

City of Sault Ste. Marie

**Sault Ste. Marie Solid Waste Environmental
Assessment
Land Use Impact Assessment
(Draft)**

Prepared by:

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Project Number:

60117627

Date:

October, 2015

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October 5, 2015

Ms. Catherine Taddo, P. Eng.
Engineering Department
City of Sault Ste. Marie
99 Foster Drive, 5th Floor
Sault Ste. Marie, ON P6A 5N1

Dear Ms. Taddo:


Project No: 60117637

**Regarding: City of Sault Ste. Marie Solid Waste Management Environmental Assessment
Land Use Impact Assessment**

We are pleased to submit our Land Use Impact Assessment Report which has been prepared to support a proposed expansion of the existing municipal landfill located on Fifth Line.

The land use impact assessment inventories the land uses within the study area, identifies potential impacts the proposed expansion may have relative to relevant MOECC guidelines, City of Sault Ste. Marie land use policies and Sault Ste. Marie Regional Conservation Authority regulations and develops mitigating measures to address potential impacts.

Sincerely,
AECOM Canada Ltd.



Rick Talvitie, P. Eng.
Manager, Northern Ontario

RT:nm

Encl.

Distribution List

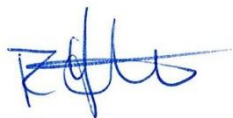
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Revision Log

Revision #	Revised By	Date	Issue / Revision Description
0	R. Talvitie	April 30, 2015	DRAFT for City staff review
1	R. Talvitie	October 5, 2015	Revised DRAFT

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1. Introduction

This document presents the findings of the land use impact assessment as part of the Environmental Assessment (EA) of the proposed expansion of the City of Sault Ste. Marie's landfill located on Fifth Line. The proposed project includes an expansion of the disposal boundaries to the north and west and a moderate increase in the height of the waste. Landfill mining is also proposed within the western portion of the existing disposal footprint to facilitate the construction of a liner to enhance environmental management at the site. The mining process involves excavation of waste within the existing disposal footprint, removing fines and recyclables, transferring the residual waste to a new lined cell and lining the mined area to accommodate future waste disposal. The planned expansion will be accommodated within existing City-owned lands.

The land use impact assessment examines and evaluates the potential for land use impacts from the landfill expansion. The assessment was completed with consideration of the existing Official Plan (OP) and Zoning By-law, relevant Ministry of Environment and Climate Change (MOECC) guidelines for land uses in the vicinity of operating landfills and the historical track record for the existing operating site. The potential disruption effect on local residents and businesses is evaluated as part of the socio-economic assessment.

Following on from this introductory section the report takes on the following format:

- Outline of the methodology and approach to the land use assessment;
- Description of the study area including a summary of existing land uses in the study area;
- Evaluation of potential land use impacts;
- Proposed mitigation; and
- Net effects and monitoring.

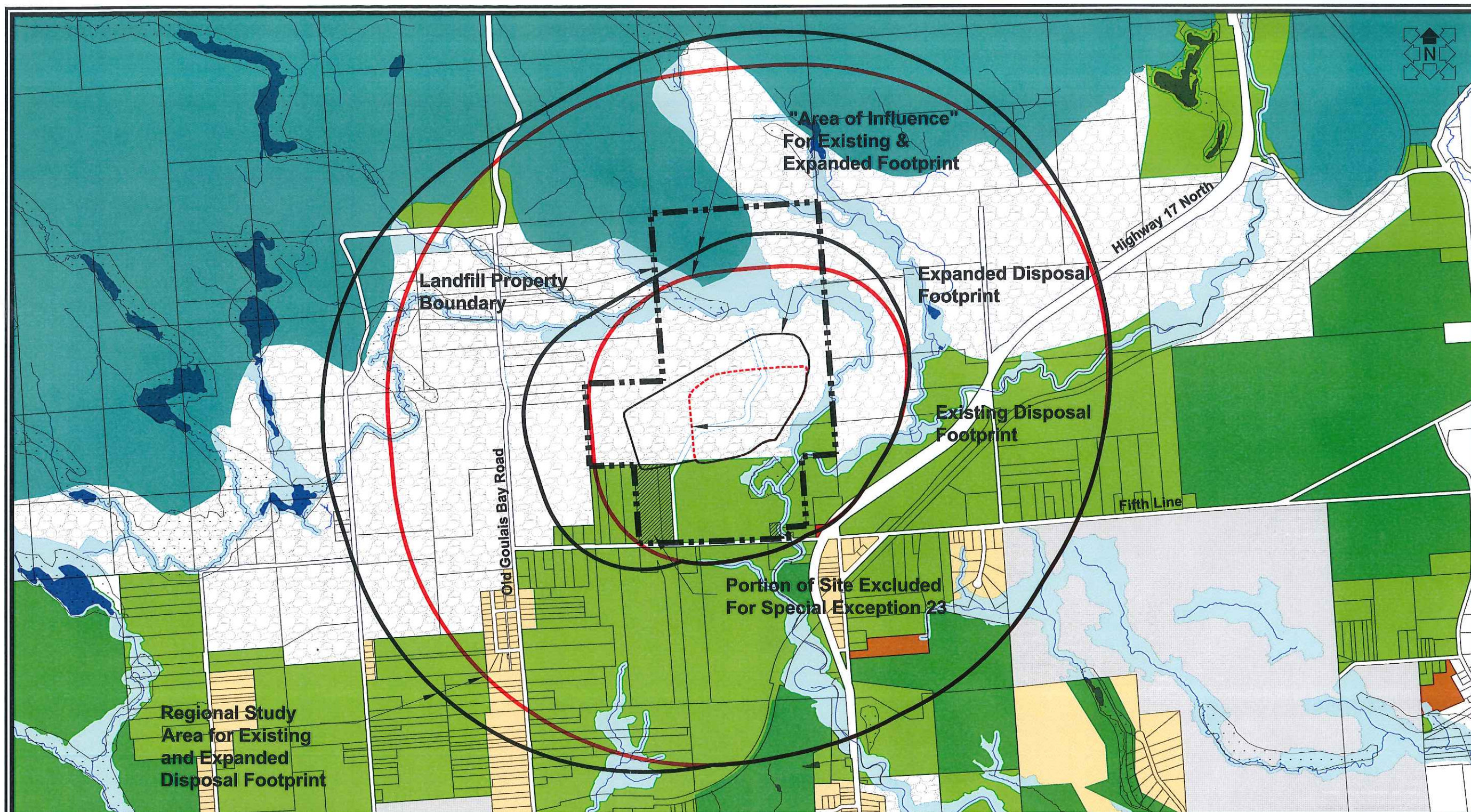
2. Methodology

The approach taken to complete the land use impact assessment was to inventory the land uses within the study area, identify potential impacts the proposed expansion may have relative to relevant MOECC guidelines and City of Sault Ste. Marie land use policies and guidelines and develop mitigating measures to address potential impacts.

3. Detailed Description of the Land Use Environment Potentially Affected

For the purposes of the detailed impact assessment, the "on-site study area" is defined as lands within the preferred landfill footprint (existing and expansion areas). The "site vicinity study area" is defined as all properties lying wholly or partially within a 500m radius of the "on-site study area" and the "regional study area" extends an additional 1km from the "site vicinity study area" (refer to Figure 1).

All of the lands required for the waste disposal activities and ancillary activities are currently owned by the City of Sault Ste. Marie. The site boundaries are delineated in Figure 1.



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Rural Precambrian Uplands	Parks and Recreation Zone	Environmental Management
Rural Area Zone; RAhp	Mobile Home Residential Zone	
Rural Aggregate Extraction Zone	Highway Zone	
Institutional Zone	Estate Residential	

LAND USE IMPACT ASSESSMENT STUDY AREA AND EXISTING ZONING

Project 60117627
Jan 2015

Figure 1

3.1 On-site Study Area

The existing land uses within the on-site study area consist of existing waste disposal activities (existing disposal footprint), organic processing (ie. leaf and yard waste composting in open windrows, curing and screening compost and storage of the final product) and wooded area.

The on-site study area is designated Rural Area in City's Official Plan and zoned Rural Area (RA) and Rural Aggregate Extraction (REX) in the City's Zoning By-law. A significant proportion of this area is also subject to Special Exception 23.

Special Exception 23 allows use as a sanitary landfill where "sanitary landfill site" shall mean a place where waste is deposited under controlled conditions including proper compaction and regular covering with an approved cover material. It also may include ancillary operations associated with the landfill site such as, but not limited to, leachate collection, site access, storage and maintenance of heavy equipment, weigh scales and monitoring wells.

The current zoning by-law was approved in 2005 and since that time, the City has acquired additional properties adjoining the landfill site which has resulted in an expansion of the overall landfill site boundaries. As a result of the more recent acquisitions, a portion of the current site falls outside of the defined Special Exception 23 boundaries (refer to Figure 1). A zoning by-law amendment is required to incorporate the full extent of the site under Special Exception 23.

3.2 Site Vicinity Study Area

The site vicinity study area includes all properties lying wholly or partially within a 500 m radius of the proposed expansion footprint. This area coincides with the area of influence of a landfill site as prescribed in MOECC Guideline D4 (copy included in Appendix B). The existing land uses within the site vicinity study area include ancillary waste management and disposal activities (ie. weigh scales, leachate collection and management, site access, maintenance and storage of heavy equipment, administration offices, public drop-off for waste and recyclables, landfill gas blower station and flare), residential (single family homes), recreational (campground), aggregate extraction operations, and contractor's yards.

Within the Official Plan and Zoning By-Law all of these properties are designated Rural Area and zoned Rural Area, Rural Precambrian Uplands, Environmental Management, Rural Aggregate Extraction and Highway. In addition the following Special Exceptions apply within this area; S-11, S-23, S-113, S-228, S-233, S-239, S-303. Copies of the special exceptions are included in Appendix C.

The proposed expansion of the site will result in a moderate increase in the site's area of influence as defined in MOECC Guideline D4 and illustrated in Figure 1. There are a total of 12 properties located within the site's expanded area of influence that are not included in the existing site's area of influence. These properties are summarized in Table 1.

Table 1. Land uses in Expanded Area of Influence

Current Land Use	Quantity	Zoning
Residential	8	Rural Area and Aggregate Extraction
Contractor Yard/Aggregate Extraction	2	Rural Area and Aggregate Extraction
Vacant/inactive (includes a former race track)	2	Rural Area and Aggregate Extraction

Note: in cases where a property includes a residence and business it has been classified as residential in this table.

The vast majority of the “landfill site” (all properties owned by the City that comprise the entire site) is included within the on-site or site vicinity study area and as noted in the forgoing section, Special Exception 23 allows use as a sanitary landfill. However, a relatively small portion of the existing site which will accommodate a portion of the expanded disposal footprint and some of the future ancillary waste management facilities lies outside of the Special Exception 23 boundaries. A zoning by-law amendment is required to expand the Special Exception 23 boundaries to include all future disposal activities and associated ancillary waste management functions.

3.3 Regional Study Area

The regional study area consists of all properties outside of the site vicinity study area and lying wholly or partially within a 1 km radius from the site vicinity study area. Although the northern portion of the landfill site (i.e. north of Canon Creek) lies within this area, there is no planned waste disposal or ancillary waste management functions within this area. This northern area of the site serves as buffer lands only.

There is a broad mix of land uses within the regional study area. Within the Official Plan all of these properties are designated Rural Area. Zoning includes Rural Area, Environmental Management, Rural Aggregate Extraction, Rural Precambrian Uplands, Highway, Estate Residential, Mobile Home Residential and Parks and Recreation.

All of these properties are beyond the prescribed 500m influence area of a landfill site as outlined in MOECC Guideline D4. There are no anticipated land use impacts within this area.

4. Evaluation of Potential Land Use Impacts

Land use planning in Ontario is generally guided by a hierarchical system starting with the Provincial Policy Statement 2014 and followed by Municipal Official Plans and Zoning By-Laws. The MOECC also publishes Guidelines specific to land use planning for landfill sites. These include Guideline D1: Land Use Compatibility and Guideline D4: Land Use On or Near Landfills and Dumps (refer to Appendix B). Lastly, a portion of the landfill site is included in the Sault Ste. Marie Regional Conservation Authority (SSMRCA) regulated area which may also impact the site development. Each of these guidance documents is discussed in the following subsections.

4.1 Provincial and City Planning Policies

The Provincial and City Planning policies have been established to guide planning and development decision making and to protect sensitive resources. The City's Official Plan incorporates a number of policies which could potentially impact the proposed expansion of the landfill. The relevant sections of the Official Plan are included in Appendix A and summarized below (Note: the Provincial Policy Statement incorporates similar provisions):

- Section 2.4 - Heritage;

- Section 3.2- Natural Heritage Features;
- Section 3.6 - Fish Habitat; and
- Section 4.1 - Groundwater Recharge Protection Area.

Each of these policies is addressed in the following paragraphs.

Heritage

The Official Plan policy indicates that an Archaeological Impact Assessment is required for development that may impact medium to high potential archaeological sites. The proposed landfill expansion extends into areas that were previously identified as having archaeological potential. In accordance with Official Plan policies, a Stage 1 and 2 archaeological assessment was completed in accordance with the requirements of the Ontario Heritage Act (R.S.O. 1990), the Environmental Assessment Act (R.S.O. 1990), the Standards and Guidelines for Consultant Archaeologists (2011) and the Planning Act (R.S.O. 1990). The work was performed under the Professional Archaeological License of Luke Dalla Bona (P065).

Through the study process, no archaeological sites were found and the study concluded that no further archaeological assessment of the property is required. Refer to the full Stage 1 and 2 Archaeological Assessment Report for further details.

Natural Heritage Features and Fish Habitat

The City's Official Plan Schedule A identifies natural resources and environmental constraints. The natural features are categorized as Category 1 or Category 2 based on their significance. No development is permitted in Category 1 natural features or areas. The proposed landfill expansion is in an area that includes some Category 2 natural features.

Fish habitat is also classified as Type 1, 2 or 3 and similarly no development is permitted in Type 1 habitat. Portions of Canon Creek and Root River run through the landfill site and are situated adjacent to the disposal footprint. Both of these water courses are identified as Type 2 or 3 fish habitat in the City's Official Plan.

Official Plan policy indicates that an Environmental Impact Study is required to assess possible impacts of new development proposed within or adjacent to Category 2 natural features or within or adjacent to Type 2 or 3 fish habitat. In accordance with Official Plan policies, a "Natural Heritage Impact Assessment" was completed, the scope of which included vegetation, wildlife and aquatic life.

The study concluded that with the implementation of the recommended mitigation strategies, adverse effects on the natural environment can be avoided or minimized. Refer to Section 5 of this report and the full Natural Heritage Impact Assessment Report for further details.

Groundwater Recharge Protection Area

The landfill site is situated within the City's Groundwater Recharge Protection Area and the Source Water Protection Plan (SWPP) identifies this area as a future moderate and low threat. The SWPP encourages the City to include specific policies, in its Official Plan, to manage specific activities to protect this resource.

The City's Official Plan specifically addresses this matter under Section 4.1 entitled "Groundwater Recharge Protection Area" which prescribes specific policies for the management and storage of fuel and chemicals, vehicle maintenance, repair and storage, spill response, and storm water management. Given that the landfill site

operations include many of these prescribed activities, these policies are relevant to the existing site and the proposed site expansion.

4.2 MOECC Guidelines

The principle objective of MOECC Guideline D1 is to minimize or prevent, through the use of buffers, the exposure of any person, property, plant, or animal life to adverse effects associated with the operation of specified facilities. It is intended to apply when a change in land use is proposed and a sensitive land use is within an area of influence. This Guideline is relevant as a zoning change is required to facilitate the proposed expansion and sensitive land uses exist within the expanded area of influence.

Guideline D-4 prescribes the specific area of influence that applies for a landfill site and is used to confirm whether a potential compatibility concern exists with proposed changes in land use. D-4 specifies restrictions and controls on land use that the MOECC wishes to see implemented in the vicinity of landfills in order to protect the health, safety, convenience and welfare of residents near the facility.

D-4 prescribes land uses that are considered sensitive to landfilling operations and those that are considered compatible with landfill operations.

For landfill sites where technical controls for leachate and landfill gas are required surrounding a fill area no land use may take place within 30m of the perimeter. The proposed expanded landfill configuration respects this minimum separation distance.

In addition the MOECC considers the most significant contaminant discharges and visual problems to typically occur within 500m of the perimeter of the fill area. For the purposes of this proposal the site vicinity study area reflects this area of influence as prescribed by the MOECC.

The area of influence associated with the existing fill area is similar to the area of influence for the proposed expanded fill area. The principle impact of the proposed expansion is an expansion of the area of influence westerly. As noted in Section 3.2, there are 12 additional properties that are incorporated into the expanded Area of Influence. The additional properties that are included in the area of influence are shown in Figure 1 and summarized in Table 1. Photos taken from the street line for each impacted property are included in Appendix D.

In accordance with Guideline D-1, adequate separation based on the facility's influence area is the preferred method of mitigating adverse effects. In cases where the required separation is not available, potential compatibility problems need to be addressed through the completion of studies to assess the level of impact and develop appropriate mitigation (refer to Section 5.0 of this report).

4.3 Sault Ste. Marie Regional Conservation Area (SSMRCA)

Portions of the landfill site are situated within an area subject to the regulation of development, interference with wetlands and alterations to shorelines and watercourses administered by the SSMRCA. The regulation is intended to control flooding, erosion, dynamic beaches, pollution or the conservation of land. A permit is required prior to proceeding with any development in the regulated areas. Refer to Section 5 of this report and the Surface Water Impact Assessment and Mitigation Report.

5. Proposed Mitigation

There are approximately 18 properties located within the site's existing area of influence. The majority of the uses within the existing area of influence are sensitive. The proposed expansion will result in an additional 12 properties within the area of influence of the expanded site, 8 of which are considered sensitive.

The site has been operating for many years with sensitive uses within the existing area of influence. The proponent has been cognizant of these sensitive uses and has adopted an operating approach that includes continual improvement in mitigating nuisance impacts. The City's commitment to mitigate impacts is demonstrated by the moderate number of documented complaints (ie. average of 10 per year over the period 2009-2013).

Over time the best management tools and approaches available to mitigate nuisance effects have improved. The proposal to expand the existing facility will support additional municipal investment to further enhance the controls and mitigating measures that presently exist for the existing site.

In accordance with MOECC Guidelines and City planning policies the City has also undertaken specific focused studies to assess the level of impact to sensitive land uses within the area of influence and to develop effective mitigating measures. Details of the mitigating measures are summarized in the following subsections and are more fully explained in the relevant discipline study reports prepared in conjunction with this Environmental Assessment.

5.1 Official Plan Policies

As noted in Section 4.1 of this report there are a number of official plan policies which may impact the proposed expansion. Specific mitigating measures relevant to each of the policies are summarized in the following paragraphs.

Archaeological Potential

Although no specific mitigating measures were identified through the Stage 1 and 2 Archaeological reporting the construction contract will include provisions to stop work should any heritage resources be discovered during the excavation activities.

Natural Heritage Features and Fish Habitat

Potential direct impacts identified through the Natural Heritage Impact Assessment included woodland and meadow vegetation removal, loss of wildlife habitat, incidental wildlife mortality and erosion and sedimentation effects. In addition, potential indirect effects identified included operational disturbance to wildlife and ecological linkages, operational aquatic effects and colonization of exotic invasive species.

To address these potential effects the following mitigation strategies were identified:

- Woodland edge management;
- Wildlife impact mitigation during construction;
- Erosion and sediment control;
- Storm water management and leachate collection system; and
- Environmental monitoring.

Details regarding these mitigating strategies are included in the Natural Heritage Impact Assessment Report.

Groundwater Recharge Protection Area

Recognizing that the existing and expanded landfill site includes fuel storage and handling, and vehicle maintenance, repair and storage, specific operating procedures will be included in the Design and Operations Report to mitigate potential impacts from these activities. In addition the Official Plan policies also identify a need for a spill response action plan which is to be reviewed and updated annually. The existing Spills and Hazardous Materials Policy which includes provisions for annual reviews and employee training is attached in Appendix E.

In conjunction with the proposed site expansion the site's storm water management plan has also been updated to reflect site configuration changes and to enhance storm water quality leaving the site. The plan respects the requirement of the Official Plan and includes the collection, storage and treatment to remove contaminants prior to discharge to the environment. Details are included in the Storm Water Management Impact Assessment Report.

5.2 MOECC Guidelines

Sensitive land uses, as defined by the MOECC, exist within the area of influence of the existing site and expanded site. As noted in Section 3.2 there 12 additional properties within the expanded area of influence. Of the 12 properties, 8 of them are residential and considered sensitive. In order to address potential impacts the following detailed impact assessment studies have been completed:

- Air Quality and Odour Impact;
- Noise Impact;
- Hydrogeological (groundwater) Impact;
- Traffic Impact;
- Socio-Economic Impact;
- Visual Impact; and
- Surface Water Impact.

The impacts identified through these studies and the proposed mitigation are summarized in Table 2. The individual discipline study reports should be referenced for specific details of the anticipated impacts and proposed mitigation.

Table 2. Proposed Mitigation for Sensitive Uses within the Area of Influence

Identified Impact	Proposed Mitigation	Reference Document
Air Quality - air quality can be impacted from combustion of fuels and from the generation of dust and particulate matter on site.	<ul style="list-style-type: none"> • No significant impacts are anticipated. • Air quality modeling completed to predict pollutant concentrations for near-by off-property receptors indicated that there were no exceedances of relevant provincial air quality criteria anticipated. 	Sault Ste. Marie Solid Waste Environmental Assessment Air Quality and Odour Impact Assessment
Odour – odours can be generated from normal landfill operations including tipping, spreading and compacting waste. Experience at this site indicates principle odour generators are biosolids disposal and landfill gas. Landfill mining is also expected to be a principle short term odour generator.	<ul style="list-style-type: none"> • Develop and implement a comprehensive odour management plan incorporating best management practices. • Keep the working face as small as possible and apply cover daily. • Minimize waste storage time and develop and employ special practices for highly odorous waste. • Adjust operations and/or mitigative actions based on meteorological conditions. • Continue operation of the active landfill gas collection 	Sault Ste. Marie Solid Waste Environmental Assessment Air Quality and Odour Impact Assessment

Identified Impact	Proposed Mitigation	Reference Document
	<p>system and implement staged expansion in conjunction with the development of each cell.</p> <ul style="list-style-type: none"> Construct an on-site biosolids processing facility incorporating odour control equipment. By-pass screening of highly odorous mined waste and avoid mining in areas with perched leachate. Use chemical and/or biological treatment to mitigate odours. Use an experienced Contractor with a good track record for the mining process. Maintain an effective and responsive odour complaint procedure. Undertake regular odour monitoring and site inspections. Ensure employees are properly trained in standard operating procedures. 	
<p>Noise – the operations at the expanded site will closely match the current operations. There will however be additional construction activities associated with future cell development and the site will be reconfigured over time which will result in some operations (eg. composting) in closer proximity to sensitive receptors.</p>	<ul style="list-style-type: none"> Noise modeling was completed to predict noise levels at near-by off-property receptors. Based on the modeling completed there are no anticipated exceedances of relevant provincial noise criteria provided a minimum 2.5m high berm is constructed adjacent to the future composting operations. 	<p>Sault Ste. Marie Solid Waste Environmental Assessment Noise Impact Assessment</p>
<p>Hydrogeological – the infiltration of precipitation through waste can impact groundwater quality.</p>	<ul style="list-style-type: none"> The existing horizontal leachate collection system along the south and south-east periphery of the existing disposal footprint will be maintained and replaced if necessary. The proposed expansion and mined areas include a complete underdrain leachate collection system and composite liner system. A horizontal north-south collector or new purge wells have been identified as a contingency measure along the western limit of the expanded disposal area to address, if necessary, remnant impacts from the existing site and provide a contingency for the expanded area. The existing monitoring program will be expanded to include the expanded disposal footprint. Effective contingencies have been identified including: <ul style="list-style-type: none"> A predictive monitoring program to identify possible issues or concerns in advance. Extension of the downstream contaminant attenuation zone (CAZ); Extension of potable water service easterly along Fifth Line to Highway 17 (Note: potable 	<p>Sault Ste. Marie Solid Waste Environmental Assessment Hydrogeological Impact Assessment</p>

Identified Impact	Proposed Mitigation	Reference Document
	water service is currently provided to all properties along Fifth Line west of the landfill site) or annual water quality monitoring of nearby wells.	
Traffic – changes in traffic patterns or volumes could impact transportation infrastructure and safety in the area.	<ul style="list-style-type: none"> Traffic volumes have been stable at moderate levels for many years and are not expected to increase significantly. No significant impacts anticipated. Monitoring included to address any significant changes in traffic volumes or operations. 	Sault Ste. Marie Solid Waste Environmental Assessment Traffic Impact Assessment
Socio-Economic - Nuisance effects from both construction and operations at the landfill may disrupt the extent people can use and enjoy their property or public spaces (both inside and outside). It may also result in a downturn in customers for businesses. Major concerns included noise, odour, traffic, increased vermin and wildlife (rats, gulls, bears etc.). In addition there is a perception that private well water quality may be adversely impacted due to the presence of the landfill site.	<ul style="list-style-type: none"> Refer to mitigation measures detailed in this table under Air Quality, Odour, Noise, Hydrogeological and Traffic. On-going engagement with the public. Best management practices Vermin Management Plan will be developed and detailed in the Design and Operations report. 	Sault Ste. Marie Solid Waste Environmental Assessment Socio-Economic Impact Assessment
Aesthetics – the disposal footprint will be expanded to the north and west and will be moderately higher than the existing fill area. The expanded site is visible from small sections of Fifth Line at the hydro easement cross over and an existing residential property located adjacent to the south west edge of the site.	<ul style="list-style-type: none"> The site is generally not visible from the east, west and north. The existing mature trees along the Fifth Line will be retained in the future site plan and will continue to provide effective visual buffers. Vegetative treatments will be introduced at strategic locations to screen sporadic views from the south and south-west. A native grass and wildflower mixture will be used as a vegetative cap on the final landform. Reforestation will be completed in several areas to compensate for the loss of existing vegetation. 	Sault Ste. Marie Solid Waste Environmental Assessment Visual Impact Assessment
Storm Water Management – the City's Official Plan and Stormwater Management Guidelines include specific policies or guidelines regarding the management of storm water. In addition portions of the site are subject to regulations administered through the Sault Ste. Marie Regional Conservation Authority.	<ul style="list-style-type: none"> On-site storm water management will be achieved through a series of ditches and culverts leading to one of four single stage storm water management ponds. The ponds are designed to reduce total suspended solids loading and to provide emergency leachate/spill containment. The ponds will include emergency flow control systems at their outlet to allow storage of runoff in case of surface water contamination by leachate or on-site spills. Effluent quality monitoring will also be included. No water quantity impacts are anticipated since the 	Sault Ste. Marie Landfill Surface Water Impact Assessment and Mitigation Report

Identified Impact	Proposed Mitigation	Reference Document
	<p>peak flow from the site is significantly smaller than those of the receiving watercourses and the on-site peak does not coincide with the water courses peaks.</p> <ul style="list-style-type: none"> The site development is planned to occur outside of the 100 year floodline. 	

In addition to the mitigation measures included in Table 2, historically, the City has purchased several properties in the vicinity of the landfill site at market prices with the objective of increasing the buffer lands surrounding the site. The City will consider the acquisition of additional properties at market value, within the site vicinity area as they become available. This will continue to be implemented on a long term basis to further enhance mitigation of nuisance impacts. Furthermore, any future development of vacant properties or redevelopment of existing developed properties that require City Planning Division approval will include consideration of MOECC Guideline D4.

The City plans to proceed with the necessary property rezoning following the receipt of EA Act approval. The rezoning is required for the hatched area shown in Figure 1 that is presently excluded from Special Exception 23.

6. Net Effects and Monitoring

There are approximately 18 properties located within the site's existing area of influence. The majority of the uses within the existing area of influence are sensitive. The proposed expansion will result in an additional 12 properties within the area of influence of the expanded site, 8 of which are considered sensitive.

In accordance with Guideline D-1, adequate separation based on the facility's influence area is the preferred method of mitigating adverse effects. In cases where the required separation is not available, potential compatibility problems need to be addressed through the completion of studies to assess the level of impact and develop appropriate mitigation which is summarized in Section 5 of this report.

Although some adverse effects are anticipated with the proposed landfill expansion, the detailed studies concluded that no significant net adverse effects are anticipated with the implementation of the proposed mitigating measures. In addition to the mitigating measures summarized in Section 5 and detailed in the individual discipline reports, monitoring is also proposed to ensure the predicted effects are not exceeded. The monitoring activities are included in the individual discipline reports where relevant.

Appendix A

SWPP and OP Excerpts

accompanied by an Environmental Impact Study and a Hydrogeologic Study prepared by experts in those fields.

PR.4 Due to the susceptibility of the area to contamination, as well as its sensitivity to development severances in the Precambrian Uplands area are prohibited. Therefore uses are limited to existing lots of record.

PR.5 In reviewing proposals requiring approval under the authority of the Planning Act the policies of Part V Section 3.3 entitled Forested Woodlands shall apply to the proposal.

4. **Natural Constraints**

Introduction

Schedule "B" outlines natural constraints to development. These constraints may mean prohibition of development; development subject to detailed *Environmental Impact Study (EIS)*; or development with minimum conditions after review.

4.1 **Groundwater Recharge Protection Area**

Introduction

The Groundwater Recharge Protection Area is the area of sand and gravel deposits south of the Shield Line, as shown on Schedule "B" of this Plan. These sand and gravel deposits allow the surface water flowing from the Precambrian Uplands to percolate downward, recharging the groundwater table that serves as the source of domestic water supply for 50 percent of the urban area and 100 percent of the Rural Area. The importance of protecting the City's groundwater resources is critical. For example, one litre of gasoline or similar petroleum solvent can pollute 1 million litres of drinking water.

The inter-relationship between ground water and surface streams, and the importance of the forested upper watersheds and wetlands as water storage and recharge areas into the ground water regime should be recognized. All of these features are necessary to provide high quality water.

Policies

G.1 The Groundwater or Aquifer Recharge Area has been identified in the Sault Ste. Marie and Area "Groundwater Management and Protection Study" (June, 2003). Based on this report, the following policies will apply to nonresidential uses that require on site storage or use of fuel, chemicals, or hazardous materials. These policies will form the basis for review and approval of applications made under the provisions of the Planning Act.

A) Fuel Storage and Handling

- i) In-ground fuel storage tanks are not permitted

- ii) The amount of fuel stored on site shall not exceed 2273 litres. The maximum amount of fuel tank fuel stored for aggregate operations shall not exceed 5,000 litres.
- iii) Fuel storage is limited to fuel for vehicles operating on site only.
- iv) The fuel storage tank must be of double walled construction with an audible alarm system that annunciates failure of the inner or outer wall integrity. Double walled construction is not a substitute for spill containment.
- v) The tank and associated fuelling equipment must be installed on an impervious surface with sufficient containment to hold 110% of the total tank volume. The fuelling area must be designed to collect all runoff, separate the fuel from the water, and allow for proper disposal of the contaminants before the runoff enters the ground or surface water systems.
- vi) The tank must be situated so as to minimize it's exposure to moving equipment and vehicles. It must also incorporate collision protection features.
- vii) On-site fueling equipment should be in a fixed location. Where the equipment to be fuelled is in a fixed location and cannot be moved the portable fuelling equipment shall provide a means to catch and contain any spillage that may occur during refueling. The method of containment will be reviewed and approved by the Conservation Authority and the PUC Services Inc..
- viii) The area where the any portable fuel tank is stored must have an impervious ground surface or be within a building whose floor drain does not discharge to surface or a sewage system. The floor drain must be directed to a holding tank or pond that is designed to capture a spill. The holding area will have the capacity of 110% of the portable fuel storage tank.

B) Chemical Storage and Handling

- i) The bulk storage of chemicals, petroleum products, and other hazardous materials is prohibited.
- ii) The storage and handling of chemicals on site for the routine operations of the use, must be closely monitored and controlled.
- iii) The storage and handling of chemicals needed for the day-to-day operations of the use are restricted to an indoor or covered area equipped with adequate spill and runoff containment structures, designed to prevent any loss of chemicals into the ground.
- iv) All persons handling chemicals must be trained to ensure the substances are properly stored and handled

C) Vehicle Maintenance, Repair and Storage

- i) Vehicular maintenance and repair will be limited to only those vehicles owned or leased, and used in conjunction with the main use permitted on site. A public garage for the repair and maintenance of vehicles is prohibited.

- ii) Maintenance and repair of vehicles and equipment shall be conducted entirely within an enclosed building.
- iii) The building must be equipped with suitable floor drainage, collection, and retention systems to ensure that any spillage and runoff is prevented from entering the ground.
- iv) The floor of the building must be structurally sound and constructed of materials capable of preventing any loss of liquids to the underlying ground.
- v) Any portion of the property used to store vehicles or motorized equipment will be equipped with an impermeable surface layer to prevent the migration of contaminated runoff into the ground.

D) Spill Response

- i) A "Spill Response Action Plan" must be established, and staff must be trained to carry out the plan. A copy of the plan shall be provided to Conservation Authority and PUC Services Inc. for their review and approval.
- ii) The spill response plan must be reviewed annually to ensure it is kept up-to-date.

E) Stormwater Management

- i) On-site stormwater must be collected, stored and treated, and properly disposed of, in order to remove contaminants before the stormwater is allowed to enter into the ground or exit the property.

G.2) Where applicable the above noted policies and criteria shall form an agreement between the land owner/operator, and the City in consultation with PUC Services Inc., prior to the finalizing of any zoning approvals by the City.

1. G.3) New residential and non-residential development can occur on full municipal services within the area designated Residential or Commercial on Schedule "C". New residential development within the Rural Area as shown on Schedule "C" can occur on individual wells and septic systems, provided the lands are suitable for the long term provision of such services. Development applications of 5 lots or more must be accompanied by a hydrogeological study that addresses the quality and availability of the water supply, as well as the suitability of the soils to support the proposed septic systems.

G.4 Existing uses that threaten the aquifer should be monitored to ensure that best practices for mitigation of the threat are followed. These existing uses should be relocated and shall not be permitted to expand.

G.5 The City, in partnership with the Conservation Authority shall develop and implement a plan for the containment of spills.

4.4.1 - Future Moderate and Low Threats –Significant Groundwater Recharge Area

Policy Number: SSM-SGRA-F-4.0

Objective: To recognise the importance of the Significant Groundwater Recharge Area (SGRA) in Sault Ste. Marie. The SGRA area is illustrated in Figure 11.

Policy:

The City of Sault Ste. Marie and the Sault North Planning Board are encouraged to protect the SGRA through Official Plan policies pertaining to Sourcewater that manage the following threat activities:

- Fuel storage and handling
- Handling and Storage of Organic Solvents
- Handling and Storage of DNAPLs
- The establishment, operation or maintenance of a system that collects, stores, transmits, treats or disposes of sewage, threat subcategory: sewage system or sewage works – discharge of stormwater from a stormwater retention pond.

All planning decisions must have regard for this policy. The Official Plan and zoning by-law should be updated to appropriately reflect this policy in accordance with section 26 of the Planning Act.

The City is encouraged to continue with Best Management Practices (BMP) in regard to road salt application and is encouraged to seek strategies to optimise the use of road salt to recognise source water protection and public safety in the SGRA.

The Ministry of Transportation is encouraged to continue with Best Management Practices (BMP) in regard to road salt application and is encouraged to seek strategies to optimise the use of road salt to recognise source water protection and public safety in the SGRA.

Education and outreach materials should be developed for distribution for threat activities within the SGRA.

Implementing Body:

City of Sault Ste. Marie
Sault North Planning Board
Ministry of Transportation

Legal Effect: Have regard to, non-legally binding commitment

Implementation Date:

Planning Act and Specify Action - the date the Source Protection Plan takes effect
Education and Outreach – Within two years of plan approval

Monitoring Policy: SSM-SGRA-MP-F-3.0

City of Sault Ste. Marie and the Sault North Planning Board shall report by February 1 of each year its decisions in the previous calendar year regarding any proposals, applications and changes in the official plan and zoning by-law, in the area where this policy applies.

It is not anticipated that residential/commercial/institutional land base application of pesticide would be greater than 1 hectare within the WHPA-A. It is not anticipated that residential or institutional storage of commercial fertilizer would be greater than 250kg in WHPA-A.

The Provincial Tables of Circumstances currently identifies a significant threat level for the storage and handling of pesticides at 250 kg. It is recognized that this level will be used as a guide for the Risk Management Official. In future, if there is a change to the Provincial Tables of Circumstances threat levels, the Risk Management Plans shall be altered as necessary.

2.17 Future Moderate Threat – Significant Groundwater Recharge Area

Policy Number: SSM-SGRA-F-3.0

The rationale for this policy is to recognise the “importance” of the significant groundwater recharge area for our watershed. Due to the vulnerability scoring assigned to the recharge area, any threats that are or could occur in the recharge area can not be scored high enough to be classified as significant. As a result, the SPC has determined that there should be recognition of this area as important “significant” as it is the only known point of recharge for the municipal drinking water aquifers.

Under the Official Plan for the City of Sault Ste. Marie, there are protections in place for certain land uses that are complementary to the Source Protection Plan process including handling and storage of fuels and chemicals.

Appendix B

MOECC Guidelines D1 and D4

GUIDELINE D-4
(formerly 07-07)

Land Use On or Near Landfills and Dumps

Legislative Authority:

Environmental Protection Act, RSO 1990, Part V, Sections 27 and 46
O. Reg. 347, General -- Waste Management
Planning Act, RSO 1990, Sections 2(a) (b) (c) (f) (g) (h), 17(9), 22(3), 41(4) and 51(3)
Condominium Act, RSO 1990, Section 50(3)
Environmental Assessment Act, RSO 1990, Section 5(3)

Responsible Director:

Director, Environmental Planning Branch

Last Revision Date:

April, 1994

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7.0 REFERENCE DOCUMENTS:

- a) Procedure D-4-1: "Assessing Methane Hazards from Landfill Sites"
- b) Ministry of Consumer and Commercial Relations Bulletin No. 91003: "Environmental Warnings/Restrictions"
- c) Ministry of Consumer and Commercial Relations Bulletin No. 80023: "Registration of Certificates & Provisional Certificates"
- d) Guideline D-7: "Requests for Land Use Approval under EPA, Section 46" (under development)
- e) Procedure D-1-1: "Land Use Compatibility: Procedure for Implementation"
- f) Procedure D-1-3: "Land Use Compatibility: Definitions"
- g) Guideline D-1: "Land Use Compatibility"

SYNOPSIS

This guideline specifies restrictions and controls on land use that the Ministry wishes to see implemented in the vicinity of landfills and dumps, in order to protect the health, safety, convenience and welfare of residents near such facilities. It complements existing ministry abatement programs for landfills and dumps, and is a direct application of Guideline D-1: "Land Use Compatibility."

Application of the guideline extends to all proposals for land use on, or near, operating and non-operating landfills, (as defined in O. Reg. 347) and dumps which contain municipal solid waste, industrial solid waste and/or sewage sludges. The guideline applies to all such facilities regardless of ownership. It does not apply to lands certified as organic soil conditioning sites under O. Reg. 347.

Ministry staff shall use the guideline when they are reviewing land use proposals, including official plans and amendments, and plans of subdivision/condominium:

- (a) at the request of the responsible Ministry or the delegated approving authority, under the *Planning Act* or the *Condominium Act*;
- (b) for land use requests subject to Section 46 of the *Environmental Protection Act*; and
- (c) for undertakings subject to the *Environmental Assessment Act*.

1.0 Introduction

This guideline protects the health, safety, convenience and welfare of residents from the potential adverse effects of landfills and dumps, by restricting or controlling land use in their vicinity. It complements the Ministry's existing abatement programs, and Ministry staff shall refer to it when they review land use proposals.

The principles of Guideline D-4 shall also be considered when looking for locations to establish a landfill in Ontario.

Procedure D-1-1: "Land Use Compatibility: Procedure for Implementation" discusses various implementation approaches and tools. Procedure D-1-3: "Land Use Compatibility: Definitions" provides definitions of terms, in addition to those included in Section 2.0 of this guideline.

2.0 Definitions

NOTE: Additional definitions are provided in Procedure D-1-3: "Land Use Compatibility: Definitions".

Fill Area:

The area of a waste disposal site set aside for landfilling or dumping (see **Conceptual Diagram No. 1.** below).

Land Use:

Any existing or proposed activity, structure, service, facility, or natural feature, either at, above, or below grade, which conforms to an approved municipal plan.

Land Used for Waste Disposal Purposes:

The land comprising the fill area, where landfilling or dumping has occurred, and the land which is being used or is to be used for the leachate buffer area and/or the gas buffer area; the land may be on- or off-site, (see **Conceptual Diagram No. 1** below).

Peripheral Area:

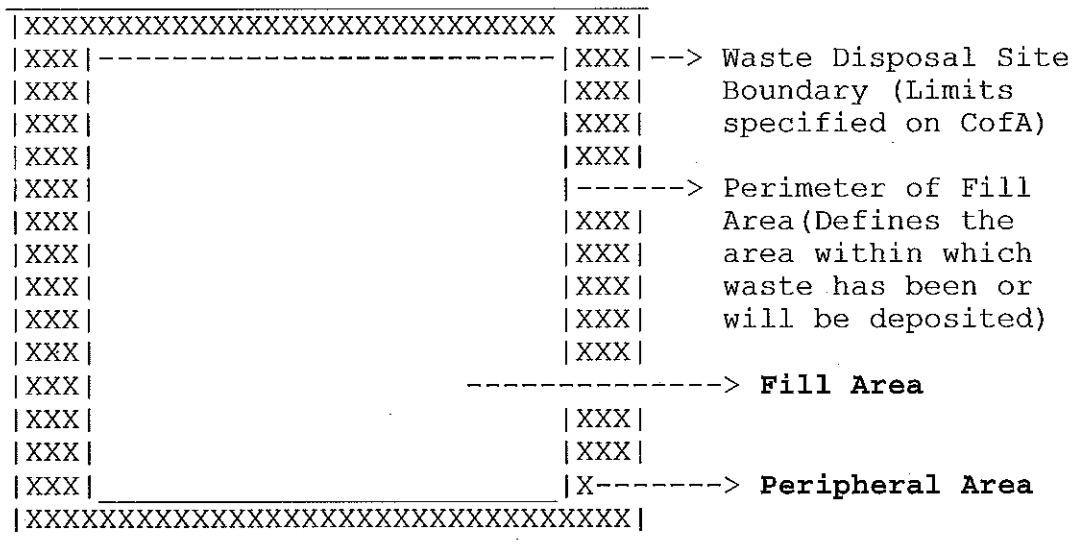
The area controlled by the site owner/operator between the boundary of the waste disposal site and the fill area; together, the peripheral area and the fill area make up the waste disposal site; the peripheral area will contain the buffer areas required to be on-site (see **Conceptual Diagram No. 1** below).

Vectors and Vermin:

Disease-carrying organisms, insects, rodents, birds (especially gulls) and other harmful creatures (e.g., bears).

CONCEPTUAL DIAGRAM NO. 1

(Plan View)



LANDFILL OR DUMP

3.0 Application

3.1 General

This guideline applies to all proposals for land use on or near any landfill or dump which contains municipal solid waste, industrial solid waste and/or sewage sludges. It does not apply to lands certified as organic soil conditioning sites under O. Reg. 347.

3.2 Liquid Industrial and Hazardous Waste

For proposals in the vicinity of landfills and dumps that have accepted liquid industrial, toxic or hazardous waste, the Ministry shall expect proponents to undertake further investigations and provide a report to the approving authority. Where there is evidence of off-site migration of contaminants, the Ministry shall require abatement measures beyond those discussed in this guideline.

4.0 Environmental Considerations

Environmental considerations shall be considered by all parties involved in the production, review and approval of a study/evaluation report.

4.1 Operating Sites

Factors to be considered when land use is proposed near an operating site include: landfill-generated gases, ground and surface water contamination by leachate, odour, litter, contaminant discharges from associated vehicular traffic, visual impact, dust, noise, other air emissions, fires, surface runoff, and vectors and vermin. Particular attention shall be given to the production and migration of methane gas.

4.2 Non-Operating Sites

Factors to be considered when land use is proposed on or near a non-operating site include: ground and surface water contamination by leachate, surface runoff, ground settlement, visual impact, soil contamination and hazardous waste, and landfill-generated gases. Particular attention shall be given to the production and migration of methane gas.

4.3 Assessment

The adverse effects of the factors listed in Sections 4.1 and 4.2 of this guideline may create:

- (a) a hazard or health/safety risk;
- (b) a nuisance to man; and/or
- (c) degradation of the natural environment.

The overall extent, number, degree and frequency of contaminant discharges and visual problems can vary with each site. Consideration must be given to the nature of proposed land use(s).

Reference should be made to Reference (a) (Section 7.0), if particular site conditions warrant obtaining further information with respect to methane gas.

4.4 Buffering Techniques

One or a combination of buffers, as defined in Guideline D-1: "Land Use Compatibility", may be employed in a given situation.

4.5 Hydrogeologic/Engineering Studies

4.5.1 Responsibility

Where the hydrogeologic and geologic setting of the proponent's property and the inter-relationship with gas and/or leachate from the fill area are unknown, Ministry staff shall recommend to the approving authority that the proponent engage a qualified hydrogeologist and/or engineer to determine the subsurface conditions and, where necessary, propose remedial measures.

4.5.2 Exceptions

The Ministry shall not normally recommend a formal site investigation, as recommended in Section 4.5.1, when its staff is satisfied that the evaluation of existing data indicates the absence of a problem.

4.6 Controls and Monitoring for Adverse Effects

Where appropriate, Ministry staff shall recommend, as a condition of approval, that a proponent include controls to deal with adverse effects or risks to health or safety and that the approving authority monitor contaminant migration and carry out inspections of control facilities.

In the event that the approving authorities lack the expertise or resources to perform such inspections, they shall employ qualified consultants to do so.

4.7 Monitoring on Private Property

Where the approving authority requires monitoring and inspections on private property, Ministry staff shall recommend that a contract be executed between the proponent and the municipality, in the form of, or as part of an agreement that may be registered on title and run with the land. Documents which are able to be registered on title are identified in References (b) and (c) (see Section 7.0).

5.0 Land Use Considerations

5.1 Sensitive Land Use

The Ministry will normally recommend against proposals for sensitive land use (see Section 5.1.1. for details) adjacent to operating landfills, and on land used for waste disposal purposes where there are completed or partially completed fill areas.

Where land uses are proposed for approval on non operating landfills and dumps under Section 46 of the *Environmental Protection Act*, the Ministry normally shall not permit residential or other sensitive land use. Further details are provided in Reference (d) of Section 7.0.

5.1.1 Sensitive Land Uses for Landfills Currently in Operation

Any existing or committed land use which includes:

- (a) a permanent structure used in animal husbandry; or
- (b) agricultural land used for pasturing livestock; or
- (c) a permanent structure where:
 - (i) a person sleeps, or
 - (ii) a person is present on a full time basis;

but not including food or motor vehicle service facilities adjacent to a highway, utility operations, scrap yards, heavy industrial uses, gravel pits, quarries, mining or forestry activities; or

- (d) cemeteries

5.1.2 Compatible Land Uses for Landfills Currently in Operation

Compatible land uses may include:

- (a) utilities and above grade transportation routes except major highways;
- (b) fences;
- (c) wood harvesting and other forestry activities;

- (d) certain farming activities;
- (e) industrial uses, including incinerators permitted to operate under O.Reg. 347;
- (f) gravel pits and quarries, and other mining activities (provided the landfill water table is not affected); or
- (g) such land uses which would not be threatened by any hazard to public health or safety and would not be impaired by nuisance effects.

5.2 Land Use Within 30 metres of a Fill Area

5.2.1 Operating Sites

No land use may take place within 30 metres of the perimeter of a fill area. This is a minimum distance.

Each operating landfill shall have an on-site operational/maintenance buffer area identified on the Certificate of Approval. This buffer shall be no less than 30 metres; it is normally 60-100 metres.

5.2.2 Non-Operating Sites

Where technical controls for leachate, or leachate and gas are required surrounding a fill area, no land use may take place within 30 metres of its perimeter. This distance may be reduced to 20 metres in cases where only gas controls are necessary.

5.3 Land Use Within 500 metres of a Fill Area

The Ministry considers the most significant contaminant discharges and visual problems to be normally within 500 metres of the perimeter of a fill area. Accordingly, the Ministry recommends this distance be used as a study area for land use proposals. Ministry staff shall ensure that the proponent has evaluated the presence and impact of any adverse effects or risks to health and safety and that necessary remedial measures are taken when land use proposals are within this distance. This assessment shall be based on the nature and knowledge of the disposal site, and the nature of land use(s) proposed.

Actual influence areas for the considerations listed in Section 4.1 and 4.2 of this guideline will vary with the individual landfill or dump. Where the actual influence area of a site has been determined to be less than the 500 metre study area set out in this section, the study area for land use proposals can be reduced to coincide with the actual influence area.

5.4 Land Use Beyond 500 metres of a Fill Area

Where significant impacts are encountered at or beyond 500

metres, the study area within which an assessment for any change in land use is recommended, shall be extended beyond the 500 metre area set out in Section 5.3. Historical evidence in Ontario has shown that the maximum distance within which adverse effects could be experienced while a landfill is operating is up to 3 kilometres.

In exceptional hydrogeologic situations, such as areas of fractured rock or sand, where it is anticipated that leachate or gas from a non-operating landfill or dump could migrate beyond 500 metres and pose a problem, Ministry staff shall recommend that proponents carry out hydrogeologic and/or engineering studies for land use proposals beyond 500 metres of a fill area (see Section 4.5 for more details).

5.5 Significant Impacts

The Ministry shall recommend against land use proposals where proponents have not incorporated feasible remedial measures to prevent or minimize adverse effects (as discussed in Section 4.3).

5.6 Sequential Development

In considering long-range planning, the Ministry may recommend that proponents delay or phase certain types of land use to coincide with closure of sections of a landfill, or the operation itself, as nuisance effects are reduced or eliminated. This approach shall only be permitted in cases where no risks to health or safety are present.

6.0 Responsibilities

6.1 Operators and/or Owners of Landfills or Dumps

The Ministry shall require operators and/or owners of operating landfills and non operating landfills and dumps to comply with the *Environmental Protection Act* and O. Reg. 347 (Waste Management) requirements for the control of adverse effects caused by these facilities.

6.2 Proponents/Consultants

Ministry staff shall recommend to the approving authority that the proponent provide a report on environmental considerations (see Section 4.0) and, where necessary, propose and implement appropriate control measures. These measures shall include design details and specifications for any control device or facility.

6.3 Municipalities

The local municipal authority is responsible for ensuring that proponents implement and monitor proper control measures associated with new, sensitive developments. It also shall ensure that periodic inspections of operating landfills and non-operating landfills and dumps for contaminant migration and potential hazards are carried out.

6.4 Ministry

With respect to its mandate for landfills and dumps, the Ministry shall exercise the following responsibilities:

6.4.1 Near Land Used or to be Used for Waste Disposal Purposes

Ministry staff will expect proponents and municipalities to fulfil their responsibility to protect public health and safety in areas of land use near a landfill or dump, and to prevent significant impacts from difficult-to-control nuisance effects which may extend beyond the lands under the Certificate of Approval for an operating landfill.

6.4.2 On Land Used for Waste Disposal Purposes

Where a proponent submits a land use proposal for approval under Section 46 of the *Environmental Protection Act*, the proponent must assure Ministry staff and the municipality that the proposal contains adequate measures for the protection of public health and safety, in order to facilitate the Minister making a decision on approval.

Where an approval under *EPA* Section 46 is not required from the Minister, Section 6.4.1 of this guideline applies.

7.0 Reference Documents:

- (a) Procedure D-4-1: "Assessing Methane Hazards from Landfill Sites"
- (b) Ministry of Consumer and Commercial Relations Bulletin No. 91003: "Environmental Warnings/Restrictions"
- (c) Ministry of Consumer and Commercial Relations Bulletin No. 80023: "Registration of Certificates & Provisional Certificates"
- (d) Guideline D-7: "Requests for Land Use Approval Under *EPA*, Section 46" (under development)
- (e) Procedure D-1-1: "Land Use Compatibility: Procedure for Implementation"

(f) Procedure D-1-3: "Land Use Compatibility: Definitions"

(g) Guideline D-1: "Land Use Compatibility"

GUIDELINE D-1
(formerly 07-03)

Land Use Compatibility

Legislative Authority:

Environmental Protection Act, RSO 1990, Section 14
Environmental Assessment Act, RSO 1990, Section
5(3)

The Planning Act, RSO 1990 Sections 2 (a) (b) (c)
(f) (g) (h), 17(9), 22(3), 41(4) and 51(3)

The Condominium Act, RSO 1990, Section 50(3)

The Niagara Escarpment Planning & Development Act,
RSO 1990, Section 9

Responsible Director:

Director, Environmental Planning Branch

Last Revision Date:

July 1995

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3.0 GUIDELINE

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- 3.3 Use Of Land Within Separation Distance
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SYNOPSIS

This guideline identifies the direct interest of the Ministry in recommending separation distances and other control measures for land use planning proposals to prevent or minimize adverse effects from the encroachment of incompatible land uses where a facility either exists or is proposed. This guideline sets the context for all existing and new guidelines relating to land use compatibility.

The guideline is intended to apply only when a change in land use is proposed, however, compatibility concerns should be recognized and addressed at the earliest possible stage of the land use planning process for which each particular agency has jurisdiction. The intent is to achieve protection from off-site adverse effects, supplementing legislated controls.

The guideline encourages informed decision-making for Ministry staff, land use planning and approval authorities, and consultants. All land use planning and resource management agencies within the Province shall have regard for the implications of their actions respecting the creation of new, or the aggravation of existing, land use compatibility problems. The Ministry shall not be held liable for municipal planning decisions that disregard Ministry policies and guidelines. When there is a contravention of Ministry legislation, Ministry staff shall enforce compliance.

Nothing in this guideline is intended to alter or modify the definition of 'adverse effect' in the *Environmental Protection Act*.

1.0 INTRODUCTION

1.1 Legislative Authority

The primary legislative basis for this Guideline is Section 14(1) of the *Environmental Protection Act*, RSO, 1990. This Section states: "Despite any other provision of this Act or the regulations, no person shall discharge a contaminant or cause or permit the discharge of a contaminant into the natural environment that causes or is likely to cause an adverse effect".

1.2 Objective

The objective of this guideline is to minimize or prevent, through the use of buffers, the exposure of any person, property, plant or animal life to adverse effects associated with the

operation of specified facilities (see definition for "facility" in Procedure D-1-3, "Land Use Compatibility: Definitions").

1.3 Procedures

Procedure D-1-1, "Land Use Compatibility: Procedure for Implementation" identifies areas of responsibility for Ministry staff or the Delegated Authority, Municipalities and Other Planning Authorities and Proponents, and discusses various implementation approaches and tools. Procedure D-1-2, "Land Use Compatibility: Specific Applications" list Ministry and other agencies' documents which are specific applications of this guideline. Procedure D-1-3, "Land Use Compatibility: Definitions" provides definitions of terms.

2.0 APPLICATION

2.1 Dual Nature of Guideline

The guideline is applicable when:

- (a) a new sensitive land use is proposed within the influence area or potential influence area of an existing facility; and/or
- (b) a new facility is proposed where an existing sensitive land use would be within the facility's influence area or potential influence area.

2.2 Planning Activities

This guideline applies when a change in land use places or is likely to place sensitive land use within the influence area or potential influence area of a facility, for the various situations listed below:

2.2.1 Policies, Guidelines and Programs

This guidelines applies for the formulation and review of land use policies, guidelines or programs.

2.2.2 General Land Use Plans

This guideline applies for the review of municipal and other levels of government general plans and proposals (e.g. municipal official plans and official plan amendments, municipal secondary plans, provincial resource management plans and other land use planning related matters).

2.2.3 Site-Specific Plans

This guideline applies for the review of site-specific development plans (e.g. plans of subdivision, plans of condominium, severances) including redevelopment and/or infill proposals.

2.3 Non-Applicable Situations

2.3.1 Existing Incompatible Land Uses

This guideline does not apply to situations where incompatible land uses already exist, and there is no new land use proposal for which approval is being sought.

However, where feasible, the Ministry encourages the implementation of mitigation measures by the appropriate authority, at the earliest opportunity, to minimize existing compatibility problems.

NOTE: When there is a compatibility problem where both land uses already exist, matters may be subject to Ministry abatement activities if there is non-compliance with a Ministry issued Certificate of Approval (C of A) for the facility, or there is no C of A in place.

2.3.2 Compliance with Existing Zoning and Official Plan Designation

This guideline does not normally affect a change in land use, an expansion, or new development, for either a facility or a sensitive land use which is in compliance with existing zoning, and the official plan designation, except for plans of subdivision and condominium and/or severances. In these exceptional situations, Ministry staff may require studies (see Guideline D-6, "Compatibility Between Industrial Facilities and Sensitive Land Uses, Sections 4.6, "Studies" and 4.7, "Mitigation"), and the identification of any necessary mitigative measures to prevent or minimize any potential 'adverse effects'.

There may be additional exceptional circumstances brought to staff's attention if a Certificate of Approval or other planning approval is required, where the Ministry would object if a sensitive land use would be subjected to adverse effects which could not be mitigated (e.g., land use change from single family residential to high rise, which would affect the point of impingement for air emissions, or when a

change of industry is proposed with a completely different influence area).

If a proposed use is permitted in the official plan, but rezoning is required, or if both redesignation and rezoning are required, then this guideline shall apply.

NOTE: Although the guideline does not specifically address such matters, it is not intended to preclude the implementation of mitigation measures to minimize existing compatibility problems.

2.3.3 Emergency Situations

This guideline does not deal with emergency situations, such as process upsets, the breakdown or malfunction of technical controls and/or spills. These are dealt with through other practices and legislation.

2.3.4 Federal Jurisdiction

This guideline does not normally apply to lands owned or purchased by undertakings under federal jurisdiction. However, federal bodies may choose to comply with provincial laws and policies, or may be required to do so by federal law or by their own regulatory bodies.

A court may rule that there is no reason for federal facilities not to comply with local requirements, as long as these additional controls do not attempt to prohibit the undertaking.

As well, this guideline may apply to private undertakings on federal lands on a case-by-case basis.

2.4 Adverse Effects

Depending upon the particular facility, adverse effects may be related to, but not limited to, one or more of the following:

- (a) noise and vibration;
- (b) visual impact (only for landfills under O. Regulation 347);
- (c) odours and other air emissions;
- (d) litter, dust and other particulates; and
- (e) other contaminants.

3.0 GUIDELINE

3.1 Preferred Approach

Incompatible land uses are to be protected from each other, in land use plans, proposals, policies and programs to achieve the Ministry's environmental objectives. Various buffers on either of the incompatible land uses or on intervening lands, as discussed in Section 4 of Procedure D-1-1, "Land Use Compatibility: Implementation", may be used to prevent or minimize 'adverse effects'. Distance is often the only effective buffer, however, and therefore adequate separation distance, based on a facility's influence area, is the preferred method of mitigating 'adverse effects'.

3.2 Purpose of Separation Distance

The separation distance should be sufficient to permit the functioning of the two incompatible land uses without an 'adverse effect' occurring. Separation of incompatible land uses should not result in freezing or denying usage of the intervening land. The distance shall be based on a facility's potential influence area or actual influence area if it is known. When development is proposed beyond a facility's potential influence area or actual influence area, the Ministry shall not normally object to development on the basis of land use compatibility. Exceptional situations may be identified in documents for specific facilities which are listed in Procedure D-1-2, "Land Use Compatibility: Specific Applications".

3.3 Use of Land Within Separation Distance

When the separation distance is the method of buffering, and the buffer area extends beyond a facility or sensitive land use site boundary, this Ministry encourages intervening land uses or activities that are compatible with both the facility and the sensitive land use(s).

Compatible land uses can vary on a case-by-case basis, and are identified for different facilities in documents listed in Procedure D-1-2, "Land Use Compatibility: Specific Applications".

Within the separation distance, municipal controls to increase zoning by-law setbacks for facilities or restrictions on location and use of outdoor storage could assist in achieving distance separation.

3.4 Irreconcilable Incompatibilities

When impacts from discharges and other compatibility problems cannot be reasonably mitigated or prevented to the level of a trivial impact (defined in Procedure D-1-3, "Land use Compatibility: Definitions") new development, whether it be a facility or a sensitive land use, shall not be permitted. More

details for specific facilities may be identified in other Ministry guidelines listed in Procedure D-1-2, "Land Use Compatibility: Specific Applications".

There may be situations and various means (see Procedure D-1-1, "Land Use Compatibility: Implementation", Section 7, "Methods") where development or redevelopment can be delayed or phased until such time that an 'adverse effect' would no longer exist (e.g. the facility ceases to operate or the problem is rectified by new technology).

Appendix C

Special Exceptions

11 (200) TENT AND TRAVEL TRAILER PARK – 5TH LINE AND GREAT NORTHERN ROAD

Notwithstanding the provisions of By-law 2005-150, in the area outlined and marked “subject property” on Sch. 205 hereto, which lands are more particularly described as part of the NE ¼, Sec.18, Tarentorus, land may be used and buildings erected and used thereon for purposes of a travel trailer park, subject to the following conditions:

1. Definitions

‘Travel Trailer’ means a trailer designed and equipped for travel, recreational and vacation uses and for seasonal or temporary occupancy only;

‘Travel Trailer Park’ means a trailer camp which has been planned and improved for the placement of tents, travel trailers and other recreational vehicles of transient use; and

‘Trailer Lot’ means a parcel of land intended to be used by one recreational vehicle or tent.

2. Trailer lots limited: Maximum number of trailer lots – 250

3. P.R. Zone special regulations

In the Parks and Recreation Zone, shown outlined and marked “P.R. Zone” on Sch. 205 hereto, all structures, placement or removal of fill of any kind, the use of the land for trailer lots or for the parking of any travel trailer or tent is prohibited.

4. Vehicular Access

Three points of vehicular access only shall be permitted, which points of access shall be located on the 5th Line Rd. in the approx. locations shown therefore on Sch. 205 hereto.

23 (397) SANITARY LANDFILL SITE

Notwithstanding the provisions of By-law 2005-150, the following lands which are all in the former Township of Tarentorus, now in the City of Sault Ste. Marie, which lands are shown outlined and marked “subject property” on Schedule 400A attached hereto and described as:

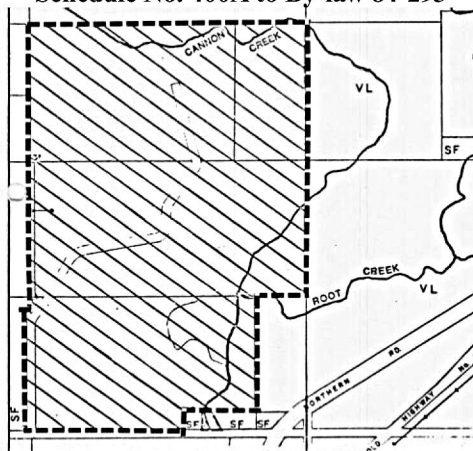
Firstly: the south half of the northeast quarter of Section 7, in the said township

Secondly: the north half of the southeast quarter of Section 7, in the said Township; and

Thirdly: part of the south half of the southeast quarter of Section 7, in the said Township, being more particularly described as Part 1 on Plan of Expropriation Registered as Instrument No. T-242176 may be used for a Sanitary landfill site.

For the purpose of this by-law a “sanitary landfill site” shall mean a place where waste is deposited under controlled conditions including proper compaction and regular covering with an approved cover material. It also may include ancillary operations associated with the landfill site such as, but not limited to, leachate collection, site access, storage and maintenance of heavy equipment, the weigh scales and monitoring wells.

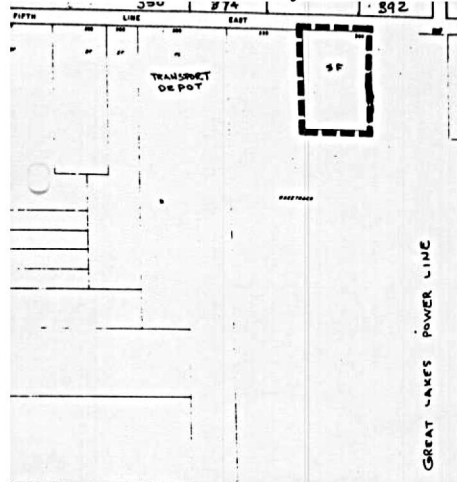
Schedule No. 400A to By-law 84-293



113 (919) SINGLE DETACHED HOME AND CONTRACTOR'S YARD - 369 FIFTH LINE EAST

Notwithstanding the provisions of By-law 2005-150, the lands described as all of Lot 8, Registrar's Compiled Plan No. H-741, Civic No. 369 Fifth Line East and are shown outlined and marked "subject property" on the map attached as Schedule No. 922 hereto, may be used to permit the existing contractor's yard, in addition to the single detached dwelling on the subject property, so long as the northerly 15.2m of the driveway entrance is asphalted.

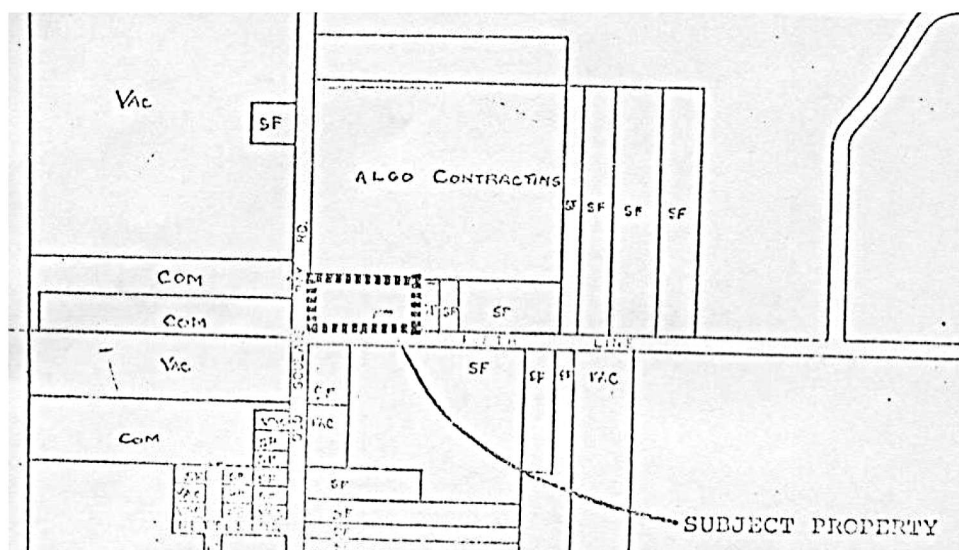
Schedule No. 922 to By-law 89-321



228 (229) CONCRETE PLANT – 224 – FIFTH LINE EAST

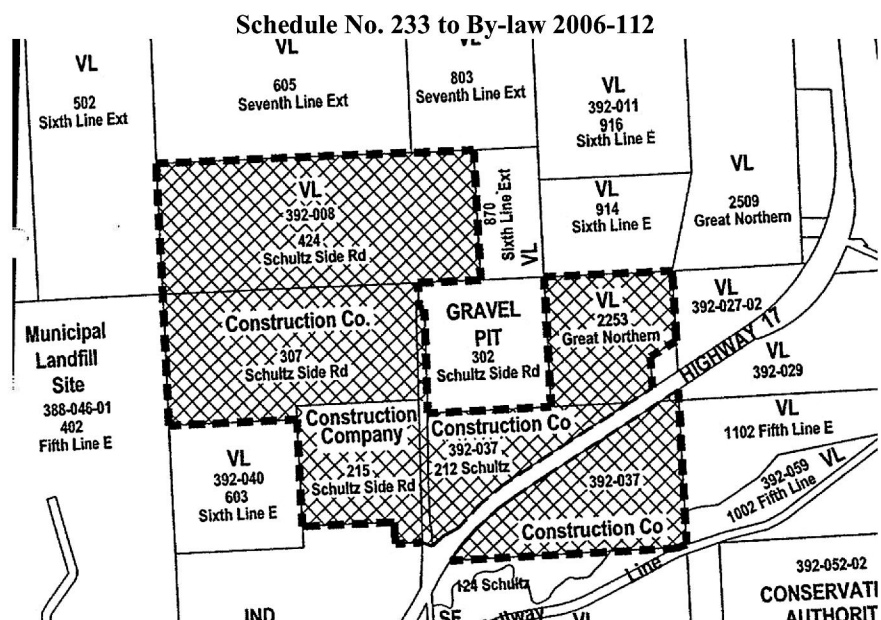
In addition to the uses permitted under the Rural Extraction Zone (REX) in By-law 2005 – 150, the land described as part of the Southwest Quarter of Section 7, former Township of Tarentorus, located at the northeast corner of Fifth Line East and Old Goulais Bay Road, described in Part 1 of Schedule 232 hereto and outlined and marked “subject property” in part 2 of Schedule 232 hereto, may be used to permit a concrete plant.

Schedule No. 232 to By-law 73-370



233 COMPOSTING YARD – 2125 GREAT NORTHERN ROAD

Despite the provisions of By-law 2005-150, the lands located on part of Sections 5 & 8 in the former Township of Tarentorus located on the north side of Great Northern Road at its intersection with Schultz Road and having Civic No. 2125 Great Northern Road and shown on Schedule NO. 233 hereto is changed from Rural Extraction Zone (REX) to Rural Extraction Zone with a special exception (REXS) to permit a composting yard for leaf and yard waste only, as an additional permitted use.

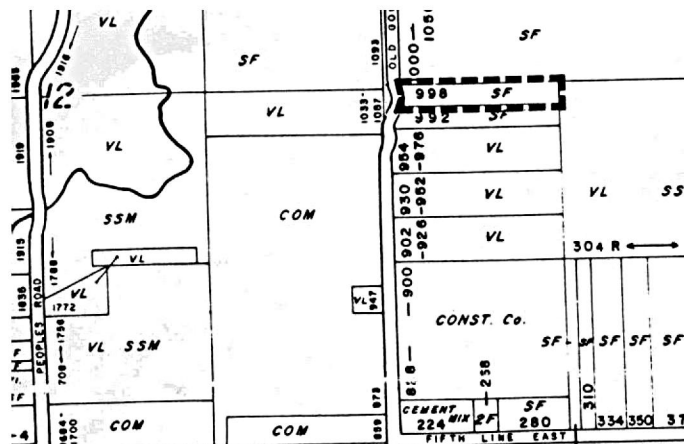


239 (896) HEAVY EQUIPMENT REPAIR AND MAINTENANCE – 998 OLD GOULAIS BAY ROAD

Notwithstanding the provisions of By-law 2005-150, the lands described as part of the northwest ½ of the northerly 10 acres of the north ½ of the west ½ of the southwest ¼ of Section 7 in the former Township of Tarentorus now in the City of Sault Ste. Marie, civic no. 998 Old Goulais Bay Road, to permit in addition to the existing single family residence, the repair of heavy equipment, subject to the following special provision:

- Vehicle body work and painting on the subject property is prohibited

Schedule No. 898 to By-law 89-159

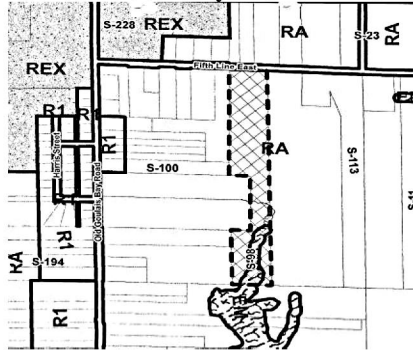


303 309 FIFTH LINE EAST

Despite the provisions of By-law 2005-150, the lands located at 309 Fifth Line East and marked “subject property” on the map attached may be utilized to permit, in addition to the uses permitted in a Rural Area zone, an electrical contractors yard subject to the following special provisions for the electrical contractors yard:

- a) The requirements of Section 4.9 of By-law 2005-150 (Buffer Requirements) are waived with respect to the east lot line;
- b) Bulk storage of fuel is prohibited on the subject property;
- c) Repair and maintenance to vehicles and equipment is prohibited on the subject property;
- d) Storage of wrecked or inoperable vehicles is prohibited on the subject property;
- e) The buffering requirements of section 4.9 of Zoning By-law 2005-150 are waived for that portion of the subject property lying between the southern limit of the compound area and the south limit of the subject property provided however that if the use of the electrical contractors yard expands into the area south of the compound area then the buffering requirements of Section 4.9 apply to any portion of the subject property south of the compound area used as an electrical contractors yard;
- f) The buffering provisions of Section 4.9 apply along the west lot line of the subject property from the southern limit of the existing vegetation along the west lot line to the south limit of any fenced compound area located on the subject property.

Schedule 303to By-law 2011-113



Appendix D

Photos of Properties in Expanded Area of Influence

Expanded Area of Influence

Properties 1, 2, 3 and 4



earth

400 ft

Expanded Area of Influence

Properties 5, 6, 7, 8 and 9

Old Goulais Bay Rd

Fifth Line E

earth

400 ft



Expanded Area of Influence

Properties 10, 11 and 12



earth

400 ft

Appendix E

Spills and Hazardous Materials Policy

PUBLIC WORKS & TRANSPORTATION POLICIES AND PROCEDURES		
Subject:	SPILLS AND HAZARDOUS MATERIALS	
File in Section:	1.21.6	
Effective Date:		Page 1 of 4
ALL REVISIONS ARE MARKED BY AN ASTERISK (*)		Revision Date:
Approved By:		

PURPOSE:

The best method of avoiding spill incidents is by prevention. This plan provides a response mechanism for spills of oil and other hazardous materials on the premise of the Sackville Works Centre and Municipal Landfill Site.

Spills on any other locations are to be handled as outlined in the City Emergency Measures Plan.

IMMEDIATE RESPONSE

This plan is applicable to incidents involving accidental spills and discharge of hazardous gaseous, liquid or solid substances. The severity of the spill, which in itself can be controlled by nature and quantity of pollutant in the locality, will determine the level of response required. It is imperative that all spills and discharges of hazardous materials be immediately reported to the Fire Department. The Fire Department will call the agencies listed below as required.

Fire Department	949-3335
Emergency	9-1-1
Ministry of Environment (Spills Action Reporting)	1-800-268-6060
Emergency Measures	

ASSESSMENT OF SPILL MAGNITUDE

Before any effective action can be taken to remedy the effects of any kind of spill, it is necessary to make an assessment of the type of containment and the magnitude of the spill.

When a spill is reported, the Fire Department will be notified immediately and they will be responsible for notifying the appropriate officials. All reported spills will be investigated by responsible City and/or Ministry authorities as soon as it is practical to do so.

PHASES

There are three (3) phases to a spill response:

- Phase 1 Discovery and Notification
- Phase 2 Containment and Countermeasures
- Phase 3 Clean up and Disposal

PHASE 1 - DISCOVERY & NOTIFICATION

The notification of a spill could be received from many sources. The message will immediately be reported to the Fire Department. The Fire Department staff member receiving the report will solicit all the information possible.

The Fire Department staff member receiving the report will at once have the incident investigated by the Fire Department or appropriate authority depending on the circumstances.

PUBLIC WORKS & TRANSPORTATION POLICIES AND PROCEDURES		
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PHASE 1 - DISCOVERY & NOTIFICATION - Cont'd

The Fire Department of Sault Ste. Marie is the local agency, which has equipment to respond to hazardous material spill, and every effort shall be made to contact that Department first before taking any action!

Note: Person means "individual, official, passerby, crew, etc.".

The person, upon arriving at the scene and appraising the situation, will report to the Fire Department, who in turn will report to the appropriate officials. This report should fall into one of the following categories:

<u>Report</u>	<u>Action To Be Taken</u>
1. No evidence of a spill	Note in report and inform all concerned
2. Minor problem; no further action to be taken	Note in report and inform all concerned
3. Action to be taken to contain or clean up with the following results: <ul style="list-style-type: none"> 1. Satisfactory 2. Unsatisfactory 	Note in report and inform Fire Department In conjunction with the Ministry of the Environment and Fire Department, take the necessary action to ensure spill is cleaned up
3. Spill with No Action Taken	Implement Spill Contingency Plan as outlined in the Emergency Measures Plan for the City to contain and control the spill if the magnitude so warrants

The person calling in will give a verbal report. The Fire Department, having been notified by the receiver on duty and having arrived on site, will institute action procedures as required.

PHASE 2 - CONTAINMENT AND COUNTERMEASURES

- a) Action to be taken during this phase will depend entirely on the type and extent of the problems encountered. The spill might be minor enough to be contained and cleaned up by personnel on site. It might be of major proportion necessitating the implementation of the City of Sault Ste. Marie Contingency Plan for Spills and other Hazardous Materials, or moderate enough to require something less than a full response by the City.
- b) Fire Department personnel on the scene must, after assessing the situation, decide on the necessary countermeasures to be taken and see that these countermeasures are put in effect.

PUBLIC WORKS & TRANSPORTATION POLICIES AND PROCEDURES		
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PHASE 2 - CONTAINMENT AND COUNTERMEASURES - Cont'd

- c) UNDER NO CIRCUMSTANCES will the Department of Public Works and Transportation personnel employ chemical spill treating agents without the express authorization of the Ministry of the Environment, the Fire Chief, Deputy Chief or senior Fire Officer present, who are the only authorized authority for the deployment of such agents.

PHASE 3 - CLEAN UP AND DISPOSAL

This will normally be the responsibility of the Department of Public Works and Transportation under the direction of the Ministry of the Environment. The Fire Department may participate through direct arrangements with the Ministry of the Environment. If deemed necessary by the Fire Chief or his designate, the Fire Department will remain at the scene to provide whatever protection is required.

DISPOSAL METHODS

The method of disposal of contaminated absorbents such as earth, sandbags, bales of hay, etc., will be decided by the Ministry of the Environment in consultation with the Department of Public Works and Transportation.

SUMMARY

The response to a spill of any kind of hazardous material will be a joint effort of the Department of Public Works and Transportation, the Ministry of the Environment and the Fire Department. The Fire Department personnel first on the scene will make an assessment of the situation and take all necessary steps to ensure containment and eventual disposal of containment and clean up products is properly handled. Speed in making decisions is vital. City and Ministry personnel will work together as a team, both at the site and in the Emergency Operations Centre, if required. Additional support will be called in as necessary and the City's Emergency Plan will be put into effect if conditions warrant it.

The Emergency Operations Centre will be located at a site to be determined by the Fire Department or as stipulated in the Emergency Measures Plan for the City.

DEFINITION

Minor Spills

A minor spill is a discharge of oil or other hazardous materials.

PUBLIC WORKS & TRANSPORTATION POLICIES AND PROCEDURES		
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Minor Spills - Cont'd

1. Of such magnitude in which the Department of Public Works and Transportation can utilize their own resources or the resources available to take the necessary measures to control, contain and clean up the material spilled.
2. Of such magnitude as to have no significant effects on fish, wildlife, plant or other living things.
3. Not likely to significantly effect or interfere with any private municipal, industrial, institutional or other water supply.
4. Of such a nature as not to generate public concern.

Moderate Spill

A moderate spill is a discharge of oil or other hazardous material.

1. Of such magnitude that it requires the resources under the City contingency plan to effectively contain and clean up the material.
2. Of a volume or type likely to present a significant hazard to fish, wildlife, plants or other living things.
3. Of such a nature that is likely to result in adverse effects or interferes with any private, municipal, industrial, institutional or other water supply within the immediate vicinity of the spill site.
4. Of such a nature as to generate public concern in the vicinity of the spill site.

Major Spill

A major spill is a discharge of oil or other hazardous material.

1. Of a magnitude requiring resources in addition to those available under the City contingency plan, or a spill, which gets out of control when action is being taken under the City Contingency Plan.
2. Which adversely effects or interferes with, or will adversely interfere or affect private, municipal, industrial, institutional or other water supply systems beyond the spill site.
3. Of such a nature as to present a hazard to human health.
4. Of such a nature as to have or most likely to have a serious effect on fish, wildlife, plants or other living things.
5. Of such a nature as to generate considerable public concern.

SCOPE

All employees of the Department of Public Works and Transportation.