

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT

**10 COPE DRIVE
OTTAWA, ONTARIO**

Submitted to:

Taggart (Eagleson) Corporation
708-225 Metcalfe Street
Ottawa, Ontario K2P 1P9

Prepared by:



BluMetric Environmental Inc.
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Project Number: 180121

December 2017

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1. EXECUTIVE SUMMARY

In December 2017, BluMetric Environmental Inc. (BluMetric™) was retained by Taggart (Eagleson) Corporation (Taggart) to prepare a Phase One Environmental Site Assessment (ESA) report for 10 Cope Drive, Ottawa, Ontario (subsequently referred to as the “Phase One Property”).

This Phase One ESA has been undertaken in general accordance with the tasks described in Ontario Regulation (O. Reg. 153/04); however, this report is not intended to be used as support for a Record of Site Condition (RSC), and has not been prepared in anticipation of being submitted to the Ontario Ministry of the Environment and Climate Change (MOECC) for review.

The Phase One Property is bounded by Cope Drive to the north, Eagleson Road to the east, residences to the south and an office building to the west. The Phase One Property is currently a tree covered vacant lot with no structures. The Phase One Property consists of one irregularly shaped parcel of land with a frontage of approximately 100 m along Cope Drive and approximately 210 m along Eagleson Road, with an area of approximately 5.17 acres.

Potentially Contaminating Activities

Several potentially contaminating activities were identified on the Phase One Property and in the Phase One Study Area as follows:

Potentially Contaminating Activities (O. Reg. 153/04 Schedule 2, Table D)	Description of Activities
55. Transformer Manufacturing, Processing and Use	<ul style="list-style-type: none">- A transformer is located on the northwest corner of the Phase One Property.- A transformer is located in the parking lot of the 20 Cope Drive property located to the west of the Phase One Property.

The transformer (TP9248) located on the northwest corner of the Phase One Property is located within a hydro easement and it is the responsibility of the Hydro utility to remediate any loss in mineral insulating oil. Due to the transformer being installed in the 1990s it is unlikely to contain transformer oil with PCBs. Further, mineral insulating oil has low volatility and low mobility in the subsurface. The presence of this transformer on a hydro easement at the Phase One Property is not considered an area of potential environmental concern (APEC). The transformer located on the 20 Cope Drive property is also unlikely to pose an environmental concern to the Phase One Property.

A Phase Two ESA has not been recommended for the Phase One Property.



2. INTRODUCTION

In December 2017, BluMetric Environmental Inc. (BluMetric™) was retained by Taggart (Eagleson) Corporation (Taggart) to prepare a Phase One Environmental Site Assessment (ESA) report for 10 Cope Drive, Ottawa, Ontario (subsequently referred to as the “Phase One Property”).

2.1 PHASE ONE PROPERTY INFORMATION

Municipal Address, Property Identifier Number (PIN), and Property Descriptions:

The Phase One Property is comprised of the following:

Legal Description	PIN	Legal Municipal Address
GOULBOURN CON 10 PT LOT 31;4R27902 PARTS 1 2 5 TO 8 AND;13	044781246	10 Cope Road, Ottawa, Ontario

Name, Address, and Other Contact Information for the Property Owner:

The Phase One Property is currently owned and managed by Taggart (Eagleson) Corporation.

Taggart (Eagleson) Corporation
708-225 Metcalfe Street.
Ottawa, Ontario K2P 1P9

Name, Status, and Other Contact Information for Any Other Person who Engaged the Qualified Person to Conduct the Phase One ESA:

In December 2017, BluMetric was retained by Taggart (Eagleson) Corporation to complete a Phase One ESA study of the Phase One Property. The principal contact for Taggart (Eagleson) Corporation is as follows:

Alex Turner
Manager, Planning & Development
Taggart (Eagleson) Corporation
708-225 Metcalfe Street.
Ottawa, Ontario K2P 1P9
Phone: (613) 234-7000 ext. 579



2.2 TERMS OF REFERENCE

The Phase One Property is a vacant treed lot that was severed from the neighbouring industrially zoned property to the west (20 Cope Drive) in 2014. The existing City of Ottawa land use zoning for the property is Arterial Mainstreet, which permits mixed uses including residential, commercial and institutional uses. Zoning of the Phase One Property is not anticipated to change. This Phase One ESA was performed to assess environmental liabilities, if any, on the Phase One Property.

This Phase One ESA has been undertaken in general accordance with the tasks described in Ontario Regulation (O. Reg.) 153/04; however, this report is not intended to be used as support for a Record of Site Condition (RSC), and has not been prepared in anticipation of being submitted to the Ontario Ministry of the Environment and Climate Change (MOECC) for review.

In general terms, the purpose of a Phase One ESA is to determine if a property is subject to actual or potential contamination. The tasks of a Phase One ESA typically include:

- reviewing environmental source information about the Phase One Property;
- inspecting the Phase One Property for evidence of current or past potentially contaminating activities that could contribute to areas of potential environmental concern;
- noting potentially contaminating activities in the Phase One Study Area that could contribute to areas of potential environmental concern at the Phase One Property;
- interviewing site personnel or other knowledgeable parties about past and present operations and activities;
- reviewing environmental documentation and site operating records that the property owner, operator, or client can provide;
- making inquiries to provincial and municipal agencies about environmental records on file;
- identifying areas of potential environmental concern on the Phase One Property; and
- using the assembled information to prepare a report.

Since Phase One ESAs do not include the testing of samples or the measuring of environmental parameters, the conclusions presented in a Phase One ESA report often are limited to identifying potentially contaminating activities (PCA) that may contribute to areas of potential environmental concerns (APEC) at the Phase One Property.

APEC can be investigated subsequently through a Phase Two ESA. In general terms, the purpose of a Phase Two ESA is to characterize environmental conditions at a property. The sampling



activities and chemical analysis undertaken in a Phase Two ESA generate information that can be used to identify those conditions that might be categorized as “contaminated”, or that need to be remediated, improved or otherwise managed.

2.3 GENERAL DESCRIPTION OF THE PHASE ONE PROPERTY

The Phase One Property is bounded by Cope Drive to the north, Eagleson Road to the east, residences to the south and an industrial facility to the west. The Phase One Property is currently a tree covered vacant lot with no structures. The Phase One Property consists of one irregularly shaped parcel of land with a frontage of approximately 100 m along Cope Drive and approximately 210 m along Eagleson Road, with an area of approximately 5.17 acres. An outline of the Phase One Property is shown on Figure 1.

The property adjacent to the north of the Phase One Property (across Cope Drive) is the Great Canadian Superstore. To the west side of the Phase One Property is the First Air property consisting of an office building. The adjacent properties to the east of the Phase One Property (across Eagleson Road) are residences. To the south of the Phase One Property is a sanitary sewer, paved walking path and residential buildings.

The general location of the Phase One Property is shown in Figure 2.



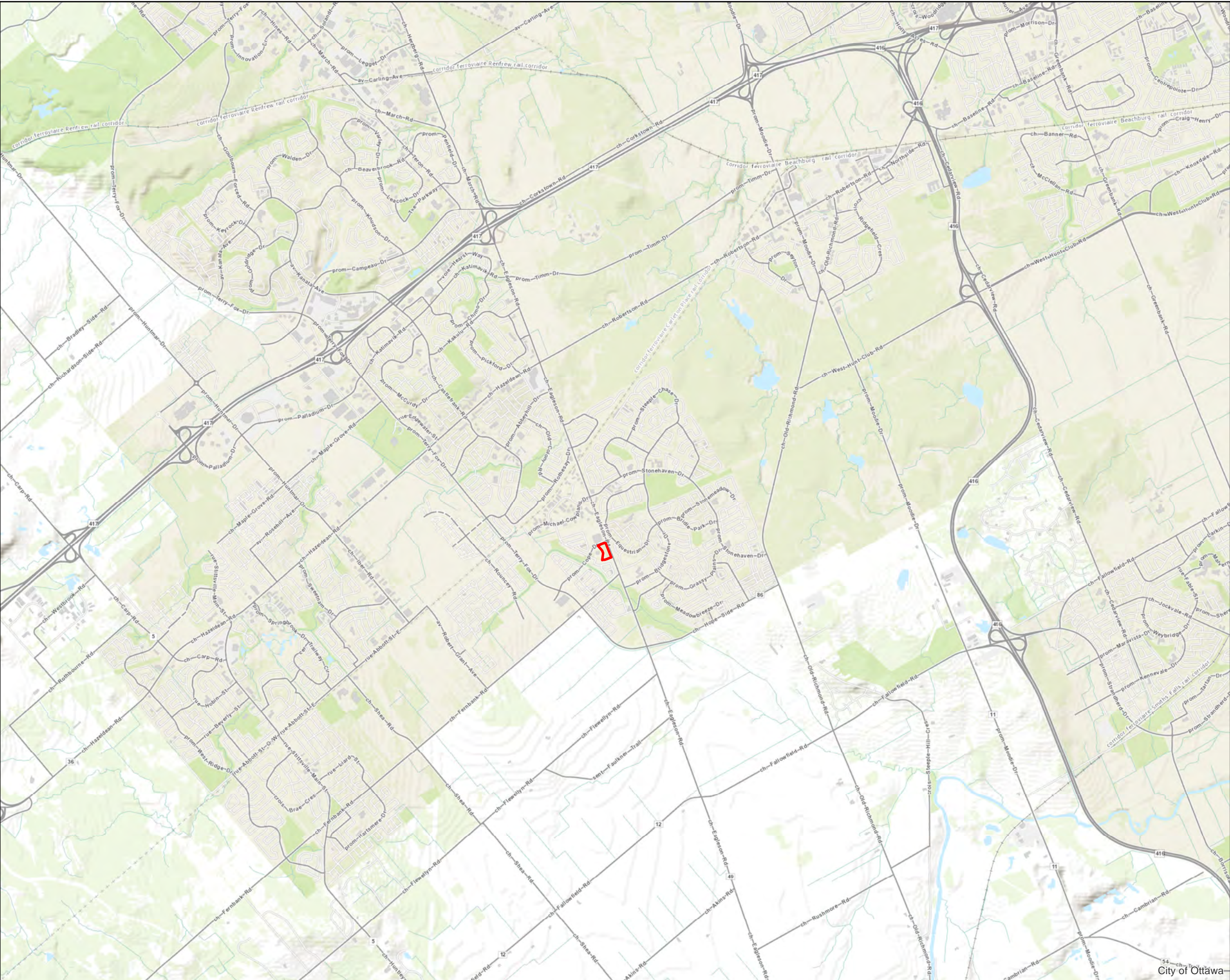


LEGEND

Watercourse

Phase One Property Boundary

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK
<div>REFERENCES</div> <div>PROPRIETARY INFORMATION MAY NOT BE REPRODUCED OR DIVULGED WITHOUT PRIOR WRITTEN CONSENT OF BLUMETRIC ENVIRONMENTAL INC. DO NOT SCALE DRAWING. THIS DRAWING MAY HAVE BEEN REDUCED. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS.</div> <div>Aerial Image from City of Ottawa http://maps.ottawa.ca/ArcGIS/services/Layer: Basemap_Imagery_2017</div> <div><div><div>0204080</div>Meters</div><div><div>N</div><div>E</div><div>S</div><div>W</div></div></div>				
<div>CLIENT</div> <div>TAGGART (EAGLESON) CORPORATION</div>				
<div>PROJECT</div> <div>PHASE ONE ENVIRONMENTAL SITE ASSESSMENT – 10 COPE DRIVE, OTTAWA, ONTARIO</div>				
<div>TITLE</div> <div>PHASE ONE PROPERTY</div>				
<div><div><div><div></div><div>BluMetric™</div><div>Environmental</div></div><div><div>3108 Carp Road PO Box 430 Ottawa, Ontario K0A 1L0 TEL: (613) 839-3053 FAX: (613) 839-5376 Email: info@blumetric.ca Web: http://www.blumetric.ca</div></div></div></div>				
PROJECT # 180121-00		DATE December 14, 2017		
DRAWN IB	CHECKED JP	FIG NO. 01	REV 0	



LEGEND

Phase One Property Boundary

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK
<div>REFERENCES</div> <div>PROPRIETARY INFORMATION MAY NOT BE REPRODUCED OR DIVULGED WITHOUT PRIOR WRITTEN CONSENT OF BLUMETRIC ENVIRONMENTAL INC. DO NOT SCALE DRAWING. THIS DRAWING MAY HAVE BEEN REDUCED. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS.</div> <div>Base Image from City of Ottawa http://maps.ottawa.ca/ArcGIS/services Layer: Basemap, Ottawa</div> <div><div>00.512 Kilometers</div><div><div></div><div>N W E S</div></div></div>				
CLIENT				
TAGGART (EAGLESON) CORPORATION				
PROJECT				
PHASE ONE ENVIRONMENTAL SITE ASSESSMENT – 10 COPE DRIVE, OTTAWA, ONTARIO				
TITLE				
PHASE ONE PROPERTY LOCATION				
<div><div><div><div></div><div>BluMetric™</div><div>Environmental</div></div><div>3108 Carp Road PO Box 430 Ottawa, Ontario K0A 1L0 TEL: (613) 839-3053 FAX: (613) 839-5376 Email: info@blumetric.ca Web: http://www.blumetric.ca</div></div></div>				
PROJECT #		DATE		
180121-00		December 14, 2017		
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IB	JP	02	0	

City of Ottawa

3. SCOPE OF INVESTIGATION

This Phase One ESA has been undertaken in accordance with the tasks described in O. Reg. 153/04, and this report follows the standard table of contents and uses the terminology of O. Reg. 153/04. However, this report is not intended to be used as support for a RSC, and has not been prepared in anticipation of being submitted to the MOECC for review.

The Phase One Property is a vacant treed lot that was severed from the neighbouring industrial property to the west (20 Cope Drive) in 2014. The existing land use of the Phase One Property is not anticipated to change; the most sensitive potential property land use under O. Reg. 153/04 is ‘residential’.

The Phase One Property is not considered to be an “enhanced investigation property”, as defined in O. Reg. 153/04.

The Phase One Study Area includes the Phase One Property and all other properties located wholly or in part within 250 m of a boundary of the Phase One Property. The qualified person (QP) for this ESA determined that no sites more than 250 m needed to be included in the study area. The Phase One Study Area is illustrated in Figure 3.

The following tasks were undertaken in December 2017 to prepare this report:

- A review of records. Requests for information were filed with the City of Ottawa, the MOECC, the Technical Standards and Safety Authority (TSSA), and ECOLOG ERIS. In addition, previous BluMetric environmental reports regarding the Phase One Property were reviewed. The assembled information is presented in Section 4.
- An interview with representatives of the previous owner of the Phase One Property. The results are presented in Section 5.
- Reconnaissance of the Phase One Property and the Study Area. This information is presented in Section 6.
- The evaluation of the assembled information.
- Preparation of this report.
- The submission of this report to Taggart (Eagleson) Corporation.





LEGEND

Watercourse

Phase One Study Area

Phase One Property Boundary

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK
<div>REFERENCES</div> <div>PROPRIETARY INFORMATION MAY NOT BE REPRODUCED OR DIVULGED WITHOUT PRIOR WRITTEN CONSENT OF BLUMETRIC ENVIRONMENTAL INC. DO NOT SCALE DRAWING. THIS DRAWING MAY HAVE BEEN REDUCED. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS.</div> <div>Aerial Image from City of Ottawa http://maps.ottawa.ca/ArcGIS/services/Layer: Basemap_Imagery_2017</div> <div><div>0204080Meters</div><div><div></div></div></div>				
CLIENT				
TAGGART (EAGLESON) CORPORATION				
PROJECT				
PHASE ONE ENVIRONMENTAL SITE ASSESSMENT – 10 COPE DRIVE, OTTAWA, ONTARIO				
TITLE				
PHASE ONE STUDY AREA				
<div><div><div></div><div>BluMetric™ Environmental</div></div><div>3108 Carp Road PO Box 430 Ottawa, Ontario K0A 1L0 TEL: (613) 839-3053 FAX: (613) 839-5376 Email: info@blumetric.ca Web: http://www.blumetric.ca</div></div>				
PROJECT #		DATE		
180121-00		December 14, 2017		
DRAWN	CHECKED	FIG NO.	REV	
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4. RECORDS REVIEW

4.1 GENERAL

4.1.1 Phase One Study Area Determination

The QP determined that the conventional distance of 250 m from Phase One Property was adequate for defining the Phase One Study Area for all records reviewed with the exception that a distance of 2 km was appropriate for reviewing records that pertain to active or former waste disposal sites, coal gasification plants, and coal tar sites, given that such sources can cause impacts that extend for distances of more than 250 m.

The search radius for historical records requested from ECOLOG ERIS (discussed in sections 4.2.1, 4.2.2 and 4.2.8) was set to 300 m from the boundary of the Phase One Property. Only properties located within 250 m from the Phase One Property were reported. In these database searches, each property surrounding the Phase One Property was identified as a point representing the municipal address of a given property. In the historical records searches, the inclusion or exclusion of properties located partially within the Phase One Study Area depended on whether this point was located within the study area buffer created by ECOLOG ERIS. The geographic location of various Phase One Study Area properties were assessed in consideration of a relatively flat-lying area and an inferred regional groundwater flow direction towards the Ottawa River located north of the Phase One Property.

The Phase One Property and the Phase One Study Area are outlined in Figures 1 and 3, respectively.

4.1.2 First Developed Use Determination

The Phase One Property was not developed between the years 1934 to present, based on the following historical records:

- Previous Environmental Reports (see Section 4.1.5)
- Physical Setting Sources (see Section 4.3)

The aerial photo from 1934 illustrates that the Phase One Property may have been used for agricultural purposes. The 2005 WESA Phase One ESA Report indicates that agricultural practices on the Phase One Property had not been active for some years. The potential for subsurface contamination from past use of herbicides and pesticides was considered negligent.



4.1.3 Fire Insurance Plans

A fire insurance plan (FIP) search was included in the 2005 WESA Phase One ESA report completed for the Phase One Property. As stated in the 2005 WESA Report, there were no plans located. As no reports have been published for several decades and no new information would be available, a request for fire insurance plans was not conducted.

4.1.4 Chain of Title

A Chain of Title search for the Phase One Property was conducted for the 2005 WESA Phase One ESA. Additional chain of title information was provided by Alex Turner of Taggart and Shelly Shorrock of First Air. Based on the chain of title search conducted in September 2005 and additional information, the Phase One Property has the following history of ownership:

1924 Thomas A. Hand sold to Robert Bradley
1974 Estate of Robert Bradley transferred to E. Deans Berry, in trust
1994 Mortgage held by Bank of Credit and Commerce of Canada was foreclosed to Arthur Andersen Inc.
1997 Arthur Andersen Inc. sold the property to #1230374 Ontario Ltd.
1999 1230374 Ontario Inc. sold the land to 3565262 Canada Inc. and 3565866 Canada Inc. These companies, under the umbrella company Softpak Technologies Ltd. (Sofpak Inc.) became known as Pika Technologies Inc. and KTI Kanatek Technologies Inc. in 2005.
2005 Softpak Technologies Ltd. to Bradley Air Services Limited
2014 Bradley Air Services Limited sold to Taggart (Eagleson) Corporation

Summary of Findings

Phase One Property

No potentially contaminating activities have been identified for the Phase One Property in the chain of title.

Phase One Study Area

No chain of title information was provided for the Phase One Study Area.



4.1.5 Environmental Reports

Phase I ESA – WESA 2005

- *WESA Ltd., 2005. Phase I Environmental Site Assessment #20 Cope Drive, Kanata, Ontario. Prepared for First Air (A Division of Bradley Air Services Ltd.). Dated December 2005, WESA Project No. CB4598.*

WESA conducted a Phase I ESA for 20 Cope Drive in 2005 which, at that time, included the Phase One Property. The Phase I ESA reported that the building at 20 Cope Drive was constructed in 1999 and industrial activity had been limited to one soldering station located in a secured area with air diffusion vacuum system. Two pad mounted transformers were noted on the property and given the age (installed late 1990s) and location of the transformers, it was considered unlikely that they contain oil with a PCB concentration greater than 50 ppm. The results of the WESA 2005 Phase I ESA identified a very low to low level of concern for the Phase One Property regarding potential contamination from on-site and surrounding land use activities. As stated in the WESA report, no form of supplementary investigation was warranted for the Phase One Property.

Phase I ESA Update – WESA, a division of BluMetric Environmental Inc. 2013

- *WESA, a division of BluMetric Environmental Inc., 2013. Update - Phase I Environmental Site Assessment 20 Cope Drive, Ottawa (Kanata), Ontario K2M 2V8. Dated March 6, 2013, WESA Project No. CB411324.*

WESA, a division of BluMetric, conducted an update to the 2005 WESA Phase One ESA for 20 Cope Drive. The update was provided in a report letter and was specific to the area of land that is now 10 Cope Drive (the Phase One Property). The building at 20 Cope Drive had been occupied by First Air since the property transfer in 2005 and was used as office space. As stated in the WESA report, the findings and results of the update did not identify any new evidence of potential environmental concern.

Summary of Findings

Phase One Property

No potentially contaminating activities were identified on the Phase One Property in previous environmental reports.



Phase One Study Area

No previous environmental reports for the Phase One Study Area were identified.

4.2 ENVIRONMENTAL SOURCE INFORMATION

4.2.1 Federal Government Database Records

A search of the following federal government databases was undertaken by Environmental Risk Information Services Inc. (ERIS) in December 2017:

- Environmental Effects Monitoring (**EEM**)
- Environmental Issues Inventory System (**EIIS**)
- Federal Convictions (**FCON**)
- Contaminated Sites on Federal Land (**FCS**)
- Fisheries and Oceans Fuel Storage Tanks (**FOFT**)
- Greenhouse Gas Emissions from Large Facilities (**GHG**)
- Indian & Northern Affairs Fuel Tanks (**IAFT**)
- National Analysis of Trends in Emergencies Canada (**NATE**)
- National Defence & Canadian Forces Fuel Storage Tanks (**NDFT**)
- National Defence & Canadian Forces Spills (**NDSP**)
- National Defence & Canadian Forces Waste Disposal Sites (**NDWD**)
- National Energy Board Pipeline Incidents (**NEBI**)
- National Energy Board Wells (**NEBW**)
- National Environmental Emergencies System (**NEES**)
- National PCB Inventory (**NPCB**)
- National Pollutant Release Inventory (**NPRI**)
- Parks Canada Fuel Storage Tanks (**PCFT**)
- Transport Canada Fuel Storage Tanks (**TCFT**)

Descriptions of these databases are provided in Appendix 10.3.

Phase One Property

No federal database records were identified for the Phase One Property.

Phase One Study Area

No federal database records were identified for the Phase One Study Area.



4.2.2 Ontario Government Database Records

The following provincial government databases were searched by ERIS in December 2017:

Abandoned Aggregate Inventory (**AAGR**)
Aggregate Inventory (**AGR**)
Abandoned Mines Information System (**AMIS**)
Ontario Borehole (**BORE**)
Certificates of Approval (**CA**)
Commercial Fuel Oil Tanks (**CFOT**)
Inventory of Coal Gasification Plants (**COAL**)
Compliance and Convictions (**CONV**)
Certificate of Property Use (**CPU**)
Drill Hole Database (**DRL**)
Environmental Activity and Sector Registry (**EASR**)
Environmental Registry (**EBR**)
Environmental Compliance Approval (**ECA**)
Emergency Management Historical Event (**EMHE**)
List of TSSA Expired Facilities (**EXP**)
Fuel Storage Tank (**FST**)
Fuel Storage Tank – Historic (**FSTH**)
O. Reg. 347 Waste Generators Summary (**GEN**)
TSSA Historic Incidents (**HINC**)
TSSA Incidents (**INC**)
Landfill Inventory Management Ontario (**LIMO**)
Mineral Occurrences (**MNR**)
Non-Compliance Reports (**NCPL**)
Ontario Oil and Gas Wells (**OOGW**)
Ontario Inventory of PCB Storage Sites (**OPCB**)
Orders (**ORD**)
Pesticide Register (**PES**)
TSSA Pipeline Incidents (**PINC**)
Private and Retail Fuel Storage Tanks (**PRT**)
Permit to Take Water (**PTTW**)
Ontario Regulation 347 Waste Receivers Summary (**REC**)
Record of Site Condition (**RSC**)
Ontario Spills (**SPL**)
Wastewater Discharger Registration Database (**SRDS**)
TSSA Variances for Abandonment of Underground Storage Tanks (**VAR**)



Waste Disposal Sites – MOE CA Inventory (**WDS**)
Waste Disposal Sites – MOE 1991 Historical Approval (**WDSH**)
Water Well Information System (**WWIS**)

Descriptions of these databases are provided in Appendix 10.3.

Phase One Property

No provincial database records were identified for the Phase One Property.

Phase One Study Area

Provincial databases records identified thirty-eight records for addresses within 0.25 km of the Phase One Property boundary.

Twelve records were identified in the Borehole (BORE) database as follows:

Easting	Northing	Distance to Phase One Property (m)*	Direction from Phase One Property	Total Depth (m)	DEM Ground Elevation (m)	Date	Geology
432239	5014477	13	SE	4.3	97	1980	Brown fill-misc, sand-gravel to 0.6 m; dark brown silty clay with organic material to 1.1 m; grey-brown stiff weathered crust silty clay to 4.3 m
432151	5014709	43	N	4.3	100	1980	Brown fill-misc, sand-gravel to 0.8 m; dark brown silty clay with organic material to 1.2 m; grey-brown very stiff weathered crust silty clay to 2.9 m; grey very stiff silty clay to 4.3 m
432101	5014722	67	NNW	6.2	100	1970	Unspecified to 6.1 m; bedrock, silt, grey, firm to 6.2 m
432129	5014768	102	N	0.8	102	1980	Brown fill-misc sand-gravel to 0.8 m
432281	5014322	159	SSE	11.3	95.1	1970	Unspecified to 11.3; bedrock.
431976	5014276	206	SSW	2.5	92.9	1993	Brown sand silt to 0.3 m; peat to 0.4 m; grey sand silt to 2.5 m.
432454	5014483	226	ESE	21.1	98.5	1977	Topsoil to 0.2 m; brown very stiff to stiff weathered crust silty



Easting	Northing	Distance to Phase One Property (m)*	Direction from Phase One Property	Total Depth (m)	DEM Ground Elevation (m)	Date	Geology
							clay to 2.9 m; grey firm silty clay to 4.6 m; loose to compact silt to 13.6 m; grey bedrock limestone to 21.1 m
431955	5014253	237	SSW	2.5	92.8	1993	Topsoil to 0.3 m; grey silt – sand to 0.9 m; grey clay silt to 2.5 m
432103	5014192	242	S	2	92.8	1993	Topsoil to 0.2 m; brown silt-sand to 1.6 m; grey silty clay to 2 m
432241	5014892	243	NNE	6.1	104	N/A	Bedrock, shale to 6.1 m
432078	5014905	247	N	5	104	1980	Brown fill-misc. sand-gravel to 1 m; brown to grey fill-misc. silt-sand to 2.3; brown very stiff fill-misc silty clay to 3 m; grey-brown very stiff weathered crust silty clay to 5m
431862	5014385	250	WSW	3	93.8	1993	Peat to 3 m

* approximate distance from record to Phase One Property boundary

These records are not considered to identify conditions likely to pose concerns to the Phase One Property.

Eleven records were found in the Ontario Regulation 347 Waste Generators Summary (GEN) as follows:

Address	Distance & Direction from Phase One Property	Company	Date	Description
760 Eagleson Road	126 m (N)	Doctor's office within the Real Canadian Superstore	2010 - 2017	261 – Pharmaceuticals 312 – Pathological Wastes
760 Eagleson Road	126 m (N)	Loblaw Companies Limited (Real Canadian Superstore)	2015	312 – Pathological Wastes



Address	Distance & Direction from Phase One Property	Company	Date	Description
760 Eagleson Road	126 m (N)	Loblaw Companies Limited (Real Canadian Superstore)	2016 - 2017	148 A - Misc. wastes and inorganic chemicals 148 I - Misc. wastes and inorganic chemicals 263 A - Misc. waste organic chemicals 261 B – Pharmaceuticals 331 L - Waste compressed gases including cylinders 261 A – Pharmaceuticals 212 L - Aliphatic solvents and residues 262 L - Detergents and soaps 212 I - Aliphatic solvents and residues 263 L - Misc. waste organic chemicals 242 T - Halogenated pesticides and herbicides 269 L - Organic non-halogenated pesticide and herbicide wastes 145 I - Wastes from the use of pigments, coatings and paints 252 L - Waste crankcase oils and lubricants 269 T - Organic non-halogenated pesticide and herbicide wastes 145 L - Wastes from the use of pigments, coatings and paints 263 C – Misc. waste organic chemicals 146 T – Other specified inorganic sledges, slurries or solids 242 L - Halogenated pesticides and herbicides 261 I – Pharmaceuticals 122 C - Alkaline solutions - containing other metals and non-metals (not cyanide) 112 C - Acid solutions - containing heavy metals 312 P - Pathological wastes 331 I - Waste compressed gases including cylinders 262 C - Detergents and soaps 261 L - Pharmaceuticals

Based on the record details and location of the waste generator records, these properties are not likely to pose an environmental concern for the Phase One Property.

One record was identified in the TSSA Incidents (INC) database. The record is for a release of carbon monoxide from a natural gas furnace at a private dwelling located at 1527 Carronbridge Road (approximately 247 m SSE of the Phase One Property) in 2012. This record does not identify conditions likely to pose concerns for the Phase One Property.



Four records were identified in the Pesticide Register (PES) for the Real Canadian Superstore located at 760 Eagleson Road for a vendor licence. It is assumed this relates to their seasonal garden center and pesticides are not manufactured and/or stored permanently at this location. Based on geographical location and record type, these records do not identify conditions likely to pose concerns for the Phase One Property.

Eight records were identified in the Ontario Spills (SPL) database as follows:

Address	Company	Incident Date	Contaminant	Amount	Receiving Medium
760 Eagleson Road	Real Canadian Superstore	August 2008	FREON R-507	136 kg	air
		September 2010	FREON R-507	136 kg	air
		February 2011	FREON R-507	102 kg	air
		February 2012	FREON R-507	300 lbs	air and municipal/private and commercial sewer
		June 2012	FREON R-507	300 lbs	air and municipal/private and commercial sewer
		February 2014	FREON R-507	136 kg	air
		May 2017	FREON R-507	720 lbs	air

Based on the spill types and geographic locations, these records do not identify conditions likely to pose concerns for the Phase One Property.

An unplotable record was found in the Ontario Spills Database (SPL) pertaining to a release of 625 lbs of FREON R-22 in 2008 from a Loblaw Properties Limited site. An additional unplotable record was found in the Ontario Compliance and Convictions database (CONV) for a Loblaw Companies Limited (Loblaw) site. Both records are likely to pertain to the Great Canadian Superstore located across the street from the Phase One Property. This record states that Loblaw pleaded guilty in 2011 under the Environmental Protection Act for the discharge of a refrigerant and was fined \$30,000. These records do not identify conditions likely to pose concerns for the Phase One Property.

Three records were identified in the Water Well Information System (WWIS). These records are discussed further in Sections 4.3.2 and 4.3.5.



Summary of Findings

Phase One Study Area

No potentially contaminating activities were identified on the Phase One study area in Provincial Database Records.

4.2.3 Ontario Ministry of the Environment

A request was submitted to the MOECC Freedom of Information (FOI) and Protection of Privacy Office by BluMetric on December 7, 2017. The MOECC had not responded at the time of issue of this report. If records are received that provide new environmental information modifying conclusions drawn in the current Phase One ESA report, a summary will be prepared and forwarded to Taggart.

It should be noted that a request for information was submitted to the MOECC Freedom of Information Office as part of the 2005 WESA Phase One ESA. As stated in the 2005 WESA report, there were no records located for the Phase One Property.

4.2.4 Areas of Natural and Scientific Interest

As part of the ERIS search, the Ontario Ministry of Natural Resources (MNR) map database of Areas of Natural and Scientific Interest (ANSIs) was searched. A map of areas of natural significance in the Phase One Study Area was provided by ERIS. This map includes Areas of ANSIs, water bodies, wetlands, wooded areas, conservation areas, municipal parks, provincial parks, natural parks and nature reserves. No areas of natural significance were found in the Phase One Study Area. A copy of this map is provided in Section 10.3.

4.2.5 Technical Standards and Safety Authority

A request for information about the Phase One Property was filed with the TSSA by BluMetric on December 7, 2017. The TSSA had not responded at the time of issue of this report. If records are received that provide new environmental information modifying conclusions drawn in the current Phase One ESA report, a summary will be prepared and forwarded to Taggart.

It should be noted that the TSSA was contacted for the 2005 WESA Phase One ESA. The 2005 WESA report states that the TSSA Fuels Safety Division had no records of aboveground or underground storage tanks in the vicinity of the Phase One Property.



The TSSA cannot guarantee having information on sites that have not been licensed since 1987. It should also be noted that the Fuel Safety Division did not license or register private fuel underground/aboveground storage tanks prior to January 1990 or furnace oil tanks prior to May 1, 2002. It should also be noted that the Fuels Safety Division does not register aboveground tanks used to store gasoline or diesel fuel, or private furnace oil or waste oil tanks in apartments, office buildings, residences, etc.

4.2.6 Municipal Records

A municipal FOI request was submitted by BluMetric to the Access to Information and Privacy Office at the City of Ottawa on December 7, 2017. An acknowledgment letter from the City was received on December 20, 2017 stating that the access review procedures have been initiated and a formal response will be provided within the legislated timeline. If records are received that provide new environmental information modifying conclusions drawn in the current Phase One ESA report, a summary will be prepared and forwarded to Taggart.

It should be noted that a request for information was filed pertaining to the Phase One Property and the surrounding area with the City of Ottawa Historical Land Use Inventory (HLUI) for the 2005 WESA Phase One ESA. As stated in the 2005 WESA report, one record was found on the HLUI database concerning a surrounding property located approximately 50 m west of the Phase One Property. An unnamed sand and gravel pit measuring 250 m by 100 m was located on a neighbouring property to the west. Sand and gravel pits can be associated with potential environmental impact as a result of equipment fuel spills at extraction operation. Since no spills were identified in the MOECC database and the pit is located down gradient from the Phase One Property, this record does not identify conditions likely to pose concerns for the Phase One Property.

Summary of Findings

Phase One Property

No municipal database records were identified for the Phase One Property.

Phase One Study Area

No potentially contaminating activities were found in the Phase One Study Area within municipal records.



4.2.7 Private Records

The following private databases were searched by ERIS in December 2017:

- Anderson's Waste Disposal Sites (**ANDR**)
- Automotive Wrecking & Supplies (**AUWR**)
- Chemical Register (**CHEM**)
- Compressed Natural Gas Stations (**CNG**)
- ERIS Historical Searches (**EHS**)
- Canadian Mine Locations (**MINE**)
- Oil and Gas Wells (**OGW**)
- Canadian Pulp and Paper (**PAP**)
- Retail Fuel Storage Tanks (**RST**)
- Scott's Manufacturing Directory (**SCT**)
- Anderson's Storage Tanks (**TANK**)

Descriptions of these databases are provided in Appendix 10.3.

Phase One Property

There were no records for the Phase One Property within the private databases.

Phase One Study Area

Private databases contain two records for the Phase One Study Area. These records were found in the ERIS Historical Searches (EHS) database. One record pertains to the ERIS search that was conducted for the 2005 WESA Phase One ESA and the other record is for a 2015 ERIS search for 760 Eagleson Road (Great Canadian Superstore). These records do not identify conditions likely to pose concerns for the Phase One Property.

Summary of Findings

Phase One Property

No potentially contaminating activities were identified on the Phase One Property in private database records.



Phase One Study Area

No potentially contaminating activities were identified in the Phase One Study Area in private database records.

4.2.8 Waste Disposal Sites

The document entitled *Waste Disposal Site Inventory* (MOE, 1991) contains a listing of active and closed waste disposal sites in Ontario as of October 31, 1990. This inventory uses the Universal Transverse Mercator (UTM) grid system to locate the waste disposal sites. The UTM coordinates used for the centre of the Phase One Property were 432156 E and 5014558 N.

Active Waste Disposal Sites

There are no active waste disposal sites within 2 km of the Phase One Property.

Closed Waste Disposal Sites

There are no closed waste disposal sites within 2 km of the Phase One Property.

4.2.9 Coal Gasification Plants and Coal Tar Sites

Inventories of coal gasification plants (Intera, 1987) and industrial sites where coal tar was produced or used (Intera, 1988) listed no sites located within 2 km of the Phase One Property.

4.3 PHYSICAL SETTING SOURCES

4.3.1 Aerial Photos

As part of the WESA 2005 Phase I ESA a review of historical air photos was conducted for the years 1934, 1949, 1958, 1968, 1981, 1988, 1992 and 1996. The descriptions of these Photos as provided in the 2005 report are provided below. Additional aerial photos (1976, 2002, 2011 and 2017) were reviewed on the City of Ottawa's geoOttawa website (<http://maps.ottawa.ca/geoOttawa/>). A summary of the findings are summarized below.

Year	Summary of Findings
1934	The area of the Phase One Property appears to be scrub brush and forested rural land. The area surrounding the subject property appears to be scrub brush and forest (extending to the northwest) and all other surrounding land use is agricultural.
1949	The Phase One Property is similar to the 1934 photo. Surrounding land use is same. Metal towers installed at farm NW of property.



1958	Similar to the 1949 photo.
1968	Similar to 1958 photo except farm buildings to NW are no longer present.
1976	The Phase One Property remains scrub land and forest. Residential areas have been developed to the northwest.
1981	Phase One Property remains scrub land and forest. Residential areas have been developed to the east side of Eagleson Road (Bridlewood south) and to the northwest (Glen Cairn). Land to southwest is still agricultural.
1988	The Phase One Property is similar to the 1981 photo. Land to the east and northeast has increased residential and to northwest some light industrial (Michael Cowpland Drive). Land to southwest is agricultural.
1992	The Phase One Property remains undeveloped. Cope Drive is partially constructed (unpaved). The surrounding area is the same as 1988 photo except increased development along Michael Cowpland Drive. Land to the southwest remains agricultural.
1996	The Phase One Property is undeveloped. Cope Drive is paved at entrance from Eagleson Drive. There is a berm at the entrance allowing for partial access. Evidence of approximately 40 objects line along the south side of Cope Drive on pavement. These objects appear to be containers of some kind, but are too irregular in shape to be drums. They could be construction traffic cones. There is sign of liquid at the base of many objects.
2002	The Phase One Property is undeveloped. The property to the west of the Phase One property has been developed with a building and paved parking lot. The residential areas surrounding the Phase One Property continue to be developed. Land to the southwest remains agricultural.
2011	The Phase One Property is undeveloped. Across Cope Drive, to the north of the Phase One Property, a building and paved parking lot has been developed. The majority of the area to the southwest remains agricultural with the development of some residential property.
2017	The Phase One Property remains undeveloped. The surrounding residential areas continue to be developed.

Summary of Findings

Phase One Property

No potentially contaminating activities were identified in the review of Aerial Photographs for the Phase One Property.

Phase One Study Area

No potentially contaminating activities were identified in the review of Aerial Photographs for the Phase One Study Area.



4.3.2 Topography, Hydrology, Geology

The Phase One Property is located at an elevation of approximately 100 m above sea level. The Phase One Property and most of the surrounding area are relatively flat-lying with a local relief of less than 1 m. A topographic map is provided in Section 10.2.

The overburden material in the vicinity of the site consists of Glacial till plain deposits, Champlain Sea offshore marine clay and silt deposits and post-Champlain Sea organic muck and peat deposits. The Phase One Property is located less than 1 kilometre south of the Hazeldean fault on limestone of the Palaeozoic Ottawa Formation.

The local geology is consistent with the mapped regional bedrock geology, with the majority of the bedrock wells finished in the Ottawa Formation limestone with a lesser amount drawing from the shale and sandstone of the underlying Rockcliffe Formation. The well records also reaffirm regional overburden mapping as described above. Bedrock in the vicinity is generally encountered at depths between less than one meter towards the bedrock high north and east of the Phase One Property and typically up to 12 m below ground surface as one progresses south and west into the clay plains.

Shallow groundwater flow from the property is inferred to follow local topography to the roadside ditch along Eagleson Road which most likely drains south into the Monaghan Drain. This drainage system directs surface water southeast towards the Jock River at a distance of approximately five kilometres from the Phase One Property. Regionally, deep bedrock groundwater flow is inferred to be northwards towards the Ottawa River.

4.3.3 Fill Materials

No records pertaining to fill material on the Phase One Property were found. Shallow fill materials are reported in the BORE database for various boreholes completed in the Phase One Study Area.

4.3.4 Water Bodies and Areas of Natural Significance

There are no surface water features on the Phase One Property. The major surface water body in the vicinity of the site is the Carp River which is located approximately 1.5 km to the northwest of the Phase One Property.



As described in Section 4.2.4, there are no ANSIs found in the Phase One Study Area. The ANSI map provided by ERIS indicates that the Stony Swamp Wetlands is located approximately two kilometers north east of the Phase One Property.

Local ground water flow may be influenced by underground utilities and other subsurface structures as ground water may migrate preferentially along the bedding materials of nearby subsurface utility trenches. However, the existence of the Monaghan Drain suggests that ground water in the vicinity of the Phase One Property flows generally towards the south direction.

4.3.5 Well Records

As noted in Section 4.2.2, three records were found in the Water Well Information System (W/WIS) database for the Phase One Study Area as follows:

Easting	Northing	Static Water Level (ft)	Depth to Bedrock (ft)	Primary Water Use	Final Well Status	UTM Reliability	Construction Date	Geology
N/A	N/A	N/A	10	N/A	Abandoned-supply	30 m to 100 m	1973	Clay to 10 ft; limestone to 205 ft
N/A	N/A	N/A	90	N/A	Observation Well	30 m to 100 m	1973	Clay to 5 ft; sand to 10 ft; clay to 23 ft; gravel and boulders to 90 ft; limestone to 177 ft; sandstone to 190 ft; limestone to 245 ft
N/A	N/A	N/A	20	Livestock	Water Supply	100 m to 300 m	1954	Shale to 20 ft; limestone to 100 ft

N/A – information not specified

These records do not identify activities likely to pose environmental concerns for the Phase One Property.

4.4 SITE OPERATING RECORDS

There are no site operating records for the Phase One Property.



Summary of Findings

Phase One Property

No potentially contaminating activities were identified on the Phase One Property in Site Operating Records.

Phase One Study Area

No potentially contaminating activities were identified in the Phase One Study Area in Site Operating Records.

5. INTERVIEWS

An interview was completed with Ms. Shelly Shorrock, Director of Facilities at First Air by Ms. Jessica Petrocco of BluMetric prior to the site visit on December 11, 2017. Ms. Shorrock has been an employee of First Air since 2006 and is familiar with the Phase One Property. The interview was completed using a standard BluMetric interview questionnaire to obtain information that may have been changed since the 2013 WESA Phase One ESA update report. A summary of the information acquired during the interview is provided below.

As indicated by Ms. Shorrock, 20 Cope Drive (consisting of the current First Air Property and the Phase One Property), was purchased by First Air in 2005. Ms. Shorrock is not aware of any historical or current underground storage tanks (USTs), above ground storage tanks (ASTs), fill material, potential or actual contamination or stressed vegetation on the Phase One Property. As stated by Ms. Shorrock several trees have been cut-down on the Phase One Property since it was purchased by Taggart in 2014. Ms. Shorrock indicated that the Phase One Property has not been used for any other purpose.

As stated by Ms. Shorrock, the First Air building is used for offices with lawn maintenance and snow removal being provided by contractors. The First Air parking lot borders the west side of the Phase One Property, draining away from the Phase One Property to catch basins located in the middle of the parking lot. A pad-mount transformer is located in the parking lot of the First Air parking lot. Ms. Shorrock indicated that no testing of the transformer has been conducted but mentioned that as per the 2005 WESA Report, given the age and location of the transformers, it is unlikely that they contain oil with a PCB concentration greater than 50 ppm. Ms. Shorrock also mentioned that since the WESA 2013 letter report, several trees have been removed from the First Air property as a result of the Ottawa Emerald Ash Borer infestation.



Additional information regarding the Phase One Property following its purchase by Taggart in 2014 was provided by Alex Turner, Manager, Planning & Development at Taggart. Mr. Turner stated that the Phase One Property has not been used by Taggart since the purchase in 2014.

Assessment of Information Gleaned Through Interviews

The information learned through interviews was compared to information collected from additional sources (discussed in Sections 3 and 4) and from the Phase One site visit (discussed in Section 6) and was generally determined to be accurate.

6. SITE RECONNAISSANCE

6.1 GENERAL REQUIREMENTS

The Phase One Property was visited on December 11, 2017 by Ms. Jessica Petrocco of BluMetric. Weather conditions were sunny; ambient air temperature was approximately minus 12°C. Weather conditions impeded visual observations of the Phase One Property due to snow cover. Access to the entirety of the Phase One Property was possible. Photographs of the Phase One Property are included in Section 10.4.

The Phase One Study Area, other than the Phase One Property, was also investigated on December 11, 2017 by Ms. Jessica Petrocco of BluMetric. A 250 m radius area from the Phase One Property boundary was surveyed and occupants of neighbouring properties were recorded. The Phase One Property was observed to be generally surrounded by residential and commercial land use in all directions.

The property adjacent to the north of the Phase One Property (across Cope Drive) is the Great Canadian Superstore. To the west side of the Phase One Property is the First Air property. The adjacent properties to the east of the Phase One Property (across Eagleson Road) are residences. To the south of the Phase One Property is a sanitary sewer, paved walking path and residential buildings.

Based on geographic location and the nature of activities noted, none of the surrounding properties were noted to be of environmental interest in the Phase One Study Area during the Phase One Study Area visit.



Summary of Findings in Phase One Study Area Visit

No potentially contaminating activities were noted in the phase one study area visit (area not including the Phase One Property).

6.2 SPECIFIC OBSERVATIONS AT PHASE ONE PROPERTY

6.2.1 Structures and Other Improvements

i. Description of Structures and Other Improvements

There are no structures on the Phase One Property.

ii. Below Ground Structures Associated With Structures and Other Improvements

There are no below ground structures associated with structures at the Phase One Property.

iii. Tanks

No tanks were observed to be present at the Phase One Property.

iv. Water Sources Associated With Structures and Other Improvements

There are no water sources associated with structures at the Phase One Property.

6.2.2 Underground Utilities and Service Corridors

The Phase One Study Area is serviced by municipal water, hydro, natural gas, telephone and sanitary sewer. There are underground utility services along Cope Drive and Eagleson Road. There are also hydro-poles along Eagleson Road. A pad mounted transformer (TP9248) is located on the northwest corner of the Phase One Property within a hydro easement as per the plan survey in Section 10.1.

6.2.3 Interiors of Structures and Buildings

i. Entry/Exit Points

Not applicable as there are no structures or buildings on the Phase One Property.



ii. Heating Systems

Not applicable as there are no structures or buildings on the Phase One Property.

iii. Cooling Systems

Not applicable as there are no structures or buildings on the Phase One Property.

iv. Drains, Pits and Sumps

Not applicable as there are no structures or buildings on the Phase One Property.

v. Unidentified Substances in the Interior of Any Building or Structure

Not applicable as there are no structures or buildings on the Phase One Property.

vi. Stains and Corrosion on Floors

Not applicable as there are no structures or buildings on the Phase One Property.

6.2.4 Exterior Portions of the Phase One Property

i. Current and Former Wells

No current or former wells were observed on the phase one property.

ii. Sewage Works

There were no visible remains of a septic tank and tile bed.

iii. Ground Surface Details

The Phase One Property consists of one irregular shaped parcel of land which covers a total area of approximately 5.17 acres with a frontage of approximately 100 m along Cope Drive and approximately 210 m along Eagleson Road. Vegetation covers 100 % of the Phase One Property. Surface runoff on the Phase One Property likely runs towards the ditch located along the east property boundary.



iv. Railway Lines and Spurs

No former or current rail lines or spurs are known to exist on the Phase One Property. No evidence of former or current rail lines was observed on the Phase One Property.

6.2.5 Parts of the Phase One Property Not Covered by Buildings or Other Structures

i. Stained Soil, Vegetation or Pavement

Due to snow cover, the presence or absence of stained soil, vegetation or pavement could not be observed at the Phase One Property.

ii. Stressed Vegetation

Due to snow cover, the presence or absence of stressed vegetation could not be observed throughout the entire Phase One Property.

iii. Area Where Fill or Debris May Have Been Placed or Graded

No evidence of the placement of fill at the Phase One Property was observed during the Phase One site reconnaissance.

iv. Potentially Contaminating Activities in Areas Not Covered by Buildings or Other Structures

No potentially contaminating activities were noted on the Phase One Property.

v. Unidentified Substances in Areas Not Covered by Buildings or Other Structures

No unidentified substances were observed on the Phase One Property in areas not covered by buildings or other structures. It should be noted that the areas not covered by buildings or other structures were snow covered at the time of the site visit and prevented a thorough investigation of these areas.

6.2.6 Enhanced Investigation at the Property

The phase one property does not meet the definition of an ‘enhanced investigation property’ as per O. Reg. 153/04.



6.2.7 Summary of Findings

The following potentially contaminating activities were noted on the Phase One Property:

Item	Column A	Description of Potentially Contaminating Activity
55.	Transformer Manufacturing, Processing and Use	Transformer (TP9248) is located on the northwest corner of the Phase One Property within a hydro easement

Source: Table 2, Schedule D, O. Reg. 153/04

6.3 WRITTEN DESCRIPTION OF THE INVESTIGATIONS

The investigations conducted for this assessment are described in Sections 4 through 6.

Chronologically, the first task was to review the information obtained by filing requests with organizations notably the ERIS databases (see Section 4.2). Physical setting sources were also obtained and reviewed at this time. In December 2017, BluMetric conducted an interview (see Section 5) and the Phase One Property and Phase One Study Area was visited (see Section 6.1).

The review and evaluation of the assembled information is presented in Section 7 and conclusions are presented in Section 8. Aside from the reconnaissance visit, interviews, and review of information collected from numerous sources, no other investigations were conducted.

7. REVIEW AND EVALUATION OF INFORMATION

7.1 CURRENT AND PAST USES

The Phase One Property has the following history of use:

Time Period	Use(s)	Information Sources
Prior to 1976	Agricultural use or vacant lot	- Aerial Photographs
1976 to 2017	Vacant treed lot	- Aerial Photographs - Interviews and Site Reconnaissance



7.2 POTENTIALLY CONTAMINATING ACTIVITY

7.2.1 Phase One Property

The following potentially contaminating activities were noted on the Phase One Property.

Item	Column A	Description of Potentially Contaminating Activity
55.	Transformer Manufacturing, Processing and Use	Pad mounted transformer (TP9248) is located on the northwest corner of the Phase One Property within the hydro easement.

Source: Table 2, Schedule D, O. Reg. 153/04

7.2.2 Phase One Study Area

The following potentially contaminating activities have been identified on the Phase One Study Area:

Item	Column A	Description of Potentially Contaminating Activity
55.	Transformer Manufacturing, Processing and Use	Pad mounted transformer is located in the First Air parking lot located to the west of the Phase One Property.

Source: Table 2, Schedule D, O. Reg. 153/04

7.3 AREAS OF POTENTIAL ENVIRONMENTAL CONCERN

7.3.1 Evaluation of Information

Information from each of the components of the Phase One ESA was evaluated and considered in order to identify areas of potential environmental concern. In determining the areas of actual or potential environmental concern at the Phase One Property, BluMetric has evaluated the information collected during this Phase One ESA based on the concepts of source, pathways and receptors.

Since Phase One ESAs do not include the testing of samples or the measuring of environmental parameters, the areas of potential environmental concern on the Phase One Property are speculative.

7.3.2 Identified Areas of Potential Environmental Concern

No potential sources of environmental impact were identified at the Phase One Property due to the current land use.



7.3.3 Contaminants of Potential Concern

No contaminants of potential concern were identified.

7.3.4 Information Gaps in Phase One Environmental Site Assessment

Weather conditions impeded visual observations of the Phase One Property due to the presence of snow cover. As a result, the presence or absence of staining in the Phase One Property could not be verified.

Responses had not been received from the TSSA, MOECC or City of Ottawa at the time of issuance of the current report.

All efforts were made to obtain records for the Phase One Property and the Phase One Study Area.

7.4 PHASE ONE CONCEPTUAL SITE MODEL

Figure 4 provides a conceptual site model (CSM) for the Phase One Study Area. It shows:

- Water bodies located in whole or in part on the Phase One Study Area,
- Roads within the Phase One Study Area,
- Uses of properties adjacent to the Phase One Property, and
- Areas where any potentially contaminating activity has occurred.

Some items often included in a CSM are not needed in this CSM:

- There are no existing buildings and structures.
- There are no areas of natural significance located in whole or in part on the phase study area.
- There are no drinking water wells at the Phase One Property.
- There are no areas of potential environmental concern.

A discussion of areas of potential environmental concern at the Phase One Property follows.

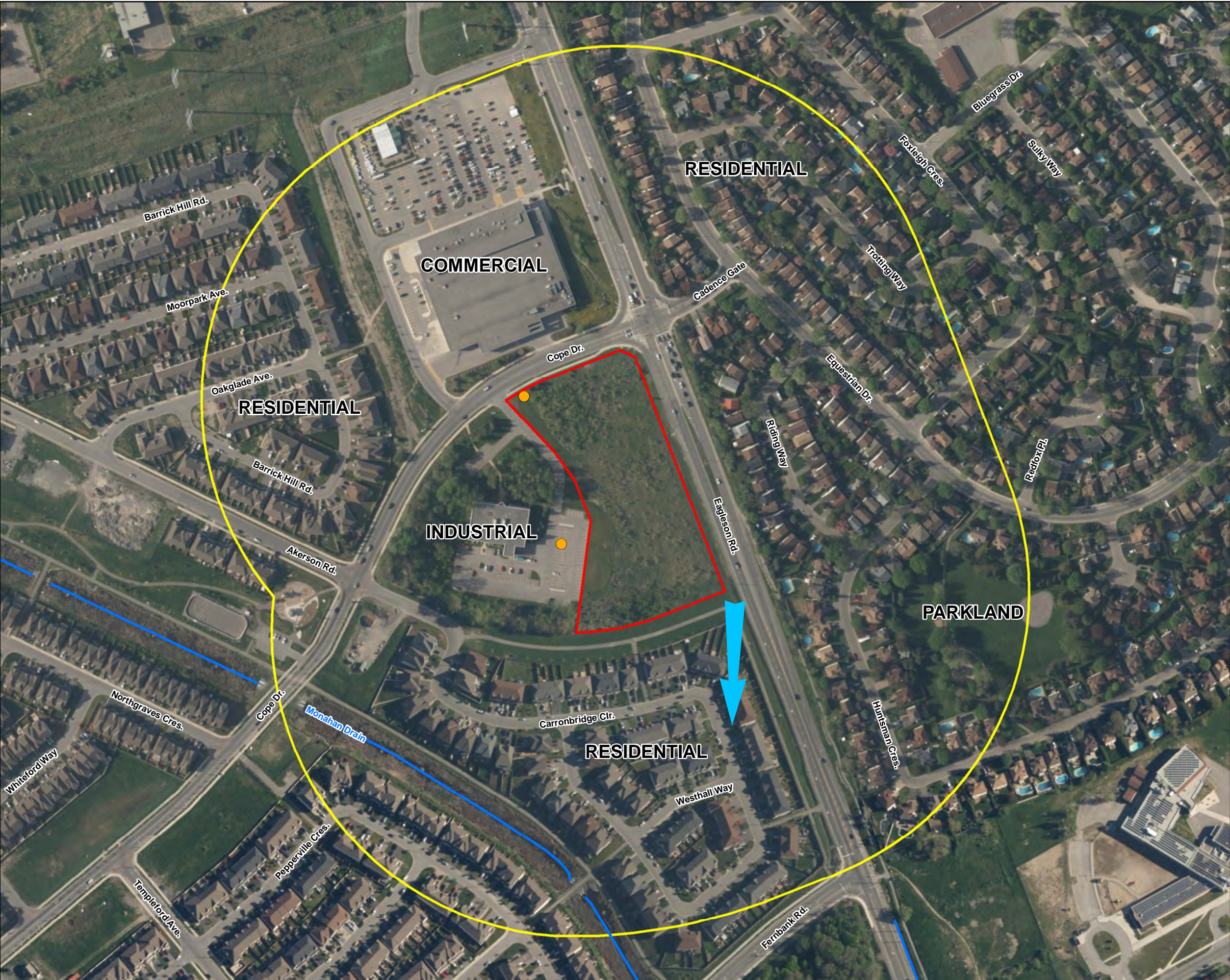
On-site Transformer

Transformer TP9248 located on the northwest corner of the Phase One Property is located within a hydro easement as per the Phase One Property plan survey in Section 10.1 and an email



from Mr. Turner of Taggart. Maintenance of the transformer is the responsibility of the Hydro utility including the remediation of any loss in mineral insulating oil. Property parcel imagery from the City of Ottawa geoOttawa website indicates that the transformer may not be located on the Phase One Property. Furthermore, the transformer was installed sometime after the 1996 Aerial Photo was taken and is unlikely to contain transformer oil with PCBs. Transformer oil typically has low volatility and does not migrate easily through the subsurface. The presence of this transformer at the Phase One Property is considered to pose a low level of concern to the Phase One Property and is not considered an APEC.





LEGEND

- Potentially Contaminating Activity – Transformer
- Inferred Local Groundwater Flow Direction
- Watercourse
- Phase One Study Area
- Phase One Property Boundary

1				
REV.	DESCRIPTION	YY/MM/DD	BY	CHK

REFERENCES
PROPRIETARY INFORMATION MAY NOT BE REPRODUCED OR DIVULGED WITHOUT PRIOR WRITTEN CONSENT OF BLUMETRIC ENVIRONMENTAL INC. DO NOT SCALE DRAWING. THIS DRAWING MAY HAVE BEEN REDUCED. ALL SCALE NOTATIONS INDICATED ARE BASED ON 11"x17" FORMAT DRAWINGS.

Aerial Image from City of Ottawa http://maps.ottawa.ca/ArcGIS/services/Layer: Basemap_Imagery_2017

CLIENT

TAGGART (EAGLESON) CORPORATION

PROJECT

PHASE ONE ENVIRONMENTAL SITE ASSESSMENT – 10 COPE DRIVE, OTTAWA, ONTARIO

TITLE

PHASE ONE CONCEPTUAL SITE MODEL

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Ottawa, Ontario K0A 1L0
TEL: (613) 839-3053
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Email: info@blumetric.ca
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PROJECT # 180121-00		DATE December 21, 2017	
DRAWN IB	CHECKED JP	FIG NO. 04	REV 0

8. CONCLUSIONS

8.1 IS A PHASE TWO ESA REQUIRED BEFORE AN RSC IS SUBMITTED?

As discussed above, no areas of potential environmental concern have been identified on the Phase One Property. A Phase Two ESA is not required before an RSC can be submitted.

8.2 CAN AN RSC BE SUBMITTED BASED ON THE PHASE ONE ESA ALONE?

It is the opinion of the QP that an RSC cannot be submitted solely on the basis of this Phase One ESA report. This Phase One ESA report was generated in general accordance with O. Reg. 153/04; however, was not intended to be used as support for a Record of Site Condition (RSC), and has not been prepared in anticipation of being submitted to the Ontario Ministry of the Environment and Climate Change (MOECC) for review.

8.3 LIMITING CONDITIONS, QP STATEMENT, AND QP SIGNATURE

Limiting Conditions

This Phase One ESA has been undertaken in general accordance with the tasks described in O. Reg. 153/04 and this report follows the standard table of contents and uses the terminology of O. Reg. 153/04; however, this report is not intended to be used as support for a RSC, and has not been prepared in anticipation of being submitted to the MOECC for review. The findings in this report are based on: observations made during a site reconnaissance; a review of historical records concerning the current and past uses of the property; and requests for information filed with provincial and municipal agencies.

The conclusions presented in this report represent our professional opinion and are based on the conditions observed on the dates set out in the report, the information available at time this report was prepared, the scope of work, and any limiting conditions noted herein.

BluMetric provides no assurances regarding changes to conditions subsequent to the time of the assessment. BluMetric makes no warranty as to the accuracy or completeness of the information provided by others or of the conclusions and recommendations predicated on the accuracy of that information.

This report, related data and material including studies, analysis, memoranda, and drawings developed during the performance of this project is the exclusive property of Taggart which shall have the right to use same for any purpose without any further compensation to BluMetric other



than as provided in the contract for this project. For any reports or other materials listed above produced by BluMetric, reliance is granted to Taggart, its government partners, cooperating agencies, and any third party with whom Taggart contracts. BluMetric accepts no responsibility for any loss or damages suffered by any unauthorized third party as a result of decisions made or actions taken based on this report.

This report was written by Jessica Petrocco and Robert Hillier of BluMetric.

Statement and Signature of the Qualified Person

This Phase One environmental site assessment of the Phase One Property includes the evaluation of information gathered from a records review, site reconnaissance, and interviews. It has been conducted in accordance with O. Reg. 153/04 by or under the supervision of a qualified person.

Sincerely yours,

BluMetric Environmental Inc.



Jessica Petrocco, QP_{ESA}, M.Eng., P.Eng.
Project Engineer



Robert Hillier, QP_{ESA}, P.Geo.
Senior Hydrogeologist



9. REFERENCES

Intera Technologies Limited, 1987. *Inventory of Coal Gasification Plant Waste Sites in Ontario*. Prepared for Ontario Ministry of the Environment, Waste Management Branch.

Intera Technologies Limited, 1988. *Inventory of Industrial Sites Producing or Using Coal Tar and Related Tars in Ontario*. Prepared for Ontario Ministry of the Environment, Waste Management Branch. November.

Natural Resources Canada, National Topographic Survey Ottawa - Map 31 G/18, 1:50,000, 11th edition, 1998.

Ontario Ministry of the Environment (MOE), 1991. *Waste Disposal Site Inventory*. Prepared by the Waste Management Branch, PIBS 256, June. ISBN 0-7729-8409-3.

WESA Ltd., 2005. *Phase I Environmental Site Assessment #20 Cope Drive, Kanata, Ontario. Prepared for First Air (A Division of Bradley Air Services Ltd.). Dated December 2005, WESA Project No. CB4598.*

WESA, a division of BluMetric Environmental Inc., 2013. *Update - Phase I Environmental Site Assessment 20 Cope Drive, Ottawa (Kanata), Ontario K2M 2V8. Dated March 6, 2013, WESA Project No. CB411324.*



10. APPENDICES

10.1 PLAN OF SURVEY

O. Reg. 153/04 requires that a phase one environmental site assessment report include a current plan of survey of the Phase One Property that has been prepared, signed, and sealed by a surveyor. A plan of survey that is not signed and sealed by a surveyor is included with this report.



AS-BUILT SURVEY OF
PART OF LOT 31
CONCESSION 10
GEOGRAPHIC TOWNSHIP OF GOULBOURN
CITY OF OTTAWA
STANTEC GEOMATICS LTD.

2012

SCALE 1:500 METRES

0 10 20 30 40 50 60

METRIC METRES

DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

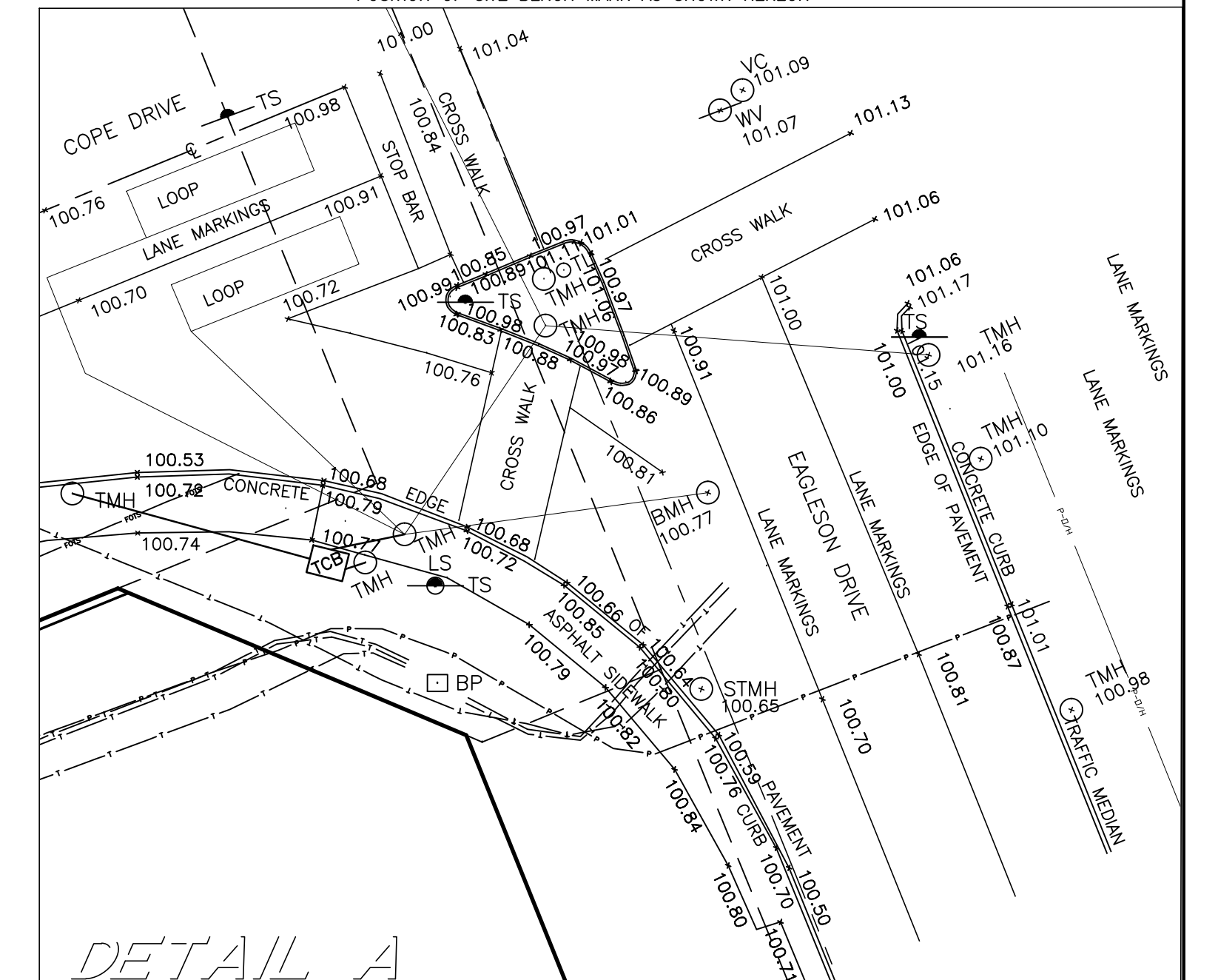
BEARING NOTE

BEARINGS SHOWN HEREON ARE GRID AND ARE DERIVED FROM THE VRS CAN-NET NETWORK AND ARE REFERRED TO THE CENTRAL MERIDIAN 76°30'00" WEST LONGITUDE, ZONE 9 OF THE ONTARIO 3° M.T.M COORDINATE SYSTEM NORTH AMERICAN DATUM 1983 ORIGINAL ADJUSTMENT.

ELEVATION NOTE

ELEVATIONS HEREON ARE GEODETIC AND ARE DERIVED FROM THE CAN-NET VRS NETWORK.

POSITION OF SITE BENCH MARK AS SHOWN HEREON



DETAIL A

SCALE 1:200 METRES

0 5 10 15 20 25

METRIC METRES

DISTANCES AND COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

LEGEND & NOTES : (IF APPLICABLE)

■	DENOTES FOUND MONUMENTS	○ BP	DENOTES BELL POLE
□	DENOTES SET MONUMENTS	□ TCB	DENOTES TRAFFIC CONTROL BOX
○	DENOTES IRON BAR	○ TL	DENOTES TRAFFIC LIGHT
○	DENOTES STANDARD IRON BAR	□ CP	DENOTES CABLE PEDESTAL
SSIB	DENOTES SHORT STANDARD IRON BAR	□ HTRAN	DENOTES HYDRO TRANSFORMER
CC	DENOTES CUT CROSS	○ WV	DENOTES WATER VALVE
N&W	DENOTES NAIL & WASHER	○ TP	DENOTES TEST PIT
OU	DENOTES ORIGIN UNKNOWN	○ GV	DENOTES GAS VALVE
MEAS.	DENOTES MEASURED	BLRD	DENOTES BOLLARD
(SG)	DENOTES STANTEC GEOMATICS LTD.	□ CB	DENOTES CATCH BASIN
P1	DENOTES PLAN 4R-17269	○ VC	DENOTES VALVE CHAMBER
P2	DENOTES PLAN 4R-21561	○ STMH	DENOTES STORM MANHOLE
P3	DENOTES REGISTERED PLAN 4M-1383	○ FMH	DENOTES FIBER OPTIC MANHOLE
P4	DENOTES PLAN 4R-9830	○ SMH	DENOTES SANITARY MANHOLE
P5	DENOTES PLAN 4R-7139	○ DRN	DENOTES DRAIN
WT	DENOTES WITNESS	○ WELL	DENOTES WATER WELL
~	DENOTES TREELINE		
INV	DENOTES INVERT		
□ BPED	DENOTES BELL PEDESTAL		
○ TS	DENOTES TRAFFIC SIGN		
○ BMH	DENOTES BELL MANHOLE		
○ HMH	DENOTES HYDRO MANHOLE		
○ TMH	DENOTES TRAFFIC MANHOLE		
○ HYD	DENOTES FIRE HYDRANT		
○ HGLY	DENOTES HYDRO GLY WIRE		
○ HBP	DENOTES HYDRO BELL POLE		
○ HP	DENOTES HYDRO POLE		
○ LS	DENOTES LIGHT STANDARD		
○ HLS	DENOTES HYDRO LIGHT STANDARD		
○ SN	DENOTES SIGN		

NOTE
LOCATION OF UNDERGROUND SERVICES ARE APPROXIMATE AND MUST BE VERIFIED PRIOR TO CONSTRUCTION.

—ST— DENOTES UNDERGROUND STORM SEWER
—SAN— DENOTES UNDERGROUND SANITARY SEWER
—GAS— DENOTES UNDERGROUND GAS LINE
—HYDRO— DENOTES UNDERGROUND HYDRO LINE
—FO— DENOTES UNDERGROUND FIBER OPTIC LINE

SURVEYOR'S CERTIFICATE:

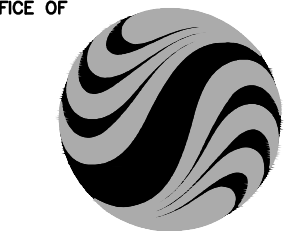
I HEREBY CERTIFY THAT THE SURVEY REPRESENTED BY THIS PLAN WAS COMPLETED ON THE 14th DAY OF DECEMBER, 2012.

DATED :

BRIAN J. WEBSTER
ONTARIO LAND SURVEYOR

UPDATED UNDERGROUND SERVICES PER SURVEY AUGUST 16, 2017.

FROM THE OFFICE OF



STANTEC
GEOMATICS
LTD.

Ontario Land Surveyors
OTTAWA - ONTARIO
(613)722-4420 FAX (613)722-0769
E-Mail: brian.webster@stantec.com
Website: www.stantec.com

Stantec

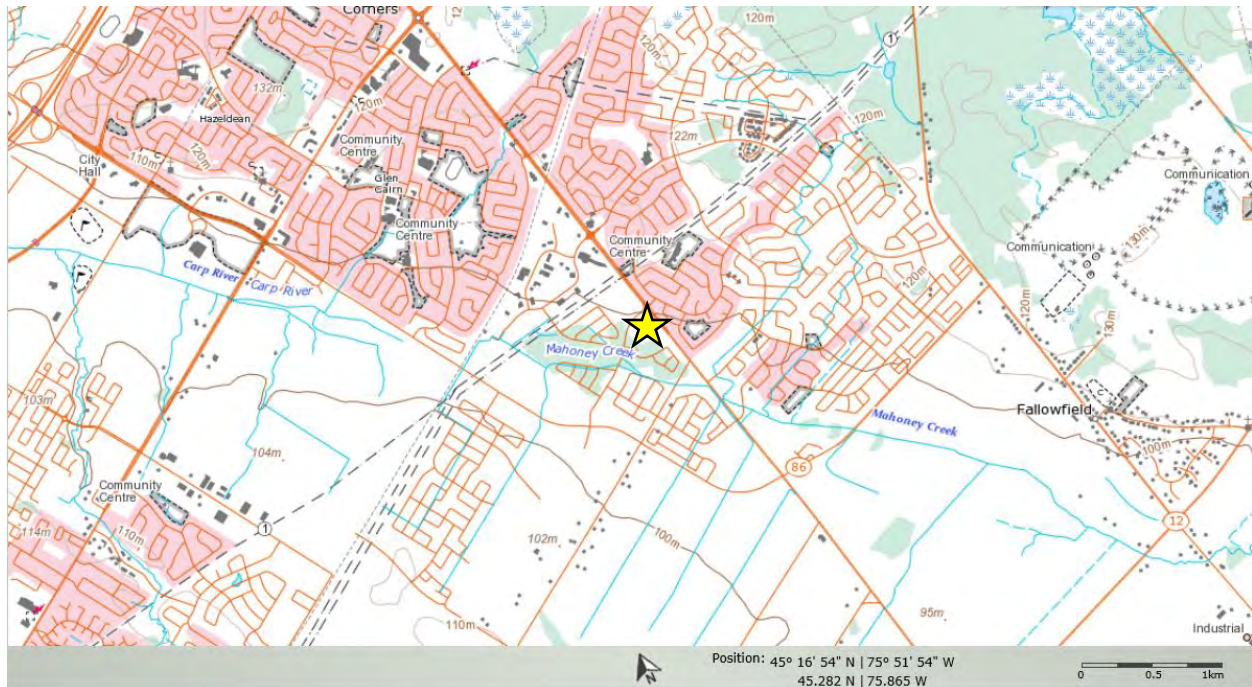
P.M.:BW DRAWN BY :DM/ME FIELD :SM CHECKED : FILE :161612857-116

161612857v-111 Taggart Cope Drive-R3.dwg

W:\active\161612857_116_CopeDr_Taggart_161613645 for time\sketch\ldo\tagg

10.2 TOPOGRAPHIC MAP OF THE PHASE ONE STUDY AREA

As required by O. Reg. 153/04, this appendix consists of a topographic map (Ontario Base Map series) that includes the Phase One Study Area.



The approximate centre of the Phase One Property is indicated by the yellow star.

Source: <http://atlas.nrcan.gc.ca/toporama/en/index.html>

Natural Resources Canada, 2017.



10.3 ENVIRONMENTAL SOURCE INFORMATION

This appendix includes the following environmental source information:

- A report describing federal, provincial and private database records for the Phase One Property and Phase One Study Area conducted by Environmental Risk Information Services (ERIS);





DATABASE REPORT

Project Property: 180121 Taggart 10 Cope Dr Ph 1 ESA
10 Cope Dr
Ottawa ON K2M2V8

Project No:

Report Type: RSC Report (Urban)

Order No: 20171207043

Requested by: BluMetric Environmental Inc.

Date Completed: December 13, 2017

**Environmental Risk
Information Services**
A division of Glacier Media Inc.
P: 1.866.517.5204
E: info@erisinfo.com
www.erisinfo.com

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Notice: IMPORTANT LIMITATIONS and YOUR LIABILITY

Reliance on information in Report: This report DOES NOT replace a full Phase I Environmental Site Assessment but is solely intended to be used as a database review of environmental records.

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Executive Summary

Property Information:

Project Property: 180121 Taggart 10 Cope Dr Ph 1 ESA
10 Cope Dr Ottawa ON K2M2V8

Project No:

Order Information:

Order No: 20171207043
Date Requested: December 7, 2017
Requested by: BluMetric Environmental Inc.
Report Type: RSC Report (Urban)

Historical/Products:

Topographic Map Ontario Base Map (OBM)

Executive Summary: Report Summary

Database	Name	Searched	Project Property	Boundary to 0.30km	Total
AAGR	Abandoned Aggregate Inventory	Y	0	0	0
AGR	Aggregate Inventory	Y	0	0	0
AMIS	Abandoned Mine Information System	Y	0	0	0
ANDR	Anderson's Waste Disposal Sites	Y	0	0	0
AUWR	Automobile Wrecking & Supplies	Y	0	0	0
BORE	Borehole	Y	0	15	15
CA	Certificates of Approval	Y	0	2	2
CFOT	Commercial Fuel Oil Tanks	Y	0	0	0
CHEM	Chemical Register	Y	0	0	0
CNG	Compressed Natural Gas Stations	Y	0	0	0
COAL	Inventory of Coal Gasification Plants and Coal Tar Sites	Y	0	0	0
CONV	Compliance and Convictions	Y	0	0	0
CPU	Certificates of Property Use	Y	0	0	0
DRL	Drill Hole Database	Y	0	0	0
EASR	Environmental Activity and Sector Registry	Y	0	0	0
EBR	Environmental Registry	Y	0	0	0
ECA	Environmental Compliance Approval	Y	0	0	0
EEM	Environmental Effects Monitoring	Y	0	0	0
EHS	ERIS Historical Searches	Y	1	1	2
EIIS	Environmental Issues Inventory System	Y	0	0	0
EMHE	Emergency Management Historical Event	Y	0	0	0
EXP	List of TSSA Expired Facilities	Y	0	0	0
FCON	Federal Convictions	Y	0	0	0
FCS	Contaminated Sites on Federal Land	Y	0	0	0
FOFT	Fisheries & Oceans Fuel Tanks	Y	0	0	0
FST	Fuel Storage Tank	Y	0	0	0
FSTH	Fuel Storage Tank - Historic	Y	0	0	0
GEN	Ontario Regulation 347 Waste Generators Summary	Y	0	11	11
GHG	Greenhouse Gas Emissions from Large Facilities	Y	0	0	0
HINC	TSSA Historic Incidents	Y	0	0	0
IAFT	Indian & Northern Affairs Fuel Tanks	Y	0	0	0
INC	TSSA Incidents	Y	0	1	1
LIMO	Landfill Inventory Management Ontario	Y	0	0	0
MINE	Canadian Mine Locations	Y	0	0	0
MNR	Mineral Occurrences	Y	0	0	0
NATE	National Analysis of Trends in Emergencies System (NATES)	Y	0	0	0

Database	Name	Searched	Project Property	Boundary to 0.30km	Total
NCPL	Non-Compliance Reports	Y	0	2	2
NDFT	National Defense & Canadian Forces Fuel Tanks	Y	0	0	0
NDSP	National Defense & Canadian Forces Spills	Y	0	0	0
NDWD	National Defence & Canadian Forces Waste Disposal Sites	Y	0	0	0
NEBI	National Energy Board Pipeline Incidents	Y	0	0	0
NEBW	National Energy Board Wells	Y	0	0	0
NEES	National Environmental Emergencies System (NEES)	Y	0	0	0
NPCB	National PCB Inventory	Y	0	0	0
NPRI	National Pollutant Release Inventory	Y	0	0	0
OGW	Oil and Gas Wells	Y	0	0	0
OOGW	Ontario Oil and Gas Wells	Y	0	0	0
OPCB	Inventory of PCB Storage Sites	Y	0	0	0
ORD	Orders	Y	0	0	0
PAP	Canadian Pulp and Paper	Y	0	0	0
PCFT	Parks Canada Fuel Storage Tanks	Y	0	0	0
PES	Pesticide Register	Y	0	4	4
PINC	TSSA Pipeline Incidents	Y	0	0	0
PRT	Private and Retail Fuel Storage Tanks	Y	0	0	0
PTTW	Permit to Take Water	Y	0	0	0
REC	Ontario Regulation 347 Waste Receivers Summary	Y	0	0	0
RSC	Record of Site Condition	Y	0	0	0
RST	Retail Fuel Storage Tanks	Y	0	0	0
SCT	Scott's Manufacturing Directory	Y	0	0	0
SPL	Ontario Spills	Y	0	8	8
SRDS	Wastewater Discharger Registration Database	Y	0	0	0
TANK	Anderson's Storage Tanks	Y	0	0	0
TCFT	Transport Canada Fuel Storage Tanks	Y	0	0	0
VAR	TSSA Variances for Abandonment of Underground Storage Tanks	Y	0	0	0
WDS	Waste Disposal Sites - MOE CA Inventory	Y	0	0	0
WDSH	Waste Disposal Sites - MOE 1991 Historical Approval Inventory	Y	0	0	0
WWIS	Water Well Information System	Y	0	4	4
Total:			1	48	49

Executive Summary: Site Report Summary - Project Property

<i>Map Key</i>	<i>DB</i>	<i>Company/Site Name</i>	<i>Address</i>	<i>Dir/Dist (m)</i>	<i>Elev diff (m)</i>	<i>Page Number</i>
1	EHS		20 Cope Dr Ottawa ON K2M 2V8	-/0.0	-1.00	16

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
2	BORE		ON	SE/11.9	0.00	16
3	WWIS		lot 29 con 6 ON	ENE/36.5	0.20	16
4	BORE		ON	N/42.7	1.71	18
5	BORE		ON	NNW/66.5	1.69	18
6	BORE		ON	N/102.3	3.36	19
7	GEN	Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega	760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	N/126.4	3.40	19
7	GEN	Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega	760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	N/126.4	3.40	20
7	GEN	Loblaw Companies Limited	760 Eagleson Rd. Kanata ON K2M 0A7	N/126.4	3.40	20
7	GEN	Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega	760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	N/126.4	3.40	21
7	GEN	Loblaw Companies Limited	760 Eagleson Rd. Kanata ON K2M 0A7	N/126.4	3.40	22
7	GEN	Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega	760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	N/126.4	3.40	23
7	GEN	Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega	760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	N/126.4	3.40	23
7	GEN	Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega	760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	N/126.4	3.40	23
7	GEN	Loblaw Companies Limited	760 Eagleson Rd. Kanata ON K2M 0A7	N/126.4	3.40	24
7	GEN	Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega	760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	N/126.4	3.40	24
7	GEN	Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega	760 Eagleson Road 2nd Floor Ottawa ON	N/126.4	3.40	24
7	PES	REAL CANADIAN SUPERSTORE #2813	760 EAGLESON RD OTTAWA ON K2M 0A7	N/126.4	3.40	25
7	PES	REAL CANADIAN SUPERSTORE #2813	760 EAGLESON ROAD OTTAWA ON K2M1H4	N/126.4	3.40	25
7	PES	REAL CANADIAN SUPERSTORE #2813	760 EAGLESON RD OTTAWA ON K2M 0A7	N/126.4	3.40	25
7	PES	REAL CANADIAN SUPERSTORE #2813	760 EAGLESON ROAD OTTAWA ON K2M1H4	N/126.4	3.40	25
7	SPL	Loblaws<UNOFFICIAL>	760 Eagleson Road Ottawa ON	N/126.4	3.40	26
7	SPL		760 Eagleson Rd, Kanata Ottawa ON	N/126.4	3.40	26
7	SPL	Real Canadian Superstore	760 Eagleson Rd, Kanata Ottawa ON K2M 0A7	N/126.4	3.40	26

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
7	SPL		760 Eagleson Rd Ottawa ON	N/126.4	3.40	27
7	SPL	Real Canadian Superstore	760 Eagleson Road Ottawa ON K2M 2G9	N/126.4	3.40	27
7	SPL	Real Canadian Superstore<UNOFFICIAL>	760 Eagleson Road, Kanata Ottawa ON K2M 0A7	N/126.4	3.40	27
7	SPL		760 Eagleson Road Ottawa ON	N/126.4	3.40	28
8	BORE		ON	SSE/158.7	-1.00	28
9	EHS		760 Eagleson Rd Ottawa ON K2M0A7	NNW/159.4	2.05	28
10	WWIS		lot 30 con 6 ON	N/204.8	6.39	29
11	BORE		ON	SSW/206.3	-2.00	32
12	WWIS		lot 30 con 6 ON	N/208.7	7.36	33
13	BORE		ON	ESE/226.0	1.08	35
14	BORE		ON	SSW/236.8	-2.00	35
15	BORE		ON	S/242.4	-2.00	36
16	BORE		ON	NNE/242.9	8.64	36
17	INC		1527 Carronbridge Road, Kanata ON	SSE/246.5	-2.00	37
18	BORE		ON	N/246.7	6.21	38
19	BORE		ON	WSW/249.5	-2.00	38
20	BORE		ON	S/269.3	-2.00	38
21	BORE		ON	WSW/273.8	-2.00	39
22	BORE		ON	SSE/291.1	-2.00	39
23	WWIS		lot 30 con 6 ON	NNE/293.5	10.00	40
24	CA	City of Ottawa	5264 and 5271 Fernbank Rd Ottawa ON	SSE/297.6	-2.00	42
24	CA	City of Ottawa	5264 and 5271 Fernbank Rd Ottawa ON	SSE/297.6	-2.00	42
24	NCPL	City of Ottawa - Stormwater Facility	5264 and 5271 Fernbank Rd Ottawa ON	SSE/297.6	-2.00	42
24	NCPL	City of Ottawa - Stormwater Facility	5264 and 5271 Fernbank Rd Ottawa ON	SSE/297.6	-2.00	43
24	SPL	City of Ottawa- Water Stormwater Treatment Unit <UNOFFICIAL>	5264 and 5271 Fernbank Rd Ottawa ON	SSE/297.6	-2.00	43

Executive Summary: Summary By Data Source

BORE - Borehole

A search of the BORE database, dated 1875-Jul 2014 has found that there are 15 BORE site(s) within approximately 0.30 kilometers of the project property.

<u>Site</u>	<u>Address</u>	<u>Distance (m)</u>	<u>Map Key</u>
	ON	11.9	<u>2</u>
	ON	42.7	<u>4</u>
	ON	66.5	<u>5</u>
	ON	102.3	<u>6</u>
	ON	158.7	<u>8</u>
	ON	206.3	<u>11</u>
	ON	226.0	<u>13</u>
	ON	236.8	<u>14</u>
	ON	242.4	<u>15</u>
	ON	242.9	<u>16</u>
	ON	246.7	<u>18</u>
	ON	249.5	<u>19</u>
	ON	269.3	<u>20</u>
	ON	273.8	<u>21</u>
	ON	291.1	<u>22</u>

CA - Certificates of Approval

A search of the CA database, dated 1985-Oct 30, 2011* has found that there are 2 CA site(s) within approximately 0.30 kilometers of the project property.

<u>Site</u>	<u>Address</u>	<u>Distance (m)</u>	<u>Map Key</u>
City of Ottawa	5264 and 5271 Fernbank Rd Ottawa ON	297.6	<u>24</u>
City of Ottawa	5264 and 5271 Fernbank Rd Ottawa ON	297.6	<u>24</u>

EHS - ERIS Historical Searches

A search of the EHS database, dated 1999-Aug 2016 has found that there are 2 EHS site(s) within approximately 0.30 kilometers of the project property.

<u>Site</u>	<u>Address</u>	<u>Distance (m)</u>	<u>Map Key</u>
	20 Cope Dr Ottawa ON K2M 2V8	0.0	<u>1</u>
	760 Eagleson Rd Ottawa ON K2M0A7	159.4	<u>9</u>

GEN - Ontario Regulation 347 Waste Generators Summary

A search of the GEN database, dated 1986-Jun 2017 has found that there are 11 GEN site(s) within approximately 0.30 kilometers of the project property.

<u>Site</u>	<u>Address</u>	<u>Distance (m)</u>	<u>Map Key</u>
Loblaw Companies Limited	760 Eagleson Rd. Kanata ON K2M 0A7	126.4	<u>7</u>
Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega	760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	126.4	<u>7</u>
Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega	760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	126.4	<u>7</u>
Loblaw Companies Limited	760 Eagleson Rd. Kanata ON K2M 0A7	126.4	<u>7</u>
Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega	760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	126.4	<u>7</u>
Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega	760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	126.4	<u>7</u>
Loblaw Companies Limited	760 Eagleson Rd. Kanata ON K2M 0A7	126.4	<u>7</u>
Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega	760 Eagleson Road 2nd Floor Ottawa ON	126.4	<u>7</u>
Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega	760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	126.4	<u>7</u>
Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega	760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	126.4	<u>7</u>

INC - TSSA Incidents

A search of the INC database, dated Feb 28, 2017 has found that there are 1 INC site(s) within approximately 0.30 kilometers of the project property.

<u>Site</u>	<u>Address</u>	<u>Distance (m)</u>	<u>Map Key</u>
	1527 Carronbridge Road, Kanata ON	246.5	<u>17</u>

NCPL - Non-Compliance Reports

A search of the NCPL database, dated Dec 31, 2014 has found that there are 2 NCPL site(s) within approximately 0.30 kilometers of the project property.

<u>Site</u>	<u>Address</u>	<u>Distance (m)</u>	<u>Map Key</u>
City of Ottawa - Stormwater Facility	5264 and 5271 Fernbank Rd Ottawa ON	297.6	<u>24</u>
City of Ottawa - Stormwater Facility	5264 and 5271 Fernbank Rd Ottawa ON	297.6	<u>24</u>

PES - Pesticide Register

A search of the PES database, dated 1988-Aug 2017 has found that there are 4 PES site(s) within approximately 0.30 kilometers of the project property.

<u>Site</u>	<u>Address</u>	<u>Distance (m)</u>	<u>Map Key</u>
REAL CANADIAN SUPERSTORE #2813	760 EAGLESON ROAD OTTAWA ON K2M1H4	126.4	<u>7</u>
REAL CANADIAN SUPERSTORE #2813	760 EAGLESON RD OTTAWA ON K2M 0A7	126.4	<u>7</u>
REAL CANADIAN SUPERSTORE #2813	760 EAGLESON ROAD OTTAWA ON K2M1H4	126.4	<u>7</u>
REAL CANADIAN SUPERSTORE #2813	760 EAGLESON RD OTTAWA ON K2M 0A7	126.4	<u>7</u>

SPL - Ontario Spills

A search of the SPL database, dated 1988-Jun 2017 has found that there are 8 SPL site(s) within approximately 0.30 kilometers of the project property.

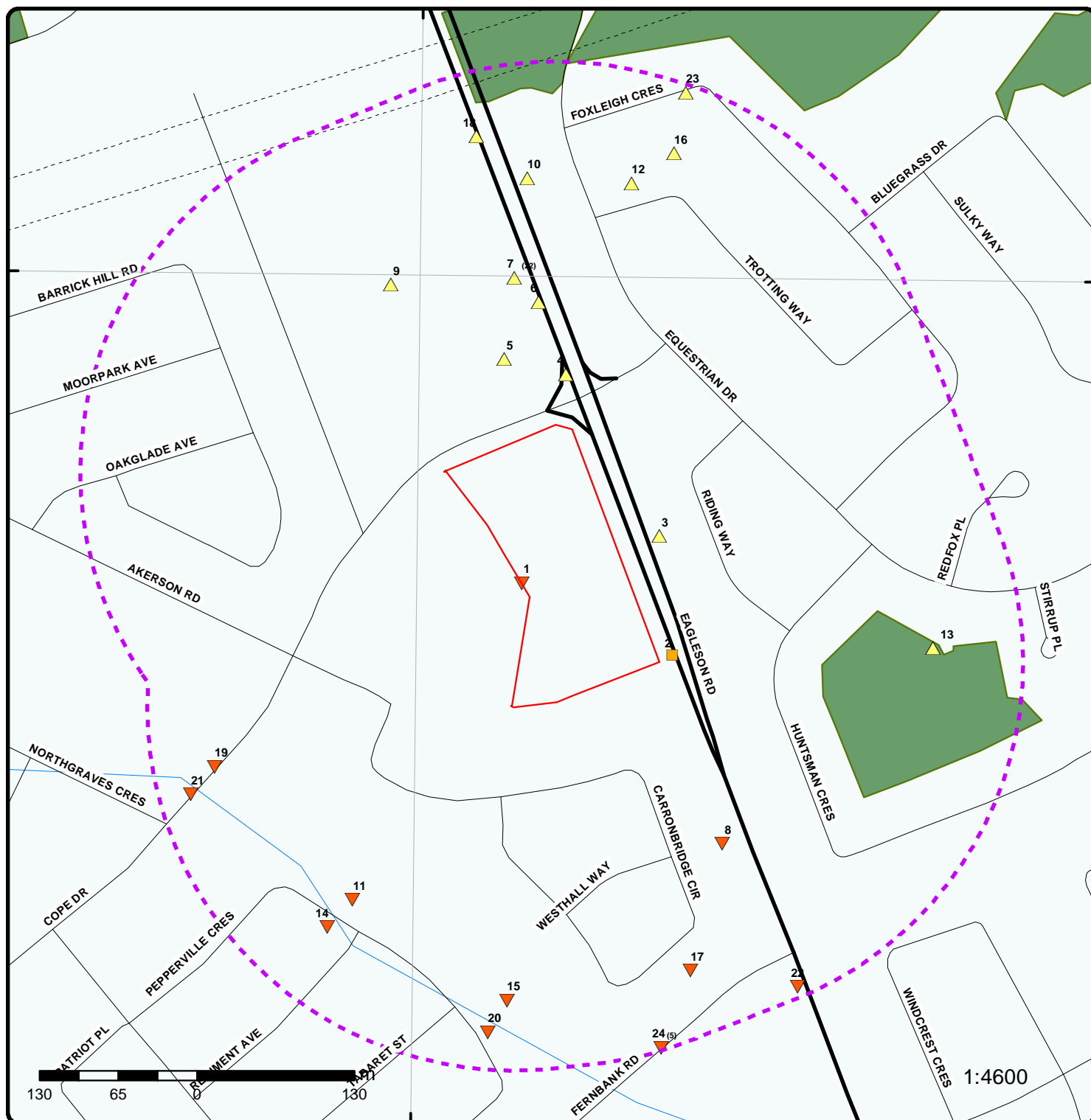
<u>Site</u>	<u>Address</u>	<u>Distance (m)</u>	<u>Map Key</u>
Real Canadian Superstore	760 Eagleson Rd, Kanata Ottawa ON K2M 0A7	126.4	<u>7</u>
	760 Eagleson Rd Ottawa ON	126.4	<u>7</u>
	760 Eagleson Rd, Kanata Ottawa ON	126.4	<u>7</u>

<u>Site</u>	<u>Address</u>	<u>Distance (m)</u>	<u>Map Key</u>
Loblaws<UNOFFICIAL>	760 Eagleson Road Ottawa ON	126.4	<u>7</u>
	760 Eagleson Road Ottawa ON	126.4	<u>7</u>
Real Canadian Superstore<UNOFFICIAL>	760 Eagleson Road, Kanata Ottawa ON K2M 0A7	126.4	<u>7</u>
Real Canadian Superstore	760 Eagleson Road Ottawa ON K2M 2G9	126.4	<u>7</u>
Clty of Ottawa- Water Stormwater Treatment Unit <UNOFFICIAL>	5264 and 5271 Fernbank Rd Ottawa ON	297.6	<u>24</u>

WWIS - Water Well Information System

A search of the WWIS database, dated Mar 31, 2017 has found that there are 4 WWIS site(s) within approximately 0.30 kilometers of the project property.

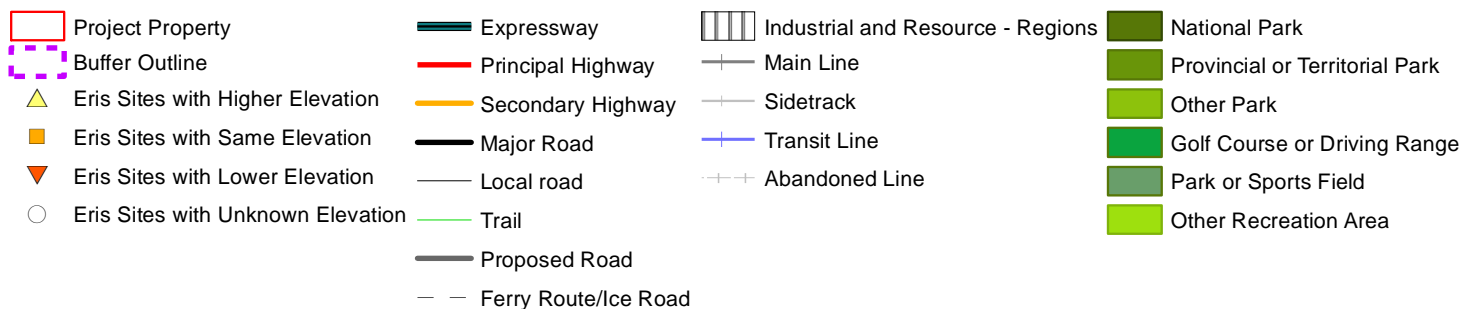
<u>Site</u>	<u>Address</u>	<u>Distance (m)</u>	<u>Map Key</u>
	lot 29 con 6 ON	36.5	<u>3</u>
	lot 30 con 6 ON	204.8	<u>10</u>
	lot 30 con 6 ON	208.7	<u>12</u>
	lot 30 con 6 ON	293.5	<u>23</u>



Map : 0.3 Kilometer Radius

Order No: 20171207043

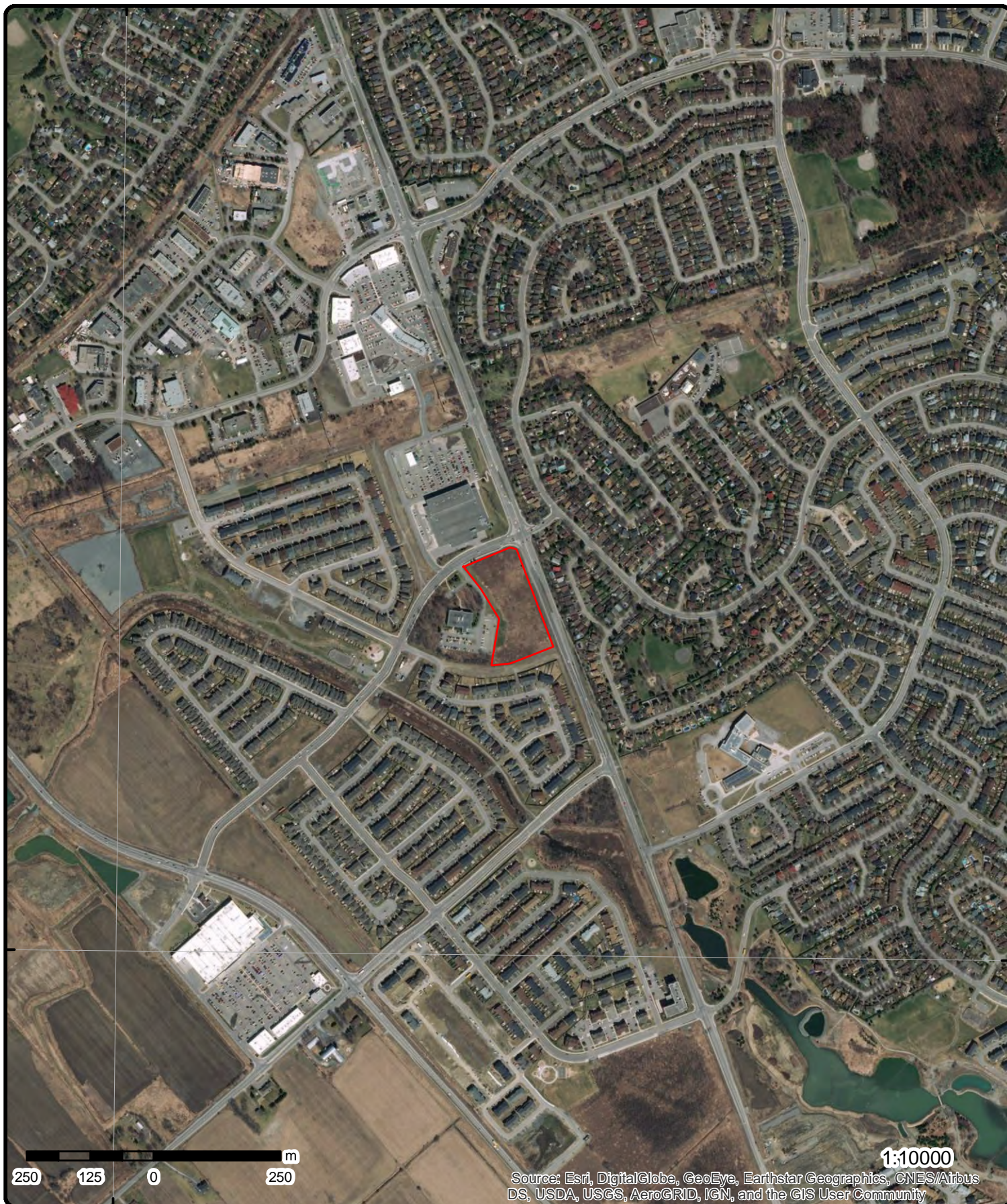
Address: 10 Cope Dr, Ottawa, ON, K2M2V8



75°52'30"W

45°16'30"N

45°16'30"N



Aerial (2016)

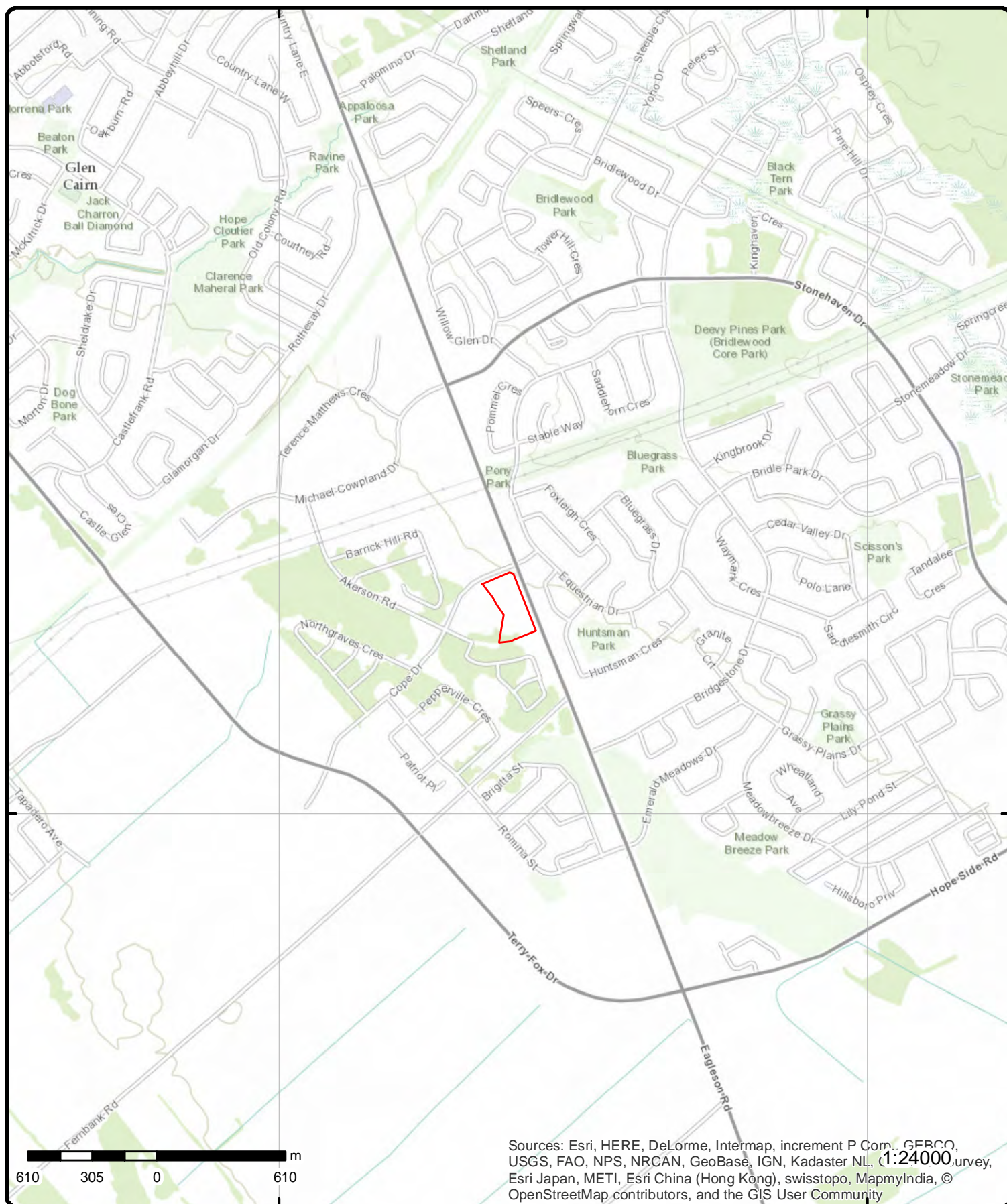
Address: 10 Cope Dr, Ottawa, ON, K2M2V8

Source: ESRI World Imagery

Order No: 20171207043



© ERIS Information Limited Partnership



Topographic Map

Address: 10 Cope Dr, Ottawa, ON, K2M2V8

Source: ESRI World Topographic Map

Order No: 20171207043



© ERIS Information Limited Partnership

Detail Report

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
1	1 of 1	-/0.0	97.9	20 Cope Dr Ottawa ON K2M 2V8	EHS
Postal Code: City: Address2: Address1: Provstate: Order No.: 20130301003 Addit. Info Ordered:: Report Date: 04-MAR-13 Report Type: Standard Report Search Radius (km): .25					
2	1 of 1	SE/11.9	98.9	ON	BORE
Borehole ID: 807140 Use: Geotechnical/Geological Investigation Drill Method:: Hollow stem auger Easting:: 432239.27 Location Accuracy:: Elev. Reliability Note:: Total Depth m:: 4.3 Township:: Lot:: Completion Date:: 06-OCT-1980 Primary Water Use::					
Type: Borehole Status:: UTM Zone:: 18 Northing:: 5014477.39 Orig. Ground Elev m:: -999.9 DEM Ground Elev m:: 97.1 Primary Name:: BH 39 Concession:: Municipality: Static Water Level:: -999.9 Sec. Water Use::					
--Details-- Stratum ID: 218591766 Bottom Depth(m): 0.6 Top Depth(m): 0.0 Stratum Desc: Brown Fill-Misc Sand - Gravel					
Stratum ID: 218591767 Bottom Depth(m): 1.1 Top Depth(m): 0.6 Stratum Desc: Dark Brown Silty Clay With: Org M					
Stratum ID: 218591768 Bottom Depth(m): 4.3 Top Depth(m): 1.1 Stratum Desc: Grey-Brown Stiff Weathered Crust Silty Clay Occasional: F Sa					
3	1 of 1	ENE/36.5	99.1	lot 29 con 6 ON	WWIS
Well ID: 1512481 Construction Date: Primary Water Use: Sec. Water Use: Final Well Status: Abandoned-Supply Water Type: Casing Material: Audit No: Tag:					
Data Entry Status: Data Src: 1 Date Received: 4/24/1973 Selected Flag: 1 Abandonment Rec: Contractor: 3504 Form Version: 1 Owner: Street Name:					

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Construction Method:				County:	OTTAWA-CARLETON
Elevation (m):				Municipality:	NEPEAN TOWNSHIP
Elevation Reliability:				Site Info:	
Depth to Bedrock:				Lot:	029
Well Depth:				Concession:	06
Overburden/Bedrock:				Concession Name:	RF
Pump Rate:				Easting NAD83:	
Static Water Level:				Northing NAD83:	
Flowing (Y/N):				Zone:	
Flow Rate:				UTM Reliability:	
Clear/Cloudy:					

Bore Hole ID:	10034471	Spatial Status:	
DP2BR:	10	Cluster Kind:	
Code OB:	r	UTMRC:	4
Code OB Desc:	Bedrock	UTMRC Desc:	margin of error : 30 m - 100 m
Open Hole:		Location Method:	p4
Elevation:	98.648864	Org CS:	
Elevrc:		Date Completed:	2/14/1973
Remarks:			
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Formation ID:	931020774
Layer:	1
Color:	0
General Color:	
Mat1:	05
Most Common Material:	CLAY
Mat2:	
Other Materials:	
Mat3:	
Other Materials:	
Formation Top Depth:	0.00
Formation End Depth:	10.00
Formation End Depth UOM:	ft

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Method Construction ID: 961512481 Method Construction Code: 4 Method Construction: Rotary (Air) Other Method Construction:					
<u>Pipe Information</u>					
Pipe ID: 10583041 Casing No: 1 Comment: Alt Name:					
<u>Construction Record - Casing</u>					
Casing ID: 930061084 Layer: 1 Material: 1 Open Hole or Material: STEEL Depth From: Depth To: 18.00 Casing Diameter: 6.00 Casing Diameter UOM: inch Casing Depth UOM: ft					
<u>4</u>	1 of 1	N/42.7	100.6	ON	BORE
Borehole ID: 807141 Use: Geotechnical/Geological Investigation Drill Method:: Hollow stem auger Easting:: 432151.63 Location Accuracy:: Elev. Reliability Note:: Total Depth m:: 4.3 Township:: Lot:: Completion Date:: 06-OCT-1980 Primary Water Use::					
Type: Borehole Status:: UTM Zone:: 18 Northing:: 5014709.49 Orig. Ground Elev m:: -999.9 DEM Ground Elev m:: 100 Primary Name:: BH 39A Concession:: Municipality: Static Water Level:: -999.9 Sec. Water Use::					
<u>--Details--</u>					
Stratum ID: 218591769 Bottom Depth(m): 0.8 Stratum ID: 218591770 Bottom Depth(m): 1.2 Stratum ID: 218591771 Bottom Depth(m): 2.9 Stratum ID: 218591772 Bottom Depth(m): 4.3					
Top Depth(m): 0.0 Stratum Desc: Black Fill-Misc Sand - Gravel Top Depth(m): 0.8 Stratum Desc: Dark Brown Silt With: Org M Top Depth(m): 1.2 Stratum Desc: Grey-Brown Very Stiff Weathered Crust Silty Clay Occasional: F Sa Top Depth(m): 2.9 Stratum Desc: Grey Very Stiff Silty Clay Occasional: F Sa					
<u>5</u>	1 of 1	NNW/66.5	100.6	ON	BORE
Borehole ID: 610561 Use: Drill Method:: Easting:: 432101 Location Accuracy::					
Type: Borehole Status:: UTM Zone:: 18 Northing:: 5014722 Orig. Ground Elev m:: 102					

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
<hr/>					
Elev. Reliability Note::				DEM Ground Elev m::	100
Total Depth m::	-999			Primary Name::	
Township::				Concession::	
Lot::				Municipality:	
Completion Date::	AUG-1970			Static Water Level::	-999.9
Primary Water Use::				Sec. Water Use::	
--Details--					
Stratum ID:	218385887			Top Depth(m):	0.0
Bottom Depth(m):	4.3			Stratum Desc:	UNSPECIFIED. SEISMIC VELOCITY = 1400.
Stratum ID:	218385888			Top Depth(m):	4.3
Bottom Depth(m):	6.1			Stratum Desc:	UNSPECIFIED. SEISMIC VELOCITY = 6500.
Stratum ID:	218385889			Top Depth(m):	6.1
Bottom Depth(m):				Stratum Desc:	BEDROCK. SEISMIC VELOCITY = 14000. SILT. GREY,FIRM. 00035004. 000080110010000200128
<hr/>					
<u>6</u>	1 of 1	N/102.3	102.2	ON	BORE
Borehole ID:	807142			Type:	Borehole
Use:	Geotechnical/Geological Investigation			Status::	
Drill Method::	Hollow stem auger			UTM Zone::	18
Easting::	432129.17			Northing::	5014768.91
Location Accuracy::				Orig. Ground Elev m::	-999.9
Elev. Reliability Note::				DEM Ground Elev m::	102
Total Depth m::	.8			Primary Name::	BH 40
Township::				Concession::	
Lot::				Municipality:	
Completion Date::	06-OCT-1980			Static Water Level::	-999.9
Primary Water Use::				Sec. Water Use::	
--Details--					
Stratum ID:	218591773			Top Depth(m):	0.0
Bottom Depth(m):	0.8			Stratum Desc:	Brown Fill-Misc Sand - Gravel
<hr/>					
<u>7</u>	1 of 22	N/126.4	102.3	Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega 760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	GEN
Generator No.:	ON7666026			PO Box No.:	
Status:				Country:	
Approval Years:	2010			Choice of Contact:	
Contam. Facility:				Co Admin:	
MHSW Facility:				Phone No. Admin:	
SIC Code:	621110				
SIC Description:	Offices of Physicians				
--Details--					
Waste Code:	312				
Waste Description:	PATHOLOGICAL WASTES				
Waste Code:	261				
Waste Description:	PHARMACEUTICALS				

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
7	2 of 22	N/126.4	102.3	Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega 760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	GEN
Generator No.:		ON7666026	PO Box No.:		
Status:		Registered	Country: Canada		
Approval Years:		As of Jun 2017	Choice of Contact:		
Contam. Facility:			Co Admin:		
MHSW Facility:			Phone No. Admin:		
SIC Code:					
SIC Description:					
--Details--					
Waste Code:		261 A			
Waste Description:		Pharmaceuticals			
Waste Code:		312 P			
Waste Description:		Pathological wastes			
7	3 of 22	N/126.4	102.3	Loblaw Companies Limited 760 Eagleson Rd. Kanata ON K2M 0A7	GEN
Generator No.:		ON6634452	PO Box No.:		
Status:		Registered	Country: Canada		
Approval Years:		As of Jun 2017	Choice of Contact:		
Contam. Facility:			Co Admin:		
MHSW Facility:			Phone No. Admin:		
SIC Code:					
SIC Description:					
--Details--					
Waste Code:		148 A			
Waste Description:		Misc. wastes and inorganic chemicals			
Waste Code:		148 I			
Waste Description:		Misc. wastes and inorganic chemicals			
Waste Code:		263 A			
Waste Description:		Misc. waste organic chemicals			
Waste Code:		261 B			
Waste Description:		Pharmaceuticals			
Waste Code:		331 L			
Waste Description:		Waste compressed gases including cylinders			
Waste Code:		261 A			
Waste Description:		Pharmaceuticals			
Waste Code:		212 L			
Waste Description:		Aliphatic solvents and residues			
Waste Code:		262 L			
Waste Description:		Detergents and soaps			
Waste Code:		212 I			
Waste Description:		Aliphatic solvents and residues			
Waste Code:		263 L			
Waste Description:		Misc. waste organic chemicals			

<i>Map Key</i>	<i>Number of Records</i>	<i>Direction/ Distance (m)</i>	<i>Elevation (m)</i>	<i>Site</i>	<i>DB</i>
Waste Code: Waste Description:		242 T Halogenated pesticides and herbicides			
Waste Code: Waste Description:		269 L Organic non-halogenated pesticide and herbicide wastes			
Waste Code: Waste Description:		145 I Wastes from the use of pigments, coatings and paints			
Waste Code: Waste Description:		252 L Waste crankcase oils and lubricants			
Waste Code: Waste Description:		269 T Organic non-halogenated pesticide and herbicide wastes			
Waste Code: Waste Description:		145 L Wastes from the use of pigments, coatings and paints			
Waste Code: Waste Description:		263 C Misc. waste organic chemicals			
Waste Code: Waste Description:		146 T Other specified inorganic sludges, slurries or solids			
Waste Code: Waste Description:		242 L Halogenated pesticides and herbicides			
Waste Code: Waste Description:		261 I Pharmaceuticals			
Waste Code: Waste Description:		122 C Alkaline slutions - containing other metals and non-metals (not cyanide)			
Waste Code: Waste Description:		112 C Acid solutions - containing heavy metals			
Waste Code: Waste Description:		312 P Pathological wastes			
Waste Code: Waste Description:		331 I Waste compressed gases including cylinders			
Waste Code: Waste Description:		262 C Detergents and soaps			
Waste Code: Waste Description:		261 L Pharmaceuticals			

7

4 of 22

N/126.4

102.3

**Dr John O. Lee, Dr Norman Bowles, Dr Timothy
Crega
760 Eagleson Road 2nd Floor
Ottawa ON K2M 0A7**

GEN

Generator No.: ON7666026
Status:
Approval Years: 2015
Contam. Facility: No
MHSW Facility: No
SIC Code: 621110
SIC Description: OFFICES OF PHYSICIANS

PO Box No.:
Country: Canada
Choice of Contact: CO_OFFICIAL
Co Admin: Patricia A Couperus
Phone No. Admin: 613-592-5265 Ext.

--Details--

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
<hr/>					
Waste Code:		312			
Waste Description:		PATHOLOGICAL WASTES			
Waste Code:		261			
Waste Description:		PHARMACEUTICALS			
<hr/>					
7	5 of 22	N/126.4	102.3	Loblaw Companies Limited 760 Eagleson Rd. Kanata ON K2M 0A7	GEN
Generator No.:	ON6634452			PO Box No.:	
Status:				Country:	Canada
Approval Years:	2016			Choice of Contact:	CO_OFFICIAL
Contam. Facility:	No			Co Admin:	Craig Hudak
MHSW Facility:	No			Phone No. Admin:	9055957544 Ext.
SIC Code:	445110				
SIC Description:		SUPERMARKETS AND OTHER GROCERY (EXCEPT CONVENIENCE) STORES			
<hr/>					
--Details--					
Waste Code:		331			
Waste Description:		WASTE COMPRESSED GASES			
Waste Code:		146			
Waste Description:		OTHER SPECIFIED INORGANICS			
Waste Code:		261			
Waste Description:		PHARMACEUTICALS			
Waste Code:		312			
Waste Description:		PATHOLOGICAL WASTES			
Waste Code:		145			
Waste Description:		PAINT/PIGMENT/COATING RESIDUES			
Waste Code:		122			
Waste Description:		ALKALINE WASTES - OTHER METALS			
Waste Code:		242			
Waste Description:		HALOGENATED PESTICIDES			
Waste Code:		148			
Waste Description:		INORGANIC LABORATORY CHEMICALS			
Waste Code:		262			
Waste Description:		DETERGENTS/SOAPS			
Waste Code:		263			
Waste Description:		ORGANIC LABORATORY CHEMICALS			
Waste Code:		252			
Waste Description:		WASTE OILS & LUBRICANTS			
Waste Code:		212			
Waste Description:		ALIPHATIC SOLVENTS			
Waste Code:		112			
Waste Description:		ACID WASTE - HEAVY METALS			
Waste Code:		269			
Waste Description:		NON-HALOGENATED PESTICIDES			

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
7	6 of 22	N/126.4	102.3	Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega 760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	GEN
Generator No.:	ON7666026			PO Box No.:	
Status:				Country:	
Approval Years:	2011			Choice of Contact:	
Contam. Facility:				Co Admin:	
MHSW Facility:				Phone No. Admin:	
SIC Code:	621110				
SIC Description:	Offices of Physicians				
--Details--					
Waste Code:	261				
Waste Description:	PHARMACEUTICALS				
Waste Code:	312				
Waste Description:	PATHOLOGICAL WASTES				
7	7 of 22	N/126.4	102.3	Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega 760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	GEN
Generator No.:	ON7666026			PO Box No.:	
Status:				Country:	Canada
Approval Years:	2014			Choice of Contact:	CO_OFFICIAL
Contam. Facility:	No			Co Admin:	Patricia A Couperus
MHSW Facility:	No			Phone No. Admin:	613-592-5265 Ext.
SIC Code:	621110				
SIC Description:	OFFICES OF PHYSICIANS				
--Details--					
Waste Code:	261				
Waste Description:	PHARMACEUTICALS				
Waste Code:	312				
Waste Description:	PATHOLOGICAL WASTES				
7	8 of 22	N/126.4	102.3	Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega 760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	GEN
Generator No.:	ON7666026			PO Box No.:	
Status:				Country:	Canada
Approval Years:	2016			Choice of Contact:	CO_OFFICIAL
Contam. Facility:	No			Co Admin:	Patricia A Couperus
MHSW Facility:	No			Phone No. Admin:	613-592-5265 Ext.
SIC Code:	621110				
SIC Description:	OFFICES OF PHYSICIANS				
--Details--					
Waste Code:	261				
Waste Description:	PHARMACEUTICALS				
Waste Code:	312				
Waste Description:	PATHOLOGICAL WASTES				

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
7	9 of 22	N/126.4	102.3	Loblaw Companies Limited 760 Eagleson Rd. Kanata ON K2M 0A7	GEN
Generator No.:	ON6634452			PO Box No.:	
Status:				Country:	Canada
Approval Years:	2015			Choice of Contact:	CO_OFFICIAL
Contam. Facility:	No			Co Admin:	
MHSW Facility:	No			Phone No. Admin:	
SIC Code:	445110				
SIC Description:	SUPERMARKETS AND OTHER GROCERY (EXCEPT CONVENIENCE) STORES				
--Details--					
Waste Code:	312				
Waste Description:	PATHOLOGICAL WASTES				
7	10 of 22	N/126.4	102.3	Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega 760 Eagleson Road 2nd Floor Ottawa ON K2M 0A7	GEN
Generator No.:	ON7666026			PO Box No.:	
Status:				Country:	
Approval Years:	2012			Choice of Contact:	
Contam. Facility:				Co Admin:	
MHSW Facility:				Phone No. Admin:	
SIC Code:	621110				
SIC Description:	Offices of Physicians				
--Details--					
Waste Code:	261				
Waste Description:	PHARMACEUTICALS				
Waste Code:	312				
Waste Description:	PATHOLOGICAL WASTES				
7	11 of 22	N/126.4	102.3	Dr John O. Lee, Dr Norman Bowles, Dr Timothy Crega 760 Eagleson Road 2nd Floor Ottawa ON	GEN
Generator No.:	ON7666026			PO Box No.:	
Status:				Country:	
Approval Years:	2013			Choice of Contact:	
Contam. Facility:				Co Admin:	
MHSW Facility:				Phone No. Admin:	
SIC Code:	621110				
SIC Description:	OFFICES OF PHYSICIANS				
--Details--					
Waste Code:	261				
Waste Description:	PHARMACEUTICALS				
Waste Code:	312				
Waste Description:	PATHOLOGICAL WASTES				

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
7	12 of 22	N/126.4	102.3	REAL CANADIAN SUPERSTORE #2813 760 EAGLESON RD OTTAWA ON K2M 0A7	PES
Licence No.: Detail Licence No.: Licence Type Code: Licence Type: Vendor Licence Class: Licence Control: Trade Name: Post Office Box: Lot: Concession: Region: District: County:		Operator Box: Operator Class: Operator No.: Operator Type: Operator Lot: Oper Concession: Operator Region: Operator District: Operator County: Oper Phone Area Cd: Ext: Oper Phone Number: Proponent Ext:			
7	13 of 22	N/126.4	102.3	REAL CANADIAN SUPERSTORE #2813 760 EAGLESON ROAD OTTAWA ON K2M1H4	PES
Licence No.: Detail Licence No.: Licence Type Code: 23 Licence Type: Limited Vendor Licence Class: Licence Control: Trade Name: Post Office Box: Lot: Concession: Region: District: County:		Operator Box: Operator Class: Operator No.: Operator Type: Operator Lot: Oper Concession: Operator Region: Operator District: Operator County: Oper Phone Area Cd: Ext: Oper Phone Number: Proponent Ext:			
7	14 of 22	N/126.4	102.3	REAL CANADIAN SUPERSTORE #2813 760 EAGLESON RD OTTAWA ON K2M 0A7	PES
Licence No.: Detail Licence No.: 23-01-14014-0 Licence Type Code: Licence Type: LIMITED Licence Class: Licence Control: Trade Name: Post Office Box: Lot: Concession: Region: District: County:		Operator Box: Operator Class: Operator No.: Operator Type: Operator Lot: Oper Concession: Operator Region: Operator District: Operator County: Oper Phone Area Cd: Ext: Oper Phone Number: Proponent Ext:			
7	15 of 22	N/126.4	102.3	REAL CANADIAN SUPERSTORE #2813 760 EAGLESON ROAD OTTAWA ON K2M1H4	PES
Licence No.: Detail Licence No.: Licence Type Code:		Operator Box: Operator Class: Operator No.:			

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Licence Type: Licence Class: Licence Control: Trade Name: Post Office Box: Lot: Concession: Region: District: County:	Vendor			Operator Type: Operator Lot: Oper Concession: Operator Region: Operator District: Operator County: Oper Phone Area Cd: Ext: Oper Phone Number: Proponent Ext:	
7	16 of 22	N/126.4	102.3	Loblaws<UNOFFICIAL> 760 Eagleson Road Ottawa ON	SPL
Ref No: Contaminant Name: Contaminant Code: Contaminant Limit 1: Contam. Limit Freq 1: Contaminant UN No 1: Contaminant Qty: MOE Reported Dt: Health/Env Conseq: Incident Dt: Incident Cause: Incident Event: Incident Reason: Incident Summary:	6112-9G4RPW FREON (CFC) 38 136 kg 2014/02/07 2014/02/07 Leak/Break Equipment Failure Loblaws: R507 leak, 136 kg to atm			Site Address: Site Conc: Site Lot: Site County/District: Site Municipality: Site Postal Code: Sector Type: Source Type: Receiving Medium: Receiving Env: Environment Impact: Nature of Impact: SAC Action Class:	760 Eagleson Road Ottawa Pipeline/Components Confirmed Air Pollution Air Spills - Gases and Vapours
7	17 of 22	N/126.4	102.3	760 Eagleson Rd, Kanata Ottawa ON	SPL
Ref No: Contaminant Name: Contaminant Code: Contaminant Limit 1: Contam. Limit Freq 1: Contaminant UN No 1: Contaminant Qty: MOE Reported Dt: Health/Env Conseq: Incident Dt: Incident Cause: Incident Event: Incident Reason: Incident Summary:	7747-88XSU5 FREON R-507 (CFC) 38 136 kg 9/3/2010 Real Canadian Superstore: R507 release			Site Address: Site Conc: Site Lot: Site County/District: Site Municipality: Site Postal Code: Sector Type: Source Type: Receiving Medium: Receiving Env: Environment Impact: Nature of Impact: SAC Action Class:	Other Not Anticipated Air Pollution Air Spills - Gases and Vapours
7	18 of 22	N/126.4	102.3	Real Canadian Superstore 760 Eagleson Rd, Kanata Ottawa ON K2M 0A7	SPL
Ref No: Contaminant Name: Contaminant Code: Contaminant Limit 1: Contam. Limit Freq 1: Contaminant UN No 1: Contaminant Qty: MOE Reported Dt:	7154-8RPT5U REFRIGERANT GAS, N.O.S. 38 21-FEB-12			Site Address: Site Conc: Site Lot: Site County/District: Site Municipality: Site Postal Code: Sector Type: Source Type:	760 Eagleson Rd, Kanata Ottawa Other

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Health/Env Conseq:				Receiving Medium:	Sewage - Municipal/Private and Commercial
Incident Dt:	21-FEB-12			Receiving Env:	
Incident Cause:	Discharge or Emission to Air			Environment Impact:	Confirmed
Incident Event:				Nature of Impact:	Air Pollution
Incident Reason:				SAC Action Class:	Air Spills - Gases and Vapours
Incident Summary:	RCSS: 300lbs R507 to atm				
7	19 of 22	N/126.4	102.3	760 Eagleson Rd Ottawa ON	SPL
Ref No:	0144-AMG4CE			Site Address:	760 Eagleson Rd
Contaminant Name:	REFRIGERANT GAS, N.O.S.			Site Conc:	
Contaminant Code:	38			Site Lot:	
Contaminant Limit 1:				Site County/District:	
Contam. Limit Freq 1:				Site Municipality:	Ottawa
Contaminant UN No 1:	1078			Site Postal Code:	
Contaminant Qty:	720 lb			Sector Type:	Miscellaneous Industrial
MOE Reported Dt:	5/17/2017			Source Type:	Valve/Fitting/Piping
Health/Env Conseq:	2 - Minor Environment			Receiving Medium:	
Incident Dt:	5/17/2017			Receiving Env:	Air
Incident Cause:				Environment Impact:	
Incident Event:	Leak/Break			Nature of Impact:	
Incident Reason:	Equipment Failure			SAC Action Class:	
Incident Summary:	RCS: 720lb of R507A to atmosphere				
7	20 of 22	N/126.4	102.3	Real Canadian Superstore 760 Eagleson Road Ottawa ON K2M 2G9	SPL
Ref No:	4480-8E3T3L			Site Address:	760 Eagleson Road
Contaminant Name:	REFRIGERANT GAS, N.O.S.			Site Conc:	
Contaminant Code:	38			Site Lot:	
Contaminant Limit 1:				Site County/District:	
Contam. Limit Freq 1:				Site Municipality:	Ottawa
Contaminant UN No 1:				Site Postal Code:	
Contaminant Qty:	102 kg			Sector Type:	Other
MOE Reported Dt:	2/14/2011			Source Type:	
Health/Env Conseq:				Receiving Medium:	
Incident Dt:	2/14/2011			Receiving Env:	
Incident Cause:	Discharge or Emission to Air			Environment Impact:	Not Anticipated
Incident Event:				Nature of Impact:	Air Pollution
Incident Reason:	Equipment Failure			SAC Action Class:	Air Spills - Gases and Vapours
Incident Summary:	Real Cnd Superstore: 102 kg of R507, repaired				
7	21 of 22	N/126.4	102.3	Real Canadian Superstore<UNOFFICIAL> 760 Eagleson Road, Kanata Ottawa ON K2M 0A7	SPL
Ref No:	6086-8VEV44			Site Address:	760 Eagleson Road, Kanata
Contaminant Name:	FREON R-507 (CFC)			Site Conc:	
Contaminant Code:	38			Site Lot:	
Contaminant Limit 1:				Site County/District:	
Contam. Limit Freq 1:				Site Municipality:	Ottawa
Contaminant UN No 1:				Site Postal Code:	
Contaminant Qty:				Sector Type:	Other
MOE Reported Dt:	19-JUN-12			Source Type:	
Health/Env Conseq:				Receiving Medium:	Sewage - Municipal/Private and Commercial
Incident Dt:	19-JUN-12			Receiving Env:	
Incident Cause:	Discharge or Emission to Air			Environment Impact:	Confirmed
Incident Event:				Nature of Impact:	Air Pollution

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Incident Reason: Incident Summary:		Equipment Failure Real Cndn Superstore, 300lbs R507 to atm, repaired		SAC Action Class: Air Spills - Gases and Vapours	
7	22 of 22	N/126.4	102.3	760 Eagleson Road Ottawa ON	SPL
Ref No: Contaminant Name: Contaminant Code: Contaminant Limit 1: Contam. Limit Freq 1: Contaminant UN No 1: Contaminant Qty: MOE Reported Dt: Health/Env Conseq: Incident Dt: Incident Cause: Incident Event: Incident Reason: Incident Summary:		8155-7HRSFA REFRIGERANT GAS, N.O.S. 38 136 kg 8/22/2008 Discharge or Emission to Air Loblaw's, Ottawa, 136 kg R507 to Atm, fixed		Site Address: Site Conc: Site Lot: Site County/District: Site Municipality: Site Postal Code: Sector Type: Source Type: Receiving Medium: Receiving Env: Environment Impact: Nature of Impact: SAC Action Class:	Ottawa Unknown Not Anticipated Air Spills - Gases and Vapours
8	1 of 1	SSE/158.7	97.9	ON	BORE
Borehole ID: Use: Drill Method:: Easting:: Location Accuracy:: Elev. Reliability Note:: Total Depth m:: Township:: Lot:: Completion Date:: Primary Water Use::		610552 432281 -999 AUG-1970		Type: Status:: UTM Zone:: Northing:: Orig. Ground Elev m:: DEM Ground Elev m:: Primary Name:: Concession:: Municipality: Static Water Level:: Sec. Water Use::	Borehole 18 5014322 96 95.1 -999.9
--Details-- Stratum ID: Bottom Depth(m):		218385868 3.0		Top Depth(m): Stratum Desc:	0.0 UNSPECIFIED. SEISMIC VELOCITY = 900.
Stratum ID: Bottom Depth(m):		218385869 11.3		Top Depth(m): Stratum Desc:	3.0 UNSPECIFIED. SEISMIC VELOCITY = 7000.
Stratum ID: Bottom Depth(m):		218385870		Top Depth(m): Stratum Desc:	11.3 BEDROCK. SEISMIC VELOCITY = 14500. SILT. GREY,FIRM. 00035004. 00008011001000020012
9	1 of 1	NNW/159.4	100.9	760 Eagleson Rd Ottawa ON K2M0A7	EHS
Postal Code: City: Address2: Address1: Provstate: Order No.: Addit. Info Ordered:: Report Date:		K2M0A7 Ottawa 760 Eagleson Rd ON 20151116032 20-NOV-15			

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Report Type:		Standard Report			
Search Radius (km):		.25			
10	1 of 1	N/204.8	105.3	lot 30 con 6 ON	WWIS
Well ID:		1512483		Data Entry Status:	
Construction Date:				Data Src:	1
Primary Water Use:				Date Received:	4/24/1973
Sec. Water Use:				Selected Flag:	1
Final Well Status:		Observation Wells		Abandonment Rec:	
Water Type:				Contractor:	3504
Casing Material:				Form Version:	1
Audit No:				Owner:	
Tag:				Street Name:	
Construction Method:				County:	OTTAWA-CARLETON
Elevation (m):				Municipality:	NEPEAN TOWNSHIP
Elevation Reliability:				Site Info:	
Depth to Bedrock:				Lot:	030
Well Depth:				Concession:	06
Overburden/Bedrock:				Concession Name:	RF
Pump Rate:				Easting NAD83:	
Static Water Level:				Northing NAD83:	
Flowing (Y/N):				Zone:	
Flow Rate:				UTM Reliability:	
Clear/Cloudy:					
<u>Bore Hole Information</u>					
Bore Hole ID:		10034473		Spatial Status:	
DP2BR:		90		Cluster Kind:	
Code OB:		r		UTMRC:	
Code OB Desc:		Bedrock		4	
Open Hole:				UTMRC Desc:	
Elevation:		103.593597		margin of error : 30 m - 100 m	
Elevrc:				Location Method:	
Remarks:				p4	
Elevrc Desc:				Org CS:	
Location Source Date:				Date Completed:	
Improvement Location Source:				2/8/1973	
Improvement Location Method:					
Source Revision Comment:					
Supplier Comment:					
<u>Overburden and Bedrock</u>					
<u>Materials Interval</u>					
Formation ID:		931020780			
Layer:		1			
Color:		0			
General Color:					
Mat1:		05			
Most Common Material:		CLAY			
Mat2:					
Other Materials:					
Mat3:					
Other Materials:					
Formation Top Depth:		0.00			
Formation End Depth:		5.00			
Formation End Depth UOM:		ft			
Formation ID:		931020781			

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Layer:	2				
Color:	0				
General Color:					
Mat1:	28				
Most Common Material:	SAND				
Mat2:					
Other Materials:					
Mat3:					
Other Materials:					
Formation Top Depth:	5.00				
Formation End Depth:	10.00				
Formation End Depth UOM:	ft				
Formation ID:	931020782				
Layer:	3				
Color:	0				
General Color:					
Mat1:	05				
Most Common Material:	CLAY				
Mat2:					
Other Materials:					
Mat3:					
Other Materials:					
Formation Top Depth:	10.00				
Formation End Depth:	23.00				
Formation End Depth UOM:	ft				
Formation ID:	931020783				
Layer:	4				
Color:	0				
General Color:					
Mat1:	11				
Most Common Material:	GRAVEL				
Mat2:	13				
Other Materials:	BOULDERS				
Mat3:	14				
Other Materials:	HARDPAN				
Formation Top Depth:	23.00				
Formation End Depth:	90.00				
Formation End Depth UOM:	ft				
Formation ID:	931020784				
Layer:	5				
Color:	0				
General Color:					
Mat1:	15				
Most Common Material:	LIMESTONE				
Mat2:					
Other Materials:					
Mat3:					
Other Materials:					
Formation Top Depth:	90.00				
Formation End Depth:	177.00				
Formation End Depth UOM:	ft				
Formation ID:	931020785				
Layer:	6				
Color:	0				
General Color:					
Mat1:	18				
Most Common Material:	SANDSTONE				
Mat2:					
Other Materials:					
Mat3:					
Other Materials:					
Formation Top Depth:	177.00				

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Formation End Depth:		190.00			
Formation End Depth UOM:		ft			
Formation ID:		931020786			
Layer:		7			
Color:		0			
General Color:					
Mat1:		15			
Most Common Material:		LIMESTONE			
Mat2:					
Other Materials:					
Mat3:					
Other Materials:					
Formation Top Depth:		190.00			
Formation End Depth:		245.00			
Formation End Depth UOM:		ft			
<u>Method of Construction & Well Use</u>					
Method Construction ID:		961512483			
Method Construction Code:		4			
Method Construction:		Rotary (Air)			
Other Method Construction:					
<u>Pipe Information</u>					
Pipe ID:		10583043			
Casing No:		1			
Comment:					
Alt Name:					
<u>Construction Record - Casing</u>					
Casing ID:		930061086			
Layer:		1			
Material:		1			
Open Hole or Material:		STEEL			
Depth From:					
Depth To:		92.00			
Casing Diameter:		6.00			
Casing Diameter UOM:		inch			
Casing Depth UOM:		ft			
<u>Results of Well Yield Testing</u>					
Pump Test ID:		991512483			
Pump Set At:					
Static Level:		6.00			
Final Level After Pumping:		225.00			
Recommended Pump Depth:					
Pumping Rate:		40.00			
Flowing Rate:					
Recommended Pump Rate:					
Levels UOM:		ft			
Rate UOM:		GPM			
Water State After Test Code:		1			
Water State After Test:		CLEAR			
Pumping Test Method:		1			
Pumping Duration HR:		0			
Pumping Duration MIN:		30			
Flowing:		N			

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
<u>Draw Down & Recovery</u>					
Pump Test Detail ID:		934377506			
Test Type:		Recovery			
Test Duration:		30			
Test Level:		9.00			
Test Level UOM:		ft			
Pump Test Detail ID:		934647831			
Test Type:		Recovery			
Test Duration:		45			
Test Level:		8.00			
Test Level UOM:		ft			
Pump Test Detail ID:		934896404			
Test Type:		Recovery			
Test Duration:		60			
Test Level:		6.00			
Test Level UOM:		ft			
<u>Water Details</u>					
Water ID:		933467955			
Layer:		1			
Kind Code:		1			
Kind:		FRESH			
Water Found Depth:		177.00			
Water Found Depth UOM:		ft			
Water ID:		933467956			
Layer:		2			
Kind Code:		1			
Kind:		FRESH			
Water Found Depth:		245.00			
Water Found Depth UOM:		ft			
11	1 of 1	SSW/206.3	96.9	ON	BORE
Borehole ID:	804353			Type:	Borehole
Use:	Geotechnical/Geological Investigation			Status::	
Drill Method::	Hand auger			UTM Zone::	18
Easting::	431975.58			Northing::	5014275.81
Location Accuracy::				Orig. Ground Elev m::	-999.9
Elev. Reliability Note::				DEM Ground Elev m::	92.9
Total Depth m::	2.5			Primary Name::	AH.13
Township::				Concession::	
Lot::				Municipality:	
Completion Date::	08-OCT-1993			Static Water Level::	-999.9
Primary Water Use::				Sec. Water Use::	
<u>--Details--</u>					
Stratum ID:	218580308			Top Depth(m):	0.0
Bottom Depth(m):	0.3			Stratum Desc:	Brown sand silt
Stratum ID:	218580309			Top Depth(m):	0.3
Bottom Depth(m):	0.4			Stratum Desc:	Peat
Stratum ID:	218580310			Top Depth(m):	0.4
Bottom Depth(m):	2.5			Stratum Desc:	Grey sand silt at depth 2.5m, end of augerhole in silty clay

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
12	1 of 1	N/208.7	106.2	lot 30 con 6 ON	WWIS
<div> <div> Well ID: 1506401 Construction Date: Primary Water Use: Livestock Sec. Water Use: Domestic Final Well Status: Water Supply Water Type: Casing Material: Audit No: Tag: Construction Method: Elevation (m): Elevation Reliability: Depth to Bedrock: Well Depth: Overburden/Bedrock: Pump Rate: Static Water Level: Flowing (Y/N): Flow Rate: Clear/Cloudy: </div> <div> Data Entry Status: Data Src: 1 Date Received: 12/8/1954 Selected Flag: 1 Abandonment Rec: Contractor: 4824 Form Version: 1 Owner: Street Name: County: OTTAWA-CARLETON Municipality: NEPEAN TOWNSHIP Site Info: Lot: 030 Concession: 06 Concession Name: RF Easting NAD83: Northing NAD83: Zone: UTM Reliability: </div> </div>					
<u>Bore Hole Information</u>					
<div> <div> Bore Hole ID: 10028444 DP2BR: 0 Code OB: r Code OB Desc: Bedrock Open Hole: Elevation: 102.812431 Elevrc: Remarks: Elevrc Desc: Location Source Date: Improvement Location Source: Improvement Location Method: Source Revision Comment: Supplier Comment: </div> <div> Spatial Status: Cluster Kind: UTMRC: 5 UTMRC Desc: margin of error : 100 m - 300 m Location Method: p5 Org CS: Date Completed: 8/24/1954 </div> </div>					
<u>Overburden and Bedrock</u>					
<u>Materials Interval</u>					
<div> <div> Formation ID: 931004452 Layer: 1 Color: General Color: Mat1: 17 Most Common Material: SHALE Mat2: Other Materials: Mat3: Other Materials: Formation Top Depth: 0.00 Formation End Depth: 20.00 Formation End Depth UOM: ft </div> <div> Formation ID: 931004453 Layer: 2 Color: 2 </div> </div>					

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
<hr/>					
General Color:		GREY			
Mat1:		15			
Most Common Material:		LIMESTONE			
Mat2:					
Other Materials:					
Mat3:					
Other Materials:					
Formation Top Depth:		20.00			
Formation End Depth:		100.00			
Formation End Depth UOM:		ft			
<u>Method of Construction & Well Use</u>					
Method Construction ID:		961506401			
Method Construction Code:		1			
Method Construction:		Cable Tool			
Other Method Construction:					
<u>Pipe Information</u>					
Pipe ID:		10577014			
Casing No:		1			
Comment:					
Alt Name:					
<u>Construction Record - Casing</u>					
Casing ID:		930049633			
Layer:		1			
Material:		1			
Open Hole or Material:		STEEL			
Depth From:					
Depth To:		20.00			
Casing Diameter:		4.00			
Casing Diameter UOM:		inch			
Casing Depth UOM:		ft			
Casing ID:		930049634			
Layer:		2			
Material:		4			
Open Hole or Material:		OPEN HOLE			
Depth From:					
Depth To:		100.00			
Casing Diameter:		4.00			
Casing Diameter UOM:		inch			
Casing Depth UOM:		ft			
<u>Results of Well Yield Testing</u>					
Pump Test ID:		991506401			
Pump Set At:					
Static Level:		20.00			
Final Level After Pumping:		25.00			
Recommended Pump Depth:					
Pumping Rate:		4.00			
Flowing Rate:					
Recommended Pump Rate:					
Levels UOM:		ft			
Rate UOM:		GPM			
Water State After Test Code:		1			
Water State After Test:		CLEAR			

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Pumping Test Method:		1			
Pumping Duration HR:		0			
Pumping Duration MIN:		30			
Flowing:		N			
Water Details					
Water ID:		933460545			
Layer:		1			
Kind Code:		1			
Kind:		FRESH			
Water Found Depth:		20.00			
Water Found Depth UOM:		ft			
Water ID:		933460546			
Layer:		2			
Kind Code:		1			
Kind:		FRESH			
Water Found Depth:		98.00			
Water Found Depth UOM:		ft			
13	1 of 1	ESE/226.0	100.0	ON	BORE
Borehole ID:		802199		Type:	Borehole
Use:		Geotechnical/Geological Investigation		Status::	
Drill Method::		Power auger		UTM Zone::	18
Easting::		432454.33		Northing::	5014483.38
Location Accuracy::				Orig. Ground Elev m::	99.4
Elev. Reliability Note::				DEM Ground Elev m::	98.5
Total Depth m::		21.1		Primary Name::	BH 1
Township::				Concession::	
Lot::				Municipality:	
Completion Date::		10-FEB-1977		Static Water Level::	-999.9
Primary Water Use::				Sec. Water Use::	
--Details--					
Stratum ID:		218571215		Top Depth(m):	0.0
Bottom Depth(m):		0.2		Stratum Desc:	Topsoil
Stratum ID:		218571216		Top Depth(m):	0.2
Bottom Depth(m):		2.9		Stratum Desc:	Brown Very Stiff to Stiff Weathered Crust Silty Clay
Stratum ID:		218571217		Top Depth(m):	2.9
Bottom Depth(m):		4.6		Stratum Desc:	Grey Firm Silty Clay With: Sa
Stratum ID:		218571218		Top Depth(m):	4.6
Bottom Depth(m):		13.6		Stratum Desc:	Loose to Compact Silt - Sand With: Gr Trace: Cl
Stratum ID:		218571219		Top Depth(m):	13.6
Bottom Depth(m):		21.1		Stratum Desc:	Grey Bedrock Limestone
14	1 of 1	SSW/236.8	96.9	ON	BORE
Borehole ID:		804342		Type:	Borehole
Use:		Geotechnical/Geological Investigation		Status::	
Drill Method::		Hand auger		UTM Zone::	18
Easting::		431955.03		Northing::	5014253.2
Location Accuracy::				Orig. Ground Elev m::	-999.9

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
<hr/>					
Elev. Reliability Note::				DEM Ground Elev m::	92.8
Total Depth m::	2.5			Primary Name::	AH.6
Township::				Concession::	
Lot::				Municipality:	
Completion Date::	08-OCT-1993			Static Water Level::	-999.9
Primary Water Use::				Sec. Water Use::	
--Details--					
Stratum ID:	218580269			Top Depth(m):	0.0
Bottom Depth(m):	0.3			Stratum Desc:	Topsoil
Stratum ID:	218580270			Top Depth(m):	0.3
Bottom Depth(m):	0.9			Stratum Desc:	Grey Silt - Sand
Stratum ID:	218580271			Top Depth(m):	0.9
Bottom Depth(m):	2.5			Stratum Desc:	Grey clay silt
<hr/>					
15	1 of 1	S/242.4	96.9	ON	BORE
Borehole ID:	804355			Type:	Borehole
Use:	Geotechnical/Geological Investigation			Status::	
Drill Method::	Hand auger			UTM Zone::	18
Easting::	432103.01			Northing::	5014192.45
Location Accuracy::				Orig. Ground Elev m::	-999.9
Elev. Reliability Note::				DEM Ground Elev m::	92.8
Total Depth m::	2			Primary Name::	AH.14
Township::				Concession::	
Lot::				Municipality:	
Completion Date::	08-OCT-1993			Static Water Level::	-999.9
Primary Water Use::				Sec. Water Use::	
--Details--					
Stratum ID:	218580317			Top Depth(m):	0.0
Bottom Depth(m):	0.2			Stratum Desc:	Topsoil
Stratum ID:	218580318			Top Depth(m):	0.2
Bottom Depth(m):	1.6			Stratum Desc:	Brown Silt - Sand
Stratum ID:	218580319			Top Depth(m):	1.6
Bottom Depth(m):	2.0			Stratum Desc:	Grey Silty Clay
<hr/>					
16	1 of 1	NNE/242.9	107.5	ON	BORE
Borehole ID:	610568			Type:	Borehole
Use:				Status::	
Drill Method::				UTM Zone::	18
Easting::	432241			Northing::	5014892
Location Accuracy::				Orig. Ground Elev m::	106
Elev. Reliability Note::				DEM Ground Elev m::	104
Total Depth m::	-999			Primary Name::	
Township::				Concession::	
Lot::				Municipality:	
Completion Date::				Static Water Level::	.9
Primary Water Use::				Sec. Water Use::	
--Details--					
Stratum ID:	218385902			Top Depth(m):	0.0
Bottom Depth(m):	6.1			Stratum Desc:	BEDROCK, SHALE.

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
<hr/>					
Stratum ID: Bottom Depth(m):	218385903			Top Depth(m): Stratum Desc:	6.1 BEDROCK,LIMESTONE. WATER STABLE AT 347.0 FEET. 15500. BEDROCK. SEISMIC VELOCITY = 14000.
<hr/>					
17	1 of 1	SSE/246.5	96.9	1527 Carronbridge Road, Kanata ON	INC
<hr/>					
Incident No:	734246				
Incident ID:	2891288				
Attribute Category:	FS-Perform L1 Incident Insp				
Status Code:	Pending L2 Causal Analysis				
Incident Location:	1527 Carronbridge Road, Kanata - CO Release				
Drainage System:					
Sub Surface Contam.:					
Aff. Prop. Use Water:					
Contam. Migrated:					
Contact Natural Env.:					
Near Body of Water:					
Approx. Quant. Rel.:					
Equipment Model:	GKS90703BXAG				
Serial No:	1107536362				
Residential App. Type:	Furnace				
Commercial App. Type:					
Industrial App. Type:					
Institutional App. Type:					
Venting Type:	Direct Vent				
Vent Connector Mater:					
Vent Chimney Mater:	Plastic - CPVC				
Pipeline Type:					
Pipeline Involved:					
Pipe Material:					
Depth Ground Cover:					
Regulator Location:					
Regulator Type:					
Operation Pressure:					
Liquid Prop Make:					
Liquid Prop Model:					
Liquid Prop Serial No:					
Equipment Type:					
Cylinder Capacity:					
Cylinder Capac. Units:					
Cylinder Material Type:					
Tank Capacity:					
Fuels Occurrence Type:	CO Release				
Fuel Type Involved:	Natural Gas				
Date of Occurrence:	2012/02/05 00:00:00				
Time of Occurrence:	NULL				
Occur Insp Start Date:	2012/02/08 00:00:00				
Any Health Impact:	Unknown				
Any Environmental Impact:	No				
Was Service Interrupted:	Yes				
Was Property Damaged:	Yes				
Operation Type Involved:	Private Dwelling				
Enforcement Policy:	NULL				
Prc Escalation Required:	NULL				
Task No:	3708748				
Notes:					
Occurrence Narrative:	Not reported until Feb. 8, 2012				
Tank Material Type:					
Tank Storage Type:					
Tank Location Type:					
Pump Flow Rate Capac:					

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Liquid Prop Notes:					
18	1 of 1	N/246.7	105.1	ON	BORE
Borehole ID:	807144			Type:	Borehole
Use:	Geotechnical/Geological Investigation			Status::	
Drill Method::	Hollow stem auger			UTM Zone::	18
Easting::	432077.59			Northing::	5014905.35
Location Accuracy::				Orig. Ground Elev m::	-999.9
Elev. Reliability Note::				DEM Ground Elev m::	104
Total Depth m::	5			Primary Name::	BH 41
Township::				Concession::	
Lot::				Municipality:	
Completion Date::	06-OCT-1980			Static Water Level::	-999.9
Primary Water Use::				Sec. Water Use::	
--Details--					
Stratum ID:	218591779			Top Depth(m):	0.0
Bottom Depth(m):	1.0			Stratum Desc:	Brown Fill-Misc Sand - Gravel
Stratum ID:	218591780			Top Depth(m):	1.0
Bottom Depth(m):	2.3			Stratum Desc:	Brown to Grey Fill-Misc Silt - Sand With: Gr
Stratum ID:	218591781			Top Depth(m):	2.3
Bottom Depth(m):	3.0			Stratum Desc:	Brown Very Stiff Fill-Misc Silty Clay With: Gr
Stratum ID:	218591782			Top Depth(m):	3.0
Bottom Depth(m):	5.0			Stratum Desc:	Grey-Brown Very Stiff Weathered Crust Silty Clay Occasional: F Sa
19	1 of 1	WSW/249.5	96.9	ON	BORE
Borehole ID:	804352			Type:	Borehole
Use:	Geotechnical/Geological Investigation			Status::	
Drill Method::	Hand auger			UTM Zone::	18
Easting::	431861.85			Northing::	5014385.42
Location Accuracy::				Orig. Ground Elev m::	-999.9
Elev. Reliability Note::				DEM Ground Elev m::	93.8
Total Depth m::	3			Primary Name::	AH.12
Township::				Concession::	
Lot::				Municipality:	
Completion Date::	08-OCT-1993			Static Water Level::	-999.9
Primary Water Use::				Sec. Water Use::	
--Details--					
Stratum ID:	218580307			Top Depth(m):	0.0
Bottom Depth(m):	3.0			Stratum Desc:	Peat
20	1 of 1	S/269.3	96.9	ON	BORE
Borehole ID:	804340			Type:	Borehole
Use:	Geotechnical/Geological Investigation			Status::	
Drill Method::	Hand auger			UTM Zone::	18
Easting::	432087.03			Northing::	5014166.25
Location Accuracy::				Orig. Ground Elev m::	-999.9
Elev. Reliability Note::				DEM Ground Elev m::	92.7

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Total Depth m::	2			Primary Name::	AH.5
Township::				Concession::	
Lot::				Municipality:	
Completion Date::	08-OCT-1993			Static Water Level::	-999.9
Primary Water Use::				Sec. Water Use::	
--Details--					
Stratum ID:	218580262			Top Depth(m):	0.0
Bottom Depth(m):	0.1			Stratum Desc:	Topsoil
Stratum ID:	218580263			Top Depth(m):	0.1
Bottom Depth(m):	2.0			Stratum Desc:	Grey-Brown sand silt Trace: Cl
21	1 of 1	WSW/273.8	96.9	ON	BORE
Borehole ID:	804344			Type:	Borehole
Use:	Geotechnical/Geological Investigation			Status::	
Drill Method::	Hand auger			UTM Zone::	18
Easting::	431842.24			Northing::	5014362.79
Location Accuracy::				Orig. Ground Elev m::	-999.9
Elev. Reliability Note::				DEM Ground Elev m::	92.8
Total Depth m::	3			Primary Name::	AH.7
Township::				Concession::	
Lot::				Municipality:	
Completion Date::	08-OCT-1993			Static Water Level::	-999.9
Primary Water Use::				Sec. Water Use::	
--Details--					
Stratum ID:	218580277			Top Depth(m):	0.0
Bottom Depth(m):	0.4			Stratum Desc:	Peat
Stratum ID:	218580278			Top Depth(m):	0.4
Bottom Depth(m):	2.0			Stratum Desc:	Grey sand silt
Stratum ID:	218580279			Top Depth(m):	2.0
Bottom Depth(m):	3.0			Stratum Desc:	Grey Silty Clay
22	1 of 1	SSE/291.1	96.9	ON	BORE
Borehole ID:	807139			Type:	Borehole
Use:	Geotechnical/Geological Investigation			Status::	
Drill Method::	Hollow stem auger			UTM Zone::	18
Easting::	432342.7			Northing::	5014203.99
Location Accuracy::				Orig. Ground Elev m::	-999.9
Elev. Reliability Note::				DEM Ground Elev m::	94.9
Total Depth m::	4.3			Primary Name::	BH 38
Township::				Concession::	
Lot::				Municipality:	
Completion Date::	06-OCT-1980			Static Water Level::	-999.9
Primary Water Use::				Sec. Water Use::	
--Details--					
Stratum ID:	218591762			Top Depth(m):	0.0
Bottom Depth(m):	0.3			Stratum Desc:	Crushed Stone
Stratum ID:	218591763			Top Depth(m):	0.3
Bottom Depth(m):	0.9			Stratum Desc:	Brown Sand

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Formation End Depth:		110.00			
Formation End Depth UOM:		ft			
Formation ID:		931004455			
Layer:		2			
Color:					
General Color:					
Mat1:		15			
Most Common Material:		LIMESTONE			
Mat2:					
Other Materials:					
Mat3:					
Other Materials:					
Formation Top Depth:		110.00			
Formation End Depth:		172.00			
Formation End Depth UOM:		ft			
<u>Method of Construction & Well Use</u>					
Method Construction ID:		961506402			
Method Construction Code:		7			
Method Construction:		Diamond			
Other Method Construction:					
<u>Pipe Information</u>					
Pipe ID:		10577015			
Casing No:		1			
Comment:					
Alt Name:					
<u>Construction Record - Casing</u>					
Casing ID:		930049635			
Layer:		1			
Material:		1			
Open Hole or Material:		STEEL			
Depth From:					
Depth To:					
Casing Diameter:		4.00			
Casing Diameter UOM:		inch			
Casing Depth UOM:		ft			
<u>Results of Well Yield Testing</u>					
Pump Test ID:		991506402			
Pump Set At:					
Static Level:		21.00			
Final Level After Pumping:		75.00			
Recommended Pump Depth:					
Pumping Rate:		2.00			
Flowing Rate:					
Recommended Pump Rate:					
Levels UOM:		ft			
Rate UOM:		GPM			
Water State After Test Code:		1			
Water State After Test:		CLEAR			
Pumping Test Method:		1			
Pumping Duration HR:		2			
Pumping Duration MIN:		0			
Flowing:		N			

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
<u>Water Details</u>					
Water ID:		933460547			
Layer:		1			
Kind Code:		1			
Kind:		FRESH			
Water Found Depth:		170.00			
Water Found Depth UOM:		ft			
24	1 of 5	SSE/297.6	96.9	City of Ottawa 5264 and 5271 Fernbank Rd Ottawa ON	CA
Certificate #:		0076-7T2NEY			
Application Year:		2009			
Issue Date:		6/18/2009			
Approval Type:		Municipal and Private Sewage Works			
Status:		Approved			
Application Type:					
Client Name::					
Client Address::					
Client City::					
Client Postal Code::					
Project Description::					
Contaminants::					
Emission Control::					
24	2 of 5	SSE/297.6	96.9	City of Ottawa 5264 and 5271 Fernbank Rd Ottawa ON	CA
Certificate #:		9587-6YNJPB			
Application Year:		2007			
Issue Date:		8/24/2007			
Approval Type:		Municipal and Private Sewage Works			
Status:		Revoked and/or Replaced			
Application Type:					
Client Name::					
Client Address::					
Client City::					
Client Postal Code::					
Project Description::					
Contaminants::					
Emission Control::					
24	3 of 5	SSE/297.6	96.9	City of Ottawa - Stormwater Facility 5264 and 5271 Fernbank Rd Ottawa ON	NCPL
Year:		2010			
Discharge Type:		Industrial Sewage			
Sector:		Miscellaneous Industrial			
Type of Concern:		CofA/Permit Non-Compliance			
Contaminant::		SUSPENDED SOLIDS			
Status Report::					
--Details--					
Incident Date:		9/15/2010			
Limit/Unit/Freq:		25 mg/L /seasonal avg			

Map Key	Number of Records	Direction/ Distance (m)	Elevation (m)	Site	DB
Quantity Min/Max:		40/40			
Facility Action:		Action Plan Submitted - Implementing Improvements			
Ministry Action:		Voluntary Abatement Program Underway			
24	4 of 5	SSE/297.6	96.9	City of Ottawa - Stormwater Facility 5264 and 5271 Fernbank Rd Ottawa ON	NCPL
Year:		2010			
Discharge Type:		Industrial Sewage			
Sector:		Miscellaneous Industrial			
Type of Concern:		CofA/Permit Non-Compliance			
Contaminant::		ESCHERICHIA COLI			
Status Report::					
--Details--					
Incident Date:		9/15/2010			
Limit/Unit/Freq:		100 CT/100mL / /d			
Quantity Min/Max:		228/2600			
Facility Action:		Action Plan Submitted - Implementing Improvements			
Ministry Action:		Voluntary Abatement Program Underway			
24	5 of 5	SSE/297.6	96.9	City of Ottawa- Water Stormwater Treatment Unit <UNOFFICIAL> 5264 and 5271 Fernbank Rd Ottawa ON	SPL
Ref No:		5782-7RMLM3		Site Address:	
Contaminant Name:		USED MOTOR OIL		Site Conc:	
Contaminant Code:				Site Lot:	
Contaminant Limit 1:				Site County/District:	
Contam. Limit Freq 1:				Site Municipality:	
Contaminant UN No 1:				Site Postal Code:	
Contaminant Qty:				Sector Type:	
MOE Reported Dt:		5/1/2009		Source Type:	
Health/Env Conseq:				Receiving Medium:	
Incident Dt:				Receiving Env:	
Incident Cause:		Unknown		Environment Impact:	
Incident Event:				Nature of Impact:	
Incident Reason:		Other - Reason not otherwise defined		SAC Action Class:	
Incident Summary:		City of Ottawa: Used oil in the Monahan Drain			

Unplottable Summary

Total: **33** Unplottable sites

DB	Company Name/Site Name	Address	City	Postal
CA	CALMAR HOLDINGS (ONT) LTD.-PT. LOT 31	COPE DR.+STORMWATER MANAGEMENT	KANATA CITY ON	
CA	Bridlewood Subdivision Phase 5C-1	Part of Lot 28, Concession 6	Ottawa ON	
CA	URBANDALE CORPORATION	PT. LOT 30, CONC.6	KANATA CITY ON	
CA	URBANDALE CORPORATION	PT. LOT 30 CONC.6	KANATA CITY ON	
CA		Lot 31, Concession 10	Kanata ON	
CA	R.M. OF OTTAWA-CARLETON	EAGLESON RD.	KANATA CITY ON	
CA	R.M. OF OTTAWA-CARLETON REG. RD. #49	EAGLESON RD.	KANATA CITY ON	
CA	R.M. OF OTTAWA-CARLETON- PHASE III	EAGLESON RD. RECONSTRUCTION	KANATA CITY ON	
CA	1029822 ONTARIO INC.	EAGLESON RD. STORMWATER POND	KANATA CITY ON	
CA	R.M. OF OTTAWA-CARLETON	EAGLESON RD., PARK & RIDE LOT	NEPEAN CITY ON	
CA	IPCF PROPERTIES INC.	EAGLESON RD., R.P. # 5R-13854	KANATA CITY ON	
CA	BELL CANADA	EAGLESON ROAD	KANATA CITY ON	
CA	EAGLESON CO-OP. HOMES - PT.LOT 32/CONC.6	EAGLESON ROAD	KANATA CITY ON	
CA		Eagleson Road	Ottawa ON	
CA	SHELL CANADA PRODUCTS	GAS STATION ON EAGLESON RD.	KANATA CITY ON	
CA	SHELL CANADA PRODUCTS	GAS STATION W. OF EAGLESON RD.	KANATA CITY ON	
CA	Bridlewood Subdivision Phase 5C-1	Part of Lot 28, Concession 6	Ottawa ON	

CA	Hazeldean - Lot 31, Concession 10		Kanata ON	
CA	Urbandale Corporation	Part of Lot 28, Concession 6 (Rideau Front)	Ottawa ON	
CA	Hazeldean - Lot 31, Concession 10		Kanata ON	
CONV	Loblaw Companies Limited		Ottawa ON	
GEN	Hydro OTTAWA LIMITED	EAGLESON RD	OTTAWA ON	K2L 2P1
PTTW	Lafarge Canada Inc.	Lot 28, Concession 6	Ottawa ON	
SPL	Loblaw Properties Limited	Loblaws	Ottawa ON	
SPL	TRANSPORT TRUCK	ALONG EAGLESON RD, COVERING ROTHESAY AND FURTHER, KANATA TRANSPORT TRUCK (CARGO)	OTTAWA CITY ON	
WWIS		lot 31	ON	
WWIS		lot 31 con A	ON	
WWIS		lot 31	ON	
WWIS		lot 31	ON	
WWIS		lot 31	ON	
WWIS		lot 31	ON	
WWIS		lot 28	ON	
WWIS		lot 28	ON	

Unplottable Report

Site: CALMAR HOLDINGS (ONT) LTD.-PT. LOT 31
COPE DR.+STORMWATER MANAGEMENT KANATA CITY ON

Database:
CA

Certificate #: 3-1216-90-
Application Year: 90
Issue Date: 7/24/1990
Approval Type: Municipal sewage
Status: Approved
Application Type:
Client Name::
Client Address::
Client City::
Client Postal Code::
Project Description::
Contaminants::
Emission Control::

Site: Bridlewood Subdivision Phase 5C-1
Part of Lot 28, Concession 6 Ottawa ON

Database:
CA

Certificate #: 3060-55AK8R
Application Year: 01
Issue Date: 12/11/01
Approval Type: Municipal & Private water
Status: Approved
Application Type: New Certificate of Approval
Client Name:: Urbandale Corporation
Client Address:: 2193 Arch Street
Client City:: Ottawa
Client Postal Code:: K1G 2H5
Project Description:: Construction of Watermains
Contaminants::
Emission Control::

Site: URBANDALE CORPORATION
PT. LOT 30, CONC.6 KANATA CITY ON

Database:
CA

Certificate #: 7-0164-96-
Application Year: 96
Issue Date: 4/1/1996
Approval Type: Municipal water
Status: Approved
Application Type:
Client Name::
Client Address::
Client City::
Client Postal Code::
Project Description::
Contaminants::
Emission Control::

Site: URBANDALE CORPORATION
PT. LOT 30 CONC.6 KANATA CITY ON

Database:
CA

Certificate #: 3-0160-96-

Application Year: 96
Issue Date: 4/1/1996
Approval Type: Municipal sewage
Status: Approved
Application Type:
Client Name::
Client Address::
Client City::
Client Postal Code::
Project Description::
Contaminants::
Emission Control::

Site: Lot 31, Concession 10 Kanata ON

Database:
CA

Certificate #: 3-0198-76-006
Application Year: 00
Issue Date: 1/24/00
Approval Type: Municipal & Private sewage
Status: Approved
Application Type: Notice
Client Name:: Corporation of the Regional Municipality of Ottawa-Carleton
Client Address:: 111 Lisgar Street
Client City:: Ottawa
Client Postal Code:: K1P 2L7
Project Description:: Hazeldean Sewage Pumping Station Upgrade and Expansion
Contaminants::
Emission Control::

Site: R.M. OF OTTAWA-CARLETON
EAGLESON RD. KANATA CITY ON

Database:
CA

Certificate #: 3-0649-90-
Application Year: 90
Issue Date: 4/26/1990
Approval Type: Municipal sewage
Status: Approved
Application Type:
Client Name::
Client Address::
Client City::
Client Postal Code::
Project Description::
Contaminants::
Emission Control::

Site: R.M. OF OTTAWA-CARLETON REG. RD. #49
EAGLESON RD. KANATA CITY ON

Database:
CA

Certificate #: 3-0876-88-
Application Year: 88
Issue Date: 6/1/1988
Approval Type: Municipal sewage
Status: Approved
Application Type:
Client Name::
Client Address::
Client City::
Client Postal Code::
Project Description::
Contaminants::
Emission Control::

Site: R.M. OF OTTAWA-CARLETON-PHASE III
EAGLESON RD. RECONSTRUCTION KANATA CITY ON

Database:
CA

Certificate #: 3-1072-90-
Application Year: 90
Issue Date: 6/20/1990
Approval Type: Municipal sewage
Status: Approved
Application Type:
Client Name::
Client Address::
Client City::
Client Postal Code::
Project Description::
Contaminants::
Emission Control::

Site: 1029822 ONTARIO INC.
EAGLESON RD. STORMWATER POND KANATA CITY ON

Database:
CA

Certificate #: 3-1195-93-
Application Year: 93
Issue Date: 11/23/1993
Approval Type: Municipal sewage
Status: Approved
Application Type:
Client Name::
Client Address::
Client City::
Client Postal Code::
Project Description::
Contaminants::
Emission Control::

Site: R.M. OF OTTAWA-CARLETON
EAGLESON RD., PARK & RIDE LOT NEPEAN CITY ON

Database:
CA

Certificate #: 3-0369-95-
Application Year: 95
Issue Date: 6/7/1995
Approval Type: Municipal sewage
Status: Approved
Application Type:
Client Name::
Client Address::
Client City::
Client Postal Code::
Project Description::
Contaminants::
Emission Control::

Site: IPCF PROPERTIES INC.
EAGLESON RD., R.P. # 5R-13854 KANATA CITY ON

Database:
CA

Certificate #: 8-4064-94-
Application Year: 94
Issue Date: 9/2/1994
Approval Type: Industrial air
Status: Approved
Application Type:
Client Name::
Client Address::

Client City::
Client Postal Code::
Project Description:: SPACE & WATER HEATERS, ON-SITE BAKERY
Contaminants:: Nitrogen Oxides, Odour/Fumes
Emission Control:: No Controls

Site: BELL CANADA
EAGLESON ROAD KANATA CITY ON

Database:
CA

Certificate #: 3-1017-88-
Application Year: 88
Issue Date: 6/30/1988
Approval Type: Municipal sewage
Status: Approved
Application Type:
Client Name::
Client Address::
Client City::
Client Postal Code::
Project Description::
Contaminants::
Emission Control::

Site: EAGLESON CO-OP. HOMES - PT.LOT 32/CONC.6
EAGLESON ROAD KANATA CITY ON

Database:
CA

Certificate #: 3-0369-92-
Application Year: 92
Issue Date: 8/10/1992
Approval Type: Municipal sewage
Status: Approved
Application Type:
Client Name::
Client Address::
Client City::
Client Postal Code::
Project Description::
Contaminants::
Emission Control::

Site: Eagleson Road Ottawa ON

Database:
CA

Certificate #: 5624-4MNJCW
Application Year: 00
Issue Date: 8/1/00
Approval Type: Municipal & Private water
Status: Approved
Application Type: New Certificate of Approval
Client Name:: Corporation of the Regional Municipality of Ottawa-Carleton
Client Address:: 111 Lisgar Street
Client City:: Ottawa
Client Postal Code:: K2P 2L7
Project Description:: Eagleson Road watermain extension from Bridgestone Drive to Emerald Meadows.
Contaminants::
Emission Control::

Site: SHELL CANADA PRODUCTS
GAS STATION ON EAGLESON RD. KANATA CITY ON

Database:
CA

Certificate #: 7-1376-89-
Application Year: 89

Issue Date: 8/15/1989
Approval Type: Municipal water
Status: Approved
Application Type:
Client Name::
Client Address::
Client City::
Client Postal Code::
Project Description::
Contaminants::
Emission Control::

Site: **SHELL CANADA PRODUCTS**
GAS STATION W. OF EAGLESON RD. KANATA CITY ON

Database:
CA

Certificate #: 3-1662-89-
Application Year: 89
Issue Date: 8/15/1989
Approval Type: Municipal sewage
Status: Approved
Application Type:
Client Name::
Client Address::
Client City::
Client Postal Code::
Project Description::
Contaminants::
Emission Control::

Site: **Bridlewood Subdivision Phase 5C-1**
Part of Lot 28, Concession 6 Ottawa ON

Database:
CA

Certificate #: 7303-55AKMN
Application Year: 01
Issue Date: 12/11/01
Approval Type: Municipal & Private sewage
Status: Approved
Application Type: New Certificate of Approval
Client Name:: Urbandale Corporation
Client Address:: 2193 Arch Street
Client City:: Ottawa
Client Postal Code:: K1G 2H5
Project Description:: Construction of Storm and Sanitary Sewers
Contaminants::
Emission Control::

Site: **Hazeldean - Lot 31, Concession 10**
Kanata ON

Database:
CA

Certificate #: 3223-4GTMXP
Application Year: 00
Issue Date: 2/25/00
Approval Type: Industrial air
Status: Approved
Application Type: New Certificate of Approval
Client Name:: Corporation of the Regional Municipality of Ottawa-Carleton
Client Address:: 111 Lisgar Street
Client City:: Ottawa
Client Postal Code:: K1P 2L7
Project Description:: For the exhaust discharge and noise emission from a 820 kW emergency standby diesel generator at the Hazeldean Sewage Pumping Station.
Contaminants::
Emission Control:: Silencer

Site: *Urbandale Corporation*
Part of Lot 28, Concession 6 (Rideau Front) Ottawa ON

Database:
CA

Certificate #: 3147-648RU7
Application Year: 2004
Issue Date: 8/27/2004
Approval Type: Municipal and Private Sewage Works
Status: Approved
Application Type:
Client Name::
Client Address::
Client City::
Client Postal Code::
Project Description::
Contaminants::
Emission Control::

Site: *Hazeldean - Lot 31, Concession 10*
Kanata ON

Database:
CA

Certificate #: 5832-4FMKPR
Application Year: 00
Issue Date: 1/31/00
Approval Type: Municipal & Private sewage
Status: Approved
Application Type: New Certificate of Approval
Client Name:: Corporation of the Regional Municipality of Ottawa-Carleton
Client Address:: 111 Lisgar Street
Client City:: Ottawa
Client Postal Code:: K1P 2L7
Project Description:: Constructio a new 600 mm diameter sanitary forcemain fromt he expanded Hazeldean Sewage Pumping Station to existing outlet chamber on Eagleson Road.
Contaminants::
Emission Control::

Site: *Loblaw Companies Limited*
Ottawa ON

Database:
CONV

File No.: 097267
Publication Title:
Publication City:
Url:
Crown Brief No.:
Ministry District:
Region:
Description: On April 19, 2011, Loblaw Companies Limited/Les Compagnies Loblaw Limitee pleaded guilty to one violation under the Environmental Protection Act for causing the discharge of a refrigerant into the air within a building or into the natural environment. The Court heard that the company owns and operates a property in Ottawa. The company uses a refrigeration contractor to install, maintain and service the equipment at this location. During such work, a release of refrigerant was reported to the ministry. The release was inside a building that was vented via exhaust fans to the natural environment. The refrigerant contains hydrochlorofluorocarbon and is considered an ozone depleting substance. The company was charged following an investigation by the ministry's Investigations and Enforcement Branch. The company was fined \$30,000 plus a victim fine surcharge and was given 30 days to pay the fine.

--Details--

Publication Date:
Count: 1
Act: EPA
Regulation:
Section:
Act/Regulation/Section: EPA
Date Charged: April 19, 2011

Charge Disposition: fine, victim fine surcharge
Fine: \$30,000

Site: **Hydro OTTAWA LIMITED**
EAGLESON RD OTTAWA ON K2L 2P1

Database:
GEN

Generator No.: ON9259460
Status:
Approval Years: 05
Contam. Facility:
MHSW Facility:
SIC Code: 221122
SIC Description: Electric Power Distribution
PO Box No.:
Country:
Choice of Contact:
Co Admin:
Phone No. Admin:

--Details--

Waste Code: 243
Waste Description: PCB'S

Site: **Lafarge Canada Inc.**
Lot 28, Concession 6 Ottawa ON

Database:
PTTW

EBR Registry No.: 012-3515
Ministry Ref. No.: 3737-9SXQHM
Year: 2015
Proposal Date: February 11, 2015
Notice Date:
Notice Type: Instrument Proposal
Proponent Address: 6509 Airport Road, Mississauga Ontario, Canada L4V 1S7
Instrument Type: (OWRA s. 34) - Permit to take water
Location: Lafarge Canada Inc. - Hawthorne Quarry Lot 28, Concession 6 City of Ottawa CITY OF OTTAWA
Location Other:

Site: **Loblaws Properties Limited**
Loblaws Ottawa ON

Database:
SPL

Ref No: 2287-7FNKE6
Contaminant Name: FREON R-22 (CFC)
Contaminant Code: 38
Contaminant Limit 1:
Contam. Limit Freq 1:
Contaminant UN No 1:
Contaminant Qty: 625 lb
MOE Reported Dt: 6/16/2008
Health/Env Conseq:
Incident Dt:
Incident Cause: Discharge or Emission to Air
Incident Event:
Incident Reason: Equipment Failure - Malfunction of system components
Incident Summary: Loblaws, 625 lb of R22 released to atmosphere.
Site Address:
Site Conc:
Site Lot:
Site County/District:
Site Municipality: Ottawa
Site Postal Code:
Sector Type: Other
Source Type:
Receiving Medium:
Receiving Env:
Environment Impact: Not Anticipated
Nature of Impact: Air Pollution
SAC Action Class: Air Spills - Gases and Vapours

Site: **TRANSPORT TRUCK**
ALONG EAGLESON RD, COVERING ROTHESAY AND FURTHER, KANATA TRANSPORT TRUCK (CARGO)
OTTAWA CITY ON

Database:
SPL

Ref No: 243359
Contaminant Name:
Contaminant Code:
Contaminant Limit 1:
Contam. Limit Freq 1:
Contaminant UN No 1:
Site Address:
Site Conc:
Site Lot:
Site County/District:
Site Municipality: 20107
Site Postal Code:

Contaminant Qty:
MOE Reported Dt: 10/26/2002
Health/Env Conseq:
Incident Dt: 10/26/2002
Incident Cause: UNKNOWN
Incident Event:
Incident Reason: UNKNOWN
Incident Summary: NEPEAN F/D: UKN TRUCK LEA-KING
FURNACE OIL TO ROAD AND SEWER.
CAUSED MVA

Sector Type:
Source Type:
Receiving Medium: LAND, WATER
Receiving Env:
Environment Impact: POSSIBLE
Nature of Impact: Multi Media Pollution
SAC Action Class:

Site:
lot 31 ON

Database:
WWIS

Well ID: 1526253
Construction Date:
Primary Water Use: Irrigation
Sec. Water Use:
Final Well Status:
Water Type:
Casing Material:
Audit No: 64227
Tag:
Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

Data Entry Status:
Data Src: 1
Date Received: 6/26/1992
Selected Flag: 1
Abandonment Rec:
Contractor: 2425
Form Version: 1
Owner:
Street Name:
County: OTTAWA-CARLETON
Municipality: NEPEAN TOWNSHIP
Site Info:
Lot: 031
Concession:
Concession Name:
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 10047971
DP2BR: 15
Code OB: r
Code OB Desc: Bedrock
Open Hole:
Elevation:
Elevrc:
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Spatial Status:
Cluster Kind:
UTMRC: 9
UTMRC Desc: unknown UTM
Location Method: na
Org CS:
Date Completed: 6/8/1992

Overburden and Bedrock **Materials Interval**

Formation ID: 931063639
Layer: 1
Color: 6
General Color: BROWN
Mat1: 05
Most Common Material: CLAY
Mat2: 13
Other Materials: BOULDERS
Mat3: 73
Other Materials: HARD
Formation Top Depth: 0.00

Formation End Depth: 15.00
Formation End Depth UOM: ft

Formation ID: 931063640
Layer: 2
Color: 2
General Color: GREY
Mat1: 26
Most Common Material: ROCK
Mat2: 18
Other Materials: SANDSTONE
Mat3: 74
Other Materials: LAYERED
Formation Top Depth: 15.00
Formation End Depth: 320.00
Formation End Depth UOM: ft

Formation ID: 931063641
Layer: 3
Color: 1
General Color: WHITE
Mat1: 18
Most Common Material: SANDSTONE
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 320.00
Formation End Depth: 400.00
Formation End Depth UOM: ft

Annular Space/Abandonment
Sealing Record

Plug ID: 933111589
Layer: 1
Plug From: 4.00
Plug To: 22.00
Plug Depth UOM: ft

Method of Construction & Well
Use

Method Construction ID: 961526253
Method Construction Code: 4
Method Construction: Rotary (Air)
Other Method Construction:

Pipe Information

Pipe ID: 10596541
Casing No: 1
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 930083966
Layer: 1
Material: 1
Open Hole or Material: STEEL
Depth From:
Depth To: 22.00
Casing Diameter: 6.00
Casing Diameter UOM: inch

Casing Depth UOM: ft

Results of Well Yield Testing

Pump Test ID: 991526253
Pump Set At:
Static Level: 30.00
Final Level After Pumping: 400.00
Recommended Pump Depth: 380.00
Pumping Rate: 12.00
Flowing Rate:
Recommended Pump Rate: 12.00
Levels UOM: ft
Rate UOM: GPM
Water State After Test Code: 2
Water State After Test: CLOUDY
Pumping Test Method:
Pumping Duration HR: 2
Pumping Duration MIN: 0
Flowing: N

Draw Down & Recovery

Pump Test Detail ID: 934106822
Test Type: Recovery
Test Duration: 15
Test Level: 200.00
Test Level UOM: ft

Pump Test Detail ID: 934390456
Test Type: Recovery
Test Duration: 30
Test Level: 125.00
Test Level UOM: ft

Pump Test Detail ID: 934651397
Test Type: Recovery
Test Duration: 45
Test Level: 60.00
Test Level UOM: ft

Pump Test Detail ID: 934908595
Test Type: Recovery
Test Duration: 60
Test Level: 35.00
Test Level UOM: ft

Water Details

Water ID: 933485490
Layer: 1
Kind Code: 1
Kind: FRESH
Water Found Depth: 320.00
Water Found Depth UOM: ft

Site:
lot 31 con A ON

Database:
WWIS

Well ID: 1534013
Construction Date:
Primary Water Use: Not Used
Sec. Water Use:
Final Well Status: Not A Well
Water Type:
Casing Material:

Data Entry Status:
Data Src: 1
Date Received: 8/26/2003
Selected Flag: 1
Abandonment Rec:
Contractor: 1558
Form Version: 1

Audit No: 250701
Tag:
Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

Owner:
Street Name:
County: OTTAWA-CARLETON
Municipality: NEPEAN TOWNSHIP
Site Info:
Lot: 031
Concession: A
Concession Name:
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 10543128
DP2BR:
Code OB: —
Code OB Desc: No formation data
Open Hole:
Elevation:
Elevrc:
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Spatial Status:
Cluster Kind:
UTMRC: 9
UTMRC Desc: unknown UTM
Location Method: na
Org CS:
Date Completed: 7/21/2003

Method of Construction & Well Use

Method Construction ID: 961534013
Method Construction Code: 0
Method Construction: Not Known
Other Method Construction:

Pipe Information

Pipe ID: 11091698
Casing No: 1
Comment:
Alt Name:

Site:
lot 31 ON

Database:
WWIS

Well ID: 1519740
Construction Date:
Primary Water Use: Domestic
Sec. Water Use:
Final Well Status: Water Supply
Water Type:
Casing Material:
Audit No:
Tag:
Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:

Data Entry Status:
Data Src: 1
Date Received: 6/24/1985
Selected Flag: 1
Abandonment Rec:
Contractor: 3644
Form Version: 1
Owner:
Street Name:
County: OTTAWA-CARLETON
Municipality: NEPEAN TOWNSHIP
Site Info:
Lot: 031
Concession:
Concession Name:
Easting NAD83:
Northing NAD83:

Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 10041593
DP2BR:
Code OB: o
Code OB Desc: Overburden
Open Hole:
Elevation:
Elevrc:
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Spatial Status:
Cluster Kind:
UTMRC: 9
UTMRC Desc: unknown UTM
Location Method: na
Org CS:
Date Completed: 4/1/1985

Overburden and Bedrock
Materials Interval

Formation ID: 931042564
Layer: 1
Color: 2
General Color: GREY
Mat1: 05
Most Common Material: CLAY
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 0.00
Formation End Depth: 70.00
Formation End Depth UOM: ft

Formation ID: 931042565
Layer: 2
Color: 2
General Color: GREY
Mat1: 14
Most Common Material: HARDPAN
Mat2: 11
Other Materials: GRAVEL
Mat3:
Other Materials:
Formation Top Depth: 70.00
Formation End Depth: 96.00
Formation End Depth UOM: ft

Formation ID: 931042566
Layer: 3
Color: 2
General Color: GREY
Mat1: 11
Most Common Material: GRAVEL
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 96.00
Formation End Depth: 98.00
Formation End Depth UOM: ft

Method of Construction & Well Use

Method Construction ID: 961519740
Method Construction Code: 5
Method Construction: Air Percussion
Other Method Construction:

Pipe Information

Pipe ID: 10590163
Casing No: 1
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 930072632
Layer: 1
Material: 1
Open Hole or Material: STEEL
Depth From:
Depth To: 98.00
Casing Diameter: 6.00
Casing Diameter UOM: inch
Casing Depth UOM: ft

Results of Well Yield Testing

Pump Test ID: 991519740
Pump Set At:
Static Level: 0.00
Final Level After Pumping: 20.00
Recommended Pump Depth: 25.00
Pumping Rate: 50.00
Flowing Rate:
Recommended Pump Rate: 10.00
Levels UOM: ft
Rate UOM: GPM
Water State After Test Code: 2
Water State After Test: CLOUDY
Pumping Test Method: 1
Pumping Duration HR: 1
Pumping Duration MIN: 0
Flowing: N

Draw Down & Recovery

Pump Test Detail ID: 934108648
Test Type:
Test Duration: 15
Test Level: 20.00
Test Level UOM: ft

Pump Test Detail ID: 934384358
Test Type:
Test Duration: 30
Test Level: 20.00
Test Level UOM: ft

Pump Test Detail ID: 934654898
Test Type:
Test Duration: 45
Test Level: 20.00
Test Level UOM: ft

Pump Test Detail ID: 934894682
Test Type:
Test Duration: 60
Test Level: 20.00
Test Level UOM: ft

Water Details

Water ID: 933476799
Layer: 1
Kind Code: 1
Kind: FRESH
Water Found Depth: 98.00
Water Found Depth UOM: ft

Site:
lot 31 ON

Database:
WWIS

Well ID:	1526254	Data Entry Status:	
Construction Date:		Data Src:	1
Primary Water Use:	Irrigation	Date Received:	6/26/1992
Sec. Water Use:		Selected Flag:	1
Final Well Status:	Water Supply	Abandonment Rec:	
Water Type:		Contractor:	2425
Casing Material:		Form Version:	1
Audit No:	64228	Owner:	
Tag:		Street Name:	
Construction Method:		County:	OTTAWA-CARLETON
Elevation (m):		Municipality:	NEPEAN TOWNSHIP
Elevation Reliability:		Site Info:	
Depth to Bedrock:		Lot:	031
Well Depth:		Concession:	
Overburden/Bedrock:		Concession Name:	
Pump Rate:		Easting NAD83:	
Static Water Level:		Northing NAD83:	
Flowing (Y/N):		Zone:	
Flow Rate:		UTM Reliability:	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	10047972	Spatial Status:	
DP2BR:	12	Cluster Kind:	
Code OB:	r	UTMRC:	9
Code OB Desc:	Bedrock	UTMRC Desc:	unknown UTM
Open Hole:		Location Method:	na
Elevation:		Org CS:	
Elevrc:		Date Completed:	6/9/1992
Remarks:			
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock
Materials Interval

Formation ID: 931063642
Layer: 1
Color: 6
General Color: BROWN
Mat1: 05
Most Common Material: CLAY

Mat2: 13
Other Materials: BOULDERS
Mat3: 73
Other Materials: HARD
Formation Top Depth: 0.00
Formation End Depth: 12.00
Formation End Depth UOM: ft

Formation ID: 931063643
Layer: 2
Color: 2
General Color: GREY
Mat1: 15
Most Common Material: LIMESTONE
Mat2: 18
Other Materials: SANDSTONE
Mat3: 74
Other Materials: LAYERED
Formation Top Depth: 12.00
Formation End Depth: 310.00
Formation End Depth UOM: ft

Formation ID: 931063644
Layer: 3
Color: 1
General Color: WHITE
Mat1: 18
Most Common Material: SANDSTONE
Mat2: 85
Other Materials: SOFT
Mat3:
Other Materials:
Formation Top Depth: 310.00
Formation End Depth: 380.00
Formation End Depth UOM: ft

**Annular Space/Abandonment
Sealing Record**

Plug ID: 933111590
Layer: 1
Plug From: 0.00
Plug To: 22.00
Plug Depth UOM: ft

**Method of Construction & Well
Use**

Method Construction ID: 961526254
Method Construction Code: 4
Method Construction: Rotary (Air)
Other Method Construction:

Pipe Information

Pipe ID: 10596542
Casing No: 1
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 930083967
Layer: 1
Material: 1

Open Hole or Material: STEEL
Depth From:
Depth To: 22.00
Casing Diameter: 6.00
Casing Diameter UOM: inch
Casing Depth UOM: ft

Results of Well Yield Testing

Pump Test ID: 991526254
Pump Set At:
Static Level: 30.00
Final Level After Pumping: 380.00
Recommended Pump Depth: 300.00
Pumping Rate: 40.00
Flowing Rate:
Recommended Pump Rate: 40.00
Levels UOM: ft
Rate UOM: GPM
Water State After Test Code: 2
Water State After Test: CLOUDY
Pumping Test Method:
Pumping Duration HR: 2
Pumping Duration MIN: 0
Flowing: N

Draw Down & Recovery

Pump Test Detail ID: 934106823
Test Type:
Test Duration: 15
Test Level: 200.00
Test Level UOM: ft

Pump Test Detail ID: 934390457
Test Type:
Test Duration: 30
Test Level: 30.00
Test Level UOM: ft

Water Details

Water ID: 933485491
Layer: 1
Kind Code: 1
Kind: FRESH
Water Found Depth: 360.00
Water Found Depth UOM: ft

Site:
lot 31 ON

Database:
WWIS

Well ID: 1528149
Construction Date:
Primary Water Use: Not Used
Sec. Water Use:
Final Well Status: Observation Wells
Water Type:
Casing Material:
Audit No: 149112
Tag:
Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:

Data Entry Status:
Data Src: 1
Date Received: 8/30/1994
Selected Flag: 1
Abandonment Rec:
Contractor: 6844
Form Version: 1
Owner:
Street Name:
County: OTTAWA-CARLETON
Municipality: OTTAWA CITY
Site Info:
Lot: 031
Concession:

Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

Concession Name:
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 10049688
DP2BR:
Code OB: p
Code OB Desc: Unknown type above a bedrock layer
Open Hole:
Elevation:
Elevrc:
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Spatial Status:
Cluster Kind:
UTMRC: 9
UTMRC Desc: unknown UTM
Location Method: na
Org CS:
Date Completed: 7/27/1994

Overburden and Bedrock
Materials Interval

Formation ID: 931068737
Layer: 1
Color: 8
General Color: BLACK
Mat1: 00
Most Common Material: UNKNOWN TYPE
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 0.00
Formation End Depth: 2.00
Formation End Depth UOM: ft

Formation ID: 931068738
Layer: 2
Color: 2
General Color: GREY
Mat1: 21
Most Common Material: GRANITE
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 2.00
Formation End Depth: 2.00
Formation End Depth UOM: ft

Formation ID: 931068739
Layer: 3
Color: 6
General Color: BROWN
Mat1: 05
Most Common Material: CLAY
Mat2: 11
Other Materials: GRAVEL
Mat3:
Other Materials:
Formation Top Depth: 2.00
Formation End Depth: 3.00

Formation End Depth UOM: ft

Formation ID: 931068740
Layer: 4
Color: 6
General Color: BROWN
Mat1: 08
Most Common Material: FINE SAND
Mat2: 11
Other Materials: GRAVEL
Mat3:
Other Materials:
Formation Top Depth: 3.00
Formation End Depth: 4.00
Formation End Depth UOM: ft

Formation ID: 931068741
Layer: 5
Color: 2
General Color: GREY
Mat1: 05
Most Common Material: CLAY
Mat2: 74
Other Materials: LAYERED
Mat3:
Other Materials:
Formation Top Depth: 4.00
Formation End Depth: 20.00
Formation End Depth UOM: ft

**Annular Space/Abandonment
Sealing Record**

Plug ID: 933113003
Layer: 1
Plug From: 3.00
Plug To: 7.00
Plug Depth UOM: ft

Plug ID: 933113004
Layer: 2
Plug From: 7.00
Plug To: 9.00
Plug Depth UOM: ft

Plug ID: 933113005
Layer: 3
Plug From: 9.00
Plug To: 20.00
Plug Depth UOM: ft

**Method of Construction & Well
Use**

Method Construction ID: 961528149
Method Construction Code: 6
Method Construction: Boring
Other Method Construction:

Pipe Information

Pipe ID: 10598258
Casing No: 1
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 930086839
Layer: 1
Material: 5
Open Hole or Material: PLASTIC
Depth From:
Depth To: 20.00
Casing Diameter: 2.00
Casing Diameter UOM: inch
Casing Depth UOM: ft

Construction Record - Screen

Screen ID: 933326495
Layer: 1
Slot: 010
Screen Top Depth: 10.00
Screen End Depth: 20.00
Screen Material:
Screen Depth UOM: ft
Screen Diameter UOM: inch
Screen Diameter: 2.00

Site:

lot 31 ON

Database:
WWIS

Well ID: 1534734
Construction Date:
Primary Water Use: Not Used
Sec. Water Use:
Final Well Status: Not A Well
Water Type:
Casing Material:
Audit No: 265833
Tag:
Construction Method:
Elevation (m):
Elevation Reliability:
Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

Data Entry Status:
Data Src: 1
Date Received: 6/10/2004
Selected Flag: 1
Abandonment Rec:
Contractor: 6907
Form Version: 2
Owner:
Street Name:
County: OTTAWA-CARLETON
Municipality: OTTAWA CITY
Site Info:
Lot: 031
Concession:
Concession Name:
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 11097509
DP2BR:
Code OB: o
Code OB Desc: Overburden
Open Hole:
Elevation:
Elevrc:
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Spatial Status:
Cluster Kind:
UTMRC: 9
UTMRC Desc: unknown UTM
Location Method: na
Org CS:
Date Completed: 5/31/2004

**Overburden and Bedrock
Materials Interval**

Formation ID: 932942463
Layer: 1
Color:
General Color:
Mat1: 24
Most Common Material: PREV. DRILLED
Mat2:
Other Materials:
Mat3:
Other Materials:
Formation Top Depth: 0.00
Formation End Depth: 40.00
Formation End Depth UOM: ft

**Method of Construction & Well
Use**

Method Construction ID: 961534734
Method Construction Code: B
Method Construction: Other Method
Other Method Construction:

Pipe Information

Pipe ID: 11101224
Casing No: 1
Comment:
Alt Name:

Results of Well Yield Testing

Pump Test ID: 991534734
Pump Set At:
Static Level: 8.00
Final Level After Pumping:
Recommended Pump Depth:
Pumping Rate:
Flowing Rate:
Recommended Pump Rate:
Levels UOM: ft
Rate UOM: GPM
Water State After Test Code:
Water State After Test:
Pumping Test Method:
Pumping Duration HR:
Pumping Duration MIN:
Flowing: N

Site:
lot 28 ON

Database:
WWIS

Well ID: 1527490
Construction Date:
Primary Water Use: Commerical
Sec. Water Use: Municipal
Final Well Status: Test Hole
Water Type:
Casing Material:
Audit No: 126283
Tag:
Construction Method:
Elevation (m):
Elevation Reliability:

Data Entry Status:
Data Src: 1
Date Received: 10/6/1993
Selected Flag: 1
Abandonment Rec:
Contractor: 4006
Form Version: 1
Owner:
Street Name:
County: OTTAWA-CARLETON
Municipality: NEPEAN TOWNSHIP
Site Info:

Depth to Bedrock:
Well Depth:
Overburden/Bedrock:
Pump Rate:
Static Water Level:
Flowing (Y/N):
Flow Rate:
Clear/Cloudy:

Lot: 028
Concession:
Concession Name: RF
Easting NAD83:
Northing NAD83:
Zone:
UTM Reliability:

Bore Hole Information

Bore Hole ID: 10049129
DP2BR:
Code OB: o
Code OB Desc: Overburden
Open Hole:
Elevation:
Elevrc:
Remarks:
Elevrc Desc:
Location Source Date:
Improvement Location Source:
Improvement Location Method:
Source Revision Comment:
Supplier Comment:

Spatial Status:
Cluster Kind:
UTMRC: 9
UTMRC Desc: unknown UTM
Location Method: na
Org CS:
Date Completed: 9/21/1993

**Overburden and Bedrock
Materials Interval**

Formation ID: 931066807
Layer: 1
Color: 2
General Color: GREY
Mat1: 28
Most Common Material: SAND
Mat2: 28
Other Materials: SAND
Mat3: 06
Other Materials: SILT
Formation Top Depth: 0.00
Formation End Depth: 17.00
Formation End Depth UOM: ft

Formation ID: 931066808
Layer: 2
Color: 2
General Color: GREY
Mat1: 28
Most Common Material: SAND
Mat2: 06
Other Materials: SILT
Mat3: 11
Other Materials: GRAVEL
Formation Top Depth: 17.00
Formation End Depth: 21.00
Formation End Depth UOM: ft

Formation ID: 931066809
Layer: 3
Color: 2
General Color: GREY
Mat1: 28
Most Common Material: SAND
Mat2: 30
Other Materials: MEDIUM GRAVEL
Mat3:
Other Materials:

Formation Top Depth: 21.00
Formation End Depth: 35.00
Formation End Depth UOM: ft

Method of Construction & Well Use

Method Construction ID: 961527490
Method Construction Code: 4
Method Construction: Rotary (Air)
Other Method Construction:

Pipe Information

Pipe ID: 10597699
Casing No: 1
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 930085798
Layer: 1
Material: 4
Open Hole or Material: OPEN HOLE
Depth From:
Depth To: 25.00
Casing Diameter: 10.00
Casing Diameter UOM: inch
Casing Depth UOM: ft

Casing ID: 930085799
Layer: 2
Material: 1
Open Hole or Material: STEEL
Depth From:
Depth To: 20.00
Casing Diameter: 8.00
Casing Diameter UOM: inch
Casing Depth UOM: ft

Casing ID: 930085800
Layer: 3
Material: 4
Open Hole or Material: OPEN HOLE
Depth From:
Depth To: 35.00
Casing Diameter: 8.00
Casing Diameter UOM: inch
Casing Depth UOM: ft

Construction Record - Screen

Screen ID: 933326446
Layer: 1
Slot: 010
Screen Top Depth: 16.00
Screen End Depth: 36.00
Screen Material:
Screen Depth UOM: ft
Screen Diameter UOM: inch
Screen Diameter: 8.00

Water Details

Water ID: 933486964
Layer: 1
Kind Code: 5
Kind: Not stated
Water Found Depth: 20.00
Water Found Depth UOM: ft

Site:
lot 28 ON

Database:
WWIS

Well ID:	1526088	Data Entry Status:	
Construction Date:		Data Src:	1
Primary Water Use:	Domestic	Date Received:	2/4/1992
Sec. Water Use:		Selected Flag:	1
Final Well Status:	Water Supply	Abandonment Rec:	
Water Type:		Contractor:	3701
Casing Material:		Form Version:	1
Audit No:	76366	Owner:	
Tag:		Street Name:	
Construction Method:		County:	OTTAWA-CARLETON
Elevation (m):		Municipality:	NEPEAN TOWNSHIP
Elevation Reliability:		Site Info:	
Depth to Bedrock:		Lot:	028
Well Depth:		Concession:	
Overburden/Bedrock:		Concession Name:	
Pump Rate:		Easting NAD83:	
Static Water Level:		Northing NAD83:	
Flowing (Y/N):		Zone:	
Flow Rate:		UTM Reliability:	
Clear/Cloudy:			

Bore Hole Information

Bore Hole ID:	10047822	Spatial Status:	
DP2BR:	101	Cluster Kind:	
Code OB:	r	UTMRC:	9
Code OB Desc:	Bedrock	UTMRC Desc:	unknown UTM
Open Hole:		Location Method:	na
Elevation:		Org CS:	
Elevrc:		Date Completed:	9/25/1990
Remarks:			
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock
Materials Interval

Formation ID:	931063180
Layer:	1
Color:	2
General Color:	GREY
Mat1:	05
Most Common Material:	CLAY
Mat2:	85
Other Materials:	SOFT
Mat3:	
Other Materials:	
Formation Top Depth:	0.00
Formation End Depth:	101.00
Formation End Depth UOM:	ft
Formation ID:	931063181

Layer: 2
Color: 2
General Color: GREY
Mat1: 15
Most Common Material: LIMESTONE
Mat2: 74
Other Materials: LAYERED
Mat3:
Other Materials:
Formation Top Depth: 101.00
Formation End Depth: 128.00
Formation End Depth UOM: ft

Annular Space/Abandonment
Sealing Record

Plug ID: 933111525
Layer: 1
Plug From: 0.00
Plug To: 4.00
Plug Depth UOM: ft

Method of Construction & Well
Use

Method Construction ID: 961526088
Method Construction Code: 4
Method Construction: Rotary (Air)
Other Method Construction:

Pipe Information

Pipe ID: 10596392
Casing No: 1
Comment:
Alt Name:

Construction Record - Casing

Casing ID: 930083704
Layer: 1
Material: 1
Open Hole or Material: STEEL
Depth From:
Depth To: 101.00
Casing Diameter: 6.00
Casing Diameter UOM: inch
Casing Depth UOM: ft

Casing ID: 930083705
Layer: 2
Material: 4
Open Hole or Material: OPEN HOLE
Depth From:
Depth To: 128.00
Casing Diameter: 6.00
Casing Diameter UOM: inch
Casing Depth UOM: ft

Results of Well Yield Testing

Pump Test ID: 991526088
Pump Set At:
Static Level: 20.00
Final Level After Pumping:

Recommended Pump Depth: 100.00
Pumping Rate: 10.00
Flowing Rate:
Recommended Pump Rate: 10.00
Levels UOM: ft
Rate UOM: GPM
Water State After Test Code: 1
Water State After Test: CLEAR
Pumping Test Method:
Pumping Duration HR: 1
Pumping Duration MIN: 0
Flowing: N

Draw Down & Recovery

Pump Test Detail ID: 934106265
Test Type: Draw Down
Test Duration: 15
Test Level: 20.00
Test Level UOM: ft

Pump Test Detail ID: 934389896
Test Type: Draw Down
Test Duration: 30
Test Level: 40.00
Test Level UOM: ft

Pump Test Detail ID: 934650839
Test Type: Draw Down
Test Duration: 45
Test Level: 60.00
Test Level UOM: ft

Pump Test Detail ID: 934908037
Test Type: Draw Down
Test Duration: 60
Test Level: 60.00
Test Level UOM: ft

Water Details

Water ID: 933485288
Layer: 1
Kind Code: 1
Kind: FRESH
Water Found Depth: 120.00
Water Found Depth UOM: ft

Appendix: Database Descriptions

*Environmental Risk Information Services (ERIS) 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 ERIS at the time of update. **Note:** Databases denoted with " * " indicates that the database will no longer be updated. See the individual database description for more information.*

Abandoned Aggregate Inventory:

Provincial [AAGR](#)

The MAAP Program maintains a database of 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.*

Government Publication Date: Sept 2002*

Aggregate Inventory:

Provincial [AGR](#)

The Ontario Ministry of Natural Resources maintains a database of all active pits and quarries. The database provides information regarding the registered owner/operator, location name, operation type, approval type, and maximum annual tonnage.

Government Publication Date: Up to Sep 2017

Abandoned Mine Information System:

Provincial [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.

Government Publication Date: 1800-Nov 2016

Anderson's Waste Disposal Sites:

Private [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.

Government Publication Date: 1860s-Present

Automobile Wrecking & Supplies:

Private [AUWR](#)

This database provides an inventory of 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.

Government Publication Date: 1999-May 2017

Borehole:

Provincial [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.

Government Publication Date: 1875-Jul 2014

Certificates of Approval:

Provincial [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. This database will no longer be updated, as CofA's have been replaced by either Environmental Activity and Sector Registry (EASR) or Environmental Compliance Approval (ECA). Please refer to those individual databases for any information after Oct.31, 2011.

Government Publication Date: 1985-Oct 30, 2011*

Commercial Fuel Oil Tanks:

Provincial

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.

Government Publication Date: Feb 28, 2017

Chemical Register:

Private

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.).

Government Publication Date: 1999-May 2017

Compressed Natural Gas Stations:

Private

CNG

Canada has a network of public access compressed natural gas (CNG) refuelling stations. These stations dispense natural gas in compressed form at 3,000 pounds per square inch (psi), the pressure which is allowed within the current Canadian codes and standards. The majority of natural gas refuelling is located at existing retail gasoline that have a separate refuelling island for natural gas. This list of stations is made available by the Canadian Natural Gas Vehicle Alliance.

Government Publication Date: Dec 31, 2012

Inventory of Coal Gasification Plants and Coal Tar Sites:

Provincial

COAL

This inventory includes both the "Inventory of Coal Gasification Plant Waste Sites in Ontario-April 1987" and the Inventory of Industrial Sites Producing or Using Coal Tar and Related Tars in Ontario-November 1988) collected by the MOE. 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, land use, information on adjoining properties, soil condition, site operators/occupants, site description, potential environmental impacts and historic maps available. This was a one-time inventory.*

Government Publication Date: Apr 1987 and Nov 1988*

Compliance and Convictions:

Provincial

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.

Government Publication Date: 1989-Sep 2017

Certificates of Property Use:

Provincial

CPU

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all CPU's on the registry such as (EPA s. 168.6) - Certificate of Property Use.

Government Publication Date: 1994-Oct 2017

Drill Hole Database:

Provincial

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".

Government Publication Date: 1886-Aug 2015

Environmental Activity and Sector Registry:

Provincial

EASR

On October 31, 2011, a smarter, faster environmental approvals system came into effect in Ontario. The EASR allows businesses to register certain activities with the ministry, rather than apply for an approval. The registry is available for common systems and processes, to which preset rules of operation can be applied. The EASR is currently available for: heating systems, standby power systems and automotive refinishing. Businesses whose activities aren't subject to the EASR may apply for an ECA (Environmental Compliance Approval), Please see our ECA database.

Government Publication Date: Oct 2011-Oct 2017

Environmental Registry:

Provincial

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, license, or certificate of approval to release substances into the air or water; these are notified on the registry. Data includes: Approval for discharge into the natural environment other than water (i.e. Air) - EPA s. 9, Approval for sewage works - OWRA s. 53(1), and EPA s. 27 - Approval for a waste disposal site. For information regarding Permit to Take Water (PTTW), Certificate of Property Use (CPU) and (ORD) Orders please refer to those individual databases.

Government Publication Date: 1994-Oct 2017

Environmental Compliance Approval:

Provincial

ECA

On October 31, 2011, a smarter, faster environmental approvals system came into effect in Ontario. In the past, a business had to apply for multiple approvals (known as certificates of approval) for individual processes and pieces of equipment. Today, a business either registers itself, or applies for a single approval, depending on the types of activities it conducts. Businesses whose activities aren't subject to the EASR may apply for an ECA. A single ECA addresses all of a business's emissions, discharges and wastes. Separate approvals for air, noise and waste are no longer required. This database will also include Renewable Energy Approvals. For certificates of approval prior to Nov 1st, 2011, please refer to the CA database. For all Waste Disposal Sites please refer to the WDS database.

Government Publication Date: Oct 2011-Oct 2017

Environmental Effects Monitoring:

Federal

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.

Government Publication Date: 1992-2007*

ERIS Historical Searches:

Private

EHS

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.

Government Publication Date: 1999-Aug 2016

Environmental Issues Inventory System:

Federal

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.

Government Publication Date: 1992-2001*

Emergency Management Historical Event:

Provincial

EMHE

List of locations of historical occurrences of emergency events, including those assigned to the Ministry of Natural Resources by Order-In-Council (OIC) under the Emergency Management and Civil Protection Act, as well as events where MNR provided requested emergency response assistance. Many of these events will have involved community evacuations, significant structural loss, and/or involvement of MNR emergency response staff. These events fall into one of ten (10) type categories: Dam Failure; Drought / Low Water; Erosion; Flood; Forest Fire; Soil and Bedrock Instability; Petroleum Resource Center Event, EMO Requested Assistance, Continuity of Operations Event, Other Requested Assistance. EMHE record details are reproduced by ERIS under License with the Ontario Ministry of Natural Resources © Queen's Printer for Ontario, 2017.

Government Publication Date: Dec 31, 2016

List of TSSA Expired Facilities:

Provincial

EXP

List of facilities with removed tanks which were once registered with the Fuels Safety Program of the Technical Standards and Safety Authority (TSSA). Includes private fuel outlets, bulk plants, fuel oil tanks, gasoline stations, marinas, propane filling stations, liquid fuel tanks, piping systems, etc. Tanks which have been removed automatically fall under the expired facilities inventory held by TSSA.

Government Publication Date: Feb 28, 2017

Federal Convictions:

Federal

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.

Government Publication Date: 1988-Jun 2007*

Contaminated Sites on Federal Land:

Federal

FCS

The Federal Contaminated Sites Inventory includes information on known federal contaminated sites under the custodianship of departments, agencies and consolidated Crown corporations as well as those that are being or have been investigated to determine whether they have contamination arising from past use that could pose a risk to human health or the environment. The inventory also includes non-federal contaminated sites for which the Government of Canada has accepted some or all financial responsibility. It does not include sites where contamination has been caused by, and which are under the control of, enterprise Crown corporations, private individuals, firms or other levels of government.

Government Publication Date: Jun 2000-Mar 2017

Fisheries & Oceans Fuel Tanks:

Federal

FOFT

Fisheries & Oceans Canada maintains an inventory of 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.

Government Publication Date: 1964-Apr 2015

Fuel Storage Tank:

Provincial

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.

Government Publication Date: Feb 28, 2017

Fuel Storage Tank - Historic:

Provincial

FSTH

The Fuels Safety Branch of the Ontario Ministry of Consumer and Commercial Relations maintained a database of all registered private fuel storage tanks. Public records of private fuel storage tanks are only available since the registration became effective in September 1989. This information is now collected by the Technical Standards and Safety Authority.

Government Publication Date: Pre-Jan 2010*

Ontario Regulation 347 Waste Generators Summary:

Provincial

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.

Government Publication Date: 1986-Jun 2017

Greenhouse Gas Emissions from Large Facilities:

Federal

GHG

List of greenhouse gas emissions from large facilities made available by Environment Canada. Greenhouse gas emissions in kilotonnes of carbon dioxide equivalents (kt CO₂ eq).

Government Publication Date: 2013-Dec 2015

TSSA Historic Incidents:

Provincial

HINC

This database will cover all incidences recorded by TSSA with their older system, before they moved to their new management system. TSSA's Fuels Safety Program administers the Technical Standards & Safety Act 2000, providing fuel-related safety services associated with the safe transportation, storage, handling and use of fuels such as gasoline, diesel, propane, natural gas and hydrogen. Under this Act, TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. The TSSA works to protect the public, the environment and property from fuel-related hazards such as spills, fires and explosions. This database will include spills and leaks from pipelines, diesel, fuel oil, gasoline, natural gas, propane and hydrogen recorded by the TSSA.

Government Publication Date: 2006-June 2009*

Indian & Northern Affairs Fuel Tanks:

Federal

IAFT

The Department of Indian & Northern Affairs Canada (INAC) maintains an inventory of 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.

Government Publication Date: 1950-Aug 2003*

TSSA Incidents:

Provincial

INC

TSSA's Fuels Safety Program administers the Technical Standards & Safety Act 2000, providing fuel-related safety services associated with the safe transportation, storage, handling and use of fuels such as gasoline, diesel, propane, natural gas and hydrogen. Under this Act, TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. Includes incidents from fuel-related hazards such as spills, fires and explosions. This database will include spills and leaks from diesel, fuel oil, gasoline, natural gas, propane and hydrogen recorded by the TSSA.

Government Publication Date: Feb 28, 2017

Landfill Inventory Management Ontario:

Provincial

LIMO

The Landfill Inventory Management Ontario (LIMO) database is updated every year, as the ministry compiles new and updated information. The inventory will include small and large landfills. Additionally, each year the ministry will request operators of the larger landfills complete a landfill data collection form that will be used to update LIMO and will include the following information from the previous operating year. This will include additional information such as estimated amount of total waste received, landfill capacity, estimated total remaining landfill capacity, fill rates, engineering designs, reporting and monitoring details, size of location, service area, approved waste types, leachate of site treatment, contaminant attenuation zone and more. The small landfills will include information such as site owner, site location and certificate of approval # and status.

Government Publication Date: Dec 31, 2013

Canadian Mine Locations:

Private

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.

Government Publication Date: 1998-2009*

Mineral Occurrences:

Provincial

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 plan metric (X and Y) coordinates of that point with the coordinates of the same point as defined from a source of higher accuracy.

Government Publication Date: 1846-Feb 2017

National Analysis of Trends in Emergencies System (NATES):

Federal

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.

Government Publication Date: 1974-1994*

Non-Compliance Reports:

Provincial

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.

Government Publication Date: Dec 31, 2014

National Defense & Canadian Forces Fuel Tanks:

Federal

NDFT

The Department of National Defense 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.

Government Publication Date: Up to May 2001*

National Defense & Canadian Forces Spills:

Federal

NDSP

The Department of National Defense 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.

Government Publication Date: Mar 1999-Aug 2010

National Defence & Canadian Forces Waste Disposal Sites:

Federal

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.

Government Publication Date: 2001-Apr 2007*

National Energy Board Pipeline Incidents:

Federal

NEBI

Locations of pipeline incidents from 2008 to present, made available by the National Energy Board (NEB). Includes incidents reported under the Onshore Pipeline Regulations and the Processing Plant Regulations related to pipelines under federal jurisdiction, does not include incident data related to pipelines under provincial or territorial jurisdiction.

Government Publication Date: 2008 -Jun 2017

National Energy Board Wells:

Federal

NEBW

The NEBW database contains information on onshore & offshore oil and gas wells that are outside provincial jurisdiction(s) and are thereby regulated by the National Energy Board. Data is provided regarding the operator, well name, well ID No./UWI, status, classification, well depth, spud and release date.

Government Publication Date: 1920-Feb 2003*

National Environmental Emergencies System (NEES):

Federal

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 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.

Government Publication Date: 1974-2003***National PCB Inventory:**

Federal

NPCB

Environment Canada's National PCB inventory includes information on in-use PCB containing equipment in Canada including federal, provincial and private facilities. Federal out-of-service PCB containing equipment and 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. Some addresses provided may be Head Office addresses and are not necessarily the location of where the waste is being used or stored.

Government Publication Date: 1988-2008***National Pollutant Release Inventory:**

Federal

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.

Government Publication Date: 1993-May 2017**Oil and Gas Wells:**

Private

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 Nickle's database is updated on a daily basis, however, this database is updated on a monthly basis. More information is available at www.nickles.com.

Government Publication Date: 1988-Sep 2017**Ontario Oil and Gas Wells:**

Provincial

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, and well cap date, license 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.

Government Publication Date: 1800-Oct 2017**Inventory of PCB Storage Sites:**

Provincial

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.

Government Publication Date: 1987-Oct 2004; 2012-Dec 2013**Orders:**

Provincial

ORD

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all Orders on the registry such as (EPA s. 17) - Order for remedial work, (EPA s. 18) - Order for preventative measures, (EPA s. 43) - Order for removal of waste and restoration of site, (EPA s. 44) - Order for conformity with Act for waste disposal sites, (EPA s. 136) - Order for performance of environmental measures.

Government Publication Date: 1994-Oct 2017**Canadian Pulp and Paper:**

Private

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.

Government Publication Date: 1999, 2002, 2004, 2005, 2009**Parks Canada Fuel Storage Tanks:**

Federal

PCFT

Canadian Heritage maintains an inventory of 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.

Government Publication Date: 1920-Jan 2005*

Pesticide Register:

Provincial PES

The Ontario Ministry of the Environment and Climate Change maintains a database of licensed operators and vendors of registered pesticides.

Government Publication Date: 1988-Aug 2017

TSSA Pipeline Incidents:

Provincial PINC

TSSA's Fuels Safety Program administers the Technical Standards & Safety Act 2000, providing fuel-related safety services associated with the safe transportation, storage, handling and use of fuels such as gasoline, diesel, propane, natural gas and hydrogen. Under this Act, TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. This database will include spills, strike and leaks from recorded by the TSSA.

Government Publication Date: Feb 28, 2017

Private and Retail Fuel Storage Tanks:

Provincial 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).

Government Publication Date: 1989-1996*

Permit to Take Water:

Provincial PTTW

This is a subset taken from Ontario's Environmental Registry (EBR) database. It will include all PTTW's on the registry such as OWRA s. 34 - Permit to take water.

Government Publication Date: 1994-Oct 2017

Ontario Regulation 347 Waste Receivers Summary:

Provincial 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.

Government Publication Date: 1986-2016

Record of Site Condition:

Provincial 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.

RSCs filed after July 1, 2011 will also be included as part of the new (O.Reg. 511/09).

Government Publication Date: 1997-Sept 2001, Oct 2004-Aug 2017

Retail Fuel Storage Tanks:

Private 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.

Government Publication Date: 1999-May 2017

Scott's Manufacturing Directory:

Private SCT

Scott's Directories is a data bank containing information on over 200,000 manufacturers across Canada. Even though Scott's listings are voluntary, it is the most comprehensive database of Canadian manufacturers available. Information concerning a company's address, plant size, and main products are included in this database.

Government Publication Date: 1992-Mar 2011*

Ontario Spills:

Provincial 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.

Government Publication Date: 1988-Jun 2017

Wastewater Discharger Registration Database:

Provincial

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).

Government Publication Date: 1990-2014

Anderson's Storage Tanks:

Private

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.

Government Publication Date: 1915-1953*

Transport Canada Fuel Storage Tanks:

Federal

TCFT

List of fuel storage tanks currently or previously owned or operated by Transport Canada. This inventory also includes tanks on The Pickering Lands, which refers to 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, and falls under the Site Management Policy of Transport Canada, but is administered by Public Works and Government Services Canada. This inventory provides information on the site name, location, tank age, capacity and fuel type.

Government Publication Date: 1970-Jan 2015

TSSA Variances for Abandonment of Underground Storage Tanks:

Provincial

VAR

List of variances granted for abandoned tanks. Under the Technical Standards and Safety Authority (TSSA) Liquid Fuels Handling Code and Fuel Oil Code, all underground storage tanks must be removed within two years of disuse. If removal of a tank is not feasible, an application may be sought for a variance from this code requirement.

Government Publication Date: Feb 28, 2017

Waste Disposal Sites - MOE CA Inventory:

Provincial

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. All new Environmental Compliance Approvals handed out after Oct 31, 2011 for Waste Disposal Sites will still be found in this database.

Government Publication Date: Oct 31, 2017

Waste Disposal Sites - MOE 1991 Historical Approval Inventory:

Provincial

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.

Government Publication Date: Up to Oct 1990*

Water Well Information System:

Provincial

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.

Government Publication Date: Mar 31, 2017

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

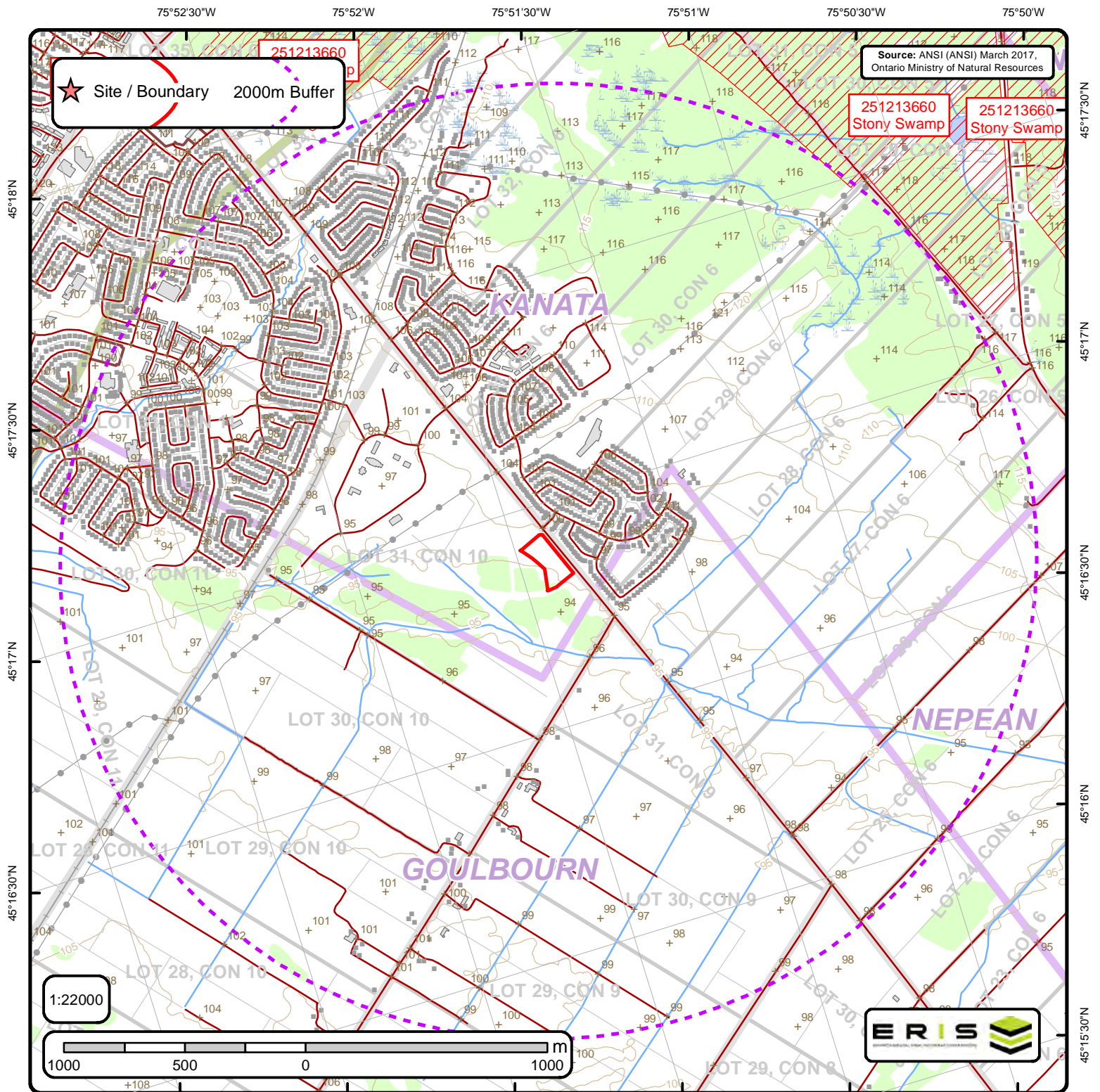
'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

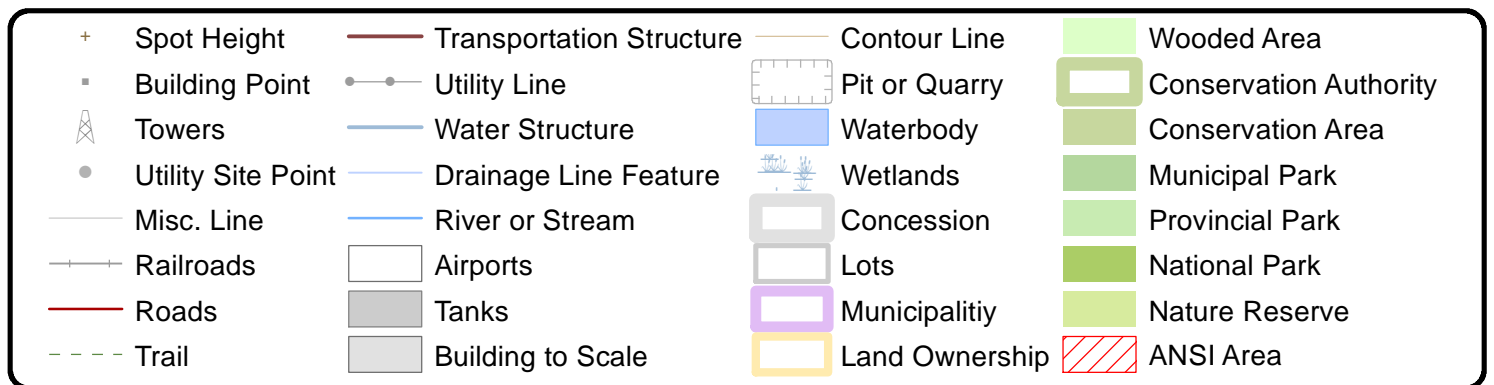
Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.



Area of Natural & Scientific Interest (ANSI) Order No. 20171207043





ANSI Report

ANSI Units Found within 2000 m of
10 Cope Dr, Ottawa, ON, K2M2V8



ANSI Name: Stony Swamp

ID: 251213660 | **Type:** Candidate ANSI, Life Science | **Significance:** Provincial | **Management Plan:** No | **Area (sqm):** 13789738.393 |

Comments:

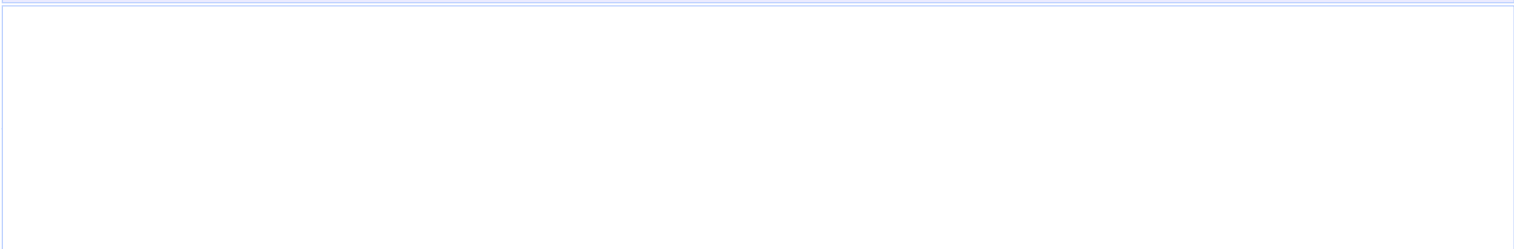
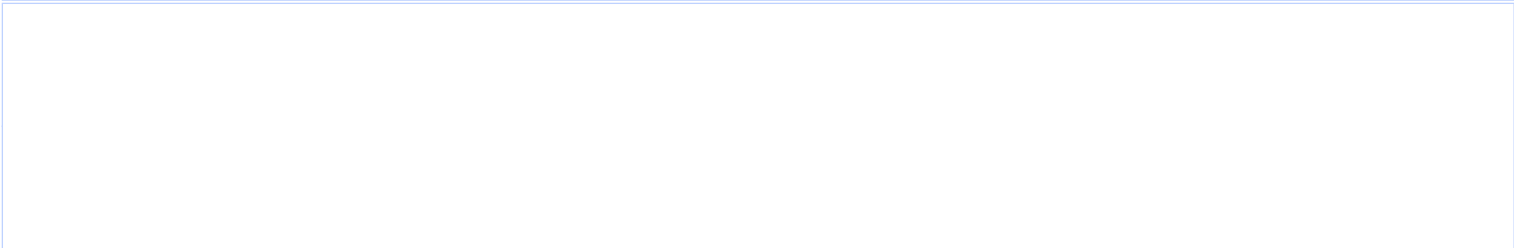
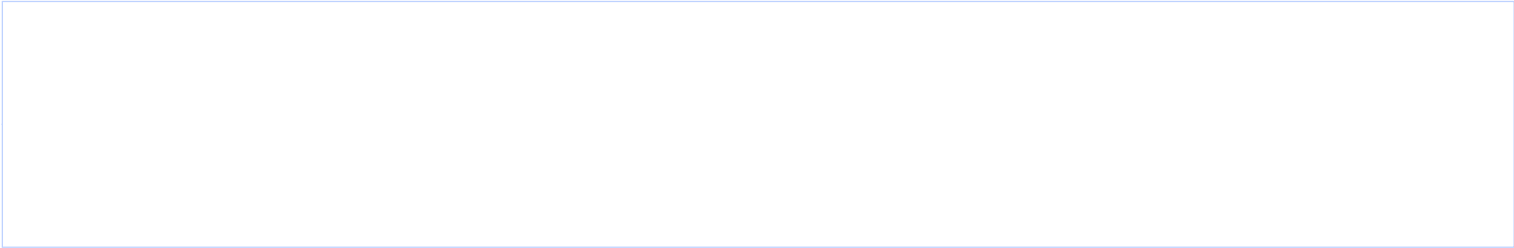


Bedrock Geology Report

Bedrock Geology units found within 2000 m of
10 Cope Dr, Ottawa, ON, K2M2V8



ID: 13298 | **Unit Name:** |
Type (All): 54a | **Type (Primary):** 54a | **Type (Secondary):** | **Type (Tertiary):** | **Rock Type (Primary):** Limestone, dolostone, shale, arkose, sandstone | **Strata (Primary):** Ottawa Group; Simcoe Group; Shadow Lake Formation | **Super Eon (Primary):** | **Eon (Primary):** PHANEROZOIC (Present to 542.0 Ma) | **Era (Primary):** PALEOZOIC (251.0 Ma to 542.0 Ma) | **Period (Primary):** ORDOVICIAN (443.7 Ma to 488.3 Ma) | **Epoch (Primary):** MIDDLE ORDOVICIAN (now considered UPPER DEVONIAN) | **Province (Primary):**





ID - Unit ID **Unit Name** - Generalized geological unit classification

Type (All) - The geological unit number(s) or code(s) for all rock types present in an individual polygon.

Type (Primary) - The primary geological unit number or code for the primary rock type in an individual polygon

Type (Secondary) - The secondary geological unit number or code for the secondary rock type, if present, in an individual polygon

Type (Tertiary) - The tertiary geological unit number or code for the tertiary rock type, if present, in an individual polygon

Rock Type (Primary) - Rock type or sub-unit description

Status (Primary) - The Stratigraphic unit. Divided into:

Supergroup (two or more groups and lone formations)
Group (two or more formations)
Formation (primary unit of lithostratigraphy)
Member (named lithologic subdivision of a formation)
Bed (named distinctive layer in a member or formation)

Super Eon (Primary) - A name given to the largest defined unit of geological time, divided into Eons. Unique values which this field may contain (Domains) are:

PRECAMBRIAN (0.542 Ga to <3.85 Ga)

Eon (Primary) - A name given to a defined unit of geological time, divided into Eras. Unique values which this field may contain (Domains) are:

ARCHEAN (2.5 Ga to <3.85 Ga)
PROTEROZOIC (0.542 Ga to 2.50 Ga)
PHANEROZOIC (Present to 542.0 Ma)

Era (Primary) - A name given to a defined unit of geological time, divided into Periods. Each era on the scale is separated from the next by a major event or change. Unique values which this field may contain (Domains) are:

MESOARCHEAN (2.8 Ga to 3.2 Ga)	MESOPROTEROZOIC (1.0 Ga to 1.6 Ga)
NEO-TO MESOARCHEAN (2.5 Ga to 3.2 Ga)	EARLY PALEOZOIC TO NEOPROTEROZOIC (443.7 Ma to 1.0 Ga)
NEOARCHEAN (2.5 Ga to 2.8 Ga)	NEO-TO MESOPROTEROZOIC (0.542 Ga to 1.6 Ga)
PALEOPROTEROZOIC (1.6 Ga to 2.5 Ga)	PALEOZOIC (251.0 Ma to 542.0 Ma)
MESO-TO PALEOPROTEROZOIC (1.0 Ga to 2.5 Ga)	MESOZOIC (65.5 Ma to 251.0 Ma)

Period (Primary) - A name given to a defined unit of geological time, divided into Epochs. Unique values which this field may contain (Domains) are:

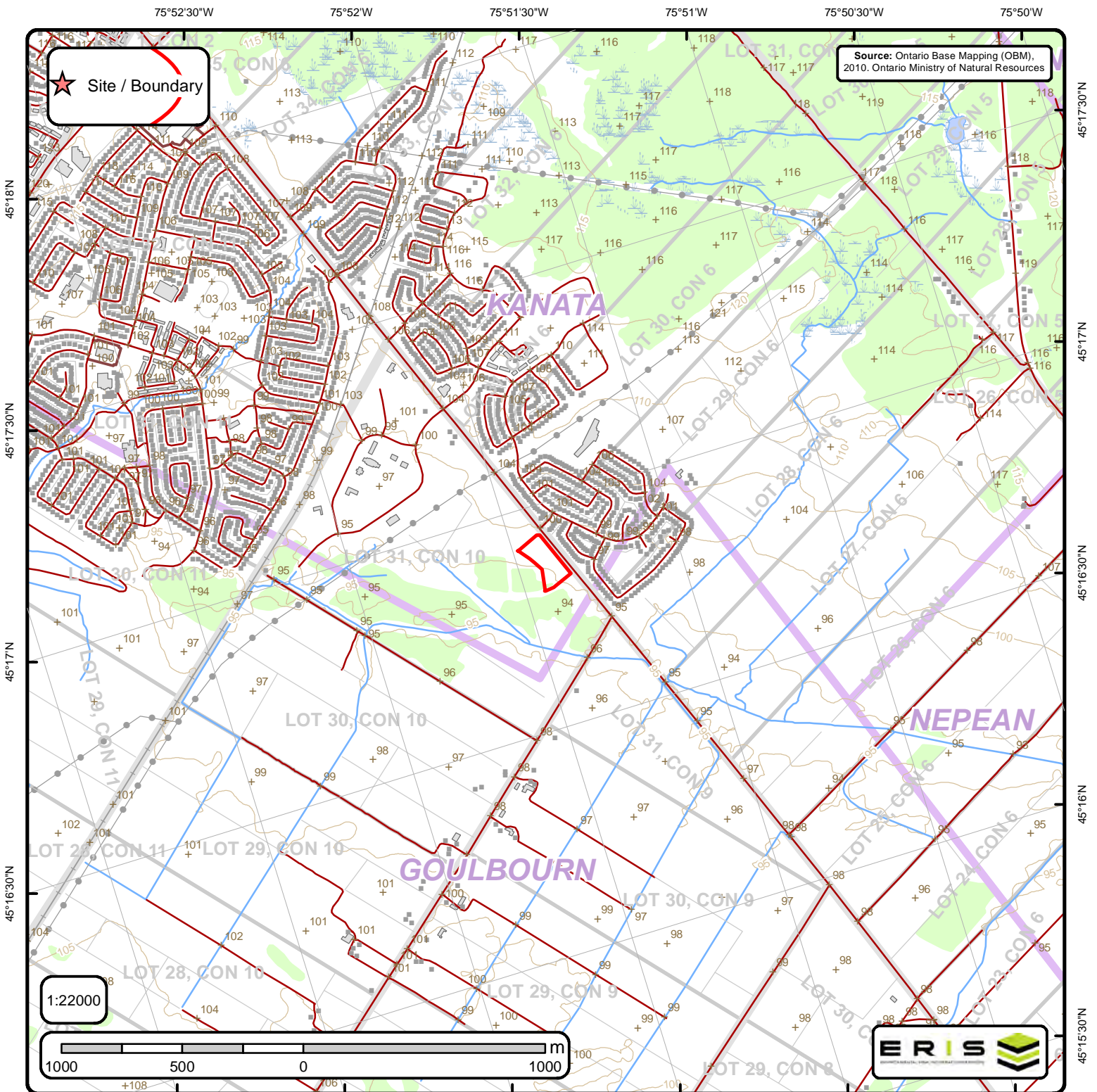
CAMBRIAN (488.3 Ma to 542.0 Ma)
ORDOVICIAN (443.7 Ma to 488.3 Ma)
SILURIAN (416.0 Ma to 443.7 Ma)
DEVONIAN (359.2 Ma to 416.0 Ma)
MISSISSIPPIAN TO DEVONIAN (318.1 Ma to 416.0 Ma)
JURASSIC (145.5 Ma to 199.6 Ma)
CRETACEOUS AND JURASSIC (65.5 Ma to 199.6 Ma)

Epoch (Primary) - A name given to a defined unit of geological time. Unique values which this field may contain (Domains) are:

LOWER ORDOVICIAN	UPPER SILURIAN
MIDDLE ORDOVICIAN	LOWER DEVONIAN
UPPER ORDOVICIAN	MIDDLE DEVONIAN
MIDDLE AND LOWER SILURIAN	UPPER DEVONIAN
UPPER SILURIAN TO LOWER DEVONIAN	LOWER CRETACEOUS AND MIDDLE JURASSIC

Province (Primary) - The Geological Province the geological unit is in. Unique values which this field may contain (Domains) are:

SUPERIOR
SOUTHERN
SUPERIOR
GRENVILLE



Ontario Base Mapping (OBM) Data

Order No. 20171207043

+	Spot Height (metre)	—	Transportation Structure	—	Contour Line	■	Wooded Area
■	Building Point	—	Utility Line	■	Pit or Quarry	■	Conservation Authority
⚡	Towers	—	Water Structure	■	Waterbody	■	Conservation Area
●	Utility Site Point	—	Drainage Line Feature	■	Wetlands	■	Municipal Park
—	Misc. Line	—	River or Stream	■	Concession	■	Provincial Park
—	Railroads	■	Airports	■	Lots	■	National Park
—	Roads	■	Tanks	■	Municipality	■	Nature Reserve
- - -	Trail	■	Building to Scale	■	Land Ownership		

75°52'30"W

75°52'W

75°51'30"W

75°51'W

75°50'30"W

75°50'W

★ Site / Boundary

Source: Chapman, L.J. and Putnam, D.F. 2007. Physiography of Southern Ontario; Ontario Geological Survey, Miscellaneous Release—Data 22

45°18'N

45°17'30"N

45°17'N

45°16'30"N

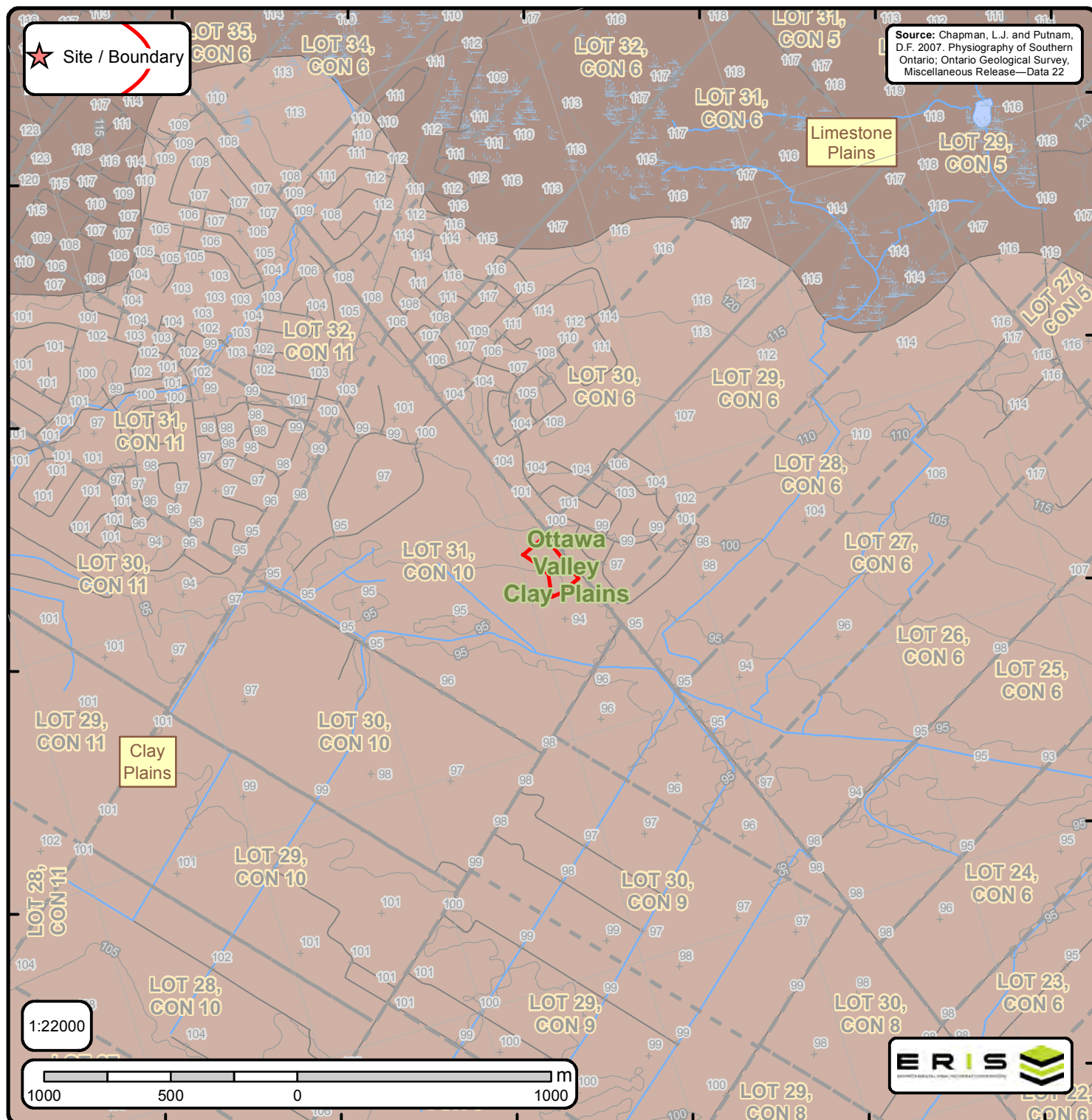
45°17'30"N

45°17'N

45°16'30"N

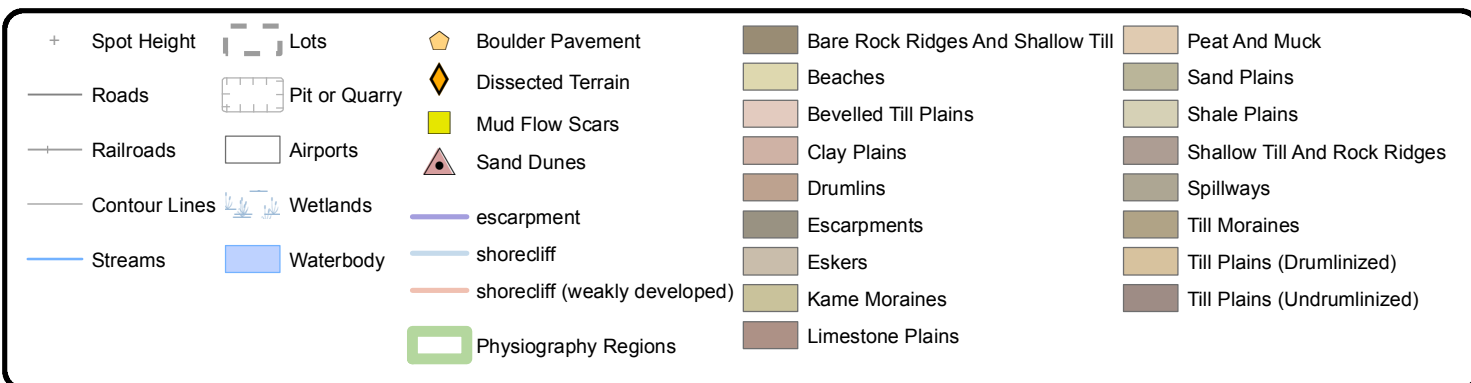
45°16'N

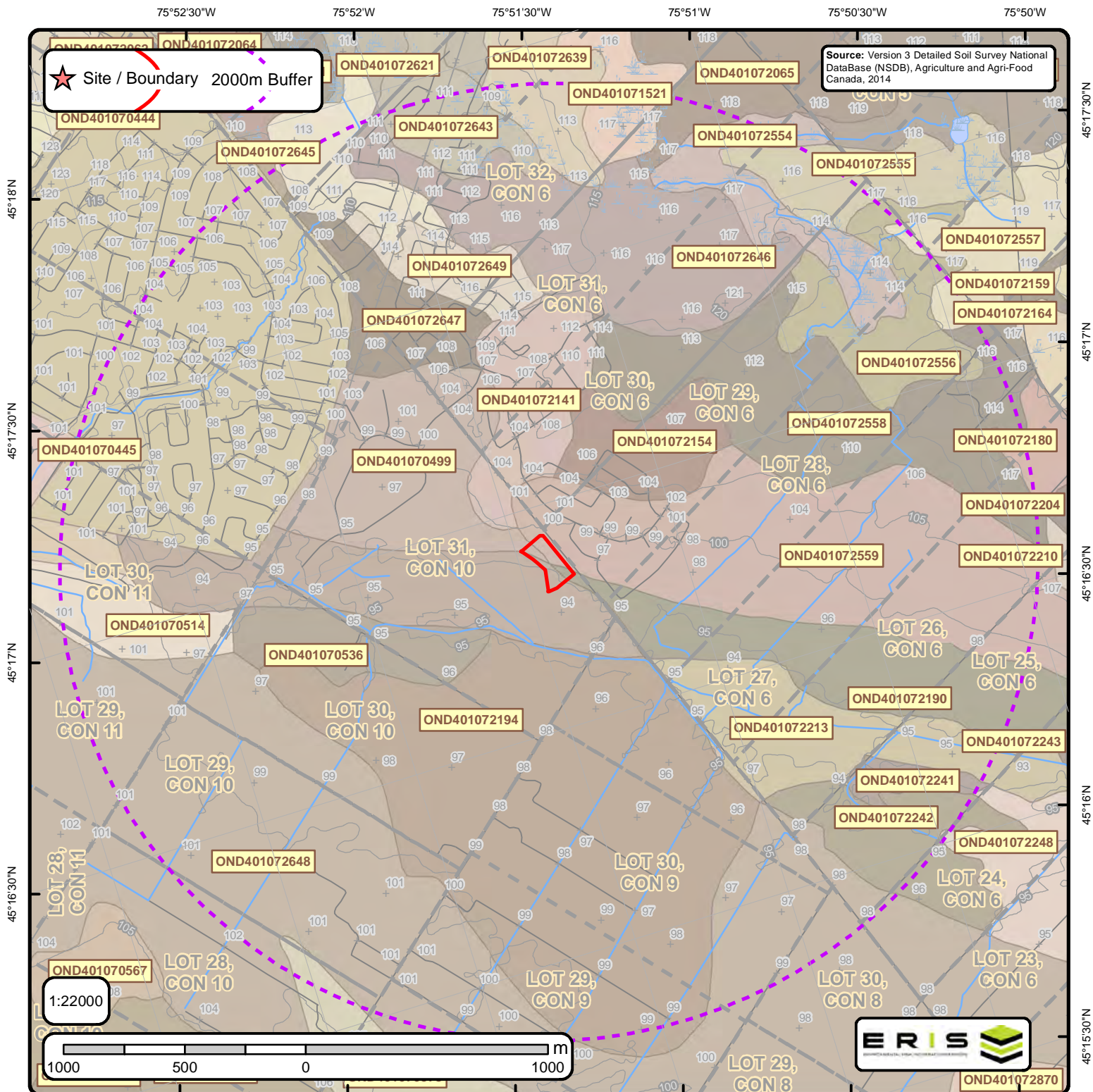
45°15'30"N



Physiography of Southern Ontario

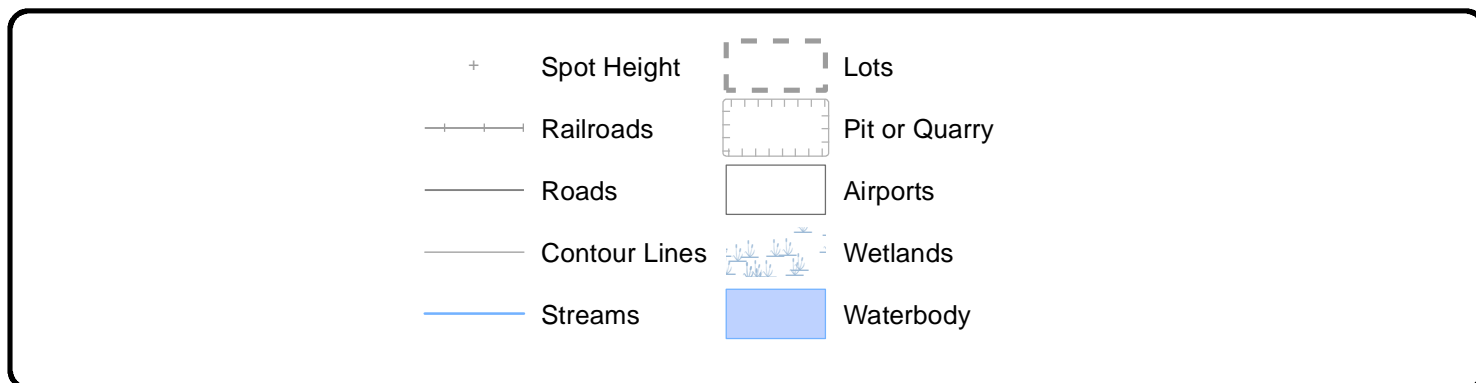
Order No. 20171207043





Detailed Soil Survey (ON Soils)

Order No. 20171207043





Soils Report

Soil Map Units Found within 2000 m of
10 Cope Dr, Ottawa, ON, K2M2V8



Soil ID: OND401070536

Component No : 2 | **Components(%)** : 50 | **Soil Name ID** : ONVUD~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : None | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : OND401070536-ONVUD~~~~~N | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-18 | **Horizon** : Ah | **Layer No** : 1 | **Very Fine Sand(%)** : 46 | **Total Sand(%)** : 75 | **Total Silt(%)** : 16 | **Total Clay(%)** : 9 | **Organic Carbon(%)** : 1.9 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 3.869 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 18-31 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 43 | **Total Sand(%)** : 82 | **Total Silt(%)** : 15 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 5.6 | **Saturated Hydraulic Conductivity(cm/h)** : 6.065 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 31-63 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 53 | **Total Sand(%)** : 90 | **Total Silt(%)** : 8 | **Total Clay(%)** : 2 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 7.127 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 63-78 | **Horizon** : Bg | **Layer No** : 4 | **Very Fine Sand(%)** : 44 | **Total Sand(%)** : 86 | **Total Silt(%)** : 7 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 6.3 | **Saturated Hydraulic Conductivity(cm/h)** : 3.942 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 78-100 | **Horizon** : Cg | **Layer No** : 5 | **Very Fine Sand(%)** : 39 | **Total Sand(%)** : 93 | **Total Silt(%)** : 4 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 6.1 | **Saturated Hydraulic Conductivity(cm/h)** : 6.172 | **Electrical Conductivity(dS/m)** : 0

Soil ID: OND401070536

Component No : 1 | **Components(%)** : 50 | **Soil Name ID** : ONVUD~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-18 | **Horizon** : Ah | **Layer No** : 1 | **Very Fine Sand(%)** : 46 | **Total Sand(%)** : 75 | **Total Silt(%)** : 16 | **Total Clay(%)** : 9 | **Organic Carbon(%)** : 1.9 | **pH in Calc Chloride** : 4.9 | **Saturated Hydraulic Conductivity(cm/h)** : 3.869 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 18-31 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 43 | **Total Sand(%)** : 82 | **Total Silt(%)** : 15 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 5.6 | **Saturated Hydraulic Conductivity(cm/h)** : 6.065 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 31-63 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 53 | **Total Sand(%)** : 90 | **Total Silt(%)** : 8 | **Total Clay(%)** : 2 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 5.7 | **Saturated Hydraulic Conductivity(cm/h)** : 7.127 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 63-78 | **Horizon** : Bg | **Layer No** : 4 | **Very Fine Sand(%)** : 44 | **Total Sand(%)** : 86 | **Total Silt(%)** : 7 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 6.3 | **Saturated Hydraulic Conductivity(cm/h)** : 3.942 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 78-100 | **Horizon** : Cg | **Layer No** : 5 | **Very Fine Sand(%)** : 39 | **Total Sand(%)** : 93 | **Total Silt(%)** : 4 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 6.1 | **Saturated Hydraulic Conductivity(cm/h)** : 6.172 | **Electrical Conductivity(dS/m)** : 0

Soil ID: OND401070514

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONNGW~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-25 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 43 | **Total Silt(%)** : 41 | **Total Clay(%)** : 16 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.375 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 25-37 | **Horizon** : Bgj | **Layer No** : 2 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 45 | **Total Silt(%)** : 40 | **Total Clay(%)** : 15 | **Organic Carbon(%)** : 3.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.752 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 37-100 | **Horizon** : Cg | **Layer No** : 3 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 20 | **Total Silt(%)** : 63 | **Total Clay(%)** : 17 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.29 | **Electrical Conductivity(dS/m)** : 0



Soils Report

Soil Map Units Found within 2000 m of
10 Cope Dr, Ottawa, ON, K2M2V8



Soil ID: OND401070514

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONBIV~~~~~A | **Surface Stoniness Class** : Nonstony | **Slope Steepness(%)** : 1.2 | **Slope Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-17 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 31 | **Total Sand(%)** : 53 | **Total Silt(%)** : 34 | **Total Clay(%)** : 13 | **Organic Carbon(%)** : 3.1 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 2.052 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 17-33 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 30 | **Total Silt(%)** : 39 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.273 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 33-62 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 40 | **Total Sand(%)** : 52 | **Total Silt(%)** : 28 | **Total Clay(%)** : 20 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.683 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 62-84 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 45 | **Total Sand(%)** : 62 | **Total Silt(%)** : 26 | **Total Clay(%)** : 12 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 1.597 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 84-100 | **Horizon** : Ckg | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 4 | **Total Silt(%)** : 54 | **Total Clay(%)** : 42 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.194 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072141

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONFRM~~~~~N | **Surface Stoniness Class** : Very stony | **Slope Steepness(%)** : 7.0 | **Slope Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : Natural grazing only; no improvements feasible. | **First CLI Limitation Subclass** : Presence of consolidated bedrock within one metre of the soil surface | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-21 | **Horizon** : Ah | **Layer No** : 1 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 44 | **Total Silt(%)** : 44 | **Total Clay(%)** : 12 | **Organic Carbon(%)** : 3.7 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 1.969 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 21-38 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 13 | **Total Sand(%)** : 49 | **Total Silt(%)** : 45 | **Total Clay(%)** : 6 | **Organic Carbon(%)** : 3.1 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 3.014 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 38-50 | **Horizon** : C | **Layer No** : 3 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 57 | **Total Silt(%)** : 36 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 1.3 | **pH in Calc Chloride** : 7.0 | **Saturated Hydraulic Conductivity(cm/h)** : 1.979 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 50-100 | **Horizon** : R | **Layer No** : 4 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : None | **pH in Calc Chloride** : None | **Saturated Hydraulic Conductivity(cm/h)** : None | **Electrical Conductivity(dS/m)** : None |

Soil ID: OND401072141

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONGVI~~~~~A | **Surface Stoniness Class** : Moderately stony | **Slope Steepness(%)** : 1.2 | **Slope Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : Presence of surface stones > 15 cm diameter. | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-19 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 59 | **Total Silt(%)** : 30 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 2.565 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 19-35 | **Horizon** : Ap | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 62 | **Total Silt(%)** : 33 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 5.087 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 35-55 | **Horizon** : Ae | **Layer No** : 3 | **Very Fine Sand(%)** : 21 | **Total Sand(%)** : 63 | **Total Silt(%)** : 32 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 4.441 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 55-77 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 56 | **Total Silt(%)** : 26 | **Total Clay(%)** : 18 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.856 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 77-92 | **Horizon** : BC | **Layer No** : 5 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 61 | **Total Silt(%)** : 28 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.805 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 92-100 | **Horizon** : Ck | **Layer No** : 6 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 65 | **Total Silt(%)** : 30 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 3.082 | **Electrical Conductivity(dS/m)** : 0 |



Soils Report

Soil Map Units Found within 2000 m of
10 Cope Dr, Ottawa, ON, K2M2V8

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Order ID:
20171207043



Soil ID: OND401072065

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONFWF~~~~~N | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Natural grazing only; no improvements feasible. | **First CLI Limitation Subclass** : Presence of consolidated bedrock within one metre of the soil surface | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-22 | **Horizon** : Ah | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 56 | **Total Silt(%)** : 35 | **Total Clay(%)** : 9 | **Organic Carbon(%)** : 2.8 | **pH in Calc Chloride** : 6.3 | **Saturated Hydraulic Conductivity(cm/h)** : 3.33 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 22-38 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 8 | **Total Sand(%)** : 53 | **Total Silt(%)** : 36 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 1.1 | **pH in Calc Chloride** : 6.9 | **Saturated Hydraulic Conductivity(cm/h)** : 1.748 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 38-56 | **Horizon** : Bmgj | **Layer No** : 3 | **Very Fine Sand(%)** : 17 | **Total Sand(%)** : 70 | **Total Silt(%)** : 22 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 3.405 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 56-60 | **Horizon** : Cg | **Layer No** : 4 | **Very Fine Sand(%)** : 16 | **Total Sand(%)** : 71 | **Total Silt(%)** : 22 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 2.494 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 60-100 | **Horizon** : R | **Layer No** : 5 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : None | **pH in Calc Chloride** : None | **Saturated Hydraulic Conductivity(cm/h)** : None | **Electrical Conductivity(dS/m)** : None |

Soil ID: OND401072065

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONZUN~~~~~N | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Natural grazing only; no improvements feasible. | **First CLI Limitation Subclass** : Presence of consolidated bedrock within one metre of the soil surface | **Second CLI Limitation Subclass** : None | **Soil Name** : UNCLASSIFIED | **Water Table Characteristics** : Unspecified period | **Soil Drainage Class** : Not applicable | **Kind of Surface Material** : Unclassified | **Layer that Restricts Root Growth** : No root restricting layer | **Type of Root Restricting Layer** : n/a | **Parent Material 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Mode of Deposition 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Parent Material Chemical Property 1|2|3** : Not Applicable; Not Applicable; Not Applicable |

Soil ID: OND401072559

Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONCRP~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : clay loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : Presence of adverse Topography | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-28 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 28 | **Total Silt(%)** : 46 | **Total Clay(%)** : 26 | **Organic Carbon(%)** : 3.5 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.568 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 28-43 | **Horizon** : Bmgj | **Layer No** : 2 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 21 | **Total Silt(%)** : 48 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.288 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 43-70 | **Horizon** : Bmgj | **Layer No** : 3 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 20 | **Total Silt(%)** : 49 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 6.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.287 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 70-95 | **Horizon** : BCg | **Layer No** : 4 | **Very Fine Sand(%)** : 17 | **Total Sand(%)** : 17 | **Total Silt(%)** : 50 | **Total Clay(%)** : 33 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 1.932 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 95-115 | **Horizon** : Cg | **Layer No** : 5 | **Very Fine Sand(%)** : 17 | **Total Sand(%)** : 18 | **Total Silt(%)** : 48 | **Total Clay(%)** : 34 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 6.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.214 | **Electrical Conductivity(dS/m)** : 0 |



Soils Report

Soil Map Units Found within 2000 m of
10 Cope Dr, Ottawa, ON, K2M2V8



Soil ID: OND401072558

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONGVISH~~~A | **Surface Stoniness Class** : Moderately stony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Presence of consolidated bedrock within one metre of the soil surface | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-37 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 15 | **Total Sand(%)** : 61 | **Total Silt(%)** : 31 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 2.4 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 3.765 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 37-53 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 15 | **Total Sand(%)** : 59 | **Total Silt(%)** : 33 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 1.1 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 2.843 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 53-70 | **Horizon** : CK | **Layer No** : 3 | **Very Fine Sand(%)** : 15 | **Total Sand(%)** : 45 | **Total Silt(%)** : 48 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 7.5 | **Saturated Hydraulic Conductivity(cm/h)** : 1.568 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 70-100 | **Horizon** : R | **Layer No** : 4 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : None | **pH in Calc Chloride** : None | **Saturated Hydraulic Conductivity(cm/h)** : None | **Electrical Conductivity(dS/m)** : None |

Soil ID: OND401072558

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONMTDSH~~~A | **Surface Stoniness Class** : Moderately stony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Presence of consolidated bedrock within one metre of the soil surface | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-17 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 15 | **Total Sand(%)** : 41 | **Total Silt(%)** : 38 | **Total Clay(%)** : 21 | **Organic Carbon(%)** : 3.3 | **pH in Calc Chloride** : 6.5 | **Saturated Hydraulic Conductivity(cm/h)** : 0.88 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 17-38 | **Horizon** : Bmg | **Layer No** : 2 | **Very Fine Sand(%)** : 10 | **Total Sand(%)** : 29 | **Total Silt(%)** : 43 | **Total Clay(%)** : 28 | **Organic Carbon(%)** : 0.8 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.341 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 38-50 | **Horizon** : BCg | **Layer No** : 3 | **Very Fine Sand(%)** : 11 | **Total Sand(%)** : 39 | **Total Silt(%)** : 38 | **Total Clay(%)** : 23 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.407 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 50-100 | **Horizon** : R | **Layer No** : 4 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : None | **pH in Calc Chloride** : None | **Saturated Hydraulic Conductivity(cm/h)** : None | **Electrical Conductivity(dS/m)** : None |

Soil ID: OND401072194

Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONBIV~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-17 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 31 | **Total Sand(%)** : 53 | **Total Silt(%)** : 34 | **Total Clay(%)** : 13 | **Organic Carbon(%)** : 3.1 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 2.052 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 17-33 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 30 | **Total Silt(%)** : 39 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.273 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 33-62 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 40 | **Total Sand(%)** : 52 | **Total Silt(%)** : 28 | **Total Clay(%)** : 20 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.683 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 62-84 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 45 | **Total Sand(%)** : 62 | **Total Silt(%)** : 26 | **Total Clay(%)** : 12 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 1.597 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 84-100 | **Horizon** : Ckg | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 4 | **Total Silt(%)** : 54 | **Total Clay(%)** : 42 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.194 | **Electrical Conductivity(dS/m)** : 0 |



Soils Report

Soil Map Units Found within 2000 m of
10 Cope Dr, Ottawa, ON, K2M2V8



Soil ID: OND401071521

Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONZOR~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Very Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-99 | **Horizon** : Oh | **Layer No** : 1 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : 20.0 | **pH in Calc Chloride** : 5.5 | **Saturated Hydraulic Conductivity(cm/h)** : 3.455 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 99-149 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 23 | **Total Silt(%)** : 17 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 5.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.21 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072554

Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONZOR~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Very Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-99 | **Horizon** : Oh | **Layer No** : 1 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : 20.0 | **pH in Calc Chloride** : 5.5 | **Saturated Hydraulic Conductivity(cm/h)** : 3.455 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 99-149 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 23 | **Total Silt(%)** : 17 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 5.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.21 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072557

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONFRM~~~~~N | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : Natural grazing only; no improvements feasible. | **First CLI Limitation Subclass** : Presence of consolidated bedrock within one metre of the soil surface | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-21 | **Horizon** : Ah | **Layer No** : 1 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 44 | **Total Silt(%)** : 44 | **Total Clay(%)** : 12 | **Organic Carbon(%)** : 3.7 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 1.969 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 21-38 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 13 | **Total Sand(%)** : 49 | **Total Silt(%)** : 45 | **Total Clay(%)** : 6 | **Organic Carbon(%)** : 3.1 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 3.014 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 38-50 | **Horizon** : C | **Layer No** : 3 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 57 | **Total Silt(%)** : 36 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 1.3 | **pH in Calc Chloride** : 7.0 | **Saturated Hydraulic Conductivity(cm/h)** : 1.979 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 50-100 | **Horizon** : R | **Layer No** : 4 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : None | **pH in Calc Chloride** : None | **Saturated Hydraulic Conductivity(cm/h)** : None | **Electrical Conductivity(dS/m)** : None |



Soils Report

Soil Map Units Found within 2000 m of
10 Cope Dr, Ottawa, ON, K2M2V8

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Order ID:
20171207043



Soil ID: OND401072557

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONZUN~~~~~N | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : Natural grazing only; no improvements feasible. | **First CLI Limitation Subclass** : Presence of consolidated bedrock within one metre of the soil surface | **Second CLI Limitation Subclass** : None | **Soil Name** : UNCLASSIFIED | **Water Table Characteristics** : Unspecified period | **Soil Drainage Class** : Not applicable | **Kind of Surface Material** : Unclassified | **Layer that Restricts Root Growth** : No root restricting layer | **Type of Root Restricting Layer** : n/a | **Parent Material 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Mode of Deposition 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Parent Material Chemical Property 1|2|3** : Not Applicable; Not Applicable; Not Applicable |

Soil ID: OND401072556

Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONLYSSH~~~N | **Surface Stoniness Class** : Moderately stony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : Very severe limitations preclude annual cultivation; improvements feasible. | **First CLI Limitation Subclass** : Presence of consolidated bedrock within one metre of the soil surface | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-19 | **Horizon** : Ahk | **Layer No** : 1 | **Very Fine Sand(%)** : 26 | **Total Sand(%)** : 75 | **Total Silt(%)** : 21 | **Total Clay(%)** : 4 | **Organic Carbon(%)** : 1.7 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 6.811 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 19-50 | **Horizon** : Ckg | **Layer No** : 2 | **Very Fine Sand(%)** : 24 | **Total Sand(%)** : 68 | **Total Silt(%)** : 28 | **Total Clay(%)** : 4 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.7 | **Saturated Hydraulic Conductivity(cm/h)** : 3.662 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 50-100 | **Horizon** : R | **Layer No** : 3 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : None | **pH in Calc Chloride** : None | **Saturated Hydraulic Conductivity(cm/h)** : None | **Electrical Conductivity(dS/m)** : None |

Soil ID: OND401072636

Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONZUN~~~~~N | **Surface Stoniness Class** : Not Applicable | **Slop Steepness(%)** : None | **Slop Length(m)** : -9 | **Drainage** : Not Applicable | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Soil Name** : UNCLASSIFIED | **Water Table Characteristics** : Unspecified period | **Soil Drainage Class** : Not applicable | **Kind of Surface Material** : Unclassified | **Layer that Restricts Root Growth** : No root restricting layer | **Type of Root Restricting Layer** : n/a | **Parent Material 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Mode of Deposition 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Parent Material Chemical Property 1|2|3** : Not Applicable; Not Applicable; Not Applicable |



Soils Report

Soil Map Units Found within 2000 m of
10 Cope Dr, Ottawa, ON, K2M2V8



Soil ID: OND401072241

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONJKV~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils that have a low runoff potential and high infiltration rate, as the soils typically are sands and gravel. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-15 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 69 | **Total Silt(%)** : 21 | **Total Clay(%)** : 10 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.0 | **Saturated Hydraulic Conductivity(cm/h)** : 3.153 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 15-29 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 26 | **Total Sand(%)** : 80 | **Total Silt(%)** : 17 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.0 | **Saturated Hydraulic Conductivity(cm/h)** : 6.686 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 29-100 | **Horizon** : C | **Layer No** : 3 | **Very Fine Sand(%)** : 36 | **Total Sand(%)** : 83 | **Total Silt(%)** : 12 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 7.0 | **Saturated Hydraulic Conductivity(cm/h)** : 4.903 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072241

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONBIV~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-17 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 31 | **Total Sand(%)** : 53 | **Total Silt(%)** : 34 | **Total Clay(%)** : 13 | **Organic Carbon(%)** : 3.1 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 2.052 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 17-33 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 30 | **Total Silt(%)** : 39 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.273 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 33-62 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 40 | **Total Sand(%)** : 52 | **Total Silt(%)** : 28 | **Total Clay(%)** : 20 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.683 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 62-84 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 45 | **Total Sand(%)** : 62 | **Total Silt(%)** : 26 | **Total Clay(%)** : 12 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 1.597 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 84-100 | **Horizon** : Ckg | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 4 | **Total Silt(%)** : 54 | **Total Clay(%)** : 42 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.194 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072242

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONBIV~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-17 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 31 | **Total Sand(%)** : 53 | **Total Silt(%)** : 34 | **Total Clay(%)** : 13 | **Organic Carbon(%)** : 3.1 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 2.052 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 17-33 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 30 | **Total Silt(%)** : 39 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.273 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 33-62 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 40 | **Total Sand(%)** : 52 | **Total Silt(%)** : 28 | **Total Clay(%)** : 20 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.683 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 62-84 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 45 | **Total Sand(%)** : 62 | **Total Silt(%)** : 26 | **Total Clay(%)** : 12 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 1.597 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 84-100 | **Horizon** : Ckg | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 4 | **Total Silt(%)** : 54 | **Total Clay(%)** : 42 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.194 | **Electrical Conductivity(dS/m)** : 0 |



Soils Report

Soil Map Units Found within 2000 m of
10 Cope Dr, Ottawa, ON, K2M2V8



Soil ID: OND401072242

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONCRP~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : clay loam | **Field Crops Capability** : No significant limitations in use for Crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-28 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 28 | **Total Silt(%)** : 46 | **Total Clay(%)** : 26 | **Organic Carbon(%)** : 3.5 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.568 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 28-43 | **Horizon** : Bmgj | **Layer No** : 2 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 21 | **Total Silt(%)** : 48 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.288 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 43-70 | **Horizon** : Bmgj | **Layer No** : 3 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 20 | **Total Silt(%)** : 49 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 6.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.287 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 70-95 | **Horizon** : BCg | **Layer No** : 4 | **Very Fine Sand(%)** : 17 | **Total Sand(%)** : 17 | **Total Silt(%)** : 50 | **Total Clay(%)** : 33 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 1.932 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 95-115 | **Horizon** : Cg | **Layer No** : 5 | **Very Fine Sand(%)** : 17 | **Total Sand(%)** : 18 | **Total Silt(%)** : 48 | **Total Clay(%)** : 34 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 6.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.214 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072180

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONOGO~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 34 | **Total Sand(%)** : 41 | **Total Silt(%)** : 42 | **Total Clay(%)** : 17 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.832 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 20-40 | **Horizon** : Bmg | **Layer No** : 2 | **Very Fine Sand(%)** : 33 | **Total Sand(%)** : 39 | **Total Silt(%)** : 40 | **Total Clay(%)** : 21 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 6.5 | **Saturated Hydraulic Conductivity(cm/h)** : 0.547 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 40-70 | **Horizon** : Bmg | **Layer No** : 3 | **Very Fine Sand(%)** : 28 | **Total Sand(%)** : 35 | **Total Silt(%)** : 42 | **Total Clay(%)** : 23 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 6.7 | **Saturated Hydraulic Conductivity(cm/h)** : 0.454 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 70-100 | **Horizon** : Cg | **Layer No** : 4 | **Very Fine Sand(%)** : 25 | **Total Sand(%)** : 31 | **Total Silt(%)** : 46 | **Total Clay(%)** : 23 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 6.7 | **Saturated Hydraulic Conductivity(cm/h)** : 0.324 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072180

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONPPV~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-15 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 41 | **Total Sand(%)** : 52 | **Total Silt(%)** : 31 | **Total Clay(%)** : 17 | **Organic Carbon(%)** : 3.2 | **pH in Calc Chloride** : 7.5 | **Saturated Hydraulic Conductivity(cm/h)** : 1.455 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 15-24 | **Horizon** : Bmgj | **Layer No** : 2 | **Very Fine Sand(%)** : 38 | **Total Sand(%)** : 53 | **Total Silt(%)** : 39 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 1.6 | **pH in Calc Chloride** : 6.2 | **Saturated Hydraulic Conductivity(cm/h)** : 2.56 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 24-50 | **Horizon** : Bmgj | **Layer No** : 3 | **Very Fine Sand(%)** : 40 | **Total Sand(%)** : 73 | **Total Silt(%)** : 23 | **Total Clay(%)** : 4 | **Organic Carbon(%)** : 0.7 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 5.837 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 50-54 | **Horizon** : Bmgj | **Layer No** : 4 | **Very Fine Sand(%)** : 35 | **Total Sand(%)** : 78 | **Total Silt(%)** : 19 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 6.904 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 54-63 | **Horizon** : Bg | **Layer No** : 5 | **Very Fine Sand(%)** : 57 | **Total Sand(%)** : 61 | **Total Silt(%)** : 32 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 2.989 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 63-86 | **Horizon** : Bg | **Layer No** : 6 | **Very Fine Sand(%)** : 28 | **Total Sand(%)** : 56 | **Total Silt(%)** : 33 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 1.634 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 86-100 | **Horizon** : Cg | **Layer No** : 7 | **Very Fine Sand(%)** : 32 | **Total Sand(%)** : 37 | **Total Silt(%)** : 47 | **Total Clay(%)** : 16 |



Soils Report

Soil Map Units Found within 2000 m of
10 Cope Dr, Ottawa, ON, K2M2V8

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Order ID:
20171207043



Soil ID: OND401072639

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONZUN~~~~~N | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Natural grazing only; no improvements feasible. | **First CLI Limitation Subclass** : Presence of consolidated bedrock within one metre of the soil surface | **Second CLI Limitation Subclass** : None | **Soil Name** : UNCLASSIFIED | **Water Table Characteristics** : Unspecified period | **Soil Drainage Class** : Not applicable | **Kind of Surface Material** : Unclassified | **Layer that Restricts Root Growth** : No root restricting layer | **Type of Root Restricting Layer** : n/a | **Parent Material 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Mode of Deposition 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Parent Material Chemical Property 1|2|3** : Not Applicable; Not Applicable; Not Applicable |

Soil ID: OND401072639

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONOKASH~~~A | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils that have a low runoff potential and high infiltration rate, as the soils typically are sands and gravel. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Very severe limitations preclude annual cultivation; improvements feasible. | **First CLI Limitation Subclass** : Presence of consolidated bedrock within one metre of the soil surface | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-12 | **Horizon** : Apk | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 70 | **Total Silt(%)** : 22 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 4.0 | **pH in Calc Chloride** : 6.9 | **Saturated Hydraulic Conductivity(cm/h)** : 5.409 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 12-30 | **Horizon** : Bmk | **Layer No** : 2 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 71 | **Total Silt(%)** : 20 | **Total Clay(%)** : 9 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 3.079 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 30-50 | **Horizon** : Ck | **Layer No** : 3 | **Very Fine Sand(%)** : 3 | **Total Sand(%)** : 91 | **Total Silt(%)** : 6 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 6.109 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 50-100 | **Horizon** : R | **Layer No** : 4 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : None | **pH in Calc Chloride** : None | **Saturated Hydraulic Conductivity(cm/h)** : None | **Electrical Conductivity(dS/m)** : None |

Soil ID: OND401072155

Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONZOR~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Very Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-99 | **Horizon** : Oh | **Layer No** : 1 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : 20.0 | **pH in Calc Chloride** : 5.5 | **Saturated Hydraulic Conductivity(cm/h)** : 3.455 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 99-149 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 23 | **Total Silt(%)** : 17 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 5.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.21 | **Electrical Conductivity(dS/m)** : 0 |



Soils Report

Soil Map Units Found within 2000 m of
10 Cope Dr, Ottawa, ON, K2M2V8



Soil ID: OND401072154

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONGVI~~~~~A | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Presence of surface stones > 15 cm diameter. | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-19 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 59 | **Total Silt(%)** : 30 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 2.565 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 19-35 | **Horizon** : Ap | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 62 | **Total Silt(%)** : 33 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 5.087 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 35-55 | **Horizon** : Ae | **Layer No** : 3 | **Very Fine Sand(%)** : 21 | **Total Sand(%)** : 63 | **Total Silt(%)** : 32 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 4.441 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 55-77 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 56 | **Total Silt(%)** : 26 | **Total Clay(%)** : 18 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.856 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 77-92 | **Horizon** : BC | **Layer No** : 5 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 61 | **Total Silt(%)** : 28 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.805 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 92-100 | **Horizon** : Ck | **Layer No** : 6 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 65 | **Total Silt(%)** : 30 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 3.082 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072154

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONCRP~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : clay loam | **Field Crops Capability** : No significant limitations in use for Crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-28 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 28 | **Total Silt(%)** : 46 | **Total Clay(%)** : 26 | **Organic Carbon(%)** : 3.5 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.568 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 28-43 | **Horizon** : Bmgj | **Layer No** : 2 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 21 | **Total Silt(%)** : 48 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.288 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 43-70 | **Horizon** : Bmgj | **Layer No** : 3 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 20 | **Total Silt(%)** : 49 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 6.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.287 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 70-95 | **Horizon** : BCg | **Layer No** : 4 | **Very Fine Sand(%)** : 17 | **Total Sand(%)** : 17 | **Total Silt(%)** : 50 | **Total Clay(%)** : 33 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 1.932 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 95-115 | **Horizon** : Cg | **Layer No** : 5 | **Very Fine Sand(%)** : 17 | **Total Sand(%)** : 18 | **Total Silt(%)** : 48 | **Total Clay(%)** : 34 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 6.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.214 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072555

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONFWF~~~~~N | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Natural grazing only; no improvements feasible. | **First CLI Limitation Subclass** : Presence of consolidated bedrock within one metre of the soil surface | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-22 | **Horizon** : Ah | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 56 | **Total Silt(%)** : 35 | **Total Clay(%)** : 9 | **Organic Carbon(%)** : 2.8 | **pH in Calc Chloride** : 6.3 | **Saturated Hydraulic Conductivity(cm/h)** : 3.33 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 22-38 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 8 | **Total Sand(%)** : 53 | **Total Silt(%)** : 36 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 1.1 | **pH in Calc Chloride** : 6.9 | **Saturated Hydraulic Conductivity(cm/h)** : 1.748 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 38-56 | **Horizon** : Bmgj | **Layer No** : 3 | **Very Fine Sand(%)** : 17 | **Total Sand(%)** : 70 | **Total Silt(%)** : 22 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 3.405 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 56-60 | **Horizon** : Cg | **Layer No** : 4 | **Very Fine Sand(%)** : 16 | **Total Sand(%)** : 71 | **Total Silt(%)** : 22 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 2.494 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 60-100 | **Horizon** : R | **Layer No** : 5 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : None | **pH in Calc Chloride** : None | **Saturated Hydraulic Conductivity(cm/h)** : None | **Electrical Conductivity(dS/m)** : None |



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Soil ID: OND401072555

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONZOR~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Very Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-99 | **Horizon** : Oh | **Layer No** : 1 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : 20.0 | **pH in Calc Chloride** : 5.5 | **Saturated Hydraulic Conductivity(cm/h)** : 3.455 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 99-149 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 23 | **Total Silt(%)** : 17 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 5.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.21 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072643

Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONZOR~~~~~N | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Very Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : None | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-99 | **Horizon** : Oh | **Layer No** : 1 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : 20.0 | **pH in Calc Chloride** : 5.5 | **Saturated Hydraulic Conductivity(cm/h)** : 3.455 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 99-149 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 23 | **Total Silt(%)** : 17 | **Total Clay(%)** : 60 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 5.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.21 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401070578

Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONGVI~~~~~A | **Surface Stoniness Class** : Moderately stony | **Slop Steepness(%)** : 7.0 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Presence of adverse Topography | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-19 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 59 | **Total Silt(%)** : 30 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 2.565 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 19-35 | **Horizon** : Ap | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 62 | **Total Silt(%)** : 33 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 1.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 5.087 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 35-55 | **Horizon** : Ae | **Layer No** : 3 | **Very Fine Sand(%)** : 21 | **Total Sand(%)** : 63 | **Total Silt(%)** : 32 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 4.441 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 55-77 | **Horizon** : Bt | **Layer No** : 4 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 56 | **Total Silt(%)** : 26 | **Total Clay(%)** : 18 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.856 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 77-92 | **Horizon** : BC | **Layer No** : 5 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 61 | **Total Silt(%)** : 28 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.805 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 92-100 | **Horizon** : Ck | **Layer No** : 6 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 65 | **Total Silt(%)** : 30 | **Total Clay(%)** : 5 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 3.082 | **Electrical Conductivity(dS/m)** : 0 |



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Soil ID: OND401072645

Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONNGW~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-25 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 43 | **Total Silt(%)** : 41 | **Total Clay(%)** : 16 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.375 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 25-37 | **Horizon** : Bgj | **Layer No** : 2 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 45 | **Total Silt(%)** : 40 | **Total Clay(%)** : 15 | **Organic Carbon(%)** : 3.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.752 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 37-100 | **Horizon** : Cg | **Layer No** : 3 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 20 | **Total Silt(%)** : 63 | **Total Clay(%)** : 17 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.29 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072644

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONQWYSH~~~A | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : moderately coarse sandy loam | **Field Crops Capability** : moderately severe limitations on use for crops. | **First CLI Limitation Subclass** : Presence of surface stones > 15 cm diameter. | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-37 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 15 | **Total Sand(%)** : 61 | **Total Silt(%)** : 31 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 2.4 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 3.765 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 37-53 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 15 | **Total Sand(%)** : 59 | **Total Silt(%)** : 33 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 1.1 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 2.843 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 53-70 | **Horizon** : CK | **Layer No** : 3 | **Very Fine Sand(%)** : 15 | **Total Sand(%)** : 46 | **Total Silt(%)** : 47 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 7.5 | **Saturated Hydraulic Conductivity(cm/h)** : 1.568 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 70-100 | **Horizon** : R | **Layer No** : 4 | **Very Fine Sand(%)** : -9 | **Total Sand(%)** : -9 | **Total Silt(%)** : -9 | **Total Clay(%)** : -9 | **Organic Carbon(%)** : None | **pH in Calc Chloride** : None | **Saturated Hydraulic Conductivity(cm/h)** : None | **Electrical Conductivity(dS/m)** : None |

Soil ID: OND401072644

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONZUN~~~~~N | **Surface Stoniness Class** : Exceedingly stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Natural grazing only; no improvements feasible. | **First CLI Limitation Subclass** : Presence of consolidated bedrock within one metre of the soil surface | **Second CLI Limitation Subclass** : None | **Soil Name** : UNCLASSIFIED | **Water Table Characteristics** : Unspecified period | **Soil Drainage Class** : Not applicable | **Kind of Surface Material** : Unclassified | **Layer that Restricts Root Growth** : No root restricting layer | **Type of Root Restricting Layer** : n/a | **Parent Material 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Mode of Deposition 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Parent Material Chemical Property 1|2|3** : Not Applicable; Not Applicable; Not Applicable |



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Soil ID: OND401072647

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONCRP~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : clay loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : Presence of adverse Topography | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-28 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 28 | **Total Silt(%)** : 46 | **Total Clay(%)** : 26 | **Organic Carbon(%)** : 3.5 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.568 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 28-43 | **Horizon** : Bmgj | **Layer No** : 2 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 21 | **Total Silt(%)** : 48 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.288 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 43-70 | **Horizon** : Bmgj | **Layer No** : 3 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 20 | **Total Silt(%)** : 49 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 6.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.287 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 70-95 | **Horizon** : BCg | **Layer No** : 4 | **Very Fine Sand(%)** : 17 | **Total Sand(%)** : 17 | **Total Silt(%)** : 50 | **Total Clay(%)** : 33 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 1.932 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 95-115 | **Horizon** : Cg | **Layer No** : 5 | **Very Fine Sand(%)** : 17 | **Total Sand(%)** : 18 | **Total Silt(%)** : 48 | **Total Clay(%)** : 34 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 6.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.214 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072647

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONGBG~~~~~A | **Surface Stoniness Class** : Moderately stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : moderately coarse sandy loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : Presence of a combination of the Subclasses F and M, or, the presence of a combination of the Subclasses | **Second CLI Limitation Subclass** : Presence of adverse Topography | **Depth(cm)** : 0-23 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 11 | **Total Sand(%)** : 67 | **Total Silt(%)** : 20 | **Total Clay(%)** : 13 | **Organic Carbon(%)** : 3.1 | **pH in Calc Chloride** : 6.1 | **Saturated Hydraulic Conductivity(cm/h)** : 2.731 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 23-50 | **Horizon** : Bm | **Layer No** : 2 | **Very Fine Sand(%)** : 11 | **Total Sand(%)** : 73 | **Total Silt(%)** : 20 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 1.0 | **pH in Calc Chloride** : 5.5 | **Saturated Hydraulic Conductivity(cm/h)** : 3.936 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 50-100 | **Horizon** : C | **Layer No** : 3 | **Very Fine Sand(%)** : 13 | **Total Sand(%)** : 68 | **Total Silt(%)** : 23 | **Total Clay(%)** : 9 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 5.9 | **Saturated Hydraulic Conductivity(cm/h)** : 1.883 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072646

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONZUN~~~~~N | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Natural grazing only; no improvements feasible. | **First CLI Limitation Subclass** : Presence of consolidated bedrock within one metre of the soil surface | **Second CLI Limitation Subclass** : None | **Soil Name** : UNCLASSIFIED | **Water Table Characteristics** : Unspecified period | **Soil Drainage Class** : Not applicable | **Kind of Surface Material** : Unclassified | **Layer that Restricts Root Growth** : No root restricting layer | **Type of Root Restricting Layer** : n/a | **Parent Material 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Mode of Deposition 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Parent Material Chemical Property 1|2|3** : Not Applicable; Not Applicable; Not Applicable |



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Soil ID: OND401072646

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONZUN~~~~~N | **Surface Stoniness Class** : Very stony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : moderately coarse sandy loam | **Field Crops Capability** : Severe limitations on use for crops. | **First CLI Limitation Subclass** : Presence of consolidated bedrock within one metre of the soil surface | **Second CLI Limitation Subclass** : None | **Soil Name** : UNCLASSIFIED | **Water Table Characteristics** : Unspecified period | **Soil Drainage Class** : Not applicable | **Kind of Surface Material** : Unclassified | **Layer that Restricts Root Growth** : No root restricting layer | **Type of Root Restricting Layer** : n/a | **Parent Material 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Mode of Deposition 1|2|3** : Not Applicable; Not Applicable; Not Applicable | **Parent Material Chemical Property 1|2|3** : Not Applicable; Not Applicable; Not Applicable |

Soil ID: OND401072649

Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONOKA~~~~~A | **Surface Stoniness Class** : Slightly stony | **Slop Steepness(%)** : 3.5 | **Slop Length(m)** : -9 | **Drainage** : Well | **Hydrological Soil Groups** : Soils that have a low runoff potential and high infiltration rate, as the soils typically are sands and gravel. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Severe limitations on use for crops. | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : Low inherent Moisture holding capacity | **Depth(cm)** : 0-12 | **Horizon** : Apk | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 70 | **Total Silt(%)** : 22 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 4.0 | **pH in Calc Chloride** : 6.9 | **Saturated Hydraulic Conductivity(cm/h)** : 5.409 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 12-30 | **Horizon** : Bmk | **Layer No** : 2 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 71 | **Total Silt(%)** : 20 | **Total Clay(%)** : 9 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 7.2 | **Saturated Hydraulic Conductivity(cm/h)** : 3.079 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 30-100 | **Horizon** : Ck | **Layer No** : 3 | **Very Fine Sand(%)** : 3 | **Total Sand(%)** : 91 | **Total Silt(%)** : 6 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 6.109 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072648

Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONNGW~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-25 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 43 | **Total Silt(%)** : 41 | **Total Clay(%)** : 16 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.375 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 25-37 | **Horizon** : Bgj | **Layer No** : 2 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 45 | **Total Silt(%)** : 40 | **Total Clay(%)** : 15 | **Organic Carbon(%)** : 3.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.752 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 37-100 | **Horizon** : Cg | **Layer No** : 3 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 20 | **Total Silt(%)** : 63 | **Total Clay(%)** : 17 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.29 | **Electrical Conductivity(dS/m)** : 0 |



Soils Report

Soil Map Units Found within 2000 m of
10 Cope Dr, Ottawa, ON, K2M2V8



Soil ID: OND401072213

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONCST~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : medium - moderately fine loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : Low inherent soil Fertility | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-20 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 28 | **Total Sand(%)** : 30 | **Total Silt(%)** : 59 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 2.6 | **pH in Calc Chloride** : 5.5 | **Saturated Hydraulic Conductivity(cm/h)** : 1.156 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 20-35 | **Horizon** : Bmgj | **Layer No** : 2 | **Very Fine Sand(%)** : 36 | **Total Sand(%)** : 38 | **Total Silt(%)** : 48 | **Total Clay(%)** : 14 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.847 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 35-110 | **Horizon** : Cg | **Layer No** : 3 | **Very Fine Sand(%)** : 66 | **Total Sand(%)** : 67 | **Total Silt(%)** : 30 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.7 | **Saturated Hydraulic Conductivity(cm/h)** : 5.398 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072213

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONBIV~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : None | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-17 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 31 | **Total Sand(%)** : 53 | **Total Silt(%)** : 34 | **Total Clay(%)** : 13 | **Organic Carbon(%)** : 3.1 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 2.052 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 17-33 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 30 | **Total Silt(%)** : 39 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.4 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.273 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 33-62 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 40 | **Total Sand(%)** : 52 | **Total Silt(%)** : 28 | **Total Clay(%)** : 20 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.683 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 62-84 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 45 | **Total Sand(%)** : 62 | **Total Silt(%)** : 26 | **Total Clay(%)** : 12 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 1.597 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 84-100 | **Horizon** : Ckg | **Layer No** : 5 | **Very Fine Sand(%)** : 0 | **Total Sand(%)** : 4 | **Total Silt(%)** : 54 | **Total Clay(%)** : 42 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 7.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.194 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401072248

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONCNB~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-21 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 16 | **Total Sand(%)** : 25 | **Total Silt(%)** : 61 | **Total Clay(%)** : 14 | **Organic Carbon(%)** : 2.3 | **pH in Calc Chloride** : 7.0 | **Saturated Hydraulic Conductivity(cm/h)** : 0.687 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 21-50 | **Horizon** : Bg | **Layer No** : 2 | **Very Fine Sand(%)** : 12 | **Total Sand(%)** : 16 | **Total Silt(%)** : 74 | **Total Clay(%)** : 10 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 7.1 | **Saturated Hydraulic Conductivity(cm/h)** : 0.395 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 50-74 | **Horizon** : Bg | **Layer No** : 3 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 26 | **Total Silt(%)** : 67 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 1.6 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.047 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 74-100 | **Horizon** : Cg | **Layer No** : 4 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 10 | **Total Silt(%)** : 80 | **Total Clay(%)** : 10 | **Organic Carbon(%)** : 0.9 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.259 | **Electrical Conductivity(dS/m)** : 0 |



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Soil ID: OND401072248

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONPPV~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : No significant limitations in use for Crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-15 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 41 | **Total Sand(%)** : 52 | **Total Silt(%)** : 31 | **Total Clay(%)** : 17 | **Organic Carbon(%)** : 3.2 | **pH in Calc Chloride** : 7.5 | **Saturated Hydraulic Conductivity(cm/h)** : 1.455 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 15-24 | **Horizon** : Bmgj | **Layer No** : 2 | **Very Fine Sand(%)** : 38 | **Total Sand(%)** : 53 | **Total Silt(%)** : 39 | **Total Clay(%)** : 8 | **Organic Carbon(%)** : 1.6 | **pH in Calc Chloride** : 6.2 | **Saturated Hydraulic Conductivity(cm/h)** : 2.56 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 24-50 | **Horizon** : Bmgj | **Layer No** : 3 | **Very Fine Sand(%)** : 40 | **Total Sand(%)** : 73 | **Total Silt(%)** : 23 | **Total Clay(%)** : 4 | **Organic Carbon(%)** : 0.7 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 5.837 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 50-54 | **Horizon** : Bmgj | **Layer No** : 4 | **Very Fine Sand(%)** : 35 | **Total Sand(%)** : 78 | **Total Silt(%)** : 19 | **Total Clay(%)** : 3 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 6.904 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 54-63 | **Horizon** : Bg | **Layer No** : 5 | **Very Fine Sand(%)** : 57 | **Total Sand(%)** : 61 | **Total Silt(%)** : 32 | **Total Clay(%)** : 7 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 2.989 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 63-86 | **Horizon** : Bg | **Layer No** : 6 | **Very Fine Sand(%)** : 28 | **Total Sand(%)** : 56 | **Total Silt(%)** : 33 | **Total Clay(%)** : 11 | **Organic Carbon(%)** : 0.1 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 1.634 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 86-100 | **Horizon** : Cg | **Layer No** : 7 | **Very Fine Sand(%)** : 32 | **Total Sand(%)** : 37 | **Total Silt(%)** : 47 | **Total Clay(%)** : 16 | **Organic Carbon(%)** : 0.0

Soil ID: OND401070493

Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONALU~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : None | **Soil Texture of A Horizon** : None | **Field Crops Capability** : Very severe limitations preclude annual cultivation; improvements feasible. | **First CLI Limitation Subclass** : Subject to occasional flooding (Inundation) from adjacent streams or waterbodies | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-19 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 10 | **Total Sand(%)** : 15 | **Total Silt(%)** : 60 | **Total Clay(%)** : 25 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 6.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.494 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 19-27 | **Horizon** : Bmgj | **Layer No** : 2 | **Very Fine Sand(%)** : 14 | **Total Sand(%)** : 20 | **Total Silt(%)** : 57 | **Total Clay(%)** : 23 | **Organic Carbon(%)** : 1.0 | **pH in Calc Chloride** : 6.7 | **Saturated Hydraulic Conductivity(cm/h)** : 0.311 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 27-42 | **Horizon** : Bmgj | **Layer No** : 3 | **Very Fine Sand(%)** : 20 | **Total Sand(%)** : 27 | **Total Silt(%)** : 52 | **Total Clay(%)** : 21 | **Organic Carbon(%)** : 0.7 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.391 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 42-100 | **Horizon** : Ckg | **Layer No** : 4 | **Very Fine Sand(%)** : 8 | **Total Sand(%)** : 18 | **Total Silt(%)** : 50 | **Total Clay(%)** : 32 | **Organic Carbon(%)** : 0.0 | **pH in Calc Chloride** : 7.7 | **Saturated Hydraulic Conductivity(cm/h)** : 0.218 | **Electrical Conductivity(dS/m)** : 0

Soil ID: OND401072190

Component No : 2 | **Components(%)** : 30 | **Soil Name ID** : ONNGW~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-25 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 43 | **Total Silt(%)** : 41 | **Total Clay(%)** : 16 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.375 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 25-37 | **Horizon** : Bgj | **Layer No** : 2 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 45 | **Total Silt(%)** : 40 | **Total Clay(%)** : 15 | **Organic Carbon(%)** : 3.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.752 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 37-100 | **Horizon** : Cg | **Layer No** : 3 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 20 | **Total Silt(%)** : 63 | **Total Clay(%)** : 17 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.29 | **Electrical Conductivity(dS/m)** : 0



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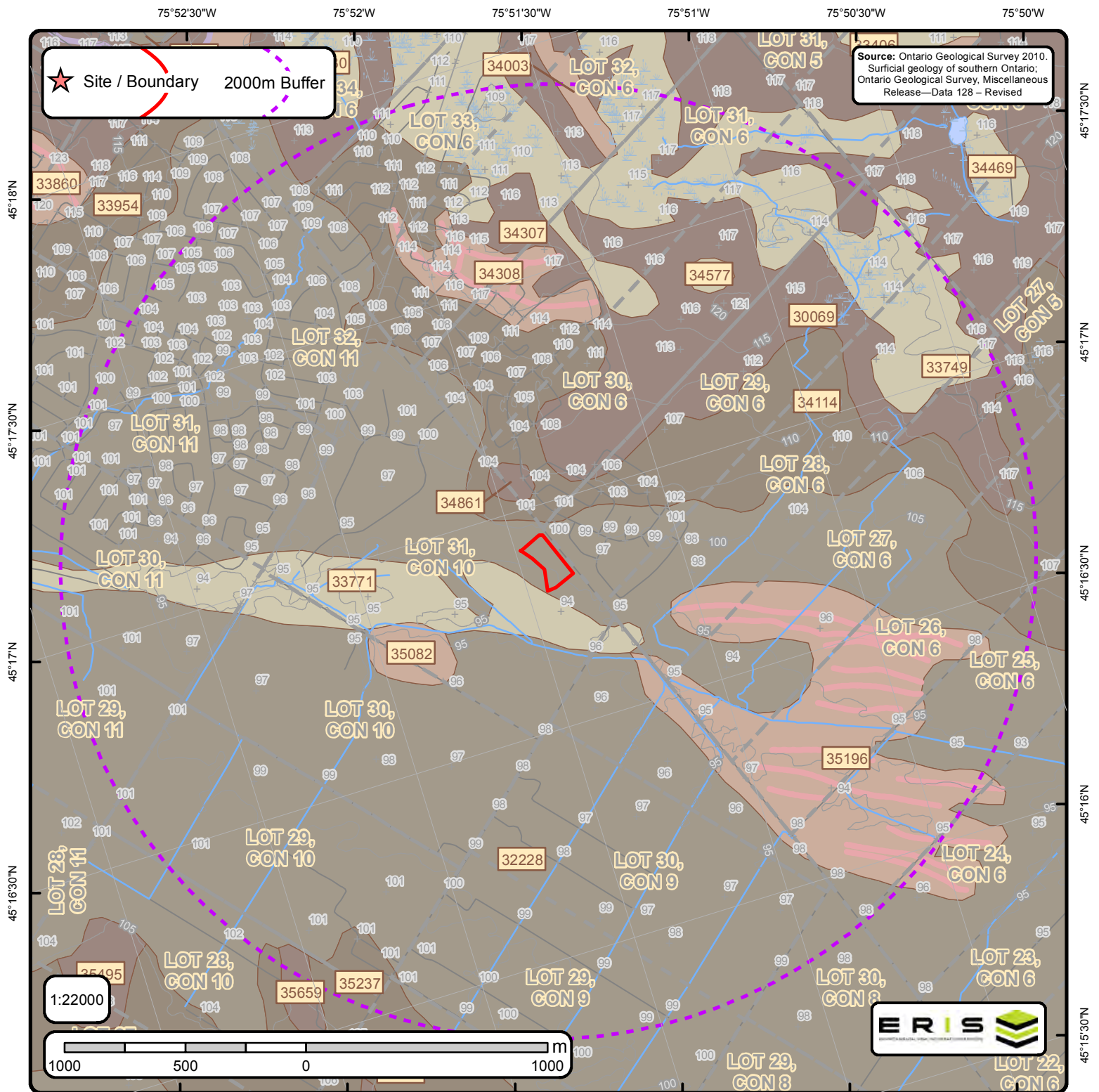


Soil ID: OND401072190

Component No : 1 | **Components(%)** : 70 | **Soil Name ID** : ONCRP~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Imperfectly | **Hydrological Soil Groups** : Soils with slow infiltration rates when thoroughly wetted and these soils typically are silty-loam soils with an impeding layer or soils with moderately fine to fine texture. | **Soil Texture of A Horizon** : clay loam | **Field Crops Capability** : No significant limitations in use for Crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-28 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 22 | **Total Sand(%)** : 28 | **Total Silt(%)** : 46 | **Total Clay(%)** : 26 | **Organic Carbon(%)** : 3.5 | **pH in Calc Chloride** : 5.8 | **Saturated Hydraulic Conductivity(cm/h)** : 0.568 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 28-43 | **Horizon** : Bmgj | **Layer No** : 2 | **Very Fine Sand(%)** : 19 | **Total Sand(%)** : 21 | **Total Silt(%)** : 48 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.6 | **pH in Calc Chloride** : 6.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.288 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 43-70 | **Horizon** : Bmgj | **Layer No** : 3 | **Very Fine Sand(%)** : 18 | **Total Sand(%)** : 20 | **Total Silt(%)** : 49 | **Total Clay(%)** : 31 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 6.6 | **Saturated Hydraulic Conductivity(cm/h)** : 0.287 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 70-95 | **Horizon** : BCg | **Layer No** : 4 | **Very Fine Sand(%)** : 17 | **Total Sand(%)** : 17 | **Total Silt(%)** : 50 | **Total Clay(%)** : 33 | **Organic Carbon(%)** : 0.3 | **pH in Calc Chloride** : 6.8 | **Saturated Hydraulic Conductivity(cm/h)** : 1.932 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 95-115 | **Horizon** : Cg | **Layer No** : 5 | **Very Fine Sand(%)** : 17 | **Total Sand(%)** : 18 | **Total Silt(%)** : 48 | **Total Clay(%)** : 34 | **Organic Carbon(%)** : 0.2 | **pH in Calc Chloride** : 6.9 | **Saturated Hydraulic Conductivity(cm/h)** : 0.214 | **Electrical Conductivity(dS/m)** : 0 |

Soil ID: OND401070499

Component No : 1 | **Components(%)** : 100 | **Soil Name ID** : ONNGW~~~~~A | **Surface Stoniness Class** : Nonstony | **Slop Steepness(%)** : 1.2 | **Slop Length(m)** : -9 | **Drainage** : Poorly | **Hydrological Soil Groups** : Soils have a high runoff potential and very slow infiltration rate when thoroughly wetted. Soils include clay soils with high swelling potential, soils in a permanent high water table and shallow soils over nearly impervious material. | **Soil Texture of A Horizon** : silt loam | **Field Crops Capability** : moderate limitations on use for crops | **First CLI Limitation Subclass** : None | **Second CLI Limitation Subclass** : None | **Depth(cm)** : 0-25 | **Horizon** : Ap | **Layer No** : 1 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 43 | **Total Silt(%)** : 41 | **Total Clay(%)** : 16 | **Organic Carbon(%)** : 3.9 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 1.375 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 25-37 | **Horizon** : Bgj | **Layer No** : 2 | **Very Fine Sand(%)** : 9 | **Total Sand(%)** : 45 | **Total Silt(%)** : 40 | **Total Clay(%)** : 15 | **Organic Carbon(%)** : 3.3 | **pH in Calc Chloride** : 7.4 | **Saturated Hydraulic Conductivity(cm/h)** : 0.752 | **Electrical Conductivity(dS/m)** : 0 | **Depth(cm)** : 37-100 | **Horizon** : Cg | **Layer No** : 3 | **Very Fine Sand(%)** : 5 | **Total Sand(%)** : 20 | **Total Silt(%)** : 63 | **Total Clay(%)** : 17 | **Organic Carbon(%)** : 0.5 | **pH in Calc Chloride** : 7.3 | **Saturated Hydraulic Conductivity(cm/h)** : 0.29 | **Electrical Conductivity(dS/m)** : 0 |



The Surficial Geology of Southern Ontario Order No. 20171207043





ID: 30069 | **Unit Name:** Bedrock |
Deposit Type Code: Pa | **Deposit Age:** Paleozoic | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 |
Primary Material: Paleozoic Bedrock | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** | **Primary General Modifier:** | **Veneer:** clay, silt, sand, gravel, diamicton | **Episode:** | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface |
Provenance: | **Carbon Content:** | **Formation:** | **Permeability:** Variable | **Material Description:** Limestone, dolomite, sandstone, and locally shale; relatively flat lying; mainly occurring as bare, tabular outcrops; includes areas thinly veneered by unconsolidated Quaternary sediments up to 1 m (3 ft) thick.

ID: 32228 | **Unit Name:** Offshore marine deposits |
Deposit Type Code: 3 | **Deposit Age:** Quaternary (Champlain Sea) | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 | **Primary Material:** clay, silt | **Primary Material Modifier:** | **Secondary Material:** sand | **Primary General:** glaciomarine | **Primary General Modifier:** foreshore/basinal | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** Low | **Material Description:** Clay, silty clay and silt, commonly calcareous and fossiliferous; locally overlain by thin sands. Upper parts are generally mottled or laminated reddish brown and bluish grey and may contain lenses and pockets of sand, but at depth the clay is uniform a

ID: 33749 | **Unit Name:** Organic deposits |
Deposit Type Code: 7 | **Deposit Age:** Recent | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 | **Primary Material:** organic deposits | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** wetland | **Primary General Modifier:** | **Veneer:** | **Episode:** Hudson | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Mainly muck and peat in bogs, fens, swamps and poorly drained areas.

ID: 33771 | **Unit Name:** Organic deposits |
Deposit Type Code: 7 | **Deposit Age:** Recent | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 | **Primary Material:** organic deposits | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** wetland | **Primary General Modifier:** | **Veneer:** | **Episode:** Hudson | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Mainly muck and peat in bogs, fens, swamps and poorly drained areas.

ID: 34003 | **Unit Name:** Nearshore sediments |
Deposit Type Code: 5a | **Deposit Age:** Quaternary (Champlain Sea) | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 | **Primary Material:** sand, gravel | **Primary Material Modifier:** bouldery | **Secondary Material:** | **Primary General:** glaciomarine | **Primary General Modifier:** littoral/foreshore | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Gravel, sand and boulders; beaches commonly fossiliferous; nature of sediment controlled by underlying material (gravel, sand and boulders where developed from till and glaciofluvial deposits; slabs and shingles where developed from sedimentary bedrock).



ID: 34114 | Unit Name: Till |

Deposit Type Code: 1a | **Deposit Age:** Quaternary | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 |
Primary Material: diamicton | **Primary Material Modifier:** sandy silt to silty sand | **Secondary Material:** | **Primary General:** glacial |
Primary General Modifier: | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface |
Provenance: N-NE | **Carbon Content:** | **Formation:** Undifferentiated silty-sandy till on Paleozoic terrain | **Permeability:** Low-Medium |
Material Description: Sandy and silty compact diamicton, grey at depth but brown where oxidized; calcareous where derived from sedimentary rocks and not leached; consists dominantly of lodgment till. In areas that lie below marine limit (198 m a.s.l.) it is overlain by a disc

ID: 34307 | Unit Name: Bedrock |

Deposit Type Code: Pa | **Deposit Age:** Paleozoic | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 |
Primary Material: Paleozoic Bedrock | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** | **Primary General Modifier:** | **Veneer:** clay, silt, sand, gravel, diamicton | **Episode:** | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface |
Provenance: | **Carbon Content:** | **Formation:** | **Permeability:** Variable | **Material Description:** Limestone, dolomite, sandstone, and locally shale; relatively flat lying; mainly occurring as bare, tabular outcrops; includes areas thinly veneered by unconsolidated Quaternary sediments up to 1 m (3 ft) thick.

ID: 34308 | Unit Name: Nearshore sediments |

Deposit Type Code: 5a | **Deposit Age:** Quaternary (Champlain Sea) | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 |
Primary Material: sand, gravel | **Primary Material Modifier:** bouldery | **Secondary Material:** | **Primary General:** glaciomarine | **Primary General Modifier:** littoral/foreshore | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** |
Stratus Modifier: Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Gravel, sand and boulders; beaches commonly fossiliferous; nature of sediment controlled by underlying material (gravel, sand and boulders where developed from till and glaciofluvial deposits; slabs and shingles where developed from sedimentary bedrock).

ID: 34577 | Unit Name: Organic deposits |

Deposit Type Code: 7 | **Deposit Age:** Recent | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 | **Primary Material:** organic deposits | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** wetland | **Primary General Modifier:** | **Veneer:** | **Episode:** Hudson | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Mainly muck and peat in bogs, fens, swamps and poorly drained areas.

ID: 34861 | Unit Name: Bedrock |

Deposit Type Code: Pa | **Deposit Age:** Paleozoic | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 |
Primary Material: Paleozoic Bedrock | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** | **Primary General Modifier:** | **Veneer:** clay, silt, sand, gravel, diamicton | **Episode:** | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface |
Provenance: | **Carbon Content:** | **Formation:** | **Permeability:** Variable | **Material Description:** Limestone, dolomite, sandstone, and locally shale; relatively flat lying; mainly occurring as bare, tabular outcrops; includes areas thinly veneered by unconsolidated Quaternary sediments up to 1 m (3 ft) thick.



ID: 35082 | Unit Name: Nearshore sediments |

Deposit Type Code: 5b | **Deposit Age:** Quaternary (Champlain Sea) | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 | **Primary Material:** sand | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** glaciomarine | **Primary General Modifier:** foreshore/basinal | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Fine-to medium-grained sand, calcareous and commonly fossiliferous; nearshore sand generally occurs as a sheet or as bars or spits associated with glaciofluvial materials.

ID: 35196 | Unit Name: Nearshore sediments |

Deposit Type Code: 5b | **Deposit Age:** Quaternary (Champlain Sea) | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 | **Primary Material:** sand | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** glaciomarine | **Primary General Modifier:** foreshore/basinal | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** High | **Material Description:** Fine-to medium-grained sand, calcareous and commonly fossiliferous; nearshore sand generally occurs as a sheet or as bars or spits associated with glaciofluvial materials.

ID: 35237 | Unit Name: Till |

Deposit Type Code: 1a | **Deposit Age:** Quaternary | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 | **Primary Material:** diamicton | **Primary Material Modifier:** sandy silt to silty sand | **Secondary Material:** | **Primary General:** glacial | **Primary General Modifier:** | **Veneer:** | **Episode:** Wisconsin | **Sub Episode:** Michigan | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** N-NE | **Carbon Content:** | **Formation:** Undifferentiated silty-sandy till on Paleozoic terrain | **Permeability:** Low-Medium | **Material Description:** Sandy and silty compact diamicton, grey at depth but brown where oxidized; calcareous where derived from sedimentary rocks and not leached; consists dominantly of lodgment till. In areas that lie below marine limit (198 m a.s.l.) it is overlain by a disc

ID: 35659 | Unit Name: Bedrock |

Deposit Type Code: Pa | **Deposit Age:** Quaternary | **Map Number:** of3103 | **Map Name:** Ottawa | **Source Map Scale:** 1:50 000 | **Primary Material:** Paleozoic Bedrock | **Primary Material Modifier:** | **Secondary Material:** | **Primary General:** | **Primary General Modifier:** | **Veneer:** clay, silt, sand, gravel, diamicton | **Episode:** | **Sub Episode:** | **Phase:** | **Stratus Modifier:** Surface | **Provenance:** | **Carbon Content:** | **Formation:** | **Permeability:** Variable | **Material Description:** Limestone, dolomite, sandstone, and locally shale; relatively flat lying; mainly occurring as bare, tabular outcrops; includes areas thinly veneered by unconsolidated Quaternary sediments up to 1 m (3 ft) thick.

Surface Geology Report Metadata

Ontario Geological Survey 2010. Surficial geology of southern Ontario;
Ontario Geological Survey, Miscellaneous Release - Data 128 - Revised.

ONTARIO MINISTRY OF NORTHERN DEVELOPMENT, MINES AND FORESTRY



ID - ID applied to the Unit

Unit Name - Name of deposit

Deposit Type Code - The geological unit number taken from the original map legend.

Deposit Age - to show the age when the sediments were deposited, e.g., Wisconsinan, postglacial or recent.

Map Number - Original map series number, eg., 'M2402' or 'P1973'. Each sgu_point feature is tagged to its original map.

Map Name - Usually NTS area where mapping was completed, e.g., 'Golden Lake'

Source Map Scale - The scale at which the original map was captured, e.g., '1:50 000'

Primary Material - This attribute provides the user with information regarding the most prevalent material present within a given area.

Primary Material Modifier - This attribute provides the user with a more refined description of the lithological classification of the primary material.

Secondary Material - This attribute provides the user with information regarding subordinate materials present within a given area.

Primary General - This attribute provides the user with an interpretation of the depositional environment within which the primary material was deposited.

Primary General Modifier - This attribute provides the user with a refined interpretation of the primary genetic modifier.

Veneer - This attribute provides the user with information regarding the type of material that forms a thin, discontinuous veneer over the primary material.

Sub Episode - A diachronic stratigraphic unit in a lower order than Episode and the proposed sequence-stratigraphic classification, consists in descending order of Michigan, Elgin and Ontario in the eastern and northern Great Lakes area in the Wisconsin Episode (Johnson et al. 1997; Karrow et al. 2000).

Sub Episode - A diachronic stratigraphic unit in a lower order than Episode and the proposed sequence-stratigraphic classification, consists in descending order of Michigan, Elgin and Ontario in the eastern and northern Great Lakes area in the Wisconsin Episode (Johnson et al. 1997; Karrow et al. 2000).

Phase - A diachronic stratigraphic unit in a lower order than Subepisode, and the proposed sequence-stratigraphic classification is listed in the following table in the eastern and northern Great Lakes area (Karrow et al. 2000)

Stratus Modifier - This attribute provides the user information regarding the stratigraphic position of the mapped unit (i.e., whether the unit occurs primarily on the surface or in the subsurface).

Provenance - This attribute provides the user with information regarding the provenance of a particular till unit (i.e. direction or lobe from which the till is derived).

Carbon Content - This attribute provides the user with information regarding the carbonate content of till.

Formation - This attribute provides the user with information regarding the formation to which a given primary material belongs (e.g., Tavistock Till, Port Stanley Till, Scarborough Formation). This attribute is seamless and allows the user to create a map based on formation.

Permeability - This attribute provides the user with basic information about permeability of the sediments in a ranking of high, medium and low.

Material Description - Material or sediment description, e.g., 'sand and silty fine sand', 'silty sand and gravel' and 'silty till with low stone content'.

10.4 SITE PHOTOGRAPHS

This appendix includes:

- Site photographs taken during the site visit on December 11, 2017; and
- Aerial photographs of the Phase One Property.





Photo 1: Phase One Property facing south west



Photo 2: Phase One Property facing north east



Photo 3: Hydro easement on west side of the Phase One Property



Photo 4: Transformer TP9248 located at the northwest corner of the Phase One Property within the hydro easement



Photo 5: Cope Drive and the Great Canadian Superstore north of the Phase One Property



Photo 6: Eagleson Road and residences east of the Phase One Property



Photo 7: Sanitary sewer, sidewalk and residences south of the Phase One Property



Photo 8: First Air Property located west of the Phase One Property



Historical Aerial Photography of the Phase One Property
10 Cope Drive, Ottawa, Ontario
1934
180121 Taggart

December 2017





Historical Aerial Photography of the Phase One Property
10 Cope Drive, Ottawa, Ontario
1958
180121 Taggart

December 2017

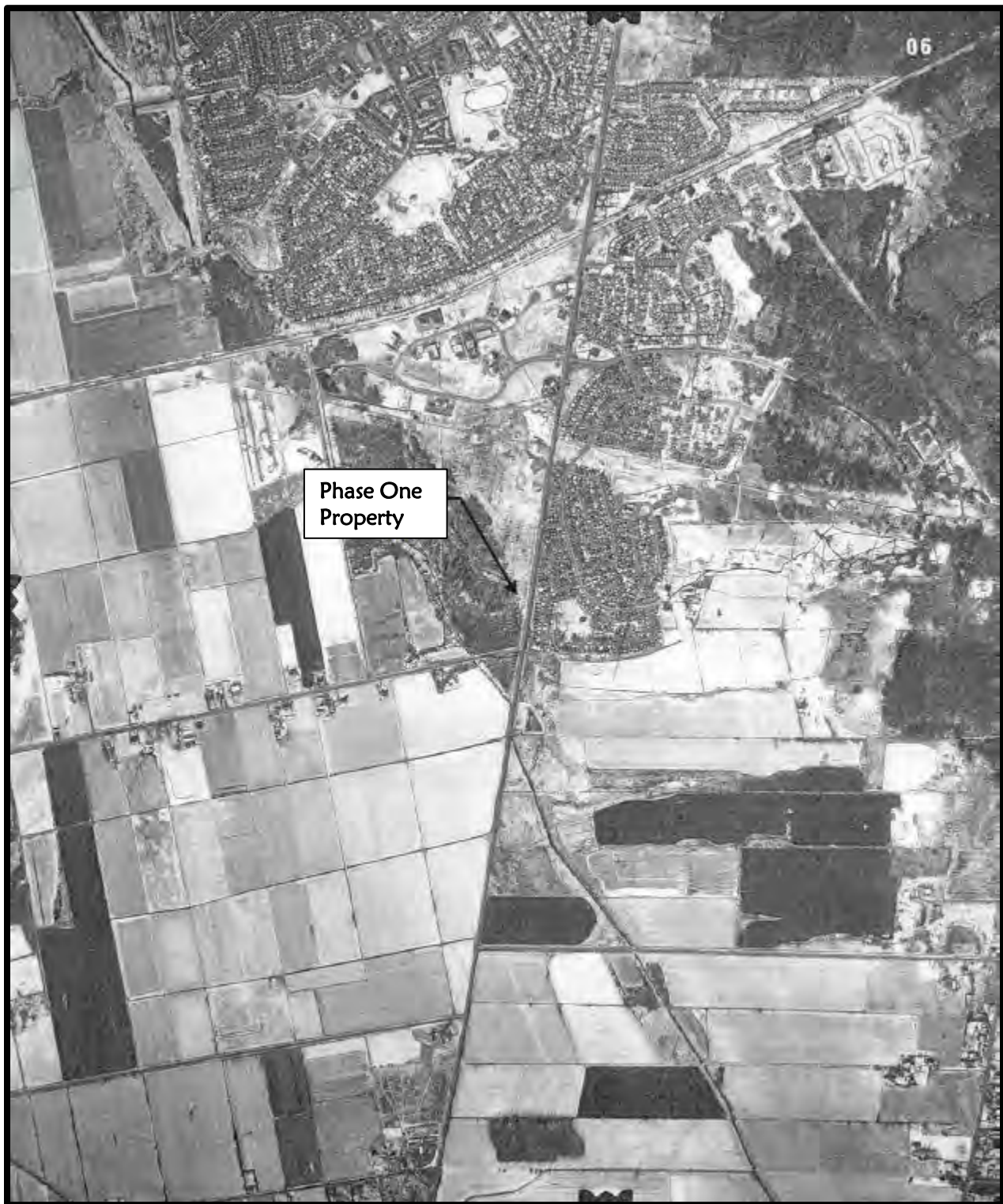




Historical Aerial Photography of the Phase One Property
10 Cope Drive, Ottawa, Ontario
1976
180121 Taggart

December 2017

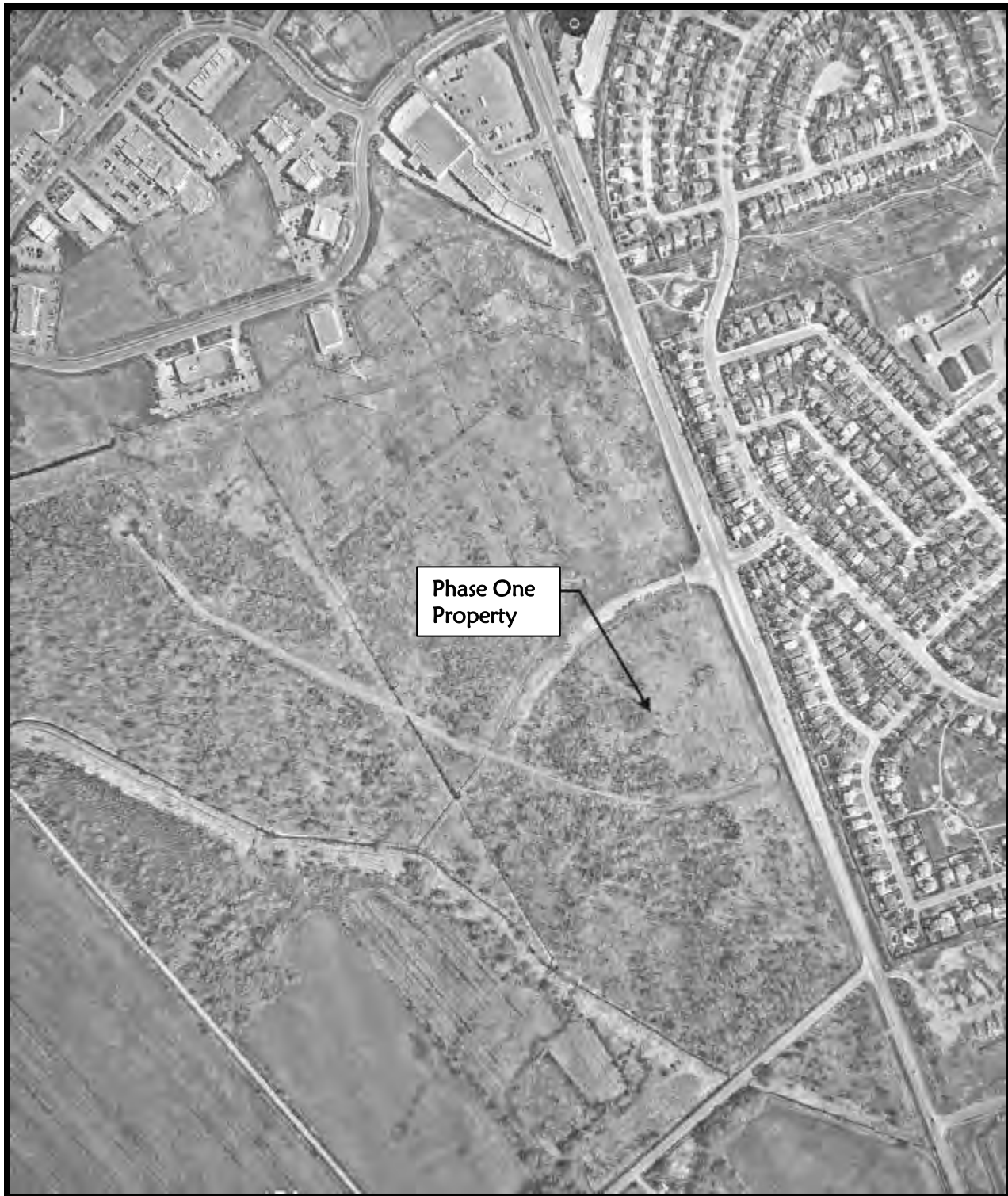




Historical Aerial Photography of the Phase One Property
10 Cope Drive, Ottawa, Ontario
1988
180121 Taggart

December 2017





Historical Aerial Photography of the Phase One Property
10 Cope Drive, Ottawa, Ontario
1996
180121 Taggart

December 2017





Historical Aerial Photography of the Phase One Property
10 Cope Drive, Ottawa, Ontario
2002
180121 Taggart

December 2017





Historical Aerial Photography of the Phase One Property
10 Cope Drive, Ottawa, Ontario
2011
180121 Taggart

December 2017





Historical Aerial Photography of the Phase One Property
10 Cope Drive, Ottawa, Ontario
2017
180121 Taggart

December 2017



10.5 ASSESSOR CREDENTIALS

This appendix includes the curriculum vitae for:

- Robert Hillier
- Jessica Petrocco



EDUCATION

- B.Sc., Earth Sciences, University of Waterloo, 1986

YEARS OF EXPERIENCE

- 31 years of experience
- 30 years with BluMetric

EMPLOYMENT HISTORY

- 1987 – Present: BluMetric, Senior Hydrogeologist
- 1986 – 1987: University of Waterloo, Institute for Groundwater Research, Research Assistant and Field Technician

PROFESSIONAL AFFILIATIONS

- Association of Professional Geoscientists of Ontario
- National Ground Water Association
- International Association of Hydrogeologists

TRAINING

- First Aid/CPR
- 8 Hour Hazwoper Refresher, 2011
- Understanding Environmental Regulations, EPIC, November 2008
- Cleanup of Contaminated Sites, Guideline Best Practices & Pitfalls to Avoid, MOE, May 2000
- Understanding Migration, Assessment and Remediation of Non-Aqueous Phase Liquids, National Groundwater Association, 1992
- 40 Hour Hazwoper, National Water Well Association, 1989
- Organic Contaminants In Groundwater, The Waterloo Centre for Groundwater Research, 1988

LANGUAGES

- English

ROLE

- Senior Hydrogeologist
- Project Geologist
- Project Manager

EXPERTISE

- Environmental Site Assessment
- Soil and Groundwater Remediation
- Water Supply Assessment
- Solid Waste Management

PROFESSIONAL PROFILE

Mr. Hillier's broad range of project experience in the fields of groundwater supply, contaminant hydrogeology, site remediation and environmental site assessment, permit him to provide a practical and common sense approach to addressing environmental related issues. He is well-versed with current provincial and federal environmental guidelines, standards and regulations. Mr. Hillier has managed and carried out numerous industrial/commercial/residential property environmental impact/compliance assessments, rural land development on private servicing assessments, water supply hydrogeological studies, Safe Drinking Water Act, 2002 (as amended) assessments, solid waste landfill leachate characterization and monitoring studies. He has also managed and conducted environmental site assessment projects in Nunavut, the United Kingdom and the Caribbean.

Mr. Hillier is a Qualified Person (QP) as per Ontario Regulation 153/04 for Phase I and II Environmental Site Assessments in support of filing for a Record of Site Condition. Mr. Hillier provides Senior Review and is the Competent Environmental Practitioner (CEP) for surface water and groundwater reporting to the MOE for assessment and monitoring of waste disposal sites. Mr. Hillier is currently serving as both Project Manager and Client Manager on Standing Offers with Infrastructure Ontario and the City of Ottawa.



REPRESENTATIVE EXPERIENCE

Project Management

Mr. Hillier manages projects in accordance with the procedures of BluMetric's Quality Management System and is responsible for schedule, budget and resource allocations for the project to ensure the client's needs are met. Mr. Hillier appreciates that each project is unique and that project requirements sometimes change during implementation, and dedicates time and effort to project management to ensure that objectives continue to be effectively and efficiently met.

Mr. Hillier has successfully managed projects ranging from small scale to multi-year million dollar ventures. He is skilled at managing projects involving solid waste management, contaminant hydrogeology, environmental site assessments and remediation, and water supply. He ensures the project teams are comprised of the appropriately skilled personnel to produce a high quality product in a timely manner. He is skilled in project control (task implementation, scheduling, budget control, personnel management, etc.), communication with stakeholders, project risk management, and issues resolution. Mr. Hillier is adept at working with regulators and has an in-depth understanding of the regulatory process allowing him to meet the client's objectives in a quick and efficient manner. A representative list of Mr. Hillier's clients includes:

- City of Ottawa Environmental Remediation Unit: 2006-Ongoing
- Mac's Convenience Stores: 2002-Ongoing
- Port of Johnstown: 1999-Ongoing
- Canadian Bank Note Company Limited: 1995-Ongoing
- Infrastructure Ontario: 2011-2017
- International Paper: 1995-2013
- Canadian Pacific Railway: 1996-2001

Environmental Site Assessment and Hydrogeological Investigations

Mr. Hillier has conducted groundwater plume definition and environmental impact studies for numerous domestic, commercial and industrial properties. He has investigated and characterized soil and groundwater conditions in the vicinity of above ground and underground storage tanks containing both petroleum products and chlorinated organic solvents. He has provided project management and technical expertise for numerous domestic, commercial and industrial properties, from project planning, to groundwater plume definition, through to implementation of remedial measures and/or contaminant management plans. Mr. Hillier has also provided peer review expertise for various clients ensuring their environmental concerns are adequately addressed when ESA and/or remediation projects have been carried out by adjacent landowners or other stakeholders. Mr. Hillier is a Qualified Person per Ontario Regulation 153/04. He has conducted numerous Phase I and Phase II ESAs for residential/industrial/commercial properties on behalf of DND, DCC, PWGSC, Infrastructure Ontario, City of Ottawa, private industry, insurance companies and banks.



Mr. Hillier has conducted groundwater plume definition and environmental impact studies for numerous domestic, commercial and industrial properties. He has investigated and characterized soil and groundwater conditions in the vicinity of underground petroleum and solvent storage tanks. With respect to contaminant hydrogeology, his project management and technical involvement has included project planning, monitoring and purge well design and construction, water quality sampling, data analysis, remedial alternatives assessment and implementation of remedial measures. Select projects include:

- Road Salt Impact Delineation for Various Patrol Yards and a Large Storage Facility: Port of Prescott (1987-Ongoing); City of Ottawa (2007-Ongoing).
- City of Ottawa. Phase I/II ESAs, Soil and Groundwater Remediation at More Than 12 Sites, Including Ongoing Monitoring at Some Sites, Ottawa ON. Client Manager and Project Manager. Responsible for resource allocation (including subcontractors), scheduling, budget and overall QA/QC of all reports. Projects have included Phased ESAs for existing and former Municipal maintenance garage/yards (Ballantyne Building, Greely Yard, Huntley Yard, Torbolton Yard). Developed work specifications and Remediation Oversight for a \$200,000 subsurface remediation program for the Ballantyne Building. Duties have required liaising with regulators, municipal departments and private stakeholders (2006-Ongoing).
- Mac's Convenience Stores. Phase II ESAs, Soil and Groundwater Remediation at Multiple Retail Fuel Stations, Various Sites Eastern ON (2002-Ongoing).
- Infrastructure Ontario. MNRF Pembroke Works Yard Limited Phase II ESA (June 2012), Remediation Planning and Oversight (2012-2013) and Long-Term Monitoring (2013-2016), Pembroke ON. Contaminant of concern was petroleum hydrocarbons. Project Lead. Responsible for client communication, budget control, invoicing, technical support and report review (May 2013-March 2017). This project included development of a remedial action plan and remedial specifications (NMS format), remediation oversight and follow-up environmental monitoring and reporting. BluMetric Contract Value (All Phases) \$250,000. Remediation Contract Value \$700,000.
- Infrastructure Ontario. Phase I, II ESA and Hydrogeology Study for a Site Near Cameron Avenue and Spence Road, Hawkesbury ON. Project Manager and Senior Hydrogeologist. Client contact and responsible for resource allocation (including subcontractors), scheduling, budget and overall QA/QC of all reports, senior technical advice and technical direction of the project. The Phase I and II ESAs were completed in general accordance with O.Reg. 153/04 (May 2015-December 2016). Contract Value \$65,000.
- Infrastructure Ontario. Phase I ESA for Site #43 Providence Continuing Care Centre (Kingston Psychiatric), Kingston ON. Project Manager. Responsible for resource allocation, subcontractor oversight and direction, scheduling, budget and overall QA/QC of reports. The ESA was completed in general accordance with O.Reg. 153/04 and also included comments on designated substances at the site. The project was completed on-time and on-budget (January-March 2016). Contract Value \$29,300.
- Infrastructure Ontario. Phase I ESA and Category B EA for the Perth Jail Property, Perth ON. Project Manager and Client Contact. Responsible for resource allocation (including subcontractors), scheduling, budget and overall QA/QC of all reports. This project was completed in support of the proposed severance and disposition of the subject property (August 2015-January 2016). Contract Value \$16,500.
- Infrastructure Ontario. Hazardous Materials and Designated Substances Survey (HMDSS), Phase II ESAs and Limited Category B Class EAs at Moose Lake, Round Lake and Machesney Lake Junior Ranger Camps ON. Project Manager. Client contact and responsible for resource allocation (including



subcontractors), scheduling, budget and overall QA/QC of all reports. Project included HMDSS of 10 to 15 buildings at each of the three sites as per Ontario regulations. Phase Two ESAs were completed in general accordance with O. Reg. 153/04 (November 2014-January 2015). Total Contract Value \$125,000.

- Infrastructure Ontario. Brockville Psychiatric Hospital Phase I and II ESA and Risk Management, Brockville ON. Project Lead. Responsible for client communications, budget control, invoicing, technical support and report review. A 'Risk Opinion' was developed for IO to assess the risks posed by fill materials containing PAHs and metals exceeding O. Reg. 153/04 Site Condition Standards (May 2013-March 2014). Contract Value \$125,000.
- Infrastructure Ontario. Sir James Whitney School for the Deaf Phase I and II ESA, Belleville ON. Project Manager and Senior Hydrogeologist. Client contact and responsible for resource allocation (including subcontractors), scheduling, budget and overall QA/QC of all reports, senior technical advice and technical direction. The Phase I and II ESAs were performed completed in general accordance with O.Reg. 153/04 (December 2011-December 2012). Contract Value \$115,000.
- Infrastructure Ontario. Phase I and II ESA and Hydrogeology Study for 440 Kent Street West Kawartha Lake, Lindsay ON. Project Manager and Senior Hydrogeologist. Client contact and responsible for resource allocation (including subcontractors), scheduling, budget and overall QA/QC of all reports, senior technical advice and technical direction. The Phase I and II ESAs were performed completed in general accordance with O.Reg. 153/04 (December 2011-December 2012). Contract Value \$95,000.
- Indigenous and Northern Affairs Canada, Various Sites NU and NT. Senior Technical Reviewer of various Phase I ESA and Phase II ESAs. Responsibilities included senior oversight/review of project deliverables (2009-2011).
- CP Railway, Ottawa ON. Petroleum hydrocarbon impacts from former bulk fuels storage facility adjacent to rail lands ultimately leased for use with Ottawa 'O' Train (1998-2002).
- Senior technical advisor for the environmental impact assessment and remediation of an arctic diesel spill at the Nanisivik Airport (2001).
- First Air, Arctic Bay NU. Completed an environmental site assessment on behalf of First Air for newly acquired lands and storage facilities located at the Nanisivik Airport near Arctic Bay and for a property located within the community of Nanisivik (1998).
- Amoco, Hawkesbury Ontario. Project hydrogeologist for subsurface chlorinated solvent impact delineation and assessment for large textile facility (1988-1992).

Remediation

Mr. Hillier has extensive soil and groundwater remediation experience using various conventional and innovative remediation technologies. Remedial action plans were produced and successfully implemented for various sites that included reporting to the MOECC and/or TSSA and/or reporting to municipalities and/or other consulting firms acting on behalf of other stakeholders. His wide range of project experience has proven valuable in identifying remediation strategies that best meet the ultimate goals, strategies, and economic resources/limitations of specific clients and/or situations. For those projects with an impact to the public, significant effort has been given to address the specific concerns of those individuals most affected by a remedial strategy. Select projects include:

- Multiple similar projects for the following insurers: AVIVA Insurance, the Co-operators, Pilot Insurance. Project Manager for domestic or commercial heating oil spills (losses ranging from 50-1500 litres). Remediation has included a combination of excavation and off-site disposal (landfill), product



recovery through strategic pumping from temporary wells and in situ chemical oxidation (1995-Ongoing). Contract Values \$3,000 to \$75,000.

- Canadian Bank Note Company Limited. Provision of Environmental Services for a Property Impacted by Chlorinated Solvent in Groundwater, Ottawa ON. Tasks included: Phase II ESA (1999), remediation planning and groundwater pump and treat program (2000-2011) and long-term monitoring (2011-2016). Project Lead. Responsible for client communication, budget control, invoicing, technical support and report review. Total Contract Value \$200,000.
- Shorewood Packaging (now Newterra). Provision of Environmental Services for Remediation of Toluene from Impacted Groundwater at a Large Printing Facility, Brockville ON. Tasks included: Phase II ESA (1995); strategic pumping of groundwater from 6-metre length property boundary capture trenches with on-site treatment via air stripper (1996-2003); continued remediation via granular activated carbon (2003-2009); and long-term monitored natural attenuation program (2010-2016). Corrective actions, including lining of sanitary and storm sewers and installation of clay dams, implemented to protect against groundwater infiltration. Project Manager. Responsible for client communication, budget control, invoicing, technical support and report review. Total Contract Value \$400,000.

Environmental Assessment

Mr. Hillier has overseen and reviewed multiple Class Environmental Assessments for various municipal and provincial level undertakings. His portfolio in this area includes several Infrastructure Ontario (2011-2017), Category B or C EAs for more than 20 sites with typical contract values from \$3,500 to \$8,000 (see detailed project descriptions above):

- CBRE. Former MNRF Works Yard Category B EA in Support of Building Demolition, Haliburton ON (2016-2017). Contract Value \$5,000.

Waste Disposal Site Monitoring and Solid Waste Management

Mr. Hillier's waste management experience includes conducting groundwater and surface water impact assessments; preparing the necessary documentation for the EPA site approval process, addressing MOE concerns such as disposal site hydrologic and hydrogeologic conditions; solid waste landfill leachate characterization and monitoring; and operation and closure planning. Projects for which Mr. Hillier is currently Senior Reviewer and Competent Environmental Practitioner (CEP) for surface water and groundwater reporting including:

- Township of Augusta: Maynard (closed) Waste Disposal Site (WDS), North Augusta WDS (open).
- North Grenville: Kemptville, South Gower, Oxford Mills, Burritt's Rapids WDS (closed).



Groundwater Supply

Mr. Hillier has conducted hydrogeological investigations to find potable sources of groundwater for municipal and private services. He has had project management and technical involvement in: target aquifer exploration and testing, groundwater treatability analysis, municipal/commercial/residential well design and construction, potable water sampling, aquifer testing, well head protection planning, and terrain analysis for septic system design. Mr. Hillier maintained a MOECC well technician license (Class 3 portable drilling, Class 4 pump installer) for a period of fifteen years prior to the introduction of the Class 5 license (groundwater monitoring applications) exemption for Professional Geoscientists. Select projects include:

- Ottawa Carleton District School Board: Evaluation of groundwater treatment methods and remedial options for water supplies impacted by bacterial contamination and/or salt (2000-Ongoing).
- Moose Creek/Finch/Vars/Carp/Chesterville/Crysler/CFB Connaught Rifle Range: Design, installation, and testing of municipal supply production wells to replace existing substandard water supplies. Well Head Protection Planning and GUDI Assessment (1988-Ongoing).
- Multiple Clients: Terrain Analysis and Hydrogeological Investigation (MOE Procedures D-3, D-4 and D-5) for private servicing of rural residential and commercial land development since 1987. Select projects include:
 - Maple Subdivision, Little Beverly Lake (2016)
 - Norcan Lake Conservation Subdivision (O'Brien Estates), Calabogie (2007-2009)
 - Canonto Lodge Subdivision, Calabogie (2008-2009)
 - Trans Canada Pipeline: Baseline Well Water Supply Survey and Impact Assessment/Correction for construction of Stittsville and Deux Rivieres Loops (2005-2006)
 - Vance Farm Residential Subdivision, Kanata (2003)
 - West Rideau Collector Sewer Tunnel Construction (Phases 4 and 5): Well Water Supply Survey and Well Impact Assessment/Correction (1993-1995)
 - Carleton University: Installation and aquifer testing of a series of pumping and reinjection wells for a large scale heat pump system (1987-1990)

Drinking Water Quality Sampling and Assessment

Mr. Hillier has conducted hydrogeological investigations to find potable sources of groundwater for municipal and private services. He has had project management and technical involvement in: target aquifer exploration and testing, groundwater treatability analysis, municipal/commercial/residential well design and construction, potable water sampling, aquifer testing, well head protection planning, and terrain analysis for septic system design.

- City of Ottawa. Well Water Supply Quality Monitoring, Ottawa ON. Project Manager and Senior Advisor. Ongoing well water supply sampling for residential and commercial supplies to assess for potential salt impact derived from municipal works yards. Sampling completed up to 4 times a year and carried out adjacent to works yards located in Goulbourn, Cumberland, and West Carleton (2011 -Ongoing).
- Canadian Science and Technology Museum Corporation. Potable Water Sampling Services, Ottawa ON. Senior Project Advisor and Senior Reviewer. Drinking water and livestock water sampling on an annual or as needed basis for the Aviation Museum, Agricultural Museum and Canadian Science and Technology Museum. Water sampling services are typically for water fountain and other potable source locations within the facilities and have included on-site measurement for chlorine residual and



turbidity (2006-Ongoing).

- Township of Beckwith. Water Supply Program Implementation Area Sampling, Carleton Place ON. Senior Project Advisor and Senior Reviewer. Ongoing sampling of granular activated carbon (GAC) treated residential and commercial water supplies in a 9 kilometres in length by 5 kilometres in area of the Township of Beckwith. Completed the GAC system sampling program and, based on volatile organic compound analytical results, provided recommendations for GAC vessel replacement as needed. An average of 300 water samples per year were collected (2009-2013).
- Major Bottled Water Producer. Groundwater Source Investigation, Eastern ON. Senior Hydrogeologist. Desktop review and field investigation to identify potential groundwater sources for bottled water in Eastern Ontario and Western Quebec. Reviewed published and in-house hydrogeological maps and report and available water well record databases, and evaluated geographic data from provincial water well databases. Field work included evaluation of target areas through installation and aquifer testing of pilot production wells, survey of existing wells and water quality sampling (2006-2008).

INTERNATIONAL PROJECT EXPERIENCE

- Trinidad and Tobago. Conducted a coastal water quality study for the island of Tobago. Objectives of the work program included mapping of point sources for coastal water quality impact and development of a GIS-based coastal water quality monitoring program (1997-1998).
- England/Wales. Conducted environmental audits at several Nortel (formerly Northern Telecom) Europe industrial sites located in the United Kingdom. Reviewed and provided recommendations on the storage and handling of hazardous waste materials. Identified existing environmental impacts due to past site activities. Completed Phase II Environment Site Assessment studies through drilling and soil and groundwater sampling programs (1992).



EDUCATION

- M.Eng., Environmental Engineering, Carleton University, 2013
- B.A.Sc., Chemical Engineering, University of Ottawa, 2010
- B.Sc., Biochemistry, University of Ottawa, 2010

YEARS OF EXPERIENCE

- 5 years of experience
- 4 years with BluMetric

EMPLOYMENT HISTORY

- 2017 – Present: BluMetric, Project Engineer
- 2013 – 2017: BluMetric, Environmental Scientist
- 2011 – 2012: Carleton University, Teaching Assistant
- 2012: Region of Durham, Technical Assistant
- 2010: CH2M Hill Canada Inc., Engineering Intern

PROFESSIONAL AFFILIATIONS

- Professional Engineers Ontario

TRAINING

- MOECC O. Reg. 170/03 Operation of Small Drinking Water Systems Course, 2017
- Lakes Environmental AERMOD Course, 2013
- 40 hour HAZWOPER, 2013
- OSHA 10-Hour Construction Course, 2010

LANGUAGES

- English

ROLE

- Environmental Compliance Auditing
- Environmental Air Emissions Assessments
- Phased Environmental Site Assessments

EXPERTISE

- Environmental Regulations and Compliance
- Environmental Air Emissions Assessments
- Environmental Compliance Approvals (Air/Noise)
- Air Dispersion Modeling and Interpretation
- Annual Reporting (ECA/NPRI/O. Reg. 127/TRA)

PROFESSIONAL PROFILE

Ms. Petrocco is an engineer with experience working in various industries. She is responsible for undertaking projects and activities pertaining to Environmental Management Systems, environmental compliance audits, Environmental Compliance Approval (ECA) applications, emission modeling, federal/provincial annual environmental reporting, National Pollutant Release Inventory (NPRI) and Toxics Reduction Act (TRA) accounting and phased environmental site investigations.

Ms. Petrocco has knowledge in the areas of solid waste management, air dispersion modeling, water and wastewater treatment and federal, provincial and municipal environmental regulations. She also has experience in construction management of waterworks installation projects, including verification of completed work as per contractual documentation and coordination of site meetings.

Ms. Petrocco's has prepared technical reports including, regulatory reports, compliance audit reports, emission summary and dispersion modeling reports, and soil and groundwater investigation reports. She is responsible for all aspects of project management, including proposal writing, cost estimates, budget tracking, invoicing and liaison between clients and regulatory agencies.



REPRESENTATIVE EXPERIENCE

Project Management

Ms. Petrocco has successfully managed a variety of projects including environmental compliance approvals, federal/provincial annual reporting and environmental compliance audits in accordance with the procedures of BluMetric's Quality Management System. Ms. Petrocco appreciates that each project is unique and that project requirements sometimes change during implementation, and dedicates time and effort to project management to ensure that project objectives continue to be effectively and efficiently met. As project manager she is responsible for the schedule, budget, invoicing, client liaison and resource allocations for the project to ensure the client's needs and regulatory requirement are met.

Quality and Environment Management Systems

Ms. Petrocco has conducted auditing of environmental management systems for several large facilities for compliance with ISO 14001. Auditing has included reviewing procedures in advance, developing an audit plan and comparing documentation with the standards before going on-site to review the implementation of documentation. She has also participated in compliance auditing involving reviewing applicable federal, provincial and regional requirements, creating checklist questions and preparing audit plans. Both management system and compliance audits have included the preparation of reports identifying non-conformances and identifying opportunities for improvement. Ms. Petrocco has also completed QMS internal audits for compliance with ISO9001. Select projects include:

- Agriculture and Agri-Food Canada. Environmental Compliance Audit of Two Agricultural Research Sites. Auditor. Ms. Petrocco assisted with an environmental compliance audit at the Brandon and Morden Research and Development Centres in Manitoba. The audit was conducted in accordance with the CSA document 'Z773-03 Environmental Compliance Auditing Standard' and the Guidelines for the audit of environmental management systems (ISO 19011: 2002) (October - November 2017).
- BluMetric Environmental Inc. ISO9001 Internal Audits. Auditor. Ms. Petrocco completed the annual internal audits of the BluMetric Quality Management System (October 2015 - March 2017).
- Best Theratronics Ltd. ISO14001 Gap Analysis and EMS Re-write. Project Manager and Auditor. As an Auditor, Ms. Petrocco was responsible for conducting the review of BTL EMS documentation, assisting with the on-site audit and providing recommendations to update the EMS to comply with the 2015 version of ISO14001. Ms. Petrocco also updated the BTL EMS manual and procedures as per the recommendations of the gap analysis (September 2015 - January 2016).
- Hydro Ottawa Limited. Environmental, Health and Safety Compliance Audit. Auditor. Ms. Petrocco was responsible for conducting an environmental compliance audit for six 'run-of-the-river' hydroelectric generating stations in accordance with the CSA document 'Z773-03 Environmental Compliance Auditing Standard' and creating an environmental legal registry for each station (December 2015).
- St. Lawrence Seaway Management Corporation. ISO14001 Gap Analysis and EMS Re-write. EMS Assistant. Ms. Petrocco assisted with a high level gap analysis; documented identified gaps in a technical report; summarized BluMetric's recommendations in a PowerPoint presentation; updated the EMS manual as per the recommendations of the gap analysis; created procedures and forms and uploaded the re-written EMS documents to an on-line system (February 2013 - March 2014).
- Jones Lang LaSalle. Environmental Compliance Audit. Field Technician. Ms. Petrocco was responsible for completing environmental compliance audits, in accordance with the CSA document 'Z773-03 Environmental Compliance Auditing Standard', at two Canada Post mail processing facilities



(December 2013).

- Canadian Bank Note Ltd. ISO 14001 EMS Implementation. EMS Assistant. Ms. Petrocco assisted with the aspect/impact analysis and EMS procedure development for CBN's manufacturing and office facilities (July 2013).

Environmental Compliance Approvals

Ms. Petrocco has completed several Environmental Compliance Approvals (ECA) Air applications for commercial, industrial and institutional facilities including manufacturers of medical imaging devices, banknotes and concrete; diesel and natural gas combustion emission sources; and hospitals. The environmental air assessments include site visits to identify emission sources, emission estimation based on emission rates, analysis of processes in use at each facility, dispersion modeling and compliance determinations based on comparison with applicable Ontario Ministry of Environment and Climate Change (MOECC) standards. As part of her work experience, Ms. Petrocco has become proficient in applying the RUN308 and AERMOD dispersion models, as well as same structure self-contamination assessments (air re-entrainment assessments applying ASHRAE principles). She serves as the liaison between clients and regulatory agencies, helping clients to respond to MOECC reviewer comments and providing an interface between the client and the MOECC through the approval process until the ECA is approved. She also prepares and submits Environmental Activity and Sector Registries (EASR) Registrations for applicable facilities. Select projects include:

- Port of Johnstown. Air EASR Registration. Technical Lead. Completed the air assessment (dispersion modelling, ESDM Report and Supplement) for a grain processing operator and assisted with the on-line registration process (April - August 2017).
- RGT Clouthier. ECA Air Application. Technical Lead. Completed the air assessment and ECA application for a mobile rock crushing operation (June - July 2017).
- Rogan Kitchens. ECA Air Application. Technical Lead. Complete the air assessment and ECA application for a kitchen door and cabinet manufacturer (January - February 2016).
- Best Theratronics Ltd. ECA Air Application. Project Manager and Technical Lead. Completed the air assessment for a medical imaging device manufacturer and provided technical assistance through the MOECC approval process. The air assessment included site visits, a review of on-site processes, emissions estimation, and preparation and submission of an ECA application and MOECC correspondence (October 2015).
- TRP Ready Mix Ltd. ECA Air Applications. Technical Assistant. Completed the air assessment and ECA applications for two ready-mix concrete plants (June - July 2013).

Annual Reporting

Ms. Petrocco assists clients with their annual federally and provincially legislated reporting requirements. For those clients with an Air ECA, she updates the emission summary and dispersion modelling for the facility to evaluate changes and review whether the facility emissions continue to comply with MOECC Standards; the modifications and updated modelling results are summarized in the annual report. For those clients with a Storm Water Management Works or an Industrial Sewage Works ECA, she reviews laboratory data, liaises with the client to obtain operating practices and summarizes results in a report as required by the ECA. For those clients who are required to report under NPRI, O. Reg. 127, and/or the Toxics Reduction Act, Ms. Petrocco evaluates annual usage or emissions against the reporting thresholds, calculates the necessary reporting data and details, and assists clients with their online reporting system entries. Select projects include:



- Canadian Bank Note Company Ltd. Annual ECA (air/noise) Reporting. Technical Lead. Ms. Petrocco is responsible for completing the annual ECA reporting requirements for a printing operation under a flexible ECA (January 2015 - Ongoing).
- Best Theratronics Ltd. Annual NPRI Reporting. Technical Lead. Ms. Petrocco is responsible for the annual reporting requirements for regulated substances of a Medical Imaging Device manufacturer (May 2013 - Ongoing).
- Port of Johnstown. Storm Water Management Works Annual ECA Report. Ms. Petrocco was responsible for preparing the 2015 annual report for the Port of Johnstown's Storm Water Management Works as per the requirements of the client's ECA (March 2016).
- Ottawa District School Board. West Carleton Secondary School Annual ECA Report. Ms. Petrocco was responsible for preparing the 2013 and 2015 annual report for the West Carleton Secondary School reverse osmosis system as per the requirements of the client's Industrial Sewage Works ECA (March 2014 and February 2016).

Environmental Site Assessment

Ms. Petrocco has completed numerous Phase I ESAs in accordance with Ontario Regulation 153/04 and to the CSA Standard for land transactions. Her work involves all aspects of the Phase I ESA including historical searches, site investigation, interviews and report compilation. She has also completed data interpolation and the reporting requirements for several Phase II ESAs under these standards. Select projects include:

- National Capital Commission. Phase I ESA of an undeveloped lot in Gatineau Park. Technical Assistant. Completed the Phase I site investigation, conducted the historical searches and compiled information into a formal report in accordance with the Canadian Standards Association (CSA) Z768-01 and Z769-00 Standards (May 2017).
- Infrastructure Ontario. Phase II ESA reports for several former MNRF ranger camps. Technical Assistant. Compiled subsurface investigation data and presented results and conclusions in a formal report in accordance with the CSA Z768-01 and Z769-00 Standards (July 2015-August 2015).
- City of Ottawa. Phase I ESA of a fire station in Ottawa. Technical Assistant. Completed the Phase I site investigation, conducted the historical searches and compiled information into a draft report in accordance with the CSA Z768-01 and Z769-00 Standards (May 2014).
- Infrastructure Ontario. Phase II ESA report for a psychiatric hospital in Brockville. Technical Assistant. Compiled subsurface investigation data and presented results and conclusions in a formal report in accordance with the CSA Z768-01 and Z769-00 Standards (July 2013-August 2013).
- Hydro Ottawa. Phase II ESA report for a former substation property in Ottawa for a Record of Site Condition (RSC). Technical Assistant. Compiled subsurface investigation data and presented results and conclusions in a formal report in accordance with Ontario Regulation 153/04, as amended (February-March 2013).

Environmental Monitoring and Sampling

Ms. Petrocco has assisted with several groundwater sampling programs for the testing of metals, BTEX, petroleum hydrocarbons, and general chemistry parameters. Ms. Petrocco has also completed potable water sampling at residential buildings. Select projects include:

- Township of Beckwith. Water Sampling and Monitoring Services. Field Technician. Ms. Petrocco was responsible for sample collection for the testing of volatile organic compounds (2014).
- Waste Management of Canada Corporation. Annual Waste Disposal Site Monitoring. Field



Technician. Ms. Petrocco assisted with the collection of groundwater using low flow sampling techniques with dedicated bladder pumps and surface water samples in accordance with the client's Environmental Monitoring Plan (2013).

- Mac's Convenience Stores Inc. Annual Groundwater Monitoring and Sampling. Field Technician. Ms. Petrocco collected groundwater samples using low flow techniques, measured water levels and free product depth, and monitored headspace combustible vapour at several Mac's convenience store and fuel retail outlets. When required, Ms. Petrocco provided traffic control during sample collection (2013).

