3.033	SM300660_0_0_20140702_002419_000	02/07/2014	0:24:19	0	01/07/2014	12:24:19	12	LACI	2	2	0.208611	1
Elliot Lake SM3-6	SM300660_0_20140702_002544.wav	0	0	4.049	SM300660_0_0_20140702_002544_000	02/07/2014	0:25:44	0	01/07/2014	12:25:44	12	LACI	2	2	0.22792	1
Elliot Lake SM3-6	SM300660_0_20140702_002610.wav	0	0	3.632	SM300660_0_0_20140702_002610_000	02/07/2014	0:26:10	0	01/07/2014	12:26:10	12	LACI	2	2	0.167803	1
Elliot Lake SM3-6	SM300660_0_20140702_002633.wav	0	0	6.176	SM300660_0_0_20140702_002633_000	02/07/2014	0:26:33	0	01/07/2014	12:26:33	12	LACI	3	3	0.360442	1
Elliot Lake SM3-6	SM300660_0_20140702_002720.wav	0	0	3.895	SM300660_0_0_20140702_002720_000	02/07/2014	0:27:20	0	01/07/2014	12:27:20	12	LACI	3	3	0.340883	1
Elliot Lake SM3-6	SM300660_0_20140702_002845.wav	0	0	4.007	SM300660_0_0_20140702_002845_000	02/07/2014	0:28:45	0	01/07/2014	12:28:45	12	LACI	4	4	0.461385	1
Elliot Lake SM3-6	SM300660_0_20140702_002854.wav	0	0	3.046	SM300660_0_0_20140702_002854_000	02/07/2014	0:28:54	0	01/07/2014	12:28:54	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_002921.wav	0	0	3.024	SM300660_0_0_20140702_002921_000	02/07/2014	0:29:21	0	01/07/2014	12:29:21	12	LACI	2	2	0.204001	1
Elliot Lake SM3-6	SM300660_0_20140702_002939.wav	0	0	3.018	SM300660_0_0_20140702_002939_000	02/07/2014	0:29:39	0	01/07/2014	12:29:39	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_002947.wav	0	0	3.345	SM300660_0_0_20140702_002947_000	02/07/2014	0:29:47	0	01/07/2014	12:29:47	12	LACI	5	5	0.504619	1
Elliot Lake SM3-6	SM300660_0_20140702_002956.wav	0	0	4.233	SM300660_0_0_20140702_002956_000	02/07/2014	0:29:56	0	01/07/2014	12:29:56	12	LACI	5	5	0.498793	1
Elliot Lake SM3-6	SM300660_0_20140702_003006.wav	0	0	7.266	SM300660_0_0_20140702_003006_000	02/07/2014	0:30:06	0	01/07/2014	12:30:06	12	LACI	8	8	0.677417	1
Elliot Lake SM3-6	SM300660_0_20140702_003038.wav	0	0	6.06	SM300660_0_0_20140702_003038_000	02/07/2014	0:30:38	0	01/07/2014	12:30:38	12	LACI	4	4	0.468498	1
Elliot Lake SM3-6	SM300660_0_20140702_003136.wav	0	0	5.615	SM300660_0_0_20140702_003136_000	02/07/2014	0:31:36	0	01/07/2014	12:31:36	12	LACI	3	3	0.362295	1
Elliot Lake SM3-6	SM300660_0_20140702_003222.wav	0	0	6.037	SM300660_0_0_20140702_003222_000	02/07/2014	0:32:22	0	01/07/2014	12:32:22	12	LACI	7	7	0.640028	1
Elliot Lake SM3-6	SM300660_0_20140702_003254.wav	0	0	5.357	SM300660_0_0_20140702_003254_000	02/07/2014	0:32:54	0	01/07/2014	12:32:54	12	LACI	5	5	0.548798	1
Elliot Lake SM3-6	SM300660_0_20140702_003304.wav	0	0	3.923	SM300660_0_0_20140702_003304_000	02/07/2014	0:33:04	0	01/07/2014	12:33:04	12	LACI	3	3	0.318957	1
Elliot Lake SM3-6	SM300660_0_20140702_003323.wav	0	0	3.703	SM300660_0_0_20140702_003323_000	02/07/2014	0:33:23	0	01/07/2014	12:33:23	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_003349.wav	0	0	4.176	SM300660_0_0_20140702_003349_000	02/07/2014	0:33:49	0	01/07/2014	12:33:49	12	LACI	4	4	0.464802	1
Elliot Lake SM3-6	SM300660_0_20140702_003431.wav	0	0	4.009	SM300660_0_0_20140702_003431_000	02/07/2014	0:34:31	0	01/07/2014	12:34:31	12	LACI	6	6	0.602305	1
Elliot Lake SM3-6	SM300660_0_2014070															

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM3-6	SM300660_0_20140702_003527.wav		0	0	4.14 SM300660_0_0_20140702_003527_000	02/07/2014	0:35:27	0	01/07/2014	12:35:27	12	LACI	4	4	0.460495	1
Elliot Lake SM3-6	SM300660_0_20140702_003544.wav		0	0	4.56 SM300660_0_0_20140702_003544_000	02/07/2014	0:35:44	0	01/07/2014	12:35:44	12	LACI	3	3	0.386189	1
Elliot Lake SM3-6	SM300660_0_20140702_003555.wav		0	0	5.542 SM300660_0_0_20140702_003555_000	02/07/2014	0:35:55	0	01/07/2014	12:35:55	12	LACI	2	2	0.230919	1
Elliot Lake SM3-6	SM300660_0_20140702_003608.wav		0	0	3.478 SM300660_0_0_20140702_003608_000	02/07/2014	0:36:08	0	01/07/2014	12:36:08	12	LACI	5	5	0.53397	1
Elliot Lake SM3-6	SM300660_0_20140702_003630.wav		0	0	3.17 SM300660_0_0_20140702_003630_000	02/07/2014	0:36:30	0	01/07/2014	12:36:30	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_003649.wav		0	0	7.691 SM300660_0_0_20140702_003649_000	02/07/2014	0:36:49	0	01/07/2014	12:36:49	12	LACI	6	6	0.621275	1
Elliot Lake SM3-6	SM300660_0_20140702_003702.wav		0	0	3.06 SM300660_0_0_20140702_003702_000	02/07/2014	0:37:02	0	01/07/2014	12:37:02	12	LACI	4	4	0.470945	1
Elliot Lake SM3-6	SM300660_0_20140702_003712.wav		0	0	9.508 SM300660_0_0_20140702_003712_000	02/07/2014	0:37:12	0	01/07/2014	12:37:12	12	LACI	13	13	0.794577	1
Elliot Lake SM3-6	SM300660_0_20140702_003759.wav		0	0	4.859 SM300660_0_0_20140702_003759_000	02/07/2014	0:37:59	0	01/07/2014	12:37:59	12	LACI	5	5	0.561551	1
Elliot Lake SM3-6	SM300660_0_20140702_003825.wav		0	0	4.412 SM300660_0_0_20140702_003825_000	02/07/2014	0:38:25	0	01/07/2014	12:38:25	12	LACI	3	3	0.361668	1
Elliot Lake SM3-6	SM300660_0_20140702_003859.wav		0	0	5.607 SM300660_0_0_20140702_003859_000	02/07/2014	0:38:59	0	01/07/2014	12:38:59	12	LACI	4	4	0.491493	1
Elliot Lake SM3-6	SM300660_0_20140702_003908.wav		0	0	7.437 SM300660_0_0_20140702_003908_000	02/07/2014	0:39:08	0	01/07/2014	12:39:08	12	LACI	4	4	0.425696	1
Elliot Lake SM3-6	SM300660_0_20140702_003919.wav		0	0	3.671 SM300660_0_0_20140702_003919_000	02/07/2014	0:39:19	0	01/07/2014	12:39:19	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_003946.wav		0	0	8.08 SM300660_0_0_20140702_003946_000	02/07/2014	0:39:46	0	01/07/2014	12:39:46	12	LACI	7	7	0.625915	1
Elliot Lake SM3-6	SM300660_0_20140702_004013.wav		0	0	3.587 SM300660_0_0_20140702_004013_000	02/07/2014	0:40:13	0	01/07/2014	12:40:13	12	LACI	2	2	0.237489	1
Elliot Lake SM3-6	SM300660_0_20140702_005922.wav		0	0	3.775 SM300660_0_0_20140702_005922_000	02/07/2014	0:59:22	0	01/07/2014	12:59:22	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_021405.wav		0	0	8.433 SM300660_0_0_20140702_021405_000	02/07/2014	2:14:05	2	01/07/2014	14:14:05	14	LACI	4	4	0.4440178	1
Elliot Lake SM3-6	SM300660_0_20140702_022053.wav		0	0	3.978 SM300660_0_0_20140702_022053_000	02/07/2014	2:20:53	2	01/07/2014	14:20:53	14	LACI	4	4	0.438124	1
Elliot Lake SM3-6	SM300660_0_20140702_022205.wav		0	0	3.725 SM300660_0_0_20140702_022205_000	02/07/2014	2:22:05	2	01/07/2014	14:22:05	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_023659.wav		0	0	3.925 SM300660_0_0_20140702_023659_000	02/07/2014	2:36:59	2	01/07/2014	14:36:59	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_032951.wav		0	0	8.282 SM300660_0_0_20140702_032951_000	02/07/2014	3:29:51	3	01/07/2014	15:29:51	15	LACI	8	8	0.683078	1
Elliot Lake SM3-6	SM300660_0_20140702_033307.wav		0	0	3.021 SM300660_0_0_20140702_033307_000	02/07/2014	3:33:07	3	01/07/2014	15:33:07	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_033634.wav		0	0	4.247 SM300660_0_0_20140702_033634_000	02/07/2014	3:36:34	3	01/07/2014	15:36:34	15	LACI	2	2	0.197472	1
Elliot Lake SM3-6	SM300660_0_20140702_033822.wav		0	0	3.634 SM300660_0_0_20140702_033822_000	02/07/2014	3:38:22	3	01/07/2014	15:38:22	15	LACI	2	2	0.168319	1
Elliot Lake SM3-6	SM300660_0_20140702_034013.wav		0	0	4.246 SM300660_0_0_20140702_034013_000	02/07/2014	3:40:13	3	01/07/2014	15:40:13	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_034058.wav		0	0	4.205 SM300660_0_0_20140702_034058_000	02/07/2014	3:40:58	3	01/07/2014	15:40:58	15	LACI	3	3	0.334407	1
Elliot Lake SM3-6	SM300660_0_20140702_034118.wav		0	0	3.511 SM300660_0_0_20140702_034118_000	02/07/2014	3:41:18	3	01/07/2014	15:41:18	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_035241.wav		0	0	4.55 SM300660_0_0_20140702_035241_000	02/07/2014	3:52:41	3	01/07/2014	15:52:41	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_035458.wav		0	0	3.02 SM300660_0_0_20140702_035458_000	02/07/2014	3:54:58	3	01/07/2014	15:54:58	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_041430.wav		0	0	3.691 SM300660_0_0_20140702_041430_000	02/07/2014	4:14:30	4	01/07/2014	16:14:30	16	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_041806.wav		0	0	3.039 SM300660_0_0_20140702_041806_000	02/07/2014	4:18:06	4	01/07/2014	16:18:06	16	LACI	3	3	0.361814	1
Elliot Lake SM3-6	SM300660_0_20140702_041952.wav		0	0	11.268 SM300660_0_0_20140702_041952_000	02/07/2014	4:19:52	4	01/07/2014	16:19:52	16	LACI	11	11	0.731042	1
Elliot Lake SM3-6	SM300660_0_20140702_042035.wav		0	0	4.382 SM300660_0_0_20140702_042035_000	02/07/2014	4:20:35	4	01/07/2014	16:20:35	16	LACI	3	3	0.41171	1
Elliot Lake SM3-6	SM300660_0_20140702_042048.wav		0	0	3.013 SM300660_0_0_20140702_042048_000	02/07/2014	4:20:48	4	01/07/2014	16:20:48	16	LACI	3	3	0.349699	1
Elliot Lake SM3-6	SM300660_0_20140702_230354.wav		0	0	3.367 SM300660_0_0_20140702_230354_000	02/07/2014	23:03:54	23	02/07/2014	11:03:54	11	LACI	2	2	0.221456	1
Elliot Lake SM3-6	SM300660_0_20140702_233358.wav		0	0	3.029 SM300660_0_0_20140702_233358_000	02/07/2014	23:33:58	23	02/07/2014	11:33:58	11	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140702_233553.wav		0	0	4.789 SM300660_0_0_20140702_233553_000	02/07/2014	23:35:53	23	02/07/2014	11:35:53	11	LACI	2	2	0.193461	1
Elliot Lake SM3-6	SM300660_0_20140703_022450.wav		0	0	3.047 SM300660_0_0_20140703_022450_000	03/07/2014	2:24:50	2	02/07/2014	14:24:50	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140703_022527.wav		0	0	5.863 SM300660_0_0_20140703_022527_000	03/07/2014	2:25:27	2	02/07/2014	14:25:27	14	LACI	3	3	0.368302	1
Elliot Lake SM3-6	SM300660_0_20140703_022548.wav		0	0	5.607 SM300660_0_0_20140703_022548_000	03/07/2014	2:25:48	2	02/07/2014	14:25:48	14	LACI	3	3	0.350392	1
Elliot Lake SM3-6	SM300660_0_20140703_022622.wav		0	0	9.938 SM300660_0_0_20140703_022622_000	03/07/2014	2:26:22	2	02/07/2014	14:26:22	14	LACI	5	5	0.539363	1
Elliot Lake SM3-6	SM300660_0_20140703_022656.wav		0	0	4.482 SM300660_0_0_20140703_022656_000	03/07/2014	2:26:56	2	02/07/2014	14:26:56	14	LACI	2	2	0.207963	1
Elliot Lake SM3-6	SM300660_0_20140703_022809.wav		0	0	3.929 SM300660_0_0_20140703_022809_000	03/07/2014	2:28:09	2	02/07/2014	14:28:09	14	LACI	2	2	0.223464	1
Elliot Lake SM3-6	SM300660_0_20140703_022842.wav		0	0	3.535 SM300660_0_0_20140703_022842_000	03/07/2014	2:28:42	2	02/07/2014	14:28:42	14	LACI	2	2	0.165967	1
Elliot Lake SM3-6	SM300660_0_20140703_023857.wav		0	0	4.283 SM300660_0_0_20140703_023857_000	03/07/2014	2:38:57	2	02/07/2014	14:38:57	14	LACI	2	2	0.188173	1
Elliot Lake SM3-6	SM300660_0_20140703_023918.wav		0	0	4.83 SM300660_0_0_20140703_023918_000	03/07/2014	2:39:18	2	02/07/2014	14:39:18	14	LACI	2	2	0.191928	1
Elliot Lake SM3-6	SM300660_0_20140703_024007.wav		0	0	5.626 SM300660_0_0_20140703_024007_000	03/07/2014	2:40:07	2	02/07/2014	14:40:07	14	LACI	6	6	0.630607	1
Elliot Lake SM3-6	SM300660_0_20140703_024422.wav		0	0	3.017 SM300660_0_0_20140703_024422_000	03/07/2014	2:44:22	2	02/07/2014	14:44:22	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140703_024633.wav		0	0	3.331 SM300660_0_0_20140703_024633_000	03/07/2014	2:46:33	2	02/07/2014	14:46:33	14	LACI	4	4	0.445413	1
Elliot Lake SM3-6	SM300660_0_20140703_024647.wav		0	0	4.84 SM300660_0_0_20140703_024647_000	03/07/2014	2:46:47	2	02/07/2014	14:46:47	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140703_024657.wav		0	0	3.04 SM300660_0_0_20140703_024657_000	03/07/2014	2:46:57	2	02/07/2014	14:46:57	14	LACI	3	3	0.372006	1
Elliot Lake SM3-6	SM300660_0_20140703_024733.wav		0	0	6.825 SM300660_0_0_20140703_024733_000	03/07/2014	2:47:33	2	02/07/2014	14:47:33	14	LACI	4	4	0.430994	1
Elliot Lake SM3-6	SM300660_0_20140703_024835.wav		0	0	4.299 SM300660_0_0_20140703_024835_000	03/07/2014	2:48:35	2	02/07/2014	14:48:35	14	LACI	2	2	0.234749	1
Elliot Lake SM3-6	SM300660_0_20140703_024858.wav		0	0	14.999 SM300660_0_0_20140703_024858_000	03/07/2014	2:48:58	2	02/07/2014	14:48:58	14	LACI	10	10	0.730993	1
Elliot Lake SM3-6	SM300660_0_20140703_024925.wav		0	0	7.8 SM300660_0_0_20140703_024925_000	03/07/2014	2:49:25	2	02/07/2014	14:49:25	14	LACI	6	6	0.587908	1
Elliot Lake SM3-6	SM300660_0_20140703_024941.wav		0	0	6.027 SM300660_0_0_20140703_024941_000	03/07/2014	2:49:41	2	02/07/2014	14:49:41	14	LACI	7	7	0.651523	1
Elliot Lake SM3-6	SM300660_0_20140703_024951.wav		0	0	3.904 SM300660_0_0_20140703_024951_000	03/07/2014	2:49:51	2	02/07/2014	14:49:51	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140703_025012.wav		0	0	5.192 SM300660_0_0_20140703_025012_000	03/07/2014	2:50:12	2	02/07/2014	14:50:12	14	LACI	6	6	0.587536	1
Elliot Lake SM3-6	SM300660_0_20140703_025021.wav		0	0	5.581 SM300660_0_0_20140703											

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM3-6	SM300660_0_20140703_025104.wav	0	0	3.8	SM300660_0_0_20140703_025104_000	03/07/2014	2:51:04	2	02/07/2014	14:51:04	14	LACI	2	2	0.166708	1
Elliot Lake SM3-6	SM300660_0_20140703_025112.wav	0	0	3.045	SM300660_0_0_20140703_025112_000	03/07/2014	2:51:12	2	02/07/2014	14:51:12	14	LACI	4	4	0.398667	1
Elliot Lake SM3-6	SM300660_0_20140703_025135.wav	0	0	3.025	SM300660_0_0_20140703_025135_000	03/07/2014	2:51:35	2	02/07/2014	14:51:35	14	LACI	2	2	0.188798	1
Elliot Lake SM3-6	SM300660_0_20140703_025910.wav	0	0	3.308	SM300660_0_0_20140703_025910_000	03/07/2014	2:59:10	2	02/07/2014	14:59:10	14	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140703_030333.wav	0	0	4.631	SM300660_0_0_20140703_030333_000	03/07/2014	3:03:33	3	02/07/2014	15:03:33	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140703_030403.wav	0	0	3.248	SM300660_0_0_20140703_030403_000	03/07/2014	3:04:03	3	02/07/2014	15:04:03	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140703_030453.wav	0	0	5.356	SM300660_0_0_20140703_030453_000	03/07/2014	3:04:53	3	02/07/2014	15:04:53	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140703_035607.wav	0	0	4.744	SM300660_0_0_20140703_035607_000	03/07/2014	3:56:07	3	02/07/2014	15:56:07	15	LACI	3	3	0.331076	1
Elliot Lake SM3-6	SM300660_0_20140703_035619.wav	0	0	6.626	SM300660_0_0_20140703_035619_000	03/07/2014	3:56:19	3	02/07/2014	15:56:19	15	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140703_040234.wav	0	0	4.311	SM300660_0_0_20140703_040234_000	03/07/2014	4:02:34	4	02/07/2014	16:02:34	16	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140703_040532.wav	0	0	4.633	SM300660_0_0_20140703_040532_000	03/07/2014	4:05:32	4	02/07/2014	16:05:32	16	LACI	3	3	0.332604	1
Elliot Lake SM3-6	SM300660_0_20140703_042348.wav	0	0	6.046	SM300660_0_0_20140703_042348_000	03/07/2014	4:23:48	4	02/07/2014	16:23:48	16	LACI	6	6	0.594205	1
Elliot Lake SM3-6	SM300660_0_20140703_042436.wav	0	0	3.041	SM300660_0_0_20140703_042436_000	03/07/2014	4:24:36	4	02/07/2014	16:24:36	16	LACI	2	2	0.232087	1
Elliot Lake SM3-6	SM300660_0_20140703_042452.wav	0	0	4.892	SM300660_0_0_20140703_042452_000	03/07/2014	4:24:52	4	02/07/2014	16:24:52	16	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140703_042539.wav	0	0	3.453	SM300660_0_0_20140703_042539_000	03/07/2014	4:25:39	4	02/07/2014	16:25:39	16	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140703_225258.wav	0	0	3.887	SM300660_0_0_20140703_225258_000	03/07/2014	22:52:58	22	03/07/2014	10:52:58	10	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140704_000243.wav	0	0	11.619	SM300660_0_0_20140704_000243_000	04/07/2014	0:02:43	0	03/07/2014	12:02:43	12	LACI	6	6	0.570223	1
Elliot Lake SM3-6	SM300660_0_20140704_000300.wav	0	0	4.215	SM300660_0_0_20140704_000300_000	04/07/2014	0:03:00	0	03/07/2014	12:03:00	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140704_000611.wav	0	0	4.998	SM300660_0_0_20140704_000611_000	04/07/2014	0:06:11	0	03/07/2014	12:06:11	12	LACI	2	2	0.240469	1
Elliot Lake SM3-6	SM300660_0_20140704_000637.wav	0	0	3.617	SM300660_0_0_20140704_000637_000	04/07/2014	0:06:37	0	03/07/2014	12:06:37	12	LACI	3	3	0.337601	1
Elliot Lake SM3-6	SM300660_0_20140704_000724.wav	0	0	3.013	SM300660_0_0_20140704_000724_000	04/07/2014	0:07:24	0	03/07/2014	12:07:24	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140704_001113.wav	0	0	4.115	SM300660_0_0_20140704_001113_000	04/07/2014	0:11:13	0	03/07/2014	12:11:13	12	LACI	3	3	0.389671	1
Elliot Lake SM3-6	SM300660_0_20140704_001202.wav	0	0	3.703	SM300660_0_0_20140704_001202_000	04/07/2014	0:12:02	0	03/07/2014	12:12:02	12	LACI	3	3	0.342612	1
Elliot Lake SM3-6	SM300660_0_20140704_001229.wav	0	0	7.738	SM300660_0_0_20140704_001229_000	04/07/2014	0:12:29	0	03/07/2014	12:12:29	12	LACI	8	8	0.689834	1
Elliot Lake SM3-6	SM300660_0_20140704_001307.wav	0	0	3.805	SM300660_0_0_20140704_001307_000	04/07/2014	0:13:07	0	03/07/2014	12:13:07	12	LACI	4	4	0.468384	1
Elliot Lake SM3-6	SM300660_0_20140704_002005.wav	0	0	9.787	SM300660_0_0_20140704_002005_000	04/07/2014	0:20:05	0	03/07/2014	12:20:05	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140704_002953.wav	0	0	5.535	SM300660_0_0_20140704_002953_000	04/07/2014	0:29:53	0	03/07/2014	12:29:53	12	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140704_003153.wav	0	0	4.814	SM300660_0_0_20140704_003153_000	04/07/2014	0:31:53	0	03/07/2014	12:31:53	12	LACI	4	4	0.477648	1
Elliot Lake SM3-6	SM300660_0_20140704_003226.wav	0	0	4.165	SM300660_0_0_20140704_003226_000	04/07/2014	0:32:26	0	03/07/2014	12:32:26	12	LACI	2	2	0.223015	1
Elliot Lake SM3-6	SM300660_0_20140704_003747.wav	0	0	3.02	SM300660_0_0_20140704_003747_000	04/07/2014	0:37:47	0	03/07/2014	12:37:47	12	LACI	2	2	0.19171	1
Elliot Lake SM3-6	SM300660_0_20140704_004047.wav	0	0	5.092	SM300660_0_0_20140704_004047_000	04/07/2014	0:40:47	0	03/07/2014	12:40:47	12	LACI	2	2	0.176975	1
Elliot Lake SM3-6	SM300660_0_20140704_011131.wav	0	0	3.396	SM300660_0_0_20140704_011131_000	04/07/2014	1:11:31	1	03/07/2014	13:11:31	13	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140704_011221.wav	0	0	4.858	SM300660_0_0_20140704_011221_000	04/07/2014	1:12:21	1	03/07/2014	13:12:21	13	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140704_035824.wav	0	0	3.415	SM300660_0_0_20140704_035824_000	04/07/2014	3:58:24	3	03/07/2014	15:58:24	15	LACI	2	2	0.230668	1
Elliot Lake SM3-6	SM300660_0_20140704_235204.wav	0	0	4.114	SM300660_0_0_20140704_235204_000	04/07/2014	23:52:04	23	04/07/2014	11:52:04	11	LACI	3	3	0.369788	1
Elliot Lake SM3-6	SM300660_0_20140704_235233.wav	0	0	5.642	SM300660_0_0_20140704_235233_000	04/07/2014	23:52:33	23	04/07/2014	11:52:33	11	LACI	5	5	0.576121	1
Elliot Lake SM3-6	SM300660_0_20140705_012717.wav	0	0	4.062	SM300660_0_0_20140705_012717_000	05/07/2014	1:27:17	1	04/07/2014	13:27:17	13	LACI	6	6	0.586146	1
Elliot Lake SM3-6	SM300660_0_20140705_012725.wav	0	0	4.106	SM300660_0_0_20140705_012725_000	05/07/2014	1:27:25	1	04/07/2014	13:27:25	13	LACI	2	2	0.257664	1
Elliot Lake SM3-6	SM300660_0_20140705_012733.wav	0	0	6.119	SM300660_0_0_20140705_012733_000	05/07/2014	1:27:33	1	04/07/2014	13:27:33	13	LACI	4	4	0.470461	1
Elliot Lake SM3-6	SM300660_0_20140705_012921.wav	0	0	3.009	SM300660_0_0_20140705_012921_000	05/07/2014	1:29:21	1	04/07/2014	13:29:21	13	LACI	2	2	0.238663	1
Elliot Lake SM3-6	SM300660_0_20140705_013051.wav	0	0	3.022	SM300660_0_0_20140705_013051_000	05/07/2014	1:30:51	1	04/07/2014	13:30:51	13	LACI	2	2	0.192148	1
Elliot Lake SM3-6	SM300660_0_20140705_013114.wav	0	0	3.576	SM300660_0_0_20140705_013114_000	05/07/2014	1:31:14	1	04/07/2014	13:31:14	13	LACI	3	3	0.338434	1
Elliot Lake SM3-6	SM300660_0_20140705_013122.wav	0	0	4.242	SM300660_0_0_20140705_013122_000	05/07/2014	1:31:22	1	04/07/2014	13:31:22	13	LACI	2	2	0.189595	1
Elliot Lake SM3-6	SM300660_0_20140705_013153.wav	0	0	6.547	SM300660_0_0_20140705_013153_000	05/07/2014	1:31:53	1	04/07/2014	13:31:53	13	LACI	10	10	0.74823	1
Elliot Lake SM3-6	SM300660_0_20140705_013205.wav	0	0	3.678	SM300660_0_0_20140705_013205_000	05/07/2014	1:32:05	1	04/07/2014	13:32:05	13	LACI	4	4	0.491426	1
Elliot Lake SM3-6	SM300660_0_20140705_013216.wav	0	0	8.396	SM300660_0_0_20140705_013216_000	05/07/2014	1:32:16	1	04/07/2014	13:32:16	13	LACI	11	11	0.751329	1
Elliot Lake SM3-6	SM300660_0_20140705_013229.wav	0	0	10.385	SM300660_0_0_20140705_013229_000	05/07/2014	1:32:29	1	04/07/2014	13:32:29	13	LACI	14	14	0.801121	1
Elliot Lake SM3-6	SM300660_0_20140705_013243.wav	0	0	9.875	SM300660_0_0_20140705_013243_000	05/07/2014	1:32:43	1	04/07/2014	13:32:43	13	LACI	15	15	0.811182	1
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Elliot Lake SM3-6	SM300660_0_20140705_013313.wav	0	0	4.001	SM300660_0_0_20140705_013313_000	05/07/2014	1:33:13	1	04/07/2014	13:33:13	13	Nold	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140705_013352.wav	0	0	3.962	SM300660_0_0_20140705_013352_000	05/07/2014	1:33:52	1	04/07/2014	13:33:52	13	LACI	6	6	0.59739	1
Elliot Lake SM3-6	SM300660_0_20140705_013418.wav	0	0	5.128	SM300660_0_0_20140705_013418_000	05/07/2014	1:34:18	1	04/07/2014	13:34:18	13	LACI	5	5	0.56038	1
Elliot Lake SM3-6	SM300660_0_20140705_013427.wav	0	0	6.261	SM300660_0_0_20140705_013427_000	05/07/2014	1:34:27	1	04/07/2014	13:34:27	13	LACI	5	5	0.57359	1
Elliot Lake SM3-6	SM300660_0_20140705_024337.wav	0	0	5.722												

FOLDER	IN FILE	CHANNEL	OFFSET	DURATION	OUT FILE	DATE	TIME	HOUR	DATE-12	TIME-12	HOUR-12	AUTO ID	PULSES	MATCHING	MARGIN	FILES
Elliot Lake SM3-6	SM300660_0_20140705_030817.wav	0	0	3.443	SM300660_0_0_20140705_030817_000	05/07/2014	3:08:17	3	04/07/2014	15:08:17	15	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140705_033956.wav	0	0	4.424	SM300660_0_0_20140705_033956_000	05/07/2014	3:39:56	3	04/07/2014	15:39:56	15	LACI	3	3	0.32279	1
Elliot Lake SM3-6	SM300660_0_20140705_034242.wav	0	0	8.672	SM300660_0_0_20140705_034242_000	05/07/2014	3:42:42	3	04/07/2014	15:42:42	15	LACI	4	4	0.435453	1
Elliot Lake SM3-6	SM300660_0_20140705_034314.wav	0	0	3.022	SM300660_0_0_20140705_034314_000	05/07/2014	3:43:14	3	04/07/2014	15:43:14	15	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140705_035122.wav	0	0	3.055	SM300660_0_0_20140705_035122_000	05/07/2014	3:51:22	3	04/07/2014	15:51:22	15	LACI	2	2	0.178582	1
Elliot Lake SM3-6	SM300660_0_20140705_035202.wav	0	0	3.026	SM300660_0_0_20140705_035202_000	05/07/2014	3:52:02	3	04/07/2014	15:52:02	15	LACI	2	2	0.240783	1
Elliot Lake SM3-6	SM300660_0_20140705_035236.wav	0	0	4.561	SM300660_0_0_20140705_035236_000	05/07/2014	3:52:36	3	04/07/2014	15:52:36	15	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140705_035245.wav	0	0	3.428	SM300660_0_0_20140705_035245_000	05/07/2014	3:52:45	3	04/07/2014	15:52:45	15	LACI	3	3	0.341415	1
Elliot Lake SM3-6	SM300660_0_20140705_040140.wav	0	0	8.565	SM300660_0_0_20140705_040140_000	05/07/2014	4:01:40	4	04/07/2014	16:01:40	16	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140705_041442.wav	0	0	5.953	SM300660_0_0_20140705_041442_000	05/07/2014	4:14:42	4	04/07/2014	16:14:42	16	LACI	3	3	0.376768	1
Elliot Lake SM3-6	SM300660_0_20140705_221202.wav	0	0	4.552	SM300660_0_0_20140705_221202_000	05/07/2014	22:12:02	22	05/07/2014	10:12:02	10	LACI	4	4	0.478171	1
Elliot Lake SM3-6	SM300660_0_20140705_230006.wav	0	0	4.555	SM300660_0_0_20140705_230006_000	05/07/2014	23:00:06	23	05/07/2014	11:00:06	11	LACI	3	3	0.364824	1
Elliot Lake SM3-6	SM300660_0_20140705_230244.wav	0	0	6.177	SM300660_0_0_20140705_230244_000	05/07/2014	23:02:44	23	05/07/2014	11:02:44	11	LACI	3	3	0.302518	1
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Elliot Lake SM3-6	SM300660_0_20140705_232644.wav	0	0	3.021	SM300660_0_0_20140705_232644_000	05/07/2014	23:26:44	23	05/07/2014	11:26:44	11	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140705_234850.wav	0	0	3.467	SM300660_0_0_20140705_234850_000	05/07/2014	23:48:50	23	05/07/2014	11:48:50	11	LACI	3	3	0.324429	1
Elliot Lake SM3-6	SM300660_0_20140705_235728.wav	0	0	3.754	SM300660_0_0_20140705_235728_000	05/07/2014	23:57:28	23	05/07/2014	11:57:28	11	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140705_235740.wav	0	0	7.782	SM300660_0_0_20140705_235740_000	05/07/2014	23:57:40	23	05/07/2014	11:57:40	11	LACI	2	2	0.207714	1
Elliot Lake SM3-6	SM300660_0_20140705_235808.wav	0	0	12.482	SM300660_0_0_20140705_235808_000	05/07/2014	23:58:08	23	05/07/2014	11:58:08	11	LACI	2	2	0.19654	1
Elliot Lake SM3-6	SM300660_0_20140706_000018.wav	0	0	3.034	SM300660_0_0_20140706_000018_000	06/07/2014	0:00:18	0	05/07/2014	12:00:18	12	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140706_013059.wav	0	0	5.903	SM300660_0_0_20140706_013059_000	06/07/2014	1:30:59	1	05/07/2014	13:30:59	13	LACI	3	3	0.386434	1
Elliot Lake SM3-6	SM300660_0_20140706_013130.wav	0	0	3.014	SM300660_0_0_20140706_013130_000	06/07/2014	1:31:30	1	05/07/2014	13:31:30	13	LACI	3	3	0.305703	1
Elliot Lake SM3-6	SM300660_0_20140706_013144.wav	0	0	5.513	SM300660_0_0_20140706_013144_000	06/07/2014	1:31:44	1	05/07/2014	13:31:44	13	LACI	5	5	0.543681	1
Elliot Lake SM3-6	SM300660_0_20140706_013155.wav	0	0	9.91	SM300660_0_0_20140706_013155_000	06/07/2014	1:31:55	1	05/07/2014	13:31:55	13	LACI	16	16	0.830175	1
Elliot Lake SM3-6	SM300660_0_20140706_013235.wav	0	0	5.826	SM300660_0_0_20140706_013235_000	06/07/2014	1:32:35	1	05/07/2014	13:32:35	13	LACI	7	7	0.659005	1
Elliot Lake SM3-6	SM300660_0_20140706_013246.wav	0	0	3.597	SM300660_0_0_20140706_013246_000	06/07/2014	1:32:46	1	05/07/2014	13:32:46	13	LACI	5	5	0.505896	1
Elliot Lake SM3-6	SM300660_0_20140706_013340.wav	0	0	3.076	SM300660_0_0_20140706_013340_000	06/07/2014	1:33:40	1	05/07/2014	13:33:40	13	LACI	2	2	0.167879	1
Elliot Lake SM3-6	SM300660_0_20140706_013355.wav	0	0	4.23	SM300660_0_0_20140706_013355_000	06/07/2014	1:33:55	1	05/07/2014	13:33:55	13	LACI	3	3	0.391772	1
Elliot Lake SM3-6	SM300660_0_20140706_013414.wav	0	0	3.518	SM300660_0_0_20140706_013414_000	06/07/2014	1:34:14	1	05/07/2014	13:34:14	13	LACI	2	2	0.258012	1
Elliot Lake SM3-6	SM300660_0_20140706_013422.wav	0	0	9.915	SM300660_0_0_20140706_013422_000	06/07/2014	1:34:22	1	05/07/2014	13:34:22	13	LACI	10	10	0.740763	1
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Elliot Lake SM3-6	SM300660_0_20140706_013502.wav	0	0	5.18	SM300660_0_0_20140706_013502_000	06/07/2014	1:35:02	1	05/07/2014	13:35:02	13	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140706_013703.wav	0	0	3.995	SM300660_0_0_20140706_013703_000	06/07/2014	1:37:03	1	05/07/2014	13:37:03	13	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140706_025227.wav	0	0	7.443	SM300660_0_0_20140706_025227_000	06/07/2014	2:52:27	2	05/07/2014	14:52:27	14	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140706_025856.wav	0	0	4.959	SM300660_0_0_20140706_025856_000	06/07/2014	2:58:56	2	05/07/2014	14:58:56	14	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140706_025930.wav	0	0	7.368	SM300660_0_0_20140706_025930_000	06/07/2014	2:59:30	2	05/07/2014	14:59:30	14	LACI	2	2	0.245585	1
Elliot Lake SM3-6	SM300660_0_20140706_030150.wav	0	0	4.35	SM300660_0_0_20140706_030150_000	06/07/2014	3:01:50	3	05/07/2014	15:01:50	15	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140706_032347.wav	0	0	3.043	SM300660_0_0_20140706_032347_000	06/07/2014	3:23:47	3	05/07/2014	15:23:47	15	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140706_032403.wav	0	0	8.729	SM300660_0_0_20140706_032403_000	06/07/2014	3:24:03	3	05/07/2014	15:24:03	15	LACI	11	11	0.748591	1
Elliot Lake SM3-6	SM300660_0_20140706_032442.wav	0	0	3.648	SM300660_0_0_20140706_032442_000	06/07/2014	3:24:42	3	05/07/2014	15:24:42	15	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140706_032904.wav	0	0	3.564	SM300660_0_0_20140706_032904_000	06/07/2014	3:29:04	3	05/07/2014	15:29:04	15	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140706_034445.wav	0	0	6.013	SM300660_0_0_20140706_034445_000	06/07/2014	3:44:45	3	05/07/2014	15:44:45	15	LACI	3	3	0.308919	1
Elliot Lake SM3-6	SM300660_0_20140706_034527.wav	0	0	5.032	SM300660_0_0_20140706_034527_000	06/07/2014	3:45:27	3	05/07/2014	15:45:27	15	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140706_034559.wav	0	0	3.038	SM300660_0_0_20140706_034559_000	06/07/2014	3:45:59	3	05/07/2014	15:45:59	15	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140706_034615.wav	0	0	3.037	SM300660_0_0_20140706_034615_000	06/07/2014	3:46:15	3	05/07/2014	15:46:15	15	Noid	0	0	0	1
Elliot Lake SM3-6	SM300660_0_20140706_034646.wav	0	0	5.123	SM300660_0_0_20140706_034646_000	06/07/2014	3:46:46	3	05/07/2014	15:46:46	15	LACI	5	5	0.570372	1
Elliot Lake SM3-6	SM300660_0_20140706_035244.wav	0	0	3.832	SM300660_0_0_20140706_035244_000	06/07/2014	3:52:44	3	05/07/2014	15:52:44	15	Noid	0	0	0	1

APPENDIX F AGENCY CONSULTATION

Appendix F: Information Received from MNRF in the vicinity of the Elliot Lake Landfill

From: Lynette Renzetti [mailto:L.Renzetti@lglcambridge.com]
Sent: January 28, 2013 11:03 AM
To: Trottier, Jim (MNR)
Subject: RE: Elliot lake Landfill

Thank you for the information Jim – much appreciated.

I have one question. The SAR list includes Hickorynut – is that Round Hickorynut (*Obovaria subrotunda*)?

Lynette

From: Trottier, Jim (MNR) [mailto:jim.trottier@ontario.ca]
Sent: Friday, January 25, 2013 4:52 PM
To: Lynette Renzetti
Cc: Sicol, Jessica (MNR); Langis, Ilsa (MNR)
Subject: RE: Elliot lake Landfill

Hi Lynette,

I've had a chance to review the information that MNR has in our files on natural heritage features in the vicinity of the Elliot Lake Landfill, and I offer the following:

Significant Wetlands

No wetlands within Esten Township have ever been evaluated for significance, thus it is unknown if there are any provincially significant wetlands in the vicinity of the landfill.

Significant Portions of the Habitat of END or THR species

There are no Endangered or Threatened Species known to be within 1km of the landfill. That being said, there has been little or no inventory work carried out by MNR in that area which may have detected END or THR species. A list of Species at Risk known to occur within Sault Ste. Marie District is attached.

At least two Threatened species have the potential to occur in the area around the landfill: Blanding's Turtle and Whip-poor-will. Blanding's turtle has been recorded within 7 km of the site, and could be present in some of the nearby wetlands. Least bittern is another Threatened species that has been recorded within 15 km of the landfill site.

Fish Habitat

Fish habitat exists within Esten Lake, and is also likely present in First Creek and all unnamed waterbodies, water courses and wetlands in the vicinity.

Esten Lake is officially designated as a lake trout lake in the MNR policy document "Inland Ontario Lakes Designated for Lake Trout Management (May 2006)". Other fish species known to be present include lake whitefish, cisco, rainbow smelt, northern pike, longnose sucker, white sucker, rock bass, pumpkinseed, smallmouth bass, yellow perch, Iowa darter and cyprinidae. Some lake trout spawning habitat within Esten Lake has been mapped, but habitat for other species has not been identified.

Other water bodies, water courses and wetlands within 1 km of Esten Lake have not been surveyed, but likely contain at least fish habitat for cyprinids and other small-bodied fish species. Specific fish habitat has not been identified nor mapped.

Significant Wildlife Habitat

There are no significant wildlife habitats identified within 1 km of the landfill. Again, this is likely due to fact that little inventory work has been undertaken in this area to identify habitat features rather than significant wildlife habitat not being present.

There is the potential for habitat of species of conservation concern to be present (e.g. Species of Special Concern, S1 to S3 species). The following are special concern species with a higher potential to be present within 1 km of the Elliot Lake landfill site: Canada Warbler, Common Nighthawk, Golden-winged Warbler, Milksnake, Monarch, and Olive-sided Flycatcher. Snapping Turtle has been observed in Esten Lake (2007), and the NHIC has records of milksnake from the Elliot Lake area.

Significant Areas of Natural and Scientific Interest

There are no areas of natural and scientific interest identified in the vicinity of the Elliot lake landfill site.

Should you have any questions about any of the information provided, please feel free to contact me by email or phone.

Regards,

Jim

Jim Trottier
Northshore Area Biologist
Ontario Ministry of Natural Resources
62 Queen Avenue
PO Box 190
Blind River, ON P0R 1B0
Telephone: (705) 356-3018
Email: jim.trottier@ontario.ca<mailto:jim.trottier@ontario.ca>

From: Lynette Renzetti [mailto:L.Renzetti@lglcambridge.com]
Sent: December 7, 2012 9:04 AM
To: Trottier, Jim (MNR)
Cc: Sicol, Jessica (MNR)
Subject: Elliot lake

Good Morning

Attached is an information request relating to a site that LGL has been retained to investigate as part of a plan to expand the landfill in Elliot Lake. Details are included in the attached letter. Any information you might be able to provide would be appreciated. If you require additional information, or prefer to discuss by phone, my contact information is included below.

Appendix G: Groundwater and Surface Water Assessment

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City of Elliot Lake

Groundwater and Surface Water Assessment Proposed Elliot Lake Landfill Expansion

Type of Document:
Final

Project Number:
BRM-00601389-A0

Prepared By:
exp Services Inc.
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Perry Sarvas, P. Geo.
Senior Hydrogeologist, Earth & Environmental
Northeastern Ontario

Date Submitted:
2014-06-10

Legal Notification

This report was prepared by **exp** Services Inc. for the account of **City of Elliot Lake**.

Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. **Exp** Services Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this project.

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Appendix A – Drawings

Appendix B – Borehole Logs

Appendix C – Grain-size Analysis Results

Appendix D – Groundwater Quality Analytical Results

Exp Services Inc. (exp) was retained by the City of Elliot Lake to complete an impact assessment of a proposed expansion of the Elliot Lake landfill site. Our comments and recommendations, based on the review of previous studies, the results of the field investigation and our understanding of the project scope, are provided in this report.

1 Introduction

It is understood by **exp** that the City of Elliot Lake wants to expand the capacity of its current landfill site (“the Site”). The Site is located in Esten Township, approximately 1.5 km south of the City of Elliot Lake and 0.75 km north of Esten Lake. The City of Elliot Lake is applying to the MOE to expand their landfill.

The regulatory and approval requirements for the design, operation, closure and post-closure care of expanding municipal landfill sites are contained in Ontario Regulation 232/98 made under the Environmental Protection Act. As part of the application for expansion, the Ontario Ministry of the Environment (MOE) requires that the expansion be designed to mitigate negative impacts to groundwater and surface water. The requirements to address these issues are contained in the MOE documents *Landfill Standards: A Guideline on the Regulatory and Approval Requirements for New or Expanding Landfilling Sites*, revised January 2012.

2 Site Description

The 15.7 hectare Site is located in Esten Township, approximately 1.5 km south of the City of Elliot Lake and 0.75 km north of Esten Lake (Figure 1). The Site location description is *Part of Parcel 8310, Algoma East Section; Part 1,2 and 3, Reference Plan 1R-4831 City of Elliot Lake, District of Algoma*. The existing landfill is operated under Ministry of the Environment (MOE) Amended Provisional Certificate of Approval Number A560810 issued in 2006, which certifies a 7.41 hectare landfill within a 15.7 hectare Waste Disposal Site.

The Site is accessed from a paved road that originates at Pearson Drive near the intersection with Esten Drive. The Site entrance is located near the southeast corner, approximately 75 m north of the Elliot Lake wastewater treatment plant and 600 m southeast of the active waste fill area.

According to **exp** (2011) and Pinchin Environmental (2012), the Site began operation on October 12, 1982. M.J. Perkins (1984) estimated the site capacity at 842,000 m³ with a maximum final contour of 335 m above sea level (masl), side slopes of 4:1; and a 94, 000 m³ allowance for final cover. From 2000 to 2012, the landfill site received non-hazardous, solid industrial, commercial and domestic waste from the City of Elliot Lake. A site survey conducted in 2002 estimated the remaining capacity at 274,000 m³. Earth Tech (2002) estimated the annual fill rate at 12,000 m³/year. Utilizing this rate, Pinchin Environmental estimated the remaining site volume as of March 2012 at 60,000 m³ with the remaining life span of the site estimated to be approximately 5 years.

A north-south hydroelectric power line corridor is located at the east end of the Site, approximately 30 m from the Site entrance.

2.1 Site Physiography

The Site is situated in an elongated bedrock depression which is open to the east and west (Earth Tech 2008). The site is bounded to the north and south by steep, tree-covered ridges of Precambrian bedrock. Localized relief exceeds 50 m.

The bedrock depression in which the existing waste fill area is located slopes from east to west and drains toward a nearby wetland and Angel Creek. The east part of the Site slopes moderately eastward toward the Site entrance and the Elliot Lake wastewater treatment plant (Figure 2).

2.2 Area Geology

Henderson and Halstead (1992) described the area as underlain by a bedrock-drift complex characterized by thin (generally less than 1 m), discontinuous soils over bedrock. At the Site, the bedrock is described as covered by glacial till or sand and gravel. The west part of the Site is occupied by recent organic deposits comprising peat, muck and marshland material. The east part of the Site, in the vicinity of the Site entrance, contains a localized area of sandy alluvium.

Abraham and Robertson (1970) described the bedrock geology in the area. The Site is located in an area where older (Archean) massive to porphyritic granite is intruded by younger (Proterozoic) dykes and sills of Nipissing diabase/gabbro. Differential erosion around the hard, resistant Nipissing intrusive rocks accounts for the bedrock valley and generally rugged topography around the Site.

2.3 Hydrogeology

Morrison Beatty Limited (1980) completed a hydrogeological investigation of the Site in 1979 when it was originally proposed as a landfill. The hydrogeological report made note of the site physiography as an east-west trending bedrock valley. The valley floor itself slopes in two directions. The west part of the valley (where the existing waste fill area is located) slopes westward toward a wetland. The east part of the valley (where the Site access road is located) slopes eastward toward the Site entrance and the Elliot Lake wastewater treatment plant. The apex (or "saddle") of this valley floor is located at the east edge of the existing waste fill area (Figure 2).

Morrison Beatty Limited (1980) completed ten (10) boreholes in seven (7) locations in what is now the existing waste fill area of the Site. Monitoring wells were installed in all the boreholes. The investigation found that the soil thickness was highest in the centre of the bedrock valley; however, soil thickness progressively decreased from west (adjacent to the wetland) to east ("saddle" of the bedrock valley). Soil thickness also progressively decreased along the north and south sides of the bedrock valley, eventually becoming areas of predominantly bedrock exposure.

Morrison Beatty Limited (1980) described the middle of the bedrock depression as generally underlain by a fine to medium silt overlying sandy glacial till. Proximal to the north and south bedrock ridges, boreholes did not encounter the silt layer. Sandy deposits were encountered in OW4, OW6 and OW7 stratified with the silt and till. A surficial layer of peat up to 0.6 m in thickness was encountered in boreholes near wetland areas. Bedrock surface was encountered between 1.8 m and 9.4 m below ground surface.

Results of the 1979 investigation indicated that the site was a groundwater discharge area and that groundwater flow in the west part of the Site was toward the west toward a nearby stream in the centre of the wetland. No groundwater quality analysis was completed in this investigation.

2.4 Surface Water Drainage

The landfill site is located in two small (<10 hectare) but separate drainage area. In the west part of the Site, drainage from surrounding bedrock ridges flows towards the landfill and then westward to a nearby wetland. The wetland drains via First Creek to Angel Creek and then to Esten Lake (Figure 1).

In the east part of the Site, drainage from surrounding bedrock ridges flows towards the centre of the valley and the Site access road, then eastward toward the Site entrance. A drainage channel near the Site entrance drains southward to a larger stream 60 m to the south. This stream, which flows along the north side of the Elliot Lake wastewater treatment plant, flows to the southwest and eventually discharges to Esten Lake approximately 450 m southwest of the Site entrance (Figure 1).

Morrison Beatty Ltd. (1980) described the west part of the Site as a groundwater discharge area. Shallow groundwater beneath the site is expected to discharge to the adjacent wetland and stream.

3 Scope of Work

The Elliot Lake landfill site is reaching its approved capacity within the designated waste fill area, and an expansion will be required to continue landfilling operations at this Site. The scope of work for this groundwater and surface water impact assessment is premised on the following assumptions:

1. The western edge of existing waste fill area is adjacent to a wetland area. Because of the wet conditions, soil stability and presence of a perennial stream, expansion of the waste fill area into this wetland is not considered to be a viable option.
2. The Site was originally intended to function as a natural attenuation landfill. However, a leachate collection and 1,500 m² sand filter bed filter treatment system was constructed in 1998 at the west boundary of the landfill as a preventative measure to minimize landfill leachate seepage and impacts on the natural environment. Because of this leachate management requirement, emplacement of another “lift” of waste above the existing waste pile is not considered a viable option.
3. The presence of steep slopes and bedrock ridges mean expansion to the north or south are not viable options.

The scope of work for this investigation was based on expansion of the waste fill area in an eastward direction from the existing waste fill area.

Ontario Regulation 232/98 (Sections 8 and 9) state that the total waste disposal of an existing landfill site shall not be established unless a written report is prepared describing the geologic, hydrogeologic and surface water conditions, and describing groundwater and surface water protection. The objective of this study is to assess potential impacts to groundwater and surface water from the proposed landfill expansion. This was accomplished through:

- Review of existing information;
- Completion of nine (9) boreholes at the Site and collection of soils information from the boreholes;
- Installation of monitoring wells in three (3) of the boreholes;
- Measurement of static water level in each of the monitoring wells;
- Collection of representative groundwater samples from each monitoring well and submission of the samples for water quality analysis.

3.1 Borehole Drilling and Soil Sampling

A total of nine boreholes were completed on February 27th, 2013 to shallow depths ranging from 0.6 m to 0.9 m. The boreholes were completed adjacent to the Site access road, from the Site entrance to the eastern edge of the existing waste fill area. Locations of the boreholes are shown in Figure 2, Appendix A. Borehole logs are contained in Appendix B.

The boreholes were drilled by Sonic Soil Sampling (Ontario) Inc (“Sonic”) using a portable hand-held Pionjar drill. All boreholes were completed to refusal in assumed bedrock surface.

Soil samples were collected from each of the boreholes. Representative soil samples from all the boreholes (except for BH1) were submitted to **exp**’s geotechnical laboratory for grain size analyses. Table 3.1 summarizes sampling information for the samples submitted for grain size analysis.

Table 3.1 Soil Samples submitted for Grain Size Analyses

Borehole Identification	Sample Identification	Sample Depth (m)
BH2	BH2 SS1	0.51
BH2	BH2 SS2	0.51
BH3	BH3 SS1	ground surface
BH4	BH4 SS1	ground surface
BH5	BH5 SS1	0.41
BH5	BH5 SS2	0.41
BH6	BH6 SS1	0.56
BH7	BH7 SS1	0.61
BH8	BH8 SS1	0.18
BH9	BH9 SS1	0.28

3.2 Monitoring Well Installation

Monitoring wells were installed in three boreholes (BH3, BH7 and BH9) and labeled MW100, MW200 and MW300, respectively. The decision to install monitoring wells in these boreholes was based on depth (all three boreholes were 0.9 m deep) and interception of saturated soils (assumed groundwater). Monitoring wells were installed in general accordance with the Ontario Water Resources Act - R.R.O. 1990, Regulation 903 - Amended to O. Reg. 128/03 by a licensed well contractor (Sonic). The monitoring wells were constructed of 37 mm Schedule 40 PVC screen and riser. The monitoring wells consisted screens and risers, and a protective casing at ground surface. The well screen has a slot size of approximately 0.25 mm (slot 10) and was sealed at the base with a PVC end cap. The annular space around the well screen was backfilled with silica sand. The sand pack was extended slightly above the screen to allow for compaction of the sand pack and expansion of the overlying well seal. A granular bentonite seal was placed in the borehole annulus from the top of the sand pack to approximately ground surface.

Static water levels were measured in the monitoring wells. Representative groundwater samples were collected from each of the wells and submitted to AGAT Laboratories for analysis of a suite of water quality parameters.

When the use of the monitoring wells are no longer required, they must be decommissioned in accordance with the procedure outlined in the Ontario Water Resources Act - R.R.O. 1990, Regulation 903 - Amended to O. Reg. 128/03. Details of the well installations are provided on the monitoring well logs in Appendix B.

3.3 Surface Water Monitoring

No perennial natural streams were observed at the Site. However, drainage channels (possible intermittent streams or drainage ditches) were observed at the base of the hill, near the hydro corridor and the Site entrance. It is likely that any surface water originating in the east part of the Site will collect in these drainage channels and flow southeastward to a larger stream approximately 60 m to the south of the Site entrance. This stream flows to the southwest and eventually discharges to Esten Lake approximately 450 m southwest of the Site entrance.

Because no perennial natural streams were observed in the east part of the Site, no surface water samples were collected for analysis.

4 Interpretation of Findings

Details of the soils encountered during the borehole program are summarized on the attached borehole logs in Appendix B.

Subsurface investigations indicated the presence of shallow soils (<1 m thick) in the Site's bedrock valley between the existing waste fill area and the Site entrance.

A summary of the Site stratigraphy is provided below.

4.1.1 Road Bed Materials

Construction fill materials comprise the bed of the Site access road through the centre of the study area, and pads for Site infrastructure and waste storage areas.

Boreholes were not completed through the road bed material or other fill areas. However, the granular material is expected to be more permeable than the native subsoils beneath the Site.

4.1.2 Native Subsoils –Silt, Silty Sand

All boreholes encountered brown to grey silt with some orange mottling and/or brown fine sand to silt with trace gravel. These native soils were wet with no detectable stains or odours.

Grain size sieve analyses were conducted on representative samples from all of the boreholes with the exception of BH1. Results are provided in Appendix C. The results indicate that soils in the west part of the study area (BH2, BH3 and BH4) are fine sand to sandy silt, and are generally coarser-grained than soils in the east (BH5, BH6, and BH7), which are silts. The exception is BH9/MW300, which is a sandy silt/fine sand. BH8 contained a significant amount of organic material, and could not be classified from grain size analysis.

The native soil thickness ranged from nil (bedrock exposure) to 1.3 m. Most boreholes encountered refusal (assumed bedrock) at a depth of 0.6 m.

4.1.3 Bedrock

Bedrock was encountered at a shallow depth in all boreholes. BH3, BH7 and BH9 encountered bedrock at depths ranging from 0.83 m to 1.27 m below ground surface (bgs). All other boreholes encountered bedrock at approximately 0.6 m bgs.

Abraham and Robertson (1970) described the bedrock geology beneath the bedrock valley in the Site as massive to porphyritic granite

4.2 Hydrogeological Conditions

4.2.1 Aquifer Characterization

The monitoring wells installed in February 2013 were completed into shallow overburden. The observed static groundwater level was close to ground surface in all three wells. Table 4.1 summarizes the characteristics of the monitoring wells.

Table 4.1 Monitoring Well Characteristics

Well Identification	Well depth ¹	Depth to Groundwater ¹	Groundwater Saturation Interval ²
	(m)	(m)	(m)
MW100	0.83	0.44	0.39
MW200	1.27	0.69	0.58
MW300	1.21	0.62	0.59

Notes:

- 1) Measured from ground surface.
- 2) Based on static water levels measured December 21, 2012.

Soils in the other six (6) boreholes completed in February 2013 were wet, and are interpreted to have been partially saturated at that time. However, the soils are shallow and have limited groundwater storage capacity. This area of the Site (from the existing waste fill area to the Site entrance) has a moderate to high slope to the east. It is expected that groundwater saturation fluctuates significantly in these soils, related to “wet” and “dry” weather conditions. During extended wet periods, it is likely that these soils become quickly saturated, with groundwater seepage and overland flow occurring at the base of the slope (i.e. near the Site entrance).

Bedrock beneath the Site is a crystalline intrusive igneous rock with a low fracture density. This type of rock typically has a very low permeability. For the purposes of this study, the bedrock surface is interpreted to be impermeable.

Based on these observations, groundwater movement at the Site (i.e. potential leachate-impacted groundwater) is expected to occur within the shallow overburden.

4.2.2 Groundwater Movement

As with the existing landfill area, it is expected that groundwater movement in the east part of the Site will be bedrock-controlled. Groundwater will be transmitted through the shallow soils in the bedrock valley eastward toward the Site entrance.

Groundwater was encountered in all three monitoring wells at shallow depths. However, the shallow soils and relatively steep ground slope in this area suggest that groundwater levels fluctuate significantly. Because of this shallow soil condition, the hydraulic gradient of shallow groundwater is interpreted to be controlled by the topography of the bedrock surface.



It is expected that groundwater movement in the east part of the Site will be bedrock-controlled. Groundwater will be transmitted through the shallow soils in the bedrock valley eastward toward the Site entrance. Soils have been shown to be consistently shallow in the east part of the Site, so ground surface topography is expected to be reflective of bedrock surface topography. Based on these conditions, it is interpreted that hydraulic gradient for the shallow groundwater regime is indicated by the ground surface gradient.

Figure 2 shows ground surface elevation contours in the east part of the Site. Figure 3 shows a cross-sectional profile of the Site from the active fill area to the Site entrance. The east edge of the existing waste fill area is at an approximate elevation of 310 m asl. The elevation at the Site entrance is at an approximate elevation of 297 m asl. The horizontal distance between the east edge of the existing waste fill area and the Site entrance is 550 m. This would equate to a hydraulic gradient of 0.024.

The soils were too shallow to allow for hydraulic testing of the monitoring wells, and the soils were too fine-grained to determine the hydraulic conductivity of granular soils using the Hazen method. Field observation and grain size analyses indicate that the soils are generally poorly sorted and range from silt to fine sand. It is estimated that the soils have hydraulic conductivity (k) in the range of 1×10^{-5} cm/second to 1×10^{-6} cm/second.

Average linear velocity (v) of groundwater can be estimated from the following equation:

$$v = \frac{k \ i}{n}$$

Where,

k = hydraulic conductivity;

i = hydraulic gradient; and,

n = effective porosity.

Results indicate the soils have k in the range of 1×10^{-6} cm/second to 1×10^{-5} cm/second. Hydraulic gradient (i) is estimated at 0.024 in this part of the Site. For an estimated effective porosity of 0.3, average linear groundwater velocity ranges from 0.03 m/year to 0.25 m/year under saturated conditions. However, soils are shallow in this area, and soil saturation is expected to fluctuate significantly. It is also expected that the more permeable granular fill of the access road bed, and seepage and overland flow in over-saturated soils, would have significant contribution in the transmission of groundwater in this area.

4.2.3 Groundwater Seepage

Leachate mounding beneath the existing waste fill area led to seepage in the west part of the Site, and the same concern exists for the proposed expansion area in the east. An evaluation of potential seepage of leachate-impacted groundwater in the east part of the Site was performed.

It is assumed that leachate is mainly generated by infiltrating precipitation. Environment Canada precipitation data for the Sudbury airport weather station (approximately 125 km east of the Site) between 1971 and 2000 indicate an average annual precipitation rate of 900 mm. Environment Canada data for 1995 indicates that the Manitoulin Island area was in a zone with average annual evapotranspiration in the range of 360 mm. Based on these data, an average annual moisture surplus of 540 mm is designated for the Site.

It has been assumed that this entire moisture surplus is available for infiltration within the fill area. It is assumed that the expanded waste fill area will have a footprint of approximately 30,000 m² (200m by 150 m). Based on the above, an average leachate generation rate of 50,000 L/day was estimated.

The following equations (where the aquifer is unconfined and assumed to have infinite extent) provide a prediction of groundwater mounding beneath an infiltration area (based on Hantush, 1967):

$$h_m^2 - h_i^2 = Z_m(t) = (2w/K)vtS^*(0.5A/(4vt)^{1/2}, 0.5B/(4vt)^{1/2})$$

$$v = Kb/\varepsilon$$

$$b = 0.5[h_i(0) + h(t)]$$

where,

h_m is maximum height of mound above aquifer base;

h_i is initial height of water table above aquifer base;

K is hydraulic conductivity;

ε is specific yield;

w is constant rate of percolation from rectangular recharge area of length A and width B ;

b is a constant of linearization; and

the function S^* is an integral expression.

For K of 1×10^{-4} m/second, ε of 0.2, h_i of 0.5 m and an infiltration duration of one year, a maximum water-table rise of approximately 1 m is predicted.

Borehole drilling has indicated the presence of shallow soils (generally < 1 m thick) in the east part of the Site. Groundwater, where encountered, was less than 0.6 m below ground surface. Based on these conditions, it is concluded that there is a significant risk that leachate-impacted groundwater will seep and discharge to ground surface downgradient of the proposed waste expansion area.

4.2.4 Groundwater Quality

Representative groundwater samples were collected from the new monitoring wells MW100, MW200 and MW300. The groundwater samples were submitted for analysis to AGAT Laboratories (and accredited analytical facility). Groundwater samples were analyzed for the Column 1 (Comprehensive List for Groundwater and Leachate) parameters in Schedule 5 of the MOE *Landfill Standards: A Guideline on the Regulatory and Approval Requirements for New or Expanding Landfilling Sites, June 2010*.

Analytical results tables and Certificates of Analysis are provided in Appendix D. Analytical results for selected "leachate indicator" parameters are summarized in Table 4.2. Results are compared to Ontario Drinking Water Standards (ODWS) where applicable.

Analytical results for all three samples show consistently low levels of total dissolved solids, sodium, chloride, alkalinity and sulphate. The pH levels in all three samples were low (just below the ODWS of 6.5).

Table 4.2 Groundwater Quality Results

Well Identification			MW 100	MW 200	MW 300
Health-related Parameters					
	Unit	ODWS			
Nitrate as N	mg/L	10.0	0.15	0.14	0.17
Sodium	mg/L	20 (200)	1.26	9.18	9.56
Barium	mg/L	1	0.018	0.018	0.03
Boron	mg/L	5	<0.010	0.016	0.012
Aesthetic Parameters					
pH	pH Units	(6.5-8.5)	5.89	6.33	6.48
Total Dissolved Solids	mg/L	(500)	44	90	96
Alkalinity (as CaCO ₃)	mg/L	(30-500)	<5	20	47
Chloride	mg/L	(250)	1.24	11.2	10.8
Sulphate	mg/L	(500)	4.53	13	7.38
Dissolved Organic Carbon	mg/L	(5)	4.8	7.7	6.8
Iron	mg/L	(0.3)	0.057	0.156	0.621

Notes:

"ODWS" means Ontario Drinking Water Standard

Bold and Shaded means ODWS criterion was exceeded

The results show no indication of leachate impact on the shallow groundwater in the east part of the Site. Indeed, the low levels of dissolved constituents and pH suggest that the groundwater is juvenile, consisting of recently-infiltrated precipitation and runoff.

5 Groundwater Impact Assessment

5.1 Reasonable Use

The Ontario Ministry of the Environment (MOE) has guidelines for determining the “reasonable use” of groundwater on property adjacent to contaminant sources such as a waste disposal site, and for determining acceptable contaminant discharge levels. These are *Guideline B-7: The Incorporation of the Reasonable Use Concept into MOEE Groundwater Management Activities* and *Procedure B-7-1: Determination of Contaminant Limits and Attenuation Zones*. These documents establish the basis and provide the quantitative methodology for applying the “reasonable use” concept. The quantitative approach is used by establishing contaminant discharge criteria (CDC), which set limits on the acceptable degree of groundwater quality degradation at the boundary between a waste disposal site property and an adjacent property.

To apply Guideline B-7, the “reasonable use” for the groundwater underneath adjacent properties must be selected. The Elliot Lake landfill site is located in an un-serviced area in the outskirts of the municipality. It is reasonable to postulate that adjacent properties could utilize groundwater as a drinking water source. Consequently, the “reasonable use” of groundwater on adjacent property has been designated as potential drinking water.

The proximity of the Site to Esten Lake is also a consideration. Groundwater and leachate discharges to the Esten Lake catchment have the potential for adverse impact to this water body. Consequently, another “reasonable use” of groundwater has been designated as discharge and baseflow to the Esten Lake watershed.

5.2 Landfill Expansion and Leachate Management

The existing landfill is operated as an engineered landfill. Mounding of leachate beneath the waste pile led to seepage. As a result, a leachate collection and sand filter treatment system was constructed in 1998 at the west boundary of the landfill. At present, leachate is collected and filtered through a 1,500 m² sand filter bed.

As previously described, the site physiography consists of an east-west trending bedrock valley. The west part of the valley (where the existing waste fill area is located) slopes westward toward a wetland. The east part of the valley (where waste fill area expansion is proposed) slopes eastward toward the Site entrance and the Elliot Lake wastewater treatment plant. The apex (or “saddle”) of this valley floor is located at the east edge of the existing waste fill area (Figure 2). So, expansion of the waste fill area to the east should not exacerbate leachate mounding and seepage in the existing waste fill area.

However, similar subsurface features exist in the east part of the Site. Based on these conditions, it has been concluded that there is a significant risk that leachate-impacted groundwater will seep and discharge to ground surface downgradient of the proposed waste expansion area. As such, it is anticipated that leachate collection and treatment will be required in the proposed waste expansion area.

5.3 Predictive Groundwater Quality at Site Boundary

As previously stated, it is anticipated that leachate collection and treatment will be required in the proposed waste expansion area. This engineered system will need to be designed and operated to ensure that impacts to groundwater at the Site boundaries are consistent with the designated “reasonable uses” of groundwater (i.e. drinking water source and baseflow to the Esten Lake catchment).

6 Surface Water Impact Assessment

It is proposed that the waste fill area be expanded eastward toward the Site entrance and the Elliot Lake wastewater treatment plant. Surface drainage in the proposed expansion area will be contained within the narrow bedrock valley, and will flow eastward toward the Site entrance. A drainage channel near the Site entrance drains southward to a larger stream 60 m to the south. This stream, which flows along the north side of the Elliot Lake wastewater treatment plant, flows to the southwest and eventually discharges to Esten Lake approximately 450 m southwest of the Site entrance (Figure 1). So, surface drainage from the proposed expansion area has the potential to impact Esten Lake (which has aquatic habitat and, because of its proximity to Elliot Lake, recreational use potential).

Table 6.1 summarizes the range of leachate quality results for water quality monitoring from the years 2000 to 2011. The results are for leachate samples collected from the leachate collection system upstream of the sand filter bed (the “Sample Hatch” location).

Table 6.1 Range of Leachate Quality Results, 2000 - 2011

Parameter	PWQO	Range 2000-2011
Aluminum	-	<0.001 - 1.13
Calcium	-	110 - 233
Iron	0.3	<0.020 - 50.7
Magnesium	-	37.4 - 63.1
Manganese	-	0.0294 - 1.21
Potassium	-	36.5 - 233
Sodium	-	71.1 - 423
Zinc	0.02	<0.001 - 0.102
Hardness	-	65 - 840
Ammonia	0.02	14.3 - 244
Nitrate	-	0.044 - 9.97
BOD	-	0.6 - 60
COD	-	153 - 490
Phenols	0.001	<0.001 - 0.241
Total Phosphorus	0.01-0.03	<0.02 - 11.4

Notes:

"PWQO" means Provincial Water Quality Objective.

Bold and Shaded means PWQO criterion exceeded in at least one sampling event.

The analytical results show typically elevated levels of "leachate indicator" parameters, including sodium, hardness and nitrate. The results also show that PWQO criteria were exceeded at least once for iron, zinc, ammonia, phenols and total phosphorus. This indicates that untreated leachate has the potential for adverse impact to nearby surface water bodies.

It is noted that surface drainage from the proposed waste expansion area eventually discharges to a creek at a point downstream of the Elliot Lake wastewater treatment plant. It must be assumed that water quality in this creek has already been compromised by the wastewater treatment outflow.

It is concluded that surface drainage (including stormwater) in the proposed waste expansion area will need to be managed. A monitoring program should be established to monitor untreated stormwater and runoff from this area. Surface water showing evidence of leachate impact may need to be re-directed to the leachate treatment system.

7 Operational Considerations

This report addresses potential groundwater impacts from the proposed expansion of the Elliot Lake landfill. Many aspects of the design and operation (e.g. operating hours, slope stability, waste fill methods, waste segregation) are beyond the scope of this report. However, some operational considerations will affect leachate management and water quality impacts, and are addressed below.

7.1 Leachate Generation

It is proposed that the expanded landfill continue to be operated as an area fill operation. Potential impacts to both groundwater and surface water can be ameliorated by minimizing leachate generation in the waste fill area. Best management practises to minimize leachate generation include:

1. Establishment and maintenance of daily cover;
2. Progressive establishment of final cover as sections of the waste fill area reach design capacity;
3. Waste compaction;
4. Surface sloping to reduce infiltration and promote runoff in the waste fill areas;
5. Perimeter drainage channels to reduce and re-direct runoff in the waste fill areas.

7.2 Leachate Management

The proposed waste expansion area is characterized by thin soils over low-permeability bedrock with a shallow and fluctuating water table. These conditions bear a significant risk that leachate-impacted groundwater will seep and discharge to ground surface downgradient of the proposed waste expansion area. As such, it is anticipated that leachate collection and treatment will be required in the proposed waste expansion area.

Potential measures for leachate management may include:

Leachate Capture and Treatment.

The Site is underlain by shallow soils. Leachate capture trenches could be established along the toes of the waste fill areas. Leachate within the trenches could then be treated *in-situ* prior to re-infiltration, or could be pumped and treated off-site. Consideration should also be given to utilizing the nearby Elliot Lake wastewater treatment plant for leachate treatment.

Passive Treatment Corridors.

Site conditions in the proposed waste expansion area are somewhat similar to those of the existing waste fill area. As such, a similar leachate collection and treatment system may be effective in the proposed expansion area. The shallow soils, (effectively) impermeable bedrock, narrow bedrock valley and pronounced eastward slope are all favourable conditions for leachate collection downgradient of the proposed fill area. Monitoring results indicate that the sand filter bed of the existing leachate treatment system has been effective in attenuating dissolved constituents, and could be incorporated into the design of the proposed waste expansion area.

7.3 Groundwater Monitoring

It is important to monitor groundwater quality at the expanded landfill site to determine whether leachate collection and treatment are effective.

It is recommended that the existing monitoring program in the west part of the Site be continued.

In addition, it is recommended that two (2) monitoring wells be installed downgradient of the proposed waste expansion area, in the centre of the bedrock valley. One monitoring well should be installed proximal to the boundary of the expanded waste fill footprint. The other monitoring well should be installed proximal to the east boundary of the Site, near the Site entrance. The purpose of these monitoring wells would be to monitor “outbreak” of leachate-impacted groundwater downgradient of the waste fill area.

It is further recommended that a background monitoring well be installed at the Site. The well should be located cross-gradient of both the existing and the proposed expanded waste fill areas, in an area with little to no risk of leachate impact. The purpose of this monitoring well would be to characterize background groundwater quality in this area prior to leachate impact.

For the initial phase, the principal objectives of the groundwater monitoring program will be to establish background groundwater quality and source leachate “strength,” and to monitor “outbreak” of leachate-impacted groundwater downgradient of the waste fill area. Components of the initial phase of groundwater monitoring program should include:

- Monitoring of all monitoring wells three (3) times annually in the spring, summer and autumn.
- Collection and submission of representative groundwater samples from each monitoring well for analysis of the Column 1 (Comprehensive List for Groundwater and Leachate) parameters in Schedule 5 of the MOE *Landfill Standards: A Guideline on the Regulatory and Approval Requirements for New or Expanding Landfilling Sites, June 2010*.
- Preparation and submission of annual monitoring reports.

Eventually, as Site conditions and leachate impacts become better understood, it is anticipated that monitoring requirements (monitoring frequency; number of monitoring wells; analytical parameters; reporting frequency) could be reduced. It is anticipated that the initial phase of groundwater monitoring will last between three and five years.

7.4 Surface Water Monitoring

It is important to monitor surface water quality downgradient of the expanded landfill site to determine whether leachate collection and treatment are effective.

It is recommended that the existing surface water monitoring program in the west part of the Site be continued.

In addition, it is recommended that surface water monitoring stations be established downgradient of the proposed waste expansion area. Surface water monitoring stations should be established in drainage channel near the Site entrance drains, in the larger stream 60 m to the south of the Site entrance, and in the stream where it discharges to Esten Lake approximately 450 m southwest of the Site. The purpose of these monitoring stations would be to monitor “outbreak” of leachate-impacted surface water downgradient of the waste fill area.

Components of the initial phase of the surface water monitoring program should include:

- Monitoring of all surface water monitoring stations three times annually in the spring, summer and autumn.

- Collection and submission of representative surface water samples from each monitoring well for analysis of the Column 3 (Comprehensive List for Surface Water) parameters in Schedule 5 of the MOE *Landfill Standards: A Guideline on the Regulatory and Approval Requirements for New or Expanding Landfilling Sites, June 2010*.
- Preparation and submission of annual monitoring reports.

Eventually, as Site conditions and leachate impacts become better understood, it is anticipated that monitoring requirements (monitoring frequency; number of monitoring stations; analytical parameters; reporting frequency) could be reduced. It is anticipated that the initial phase of surface water monitoring will last between three and five years.

7.5 Contingency Measures

The predictive assessment indicates that the expanded landfill can be operated as an engineered landfill site. The design of the landfill should include a leachate management system that protects downgradient groundwater and surface water quality. It is essential to establish a Contingency Plan to address situations where the leachate management system does not achieve this objective.

As previously stated, potential impacts to groundwater and surface water can be ameliorated by minimizing leachate generation in the waste fill area. Some best management practises are listed in Section 7.1, and should be considered for incorporation in the Contingency Plan.

The existing waste fill area has a leachate collection and 1,500 m² sand filter bed filter treatment system at the west boundary of the landfill that was constructed in 1998. Water quality monitoring has indicated that this leachate treatment system has been effective in attenuating leachate, and could be incorporated into the design of the proposed waste expansion area. The Contingency Plan should provide additional measures if this system proves to be ineffective. Other potential contingency measures may include:

- Leachate Capture and Treatment. If the sand filter bed proves to be ineffective, leachate within the bed could be pumped then treated *in-situ* prior to re-infiltration. Potential treatment methods include aeration, oxidation, carbon filtration and chemical precipitation. Alternatively, the leachate could be treated off-site (including transport to the nearby Elliot Lake wastewater treatment plant).
- Alternative Passive Treatment. If the sand filter bed proves to be ineffective, the bed could be replaced with other media for the passive flow-through treatment of leachate. Depending on the contaminant of concern, the media may promote the oxidation, adsorption and/or precipitation of dissolved constituents. Alternative media included glauconite, carbonate and mixed media with organic content.

8 Summary and Recommendations

The City of Elliot Lake is applying to expand the capacity of its current landfill site located in Esten Township, approximately 1.5 km south of the City of Elliot Lake and 0.75 km north of Esten Lake (Figure 1). The existing landfill is operated under MOE Amended Provisional Certificate of Approval Number A560810 issued in 2006.

The 7.41 hectare landfill within a 15.7 hectare Waste Disposal Site is currently operated as an engineered landfill with passive treatment of leachate in a sand filter bed at the west toe of the waste fill area. The Site began operation in 1982 and, from 2000 to 2012, received non-hazardous, solid industrial, commercial and domestic waste from the City of Elliot Lake. As of March 2012, the Site was estimated to have a remaining site volume of 60,000 m³ and a remaining life span of approximately 5 years.

The Site is situated in an elongated bedrock depression which is open to the east and west. The site is bounded to the north and south by steep, tree-covered ridges of Precambrian bedrock. The existing waste fill area is located at the bottom of the valley in an area that slopes from east to west and drains toward a nearby wetland and Angel Creek. The east part of the Site slopes moderately eastward toward the Site entrance and the Elliot Lake wastewater treatment plant.

The Site is underlain by thin (generally less than 1 m), discontinuous soils over bedrock. The west part of the Site is occupied by recent organic deposits comprising peat, muck and marshland material. The east part of the Site, in the vicinity of the Site entrance, contains a localized area of sandy alluvium. The bedrock comprises Archean massive to porphyritic granite intruded by Proterozoic dykes and sills of Nipissing diabase/gabbro. Differential erosion around the hard, resistant Nipissing intrusive rocks accounts for the bedrock valley and generally rugged topography around the Site.

The site physiography controls hydrogeological conditions at the Site. The bedrock valley floor slopes in two directions. The west part of the valley (where the existing waste fill area is located) slopes westward toward a wetland. The east part of the valley (where waste fill expansion is proposed) slopes eastward toward the Site entrance and the Elliot Lake wastewater treatment plant. The apex (or "saddle") of this valley floor is located at the east edge of the existing waste fill area.

Morrison Beatty Limited (1980) described the west part of the Site as a groundwater discharge area, with groundwater flow in thin soils toward the west discharging to a nearby stream in the centre of the wetland.

The landfill site is located in two separate drainage area. In the west part of the Site, drainage from surrounding bedrock ridges flows towards the landfill and then westward to a nearby wetland. The wetland drains via First Creek to Angel Creek and then to Esten Lake. In the east part of the Site, drainage is towards the centre of the valley and the Site access road, then eastward toward the Site entrance. A drainage channel near the Site entrance drains southward to a larger stream 60 m to the south. This stream, which flows along the north side of the Elliot Lake wastewater treatment plant, flows to the southwest and eventually discharges to Esten Lake approximately 450 m southwest of the Site entrance.

The objective of this study is to assess potential impacts to groundwater and surface water from the proposed landfill expansion. Prior to field investigations, existing technical information on the Site was reviewed. In February 2012, a total of nine boreholes were completed in the east part of the Site to shallow depths ranging from 0.6 m to 0.9 m. The boreholes were all located at the bottom of the bedrock valley, between the Site entrance and the eastern edge of the existing waste fill area. Soil samples were collected from each of the boreholes, and representative soil samples were submitted for grain size analyses.

Because of the shallow soil conditions and lack of groundwater, monitoring wells were installed in only three boreholes. Static water levels were measured in the monitoring wells. Representative groundwater samples were collected from each of the wells and submitted to AGAT Laboratories for analysis of a suite of water quality parameters.

The east part of the Site is underlain by shallow soils (nil to 1.3 m) in the Site's bedrock valley between the existing waste fill area and the Site entrance. All boreholes encountered brown to grey silt with some orange mottling and/or brown fine sand to silt with trace gravel. These native soils were wet with no detectable stains or odours. Grain size analyses indicate that soils are fine sand to silt, and are generally coarser-grained in the west. Construction fill materials comprise the bed of the Site access road through the centre of the study area, and pads for Site infrastructure and waste storage areas.

Depth to groundwater in the three monitoring wells ranged from 0.39 m to 0.59 m. Soils in the other six boreholes were wet, and are interpreted to have been partially saturated at that time. However, the soils are shallow and have limited groundwater storage capacity. This area of the Site has a moderate to high slope to the east. It is expected that groundwater saturation fluctuates significantly in these soils, related to "wet" and "dry" weather conditions. During extended wet periods, it is likely that these soils become quickly saturated. Bedrock beneath the Site is a crystalline intrusive igneous rock with a low fracture density and is interpreted to be impermeable. Leachate-impacted groundwater is expected to occur within the shallow overburden.

The soils have hydraulic conductivities in the range of 1×10^{-6} cm/second to 1×10^{-5} cm/second. Hydraulic gradient (i) is estimated at 0.024 in this part of the Site. For an estimated effective porosity of 0.3, average linear groundwater velocity ranges from 0.03 m/year to 0.25 m/year under saturated conditions. However, soils are shallow in this area, and soil saturation is expected to fluctuate significantly. It is also expected that the more permeable granular fill of the access road bed, and seepage and overland flow in over-saturated soils, would have significant contribution in the transmission of groundwater in this area.

Leachate mounding and water table rises caused by infiltration is predicted to be up to 1 m is predicted. Because of the shallow soil conditions at the Site, it is concluded that there is a significant risk that leachate-impacted groundwater will seep and discharge to ground surface downgradient of the proposed waste expansion area.

Analytical results for the representative groundwater samples collected from monitoring wells MW100, MW200 and MW300 show no indication of leachate impact on the shallow groundwater in the east part of the Site. Indeed, the low levels of dissolved constituents and pH suggest that the groundwater is juvenile, consisting of recently-infiltrated precipitation and runoff.

The Elliot Lake landfill site is located in an un-serviced area in the outskirts of the municipality. Consequently, the "reasonable use" of groundwater (per MOE Guideline B-7) on adjacent property has been designated as potential drinking water. However, another "reasonable use" of groundwater has been designated as discharge and baseflow to the Esten Lake watershed.

Monitoring results of leachate quality from the existing waste fill area show typically elevated levels of "leachate indicator" parameters, including sodium, hardness and nitrate. The results also show that PWQO criteria were exceeded at least once for iron, zinc, ammonia, phenols and total phosphorus. This indicates that untreated leachate has the potential for adverse impact to nearby surface water bodies.

Based on the results of this groundwater and surface water impact assessment, the following conclusions are provided:

- Leachate, groundwater and surface water quality monitoring results at the existing waste fill area indicate the potential for adverse impacts to groundwater and surface water downgradient (i.e. east) of the proposed waste expansion area.

- The shallow soil conditions at, and downgradient, of the proposed waste expansion area represent a significant risk of leachate seepage, which indicates that the operation will need to be engineered to accommodate leachate collection and treatment.

The following recommendations are provided:

1. The design and operation of the expanded landfill should include best management practises to minimize leachate generation such as: establishment and maintenance of daily cover; progressive establishment of final cover as sections of the waste fill area reach design capacity; waste compaction; surface sloping to reduce infiltration and promote runoff in the waste fill areas; and, perimeter drainage channels to reduce and re-direct runoff in the waste fill areas.
2. A leachate collection and treatment system should be designed for the proposed waste expansion area. Potential measures for leachate management may include leachate capture and active (on-site or off-site) treatment, or a passive on-site treatment system (similar to the existing on-site system).
3. A groundwater monitoring program should be established. During the initial phase of Site expansion, the groundwater monitoring program should include: establishment of a background well and downgradient monitoring wells; monitoring of all monitoring wells three times annually in the spring, summer and autumn; analysis of representative groundwater samples from each monitoring well for Column 1, Schedule 5 parameters in MOE *Landfill Standards Guideline (June 2010)*; establishment of “triggers” to implement contingency measures; submission of annual monitoring reports.
4. A surface water monitoring program should be established. During the initial phase of Site expansion, the surface water monitoring program should include: establishment of surface water monitoring stations between the waste fill area and Esten Lake; monitoring of all monitoring stations three times annually in the spring, summer and autumn; analysis of representative surface water samples from each monitoring station for Column 3, Schedule 5 parameters in MOE *Landfill Standards Guideline (June 2010)*; establishment of “triggers” to implement contingency measures; submission of annual monitoring reports.
5. Establish a Contingency Plan to address the risk of unanticipated leachate management issues and potential groundwater and surface water impacts. The Contingency Plan should include measures to minimizing leachate generation in the waste fill area, and alternative measures to control, collect and treat leachate.

9 Limitations

The information presented in this report is based on limited investigation, and is designed to provide information to support an overall site assessment of the current and future environmental conditions of the Site. The findings cannot be extended to other portions of the Site.

Achieving the objectives stated in this report has required us to arrive at conclusions based upon the information presently known to us. No investigative method can completely eliminate the possibility of obtaining partially imprecise or incomplete information; it can only reduce the possibility to an acceptable level. Professional judgment was exercised in analyzing the information obtained and in the formulation of the conclusions. Like all professional persons rendering advice, we do not act as absolute insurers of the conclusions we reach, but we commit ourselves to care and competence in reaching those conclusions.

It should also be noted that current environmental guidelines and regulations are subject to change, and such changes, when put into effect, could alter the conclusions and recommendations noted throughout this report.

The conclusions and recommendations noted throughout this report reflect Site conditions with respect to the environmental condition of the Site at the time of monitoring and sampling. It is possible that unexpected environmental conditions may be encountered on the Site, which have not been explored within the scope of this site assessment summary. Should such an event occur, **exp** should be notified in order that we may determine if modifications to our conclusions are necessary.

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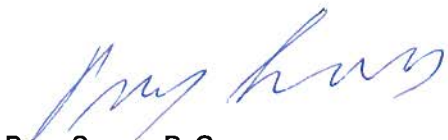
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10 Closure

We trust that these comments and recommendations provide you with sufficient information to proceed with design. Should you have any questions, please do not hesitate to contact this office.

Yours truly,

Exp Services Inc.



Perry Sarvas, P. Geo.
Senior Hydrogeologist, Earth & Environmental
Northeastern Ontario

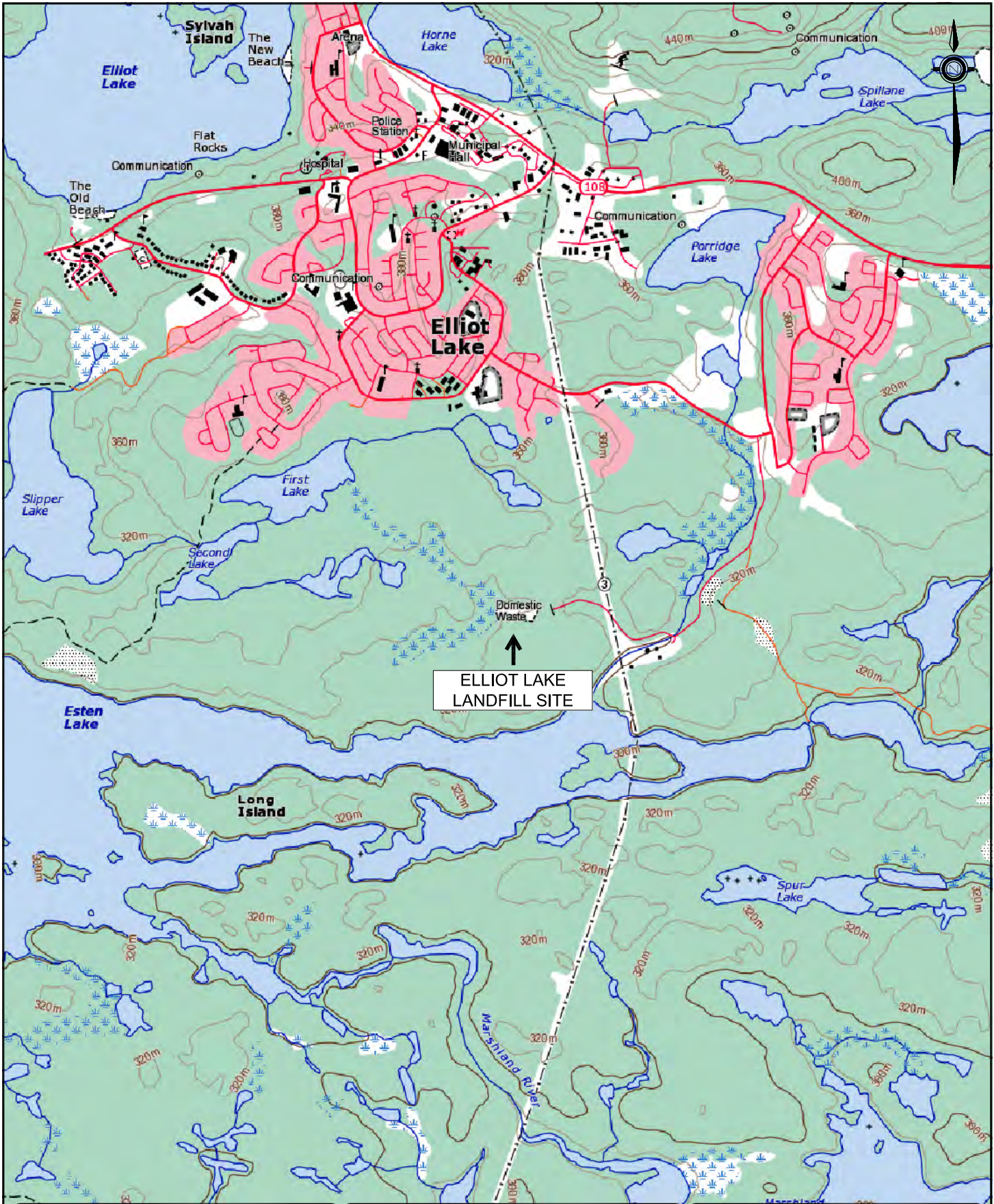


Yves Beauparlant, P.Eng.
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Appendix A – Drawings



ELLIOT LAKE
LANDFILL SITE



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PROJECT TITLE AND LOCATION:

ELLIOT LAKE LANDFILL SITE
 LOCATION PLAN

PROJECT NO.:
 SUEN0003064A

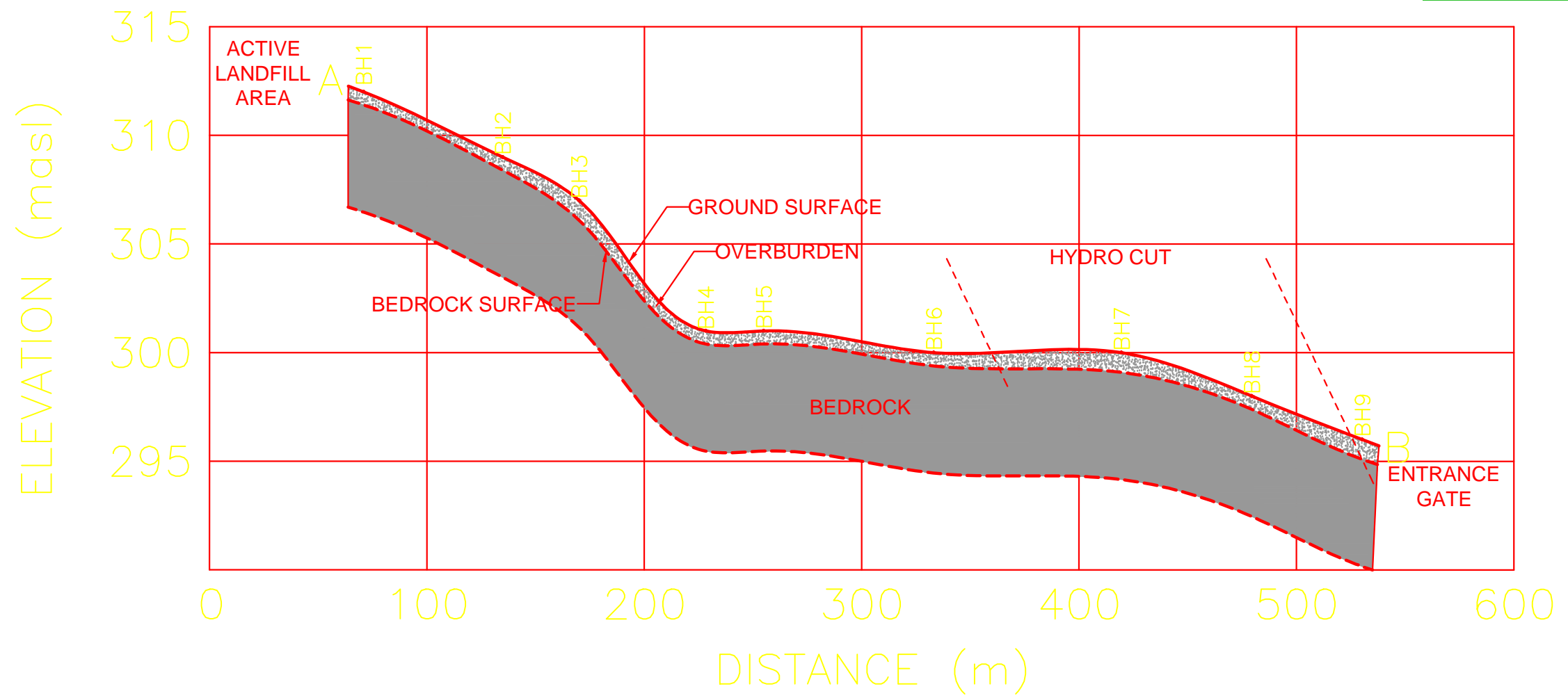
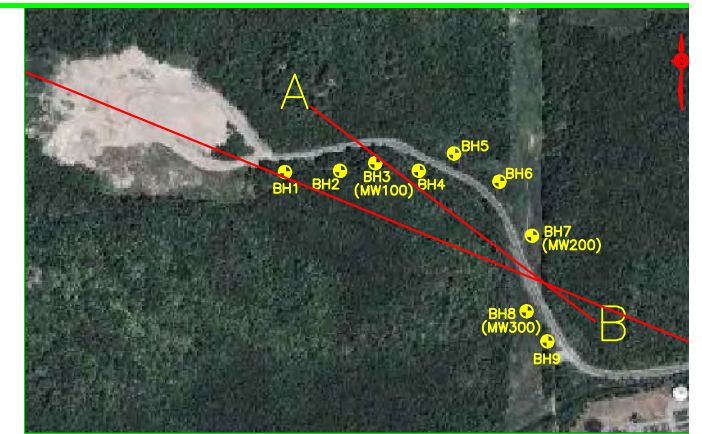
DWN.:
 R.L.

SCALE:
 NTS

CHKD.:
 T.G.

DATE:
 APRIL 2011

DWG. No.:
 1



PROFILE - SECTION A-B

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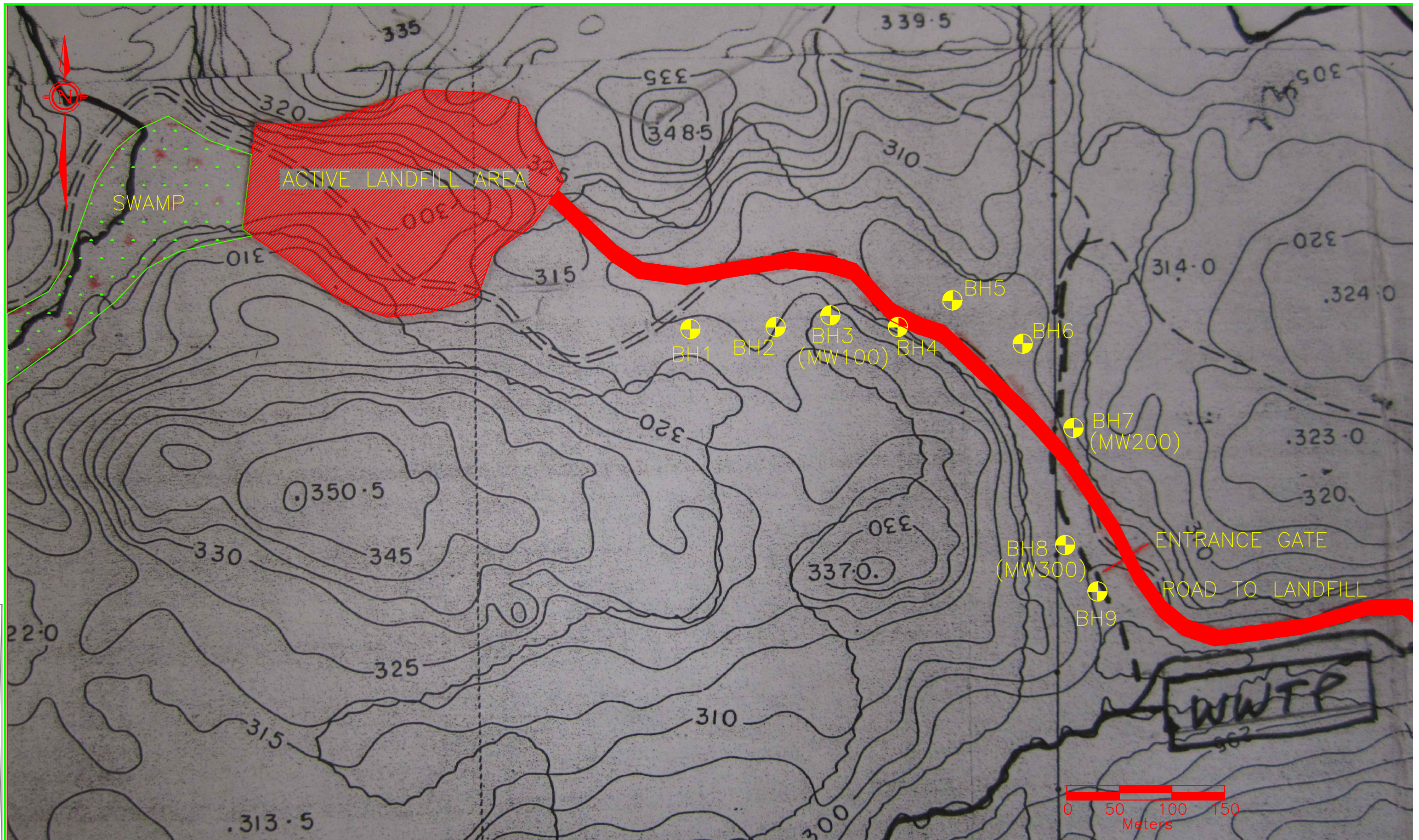
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REVISIONS		
No.	DESCRIPTION	DATE

CLIENT	CITY OF ELLIOT LAKE
PROJECT	GROUNDWATER AND SURFACE WATER IMPACT ASSESSMENT PROPOSED ELLIOT LAKE LANDFILL EXPANSION
PROJECT NO.	BRM-00601389

TITLE:	SITE CROSS SECTION		
DATE	APRIL 2013	SCALE:	NTS
DWG NO.	3		



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REVISIONS		
No.	DESCRIPTION	DATE

CLIENT	CITY OF ELLIOT LAKE
PROJECT	GROUNDWATER AND SURFACE WATER IMPACT ASSESSMENT PROPOSED ELLIOT LAKE LANDFILL EXPANSION
PROJECT NO.	BRM-00601389

TITLE:	SITE PLAN		
DATE	APRIL 2013	SCALE:	AS SHOWN
DWG NO.	2		

Appendix B – Borehole Logs

Log of Test Pit BH-1

Project No. BRM-00601389-A0


Figure No. 2

Project: Elliot Lake Landfill Expansion

Sheet No. 1 of 1

Location: Elliot Lake, ON

Date Excavated: February 26, 2013

Grab Sample 

Combustible Vapour Reading

Natural Moisture

Plastic and Liquid Limit 

Excavator Type: AUGER

Penetrometer 

Undrained Triaxial at

Datum: _____

Field Vane Test 

% Strain at Failure

L W G	C O M P O S	Soil Description	ELEV. m	D E P T H m	N Value				Combustible Vapour Reading (ppm)			S A M P L E S	Natural Unit Weight kN/m ³
					20	40	60	80	25	50	75		
					Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)				
		SANDY SILT, brown & grey, damp, orange mottling, no stain, no odour.		0	100		200						
		PEAT some sand, damp, no stain, no odour.											
		BOREHOLE TERMINATED AT ~ 0.6 m DEPTH DUE TO SUSPECTED BEDROCK											

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See Figures B-1A and B-1B for Notes on Sample Description

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	N/A	N/A

Log of Test Pit BH-2

Project No. BRM-00601389-A0

Figure No. 3

Project: Elliot Lake Landfill Expansion

Sheet No. 1 of 1

Location: Elliot Lake, ON

Date Excavated: February 26, 2013

Grab Sample

Combustible Vapour Reading

Natural Moisture

Excavator Type: AUGER

Penetrometer

Plastic and Liquid Limit

Datum: _____

Field Vane Test

Undrained Triaxial at % Strain at Failure

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH (m)	N Value				Combustible Vapour Reading (ppm)			SAMPLES	Natural Unit Weight kN/m ³
					20	40	60	80	25	50	75		
		SAND, trace gravel, brown, damp, no stain, no odour.		0		100		200					
		SANDY SILT, brown and grey, damp, orange mottling, no stain, no odour.											
		BOREHOLE TERMINATED AT ~ 0.6 m DEPTH DUE TO SUSPECTED BEDROCK											

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See Figures B-1A and B-1B for Notes on Sample Description

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	N/A	N/A

Log of Test Pit BH-3

Project No. BRM-00601389-A0

Figure No. 4

Project: Elliot Lake Landfill Expansion

Sheet No. 1 of 1

Location: Elliot Lake, ON

Date Excavated: February 26, 2013

Excavator Type: AUGER

Datum: _____

Grab Sample
 Penetrometer
 Field Vane Test

Combustible Vapour Reading
 Natural Moisture
 Plastic and Liquid Limit
 Undrained Triaxial at % Strain at Failure

G L W	S O I L	Soil Description	ELEV. m	N Value				Combustible Vapour Reading (ppm)			S O I L	Natural Unit Weight kN/m ³
				Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)				
				20	40	60	80	25	50	75		
0		SAND, trace gravel, brown, wet, no stain, no odour. SANDY SILT, brown and grey, wet, orange mottling, no stain, no odour.		100	200			10	20	30		
		BOREHOLE TERMINATED AT ~ 0.9 m DEPTH DUE TO SUSPECTED BEDROCK										

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See Figures B-1A and B-1B for Notes on Sample Description

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	0.30	N/A

Log of Test Pit BH-4

Project No. BRM-00601389-A0

Figure No. 5

Project: Elliot Lake Landfill Expansion

Sheet No. 1 of 1

Location: Elliot Lake, ON

Date Excavated: February 26, 2013

Excavator Type: AUGER

Datum: _____

Grab Sample
Penetrometer
Field Vane Test



Combustible Vapour Reading
Natural Moisture
Plastic and Liquid Limit
Undrained Triaxial at % Strain at Failure

GWL	SYMBOL	Soil Description	ELEV. m	DEPTH m	N Value				Combustible Vapour Reading (ppm)			S.P.M.	Natural Unit Weight kN/m ³
					20	40	60	80	25	50	75		
		SANDY SILT , brown and grey, wet, no stain, no odour.		0	Shear Strength kPa 100 200				Natural Moisture Content % Atterberg Limits (% Dry Weight) 10 20 30				
		BOREHOLE TERMINATED AT ~ 0.6 m DEPTH DUE TO SUSPECTED BEDROCK											

TESTPIT (GEO)_BRM-00601389 - ELLIOT LAKE LANDFILL EXPANSION.GPJ NEW.GDT 3/8/13



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See Figures B-1A and B-1B for Notes on Sample Description

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	Surface	N/A

Log of Test Pit BH-5

Project No. BRM-00601389-A0

Figure No. 6

Project: Elliot Lake Landfill Expansion




Sheet No. 1 of 1



Location: Elliot Lake, ON

Date Excavated: February 26, 2013

Excavator Type: AUGER

Datum: _____

Grab Sample 
 Penetrometer 
 Field Vane Test 

Combustible Vapour Reading
 Natural Moisture
 Plastic and Liquid Limit 
 Undrained Triaxial at % Strain at Failure 

W L C O M M S	Soil Description	ELEV. m	D I S T A N C E m	N Value				Combustible Vapour Reading (ppm)			S A M P L E N U M	Natural Unit Weight kN/m ³
				20	40	60	80	25	50	75		
	SANDY SILT, grey, wet, no stain, no odour. brown and grey, orange mottling below ~ 0.2 m depth.		0	100	200			10	20	30		
	BOREHOLE TERMINATED AT ~ 0.6 m DEPTH DUE TO SUSPECTED BEDROCK											

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See Figures B-1A and B-1B for Notes on Sample Description

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	Surface	N/A

Log of Test Pit BH-7

Project No. BRM-00601389-A0

Figure No. 8

Project: Elliot Lake Landfill Expansion

Sheet No. 1 of 1

Location: Elliot Lake, ON

Date Excavated: February 26, 2013

Grab Sample

Combustible Vapour Reading

Natural Moisture

Excavator Type: AUGER

Penetrometer

Plastic and Liquid Limit

Field Vane Test

Undrained Triaxial at

% Strain at Failure

Datum: _____

SYMBOL	Soil Description	ELEV. m	DEPTH m	N Value				Combustible Vapour Reading (ppm)			SAMPLES	Natural Unit Weight kN/m ³
				20	40	60	80	25	50	75		
				Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)				
▽	SANDY SILT , grey, wet, no stain, no odour. grey and brown below ~ 0.3 m depth.		0	100	200						/	
	BOREHOLE TERMINATED AT ~ 0.9 m DEPTH DUE TO SUSPECTED BEDROCK											

TESTPIT (GEO)_BRM-00601389 - ELLIOT LAKE LANDFILL EXPANSION.GPJ NEW.GDT 3/8/13



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See Figures B-1A and B-1B for Notes on Sample Description

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	0.15	N/A

Log of Test Pit BH-8

Project No. BRM-00601389-A0

Figure No. 9

Project: Elliot Lake Landfill Expansion

Sheet No. 1 of 1

Location: Elliot Lake, ON

Date Excavated: February 26, 2013

Grab Sample

Combustible Vapour Reading

Natural Moisture

Excavator Type: AUGER

Penetrometer

Plastic and Liquid Limit

Datum: _____

Field Vane Test

Undrained Triaxial at % Strain at Failure

SOIL SYMBOL	Soil Description	ELEV. m	DEPTH m	N Value				Combustible Vapour Reading (ppm)			Natural Unit Weight kN/m ³
				20	40	60	80	25	50	75	
				Shear Strength kPa				Natural Moisture Content % Atterberg Limits (% Dry Weight)			
	SANDY SILT, grey and brown, wet, no stain, no odour.		0	100	200			10	20	30	
	BOREHOLE TERMINATED AT ~ 0.6 m DEPTH DUE TO SUSPECTED BEDROCK										

TESTPIT (GEO)_BRM-00601389 - ELLIOT LAKE LANDFILL EXPANSION.GPJ NEW.GDT 3/8/13



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See Figures B-1A and B-1B for Notes on Sample Description

Time	Water Level (m)	Depth to Cave (m)
Upon Completion	Surface	N/A

Appendix C – Grain-size Analysis Results



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GRAIN SIZE ANALYSIS

JOB #: BRM-00601389
JOB NAME: Eliot Lake Environmental Assessment
TICKET #: 33330
DATE: March 5th, 2013
SAMPLE: BH1 SS1

SIEVE SIZE	WEIGHT RETAINED	WEIGHT PASSING	% RETAINED	% PASSING
150 mm	0.0	427.9	0.0	100.0
53 mm	0.0	427.9	0.0	100.0
37.5 mm	0.0	427.9	0.0	100.0
26.5 mm	0.0	427.9	0.0	100.0
19.0 mm	0.0	427.9	0.0	100.0
16.0 mm	0.0	427.9	0.0	100.0
13.2 mm	0.0	427.9	0.0	100.0
9.5 mm	7.9	420.0	1.8	98.2
4.75 mm	21.3	406.6	5.0	95.0
2.36 mm	39.5	388.4	9.2	90.8
1.18 mm	54.9	373.0	12.8	87.2
600 um	76.1	351.8	17.8	82.2
300 um	113.3	314.6	26.5	73.5
150 um	158.8	269.1	37.1	62.9
75 um	227.1	200.8	53.1	46.9
53 um	261.9	166.0	61.2	38.8
orig. weight	427.9			

COMMENTS: sample washes over 53 um sieve.

TECHNICIAN: LB



exp. Services Inc.
885 Regent St.
Sudbury, Ontario
P3E 5M4
Telephone: (705) 674-9681
Facsimile: (705) 674-8271

GRAIN SIZE ANALYSIS

JOB #: BRM-00601389
JOB NAME: Eliot Lake Environmental Assessment
TICKET #: 33331
DATE: March 5th, 2013
SAMPLE: BH1 SS2

SIEVE SIZE	WEIGHT RETAINED	WEIGHT PASSING	% RETAINED	% PASSING
150 mm	0.0	35.8	0.0	100.0
53 mm	0.0	35.8	0.0	100.0
37.5 mm	0.0	35.8	0.0	100.0
26.5 mm	0.0	35.8	0.0	100.0
19.0 mm	0.0	35.8	0.0	100.0
16.0 mm	0.0	35.8	0.0	100.0
13.2 mm	0.0	35.8	0.0	100.0
9.5 mm	0.0	35.8	0.0	100.0
4.75 mm	2.6	33.2	7.3	92.7
2.36 mm	9.2	26.6	25.7	74.3
1.18 mm	18.8	17.0	52.5	47.5
600 um	25.0	10.8	69.8	30.2
300 um	28.4	7.4	79.3	20.7
150 um	30.4	5.4	84.9	15.1
75 um	31.8	4.0	88.8	11.2
53 um	32.5	3.3	90.8	9.2
orig. weight	35.8			

COMMENTS: sample washes over 53 um sieve.

TECHNICIAN: LB



exp. Services Inc.
885 Regent St.
Sudbury, Ontario
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Telephone: (705) 674-9681
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GRAIN SIZE ANALYSIS

JOB #: BRM-00601389
JOB NAME: Eliot Lake Environmental Assessment
TICKET #: 33332
DATE: March 5th, 2013
SAMPLE: BH2 SS1

SIEVE SIZE	WEIGHT RETAINED	WEIGHT PASSING	% RETAINED	% PASSING
150 mm	0.0	321.1	0.0	100.0
53 mm	0.0	321.1	0.0	100.0
37.5 mm	0.0	321.1	0.0	100.0
26.5 mm	37.1	284.0	11.6	88.4
19.0 mm	37.1	284.0	11.6	88.4
16.0 mm	45.6	275.5	14.2	85.8
13.2 mm	58.9	262.2	18.3	81.7
9.5 mm	67.7	253.4	21.1	78.9
4.75 mm	88.0	233.1	27.4	72.6
2.36 mm	107.5	213.6	33.5	66.5
1.18 mm	128.8	192.3	40.1	59.9
600 um	157.5	163.6	49.1	50.9
300 um	203.2	117.9	63.3	36.7
150 um	249.5	71.6	77.7	22.3
75 um	280.2	40.9	87.3	12.7
53 um	289.3	31.8	90.1	9.9
orig. weight	321.1			

COMMENTS: sample washes over 53 um sieve.

TECHNICIAN: LB



exp. Services Inc.
885 Regent St.
Sudbury, Ontario
P3E 5M4
Telephone: (705) 674-9681
Facsimile: (705) 674-8271

GRAIN SIZE ANALYSIS

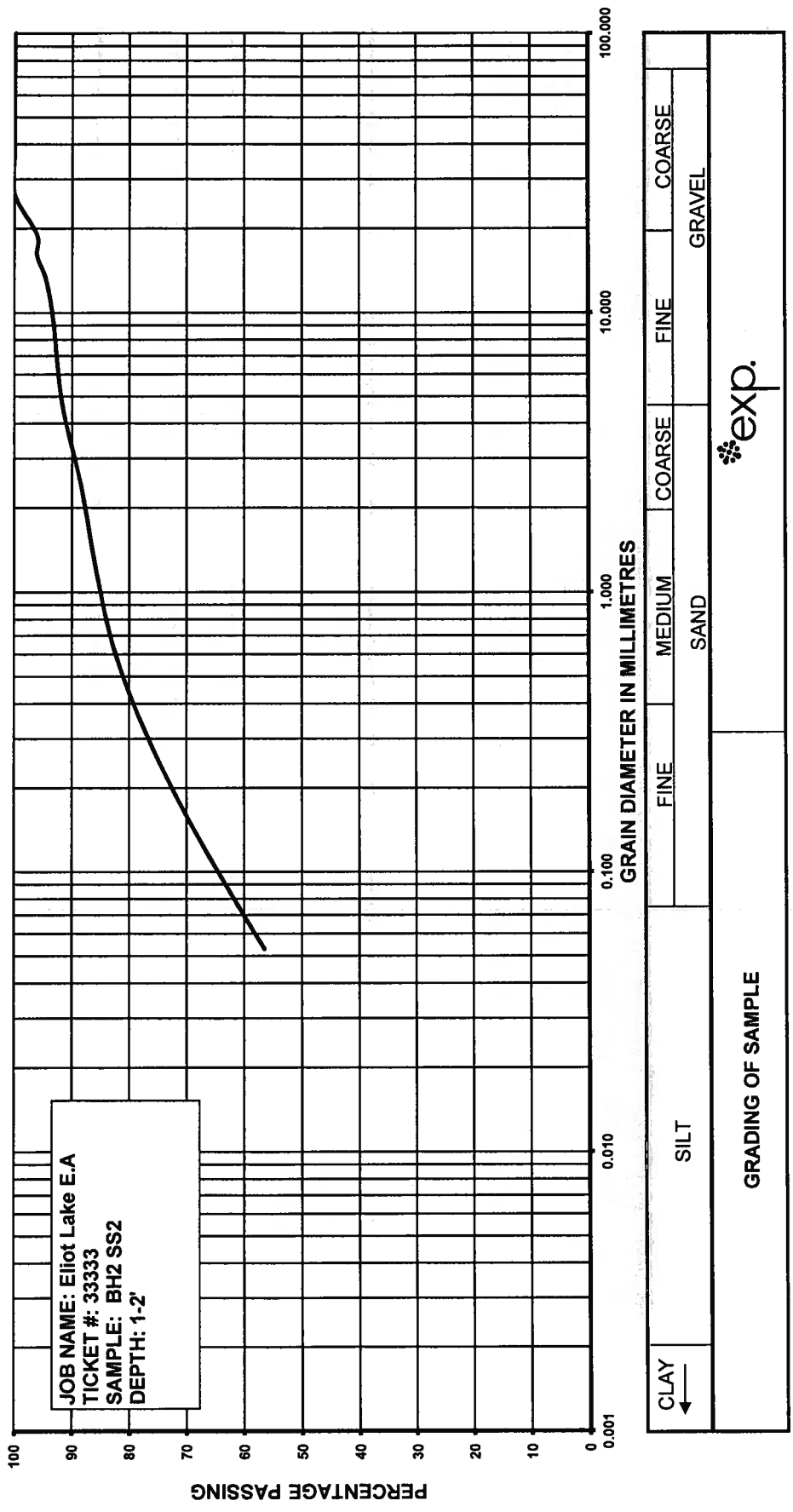
JOB #: BRM-00601389
JOB NAME: Eliot Lake Environmental Assessment
TICKET #: 33333
DATE: March 5th, 2013
SAMPLE: BH2 SS2

SIEVE SIZE	WEIGHT RETAINED	WEIGHT PASSING	% RETAINED	% PASSING
150 mm	0.0	375.7	0.0	100.0
53 mm	0.0	375.7	0.0	100.0
37.5 mm	0.0	375.7	0.0	100.0
26.5 mm	0.0	375.7	0.0	100.0
19.0 mm	14.6	361.1	3.9	96.1
16.0 mm	14.6	361.1	3.9	96.1
13.2 mm	20.4	355.3	5.4	94.6
9.5 mm	25.1	350.6	6.7	93.3
4.75 mm	31.0	344.7	8.3	91.7
2.36 mm	43.7	332.0	11.6	88.4
1.18 mm	53.5	322.2	14.2	85.8
600 um	66.2	309.5	17.6	82.4
300 um	87.6	288.1	23.3	76.7
150 um	115.0	260.7	30.6	69.4
75 um	146.6	229.1	39.0	61.0
53 um	163.4	212.3	43.5	56.5
orig. weight	375.7			

COMMENTS: sample washes over 53 um sieve.

TECHNICIAN: LB

GRAIN SIZE ANALYSIS





exp. Services Inc.
885 Regent St.
Sudbury, Ontario
P3E 5M4
Telephone: (705) 674-9681
Facsimile: (705) 674-8271

GRAIN SIZE ANALYSIS

JOB #: BRM-00601389
JOB NAME: Eliot Lake Environmental Assessment
TICKET #: 33334
DATE: March 5th, 2013
SAMPLE: BH3 SS1

SIEVE SIZE	WEIGHT RETAINED	WEIGHT PASSING	% RETAINED	% PASSING
150 mm	0.0	303.4	0.0	100.0
53 mm	0.0	303.4	0.0	100.0
37.5 mm	0.0	303.4	0.0	100.0
26.5 mm	0.0	303.4	0.0	100.0
19.0 mm	0.0	303.4	0.0	100.0
16.0 mm	0.0	303.4	0.0	100.0
13.2 mm	10.5	292.9	3.5	96.5
9.5 mm	12.3	291.1	4.1	95.9
4.75 mm	27.5	275.9	9.1	90.9
2.36 mm	38.8	264.6	12.8	87.2
1.18 mm	51.9	251.5	17.1	82.9
600 um	68.7	234.7	22.6	77.4
300 um	95.5	207.9	31.5	68.5
150 um	129.7	173.7	42.7	57.3
75 um	171.4	132.0	56.5	43.5
53 um	192.1	111.3	63.3	36.7
orig. weight	303.4			

COMMENTS: sample washes over 53 um sieve.

TECHNICIAN: LB



exp. Services Inc.
885 Regent St.
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P3E 5M4
Telephone: (705) 674-9681
Facsimile: (705) 674-8271

GRAIN SIZE ANALYSIS

JOB #: BRM-00601389
JOB NAME: Eliot Lake Environmental Assessment
TICKET #: 33335
DATE: March 5th, 2013
SAMPLE: BH4 SS1

SIEVE SIZE	WEIGHT RETAINED	WEIGHT PASSING	% RETAINED	% PASSING
150 mm	0.0	1353.7	0.0	100.0
53 mm	0.0	1353.7	0.0	100.0
37.5 mm	0.0	1353.7	0.0	100.0
26.5 mm	35.8	1317.9	2.6	97.4
19.0 mm	66.4	1287.3	4.9	95.1
16.0 mm	66.4	1287.3	4.9	95.1
13.2 mm	66.4	1287.3	4.9	95.1
9.5 mm	75.1	1278.6	5.5	94.5
4.75 mm	119.6	1234.1	8.8	91.2
2.36 mm	171.1	1182.6	12.6	87.4
1.18 mm	234.7	1119.0	17.3	82.7
600 um	313.6	1040.1	23.2	76.8
300 um	442.3	911.4	32.7	67.3
150 um	624.3	729.4	46.1	53.9
75 um	830.6	523.1	61.4	38.6
53 um	908.8	444.9	67.1	32.9
orig. weight	1353.7			

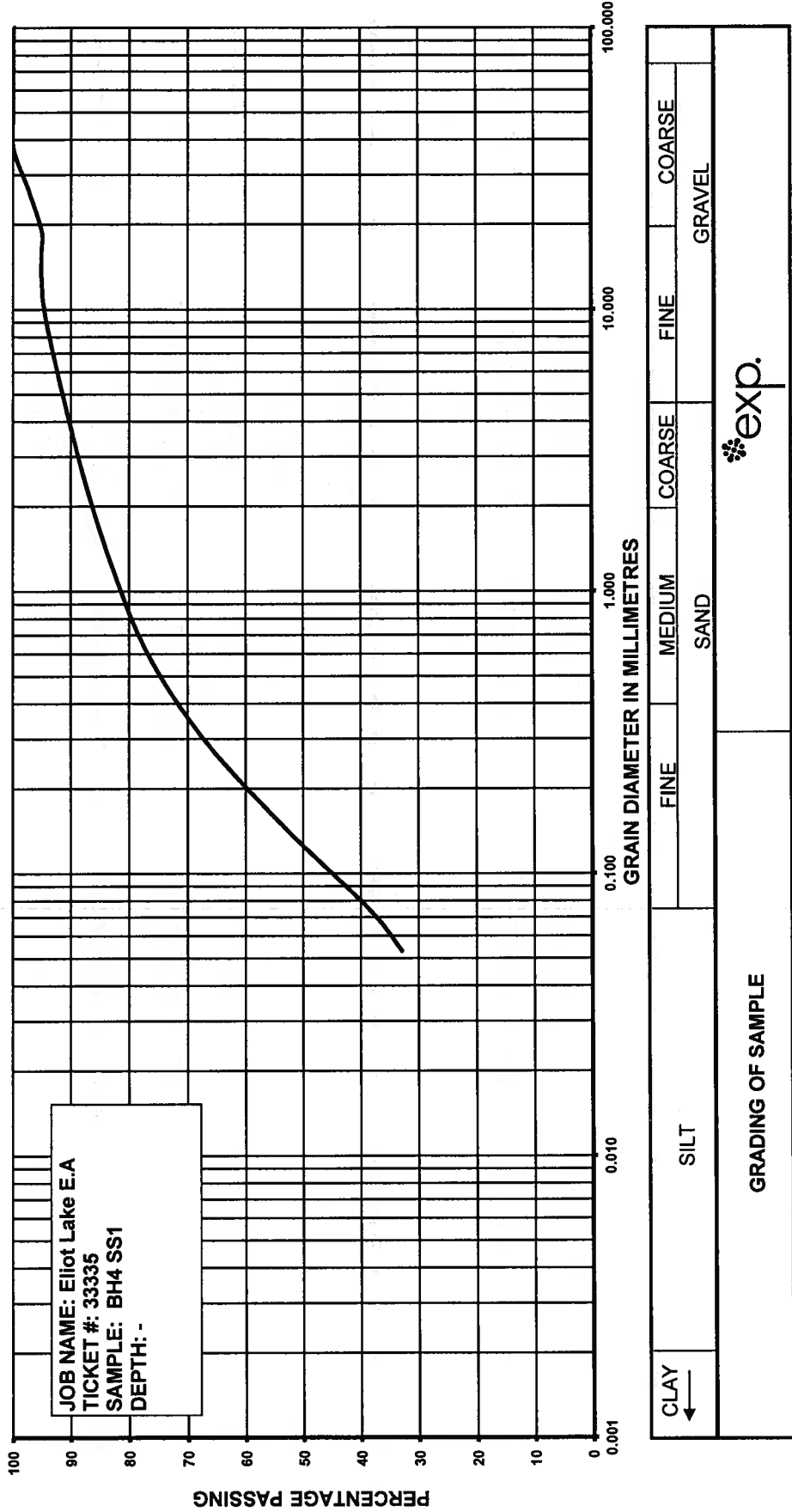
COMMENTS: sample washes over 53 um sieve.

TECHNICIAN: LB

PROJ. No. BRM-00601389

GRAIN SIZE ANALYSIS

March 5th, 2013





exp. Services Inc.
885 Regent St.
Sudbury, Ontario
P3E 5M4
Telephone: (705) 674-9681
Facsimile: (705) 674-8271

GRAIN SIZE ANALYSIS

JOB #: BRM-00601389
JOB NAME: Eliot Lake Environmental Assessment
TICKET #: 33336
DATE: March 5th, 2013
SAMPLE: BH5 SS1

SIEVE SIZE	WEIGHT RETAINED	WEIGHT PASSING	% RETAINED	% PASSING
150 mm	0.0	213.8	0.0	100.0
53 mm	0.0	213.8	0.0	100.0
37.5 mm	0.0	213.8	0.0	100.0
26.5 mm	0.0	213.8	0.0	100.0
19.0 mm	0.0	213.8	0.0	100.0
16.0 mm	0.0	213.8	0.0	100.0
13.2 mm	0.0	213.8	0.0	100.0
9.5 mm	0.0	213.8	0.0	100.0
4.75 mm	0.0	213.8	0.0	100.0
2.36 mm	2.5	211.3	1.2	98.8
1.18 mm	5.4	208.4	2.5	97.5
600 um	9.9	203.9	4.6	95.4
300 um	17.2	196.6	8.0	92.0
150 um	25.8	188.0	12.1	87.9
75 um	41.4	172.4	19.4	80.6
53 um	53.0	160.8	24.8	75.2
orig. weight	213.8			

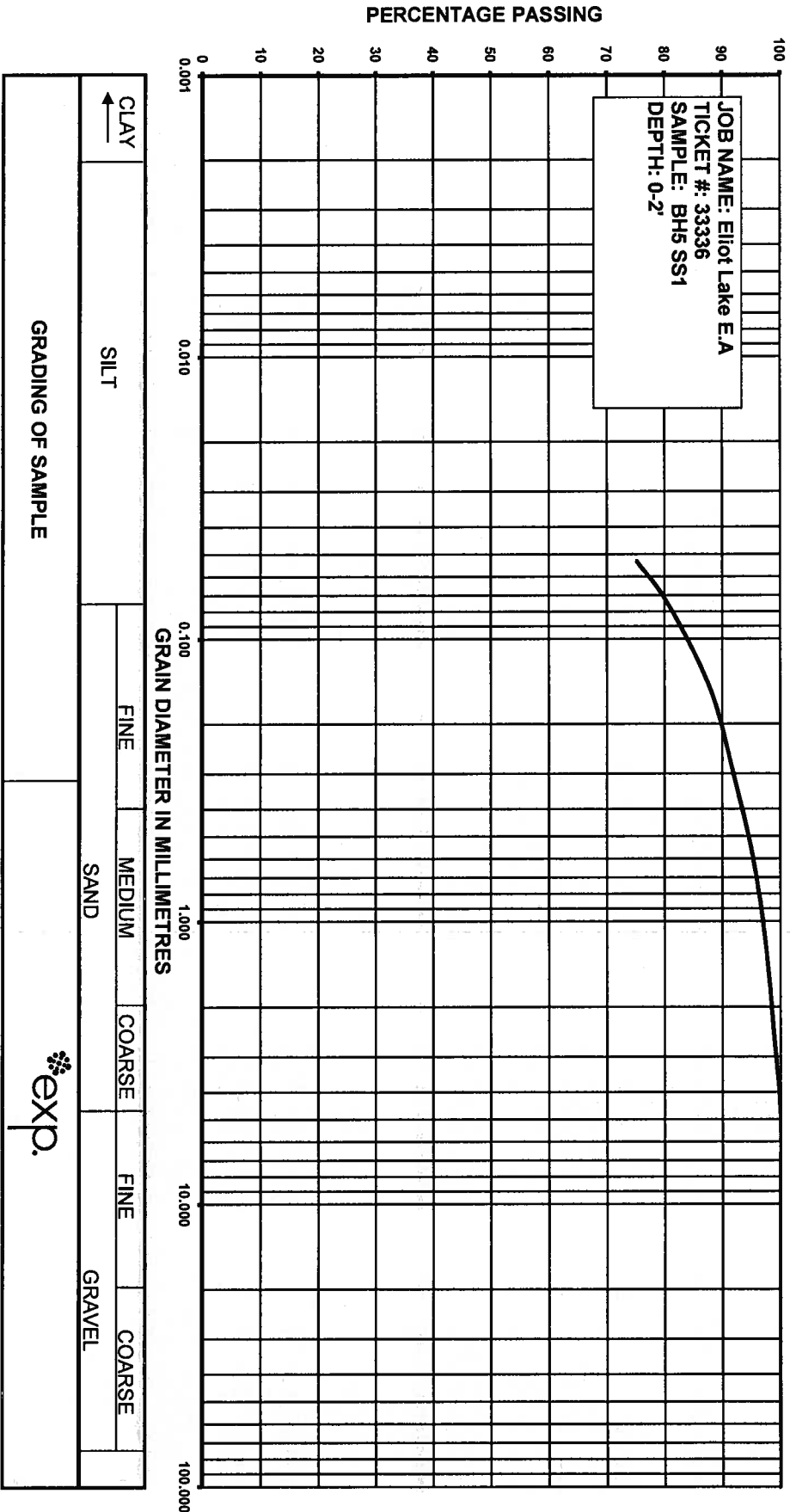
COMMENTS: sample washes over 53 um sieve.
Hydro suggested

TECHNICIAN: LB

PROJ. No. BRM-00601389

GRAIN SIZE ANALYSIS

March 5th, 2013





exp. Services Inc.
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Facsimile: (705) 674-8271

GRAIN SIZE ANALYSIS

JOB #: BRM-00601389
JOB NAME: Eliot Lake Environmental Assessment
TICKET #: 33337
DATE: March 5th, 2013
SAMPLE: BH5 SS2

SIEVE SIZE	WEIGHT RETAINED	WEIGHT PASSING	% RETAINED	% PASSING
150 mm	0.0	212.4	0.0	100.0
53 mm	0.0	212.4	0.0	100.0
37.5 mm	0.0	212.4	0.0	100.0
26.5 mm	0.0	212.4	0.0	100.0
19.0 mm	0.0	212.4	0.0	100.0
16.0 mm	0.0	212.4	0.0	100.0
13.2 mm	0.0	212.4	0.0	100.0
9.5 mm	0.0	212.4	0.0	100.0
4.75 mm	0.0	212.4	0.0	100.0
2.36 mm	0.1	212.3	0.0	100.0
1.18 mm	0.7	211.7	0.3	99.7
600 um	1.3	211.1	0.6	99.4
300 um	2.2	210.2	1.0	99.0
150 um	4.0	208.4	1.9	98.1
75 um	8.7	203.7	4.1	95.9
53 um	13.6	198.8	6.4	93.6
orig. weight	212.4			

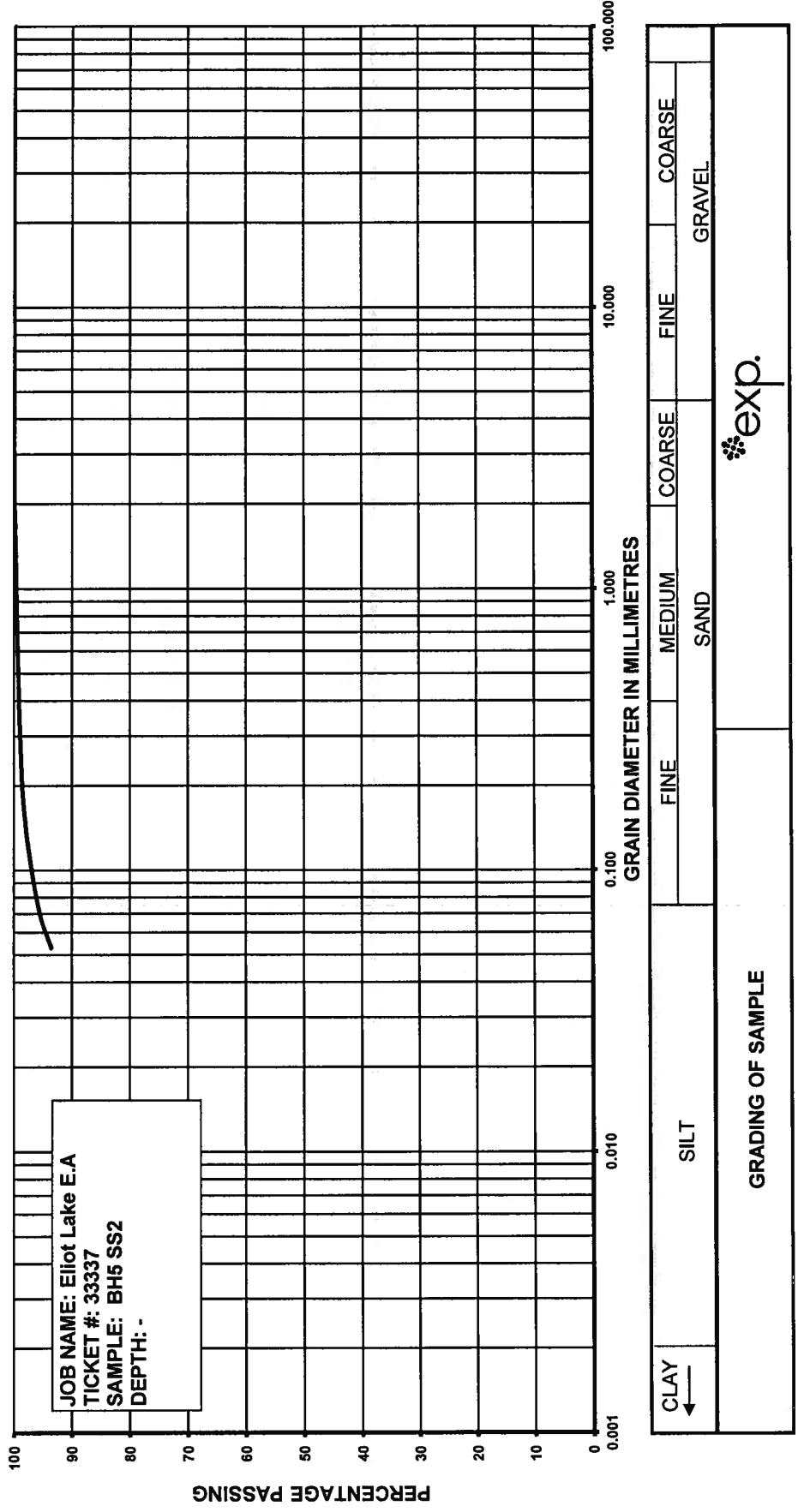
COMMENTS: sample washes over 53 um sieve.
Hydro suggested

TECHNICIAN: LB

PROJ. No. BRM-00601389

GRAIN SIZE ANALYSIS

March 5th, 2013



CLAY ←	SILT	FINE	MEDIUM	COARSE	FINE	COARSE
GRADING OF SAMPLE			SAND			



exp. Services Inc.
 885 Regent St.
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 P3E 5M4
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 Facsimile: (705) 674-8271

GRAIN SIZE ANALYSIS

JOB #: BRM-00601389
JOB NAME: Eliot Lake Environmental Assessment
TICKET #: 33338
DATE: March 5th, 2013
SAMPLE: BH6 SS1

SIEVE SIZE	WEIGHT RETAINED	WEIGHT PASSING	% RETAINED	% PASSING
150 mm	0.0	445.4	0.0	100.0
53 mm	0.0	445.4	0.0	100.0
37.5 mm	0.0	445.4	0.0	100.0
26.5 mm	0.0	445.4	0.0	100.0
19.0 mm	0.0	445.4	0.0	100.0
16.0 mm	0.0	445.4	0.0	100.0
13.2 mm	0.0	445.4	0.0	100.0
9.5 mm	0.0	445.4	0.0	100.0
4.75 mm	0.0	445.4	0.0	100.0
2.36 mm	0.1	445.3	0.0	100.0
1.18 mm	0.4	445.0	0.1	99.9
600 um	1.8	443.6	0.4	99.6
300 um	4.3	441.1	1.0	99.0
150 um	6.7	438.7	1.5	98.5
75 um	15.5	429.9	3.5	96.5
53 um	27.9	417.5	6.3	93.7
orig. weight	445.4			

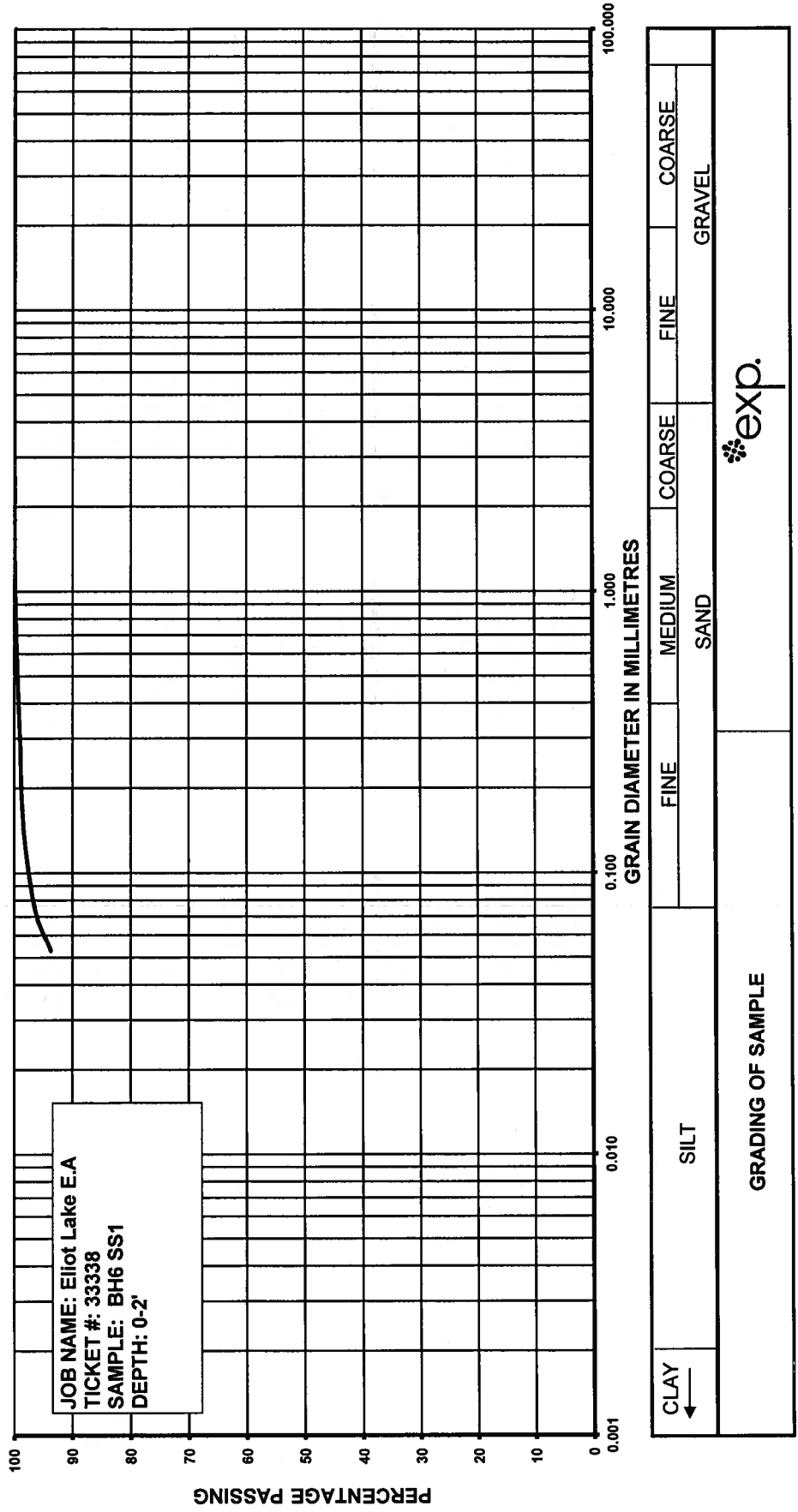
COMMENTS: sample washes over 53 um sieve.
Hydro suggested

TECHNICIAN: LB

PROJ. No. BRM-00601389

GRAIN SIZE ANALYSIS

March 5th, 2013



JOB NAME: Elliot Lake E.A
TICKET #: 33338
SAMPLE: BH6 SS1
DEPTH: 0-2'



exp. Services Inc.
885 Regent St.
Sudbury, Ontario
P3E 5M4
Telephone: (705) 674-9681
Facsimile: (705) 674-8271

GRAIN SIZE ANALYSIS

JOB #: BRM-00601389
JOB NAME: Eliot Lake Environmental Assessment
TICKET #: 33339
DATE: March 5th, 2013
SAMPLE: BH7 SS1

SIEVE SIZE	WEIGHT RETAINED	WEIGHT PASSING	% RETAINED	% PASSING
150 mm	0.0	571.1	0.0	100.0
53 mm	0.0	571.1	0.0	100.0
37.5 mm	0.0	571.1	0.0	100.0
26.5 mm	0.0	571.1	0.0	100.0
19.0 mm	0.0	571.1	0.0	100.0
16.0 mm	0.0	571.1	0.0	100.0
13.2 mm	0.0	571.1	0.0	100.0
9.5 mm	0.0	571.1	0.0	100.0
4.75 mm	0.3	570.8	0.1	99.9
2.36 mm	0.5	570.6	0.1	99.9
1.18 mm	0.9	570.2	0.2	99.8
600 um	2.0	569.1	0.4	99.6
300 um	3.3	567.8	0.6	99.4
150 um	4.3	566.8	0.8	99.2
75 um	8.3	562.8	1.5	98.5
53 um	19.2	551.9	3.4	96.6
orig. weight	571.1			

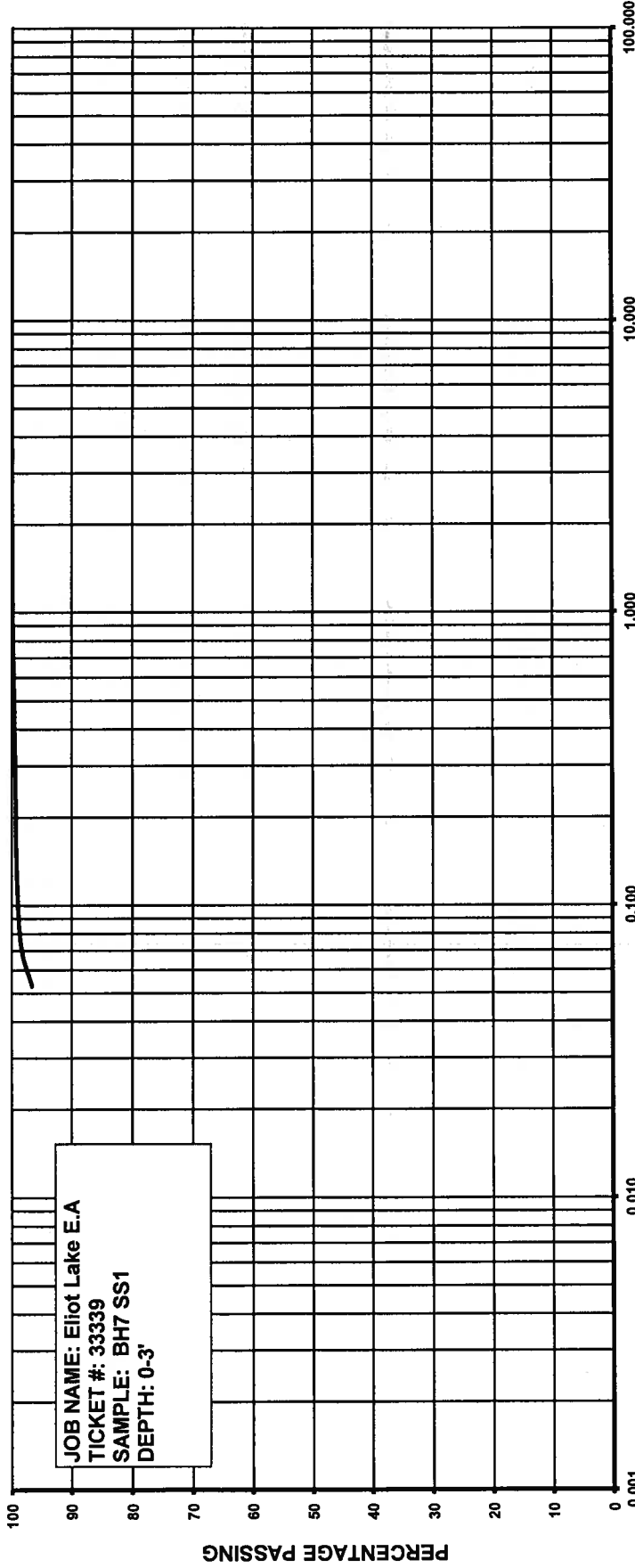
COMMENTS: sample washes over 53 um sieve.
Hydro suggested

TECHNICIAN: LB

PROJ. No. BRM-00601389

GRAIN SIZE ANALYSIS

March 5th, 2013



JOB NAME: Eliot Lake E.A
TICKET #: 33339
SAMPLE: BH7 SS1
DEPTH: 0-3'

CLAY ←	SILT		FINE	MEDIUM	COARSE	FINE	COARSE
GRADING OF SAMPLE			SAND				GRAVEL



exp. Services Inc.
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 Facsimile: (705) 674-8271

GRAIN SIZE ANALYSIS

JOB #: BRM-00601389
JOB NAME: Eliot Lake Environmental Assessment
TICKET #: 33340
DATE: March 5th, 2013
SAMPLE: BH8 SS1

SIEVE SIZE	WEIGHT RETAINED	WEIGHT PASSING	% RETAINED	% PASSING
150 mm	0.0	9.8	0.0	100.0
53 mm	0.0	9.8	0.0	100.0
37.5 mm	0.0	9.8	0.0	100.0
26.5 mm	0.0	9.8	0.0	100.0
19.0 mm	0.0	9.8	0.0	100.0
16.0 mm	0.0	9.8	0.0	100.0
13.2 mm	0.0	9.8	0.0	100.0
9.5 mm	0.3	9.5	3.1	96.9
4.75 mm	0.5	9.3	5.1	94.9
2.36 mm	1.0	8.8	10.2	89.8
1.18 mm	1.2	8.6	12.2	87.8
600 um	1.9	7.9	19.4	80.6
300 um	2.5	7.3	25.5	74.5
150 um	3.2	6.6	32.7	67.3
75 um	4.7	5.1	48.0	52.0
53 um	5.4	4.4	55.1	44.9
orig. weight	9.8			

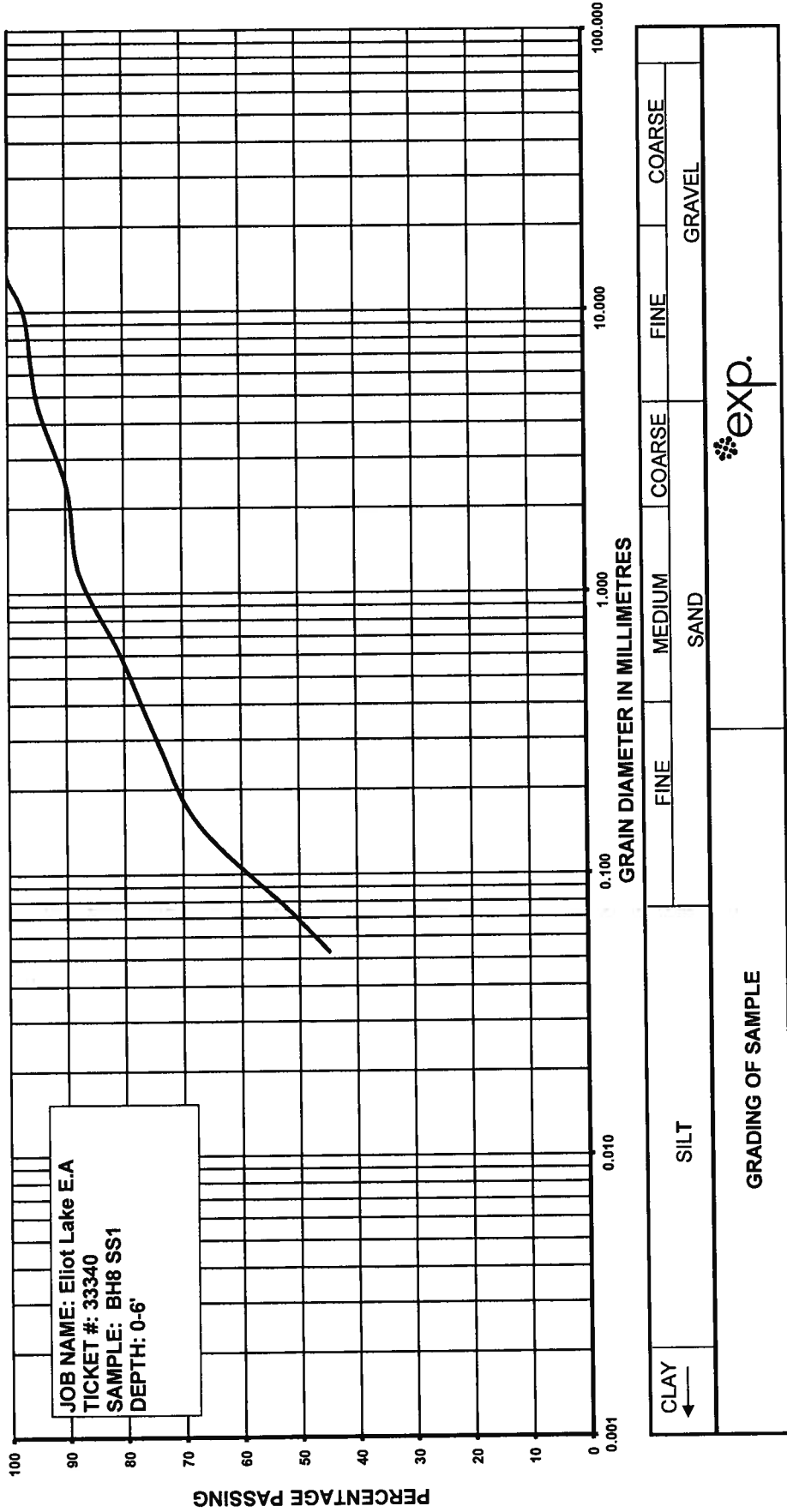
COMMENTS: sample washes over 53 um sieve. Everything retaining on 1.18mm and up was all organics
Mainly wood chips. Hardly any soil. Not enough sample for hydro.

TECHNICIAN: LB

PROJ. No. BRM-00601389

GRAIN SIZE ANALYSIS

March 5th, 2013



JOB NAME: Eliot Lake E.A
TICKET #: 33340
SAMPLE: BH8 SS1
DEPTH: 0-6'

CLAY ←	SILT	FINE	MEDIUM	COARSE	FINE	COARSE
GRADING OF SAMPLE		GRAVEL				



exp. Services Inc.
885 Regent St.
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GRAIN SIZE ANALYSIS

JOB #: BRM-00601389
JOB NAME: Eliot Lake Environmental Assessment
TICKET #: 33341
DATE: March 5th, 2013
SAMPLE: BH9 SS1

SIEVE SIZE	WEIGHT RETAINED	WEIGHT PASSING	% RETAINED	% PASSING
150 mm	0.0	218.2	0.0	100.0
53 mm	0.0	218.2	0.0	100.0
37.5 mm	0.0	218.2	0.0	100.0
26.5 mm	0.0	218.2	0.0	100.0
19.0 mm	18.2	200.0	8.3	91.7
16.0 mm	18.2	200.0	8.3	91.7
13.2 mm	22.0	196.2	10.1	89.9
9.5 mm	25.4	192.8	11.6	88.4
4.75 mm	34.4	183.8	15.8	84.2
2.36 mm	45.5	172.7	20.9	79.1
1.18 mm	53.9	164.3	24.7	75.3
600 um	63.1	155.1	28.9	71.1
300 um	73.8	144.4	33.8	66.2
150 um	83.5	134.7	38.3	61.7
75 um	95.1	123.1	43.6	56.4
53 um	104.4	113.8	47.8	52.2
orig. weight	218.2			

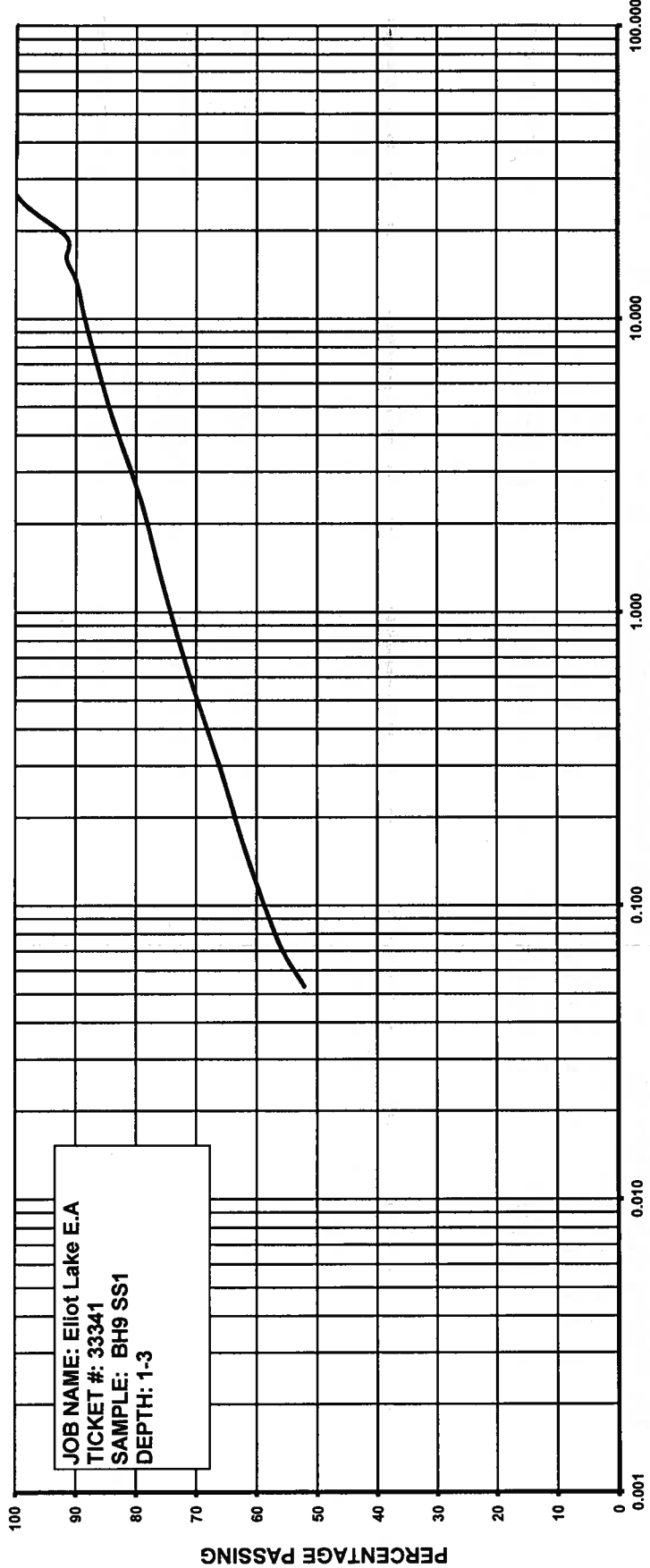
COMMENTS: sample washes over 53 um sieve.

TECHNICIAN: LB

PROJ. No. BRM-00601389

GRAIN SIZE ANALYSIS

March 5th, 2013



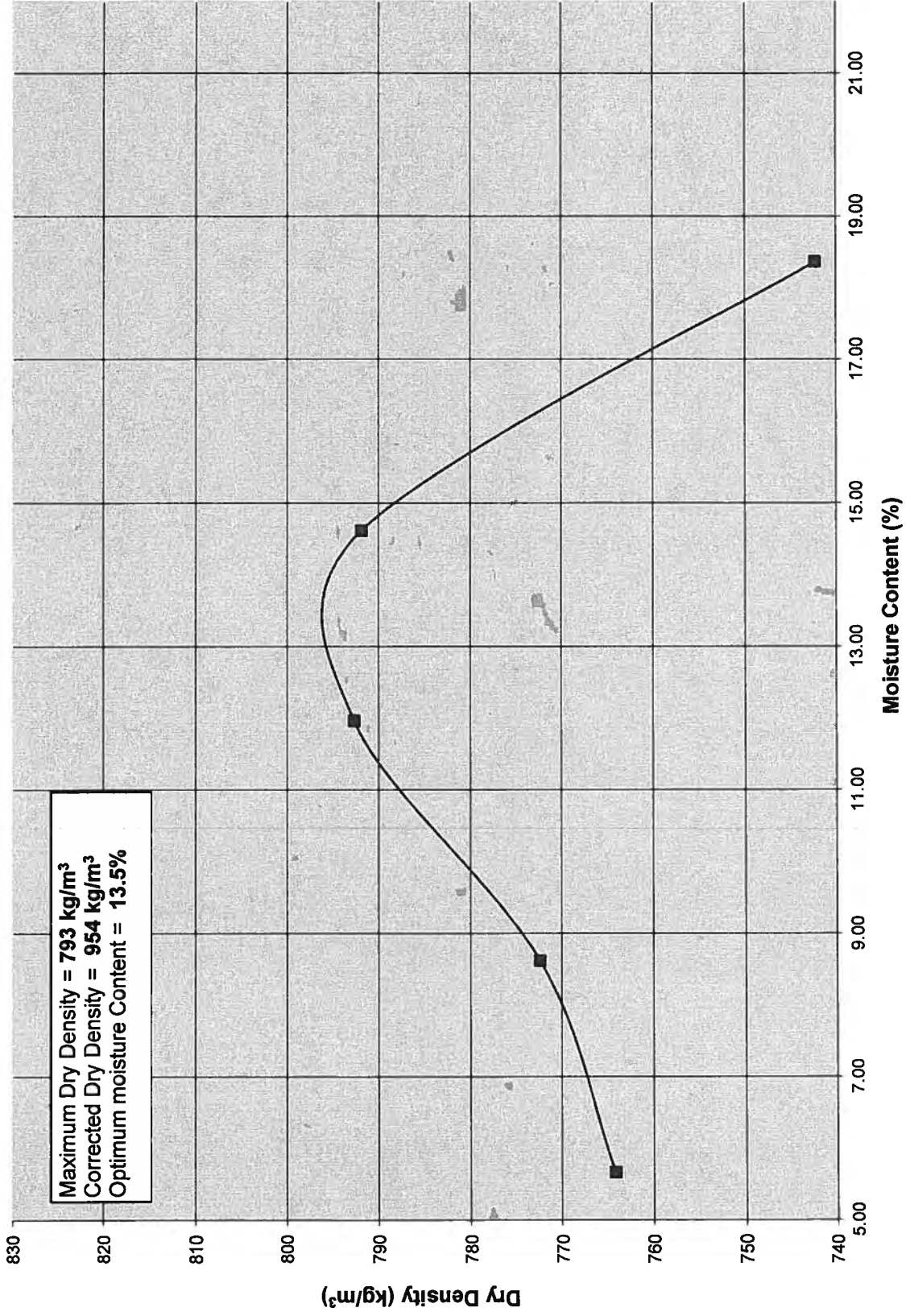
CLAY ←	SILT	FINE	MEDIUM	COARSE	FINE	COARSE
GRADING OF SAMPLE			SAND			

Job #: BRM-00600675

Date: January 14, 2012

Proctor Density Test

Ticket: 33194
Sample: TP 4
Depth: 600-675

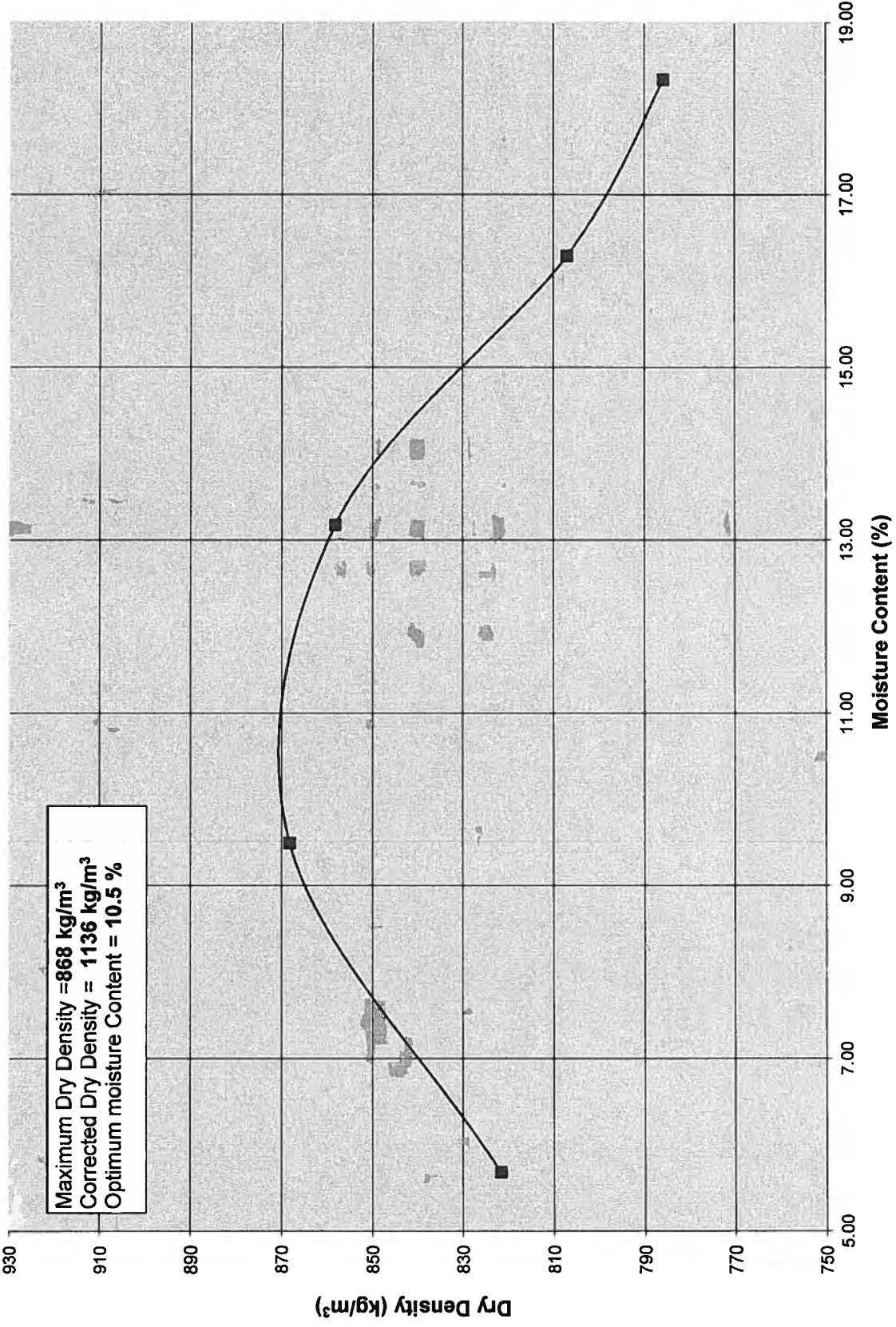


Job #: BRM-00600675

Date: January 14, 2012

Proctor Density Test

Ticket: 33193
Sample: TP 3
Depth: 600-675

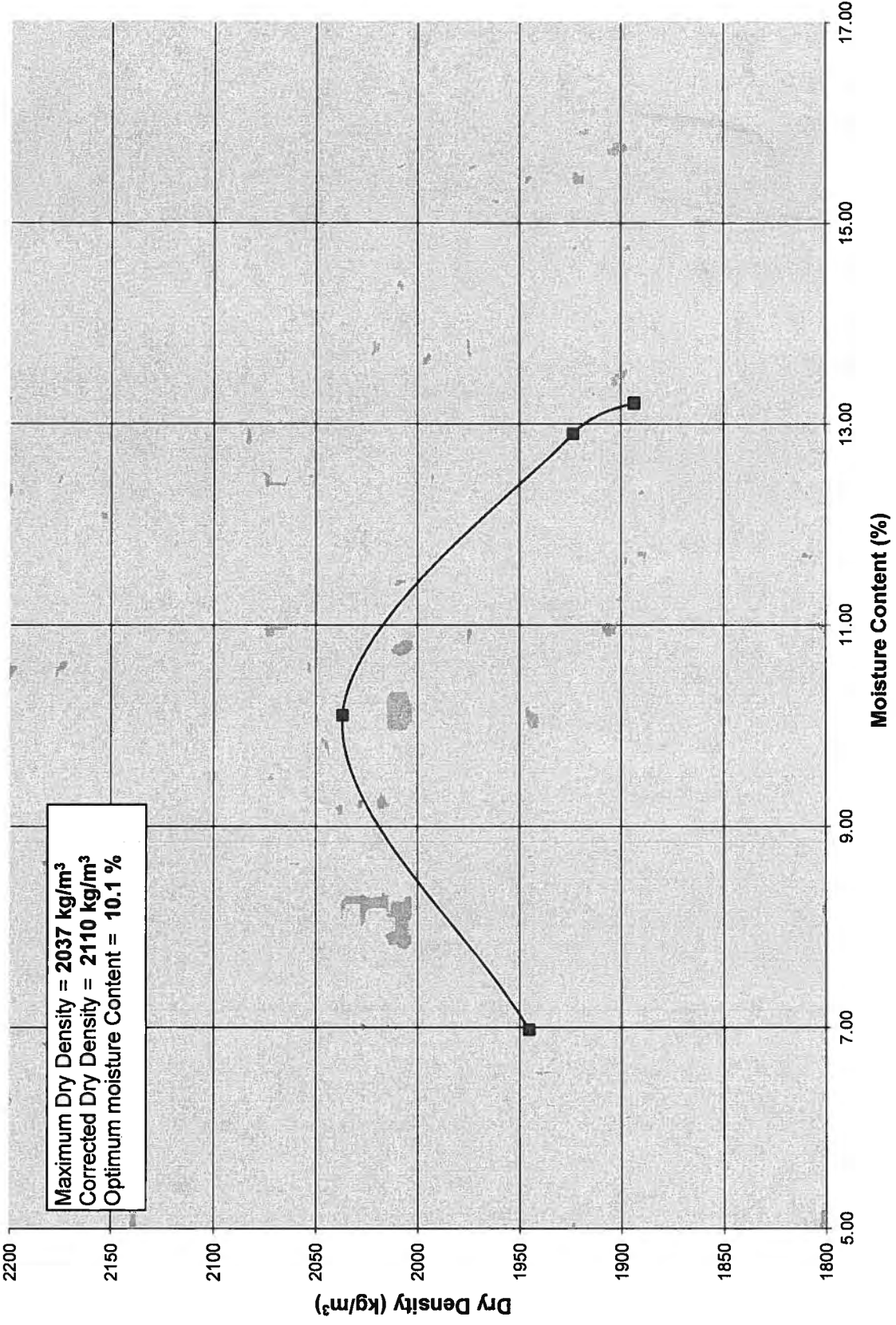


Job #: BRM-00600675

Date: January 14, 2012

Proctor Density Test

Ticket: 33191
Sample: TP 1
Depth: 600-675



Appendix D – Groundwater Quality Analytical Results

CLIENT NAME: EXP. SERVICES INC.
885 REGENT ST
SUDBURY, ON P3E5M4
(705) 674-9681

ATTENTION TO: Perry Sarvas

PROJECT NO: BRM-00601389

AGAT WORK ORDER: 13T692982

WATER ANALYSIS REVIEWED BY: Mike Muneswar, BSc (Chem), Senior Inorganic Analyst

DATE REPORTED: Mar 08, 2013

PAGES (INCLUDING COVER): 6

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (905) 712-5100

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.



Certificate of Analysis

AGAT WORK ORDER: 13T692982

PROJECT NO: BRM-00601389

5835 COOPERS AVENUE
 MISSISSAUGA, ONTARIO
 CANADA L4Z 1Y2
 TEL (905)712-5100
 FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: EXP. SERVICES INC.

ATTENTION TO: Perry Sarvas

Schedule 5 - Column 2 - Groundwater

DATE RECEIVED: 2013-03-01

DATE REPORTED: 2013-03-08

Parameter	Unit	SAMPLE DESCRIPTION:		MW 100	MW 200	MW 300	MW DUP
		SAMPLE TYPE:		Water	Water	Water	Water
		DATE SAMPLED:		2/27/2013	2/27/2013	2/27/2013	2/27/2013
		G / S	RDL	4163018	4163060	4163069	4163078
pH	pH Units	(6.5-8.5)	NA	5.89	6.33	6.48	5.55
Alkalinity (as CaCO3)	mg/L	(30-500)	5	<5	20	47	<5
Electrical Conductivity	uS/cm		2	27	117	104	158
Total Dissolved Solids	mg/L	(500)	20	44	90	96	84
Chloride	mg/L	(250)	0.10	1.24	11.2	10.8	13.1
Nitrate as N	mg/L	10.0	0.05	0.15	0.14	0.17	0.24
Sulphate	mg/L	(500)	0.10	4.53	13.0	7.38	38.6
Chemical Oxygen Demand	mg/L		5	19	23	39	32
Ammonia as N	mg/L		0.02	2.24	2.73	3.67	2.72
Dissolved Organic Carbon	mg/L	(5)	0.5	4.8	7.7	6.8	7.5
Calcium	mg/L		0.05	1.92	8.91	8.22	9.25
Magnesium	mg/L		0.05	0.52	2.06	1.98	2.09
Sodium	mg/L	20 (200)	0.05	1.26	9.18	9.56	9.08
Barium	mg/L	1	0.002	0.018	0.018	0.030	0.023
Boron	mg/L	5	0.010	<0.010	0.016	0.012	0.015
Iron	mg/L	(0.3)	0.010	0.057	0.156	0.621	0.179

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to O.Reg.169/03(mg/L)

Certified By: _____

Quality Assurance

CLIENT NAME: EXP. SERVICES INC.
 PROJECT NO: BRM-00601389

AGAT WORK ORDER: 13T692982
 ATTENTION TO: Perry Sarvas

Water Analysis																
RPT Date: Mar 08, 2013			DUPLICATE				Method Blank	REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Measured Value		Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits		
								Lower	Upper		Lower	Upper		Lower	Upper	

Schedule 5 - Column 2 - Groundwater

pH	4163319		7.62	7.81	2.5%	NA	101%	90%	110%	NA			NA		
Alkalinity (as CaCO3)	4163319		364	365	0.2%	< 5	93%	80%	120%	NA			NA		
Electrical Conductivity	4163319		1800	1800	0.1%	< 2	103%	80%	120%	NA			NA		
Total Dissolved Solids	1	4163078	84	80	4.9%	< 200	96%	80%	120%	NA			NA		
Chloride	4167190		22.2	22.2	0.2%	< 0.10	98%	90%	110%	97%	90%	110%	97%	80%	120%
Nitrate as N	4167190		<0.05	<0.05	0.0%	< 0.05	99%	90%	110%	104%	90%	110%	107%	80%	120%
Sulphate	4167190		28.5	28.4	0.4%	< 0.10	97%	90%	110%	97%	90%	110%	98%	80%	120%
Chemical Oxygen Demand	1	4163018	19	19	0.0%	< 5	96%	90%	110%	106%	90%	110%	112%	70%	130%
Ammonia as N	1		0.45	0.45	0.0%	< 0.02	93%	90%	110%	94%	90%	110%	106%	80%	120%
Dissolved Organic Carbon	1		16.4	16.8	2.4%	< 0.5	102%	90%	110%	101%	90%	110%	97%	80%	120%
Calcium	1	4163018	1.92	1.91	0.5%	< 0.05	101%	90%	110%	98%	90%	110%	100%	70%	130%
Magnesium	1	4163018	0.52	0.53	1.9%	< 0.05	105%	90%	110%	102%	90%	110%	104%	70%	130%
Sodium	1	4163018	1.26	1.26	0.0%	< 0.05	96%	90%	110%	94%	90%	110%	96%	70%	130%
Barium	1		0.022	0.018	20.0%	< 0.002	109%	90%	110%	103%	90%	110%	97%	70%	130%
Boron	1		0.034	0.029	15.9%	< 0.010	105%	90%	110%	101%	90%	110%	107%	70%	130%
Iron	1		0.196	0.174	11.9%	< 0.010	102%	90%	110%	93%	90%	110%	102%	70%	130%

Comments: NA signifies Not Applicable.

Certified By: _____





Time Markers

AGAT WORK ORDER: 13T692982

PROJECT NO: BRM-00601389

5835 COOPERS AVENUE
 MISSISSAUGA, ONTARIO
 CANADA L4Z 1Y2
 TEL (905)712-5100
 FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: EXP. SERVICES INC.

ATTENTION TO: Perry Sarvas

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
4163018	MW 100	Water	27-FEB-2013	01-MAR-2013

Schedule 5 - Column 2 - Groundwater

Parameter	Date Prepared	Date Analyzed	Initials
pH	05-MAR-2013	05-MAR-2013	XH
Alkalinity (as CaCO3)	05-MAR-2013	05-MAR-2013	XH
Electrical Conductivity	05-MAR-2013	05-MAR-2013	XH
Total Dissolved Solids	06-MAR-2013	07-MAR-2013	XH
Chloride	05-MAR-2013	05-MAR-2013	WZ
Nitrate as N	05-MAR-2013	05-MAR-2013	WZ
Sulphate	05-MAR-2013	05-MAR-2013	WZ
Chemical Oxygen Demand	04-MAR-2013	04-MAR-2013	XL
Ammonia as N	04-MAR-2013	04-MAR-2013	ND
Dissolved Organic Carbon	04-MAR-2013	04-MAR-2013	ND
Calcium	04-MAR-2013	04-MAR-2013	DP
Magnesium	04-MAR-2013	04-MAR-2013	DP
Sodium	04-MAR-2013	04-MAR-2013	DP
Barium	04-MAR-2013	04-MAR-2013	CR
Boron	04-MAR-2013	04-MAR-2013	CR
Iron	04-MAR-2013	04-MAR-2013	CR

4163060	MW 200	Water	27-FEB-2013	01-MAR-2013
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Schedule 5 - Column 2 - Groundwater

Parameter	Date Prepared	Date Analyzed	Initials
pH	05-MAR-2013	05-MAR-2013	XH
Alkalinity (as CaCO3)	05-MAR-2013	05-MAR-2013	XH
Electrical Conductivity	05-MAR-2013	05-MAR-2013	XH
Total Dissolved Solids	06-MAR-2013	07-MAR-2013	XH
Chloride	05-MAR-2013	05-MAR-2013	WZ
Nitrate as N	05-MAR-2013	05-MAR-2013	WZ
Sulphate	05-MAR-2013	05-MAR-2013	WZ
Chemical Oxygen Demand	04-MAR-2013	04-MAR-2013	XL
Ammonia as N	04-MAR-2013	04-MAR-2013	ND
Dissolved Organic Carbon	04-MAR-2013	04-MAR-2013	ND
Calcium	04-MAR-2013	04-MAR-2013	DP
Magnesium	04-MAR-2013	04-MAR-2013	DP
Sodium	04-MAR-2013	04-MAR-2013	DP
Barium	04-MAR-2013	04-MAR-2013	CR
Boron	04-MAR-2013	04-MAR-2013	CR
Iron	04-MAR-2013	04-MAR-2013	CR



Time Markers

AGAT WORK ORDER: 13T692982

PROJECT NO: BRM-00601389

5835 COOPERS AVENUE
 MISSISSAUGA, ONTARIO
 CANADA L4Z 1Y2
 TEL (905)712-5100
 FAX (905)712-5122
<http://www.agatlabs.com>

CLIENT NAME: EXP. SERVICES INC.

ATTENTION TO: Perry Sarvas

Sample ID	Sample Description	Sample Type	Date Sampled	Date Received
4163069	MW 300	Water	27-FEB-2013	01-MAR-2013

Schedule 5 - Column 2 - Groundwater

Parameter	Date Prepared	Date Analyzed	Initials
pH	05-MAR-2013	05-MAR-2013	XH
Alkalinity (as CaCO3)	05-MAR-2013	05-MAR-2013	XH
Electrical Conductivity	05-MAR-2013	05-MAR-2013	XH
Total Dissolved Solids	06-MAR-2013	07-MAR-2013	XH
Chloride	05-MAR-2013	05-MAR-2013	WZ
Nitrate as N	05-MAR-2013	05-MAR-2013	WZ
Sulphate	05-MAR-2013	05-MAR-2013	WZ
Chemical Oxygen Demand	04-MAR-2013	04-MAR-2013	XL
Ammonia as N	04-MAR-2013	04-MAR-2013	ND
Dissolved Organic Carbon	04-MAR-2013	04-MAR-2013	ND
Calcium	04-MAR-2013	04-MAR-2013	DP
Magnesium	04-MAR-2013	04-MAR-2013	DP
Sodium	04-MAR-2013	04-MAR-2013	DP
Barium	04-MAR-2013	04-MAR-2013	CR
Boron	04-MAR-2013	04-MAR-2013	CR
Iron	04-MAR-2013	04-MAR-2013	CR

4163078	MW DUP	Water	27-FEB-2013	01-MAR-2013
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Schedule 5 - Column 2 - Groundwater

Parameter	Date Prepared	Date Analyzed	Initials
pH	05-MAR-2013	05-MAR-2013	XH
Alkalinity (as CaCO3)	05-MAR-2013	05-MAR-2013	XH
Electrical Conductivity	05-MAR-2013	05-MAR-2013	XH
Total Dissolved Solids	06-MAR-2013	07-MAR-2013	XH
Chloride	05-MAR-2013	05-MAR-2013	WZ
Nitrate as N	05-MAR-2013	05-MAR-2013	WZ
Sulphate	05-MAR-2013	05-MAR-2013	WZ
Chemical Oxygen Demand	04-MAR-2013	04-MAR-2013	XL
Ammonia as N	04-MAR-2013	04-MAR-2013	ND
Dissolved Organic Carbon	04-MAR-2013	04-MAR-2013	ND
Calcium	04-MAR-2013	04-MAR-2013	DP
Magnesium	04-MAR-2013	04-MAR-2013	DP
Sodium	04-MAR-2013	04-MAR-2013	DP
Barium	04-MAR-2013	04-MAR-2013	CR
Boron	04-MAR-2013	04-MAR-2013	CR
Iron	04-MAR-2013	04-MAR-2013	CR

Method Summary

CLIENT NAME: EXP. SERVICES INC.

AGAT WORK ORDER: 13T692982

PROJECT NO: BRM-00601389

ATTENTION TO: Perry Sarvas

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
pH	INOR-93-6000	SM 4500-H+ B	PC TITRATE
Alkalinity (as CaCO ₃)	INOR-93-6000	SM 2320 B	PC TITRATE
Electrical Conductivity	INOR-93-6000	SM 2510 B	PC TITRATE
Total Dissolved Solids	INOR-93-6028	SM 2540 C	BALANCE
Chloride	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Nitrate as N	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Sulphate	INOR-93-6004	SM 4110 B	ION CHROMATOGRAPH
Chemical Oxygen Demand	INOR-93-6042	SM 5220 D	SPECTROPHOTOMETER
Ammonia as N	INOR-93-6002	AQ2 EPA-103A & SM 4500 NH ₃ -F	AQ-2 DISCRETE ANALYZER
Dissolved Organic Carbon	INOR-93-6049	EPA 415.1 & SM 5310 B	SHIMADZU CARBON ANALYZER
Calcium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Magnesium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Sodium	MET-93-6105	EPA SW-846 6010C & 200.7	ICP/OES
Barium	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Boron	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS
Iron	MET-93-6103	EPA SW-846 6020A & 200.8	ICP-MS



black
Laboratories

5835 Coopers Avenue
Mississauga, Ontario
L4Z 1Y2
www.agatiabs.com · webearth.agatiabs.com

Laboratory Use Only

Arrival Temperature: 13T 692982
AGAT WO #: _____
Lab Temperature: 4.4/4.9/4.7
Notes: _____

Chain of Custody Record

Ph: 905.712.5100 · Fax: 905.712.5122 · Toll Free: 800.856.6261

Client Information:

Company: exp Perry Servas
 Contact: 85 Regent St.
 Address: Sudbury ON P3E 5M4
 Phone: 705 674 9691 Fax: 705 674 8271
 Project: PM 0060138A PO: PM 0060138A
 AGAT Quotation #: S.O.A.

Please note, if quotation number is not provided, client will be billed full price for analysis.

Regulatory Requirements:

Regulation 153/09 (reg. 511 Amend.) Sewer Use Regulation 558

Table Ind/Com CCME Other (specify) DDWS

Region Sanitary Storm Prov. Water Quality Objectives (PWQO) None

Soil Texture (check one) Coarse Fine

Turnaround Time Required (TAT) Required*

Regular TAT 5 to 7 Working Days

Rush TAT (please provide prior notification) **Rush Surcharges Apply**

3 Working Days 2 Working Days 1 Working Day

OR

Date Required (Rush surcharges may apply): _____

*TAT is exclusive of weekends and statutory holidays

Invoice To:

Company: _____ Same: Yes No
 Contact: _____
 Address: _____

Is this a drinking water sample?
 (potable water intended for human consumption)
 Yes No

If "Yes", please use the Drinking Water Chain of Custody Form

Is this submission for a Record of Site Condition?
 Yes No

Legend Matrix

GW Ground Water O Oil
 SW Surface Water P Paint
 SD Sediment S Soil

Report Information - reports to be sent to:

1. Name: Perry Servas
 Email: perry.servas@exp.com
 2. Name: _____
 Email: _____

Sample Identification	Date Sampled	Time Sampled	Sample Matrix	# of Containers	Comments Site/Sample Information
MW 100	Feb 27/13	N/A	GW	7	Not Field Filtered (Metals)
MW 200					
MW 300					
MW DUP					

Metals and Inorganics	Metal Scan	Hydride Forming Metals	Client Custom Metals	ORPs: B-HWS, CI, CN, EC, FOC, Cr+6, SAR, NO ₃ /NO ₂ , N-Total, Hg, pH	Nutrients: TP, NH ₃ , TKN, NO ₃ , NO ₂ , NO ₃ /NO ₂	VOC: VOC, THM, BTEX, CMCE Fractions 1 to 4	ABNS	PAHS	Chlorophenols	PBBS	Organochlorine Pesticides	TCLP: TCLP Metals/Inorganics	Sewer Use

Samples Relinquished by (print name & sign): Perry Servas Date/Time: Feb 28/13

Samples Received by (print name & sign): Staggan Date/Time: Mar 11 2013

Samples Relinquished by (print name & sign): _____ Date/Time: _____

Samples Received by (print name & sign): _____ Date/Time: _____

Pink Copy - Client
 Yellow + Golden Copy - AGAT
 White Copy - AGAT

Page 1 of 1
 NO: **160472**