

Terraprobe

Consulting Geotechnical & Environmental Engineering
Construction Materials Inspection & Testing

**PHASE ONE
ENVIRONMENTAL SITE ASSESSMENT
WALDEMAR-AMARANTH PROJECT
AMARANTH, ONTARIO**

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1.0 EXECUTIVE SUMMARY

Terraprobe Inc. was retained by Friedman & Associates to complete a Phase One Environmental Assessment (ESA) on the Waldemar-Amaranth property in the Township of Amaranth, Ontario.

The Phase One ESA involved three main tasks, as follows:

- a records review of historical site use and activities for the Phase One property and for the Phase One study area;
- interviews with available individuals having some knowledge of current and/or past site activities; and,
- a reconnaissance inspection of the property

At the time of this assessment, the property was vacant/undeveloped. Historical land use has been interpreted to be agricultural. Issues of obvious or potential environmental concern that were identified on the Phase One property and in the Phase One study area are summarized in the following table.

Issue	Rationale
Phase One Property	
historical agricultural use	interpreted from air photographs
Phase One Study Area	
historical agricultural use	interpreted from air photographs; observations during site reconnaissance

On the basis of the above, a Phase Two ESA is recommended. The program should include sampling and analysis of the near surface soils and of the sediment in the drainage swale that traverses the Phase One property for evidence of adverse impact related to historical agricultural activities (application of herbicides and pesticides). In the event that a Record of Site Condition is required, the program should be expanded to include ground water sampling and analysis.

The results of this investigation are subject to review pending receipt of the outstanding regulatory responses. In the event that an issue of concern is identified, Terraprobe Inc. will provide additional comment and identify any requirement for additional work.

2.0 INTRODUCTION

Terraprobe Inc. was retained by Friedman & Associates to complete a Phase One Environmental Site Assessment (ESA) on the Waldemar-Amaranth property in Amaranth, Ontario. The general location of the Phase One property is presented on the Site Location Plan (Figure 1).

2.1 Phase One Property Information

Legal Description & PIN:

Based on the information provided by the title search consultant, the Phase One property consists of two parcels. The legal description of each, as indicated on the Parcel Register on file at the Service Ontario Registry office is as follows:

North Parcel

- Pt Lt 3 Con 10 & Pt 1, 7R3187 except PI 320; Amaranth
- PIN: 34043-0013 (LT)

South Parcel

- Pt Lt 2 Con 10 & Pt James St., Pt Evans St & Pt Church St Pl 4A as closed by MF144258 Pt 1, 7R3101 except PI 320 & Pts 1 to 3, 7R3576 & Pt 12, 7R3229, S/T MF171536; Amaranth
- PIN: 34043-0008 (LT)

Municipal Address:

The parcel register does not indicate that a municipal address has been assigned to the Phase One property.

Zoning:

Based on information from the zoning map of The Township of Amaranth, the northern portion of the property is zoned HR-Hamlet Residential and the southern portion is zoned RU-Rural.

Property Owner Information:

Allto Holdings Inc.
23 Robb Boulevard, Unit #1
Orangeville, Ontario
L9W 3L1

Contact:

Mr. Larry Acchione
(519) 941-6403

2.2 Site Description

The Phase One property is irregular in shape, with an approximate area of 34 hectares (83 acres). Access to the site is from John Street and Evans Avenue. General site features and limitations of inspections are presented on the Site Plan (Figure 2).

2.3 Buildings

There were no buildings or structures on the Phase One property.

2.4 Purpose of Investigation

The objective of Phase One ESA was to assess the environmental condition of the Phase One property to identify issues of potential or obvious environmental concern and to identify potentially contaminating activities on the Phase One property and within the study area¹. The work included an assessment of the likelihood that the environmental quality of the soil and ground water the Phase One property may have been adversely affected by past and present practices on the Phase One property, or on surrounding properties.

The Phase One ESA was completed to satisfy the intent of the requirements, methodology and practices for Phase One ESAs described in Ontario Regulation 153/04 (O.Reg. 153/04) as amended by Ontario Regulation 511/09 (O.Reg. 511/09), December 29, 2009, and subsequent amendments. The Phase One ESA involved three main tasks, as follows:

- a records review of historical site use and activities for the Phase One property and for the Phase One study area¹;
- interviews with available individuals having some knowledge of current and/or past site activities; and,
- a reconnaissance inspection of the property.

Sampling and analysis of soil, ground water and / or other materials (i.e., construction material, air) for the purpose of assessing environmental quality were not carried out as part of the Phase One ESA. The potential for environmental liability and/or environmental impact is an opinion that had been arrived at based on the information presented in this report.

¹ the area that includes a Phase One property, any other property that is located, wholly or partly, within 250 metres from the nearest point on a boundary of the Phase One property and any property that the qualified person determines should be included as part of the Phase One study area

3.0 SCOPE OF INVESTIGATION

3.1 Records Review

The records review is designed to provide information on historical site activities. Specifically, the objectives of the records review are summarized as follows.

1. To obtain and review records that relate to the Phase One property and to the current and past uses of the site and activities at or affecting the Phase One property in order to determine if an area of potential environmental concern exists and to interpret any area of potential environmental concern.
2. To obtain and review records that relate to the Phase One study area, other than the Phase One property, in order to determine if an area of potential environmental concern exists and to interpret any area of potential environmental concern.

Tasks that were completed/addressed for the records review included the following:

- a review of available archival information for the site including aerial photographs, topographic mapping, available historical maps and drawings;
- a review of available site specific environmental reports or records (e.g., Certificates of Approval, waste generator registration, approvals, permits) that were provided to Terraprobe Inc.;
- a review of geological and hydrogeological information in published government maps and/or reports;
- a review of information on file with Ecolog ERIS, a commercial data base that provides information from numerous private, provincial, and federal environmental data bases/registries;
- a review of information on file RMS Risk Management Service Inc. (RMS), a commercial data base for fire insurance plans and insurance inspection reports (and related plans);
- a review of published Ontario Ministry of the Environment (MOE) directories related to registered PCB storage sites and active and closed landfill sites;
- a review of the GRCA jurisdiction map to determine whether the Phase One property was located on lands that are under the jurisdiction of GRCA;
- a review of the Township of Amaranth zoning plan; and,
- a review of the Ontario Ministry of Natural Resources (MNR) Natural Heritage Information Centre data base for information specific to natural areas, environmentally sensitive areas, endangered or protected species, etc.

In addition, requests were made to various regulatory agencies to establish the status of the Phase One property with them. For this assessment, the following agencies were contacted.

- Technical Standards and Safety Authority
- Ontario Ministry of the Environment - Freedom of Information Office
- Township of Amaranth

3.2 Interviews

The objectives of conducting the Phase One ESA interview with individuals having knowledge of the Phase One property activities are:

1. To obtain information to assist in determining if an area of potential environmental concern exists.
2. To identify details of potentially contaminating activities or potential contaminant pathways in, on or under the Phase One property.

Key personnel (owners or site managers) are contacted/interviewed and as applicable, are asked to fill out or respond to a series of questions related to specific site activities such as the nature of the operations, handling and storage of environmentally sensitive products and related wastes, environmental approvals and registrations, knowledge of previous reports related to the environmental condition of the property, and any issues related to non-compliance, orders, or charges related to environmental conditions on the property.

3.3 Site Reconnaissance

The objectives of the site reconnaissance are:

1. To determine if areas of potential environmental concern exist through observations about current and past uses and potentially contaminating activity on, in or under the Phase One property and, as practicable, current and past uses and activities and potentially contaminating activity in the Phase One study area.
2. To identify details of potential contaminant pathways on, in or under the Phase One property and areas of potential environmental concern and contaminants of potential concern.

The site reconnaissance included a review of numerous issues of potential environmental concern, including but not limited to the following:

- a review of activities and practices (including waste management) currently carried out on the Phase One property;
- an assessment for the potential presence of materials which may contain friable and non-friable asbestos;
- an assessment for the potential presence of PCB-containing electrical equipment;
- an assessment for evidence of past waste disposal or landfill on the Phase One property;
- an assessment of the presence of existing or former above ground and / or underground fuel storage tanks;
- an assessment for the potential presence of hazardous or toxic materials; and,
- an assessment for evidence of stained/odorous soils and stressed vegetation.

In addition, an inspection of adjacent properties within the Phase One study area (identified in Section 4.1.1) was completed to assess the potential for operations being carried out on those properties to impact on the environmental condition of the Phase One property. The inspection of adjacent properties was limited to inspection from the Phase One property boundaries and public areas (road, sidewalks, etc.).

4.0 RECORDS REVIEW

4.1 General

4.1.1 Phase One Study Area Determination

The Phase One Study Area consisted of properties located within a 250 metres radius of the Phase One property. Based on information collected for this assessment, the following municipal addresses were included in the study area.

- 23 Mill Street - UPI facility; United Co-operatives of Ontario
- 25 Main Street - Bert Rodgers Variety & Sunoco Service

The above addresses located within the Phase One study area were listed in the Ecolog ERIS report.

The properties within 250 metres of the Phase One property that are developed for residential use or are undeveloped or in agricultural use were not investigated, since they were unlikely to have had adverse environmental impact on the Phase One property. The residential properties are located to the east of the Phase One property.

Based on the historical property use and development on the Phase One property and surrounding area, it was determined that a 250 metre study area around the property was sufficient to identify issues of potential environmental concern that could potentially impact on the environmental condition of the Phase One property.

4.1.2 First Developed Use Determination

Based on the aerial photographs, there has been no developed use of the Phase One property. The information indicates that the property has been in agricultural use since at least 1930.

4.1.3 Fire Insurance Plans and Insurance Inspection Reports & Plans

Risk Management Services (RMS) is a private organization which provides risk information to insurers, private corporations, and risk managers. RMS was contacted to determine whether their records included any fire insurance plans, insurance inspection reports, or site specific plans for the Phase One property. It was reported that there is no information on file related to the Phase One property.

4.1.4 Chain of Title

A chain of title was prepared for Terraprobe Inc. by a freelance title search consultant. As previously noted, the chain of title indicates that the Phase One property consists of two legal parcels of land. The following summarizes ownership of each parcel.

Date	By	To
North Parcel		
October 28, 1916	probate	William James Tate
June 4, 1924	grant	Frank Tate
February 4, 1928	grant	Samuel & Eva Hutchinson
July 6, 1929	grant	Com. Of Agr Loans - Philip & Mary Saigeon
May 30, 1930	grant	William H. Burke & Alberta E. Burke
September 16, 1963	grant	David John Bland & Hazel Bland
August 7, 1975	transfer	Larry Acchione
April 4, 2007	transfer	Allto Holdings Inc.
South Parcel		
July 3, 1833	crown patent	Philip Secord
April 20, 1835	bargain & sale	William Woodruff
May 17, 1860	bargain & sale	David Jenkins
November 26, 1892	conveyance	James A. McFadzean
January 29, 1902	grant	Hazel Mildred Richardson, Extrix. Of McFadzean
April 18, 1980	grant	Acchione Construction Co. Ltd., now known as Allto Holdings Inc.

The chain of title indicated ownership of the north parcel was by private individuals until August 4, 2007, when it was acquired by the current owner. Ownership of the south parcel was by private individuals until April 18, 1980 at which time it was acquired by the current owner.

4.1.5 Environmental Reports

No environmental reports related to the Phase One property were provided for review.

4.2 Environmental Source Information

4.2.1 Ecolog ERIS Information

Ecolog Environmental Risk Information Services Ltd. (ERIS) is an organization that searches various government and private environmental data bases.

Listings for two water wells within the Phase One property were identified in the Water Well Information Systems data base. Water use was indicated to be domestic and public.

The Ecolog ERIS search identified the following data base entries related to properties located within 250 metres of the Phase One property.

- The property located at 23 Mill Street was listed in the Ontario Regulation 347 Waste Generators Summary data base as a generator of light fuel wastes in 1998. The potential for adverse impact on the Phase One property is considered to be low based on the location of the property, east of and interpreted to be down-gradient to the Phase One property.
- The Waldemar Quarry is listed in the Mineral Occurrences data base as a past producing mine (without reserves). This type of operation does not pose any adverse environmental impact.
- The Pesticide Register identifies the property at 23 Mill Street as a pesticide vendor. No potential for impact is interpreted.
- The property at 25 Main Street is identified in the Retail Fuel Storage Tank data base. It is suspected that there may be an error in this record, since the property is indicated to be in Orangeville. Regardless, given the location of the property (east of and interpreted to be down-gradient of the Phase One property, no potential for adverse impact is interpreted.
- Numerous water wells were listed in the Water Well Information System data base. Most were for domestic use. Other reported uses included livestock and municipal.

The ERIS report did not identify any Ministry Orders or issues related to compliance/convictions that would indicate that operations on the Phase One property or within the search area had resulted in adverse impact to the environment, or had been charged for non-compliance or violation of current environmental legislation. A copy of the ERIS report can be found in Appendix A.

4.2.2 MOE Data Bases

Terraprobe Inc. reviewed directories published by the MOE related to registered PCB storage sites and waste disposal sites. The following summarizes the information presented in those documents.

- The review of the MOE's *Ontario Inventory of PCB Storage Sites* did not list the Phase One property as a licensed PCB storage facility.
- The review of the MOE's *Waste Disposal Site Inventory* did not identify the Phase One property as an active or closed waste disposal facility. Information in that directory also indicated that the Phase One property had no recorded history of use as a municipal coal gasification plant or as an industrial site producing and/or using coal tar and related products.

4.2.3 MNR National Heritage Information Centre Data Base

Terraprobe Inc. reviewed the Ontario Ministry of Natural Resources National Heritage Information Centre (HNIC) data base for listings of the various classes of natural areas and rare species locations for the Richmond Hill area. The database did not indicate any species that are endangered within 1 kilometre of the Phase One property. No natural areas were located within 1 km. of the Phase One property.

4.2.4 Grand River Conservation Authority

The review of the Grand River Conservation Authority (GRCA) web-site indicated that the Phase One property is located within the GRCA jurisdiction. Appendix B includes a map that indicates that the Phase One property is not located within the GRCA regulation limits.

4.2.5 Technical Standards and Safety Authority

The Technical Standards and Safety Authority (TSSA) maintains records related to storage tanks for petroleum related products. The TSSA was contacted to establish the status of the Phase One property with respect to their records. It was reported that there is no information related to the Phase One property on file with the TSSA. A copy of the response is presented in Appendix B.

4.2.6 The Ontario Ministry of the Environment

A written request was submitted to the Ontario Ministry of the Environment Freedom of Information Office to determine if that agency has information on file with respect to the Phase One property. At the time of preparation of this report, the response from the MOE had not yet been received.

4.2.7 Township of Amaranth

A representative of the Township of Amaranth was contacted via e-mail to determine if there were any issues related to sewer use by-law compliance or reported spills on file. It was reported that The Township of Amaranth does not have a sewer use by-law; the area is serviced by private septic systems. There were no reported spills on file. A copy of the response is included in Appendix B.

4.2.8 Zoning

Based on information from the zoning map of The Township of Amaranth, the northern portion of the property is zoned HR - Hamlet Residential, and the southern portion is zoned RU - Rural.

4.3 Physical Setting Sources

4.3.1 Review of Aerial Photographs and Historical Mapping

Aerial photographs dating back to 1930 and a 1983 Ontario Base map were reviewed. Photocopies of the documents are compiled in Appendix C. These documents provided a visual record of the physical conditions on the Phase One property. The following summarizes development of the Phase One property, based on these sources of information.



Reference	Phase One Property	Phase One Study Area
1930 Air Photo (Figure C-1)	site is undeveloped; appears to be an open field; possibly in agricultural use; small building or residence is interpreted at the north end of the east side of the south portion of the property	undeveloped - agricultural land use interpreted; area on the east side of Phase One property appears to be developed for residential use
1969 Air Photo (Figure C-2)	no significant changes; agricultural 'field' patterns clearly defined	no significant changes
1980 Air Photo (Figure C-3)	no significant changes	similar; undeveloped; agricultural land use interpreted; increase in rural residential
1983 Ontario Base Map (Figure C-4-)	no significant changes	general increase in the level of interpreted residential development to the east; indicates rail line along the north boundary of the Phase One property
1990 Air Photo (Figure C-5)	farming building or residence is no longer indicated	increase in density of interpreted residential development to the immediate east
2004 Air Photo (Figure C-6)	site is undeveloped; appears to be an open field; possibly in agricultural use	no significant changes

The review of the aerial photographs indicated that the Phase One property has historically been undeveloped or in agricultural use. The air photographs indicate a farm building or residence on the Phase One property until at least 1980. The 1990 air photograph does not show the building. Currently there are no buildings on the Phase One property. Residential development to the immediate east of the Phase One property appears to have occurred since 1990.

4.3.2 Topography, Hydrology and Geology

Based on published geological information for the general area, the near surface soil at and in the vicinity of the Phase One property generally consists of Pleistocene age glaciofluvial outwash deposits of gravel and sand and includes proglacial and river deltaic deposits, with possible occurrences of Tavistock till (sandy silt to silt matrix with moderate to high carbonate content)². The bedrock is described as Middle and Lower Silurian age Guelph Formation, consisting of sandstone, shale, dolostone and siltstone³.

² Barnett, P.J., Cowan, W.R., and Henry, A.P. ; **Quaternary Geology of Ontario, Southern Sheet**; Ontario Geological Survey; Map P.2556, 1:1 000 000, 1991.

³ **Ontario Geological Survey; Bedrock Geology of Ontario, Southern Sheet**; Ontario Geological Survey, Map 2544, 1:1 000 000, 1991

The ground surface in the area of the Phase One property slopes generally to the east. Regional ground water flow is expected to be in a easterly direction towards the Grand River. Locally, near surface ground water flow may be influenced by underground structures (i.e. service trenches) or surface water courses.

It should be noted that the ground water, soil and rock conditions described above represent generalized conditions only, and should not be considered site specific.

4.3.3 Fill Materials

No fill deposits were identified on the geological maps.

4.3.4 Water Bodies and Areas of Natural Significance

There are no lakes, ponds or lagoons on the Phase One property. The Grand River is located to the east of the Phase One property. The distance to the Grand River varies from about 140 to 250 metres. The map provided on the GRCA web-site, included in Appendix B, indicates an east-west trending drainage feature traversing the central portion of the Phase One property.

4.3.5 Well Records

As indicated in Section 4.2.1, the review of water well records completed by Ecolog ERIS identified two water wells on the Phase One property. Water use was indicated to be domestic and public.

4.4 Site Operating Records

There were no site operating records pertaining to the Phase One property. There was no active development or activity.

5.0 INTERVIEWS

No interviews were carried out in connection with this assessment.

6.0 SITE RECONNAISSANCE

6.1 General Requirements

Date of Investigation:	June 23, 2011
Time of Investigation:	10:45 am - 1:00 pm
Weather Conditions:	Overcast/ light showers ~ 17° C
Duration of Investigation:	~2.25 hours
Was the facility operating	No - open field/ undeveloped
Name and Qualifications of Person(s) Conducting Investigation	Bruno Mirassol, B.Eng., E.I.T.
Name and Qualifications of Person(s) supervising the assessment	Peter A. Fortuna, P.Geo., P.Eng., QP _{ESA}

6.2 Specific Observations at Phase One Property

Investigation of Property

The site inspection included a walking tour of the property, as well as compiling written and photographic records. The layout of the Phase One property at the time of the site inspection is presented in the Site Plan, Figure 2. Photographs and accompanying descriptions are presented in Appendix D.

6.2.1 General Description

At the time of the site reconnaissance inspection, the Phase One property inspected was an undeveloped open field. An east-west trending drainage swale traversed the central portion of the Phase One property. This swale also provides drainage for the adjacent property to the west. The location of the swale is indicated Site Plan (Figure 2).

6.2.2 Building Descriptions

There were no buildings or structures on the Phase One property.

6.2.3 Exterior Site Conditions

The property was irregular in shape and occupied an area of approximately 34 hectares (83 acres). The grounds surface was generally flat lying, with gradual slopes. The property was vegetated with knee to waist high field grasses and weeds. The vegetation around the perimeter of the property had recently been trimmed. Several mature trees were noted along the perimeter of the Phase One property. The general slope of the property is easterly, with some localized sloping toward drainage swales.

6.2.4 Below Ground Structures

No below ground structures were observed.

6.2.5 Above Ground Fuel Storage Tanks

No above ground fuel storage tanks or evidence of above ground fuel storage tanks were observed during the inspection of the Phase One property.

6.2.6 Underground Fuel Storage Tanks

No underground fuel storage tanks or evidence of underground fuel storage tanks were observed.

6.2.7 Water Sources

The Phase One property is not serviced with a municipal water supply. As previously noted, two wells were identified on the property by Ecolog ERIS.

6.2.8 Underground Utility and Services

The Phase One property is not serviced with private or public utilities.

6.2.9 Building Exit and Entry Points

There were no buildings or structures on the Phase one property.

6.2.10 Heating Systems

The Phase One property was undeveloped. There were no heating systems.

6.2.11 Drains, Pits and Sumps

No drains, pits or sumps were observed.

6.2.12 Unidentified Substances

No unidentified substances were observed.

6.2.13 Staining and Corrosion

No staining or corrosion was observed.

6.2.14 Current and Former Wells

There was no evidence of an existing well located on the Phase One property. The wells that were identified in the Ecolog ERIS report were not located during the inspection.

6.2.15 Sewage Works

The property is located in an area that is not serviced by municipal sewers.

6.2.16 Ground Surface

The Phase One property ground surface was generally flat lying with some gradual slopes to the east. Locally, the ground surface is graded towards the drainage feature that traverses the central portion of the property.

6.2.17 Railways

No evidence of current or former railway lines or spurs were observed on the Phase One property. A former rail line (now a walking trail) borders the north boundary of the Phase One property.

6.2.18 Stained and Odourous Soils

There was no evidence of stained or odourous soils. A thorough inspection of the ground surface was somewhat restricted by the vegetation growth.

6.2.19 Stressed Vegetation

There was no evidence of stressed vegetation.

6.2.20 Fill Materials

A few small vegetated soil mounds were noted. These were approximately 2 metres in height and had a diameter of about 4 metres. The locations of the mounds are indicated on the Site Plan (Figure 2). The composition of the mounds could not be determined.

6.2.21 Watercourses, Ditches, or Standing Water

There was an east-west trending drainage swale (possible creek) located in the central portion of the Phase One property. The adjacent property to the west drained into this swale. The location of this swale is indicated on the Site Plan, Figure 2. The map provided on the GRCA web-site (Appendix B) identifies this feature as part of the GRCA drainage network.

6.2.22 Air Emissions

There were no air emission sources on the Phase One property.

6.2.23 Roads, Parking Facilities, and Right-of-Ways

There were no roads, parking facilities, or right-of-ways on the Phase One Property.

6.2.24 Special Attention Items

Special attention items relate to materials that may be found in building and construction materials, and cooling/refrigeration equipment. These include asbestos, polychlorinated biphenyls (PCBs), lead, ozone depleting substances, and radioactive materials. Based on the fact that there is no development on the Phase One property, the potential for these materials/substances to be present is considered to be very low, and there was no evidence suggesting they may be present.

It is possible that based on the historical agricultural use, herbicides and pesticides may have been applied to the Phase One property.

6.2.25 Potentially Contaminating Activities

No potentially contaminating activities were observed on the Phase One property. As noted above, it is possible that herbicides and pesticides may have been applied to the Phase One property in connection with historical agricultural use.

6.3 Enhanced Phase One Property Investigation

There were no contaminating activities observed during the inspection of the Phase One property, and the review of historical information has not identified previous industrial use, or previous use of the property for vehicle servicing and maintenance, dry cleaning, or fuel distribution. On this basis, the Phase One property does not meet the criteria to warrant an Enhanced Phase One property investigation.

6.4 Investigation of Phase One Study Area

At the time of the site inspection, the following land uses were noted on the properties immediately adjacent to the Phase One property. Inspection of adjacent properties was limited to visual observations from public roads and the Phase One property.

Direction	Land Uses
North	open field/ undeveloped; access road/trail
East	residential
South	open field; farm land
West	open field; farm land

No above ground or underground fuel storage tanks, or related evidence, were observed on adjacent properties. As previously noted, the Phase One Study Area included the following properties of concern that had been identified in the Ecolog ERIS report.

- 23 Mill Street - UPI facility; United Co-operatives of Ontario
- 25 Main Street - Bert Rodgers Variety & Sunoco Service

These property uses were no longer evident during the inspection of the Phase One study area.

6.5 Written Description of Investigation

The site reconnaissance inspection conducted on June 23, 2011 included a walking tour supported by written and photographic records of the Phase One property. At the time of the site inspection the property was an undeveloped open field. There were no existing buildings or structures on the Phase One property.

Inspection of adjacent properties was limited to visual observations from public roads and the Phase One property boundaries. Activities of potential environmental concern were not observed on the Phase One property nor on properties located within the Phase One study area. However, given the historical agricultural use of the Phase One properties and adjacent properties within the Phase One study area, the potential exists that herbicides and pesticides have been applied to the property and surrounding area.

7.0 REVIEW AND EVALUATION OF INFORMATION

7.1 Current and Past Uses

Current and past uses of the Phase One property have been determined primarily on the basis of the information provided in the air photographs, topographic plan, chain of title, and existing site conditions.

Year	Name of Owner	Description of Property Use	Other Observations from Aerial Photographs, Fire Insurance Plans, Etc.
North Parcel			
1916	William James Tate	agricultural	historically, this portion of the Phase One property is in a rural setting; developed area (Hamlet) of Amaranth has been located to the immediate east of the Phase One property since at least 1930; railway line along the north boundary (now removed)
1924	Frank Tate		
1928	Samuel & Eva Hutchinson		
1929	Philip & Maria Saigeon		
1930	William H. Burke & Alberta E. Burke		
1963	David John Bland & Hazel Bland		
1975	Larry Acchione		
2007	Allto Holdings Inc. (current owner)		
South Parcel			
1833	Philip Secord	agricultural	historically, this portion of the Phase One property is in a rural setting; developed area (Hamlet) of Amaranth has been located to the immediate east of the Phase One property since at least 1930
1835	William Woodruff		
1860	David Jenkins		
1892	James McFadzean		
1902	Hazel Mildred Richardson		
1980	Acchione Construction Co. Ltd., now known as Allto Holdings Inc. (current owner)		

Historical uses of properties in the Phase One study area are mainly agricultural use. The area to the east of the Phase One property has more recently been developed for residential use.

7.2 Potentially Contaminating Activity

The following potentially contaminating activities and/or issues of potential environmental concern have been identified on both the Phase One property, and in the Phase One study area. These are summarized in the following table.



Potentially Contaminating Activity & Issues of Concerns	
Phase One Property	• potential for impact related to the use of herbicides and pesticides
Phase One Study Area	• potential for impact related to the use of herbicides and pesticides

7.3 Areas of Potential Environmental Concern

7.3.1 Phase One Property

Area of Potential Environmental Concern	Potential Contaminating Activity	Description of Location	Contaminants of Potential Concern	Media Potentially Impacted	Recommended Activities for Phase Two ESA
historical agricultural use	application of pesticides	agricultural fields over most of the property	organo-chlorine pesticides; metals	soil, ground water, sediment in drainage swale	shallow auger holes; sediment sampling along swales, water table monitoring wells to be considered in the event that adverse impact is confirmed

7.3.2 Phase One Study Area

Area of Potential Environmental Concern	Potential Contaminating Activity	Description of Location	Contaminants of Potential Concern	Media Potentially Impacted	Recommended Activities for Phase Two ESA
historical agricultural use on properties to the north, west, and south	application of pesticides	agricultural fields over most of the property	organo-chlorine pesticides; metals	soil, ground water, sediment in drainage swale	shallow auger holes; sediment sampling along swales, water table monitoring wells to be considered in the event that adverse impact is confirmed is confirmed

7.4 Phase One Conceptual Site Model

The conceptual site model has been based on the information presented listed above (Sections 7.1, 7.2 and 7.3). The Conceptual Site Model (Figure 3) identifies the locations of areas where potentially contaminating activities that could have resulted in adverse impact to the environmental soil and ground water on or below the Phase One property. These are summarized in the following table.

Area	Issue	Contaminants of Potential Concern
Phase One Property		
A	historical agricultural use	• organo-chlorine pesticides, metals
Phase One Study Area		
B	historical agricultural use	• organo-chlorine pesticides, metals

Underground Utilities: As previously noted, the Phase One property is not serviced.

Regional and Hydrogeological Information:

Section 4.3.2 provides details on the regional geology and hydrology. Based on published geological information for the general area, the near surface soil at and in the vicinity of the Phase One property generally consists of outwash deposits of gravel and sand and includes proglacial and river deltaic deposits. Soils of this type are considered to be permeable and provide a pathway for infiltration of precipitation.

The ground surface in the area of the Phase One property slopes generally to the east. Regional ground water flow is expected to be in a easterly direction towards the Grand River. Locally, near surface ground water flow may be influenced by underground structures (i.e. service trenches) or surface water courses.

8.0 CONCLUSIONS

The Phase One ESA has identified issues of potential environmental concern that may have resulted in adverse impact to the environmental condition of the Phase One property. These are summarized below.

Area	Issue	Rationale
Phase One Property		
A	historical agricultural use	interpreted from air photographs;
Phase One Study Area		
B	historical agricultural use	interpreted from air photographs; observations during site reconnaissance

Refer to Figure 3 (Conceptual Site Model) for the locations of the areas.

On the basis of the above, a Phase Two ESA is recommended. The program should include sampling and analysis of the near surface soils and of the sediment in the drainage swale that traverses the Phase One property for evidence of adverse impact related to historical agricultural activities (application of herbicides and pesticides). In the event that a Record of Site Condition is required, the program should be expanded to include ground water sampling and analysis.

The results of this investigation are subject to review pending receipt of the outstanding regulatory responses. In the event that an issue of concern is identified, Terraprobe Inc. will provide additional comment and identify any requirement for additional work.

9.0 REFERENCES

Information in the Public Domain

Barnett, P.J., Cowan, W.R., and Henry, A.P. ; **Quaternary Geology of Ontario, Southern Sheet**; Ontario Geological Survey; Map P.2556, 1:1 000 000, 1991.

Ontario Geological Survey; Bedrock Geology of Ontario, Southern Sheet; Ontario Geological Survey, Map 2544, 1:1 000 000, 1991

Ministry of Natural Resources Heritage Information Centre data base

Air Photographs - 1930, 1969, 1980, 1990, 2004

Ontario Base Map - 1983

Service Ontario - chain of title/ownership records

Grand River Conservation Authority

Township of Amaranth

Commercial Data Bases

Ecolog ERIS - review of 50 provincial, federal and private environmental data bases for the Phase One property and Phase One study area (250 metre radius)

Risk Management Services (RMS) - fire insurance plans, insurance inspection reports and site specific plans

10.0 LIMITATIONS AND USE OF REPORT

This report was prepared for the exclusive use of Friedman & Associates and their legal counsel and is intended to provide an assessment of the environmental conditions of the Waldemar-Amaranth Project property in Amaranth, Ontario.

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. Terraprobe Inc. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report, including consequential financial effects on transactions or property values, or requirements for follow-up actions and costs.

The assessment should not be considered a comprehensive audit that eliminates all risks of encountering environmental problems. The information presented in this report is based on information collected during the completion of the Phase One Environmental Site Assessment by Terraprobe Inc.. It is based on the conditions on the Phase One property at the time of the site inspection supplemented by a review of historical information to assess the environmental conditions on the Phase One property, as reported herein.

Sampling and analysis of soil, ground water or any other material was not carried out as part of this assessment. Consequently, the presence and/or extent of any adverse environmental impact cannot be verified. The potential for environmental liability and/or environmental impact is an opinion that has been arrived at within the scope of this assessment.

In assessing the environmental conditions / history of the Phase One property, Terraprobe Inc. has relied in good faith on information provided by others, as noted in this report, and has assumed that the information provided by those individuals is factual and accurate. Terraprobe Inc. accepts no responsibility for any deficiency, misstatement or inaccuracy in this report resulting from the information provided by those individuals.


There is no warranty expressed or implied by this report regarding the environmental status of the Phase One property. Professional judgement was exercised in gathering and analysing information collected by our staff, as well as that submitted by others. The conclusions presented are the product of professional care and competence, and cannot be construed as an absolute guarantee.

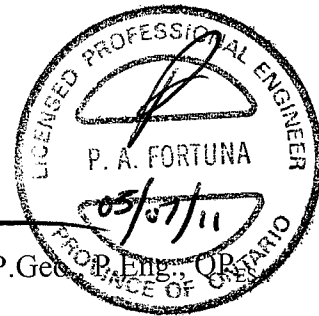
In the event that during future work new information regarding the environmental condition of the Phase One property is encountered, or in the event that the outstanding responses from the regulatory agencies indicate outstanding issues on file with respect to the Phase One property, Terraprobe Inc. should be notified in order that we may re-evaluate the findings of this assessment and provide amendments, as required.

We trust this report meets with your requirements. Should you have any questions regarding the information presented, please do not hesitate to contact our office.

Yours truly,
Terraprobe Inc.


Bruno A.T. Mirassol, B.Eng.
E.I.T.


Peter A. Fortuna, P.Geo., P.Eng., QP
Associate

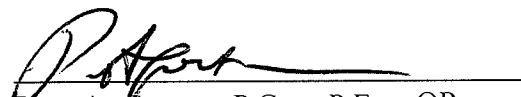


Statement of Qualified Person

The Phase One Environmental Site Assessment has been completed under the direction and supervision of Peter A. Fortuna, P.Geo, P.Eng., QP. The findings and conclusions presented in this report have been determined on the basis of the information that was obtained and reviewed, and on an assessment of the existing conditions on the Phase One property and properties within the Phase One study area.

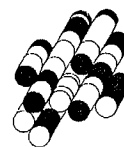
Mr. Fortuna is a Senior Environmental Engineer with over thirty-five years experience in the fields of geoscience and environmental assessment. He has provided environmental consulting services to various clients in both the private and public sectors in the Hamilton area since 1989.

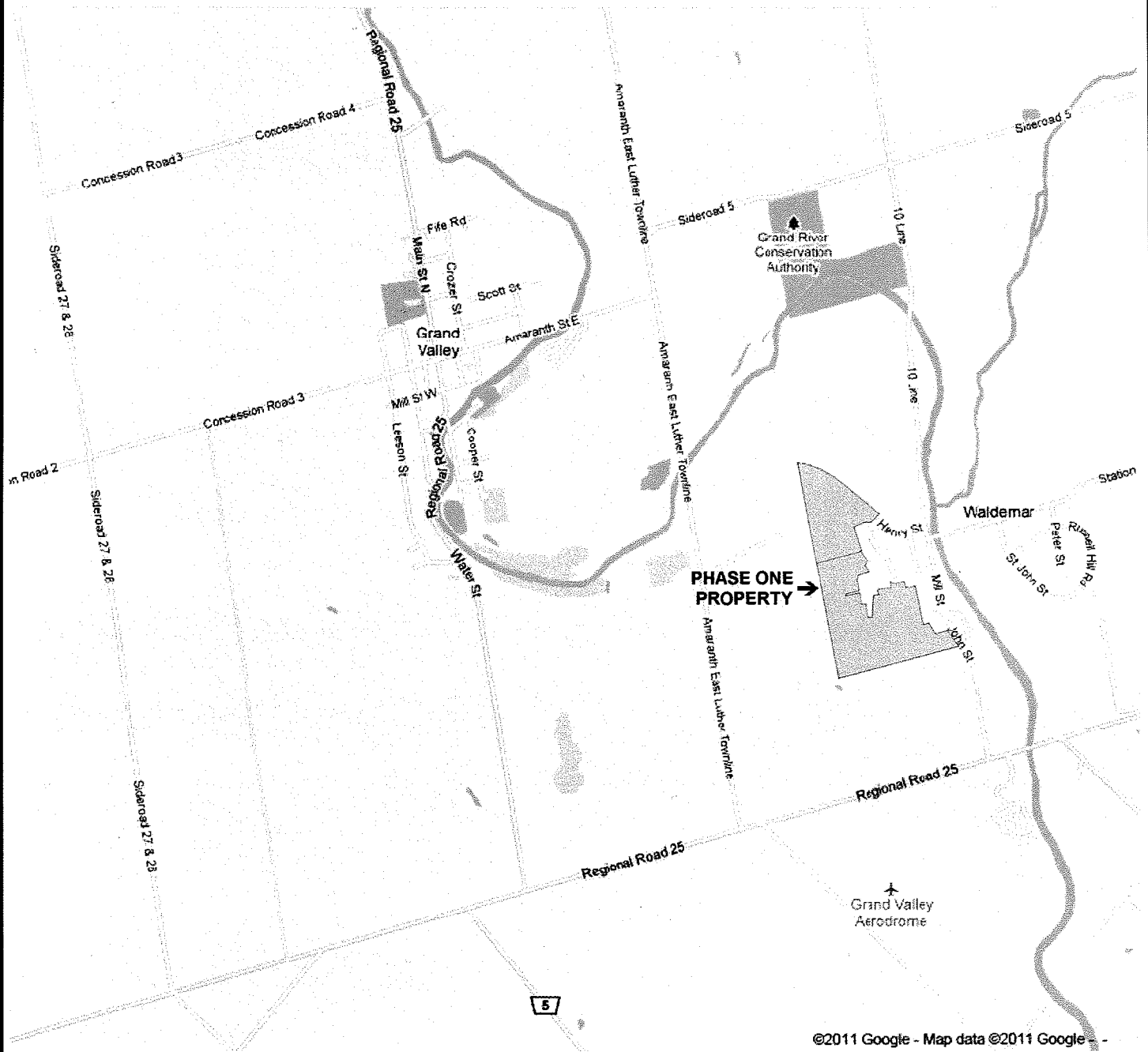
Mr. Fortuna is an Associate of Terraprobe Inc. and is responsible for environmental projects being completed from Terraprobe's Hamilton-Niagara office. He holds a Bachelor of Applied Science (B.A.Sc.) from the University of Windsor (1974).


Peter A. Fortuna, P.Geo., P.Eng, QP_{ESA}
Associate

FIGURES

Terraprobe Inc.





©2011 Google - Map data ©2011 Google

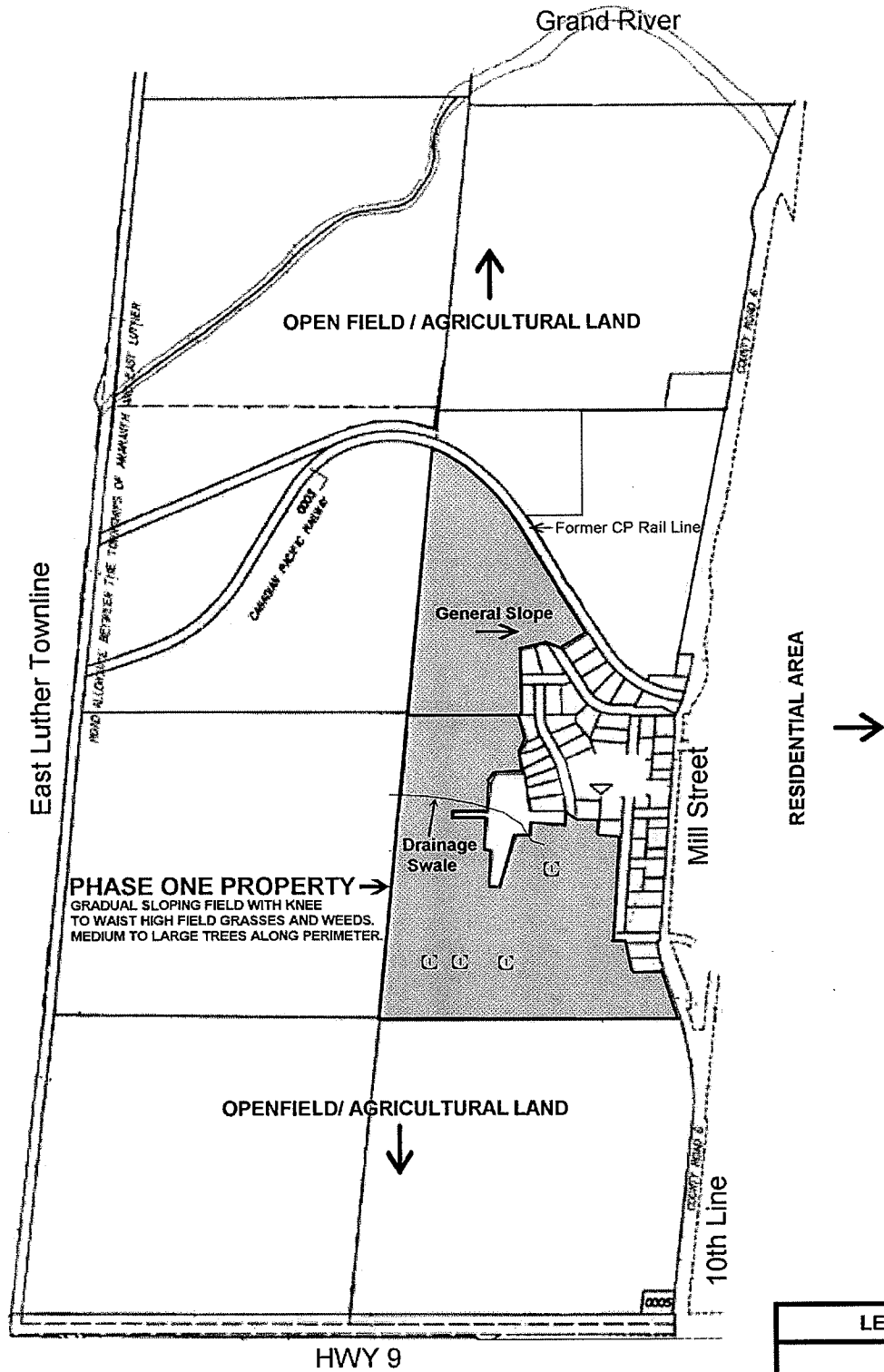
**Site Location Plan
Waldemar-Amaranth Project
Amaranth, Ontario**



Terraprobe
903 Barton Street, Unit 22
Stoney Creek, Ontario, L8E 5P5
(905) 643-7580 / Fax (905) 643-7559

Notes:
Location and scale are approximate

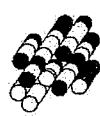
Drawn By:	B.M.	Scale:	Approx.	Project No.:	7-11-6045
Checked By:	P.F.	Date:	June, 2011	Figure No.:	1



PHASE ONE PROPERTY →
 GRADUAL SLOPING FIELD WITH KNEE
 TO WAIST HIGH FIELD GRASSES AND WEEDS.
 MEDIUM TO LARGE TREES ALONG PERIMETER.

LEGEND	
	Vegetated Soil Mound

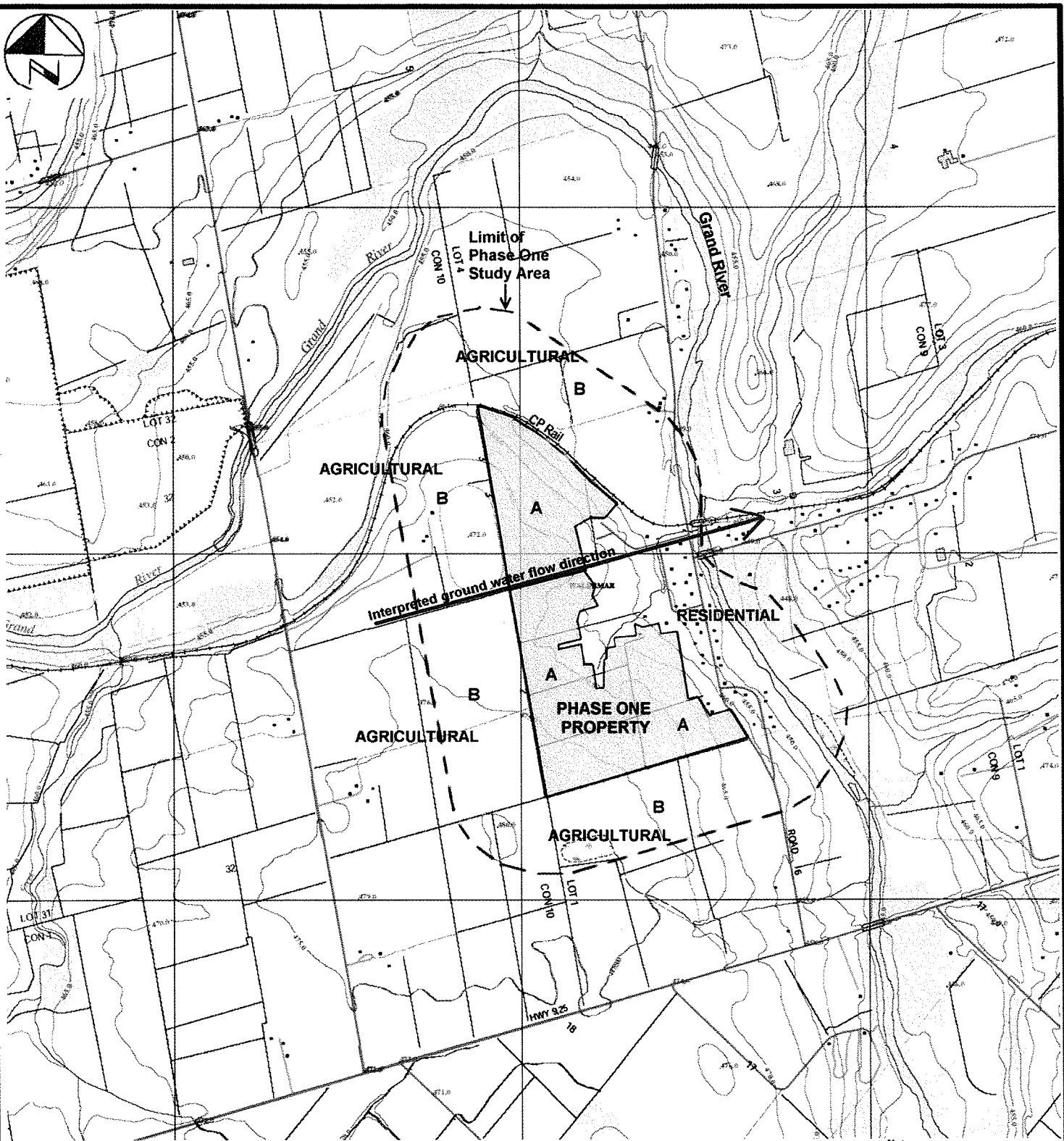
**Site Plan
 Waldemar-Amaranth Project
 Amaranth, Ontario**



Terroprobe
 903 Barton Street, Unit 22
 Stoney Creek, Ontario, L8E 5P5
 (905) 643-7560 / Fax (905) 643-7559

Drawn By:	B.M.	Scale:	Approx.	Project No.:	7-11-6045
Checked By:	P.F.	Date:	June, 2011	Figure No.:	2

NOTES:
 SITE PLAN IS NOT TO SCALE
 DIMENSIONS ARE APPROXIMATE
 SITE PLAN IS BASED ON CONDITIONS OBSERVED ON JUNE 23, 2011
 SITE PLAN IS BASED ON PROPERTY INDEX MAP; BLOCK 34043, TOWNSHIP OF AMARANTH

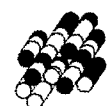


Notes:
Location and scale is approximate

Areas of Potential Environmental Concern
Phase One Property
A - Agricultural use

Phase One Study Area
B - Agricultural use

Conceptual Site Model
Waldemar-Amaranth Project
Amaranth, Ontario



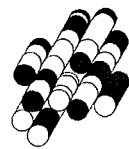
Terraprobe
903 Barton Street, Unit 22
Stoney Creek, Ontario, L8E 5P5
(905) 643-7560 / Fax (905) 643-7559

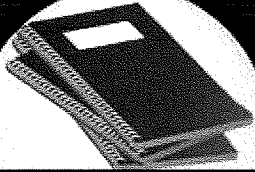
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Checked By:	P.F.	Date:	June, 2011	Figure No.:	3

Ecolog ERIS Report

APPENDIX A

Terraprobe Inc.





**DATABASE
REPORTS**

Canada's Primary Environmental Risk Information Service

Project Site: Un-named
James St
Grand Valley, ON

Client: Peter Fortuna
Terraprobe Ltd
Unit 22, 903 Barton Street
Stoney Creek, ON L8E5P5

ERIS Project No: 20110614008

Report Type: Custom Report - .25km Search Radius

Prepared By: Daniela Nigro
dnigro@eris.ca

Date: June 22, 2011

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Table of Contents

Order Number: 20110614008
Site Name: Un-named
Site Address: James St Grand Valley, ON
Report Type: Custom Report, 0.25 km Search Radius

	<u>Section</u>
Report Summary <i>This outlines the number of records from each database that fall on the site, and within various distances from the site.</i>	i
Site Diagram <i>The records that were found within a specified distance from the project property (the primary search radius) have been plotted on a diagram to provide you with a visual representation of the information available. Sites will be plotted on the diagram if there is sufficient information from the database source to determine accurate geographic coordinates. Each plotted site is marked with an acronym identifying the database in which the record was found (i.e., WDS for Waste Disposal Sites). These are referred to as "Map Keys". A variety of problems are inherent when attempting to associate various government or private source records with locations. EcoLog ERIS has attempted to make the best fit possible between the available data and their positions on the site diagram.</i>	ii
Site Profile <i>This table describes the records that relate directly to the property that is being researched.</i>	iii
Detail Report <i>This section represents information, by database, for the records found within the primary search radius. Listed at the end of each database are the sites that could not be plotted on the locator diagram because of insufficient address information. These records will not have map keys. They have been included because they may be found to be relevant during a more detailed investigation.</i>	iv
	<u>Page</u>
Ontario Regulation 347 Waste Generators Summary	1
Mineral Occurrences	2
Pesticide Register	3
Retail Fuel Storage Tanks	4
Water Well Information System	5
Appendix: Database Descriptions	

Report Summary

Order Number: 20110614008
 Site Name: Un-named
 Site Address: James St Grand Valley, ON
 Report Type: Custom Report, 0.25 km Search Radius

Number of Mappable Records Surrounding the Site

Database		Selected	On-site	Within 0.25	0.25km to 0.25km	Total
AAGR	Abandoned Aggregate Inventory	Y	0	0	0	0
AGR	Aggregate Inventory	Y	0	0	0	0
AMIS	Abandoned Mine Information System	Y	0	0	0	0
ANDR	Anderson's Waste Disposal Sites	Y	0	0	0	0
AUWR	Automobile Wrecking & Supplies	Y	0	0	0	0
BORE	Borehole	Y	0	0	0	0
CA	Certificates of Approval	Y	0	0	0	0
CFOT	Commercial Fuel Oil Tanks	Y	0	0	0	0
CHEM	Chemical Register	Y	0	0	0	0
COAL	Coal Gasification Plants	Y	0	0	0	0
CONV	Compliance and Convictions	Y	0	0	0	0
DRL	Drill Hole Database	Y	0	0	0	0
EBR	Environmental Registry	Y	0	0	0	0
EEM	Environmental Effects Monitoring	Y	0	0	0	0
EHS	ERIS Historical Searches	Y	0	0	0	0
EIIS	Environmental Issues Information System	Y	0	0	0	0
FCON	Federal Convictions	Y	0	0	0	0
FCS	Contaminated Sites on Federal Land	Y	0	0	0	0
FOFT	Fisheries & Oceans Fuel Storage Tanks	Y	0	0	0	0
FST	Fuel Storage Tank	Y	0	0	0	0
GEN	Ontario Regulation 347 Waste Generators Summary	Y	0	1	0	1
IAFT	Indian & Northern Affairs Fuel Tanks	Y	0	0	0	0
MINE	Canadian Mine Locations	Y	0	0	0	0
MNR	Mineral Occurrences	Y	0	1	0	1
NATE	National Analysis of Trends in Emergencies System (NATES)	Y	0	0	0	0
NCPL	Non-Compliance Reports	Y	0	0	0	0
NDFT	National Defence & Canadian Forces Fuel Storage Tanks	Y	0	0	0	0
NDSP	National Defence & Canadian Forces Spills	Y	0	0	0	0
NDWD	National Defence & Canadian Forces Waste Disposal Sites	Y	0	0	0	0
NEES	National Environmental Emergencies System (NEES)	Y	0	0	0	0
NPCB	National PCB Inventory	Y	0	0	0	0
NPRI	National Pollutant Release Inventory	Y	0	0	0	0
OGW	Oil and Gas Wells	Y	0	0	0	0
OOGW	Ontario Oil and Gas Wells	Y	0	0	0	0
OPCB	Inventory of PCB Storage Sites	Y	0	0	0	0
PAP	Canadian Pulp and Paper	Y	0	0	0	0
PCFT	Parks Canada Fuel Storage Tanks	Y	0	0	0	0
PES	Pesticide Register	Y	0	1	0	1
PRT	Private and Retail Fuel Storage Tanks	Y	0	0	0	0
REC	Ontario Regulation 347 Waste Receivers Summary	Y	0	0	0	0
RSC	Record of Site Condition	Y	0	0	0	0
RST	Retail Fuel Storage Tanks	Y	0	1	0	1

Report Summary

Order Number: 20110614008
Site Name: Un-named
Site Address: James St Grand Valley, ON
Report Type: Custom Report, 0.25 km Search Radius

Database		Selected	On-site	Within 0.25	0.25km to 0.25km	Total
SCT	Scott's Manufacturing Directory	Y	0	0	0	0
SPL	Ontario Spills	Y	0	0	0	0
SRDS	Wastewater Discharger Registration Database	Y	0	0	0	0
TANK	Anderson's Storage Tanks	Y	0	0	0	0
TCFT	Transport Canada Fuel Storage Tanks	Y	0	0	0	0
WDS	Waste Disposal Sites - MOE CA Inventory	Y	0	0	0	0
WDSH	Waste Disposal Sites - MOE 1991 Historical Approval Inventory	Y	0	0	0	0
WWIS	Water Well Information System	Y	0	35	0	35
TOTAL			0	39	0	39

The databases chosen by the client as per the submitted order form are denoted in the 'Selected' column in the above table. Counts have been provided outside the primary buffer area for cursory examination only. These records have not been examined or verified, therefore, they are subject to change.



Pinpointing Your Environmental Risks

12 Concorde Pl, Suite 800 North York, ON M3C 4J2
416-510-5204

Project Property: Un-named
James St
Grand Valley, ON

ERIS Project #: 20110614008

Date: JUN-14-2011

LEGEND

Project Property	Open Area	Landuse Classifications
Database Location	Residential	Recreation
Points of Interest	Commercial	Golf Course/Driving Range
Chimney	Resource and Industrial	Park/Sports Field
Silo	Government and Institutional	Other Recreation Area
Pipe & Transmission Lines	Parks and Recreational	Sports/Race Track
Pipeline	Waterbody	Cemetery
Transmission Line		Campground
Transmission Tower		Vegetation
Transformer Station		Wooded Area
Rail		Orchard
Railway - Main		Vineyard
Railway - Sidetrack		Industrial Resources
Railway - Abandoned		Conveyor
Bridge		Crane: Moveable
Tunnel		Crane: Stationary
Transportation - Other		Tank
Embankment		Rock Cut
Trail		Auto Wrecker
Runway		Lumber Yard
Hydrographic Features		Pit
Permanent Waterway		
Intermittent Waterway		
Open Reservoir		
Dyke/Levee		
Dam		
Breakwall		
Wetland		

SITE DIAGRAM



This diagram is to be used solely for relative street location purposes. It may not accurately portray street or site positions.

Site Report

Order Number: 20110614008

Site Name: Un-named

Site Address: James St Grand Valley, ON

Report Type: Custom Report, 0.25 km Search Radius

FOR COMPLETE INFORMATION, REFER TO DETAIL REPORT

A search has been conducted for this site (address) and company name. No records were found, within the database(s) selected, that meet either of these criteria.

Detail Report

Order Number: 20110614008
Site Name: Un-named
Site Address: James St Grand Valley ON
Report Type: Custom Report, 0.25 km Search Radius

If information is required for sites located beyond the selected address, please contact your ERIIS representative.

Ontario Regulation 347 Waste Generators Summary

Mineral Occurrences

Pesticide Register

Retail Fuel Storage Tanks

Water Well Information System

Ontario Regulation 347 Waste Generators Summary

Map Key	Company	Address	SIC Code	SIC Description	Waste Code	Waste Description
GEN-1	UPI (OUT OF BUS) 180	39- 23 MILL ST., LOT 6 & 7, PLAN 22A TWP. OF LUTHER LON 1G0	5111	PETROLEUM PROD., WH.	221	LIGHT FUELS
				Generator #: ON1446917 Approval Yrs: 92,93,96,97,98		

Mineral Occurrences

Map Key	Company	Address	Easting	Northing	Zone	MDI No	Deposit Status
MNR-1	WALDEMAR QUARRY		557375.162	4859911.712	17	MDI40P16NW00004	PAST PRODUCING MINE WITHOUT RESERVES
<p>Mining Division: Geological District: SOUTHWESTERN ONTARIO Claim Map: N/A Access Description: N/A</p>							
			<u>Year</u>	<u>Name</u>	<u>Twp/Area</u>	<u>Con/Lot/Sec</u>	<u>Commodity</u>
			1991	WALDEMA R QUARRY	AMARANTH	LOT: 2 CON: 9	DOLOMITE/DOLOSTONE (STRUCTURAL MATERIAL)
							<u>Deposit Characteristic</u>

Pesticide Register

Map Key	Company	Address	Licence No.	Licence Type
PES-1	UNITED CO OPERATIVES OF ONTARIO	23 MILL STREET GRAND VIALLEY L0N 1G0		Vendor

Retail Fuel Storage Tanks

Map Key	Company	Address	Facility	Description
RST-1	RODGERS BERT VARIETY & SUNOCO SERVICE	25 MAIN ORANGEVILLE NOB 120	Service Stations-Gasoline, Oil & Natural Gas	

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality																				
WWIS-1		lot 3 con 10	1701894	003	10	CON	DUFFERIN	AMARANTH TOWNSHIP																				
<p> Easting Nad83: 566764.3 Northing Nad83: 4859973 Zone: 17 Utm Reliability: margin of error : 30 m - 100 m Construction Date: 5/30/1975 Primary Water Use: Livestock Secondary Water Use: Well Depth: 185 ft Pump Rate: 10 GPM Static Water Level: 45 ft Flow Rate: Clear/Cloudy: CLOUDY Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 472.176513 Elevation Reliability: Depth to Bedrock: 90 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: STEEL </p>																												
<table border="1"> <thead> <tr> <th>Thickness</th> <th>Original Depth</th> <th>Material Colour</th> <th>Material</th> </tr> </thead> <tbody> <tr> <td>33 ft</td> <td>33 ft</td> <td>BROWN</td> <td>CLAY</td> </tr> <tr> <td>57 ft</td> <td>90 ft</td> <td>GREY</td> <td>CLAY</td> </tr> <tr> <td>42 ft</td> <td>132 ft</td> <td>GREY</td> <td>LIMESTONE</td> </tr> <tr> <td>53 ft</td> <td>185 ft</td> <td>WHITE</td> <td>LIMESTONE</td> </tr> </tbody> </table>									Thickness	Original Depth	Material Colour	Material	33 ft	33 ft	BROWN	CLAY	57 ft	90 ft	GREY	CLAY	42 ft	132 ft	GREY	LIMESTONE	53 ft	185 ft	WHITE	LIMESTONE
Thickness	Original Depth	Material Colour	Material																									
33 ft	33 ft	BROWN	CLAY																									
57 ft	90 ft	GREY	CLAY																									
42 ft	132 ft	GREY	LIMESTONE																									
53 ft	185 ft	WHITE	LIMESTONE																									

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-2		lot 3 con 10	1702758	003	10	CON	DUFFERIN	AMARANTH TOWNSHIP
<p> Easting Nad83: 556915.3 Northing Nad83: 4860198 Zone: 17 Utm Reliability: unknown UTM Construction Date: 7/17/1981 Primary Water Use: Public Secondary Water Use: Well Depth: 200 ft Pump Rate: 60 GPM Static Water Level: 18 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (Y/n): N Elevation (m): 470.542968 Elevation Reliability: Depth to Bedrock: 1 Overburden/Bedrock: Mixed in a Layer Water Type: FRESH Casing Material: STEEL, OPEN HOLE </p>								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			1 ft	1 ft		TOPSOIL		
			15 ft	16 ft	BROWN	CLAY, SANDSTONE, MEDIUM-GRAINED SAND, SOFT		
			5 ft	21 ft	BROWN	CLAY, STONES, HARD		
			5 ft	26 ft	GREY	LIMESTONE, FRACTURED, SOFT		
			2 ft	28 ft	GREY	LIMESTONE, HARD		
			34 ft	62 ft	GREY	LIMESTONE, MEDIUM-GRAINED, HARD		
			81 ft	143 ft	BROWN	LIMESTONE, MEDIUM-GRAINED, HARD		
			26 ft	169 ft	BROWN	LIMESTONE, SOFT		
			5 ft	174 ft	GREY	LIMESTONE, MEDIUM-GRAINED, HARD		
			26 ft	200 ft	BROWN	LIMESTONE, MEDIUM-GRAINED, HARD		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-3		lot 22 con 10	1706596	022	10	CON	DUFFERIN	AMARANTH TOWNSHIP
<p> Easting Nad83: 557247 Northing Nad83: 4859749 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 10/13/2005 Primary Water Use: Secondary Water Use: Well Depth: Pump Rate: Static Water Level: 5.79 m Flow Rate: Clear/Cloudy: Specific Capacity: Final Well Status: Abandoned-Other Construction Method: Other Method Flowing (y/n): Elevation (m): 464.164764 Elevation Reliability: Depth to Bedrock: Overburden/Bedrock: No formation data Water Type: Casing Material: <u>Thickness</u> <u>Original Depth</u> <u>Material Colour</u> <u>Material</u> </p>								

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-4		lot 3 con 10	1703178	003	10	CON	DUFFERIN	AMARANTH TOWNSHIP
<p> Easting Nad83: 557296.3 Northing Nad83: 4860006 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 10/30/1985 Primary Water Use: Domestic Secondary Water Use: Well Depth: 202 ft Pump Rate: 10 GPM Static Water Level: 35 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 460.404266 Elevation Reliability: Depth to Bedrock: 56 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: OPEN HOLE, STEEL </p>								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			56 ft	56 ft	BROWN	CLAY, STONES		
			53 ft	109 ft	GREY	LIMESTONE		
			3 ft	112 ft	BROWN	LIMESTONE		
			23 ft	135 ft	GREY	LIMESTONE		
			67 ft	202 ft	BROWN	LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality																								
WWIS-5		lot 3 con 10	1703291	003	10	CON	DUFFERIN	AMARANTH TOWNSHIP																								
<p> Easting Nad83: 557328.3 Northing Nad83: 4860056 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 11/4/1986 Primary Water Use: Domestic Secondary Water Use: Well Depth: 201 ft Pump Rate: 9 GPM Static Water Level: 28 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 455.517852 Elevation Reliability: Depth to Bedrock: 48 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: OPEN HOLE, STEEL </p>																																
<table border="1"> <thead> <tr> <th>Thickness</th> <th>Original Depth</th> <th>Material Colour</th> <th>Material</th> </tr> </thead> <tbody> <tr> <td>5 ft</td> <td>5 ft</td> <td></td> <td>CLAY, FILL</td> </tr> <tr> <td>43 ft</td> <td>48 ft</td> <td>BROWN</td> <td>CLAY, STONES</td> </tr> <tr> <td>47 ft</td> <td>95 ft</td> <td>GREY</td> <td>LIMESTONE</td> </tr> <tr> <td>85 ft</td> <td>180 ft</td> <td>BROWN</td> <td>LIMESTONE</td> </tr> <tr> <td>21 ft</td> <td>201 ft</td> <td>BROWN</td> <td>LIMESTONE</td> </tr> </tbody> </table>									Thickness	Original Depth	Material Colour	Material	5 ft	5 ft		CLAY, FILL	43 ft	48 ft	BROWN	CLAY, STONES	47 ft	95 ft	GREY	LIMESTONE	85 ft	180 ft	BROWN	LIMESTONE	21 ft	201 ft	BROWN	LIMESTONE
Thickness	Original Depth	Material Colour	Material																													
5 ft	5 ft		CLAY, FILL																													
43 ft	48 ft	BROWN	CLAY, STONES																													
47 ft	95 ft	GREY	LIMESTONE																													
85 ft	180 ft	BROWN	LIMESTONE																													
21 ft	201 ft	BROWN	LIMESTONE																													

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-6		lot 2 con 10	1703409	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
<p> Easting Nad83: 557337.3 Northing Nad83: 4859799 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 7/4/1987 Primary Water Use: Municipal Secondary Water Use: Well Depth: 250 ft Pump Rate: 50 GPM Static Water Level: 35 ft Flow Rate: Clear/Cloudy: Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 460.481872 Elevation Reliability: Depth to Bedrock: 58 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: STEEL, OPEN HOLE </p>								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			5 ft	19 ft	GREY	CLAY, SAND, SOFT		
			27 ft	46 ft	GREY	CLAY, STONES, HARD		
			12 ft	58 ft	GREY	CLAY, SAND, GRAVEL		
			6 ft	64 ft	BROWN	LIMESTONE, SOFT		
			48 ft	112 ft	GREY	LIMESTONE, HARD		
			33 ft	145 ft	BROWN	LIMESTONE, HARD		
			52 ft	197 ft	GREY	LIMESTONE, HARD		
			35 ft	232 ft	BROWN	LIMESTONE, HARD, FRACTURED		
			18 ft	250 ft	BROWN	LIMESTONE, HARD		
			9 ft	9 ft	BROWN	CLAY, SOFT		
			5 ft	14 ft	GREY	CLAY, SOFT		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality																				
WWIS-7		lot 3 con 10	1703559	003	10	CON	DUFFERIN	AMARANTH TOWNSHIP																				
<p> Easting Nad83: 557342.3 Northing Nad83: 4860024 Zone: 17 Utm Reliability: margin of error: 10 - 30 m Construction Date: 2/5/1988 Primary Water Use: Domestic Secondary Water Use: Well Depth: 110 ft Pump Rate: 10 GPM Static Water Level: 38 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Cable Tool Flowing (y/n): N Elevation (m): 456.536041 Elevation Reliability: Depth to Bedrock: 45 Overburden/Bedrock: Bedrock Water Type: Not stated Casing Material: OPEN HOLE, STEEL </p>																												
<table border="1"> <thead> <tr> <th>Thickness</th> <th>Original Depth</th> <th>Material Colour</th> <th>Material</th> </tr> </thead> <tbody> <tr> <td>27 ft</td> <td>27 ft</td> <td>BROWN</td> <td>CLAY, BOULDERS</td> </tr> <tr> <td>8 ft</td> <td>35 ft</td> <td></td> <td>SAND</td> </tr> <tr> <td>10 ft</td> <td>45 ft</td> <td>BROWN</td> <td>CLAY, BOULDERS</td> </tr> <tr> <td>65 ft</td> <td>110 ft</td> <td></td> <td>LIMESTONE</td> </tr> </tbody> </table>									Thickness	Original Depth	Material Colour	Material	27 ft	27 ft	BROWN	CLAY, BOULDERS	8 ft	35 ft		SAND	10 ft	45 ft	BROWN	CLAY, BOULDERS	65 ft	110 ft		LIMESTONE
Thickness	Original Depth	Material Colour	Material																									
27 ft	27 ft	BROWN	CLAY, BOULDERS																									
8 ft	35 ft		SAND																									
10 ft	45 ft	BROWN	CLAY, BOULDERS																									
65 ft	110 ft		LIMESTONE																									

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-8		lot 3 con 10	1706300	003	10	CON	DUFFERIN	AMARANTH TOWNSHIP
Easting Nad83: 557352 Northing Nad83: 4860420 Zone: 17 Utm Reliability: margin of error: 10 - 30 m Construction Date: 10/27/2004 Primary Water Use: Domestic Secondary Water Use: Well Depth: 20.72 m Pump Rate: 45 LPM Static Water Level: 6.7 m Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): Elevation (m): 451.388122 Elevation Reliability: Depth to Bedrock: 19 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: STEEL, OPEN HOLE								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			5.79 m	5.79 m	BROWN	GRAVEL, SAND		
			7.01 m	12.8 m	BROWN	LIMESTONE		
			7.92 m	20.72 m	GREY	LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-9		lot 2 con 10	1703558	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
<p> Easting Nad83: 557375.3 Northing Nad83: 4859978 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 1/1/1988 Primary Water Use: Domestic Secondary Water Use: Well Depth: 97 ft Pump Rate: 10 GPM Static Water Level: 29 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 455.909912 Elevation Reliability: Depth to Bedrock: 36 Overburden/Bedrock: Bedrock Water Type: Not stated Casing Material: OPEN HOLE, STEEL </p>								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			29 ft	29 ft	BROWN	CLAY, BOULDERS		
			4 ft	33 ft		SAND		
			3 ft	36 ft	BROWN	CLAY		
			61 ft	97 ft		LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-10		lot 2 con 10	1703557	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
<p> Easting Nad83: 557390.3 Northing Nad83: 4859915 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 1/1/1988 Primary Water Use: Domestic Secondary Water Use: Well Depth: 97 ft Pump Rate: 10 GPM Static Water Level: 27 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 455.830993 Elevation Reliability: Depth to Bedrock: 37 Overburden/Bedrock: Bedrock Water Type: Not stated Casing Material: STEEL, OPEN HOLE </p>								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			32 ft	32 ft	BROWN	CLAY, BOULDERS		
			4 ft	36 ft		SAND		
			1 ft	37 ft	BROWN	CLAY		
			60 ft	97 ft		LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-11		lot 2 con 10	1703471	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
<p> Easting Nad83: 557405.3 Northing Nad83: 4859843 Zone: 17 Utm Reliability: margin of error: 10 - 30 m Construction Date: 8/12/1987 Primary Water Use: Domestic Secondary Water Use: Well Depth: 97 ft Pump Rate: 10 GPM Static Water Level: 22 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 455.968444 Elevation Reliability: Depth to Bedrock: 33 Overburden/Bedrock: Mixed in a Layer Water Type: Not stated Casing Material: STEEL, OPEN HOLE </p>								
			Thickness	Original Depth	Material Colour	Material		
			16 ft	16 ft	BROWN	CLAY, BOULDERS		
			17 ft	33 ft	BROWN	CLAY, GRAVEL		
			4 ft	37 ft	BROWN	CLAY, LIMESTONE		
			60 ft	97 ft	BROWN	LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-12		lot 22 con 10	1706593	022	10	CON	DUFFERIN	AMARANTH TOWNSHIP
Easting Nad83: 557412 Northing Nad83: 4859815 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 9/13/2005 Primary Water Use: Secondary Water Use: Well Depth: Pump Rate: Static Water Level: 3.84 m Flow Rate: Clear/Cloudy: Specific Capacity: Final Well Status: Abandoned-Other Construction Method: Other Method Flowing (y/n): Elevation (m): 457.050292 Elevation Reliability: Depth to Bedrock: Overburden/Bedrock: No formation data Water Type: Casing Material: <u>Thickness</u> <u>Original</u> <u>Depth</u> <u>Material</u> <u>Material</u>								

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-13		lot 3 con 10	1703292	003	10	CON	DUFFERIN	AMARANTH TOWNSHIP
Easting Nad83: 557411.3 Northing Nad83: 4860144 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 8/1/1986 Primary Water Use: Domestic Secondary Water Use: Well Depth: 81 ft Pump Rate: 10 GPM Static Water Level: 17 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 451.847045 Elevation Reliability: Depth to Bedrock: 21 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: STEEL, OPEN HOLE								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			21 ft	21 ft		GRAVEL, CLAY		
			9 ft	30 ft	BROWN	LIMESTONE		
			51 ft	81 ft	GREY	LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-14		lot 2 con 10	1701689	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
Easting Nad83: 557414.3 Northing Nad83: 4859923 Zone: 17 Utm Reliability: margin of error : 100 m - 300 m Construction Date: 6/6/1974 Primary Water Use: Domestic Secondary Water Use: Well Depth: 50 ft Pump Rate: 50 GPM Static Water Level: 7 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 453.225036 Elevation Reliability: Depth to Bedrock: 14 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: STEEL								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			10 ft	10 ft	BROWN	CLAY		
			4 ft	14 ft	BROWN	GRAVEL		
			36 ft	50 ft	WHITE	LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-15		lot 2 con 10	1704397	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
Easting Nad83: 557448.3 Northing Nad83: 4859875 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 9/17/1991 Primary Water Use: Domestic Secondary Water Use: Well Depth: 128 ft Pump Rate: 10 GPM Static Water Level: 12 ft Flow Rate: Clear/Cloudy: Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 454.865386 Elevation Reliability: Depth to Bedrock: 4 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: STEEL, OPEN HOLE								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			4 ft	4 ft	BROWN	CLAY, STONES		
			66 ft	70 ft	GREY	LIMESTONE		
			58 ft	128 ft	BROWN	LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-16		lot 2 con 10	1701763	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
Easting Nad83: 557464.3 Northing Nad83: 4860068 Zone: 17 Utm Reliability: margin of error : 100 m - 300 m Construction Date: 10/17/1974 Primary Water Use: Domestic Secondary Water Use: Well Depth: 90 ft Pump Rate: 5 GPM Static Water Level: 15 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Air) Flowing (y/n): N Elevation (m): 450.151184 Elevation Reliability: Depth to Bedrock: 10 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: STEEL								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			10 ft	10 ft	BROWN	CLAY, GRAVEL		
			80 ft	90 ft	GREY	LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-17		lot 2 con 10	1701993	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
<p> Easting Nad83: 557464.3 Northing Nad83: 4860073 Zone: 17 Utm Reliability: margin of error : 100 m - 300 m Construction Date: 8/24/1975 Primary Water Use: Domestic Secondary Water Use: Well Depth: 65 ft Pump Rate: 35 GPM Static Water Level: 5 ft Flow Rate: Clear/Cloudy: CLOUDY Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 450.256713 Elevation Reliability: Depth to Bedrock: 8 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: </p>								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			8 ft	8 ft	BROWN	CLAY, GRAVEL		
			57 ft	65 ft	WHITE	LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-18		lot 2 con 10	1704523	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
Easting Nad83: 557490.3 Northing Nad83: 4859801 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 12/14/1992 Primary Water Use: Domestic Secondary Water Use: Well Depth: 130 ft Pump Rate: 10 GPM Static Water Level: 16 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 454.236846 Elevation Reliability: Depth to Bedrock: 19 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: STEEL, OPEN HOLE								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			1 ft	1 ft		TOPSOIL		
			18 ft	19 ft	BROWN	CLAY, STONES, SAND		
			56 ft	75 ft	GREY	LIMESTONE		
			55 ft	130 ft	BROWN	LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-19		lot 2 con 10	1705885	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
<p> Easting Nad83: 557501.2 Northing Nad83: 4859711 Zone: 17 Utm Reliability: margin of error : 100 m - 300 m Construction Date: 7/23/2002 Primary Water Use: Domestic Secondary Water Use: Well Depth: 137 ft Pump Rate: 8 GPM Static Water Level: 2 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Air) Flowing (y/n): N Elevation (m): 456.344726 Elevation Reliability: Depth to Bedrock: 39 Overburden/Bedrock: Bedrock Water Type: Not stated Casing Material: STEEL, OPEN HOLE </p>								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			1 ft	1 ft		TOPSOIL		
			38 ft	39 ft	BROWN	CLAY, SANDY, GRAVEL		
			48 ft	87 ft	GREY	LIMESTONE		
			33 ft	120 ft	GREY	LIMESTONE		
			17 ft	137 ft	BROWN	LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-20		lot 2 con 10	1703921	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
<p> Easting Nad83: 557502.2 Northing Nad83: 4859761 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 6/15/1989 Primary Water Use: Domestic Secondary Water Use: Well Depth: 100 ft Pump Rate: 15 GPM Static Water Level: 8 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Air) Flowing (y/n): N Elevation (m): 454.702301 Elevation Reliability: Depth to Bedrock: 22 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: STEEL </p>								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			1 ft	1 ft	BROWN	TOPSOIL		
			21 ft	22 ft	BROWN	CLAY, STONES		
			1 ft	23 ft	WHITE	LIMESTONE		
			6 ft	29 ft	WHITE	SHALE, GRAVEL		
			71 ft	100 ft	GREY	LIMESTONE, HARD		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-21		lot 2 con 10	7139100	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
<p> Easting Nad83: 557503 Northing Nad83: 4859909 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 11/11/2009 Primary Water Use: Domestic Secondary Water Use: Well Depth: 97 ft Pump Rate: 10 GPM Static Water Level: 8 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Other Method Flowing (y/n): Elevation (m): 452.2742 Elevation Reliability: Depth to Bedrock: Overburden/Bedrock: Water Type: FRESH Casing Material: STEEL, OPEN HOLE </p>								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
				97 ft	GREY	TOPSOIL LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-22		lot 2 con 10	1702473	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
Easting Nad83: 557514.2 Northing Nad83: 4859623 Zone: 17 Utm Reliability: margin of error : 100 m - 300 m Construction Date: 11/14/1978 Primary Water Use: Domestic Secondary Water Use: Well Depth: 82 ft Pump Rate: 10 GPM Static Water Level: 32 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 464.178863 Elevation Reliability: Depth to Bedrock: 70 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: STEEL, OPEN HOLE								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			51 ft	51 ft	BROWN	CLAY		
			19 ft	70 ft	BROWN	CLAY, GRAVEL		
			12 ft	82 ft		LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality																				
WWIS-23		lot 2 con 10	1704059	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP																				
<p> Easting Nad83: 557524.2 Northing Nad83: 4859670 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 10/6/1989 Primary Water Use: Domestic Secondary Water Use: Well Depth: 165 ft Pump Rate: 7 GPM Static Water Level: 29 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 458.375762 Elevation Reliability: Depth to Bedrock: 55 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: STEEL, </p>																												
<table border="1"> <thead> <tr> <th>Thickness</th> <th>Original Depth</th> <th>Material Colour</th> <th>Material</th> </tr> </thead> <tbody> <tr> <td>1 ft</td> <td>1 ft</td> <td>BLACK</td> <td>TOPSOIL</td> </tr> <tr> <td>25 ft</td> <td>26 ft</td> <td>BROWN</td> <td>CLAY, STONES</td> </tr> <tr> <td>29 ft</td> <td>55 ft</td> <td>GREY</td> <td>CLAY, STONES</td> </tr> <tr> <td>110 ft</td> <td>165 ft</td> <td>GREY</td> <td>ROCK</td> </tr> </tbody> </table>									Thickness	Original Depth	Material Colour	Material	1 ft	1 ft	BLACK	TOPSOIL	25 ft	26 ft	BROWN	CLAY, STONES	29 ft	55 ft	GREY	CLAY, STONES	110 ft	165 ft	GREY	ROCK
Thickness	Original Depth	Material Colour	Material																									
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25 ft	26 ft	BROWN	CLAY, STONES																									
29 ft	55 ft	GREY	CLAY, STONES																									
110 ft	165 ft	GREY	ROCK																									

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-24		lot 2 con 10	1703180	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
<p> Easting Nad83: 557526.2 Northing Nad83: 4859628 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 7/8/1985 Primary Water Use: Domestic Secondary Water Use: Well Depth: 202 ft Pump Rate: 10 GPM Static Water Level: 45 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 462.625823 Elevation Reliability: Depth to Bedrock: 68 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: STEEL, OPEN HOLE </p>								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			14 ft	14 ft		GRAVEL, BOULDERS, CLAY		
			54 ft	68 ft	BROWN	CLAY, STONES		
			64 ft	132 ft	GREY	LIMESTONE		
			70 ft	202 ft	BROWN	LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-25		lot 2 con 10	1704442	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
Easting Nad83: 557546.2 Northing Nad83: 4859596 Zone: 17 Utm Reliability: margin of error: 10 - 30 m Construction Date: 5/22/1991 Primary Water Use: Domestic Secondary Water Use: Well Depth: 90 ft Pump Rate: 8 GPM Static Water Level: 36 ft Flow Rate: Clear/Cloudy: CLOUDY Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Air) Flowing (y/n): N Elevation (m): 462.258728 Elevation Reliability: Depth to Bedrock: 17 Overburden/Bedrock: Mixed in a Layer Water Type: FRESH Casing Material: STEEL								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>		<u>Material</u>	
			3 ft	3 ft	BROWN		TOPSOIL	
			14 ft	17 ft	BROWN		CLAY, ROCK	
			53 ft	70 ft	GREY		CLAY, ROCK	
			20 ft	90 ft	GREY		LIMESTONE	

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality																												
WWIS-26		lot 14 con 13 MOORFIELD	6715433	014	13	CON	WELLINGTON	MARYBOROUGH TOWNSHIP																												
<p> Easting Nad83: 557553 Northing Nad83: 4859518 Zone: 17 Utm Reliability: Construction Date: 7/27/2005 Primary Water Use: Domestic Secondary Water Use: Well Depth: 17.67 m Pump Rate: 30.28 LPM Static Water Level: 6 m Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Cable Tool Flowing (y/n): Elevation (m): 464.615997 Elevation Reliability: Depth to Bedrock: Overburden/Bedrock: Overburden Water Type: FRESH Casing Material: STEEL </p>																																				
<table border="1"> <thead> <tr> <th><u>Thickness</u></th> <th><u>Original Depth</u></th> <th><u>Material Colour</u></th> <th><u>Material</u></th> </tr> </thead> <tbody> <tr> <td>0.304 m</td> <td>0.304 m</td> <td>BROWN</td> <td>TOPSOIL</td> </tr> <tr> <td>0.916 m</td> <td>1.22 m</td> <td>BROWN</td> <td>FILL</td> </tr> <tr> <td>1.82 m</td> <td>3.04 m</td> <td>BROWN</td> <td>CLAY, SAND</td> </tr> <tr> <td>7.32 m</td> <td>10.36 m</td> <td>BROWN</td> <td>SAND, CLAY</td> </tr> <tr> <td>1.24 m</td> <td>11.6 m</td> <td>BROWN</td> <td>GRAVEL, CLAY</td> </tr> <tr> <td>6.07 m</td> <td>17.67 m</td> <td>BROWN</td> <td>GRAVEL, SAND</td> </tr> </tbody> </table>									<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>	0.304 m	0.304 m	BROWN	TOPSOIL	0.916 m	1.22 m	BROWN	FILL	1.82 m	3.04 m	BROWN	CLAY, SAND	7.32 m	10.36 m	BROWN	SAND, CLAY	1.24 m	11.6 m	BROWN	GRAVEL, CLAY	6.07 m	17.67 m	BROWN	GRAVEL, SAND
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6.07 m	17.67 m	BROWN	GRAVEL, SAND																																	

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-27		lot 2 con 10	1701618	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
Easting Nad83: 557562.2 Northing Nad83: 4859791 Zone: 17 Utm Reliability: margin of error : 300 m - 1 km Construction Date: 9/21/1973 Primary Water Use: Domestic Secondary Water Use: Well Depth: 87 ft Pump Rate: 5 GPM Static Water Level: 20 ft Flow Rate: Clear/Cloudy: CLOUDY Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 451.091491 Elevation Reliability: Depth to Bedrock: 20 Overburden/Bedrock: Mixed in a Layer Water Type: FRESH Casing Material: STEEL								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			20 ft	20 ft	BROWN	CLAY		
			7 ft	27 ft	GREY	CLAY, LIMESTONE		
			60 ft	87 ft	WHITE	LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-28		lot 2 con 9	1705126	002	09	CON	DUFFERIN	AMARANTH TOWNSHIP
Easting Nad83: 557564.2 Northing Nad83: 4859628 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 5/15/1997 Primary Water Use: Domestic Secondary Water Use: Well Depth: 138 ft Pump Rate: 10 GPM Static Water Level: 47 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Air) Flowing (y/n): N Elevation (m): 458.732177 Elevation Reliability: Depth to Bedrock: 36 Overburden/Bedrock: Bedrock Water Type: Not stated Casing Material: STEEL, OPEN HOLE								
<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>					
1 ft	1 ft	BLACK	TOPSOIL					
23 ft	24 ft	BROWN	SAND					
12 ft	36 ft	GREY	CLAY, STONES, TILL					
13 ft	49 ft		LIMESTONE, FRACTURED					
38 ft	87 ft	GREY	DOLOMITE					
51 ft	138 ft	BROWN	DOLOMITE					

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-29		lot 2 con 9	1703374	002	09	CON	DUFFERIN	AMARANTH TOWNSHIP
<p> Easting Nad83: 557602.2 Northing Nad83: 4859590 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 4/22/1987 Primary Water Use: Domestic Secondary Water Use: Well Depth: 112 ft Pump Rate: 5 GPM Static Water Level: 18 ft Flow Rate: Clear/Cloudy: CLOUDY Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 458.963592 Elevation Reliability: Depth to Bedrock: 43 Overburden/Bedrock: Mixed in a Layer Water Type: Not stated Casing Material: STEEL, OPEN HOLE </p>								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			22 ft	22 ft	BROWN	CLAY, BOULDERS		
			7 ft	29 ft	RED	CLAY		
			14 ft	43 ft	BROWN	CLAY, BOULDERS		
			3 ft	46 ft	BROWN	CLAY, LIMESTONE		
			66 ft	112 ft		LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-30		lot 2 con 9	1701350	002	09	CON	DUFFERIN	AMARANTH TOWNSHIP
Easting Nad83: 557664.2 Northing Nad83: 4859583 Zone: 17 Utm Reliability: margin of error : 30 m - 100 m Construction Date: 8/31/1972 Primary Water Use: Domestic Secondary Water Use: Well Depth: 112 ft Pump Rate: 10 GPM Static Water Level: 35 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Cable Tool Flowing (y/n): N Elevation (m): 452.74707 Elevation Reliability: Depth to Bedrock: 40 Overburden/Bedrock: Bedrock Water Type: SALTY Casing Material: OPEN HOLE, GALVANIZED								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			19 ft	19 ft		PREVIOUSLY DUG		
			21 ft	40 ft		GRAVEL		
			72 ft	112 ft	GREY	ROCK		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality																								
WWIS-31		lot 2 con 9	1704080	002	09	CON	DUFFERIN	AMARANTH TOWNSHIP																								
<p> Easting Nad83: 557669.2 Northing Nad83: 4859510 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 6/7/1989 Primary Water Use: Domestic Secondary Water Use: Well Depth: 101 ft Pump Rate: 10 GPM Static Water Level: 37 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 458.429199 Elevation Reliability: Depth to Bedrock: 55 Overburden/Bedrock: Bedrock Water Type: Not stated Casing Material: STEEL, OPEN HOLE </p>																																
<table border="1"> <thead> <tr> <th>Thickness</th> <th>Original Depth</th> <th>Material Colour</th> <th>Material</th> </tr> </thead> <tbody> <tr> <td>2 ft</td> <td>2 ft</td> <td>BLACK</td> <td>TOPSOIL</td> </tr> <tr> <td>16 ft</td> <td>18 ft</td> <td>BROWN</td> <td>CLAY, BOULDERS</td> </tr> <tr> <td>9 ft</td> <td>27 ft</td> <td>GREY</td> <td>CLAY</td> </tr> <tr> <td>28 ft</td> <td>55 ft</td> <td>BROWN</td> <td>CLAY, BOULDERS</td> </tr> <tr> <td>46 ft</td> <td>101 ft</td> <td>BROWN</td> <td>LIMESTONE</td> </tr> </tbody> </table>									Thickness	Original Depth	Material Colour	Material	2 ft	2 ft	BLACK	TOPSOIL	16 ft	18 ft	BROWN	CLAY, BOULDERS	9 ft	27 ft	GREY	CLAY	28 ft	55 ft	BROWN	CLAY, BOULDERS	46 ft	101 ft	BROWN	LIMESTONE
Thickness	Original Depth	Material Colour	Material																													
2 ft	2 ft	BLACK	TOPSOIL																													
16 ft	18 ft	BROWN	CLAY, BOULDERS																													
9 ft	27 ft	GREY	CLAY																													
28 ft	55 ft	BROWN	CLAY, BOULDERS																													
46 ft	101 ft	BROWN	LIMESTONE																													

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-32		lot 2 con 10	1704152	002	10	CON	DUFFERIN	AMARANTH TOWNSHIP
<p> Easting Nad83: 557699.2 Northing Nad83: 4859593 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 4/20/1989 Primary Water Use: Domestic Secondary Water Use: Well Depth: Pump Rate: 4 GPM Static Water Level: Flow Rate: Clear/Cloudy: Specific Capacity: Final Well Status: Water Supply Construction Method: Flowing (y/n): N Elevation (m): 449.563049 Elevation Reliability: Depth to Bedrock: Overburden/Bedrock: No formation data Water Type: Casing Material: <u>Thickness</u> <u>Original Depth</u> <u>Material Colour</u> <u>Material</u> </p>								

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-33		lot 1 con 9	1704302	001	09	CON	DUFFERIN	AMARANTH TOWNSHIP
Easting Nad83: 557750.2 Northing Nad83: 4859457 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 5/11/1990 Primary Water Use: Domestic Secondary Water Use: Well Depth: 80 ft Pump Rate: 10 GPM Static Water Level: 30 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Cable Tool Flowing (y/n): N Elevation (m): 453.976348 Elevation Reliability: Depth to Bedrock: 18 Overburden/Bedrock: Bedrock Water Type: Not stated Casing Material:								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			18 ft	18 ft		CLAY, GRAVEL		
			19 ft	37 ft		LIMESTONE, FRACTURED		
			43 ft	80 ft		LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-34		lot 1 con 9	1703249	001	09	CON	DUFFERIN	AMARANTH TOWNSHIP
<p> Easting Nad83: 557778.2 Northing Nad83: 4859353 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 5/30/1986 Primary Water Use: Domestic Secondary Water Use: Well Depth: 165 ft Pump Rate: 10 GPM Static Water Level: 20 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 458.575317 Elevation Reliability: Depth to Bedrock: 46 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: STEEL, OPEN HOLE </p>								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			16 ft	16 ft		GRAVEL, CLAY		
			30 ft	46 ft		CLAY, STONES		
			102 ft	148 ft	GREY	LIMESTONE		
			17 ft	165 ft	BROWN	LIMESTONE		

Water Well Information System

Map Key	Company	Address	Well Id	Lot	Concession	Concession Name	County	Municipality
WWIS-35		lot 1 con 9	1703101	001	09	CON	DUFFERIN	AMARANTH TOWNSHIP
Easting Nad83: 557817.2 Northing Nad83: 4859338 Zone: 17 Utm Reliability: margin of error : 10 - 30 m Construction Date: 9/21/1984 Primary Water Use: Domestic Secondary Water Use: Well Depth: 156 ft Pump Rate: 10 GPM Static Water Level: 20 ft Flow Rate: Clear/Cloudy: CLEAR Specific Capacity: Final Well Status: Water Supply Construction Method: Rotary (Convent.) Flowing (y/n): N Elevation (m): 456.993988 Elevation Reliability: Depth to Bedrock: 49 Overburden/Bedrock: Bedrock Water Type: FRESH Casing Material: STEEL, OPEN HOLE								
			<u>Thickness</u>	<u>Original Depth</u>	<u>Material Colour</u>	<u>Material</u>		
			24 ft	24 ft	BROWN	CLAY, GRAVEL		
			25 ft	49 ft	GREY	CLAY		
			107 ft	156 ft		LIMESTONE		

Appendix: Ontario Database Descriptions

EcoLog Environmental Risk Information Services Ltd can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to EcoLog ERIS at the time of update. **Note:** Databases denoted with "*" indicates that the database will no longer be updated. See the individual database descriptions for more information.

Provincial Government Source Databases:

Abandoned Aggregate Inventory Up to Sept 2002

AAGR

The MAAP Program maintains a database of all abandoned pits and quarries. Please note that the database is only referenced by lot and concession and city/town location. The database provides information regarding the location, type, size, land use, status and general comments.

Aggregate Inventory Up to Jun 2010

AGR

The Ontario Ministry of Natural Resources maintains a database of all active pits and quarries. Please note that the database is only referenced by lot/concession and city/town location. The database provides information regarding the registered owner/operator, location, status, licence type, and maximum tonnage.

Abandoned Mines Information System 1800-2005

AMIS

The Abandoned Mines Information System contains data on known abandoned and inactive mines located on both Crown and privately held lands. The information was provided by the Ministry of Northern Development and Mines (MNDM), with the following disclaimer: "the database provided has been compiled from various sources, and the Ministry of Northern Development and Mines makes no representation and takes no responsibility that such information is accurate, current or complete". Reported information includes official mine name, status, background information, mine start/end date, primary commodity, mine features, hazards and remediation.

Borehole 1875-Sept 2010

BORE

A borehole is the generalized term for any narrow shaft drilled in the ground, either vertically or horizontally. The information here includes geotechnical investigations or environmental site assessments, mineral exploration, or as a pilot hole for installing piers or underground utilities. Information is from many sources such as the Ministry of Transportation (MTO) boreholes from engineering reports and projects from the 1950 to 1990's in Southern Ontario. Boreholes from the Ontario Geological Survey (OGS) including The Urban Geology Analysis Information System (UGAIS) and the York Peel Durham Toronto (YPDT) database of the Conservation Authority Moraine Coalition. This database will include fields such as location, stratigraphy, depth, elevation, year drilled, etc.

For all water well data or oil and gas well data for Ontario please refer to WWIS and OOGW.

Certificates of Approval 1985-Mar 2011

CA

This database contains the following types of approvals: Air & Noise, Industrial Sewage, Municipal & Private Sewage, Waste Management Systems and Renewable Energy Approvals. The MOE in Ontario states that any facility that releases emissions to the atmosphere, discharges contaminants to ground or surface water, provides potable water supplies, or stores, transports or disposes of waste, must have a Certificate of Approval before it can operate lawfully. Fields include approval number, business name, address, approval date, approval type and status.

TSSA Commercial Fuel Oil Tanks 1948-Aug 2010

CFOT

Since May 2002, Ontario developed a new act where it became mandatory for fuel oil tanks to be registered with Technical Standards & Safety Authority (TSSA). This data would include all commercial underground fuel oil tanks in Ontario with fields such as location, registration number, tank material, age of tank and tank size.

Coal Gasification Plants 1987, 1988*

COAL

This inventory of all known and historical coal gasification plants was collected by the Ministry of Environment. It identifies industrial sites that produced and continue to produce or use coal tar and other related tars. Detailed information is available and includes: facility type, size, landuse, soil condition, site operators/occupants, site description, and potential environmental impacts. This information is effective to 1988, but the program has since been discontinued.

Compliance and Convictions 1989-Apr 2011

CONV

This database summarizes the fines and convictions handed down by the Ontario courts beginning in 1989. Companies and individuals named here have been found guilty of environmental offenses in Ontario courts of law.

Drill Holes 1886-2005

DRL

The Ontario Drill Hole Database contains information on more than 113,000 percussion, overburden, sonic and diamond drill holes from assessment files on record with the department of Mines and Minerals. Please note that limited data is available for southern Ontario, as it was the last area to be completed. The database was created when surveys submitted to the Ministry were converted in the Assessment File Research Image Database (AFRI) project. However, the degree of accuracy (coordinates) as to the exact location of drill holes is dependent upon the source document submitted to the MNDM. Levels of accuracy used to locate holes are: centering on the mining claim; a sketch of the mining claim; a 1:50,000 map; a detailed company map; or from submitted a "Report of Work".

Environmental Registry 1994-Apr 2011

EBR

The Environmental Registry lists proposals, decisions and exceptions regarding policies, Acts, instruments, or regulations that could significantly affect the environment. Through the Registry, thirteen provincial ministries notify the public of upcoming proposals and invite their comments. For example, if a local business is requesting a permit, licence, or certificate of approval to release substances into the air or water; these are notified on the registry. Data includes things like; Approval for discharge into the natural environment other than water (i.e. Air), Permit to Take Water (PTTW), Certificate of Property Use (CPU), Approval for a waste disposal site, Order for preventative measures.(EPA s. 18), Order for conformity with Act for waste disposal sites.(EPA s. 44), Order for remedial work.(EPA s. 17) and many more.

TSSA Fuel Storage Tanks Current to Jun 2010

FST

The Technical Standards & Safety Authority (TSSA), under the *Technical Standards & Safety Act* of 2000 maintains a database of registered private and retail fuel storage tanks in Ontario with fields such as location, tank status, license date, tank type, tank capacity, fuel type, installation year and facility type.

Ontario Regulation 347 Waste Generators Summary 1986-Oct 2010

GEN

Regulation 347 of the Ontario EPA defines a waste generation site as any site, equipment and/or operation involved in the production, collection, handling and/or storage of regulated wastes. A generator of regulated waste is required to register the waste generation site and each waste produced, collected, handled, or stored at the site. This database contains the registration number, company name and address of registered generators including the types of hazardous wastes generated. It includes data on waste generating facilities such as: drycleaners, waste treatment and disposal facilities, machine shops, electric power distribution etc. This information is a summary of all years from 1986 including the most currently available data. Some records may contain, within the company name, the phrase "See & Use..." followed by a series of letters and numbers. This occurs when one company is amalgamated with or taken over by another registered company. The number listed as "See & Use", refers to the new ownership and the other identification number refers to the original ownership. This phrase serves as a link between the 2 companies until operations have been fully transferred.

Mineral Occurrences 1846-Nov 2010

MNR

In the early 70's, the Ministry of Northern Development and Mines created an inventory of approximately 19,000 mineral occurrences in Ontario, in regard to metallic and industrial minerals, as well as some information on building stones and aggregate deposits. Please note that the "Horizontal Positional Accuracy" is approximately +/- 200 m. Many reference elements for each record were derived from field sketches using pace or chain/tape measurements against claim posts or topographic features in the area. The primary limiting factor for the level of positional accuracy is the scale of the source material. The testing of horizontal accuracy of the source materials was accomplished by comparing the planimetric (X and Y) coordinates of that point with the coordinates of the same point as defined from a source of higher accuracy.

Non-Compliance Reports 1992(water only), 1994-2009

NCPL

The Ministry of the Environment provides information about non-compliant discharges of contaminants to air and water that exceed legal allowable limits, from regulated industrial and municipal facilities. A reported non-compliance failure may be in regard to a Control Order, Certificate of Approval, Sectoral Regulation or specific regulation/act.

Ontario Oil and Gas Wells 1800-Nov 2010

OOGW

In 1998, the MNR handed over to the Ontario Oil, Gas and Salt Resources Corporation, the responsibility of maintaining a database of oil and gas wells drilled in Ontario. The OGSR Library has over 20,000+ wells in their database. Information available for all wells in the ERIS database include well owner/operator, location, permit issue date, well cap date, licence no., status, depth and the primary target (rock unit) of the well being drilled. All geology/stratigraphy table information, plus all water table information is also provide for each well record.

Ontario Inventory of PCB Storage Sites 1987-Oct 2004

OPCB

The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of PCB storage sites within the province. Ontario Regulation 11/82 (Waste Management - PCB) and Regulation 347 (Generator Waste Management) under the Ontario EPA requires the registration of inactive PCB storage equipment and/or disposal sites of PCB waste with the Ontario Ministry of Environment. This database contains information on: 1) waste quantities; 2) major and minor sites storing liquid or solid waste; and 3) a waste storage inventory.

Pesticide Register 1988-Mar 2011

PES

The Ontario Ministry of Environment maintains a database of all manufacturers and vendors of registered pesticides.

Private and Retail Fuel Storage Tanks 1989-1996*

PRT

The Fuels Safety Branch of the Ontario Ministry of Consumer and Commercial Relations maintained a database of all registered private fuel storage tanks and licensed retail fuel outlets. This database includes an inventory of locations that have gasoline, oil, waste oil, natural gas and/or propane storage tanks on their property. The MCCR no longer collects this information. This information is now collected by the Technical Standards and Safety Authority (TSSA).

Ontario Regulation 347 Waste Receivers Summary 1986-2008

REC

Part V of the Ontario Environmental Protection Act ("EPA") regulates the disposal of regulated waste through an operating waste management system or a waste disposal site operated or used pursuant to the terms and conditions of a Certificate of Approval or a Provisional Certificate of Approval. Regulation 347 of the Ontario EPA defines a waste receiving site as any site or facility to which waste is transferred by a waste carrier. A receiver of regulated waste is required to register the waste receiving facility. This database represents registered receivers of regulated wastes, identified by registration number, company name and address, and includes receivers of waste such as: landfills, incinerators, transfer stations, PCB storage sites, sludge farms and water pollution control plants. This information is a summary of all years from 1986 including the most currently available data.

Record of Site Condition 1997-Sept 2001, Oct 2004-Apr 2011

RSC

The Record of Site Condition (RSC) is part of the Ministry of the Environment's Brownfields Environmental Site Registry. Protection from environmental cleanup orders for property owners is contingent upon documentation known as a record of site condition (RSC) being filed in the Environmental Site Registry. In order to file an RSC, the property must have been properly assessed and shown to meet the soil, sediment and groundwater standards appropriate for the use, such as residential, proposed to take place on the property. The Record of Site Condition Regulation (O. Reg. 153/04) details requirements related to site assessment and clean up. Information available includes Registration Number, Filing Owner, Property Address, Filing Date and Municipality.

Ontario Spills 1988-Nov 2010

SPL

This database identifies information such as location (approximate), type and quantity of contaminant, date of spill, environmental impact, cause, nature of impact, etc. Information from 1988-2002 was part of the ORIS (Occurrence Reporting Information System). The SAC (Spills Action Centre) handles all spills reported in Ontario. Regulations for spills in Ontario are part of the MOE's Environmental Protection Act, Part X.

Wastewater Discharger Registration Database 1990-2009

SRDS

Information under this heading is combination of the following 2 programs. The Municipal/Industrial Strategy for Abatement (MISA) division of the Ontario Ministry of Environment maintained a database of all direct dischargers of toxic pollutants within nine sectors including: Electric Power Generation; Mining; Petroleum Refining; Organic Chemicals; Inorganic Chemicals; Pulp & Paper; Metal Casting; Iron & Steel; and Quarries. All sampling information is now collected and stored within the Sample Result Data Store (SRDS).

Waste Disposal Sites - MOE CA Inventory 1970-Mar 2011

WDS

The Ontario Ministry of Environment, Waste Management Branch, maintains an inventory of known open (active or inactive) and closed disposal sites in the Province of Ontario. Active sites maintain a Certificate of Approval, are approved to receive and are receiving waste. Inactive sites maintain Certificate(s) of Approval but are not receiving waste. Closed sites are not receiving waste. The data contained within this database was compiled from the MOE's Certificate of Approval database. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number. For more current information for Waste Disposal Sites please see the EBR database, which will include information such as 'Approval for a waste disposal site (EPA s.27)' and 'Approval for use of a former waste disposal site (EPA s.46)'.

Waste Disposal Sites - MOE 1991 Historical Approval Inventory Up to Oct 1990*

WDSH

In June 1991, the Ontario Ministry of Environment, Waste Management Branch, published the "June 1991 Waste Disposal Site Inventory", of all known active and closed waste disposal sites as of October 30st, 1990. For each "active" site as of October 31st 1990, information is provided on site location, site/CA number, waste type, site status and site classification. For each "closed" site as of October 31st 1990, information is provided on site location, site/CA number, closure date and site classification. Locations of these sites may be cross-referenced to the Anderson database described under ERIS's Private Source Database section, by the CA number.

Water Well Information System 1955-Mar 2011

WWIS

This database describes locations and characteristics of water wells found within Ontario in accordance with Regulation 903. It includes such information as coordinates, construction date, well depth, primary and secondary use, pump rate, static water level, well status, etc. Also included are detailed stratigraphy information, approximate depth to bedrock and the approximate depth to the water table.

Federal Government Source Databases:

Diagram Identifier:

Environmental Effects Monitoring 1992-2007*

EEM

The Environmental Effects Monitoring program assesses the effects of effluent from industrial or other sources on fish, fish habitat and human usage of fisheries resources. Since 1992, pulp and paper mills have been required to conduct EEM studies under the Pulp and Paper Effluent Regulations. This database provides information on the mill name, geographical location and sub-lethal toxicity data.

Environmental Issues Inventory System 1992-2001*

EIIS

The Environmental Issues Inventory System was developed through the implementation of the Environmental Issues and Remediation Plan. This plan was established to determine the location and severity of contaminated sites on inhabited First Nation reserves, and where necessary, to remediate those that posed a risk to health and safety; and to prevent future environmental problems. The EIIS provides information on the reserve under investigation, inventory number, name of site, environmental issue, site action (Remediation, Site Assessment), and date investigation completed.

Federal Convictions 1988-Jun 2007

FCON

Environment Canada maintains a database referred to as the "Environmental Registry" that details prosecutions under the Canadian Environmental Protection Act (CEPA) and the Fisheries Act (FA). Information is provided on the company name, location, charge date, offence and penalty.

Contaminated Sites on Federal Land June 2000-May 2011

FCS

The Treasury Board of Canada Secretariat maintains an inventory of all known contaminated sites held by various Federal departments and agencies. This inventory does not include properties owned by Crown corporations, but does contain non-federal sites for which the Government of Canada has accepted some or all financial responsibility. All sites have been classified through a system developed by the Canadian Council of Ministers of the Environment. The database provides information on company name, location, site ID #, property use, classification, current status, contaminant type and plan of action for site remediation.

Fisheries & Oceans Fuel Tanks 1964-Sept 2003

FOFT

Fisheries & Oceans Canada maintains an inventory of all aboveground & underground fuel storage tanks located on Fisheries & Oceans property or controlled by DFO. Our inventory provides information on the site name, location, tank owner, tank operator, facility type, storage tank location, tank contents & capacity, and date of tank installation.

Indian & Northern Affairs Fuel Tanks 1950-Aug 2003

IAFT

The Department of Indian & Northern Affairs Canada (INAC) maintains an inventory of all aboveground & underground fuel storage tanks located on both federal and crown land. Our inventory provides information on the reserve name, location, facility type, site/facility name, tank type, material & ID number, tank contents & capacity, and date of tank installation.

National Analysis of Trends in Emergencies System (NATES) 1974-1994*

NATE

In 1974 Environment Canada established the National Analysis of Trends in Emergencies System (NATES) database, for the voluntary reporting of significant spill incidents. The data was to be used to assist in directing the work of the emergencies program. NATES ran from 1974 to 1994. Extensive information is available within this database including company names, place where the spill occurred, date of spill, cause, reason and source of spill, damage incurred, and amount, concentration, and volume of materials released.

National Defence & Canadian Forces Fuel Tanks Up to May 2001*

NDFT

The Department of National Defence and the Canadian Forces maintains an inventory of all aboveground & underground fuel storage tanks located on DND lands. Our inventory provides information on the base name, location, tank type & capacity, tank contents, tank class, date of tank installation, date tank last used, and status of tank as of May 2001. This database will no longer be updated due to the new National Security protocols which have prohibited any release of this database.

National Defence & Canadian Forces Spills Mar 1999-Aug 2010

NDSP

The Department of National Defence and the Canadian Forces maintains an inventory of spills to land and water. All spill sites have been classified under the "Transportation of Dangerous Goods Act - 1992". Our inventory provides information on the facility name, location, spill ID #, spill date, type of spill, as well as the quantity of substance spilled & recovered.

National Defence & Canadian Forces Waste Disposal Sites 2001-April 2007

NDWD

The Department of National Defence and the Canadian Forces maintains an inventory of waste disposal sites located on DND lands. Where available, our inventory provides information on the base name, location, type of waste received, area of site, depth of site, year site opened/closed and status.

National Environmental Emergencies System (NEES) 1974-2003

NEES

In 2000, the Emergencies program implemented NEES, a reporting system for spills of hazardous substances. For the most part, this system only captured data from the Atlantic Provinces, some from Quebec and Ontario and a portion from British Columbia. Data for Alberta, Saskatchewan, Manitoba and the Territories was not captured. However, NEES is also a repository for all previous Environment Canada spill datasets. NEES is composed of the historic datasets – or Trends – which dates from approximately 1974 to present. **NEES Trends** is a compilation of historic databases, which were merged and includes data from NATES (National Analysis of Trends in Emergencies System), ARTS (Atlantic Regional Trends System), and NEES. In 2001, the Emergencies Program determined that variations in reporting regimes and requirements between federal and provincial agencies made national spill reporting and trend analysis difficult to achieve. As a consequence, the department has focused efforts on capturing data on spills of substances which fall under its legislative authority only (CEPA and FA). As such, the NEES database will be decommissioned in December 2004.

National PCB Inventory 1988-2008

NPCB

Environment Canada's National PCB inventory includes information on in-use PCB containing equipment in Canada including federal, provincial and private facilities. All federal out-of-service PCB containing equipment and all PCB waste owned by the federal government or by federally regulated industries such as airlines, railway companies, broadcasting companies, telephone and telecommunications companies, pipeline companies, etc. are also listed. Although it is not Environment Canada's mandate to collect data on non-federal PCB waste, the National PCB inventory includes some information on provincial and private PCB waste and storage sites.

National Pollutant Release Inventory 1993-2009

NPRI

Environment Canada has defined the National Pollutant Release Inventory ("NPRI") as a federal government initiative designed to collect comprehensive national data regarding releases to air, water, or land, and waste transfers for recycling for more than 300 listed substances.

Parks Canada Fuel Storage Tanks 1920-Jan 2005

PCFT

Canadian Heritage maintains an inventory of all known fuel storage tanks operated by Parks Canada, in both National Parks and at National Historic Sites. The database details information on site name, location, tank install/removal date, capacity, fuel type, facility type, tank design and owner/operator.

Transport Canada Fuel Storage Tanks 1970-March 2007

TCFT

With the provinces of BC, MB, NB, NF, ON, PE, and QC; Transport Canada currently owns and operates 90 fuel storage tanks. This inventory will also include The Pickering Lands, which refers to the 7,530 hectares (18,600 acres) of land in Pickering, Markham and Uxbridge - owned by the Government of Canada since 1972. Properties on this land has been leased by the government since 1975, falls under the Site Management Policy of Transport Canada, but administered by Public Works and Government Services Canada. Our inventory provides information on the site name, location, tank age, capacity and fuel type.

Private Source Databases:

Anderson's Waste Disposal Sites 1860s-Present

ANDR

The information provided in this database was collected by examining various historical documents which aimed to characterize the likely position of former waste disposal sites from 1860 to present. The research initiative behind the creation of this database was to identify those sites that are missing from the *Ontario MOE Waste Disposal Site Inventory*, as well as to provide revisions and corrections to the positions and descriptions of sites currently listed in the MOE inventory. In addition to historic waste disposal facilities, the database also identifies certain auto wreckers and scrap yards that have been extrapolated from documentary sources. *Please note that the data is not warranted to be complete, exhaustive or authoritative. The information was collected for research purposes only.*

Automobile Wrecking & Supplies 2001-Jun 2010

AUWR

This database provides an inventory of all known locations that are involved in the scrap metal, automobile wrecking/recycling, and automobile parts & supplies industry. Information is provided on the company name, location and business type.

Chemical Register 1992, 1999-Jun 2010

CHEM

This database includes information from both a one time study conducted in 1992 and private source and is a listing of facilities that manufacture or distribute chemicals. The production of these chemical substances may involve one or more chemical reactions and/or chemical separation processes (i.e. fractionation, solvent extraction, crystallization, etc.).

ERIS Historical Searches 1999-Apr 2011

EHS

EcoLog ERIS has compiled a database of all environmental risk reports completed since March 1999. Available fields for this database include: site location, date of report, type of report, and search radius. As per all other databases, the ERIS database can be referenced on both the map and "Statistical Profile" page.

Canadian Mine Locations 1998-2009

MINE

This information is collected from the Canadian & American Mines Handbook. The Mines database is a national database that provides over 290 listings on mines (listed as public companies) dealing primarily with precious metals and hard rocks. Listed are mines that are currently in operation, closed, suspended, or are still being developed (advanced projects). Their locations are provided as geographic coordinates (x, y and/or longitude, latitude). As of 2002, data pertaining to Canadian smelters and refineries has been appended to this database.

Oil and Gas Wells Oct 2001-Mar 2011

OGW

The Nickle's Energy Group (publisher of the Daily Oil Bulletin) collects information on drilling activity including operator and well statistics. The well information database includes name, location, class, status and depth. The main Nickles' database is updated on a daily basis, however, this database is updated on a monthly basis. More information is available at www.nickles.com.

Canadian Pulp and Paper 1999, 2002, 2004, 2005, 2009

PAP

This information is part of the Pulp and Paper Canada Directory. The Directory provides a comprehensive listing of the locations of pulp and paper mills and the products that they produce.

Retail Fuel Storage Tanks 2000-Jun 2010

RST

This database includes an inventory of retail fuel outlet locations (including marinas) that have on their property gasoline, oil, waste oil, natural gas and / or propane storage tanks. Information is provided on company name, location and type of business.

Scott's Manufacturing Directory 1992-Mar 2011

SCT

Scott's Directories is a data bank containing information on over 70,000 manufacturers in Ontario. Even though Scott's listings are voluntary, it is the most comprehensive database of Ontario manufacturers available. Information concerning a company's address, plant size, and main products are included in this database. This database begins with 1992 information and is updated annually.

Anderson's Storage Tanks 1915-1953*

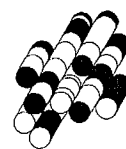
TANK

The information provided in this database was collected by examining various historical documents, which identified the location of former storage tanks, containing substances such as fuel, water, gas, oil, and other various types of miscellaneous products. Information is available in regard to business operating at tank site, tank location, permit year, permit & installation type, no. of tanks installed & configuration and tank capacity. *Data contained within this database pertains only to the city of Toronto and is not warranted to be complete, exhaustive or authoritative. The information was collected for research purposes only.*

Regulatory Responses and Information

APPENDIX B

Terraprobe Inc.



Grand River Conservation Authority

Map created: June 17, 2011



Waldemar-Amaranth

LEGEND

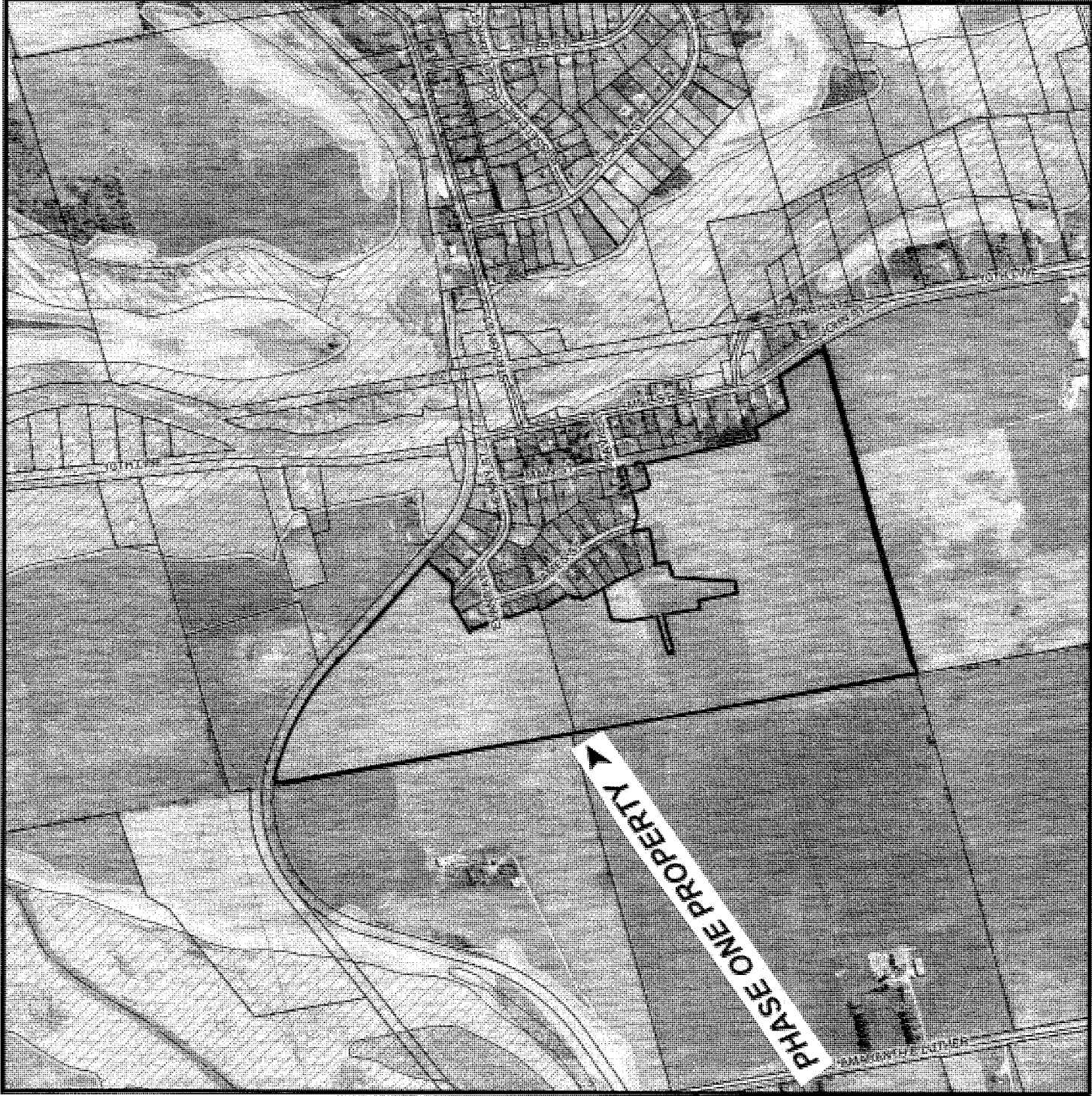
- WATERSHED MASK
- WATERSHED BOUNDARY (GRCA)
- ROADS-ADDRESS (MNR)
- DRAINAGE-NETWORK (GRCA)
- PARCELS-ASSESSMENT (MPAC)
- LOTS (NRVIS)
- FLOODPLAIN (GRCA)
- ENGINEERED
- APPROXIMATE
- ESTIMATED
- WETLAND (GRCA)
- SLOPE VALLEY (GRCA)
- STEEP
- OVERSTEEP
- SLOPE EROSION (GRCA)
- STEEP
- OVERSTEEP
- TOE
- REGULATION LIMIT (GRCA)

GRCA Disclaimer

This map is for illustrative purposes only. Information contained hereon is not a substitute for professional review or a site survey and is subject to change without notice. The Grand River Conservation Authority takes no responsibility for, nor guarantees, the accuracy of the information contained on this map. Any interpretations or conclusions drawn from this map are the sole responsibility of the user.

The source for each data layer is shown in parentheses in the map legend. For a complete listing of sources and citations go to:

<http://grims.grandriver.ca/docs/SourcesCitations2.htm>



THIS MAP IS NOT TO BE USED FOR NAVIGATION

Copyright © Grand River Conservation Authority, 2011

Bruno Mirassol

From: spng@tssa.org on behalf of publicinformationsservices@tssa.org
Sent: Friday, June 17, 2011 5:17 PM
To: Bruno Mirassol
Subject: Re: Information Request- Registered Fuel Storage Tank

Hi Bruno,

Thank you for your inquiry.

We have no record in our database of any fuel storage tanks at the subject address (addresses).

For a further search in our archives please submit your request in writing to Public Information Services via e-mail (publicinformationsservices@tssa.org) or through mail along with a fee of \$56.50 (including HST) per location. The fee is payable with credit card (Visa or MasterCard) or with a Cheque made payable to TSSA.

Although TSSA believes the information provided pursuant to your request is accurate, please note that TSSA does not warrant this information in any way whatsoever.

Thank you and have a great day!

Sarah Png
Public Information Services

"Putting Public Safety First"

Technical Standards and Safety Authority
14th Floor, Centre Tower
3300 Bloor Street West
Toronto, ON M8X 2X4

Toll-Free: 1-877-682-8772
Email: publicinformationsservices@tssa.org
Web Site: www.tssa.org

"Bruno Mirassol" <bmirassol@terraprobe.ca>

To <publicinformationsservices@tssa.org>

cc

06/17/2011 03:27 PM

Subject: Information Request- Registered Fuel Storage Tank

Dear Sir/Mame,

To aid in our Environmental Site Assessment, could you perform a search for registered fuel storage tanks on the following property:

1 Evans Avenue, Amaranth, Ontario (May not be correct)

Legal Description:

PT LT 2 CON 10 & PT JAMES ST, PT EVANS ST & PT CHURCH ST PL 4A AS CLOSED BY
MF144258 PT 1, 7R3101 EXCEPT PL 320 & PTS 1 TO 3, 7R3576 & PT 12, 7R3229; S/T MF171536;
AMARANTH

Please contact me if further information is needed and if there will be a service fee for this inquiry.

Thank you,

Bruno Mirassol, B.Eng
Engineer in Training, (E.I.T.)

Project # 7-11-6045

This electronic message and any attached documents are intended only for the named addressee(s). This communication from the Technical Standards and Safety Authority may contain information copied, forwarded or distributed without authorization. If you have received this message in error

Bruno Mirassol

REPORTED SPILLS
SEWER-USE COMPLIANCE ISSUES

7.11.6045

From: Christine Gervais [cgervais@amaranth-eastgary.ca]
Sent: Tuesday, June 21, 2011 2:08 PM
To: 'Bruno Mirassol'
Subject: RE: Information request

Hi Bruno,

The Township of Amaranth does not have a sewer by-law. Individual private septic systems service the residential lots in this community.

We are not aware of any compliance or spills issues on these lands.

Regards,

Christine Gervais, B. Sc., MCIP, RPP
 Planner
 TOWNSHIP OF AMARANTH &
 TOWNSHIP OF EAST GARAFRAXA
 Tel.: 519-941-1007
 Fax: 519-941-1802
cgervais@amaranth-eastgary.ca

From: Bruno Mirassol [mailto:bmirassol@terraprobe.ca]
Sent: Friday, June 17, 2011 4:25 PM
To: cgervais@amaranth-eastgary.ca
Subject: Information request

Good afternoon Ms. Christine Gervais

Terraprobe Inc. has been retained to carry out a Phase One Environmental Site Assessment at 1 Evans Avenue in Amaranth. The address may be incorrect but that is what our client has provided. A legal description was also provided which I have also included below.

In conjunction with the Phase One ESA, we wish to inquire on the status of the property with respect to sewer use by-law infractions, compliance issues, or reported spills on file. Could you please advise us on the status of the property. I have attached 2 maps of the subject property.

Legal Description: PT LT 2 CON 10 & PT JAMES ST, PT EVANS ST & PT CHURCH ST PL 4A AS
 CLOSED BY MF144258 PT 1, 7R3101 EXCEPT PL 320 & PTS 1 TO 3, 7R3576 & PT 12,
 7R3229; S/T MF171536; AMARANTH

If any further information is required, or if there is a service fee for completing this request please contact me.

Thank you,

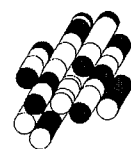
Bruno Mirassol, B.Eng
 Engineer in Training (E.I.T.)

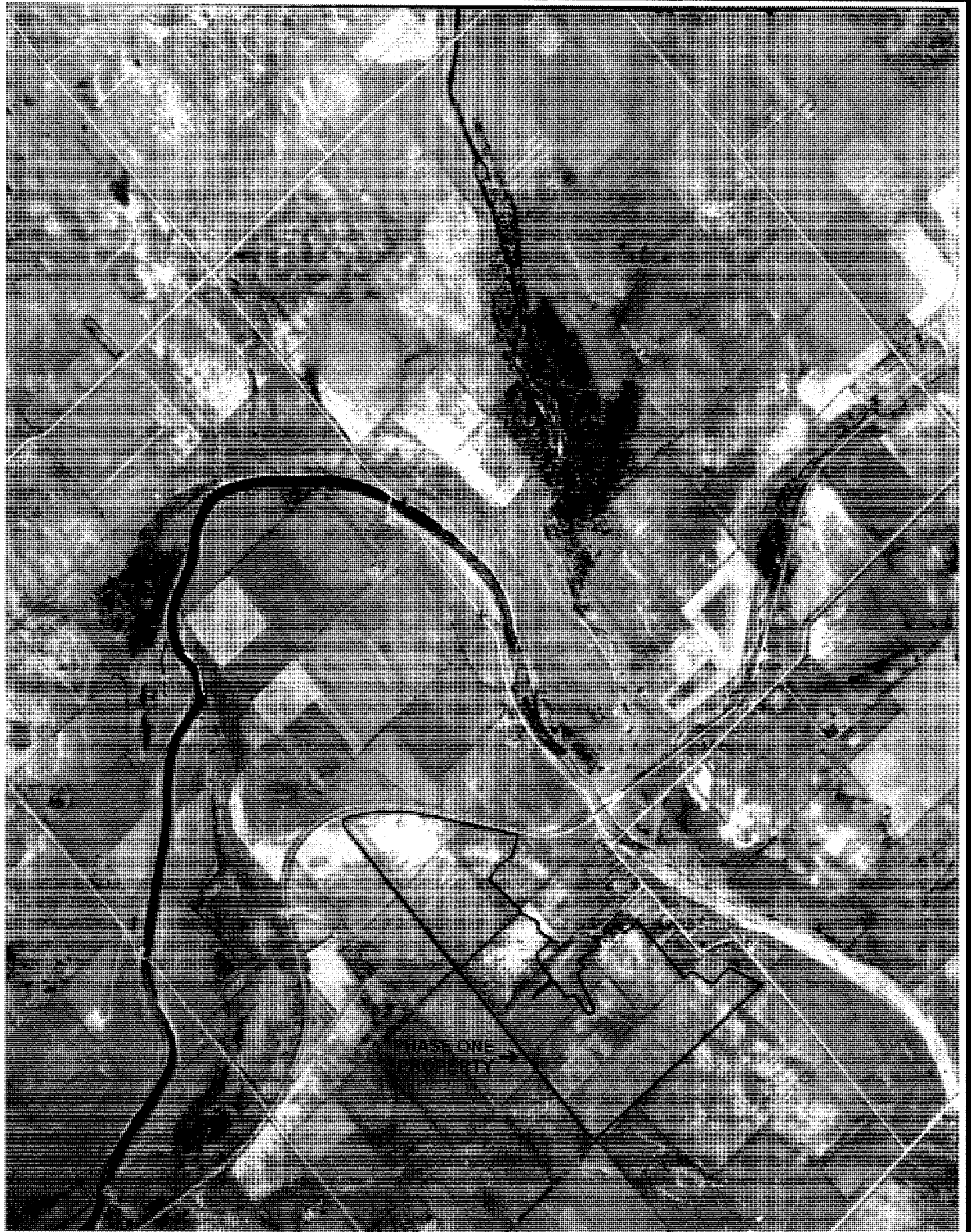
6/21/2011

Aerial Photographs & Historical Maps

APPENDIX C

Terraprobe Inc.





1930 Aerial Photograph
Waldemar-Amaranth Project
Amaranth, Ontario



Terraprobe

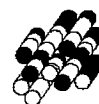
903 Barton Street, Unit 22
Stoney Creek, Ontario, L8E 5P6
(905) 643-7560 / Fax (905) 643-7559

Notes:
Location and scale are approximate

Drawn By:	B.M.	Scale:	Approx.	Project No.:	7-11-6045
Checked By:	P.F.	Date:	June, 2011	Figure No.:	C-1



1969 Aerial Photograph
Waldemar-Amaranth Project
Amaranth, Ontario



Terraprobe

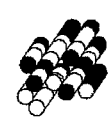
903 Barton Street, Unit 22
Stoney Creek, Ontario, L8E 5P5
(905) 643-7560 / Fax (905) 643-7559

Notes:
Location and scale are approximate

Drawn By:	B.M.	Scale:	Approx.	Project No.:	7-11-6045
Checked By:	P.F.	Date:	June, 2011	Figure No.:	C-2



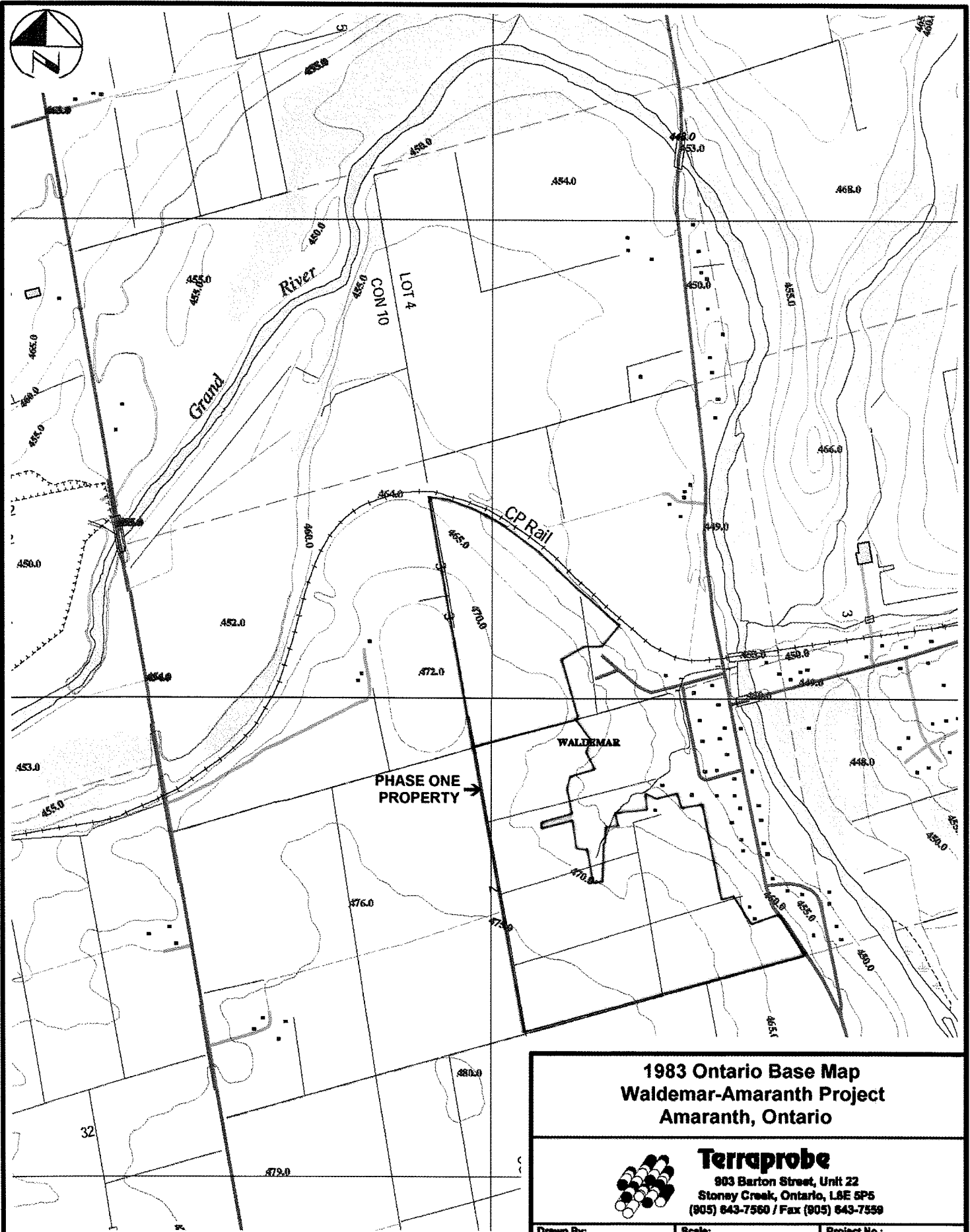
**1980 Aerial Photograph
Waldemar-Amaranth Project
Amaranth, Ontario**



Terraprobe
903 Barton Street, Unit 22
Stoney Creek, Ontario, L8E 5P5
(905) 643-7560 / Fax (905) 643-7559

Notes:
Location and scale are approximate

Drawn By:	B.M.	Scale:	Approx.	Project No.:	7-11-6045
Checked By:	P.F.	Date:	June, 2011	Figure No.:	C-3



Notes:
Location and scale are approximate

**1983 Ontario Base Map
Waldemar-Amaranth Project
Amaranth, Ontario**



TerraProbe
903 Barton Street, Unit 22
Stony Creek, Ontario, L8E 5P5
(905) 843-7560 / Fax (905) 843-7559

Drawn By:	B.M.	Scale:	1:10 000	Project No.:	7-11-6045
Checked By:	P.F.	Date:	June, 2011	Figure No.:	C-4



**1990 Aerial Photograph
Waldemar-Amaranth Project
Amaranth, Ontario**



Terraprobe
803 Barton Street, Unit 22
Stoney Creek, Ontario, L8E 5P6
(905) 643-7568 / Fax (905) 643-7569

Notes:
Location and scale are approximate

Drawn By:	B.M.	Scale:	Approx.	Project No.:	7-11-6045
Checked By:	P.F.	Date:	June, 2011	Figure No.:	C-5



**2011 Aerial Photograph
Waldemar-Amaranth Project
Amaranth, Ontario**



Terraprobe

903 Barton Street, Unit 22
Stoney Creek, Ontario, L8E 5P5
(905) 643-7560 / Fax (905) 643-7559

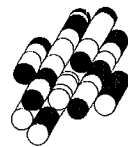
Drawn By:	B.M.	Scale:	Approx.	Project No.:	7-11-6045
Checked By:	P.F.	Date:	June, 2011	Figure No.:	C-6

Notes:
Location and scale are approximate

Photographs

APPENDIX D

Terraprobe Inc.



**Looking southeast
from middle of west
side of north parcel**



**Looking south from the
northwest corner of
north parcel**

**Looking southeast
from middle of west
side of south parcel**



**Looking west from the
east side of south
parcel**



**Looking east from the
southeast corner of
south parcel**

**Looking north from the
southeast corner of
south parcel**

