Appendix K
Physical Settings Report

PSR
PHYSICAL SETTING REPORT

Property Information

Order Number:		25021200500p
Date Completed:		February 13, 2025
Project Number:		
Project Property:		Parking lot south of 585 Hunt Club Road, Ottawa Parking lot south of 585 West Hunt Club Road Ottawa ON K2G 5X6
Coordinates:		
	Latitude:	45.3339562
	Longitude:	-75.7287581
	UTM Northing:	5020309.08181 Metres
	UTM Easting:	442897.19244 Metres
	UTM Zone:	UTM Zone 18T
	Elevation:	88.18 m
	Slope Direction:	SSE

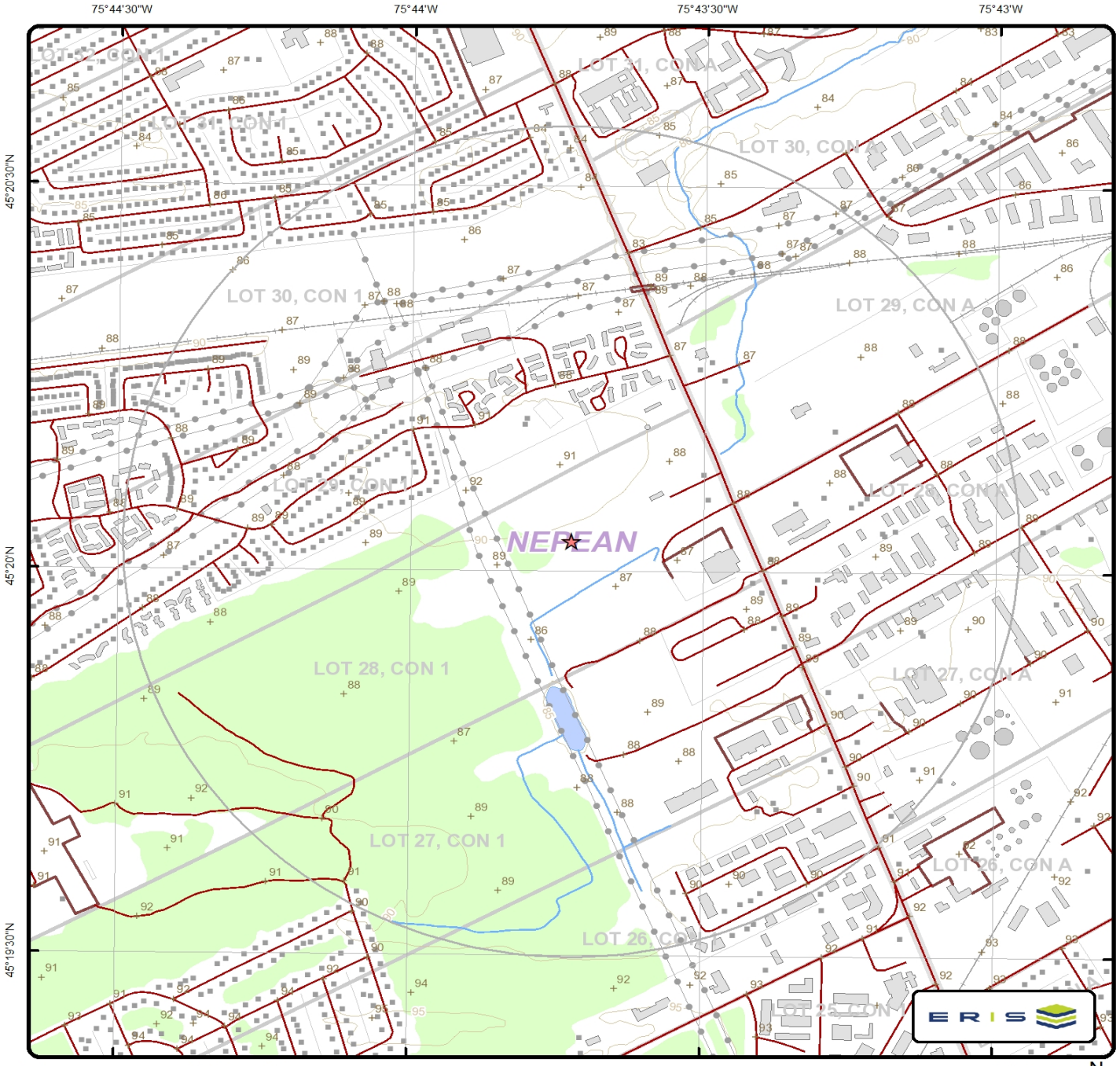
The ERIS ***Physical Setting Report - PSR*** provides comprehensive information about the physical setting around a site and includes a complete overview of topography as well as hydrologic, geologic and soil characteristics. The location and detailed attributes of oil and gas wells, water wells, and radon are also included for review.

The compilation of both physical characteristics of a site and additional attribute data is useful in assessing the impact of migration of contaminants and subsequent impact on soils and groundwater.

Disclaimer

This Report does not provide a full environmental evaluation for the site or adjacent properties. Please see the terms and disclaimer at the end of the Report for greater detail.

Topographic Information



Topographic Map

0 0.2 0.4 0.8 KM

N

Address: Parking lot south of 585 West Hunt Club Road,Ottawa,ON

Legend

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	Municipalitiy	Nature Reserve
Trail	Building to Scale	Land Ownership	

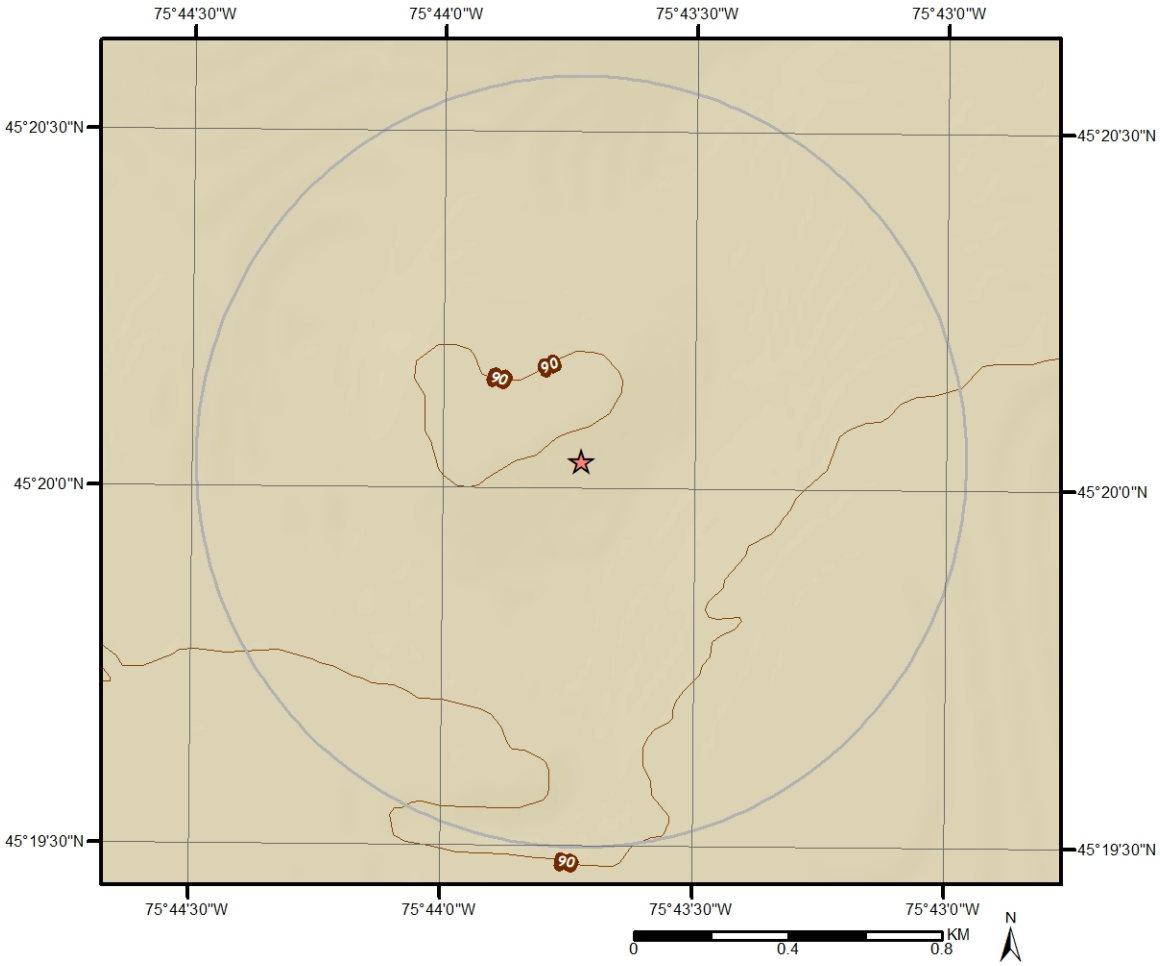
Data source: Ontario Base Mapping (OBM) by Ontario Ministry of Natural Resources.

Topographic Information

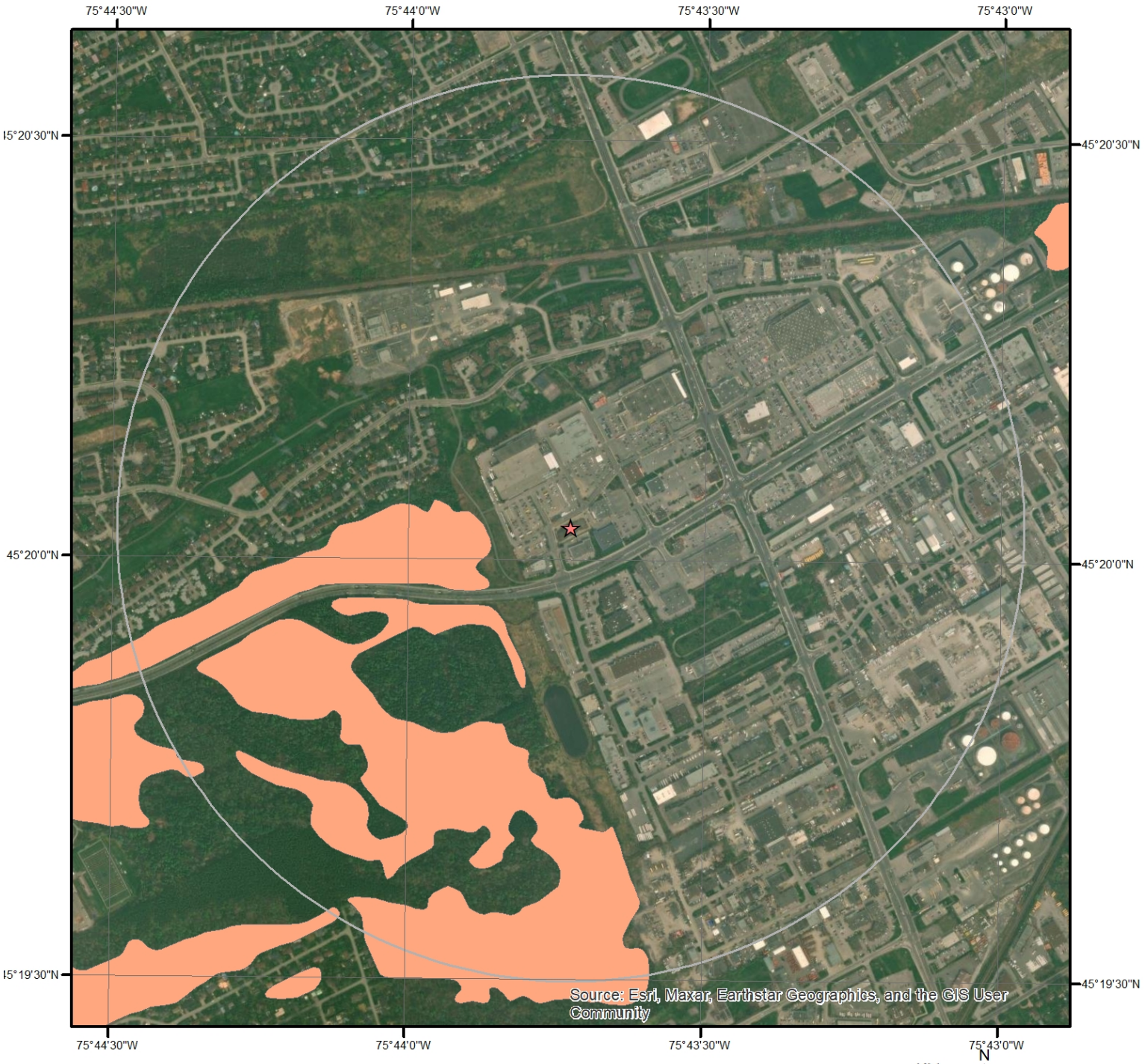
The previous topographic map(s) show general topographic information in the surrounding area of the project property, using Toporama data or a provincial source when available. Below are shaded relief map(s), derived from Digital Elevation data to depict terrain in further detail.

Topographic information at project property:

Elevation:	88.18 m
Slope Direction:	SSE



Hydrologic Information



Wetland

This map shows wetland existence. Data coverage is shown to the right.
Gray indicates no data available in the area.

KM
0 0.125 0.25 0.5 0.75

N

PSW	Forested Peatland	Peatland Fen	Shrub Wetland
Evaluated PSW	Freshwater Marsh	Peatland Forested	Swamp
Aquatic Bed	Land Locked Pond	Salt or Brackish Marsh	Unknown
Bog	Marsh	Salt Water	Water
Bog or Fen	No Open Water or Marsh Component	Sand Dune	Wet Meadow
Coastal Marsh	Open Water or Marsh Component	Salt Marsh	Wetland
Fen	Open Water	Shallow / Open Water	
Forested Wetland	Peatland Bog	Shallow Water	

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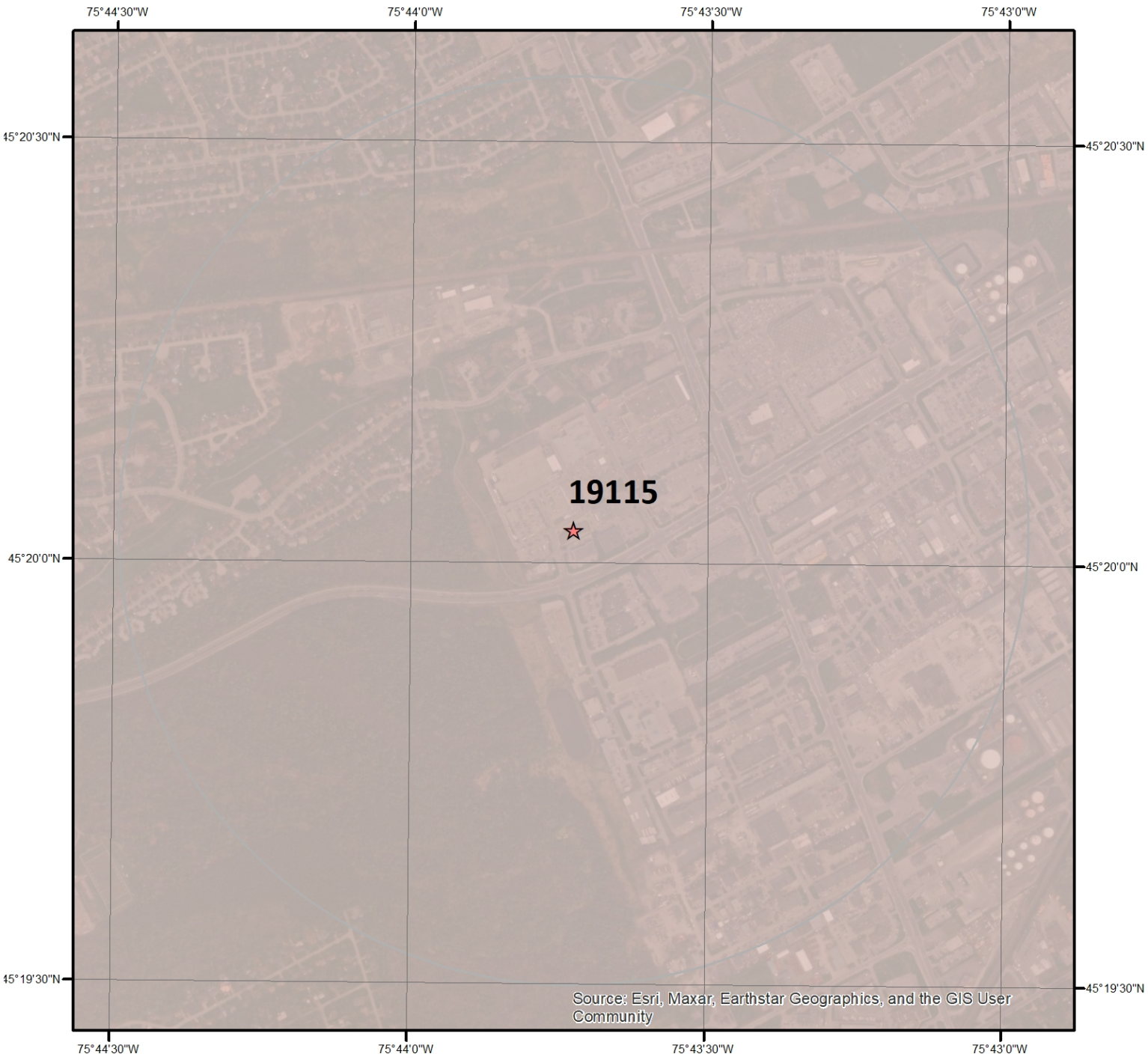
Geologic Information



Bedrock Geology

This map shows bedrock geologic units in the area. Please refer to the report for detailed descriptions. Data coverage is shown to the right. Gray indicates no data available in the area.

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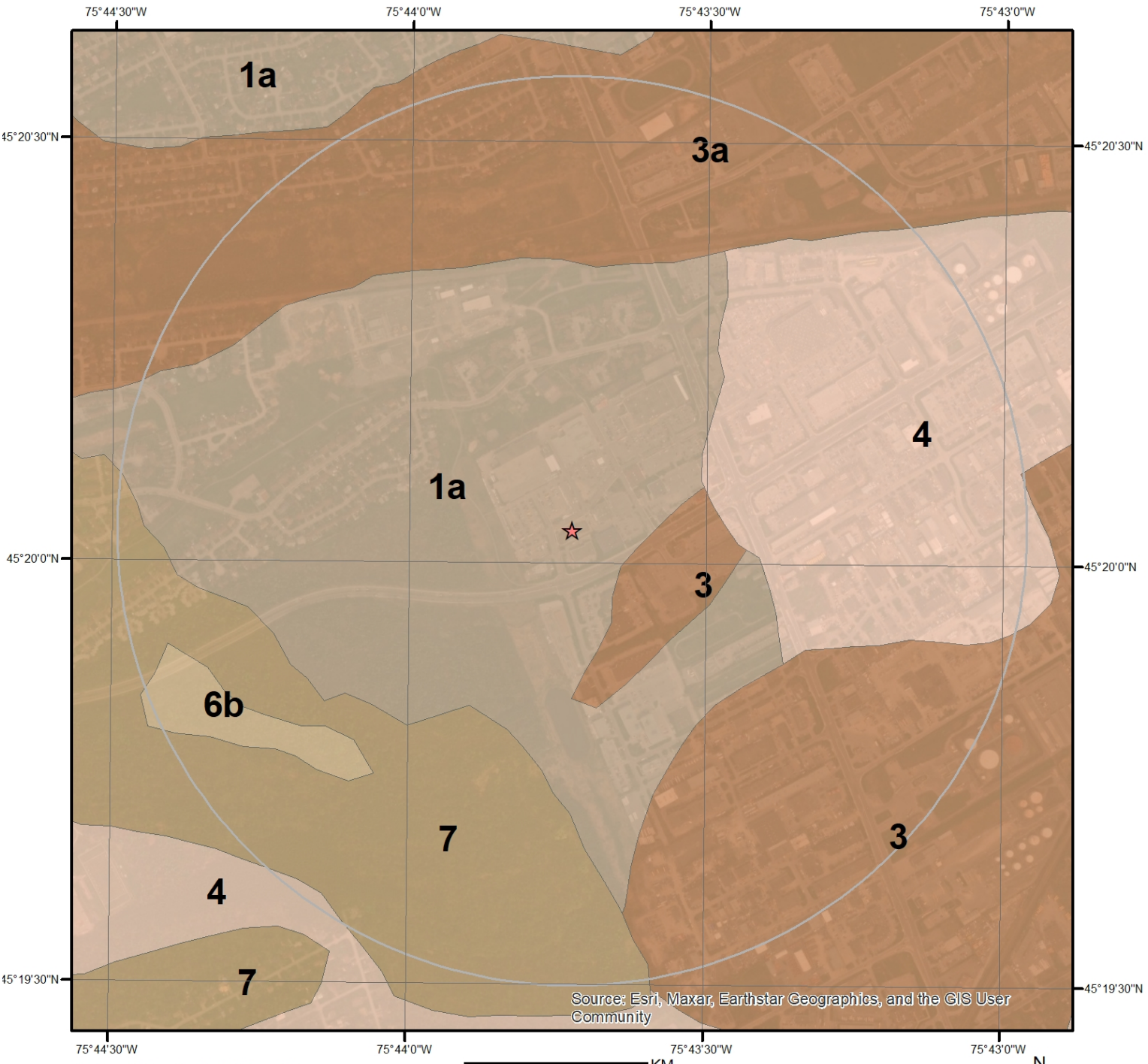
Geologic Information

Detailed bedrock geology information about each unit within the search radius is provided below.

Unit ID 19115

Unit Name:	
Rock Type:	Dolostone, sandstone
Strata:	Beekmantown Group
Super Eon:	
Eon:	PHANEROZOIC (Present to 542.0 Ma)
Era:	PALEOZOIC (251.0 Ma to 542.0 Ma)
Period:	ORDOVICIAN (443.7 Ma to 488.3 Ma)
Epoch:	LOWER ORDOVICIAN
Province:	
Tectonic Zone:	

Geologic Information



Surficial Geology

This map shows surficial geologic labels in the area. Please refer to the report for detailed descriptions. Data coverage is shown to the right. Gray indicates no data available in the area.

Geologic Information

Detailed surficial geology information about each unit within the search radius is provided below.

Unit ID 3a

Geological Deposit:	Offshore marine deposits
Deposit Age:	Quaternary (Champlain Sea)
Primary Material:	clay, silt
Secondary Material:	
Primary General:	glaciomarine
Primary General Modifier:	foreshore/basinal
Veneer:	silt, sand
Episode:	Wisconsin
Sub Episode:	Michigan
Strata Modifier:	Surface
Provenance:	
Carbon Content:	
Formation:	
Permeability:	Low
Material Description:	Clay and silt underlying erosional terraces; upper part of marine deposits removed to variable depths by fluvial erosion so in places clay is uniform blue-grey; unit includes lenses, bars and channel fills to sand and pockets of nonmarine silt that were formed during terrace (or channel) cutting.

Unit ID 4

Geological Deposit:	Deltaic and estuarine deposits
Deposit Age:	Quaternary (Champlain Sea)
Primary Material:	sand
Secondary Material:	
Primary General:	glaciomarine
Primary General Modifier:	deltaic
Veneer:	
Episode:	Wisconsin
Sub Episode:	Michigan
Strata Modifier:	Surface
Provenance:	
Carbon Content:	
Formation:	
Permeability:	High
Material Description:	Medium-to fine-grained sand, in some places fossiliferous; lies outside abandoned channels; most common deposit is a combined strip delta-sand plain that developed as water levels fell.

Unit ID 7

Geological Deposit:	Organic deposits
Deposit Age:	Recent

Geologic Information

Primary Material:	organic deposits
Secondary Material:	
Primary General:	wetland
Primary General Modifier:	
Veneer:	
Episode:	Hudson
Sub Episode:	
Strata Modifier:	Surface
Provenance:	
Carbon Content:	
Formation:	
Permeability:	High
Material Description:	Mainly muck and peat in bogs, fens, swamps and poorly drained areas.

Unit ID 1a

Geological Deposit:	Till
Deposit Age:	Quaternary
Primary Material:	diamicton
Secondary Material:	
Primary General:	glacial
Primary General Modifier:	
Veneer:	
Episode:	Wisconsin
Sub Episode:	Michigan
Strata 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 discontinuous lag consisting of gravel, sand and boulders

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Unit ID 3

Geological Deposit:	Offshore marine deposits
Deposit Age:	Quaternary (Champlain Sea)
Primary Material:	clay, silt
Secondary Material:	sand
Primary General:	glaciomarine
Primary General Modifier:	foreshore/basinal
Veneer:	
Episode:	Wisconsin
Sub Episode:	Michigan
Strata Modifier:	Surface
Provenance:	
Carbon Content:	

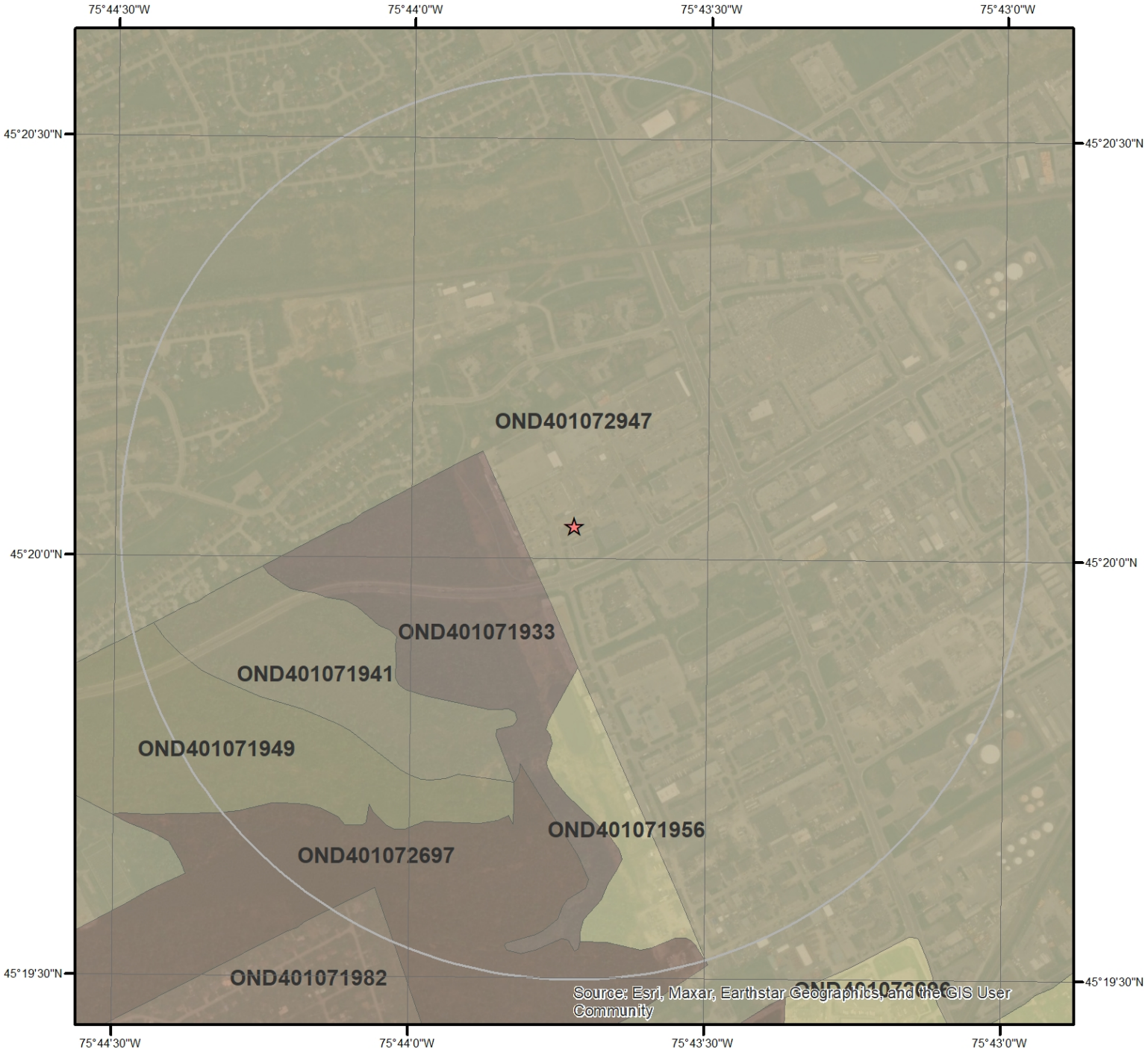
Geologic Information

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 and blue-grey.

Unit ID 6b

Geological Deposit:	Alluvial deposits
Deposit Age:	Recent
Primary Material:	sand
Secondary Material:	silt
Primary General:	fluvial
Primary General Modifier:	abandoned floodplain
Veneer:	
Episode:	Hudson
Sub Episode:	
Strata Modifier:	Surface
Provenance:	
Carbon Content:	
Formation:	
Permeability:	Variable
Material Description:	Medium grained stratified sand with some silt; in the form of fluvial terraces and channels cut in marine clay, and bars and spits within abandoned channels.

Soil Information



Soil Map

0 0.2 0.4 0.8 KM

N

This map shows soil units around the target property. Please refer to the report for detailed soil descriptions.

Soil Information

Detailed soil information about each unit within the search radius is provided below.

Ontario Detailed Soil Survey (DSS3)

Polygon ID: OND401071982

Component

Component ID:	OND40107198201	**Components(%):**	100
Soil Name ID:	ONZUN~~~~~N	**Slope Steepness(%):**	Unknown or Not applicable
Component No:	1	**Slope Length(m):**	-9
Surface Stoniness Class:	Not Applicable		

Component Rating

Field Crops Capability:	
First CLI Limitation Subclass:	
Second CLI Limitation Subclass:	
Drainage:	Not Applicable
Soil Texture of A Horizon:	
Hydrological Soil Groups:	

Soil Name

Soil Name:	UNCLASSIFIED
Kind of Surface Material:	Unclassified
Soil Drainage Class:	Not applicable
Water Table Charateristics:	Unspecified period
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

Polygon ID: OND401071949

Component

Soil Information

Component ID:	OND40107194901	**Components(%):**	70
Soil Name ID:	ONRUB~~~~~A	**Slope Steepness(%):**	1.2
Component No:	1	**Slope Length(m):**	-9
Surface Stoniness Class:	Nonstony		

Component Rating

Field Crops Capability:	Severe limitations on use for crops.
First CLI Limitation Subclass:	Low inherent soil Fertility
Second CLI Limitation Subclass:	
Drainage:	Imperfectly
Soil Texture of A Horizon:	
Hydrological Soil Groups:	Soils with moderate infiltration rates when completely wetted. Soils are sandy loam soils with moderately fine to moderately coarse textures.

Soil Name

Soil Name:	RUBICON
Kind of Surface Material:	Mineral
Soil Drainage Class:	Imperfectly drained
Water Table Charateristics:	Unspecified period
Layer that Restricts Root Growth:	No root restricting layer
Type of Root Restricting Layer:	n/a
Parent Material 1, 2, 3:	Very Coarse; Not Applicable; Not Applicable
Mode of Deposition 1,2,3:	Marine; Not Applicable; Not Applicable
Parent Material Chemical Property 1,2,3:	Medium Acid to Neutral; Not Applicable; Not Applicable

Soil Layer

Layer No:	1	**Very Fine Sand(%):**	6
Horizon:	Ap	**Total Sand(%):**	85
Depth(cm):	0-12	**Total Silt(%):**	10
pH in Calc Chloride:	6.9	**Total Clay(%):**	5
Saturated Hydraulic Conductivity(cm/h):	7.685	**Organic Carbon(%):**	3.1
Electrical Conductivity (dS/m):	0		

Layer No:	2	**Very Fine Sand(%):**	6
Horizon:	Bm	**Total Sand(%):**	89
Depth(cm):	12-30	**Total Silt(%):**	8

Soil Information

pH in Calc Chloride:	7.1	**Total Clay(%):**	3
Saturated Hydraulic Conductivity(cm/h):	6.927	**Organic Carbon(%):**	0.8
Electrical Conductivity (dS/m):	0		

Layer No:	3	**Very Fine Sand(%):**	5
Horizon:	Bg	**Total Sand(%):**	88
Depth(cm):	30-50	**Total Silt(%):**	7
pH in Calc Chloride:	7.7	**Total Clay(%):**	5
Saturated Hydraulic Conductivity(cm/h):	4.953	**Organic Carbon(%):**	0.2
Electrical Conductivity (dS/m):	0		

Layer No:	4	**Very Fine Sand(%):**	5
Horizon:	Ckg	**Total Sand(%):**	92
Depth(cm):	50-100	**Total Silt(%):**	6
pH in Calc Chloride:	7.9	**Total Clay(%):**	2
Saturated Hydraulic Conductivity(cm/h):	6.887	**Organic Carbon(%):**	0.2
Electrical Conductivity (dS/m):	0		

Component

Component ID:	OND40107194902	**Components(%):**	30
Soil Name ID:	ONMLP~~~~~A	**Slope Steepness(%):**	3.5
Component No:	2	**Slope Length(m):**	-9
Surface Stoniness Class:	Nonstony		

Component Rating

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
Drainage:	Well
Soil Texture of A Horizon:	
Hydrological Soil Groups:	Soils that have a low runoff potential and high infiltration rate, as the soils typically are sands and gravel.

Soil Name

Soil Name:	MILLE ISLE
Kind of Surface Material:	Mineral

Soil Information

Soil Drainage Class:	Well drained
Water Table Charateristics:	Never
Layer that Restricts Root Growth:	No root restricting layer
Type of Root Restricting Layer:	n/a
Parent Material 1, 2, 3:	Very Coarse; Not Applicable; Not Applicable
Mode of Deposition 1,2,3:	Marine; Not Applicable; Not Applicable
Parent Material Chemical Property 1,2,3:	Extremely / Strongly Acidic; Not Applicable; Not Applicable

Soil Layer

Layer No:	1	**Very Fine Sand(%):**	1
Horizon:	Ap	**Total Sand(%):**	86
Depth(cm):	0-20	**Total Silt(%):**	9
pH in Calc Chloride:	5.5	**Total Clay(%):**	5
Saturated Hydraulic Conductivity(cm/h):	6.662	**Organic Carbon(%):**	1.9
Electrical Conductivity (dS/m):	0		

Layer No:	2	**Very Fine Sand(%):**	2
Horizon:	Bm	**Total Sand(%):**	88
Depth(cm):	20-45	**Total Silt(%):**	9
pH in Calc Chloride:	5	**Total Clay(%):**	3
Saturated Hydraulic Conductivity(cm/h):	7.125	**Organic Carbon(%):**	0.9
Electrical Conductivity (dS/m):	0		

Layer No:	3	**Very Fine Sand(%):**	3
Horizon:	BC	**Total Sand(%):**	92
Depth(cm):	45-65	**Total Silt(%):**	6
pH in Calc Chloride:	4.8	**Total Clay(%):**	2
Saturated Hydraulic Conductivity(cm/h):	7.099	**Organic Carbon(%):**	0.5
Electrical Conductivity (dS/m):	0		

Layer No:	4	**Very Fine Sand(%):**	3
Horizon:	C	**Total Sand(%):**	91
Depth(cm):	65-100	**Total Silt(%):**	6
pH in Calc Chloride:	5	**Total Clay(%):**	3
Saturated Hydraulic Conductivity(cm/h):	6.102	**Organic Carbon(%):**	0
Electrical Conductivity (dS/m):	0		

Polygon ID: OND401071941

Soil Information

Component

Component ID:	OND40107194101	**Components(%):**	70
Soil Name ID:	ONCNB~~~~~A	**Slope Steepness(%):**	1.2
Component No:	1	**Slope Length(m):**	-9
Surface Stoniness Class:	Nonstony		

Component Rating

Field Crops Capability:	moderate limitations on use for crops
First CLI Limitation Subclass:	
Second CLI Limitation Subclass:	
Drainage:	Poorly
Soil Texture of A Horizon:	silt loam
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 Name

Soil Name:	CARSONBY
Kind of Surface Material:	Mineral
Soil Drainage Class:	Poorly drained
Water Table Charateristics:	Always
Layer that Restricts Root Growth:	No root restricting layer
Type of Root Restricting Layer:	n/a
Parent Material 1, 2, 3:	Medium; Not Applicable; Not Applicable
Mode of Deposition 1,2,3:	Marine; Not Applicable; Not Applicable
Parent Material Chemical Property 1,2,3:	Medium Acid to Neutral; Not Applicable; Not Applicable

Soil Layer

Layer No:	1	**Very Fine Sand(%):**	16
Horizon:	Ap	**Total Sand(%):**	25
Depth(cm):	0-21	**Total Silt(%):**	61
pH in Calc Chloride:	7	**Total Clay(%):**	14
Saturated Hydraulic Conductivity(cm/h):	0.687	**Organic Carbon(%):**	2.3
Electrical Conductivity (dS/m):	0		

Soil Information

Layer No:	2	**Very Fine Sand(%):**	12
Horizon:	Bg	**Total Sand(%):**	16
Depth(cm):	21-50	**Total Silt(%):**	74
pH in Calc Chloride:	7.1	**Total Clay(%):**	10
Saturated Hydraulic Conductivity(cm/h):	0.395	**Organic Carbon(%):**	0.2
Electrical Conductivity (dS/m):	0		

Layer No:	3	**Very Fine Sand(%):**	22
Horizon:	Bg	**Total Sand(%):**	26
Depth(cm):	50-74	**Total Silt(%):**	67
pH in Calc Chloride:	7.3	**Total Clay(%):**	7
Saturated Hydraulic Conductivity(cm/h):	1.047	**Organic Carbon(%):**	1.6
Electrical Conductivity (dS/m):	0		

Layer No:	4	**Very Fine Sand(%):**	9
Horizon:	Cg	**Total Sand(%):**	10
Depth(cm):	74-100	**Total Silt(%):**	80
pH in Calc Chloride:	7.4	**Total Clay(%):**	10
Saturated Hydraulic Conductivity(cm/h):	0.259	**Organic Carbon(%):**	0.9
Electrical Conductivity (dS/m):	0		

Component

Component ID:	OND40107194102	**Components(%):**	30
Soil Name ID:	ONZOR~~~~~N	**Slope Steepness(%):**	1.2
Component No:	2	**Slope Length(m):**	-9
Surface Stoniness Class:	Nonstony		

Component Rating

Field Crops Capability:	
First CLI Limitation Subclass:	
Second CLI Limitation Subclass:	
Drainage:	Very Poorly
Soil Texture of A Horizon:	
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 Name

Soil Information

Soil Name:	ORGANIC
Kind of Surface Material:	Organic
Soil Drainage Class:	Very poorly drained
Water Table Charateristics:	Unspecified period
Layer that Restricts Root Growth:	No root restricting layer
Type of Root Restricting Layer:	n/a
Parent Material 1, 2, 3:	Mesic; Not Applicable; Not Applicable
Mode of Deposition 1,2,3:	Undifferentiated organic; Not Applicable; Not Applicable
Parent Material Chemical Property 1,2,3:	Medium Acid to Neutral; Not Applicable; Not Applicable

Soil Layer

Layer No:	1	**Very Fine Sand(%):**	-9
Horizon:	Oh	**Total Sand(%):**	-9
Depth(cm):	0-99	**Total Silt(%):**	-9
pH in Calc Chloride:	5.5	**Total Clay(%):**	-9
Saturated Hydraulic Conductivity(cm/h):	3.455	**Organic Carbon(%):**	20
Electrical Conductivity (dS/m):	0		

Layer No:	2	**Very Fine Sand(%):**	0
Horizon:	Bg	**Total Sand(%):**	23
Depth(cm):	99-149	**Total Silt(%):**	17
pH in Calc Chloride:	5.9	**Total Clay(%):**	60
Saturated Hydraulic Conductivity(cm/h):	0.21	**Organic Carbon(%):**	0.6
Electrical Conductivity (dS/m):	0		

Polygon ID: ONDA01071956

Component

Component ID:	OND40107195601	**Components(%):**	70
Soil Name ID:	ONMUA~~~~~A	**Slope Steepness(%):**	1.2
Component No:	1	**Slope Length(m):**	-9
Surface Stoniness Class:	Nonstony		

Component Rating

Field Crops Capability: moderately severe limitations on use for crops.

Soil Information

First CLI Limitation Subclass:	Low inherent soil Fertility
Second CLI Limitation Subclass:	
Drainage:	Imperfectly
Soil Texture of A Horizon:	
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 Name

Soil Name:	MOUNTAIN
Kind of Surface Material:	Mineral
Soil Drainage Class:	Imperfectly drained
Water Table Charateristics:	Unspecified period
Layer that Restricts Root Growth:	No root restricting layer
Type of Root Restricting Layer:	n/a
Parent Material 1, 2, 3:	Fine; Coarse; Not Applicable
Mode of Deposition 1,2,3:	Fluvial; Lacustrine; Not Applicable
Parent Material Chemical Property 1,2,3:	Medium Acid to Neutral; Medium Acid to Neutral; Not Applicable

Soil Layer

Layer No:	1	**Very Fine Sand(%):**	18
Horizon:	Ap	**Total Sand(%):**	80
Depth(cm):	0-19	**Total Silt(%):**	13
pH in Calc Chloride:	7	**Total Clay(%):**	7
Saturated Hydraulic Conductivity(cm/h):	4.622	**Organic Carbon(%):**	1.3
Electrical Conductivity (dS/m):	0		

Layer No:	2	**Very Fine Sand(%):**	18
Horizon:	Bm	**Total Sand(%):**	80
Depth(cm):	19-28	**Total Silt(%):**	14
pH in Calc Chloride:	6.8	**Total Clay(%):**	6
Saturated Hydraulic Conductivity(cm/h):	4.787	**Organic Carbon(%):**	0.6
Electrical Conductivity (dS/m):	0		

Layer No:	3	**Very Fine Sand(%):**	12
Horizon:	Bmgj	**Total Sand(%):**	81
Depth(cm):	28-46	**Total Silt(%):**	14
pH in Calc Chloride:	6.5	**Total Clay(%):**	5
Saturated Hydraulic	5.474	**Organic Carbon(%):**	0.2

Soil Information

Conductivity(cm/h):	
Electrical Conductivity (dS/m):	0

Layer No:	4	**Very Fine Sand(%):**	14
Horizon:	Cgj	**Total Sand(%):**	24
Depth(cm):	46-66	**Total Silt(%):**	32
pH in Calc Chloride:	5.8	**Total Clay(%):**	44
Saturated Hydraulic Conductivity(cm/h):	0.216	**Organic Carbon(%):**	0.1
Electrical Conductivity (dS/m):	0		

Layer No:	5	**Very Fine Sand(%):**	0
Horizon:	Cgj	**Total Sand(%):**	3
Depth(cm):	66-100	**Total Silt(%):**	26
pH in Calc Chloride:	5.7	**Total Clay(%):**	71
Saturated Hydraulic Conductivity(cm/h):	0.193	**Organic Carbon(%):**	0.1
Electrical Conductivity (dS/m):	0		

Component

Component ID:	OND40107195602	**Components(%):**	30
Soil Name ID:	ONBDO~~~~~A	**Slope Steepness(%):**	1.2
Component No:	2	**Slope Length(m):**	-9
Surface Stoniness Class:	Nonstony		

Component Rating

Field Crops Capability:	moderately severe limitations on use for crops.
First CLI Limitation Subclass:	
Second CLI Limitation Subclass:	
Drainage:	Poorly
Soil Texture of A Horizon:	
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 Name

Soil Name:	BRANDON
Kind of Surface Material:	Mineral
Soil Drainage Class:	Poorly drained

Soil Information

Water Table Charateristics:	Unspecified period
Layer that Restricts Root Growth:	No root restricting layer
Type of Root Restricting Layer:	n/a
Parent Material 1, 2, 3:	Moderately Fine; Not Applicable; Not Applicable
Mode of Deposition 1,2,3:	Marine; Not Applicable; Not Applicable
Parent Material Chemical Property 1,2,3:	Medium Acid to Neutral; Not Applicable; Not Applicable

Soil Layer

Layer No:	1	**Very Fine Sand(%):**	11
Horizon:	Apg	**Total Sand(%):**	14
Depth(cm):	0-12	**Total Silt(%):**	52
pH in Calc Chloride:	5.7	**Total Clay(%):**	34
Saturated Hydraulic Conductivity(cm/h):	0.223	**Organic Carbon(%):**	2.1
Electrical Conductivity (dS/m):	0		

Layer No:	2	**Very Fine Sand(%):**	7
Horizon:	Bg	**Total Sand(%):**	11
Depth(cm):	12-38	**Total Silt(%):**	46
pH in Calc Chloride:	6.6	**Total Clay(%):**	43
Saturated Hydraulic Conductivity(cm/h):	0.211	**Organic Carbon(%):**	0.5
Electrical Conductivity (dS/m):	0		

Layer No:	3	**Very Fine Sand(%):**	7
Horizon:	Bg	**Total Sand(%):**	11
Depth(cm):	38-70	**Total Silt(%):**	47
pH in Calc Chloride:	6.9	**Total Clay(%):**	42
Saturated Hydraulic Conductivity(cm/h):	0.211	**Organic Carbon(%):**	0.2
Electrical Conductivity (dS/m):	0		

Layer No:	4	**Very Fine Sand(%):**	0
Horizon:	Cg	**Total Sand(%):**	8
Depth(cm):	70-105	**Total Silt(%):**	45
pH in Calc Chloride:	7.1	**Total Clay(%):**	47
Saturated Hydraulic Conductivity(cm/h):	0.197	**Organic Carbon(%):**	0.2
Electrical Conductivity (dS/m):	0		

Polygon ID: OND401071933

Soil Information

Component

Component ID:	OND40107193301	**Components(%):**	70
Soil Name ID:	ONBDO~~~~~A	**Slope Steepness(%):**	1.2
Component No:	1	**Slope Length(m):**	-9
Surface Stoniness Class:	Nonstony		

Component Rating

Field Crops Capability:	moderately severe limitations on use for crops.
First CLI Limitation Subclass:	
Second CLI Limitation Subclass:	
Drainage:	Poorly
Soil Texture of A Horizon:	
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 Name

Soil Name:	BRANDON
Kind of Surface Material:	Mineral
Soil Drainage Class:	Poorly drained
Water Table Charateristics:	Unspecified period
Layer that Restricts Root Growth:	No root restricting layer
Type of Root Restricting Layer:	n/a
Parent Material 1, 2, 3:	Moderately Fine; Not Applicable; Not Applicable
Mode of Deposition 1,2,3:	Marine; Not Applicable; Not Applicable
Parent Material Chemical Property 1,2,3:	Medium Acid to Neutral; Not Applicable; Not Applicable

Soil Layer

Layer No:	1	**Very Fine Sand(%):**	11
Horizon:	Apg	**Total Sand(%):**	14
Depth(cm):	0-12	**Total Silt(%):**	52
pH in Calc Chloride:	5.7	**Total Clay(%):**	34
Saturated Hydraulic Conductivity(cm/h):	0.223	**Organic Carbon(%):**	2.1
Electrical Conductivity (dS/m):	0		

Soil Information

Layer No:	2	**Very Fine Sand(%):**	7
Horizon:	Bg	**Total Sand(%):**	11
Depth(cm):	12-38	**Total Silt(%):**	46
pH in Calc Chloride:	6.6	**Total Clay(%):**	43
Saturated Hydraulic Conductivity(cm/h):	0.211	**Organic Carbon(%):**	0.5
Electrical Conductivity (dS/m):	0		

Layer No:	3	**Very Fine Sand(%):**	7
Horizon:	Bg	**Total Sand(%):**	11
Depth(cm):	38-70	**Total Silt(%):**	47
pH in Calc Chloride:	6.9	**Total Clay(%):**	42
Saturated Hydraulic Conductivity(cm/h):	0.211	**Organic Carbon(%):**	0.2
Electrical Conductivity (dS/m):	0		

Layer No:	4	**Very Fine Sand(%):**	0
Horizon:	Cg	**Total Sand(%):**	8
Depth(cm):	70-105	**Total Silt(%):**	45
pH in Calc Chloride:	7.1	**Total Clay(%):**	47
Saturated Hydraulic Conductivity(cm/h):	0.197	**Organic Carbon(%):**	0.2
Electrical Conductivity (dS/m):	0		

Component

Component ID:	OND40107193302	**Components(%):**	30
Soil Name ID:	ONJKV~~~~~A	**Slope Steepness(%):**	3.5
Component No:	2	**Slope Length(m):**	-9
Surface Stoniness Class:	Nonstony		

Component Rating

Field Crops Capability:	moderately severe limitations on use for crops.
First CLI Limitation Subclass:	Low inherent soil Fertility
Second CLI Limitation Subclass:	
Drainage:	Well
Soil Texture of A Horizon:	
Hydrological Soil Groups:	Soils that have a low runoff potential and high infiltration rate, as the soils typically are sands and gravel.

Soil Name

Soil Information

Soil Name:	JOCKVALE
Kind of Surface Material:	Mineral
Soil Drainage Class:	Well drained
Water Table Charateristics:	Never
Layer that Restricts Root Growth:	No root restricting layer
Type of Root Restricting Layer:	n/a
Parent Material 1, 2, 3:	Coarse; Not Applicable; Not Applicable
Mode of Deposition 1,2,3:	Marine; Not Applicable; Not Applicable
Parent Material Chemical Property 1,2,3:	Medium Acid to Neutral; Not Applicable; Not Applicable

Soil Layer

Layer No:	1	**Very Fine Sand(%):**	19
Horizon:	Ap	**Total Sand(%):**	69
Depth(cm):	0-15	**Total Silt(%):**	21
pH in Calc Chloride:	7	**Total Clay(%):**	10
Saturated Hydraulic Conductivity(cm/h):	3.153	**Organic Carbon(%):**	1.5
Electrical Conductivity (dS/m):	0		

Layer No:	2	**Very Fine Sand(%):**	26
Horizon:	Bm	**Total Sand(%):**	80
Depth(cm):	15-29	**Total Silt(%):**	17
pH in Calc Chloride:	7	**Total Clay(%):**	3
Saturated Hydraulic Conductivity(cm/h):	6.686	**Organic Carbon(%):**	0.4
Electrical Conductivity (dS/m):	0		

Layer No:	3	**Very Fine Sand(%):**	36
Horizon:	C	**Total Sand(%):**	83
Depth(cm):	29-100	**Total Silt(%):**	12
pH in Calc Chloride:	7	**Total Clay(%):**	5
Saturated Hydraulic Conductivity(cm/h):	4.903	**Organic Carbon(%):**	0.2
Electrical Conductivity (dS/m):	0		

Polygon ID: OND401072697

Component

Component ID:	OND40107269701	**Components(%):**	70

Soil Information

Soil Name ID:	ONCLA~~~~~A	**Slope Steepness(%):**	3.5
Component No:	1	**Slope Length(m):**	-9
Surface Stoniness Class:	Nonstony		

Component Rating

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
Drainage:	Well
Soil Texture of A Horizon:	
Hydrological Soil Groups:	Soils that have a low runoff potential and high infiltration rate, as the soils typically are sands and gravel.

Soil Name

Soil Name:	CARLSBAD
Kind of Surface Material:	Mineral
Soil Drainage Class:	Well drained
Water Table Charateristics:	Never
Layer that Restricts Root Growth:	No root restricting layer
Type of Root Restricting Layer:	n/a
Parent Material 1, 2, 3:	Very Coarse; Not Applicable; Not Applicable
Mode of Deposition 1,2,3:	Fluvial; Not Applicable; Not Applicable
Parent Material Chemical Property 1,2,3:	Extremely / Strongly Acidic; Not Applicable; Not Applicable

Soil Layer

Layer No:	1	**Very Fine Sand(%):**	3
Horizon:	Ap	**Total Sand(%):**	91
Depth(cm):	0-15	**Total Silt(%):**	5
pH in Calc Chloride:	7	**Total Clay(%):**	4
Saturated Hydraulic Conductivity(cm/h):	6.934	**Organic Carbon(%):**	1.2
Electrical Conductivity (dS/m):	0		

Layer No:	2	**Very Fine Sand(%):**	2
Horizon:	Bm	**Total Sand(%):**	96
Depth(cm):	15-25	**Total Silt(%):**	2
pH in Calc Chloride:	6.6	**Total Clay(%):**	2

Soil Information

Saturated Hydraulic Conductivity(cm/h):	8.209	**Organic Carbon(%):**	1
Electrical Conductivity (dS/m):	0		

Layer No:	3	**Very Fine Sand(%):**	3
Horizon:	Bm	**Total Sand(%):**	95
Depth(cm):	25-66	**Total Silt(%):**	3
pH in Calc Chloride:	6.2	**Total Clay(%):**	2
Saturated Hydraulic Conductivity(cm/h):	8.325	**Organic Carbon(%):**	0.2
Electrical Conductivity (dS/m):	0		

Layer No:	4	**Very Fine Sand(%):**	2
Horizon:	BC	**Total Sand(%):**	97
Depth(cm):	66-82	**Total Silt(%):**	2
pH in Calc Chloride:	5.8	**Total Clay(%):**	1
Saturated Hydraulic Conductivity(cm/h):	8.134	**Organic Carbon(%):**	0.2
Electrical Conductivity (dS/m):	0		

Layer No:	5	**Very Fine Sand(%):**	4
Horizon:	C	**Total Sand(%):**	96
Depth(cm):	82-100	**Total Silt(%):**	2
pH in Calc Chloride:	5.8	**Total Clay(%):**	2
Saturated Hydraulic Conductivity(cm/h):	6.96	**Organic Carbon(%):**	0.2
Electrical Conductivity (dS/m):	0		

Component

Component ID:	OND40107269702	**Components(%):**	30
Soil Name ID:	ONZUN~~~~~N	**Slope Steepness(%):**	1.2
Component No:	2	**Slope Length(m):**	-9
Surface Stoniness Class:	Not Applicable		

Component Rating

Field Crops Capability:	
First CLI Limitation Subclass:	
Second CLI Limitation Subclass:	
Drainage:	Imperfectly
Soil Texture of A Horizon:	
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 Information

Soil Name

Soil Name:	UNCLASSIFIED
Kind of Surface Material:	Unclassified
Soil Drainage Class:	Not applicable
Water Table Charateristics:	Unspecified period
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

Polygon ID: ONDA01072947

Component

Component ID:	ONDA0107294701	**Components(%):**	100
Soil Name ID:	ONZUN~~~~~N	**Slope Steepness(%):**	Unknown or Not applicable
Component No:	1	**Slope Length(m):**	-9
Surface Stoniness Class:	Not Applicable		

Component Rating

Field Crops Capability:	
First CLI Limitation Subclass:	
Second CLI Limitation Subclass:	
Drainage:	Not Applicable
Soil Texture of A Horizon:	
Hydrological Soil Groups:	

Soil Name

Soil Name:	UNCLASSIFIED
Kind of Surface Material:	Unclassified
Soil Drainage Class:	Not applicable
Water Table Charateristics:	Unspecified period

Soil Information

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

Wells and Additional Sources

Wells & Additional Sources

0 0.05 0.1 0.2 KM

N

- Sites with Higher Elevation
- Sites with Same Elevation
- Sites with Lower Elevation
- Sites with Unknown Elevation

ERIS

Wells and Additional Sources Summary

Federal Sources

National Energy Board Wells

Map Key	ID	Distance (m)	Direction
	No records found		

Provincial Sources

Ontario Oil and Gas Wells

Map Key	ID	Distance (m)	Direction
	No records found		

Provincial Groundwater Monitoring Network

Map Key	ID	Distance (m)	Direction
	No records found		

Water Well Information System

Map Key	Well ID	Distance (m)	Direction
1	1515062	152.95	NE
2	7038486	165.35	SSW

Private Sources

Oil and Gas Wells

Map Key	ID	Distance (m)	Direction
	No records found		

Water Well Information System

Map Key	Direction	Distance (km)	Distance (m)	Elevation (m)	DB
1	NE	0.15	152.95	87.96	WWIS

Well ID:	1515062	Flowing (Y/N):	
Construction Date:		Flow Rate:	
Use 1st:	Domestic	Data Entry Status:	
Use 2nd:	0	Data Src:	1
Final Well Status:	Water Supply	Date Received:	12/16/1975
Water Type:		Selected Flag:	TRUE
Casing Material:		Abandonment Rec:	
Audit No:		Contractor:	1558
Tag:		Form Version:	1
Constructn Method:		Owner:	
Elevation (m):		County:	OTTAWA-CARLETON
Elevatn Reliabilty:		Lot:	028
Depth to Bedrock:		Concession:	01
Well Depth:		Concession Name:	RF
Overburden/Bedrock:		Easting NAD83:	
Pump Rate:		Northing NAD83:	
Static Water Level:		Zone:	
Clear/Cloudy:		UTM Reliability:	
Municipality:	NEPEAN TOWNSHIP		
Site Info:			

PDF URL (Map): https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/151\1515062.pdf

Well Completed Date:	10/06/1975
Year Completed:	1975
Depth (m):	64.6176
Latitude:	45.3349185622975
Longitude:	-75.7273623193564
X:	-75.72736215782768
Y:	45.33491855524183
Path:	151\1515062.pdf

Bore Hole ID:	10037025	Elevation:	
DP2BR:		Elevrc:	
Spatial Status:		Zone:	18
Code OB:		East83:	443007.70
Code OB Desc:		North83:	5020414.00
Open Hole:		Org CS:	
Cluster Kind:		UTMRC:	4

Wells and Additional Sources Detail Report

Date Completed:	10/06/1975	UTMRC Desc:	margin of error : 30 m - 100 m
Remarks:		Location Method:	p4
Location Method Desc:	Original Pre1985 UTM Rel Code 4: margin of error : 30 m - 100 m		
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Formation ID:	931028109
Layer:	2
Color:	2
General Color:	GREY
Material 1:	15
Material 1 Desc:	LIMESTONE
Material 2:	
Material 2 Desc:	
Material 3:	
Material 3 Desc:	
Formation Top Depth:	24.0
Formation End Depth:	165.0
Formation End Depth UOM:	ft

Formation ID:	931028110
Layer:	3
Color:	2
General Color:	GREY
Material 1:	18
Material 1 Desc:	SANDSTONE
Material 2:	15
Material 2 Desc:	LIMESTONE
Material 3:	74
Material 3 Desc:	LAYERED
Formation Top Depth:	165.0
Formation End Depth:	185.0
Formation End Depth UOM:	ft

Formation ID:	931028108
Layer:	1
Color:	6
General Color:	BROWN

Material 1:	28
Material 1 Desc:	SAND
Material 2:	13
Material 2 Desc:	BOULDERS
Material 3:	
Material 3 Desc:	
Formation Top Depth:	0.0
Formation End Depth:	24.0
Formation End Depth UOM:	ft

Formation ID:	931028111
Layer:	4
Color:	1
General Color:	WHITE
Material 1:	18
Material 1 Desc:	SANDSTONE
Material 2:	
Material 2 Desc:	
Material 3:	
Material 3 Desc:	
Formation Top Depth:	185.0
Formation End Depth:	212.0
Formation End Depth UOM:	ft

Method Construction ID:	961515062
Method Construction Code:	5
Method Construction:	Air Percussion
Other Method Construction:	

Pipe ID:	10585595
Casing No:	1
Comment:	
Alt Name:	

Casing ID:	930065457
Layer:	1
Material:	1
Open Hole or Material:	STEEL
Depth From:	
Depth To:	25.0
Casing Diameter:	6.0
Casing Diameter UOM:	inch

Casing Depth UOM:	ft

Casing ID:	930065458
Layer:	2
Material:	4
Open Hole or Material:	OPEN HOLE
Depth From:	
Depth To:	212.0
Casing Diameter:	6.0
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Pumping Test Method Desc:	PUMP
Pump Test ID:	991515062
Pump Set At:	
Static Level:	50.0
Final Level After Pumping:	100.0
Recommended Pump Depth:	125.0
Pumping Rate:	20.0
Flowing Rate:	
Recommended Pump Rate:	5.0
Levels UOM:	ft
Rate UOM:	GPM
Water State After Test Code:	1
Water State After Test:	CLEAR
Pumping Test Method:	1
Pumping Duration HR:	1
Pumping Duration MIN:	0
Flowing:	No

Pump Test Detail ID:	934099885
Test Type:	Draw Down
Test Duration:	15
Test Level:	100.0
Test Level UOM:	ft

Pump Test Detail ID:	934384709
Test Type:	Draw Down
Test Duration:	30
Test Level:	100.0
Test Level UOM:	ft

Pump Test Detail ID:	934645691
Test Type:	Draw Down
Test Duration:	45
Test Level:	100.0
Test Level UOM:	ft

Pump Test Detail ID:	934894397
Test Type:	Draw Down
Test Duration:	60
Test Level:	100.0
Test Level UOM:	ft

Water ID:	933471068
Layer:	1
Kind Code:	1
Kind:	FRESH
Water Found Depth:	210.0
Water Found Depth UOM:	ft

Map Key	Direction	Distance (km)	Distance (m)	Elevation (m)	DB
2	SSW	0.17	165.35	86.60	WWIS

Well ID:	7038486	Flowing (Y/N):	
Construction Date:		Flow Rate:	
Use 1st:		Data Entry Status:	
Use 2nd:		Data Src:	
Final Well Status:	Abandoned-Other	Date Received:	12/18/2006
Water Type:		Selected Flag:	TRUE
Casing Material:		Abandonment Rec:	Yes
Audit No:	Z51925	Contractor:	7241
Tag:	A053770	Form Version:	3
Constructn Method:		Owner:	
Elevation (m):		County:	OTTAWA-CARLETON
Elevatn Reliabilty:		Lot:	
Depth to Bedrock:		Concession:	
Well Depth:		Concession Name:	
Overburden/Bedrock:		Easting NAD83:	
Pump Rate:		Northing NAD83:	
Static Water Level:		Zone:	
Clear/Cloudy:		UTM Reliability:	
Municipality:	OTTAWA CITY		
Site Info:			

Wells and Additional Sources Detail Report

PDF URL (Map):	https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/703\7038486.pdf

Well Completed Date:	09/26/2006
Year Completed:	2006
Depth (m):	7.32
Latitude:	45.3325557387429
Longitude:	-75.7294722496506
X:	-75.72947208882711
Y:	45.33255573243275
Path:	703\7038486.pdf

Bore Hole ID:	11761318	Elevation:	
DP2BR:		Elevrc:	
Spatial Status:		Zone:	18
Code OB:		East83:	442840.00
Code OB Desc:		North83:	5020153.00
Open Hole:		Org CS:	UTM83
Cluster Kind:		UTMRC:	3
Date Completed:	09/26/2006	UTMRC Desc:	margin of error : 10 - 30 m
Remarks:		Location Method:	wwr
Location Method Desc:	on Water Well Record		
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Formation ID:	933085983
Layer:	3
Color:	6
General Color:	BROWN
Material 1:	28
Material 1 Desc:	SAND
Material 2:	06
Material 2 Desc:	SILT
Material 3:	
Material 3 Desc:	
Formation Top Depth:	3.0999999046325684
Formation End Depth:	7.320000171661377
Formation End Depth UOM:	m

Formation ID:	933085981
Layer:	1
Color:	6
General Color:	BROWN
Material 1:	01
Material 1 Desc:	FILL
Material 2:	28
Material 2 Desc:	SAND
Material 3:	
Material 3 Desc:	
Formation Top Depth:	0.0
Formation End Depth:	0.9100000262260437
Formation End Depth UOM:	m

Formation ID:	933085982
Layer:	2
Color:	6
General Color:	BROWN
Material 1:	28
Material 1 Desc:	SAND
Material 2:	06
Material 2 Desc:	SILT
Material 3:	
Material 3 Desc:	
Formation Top Depth:	0.9100000262260437
Formation End Depth:	3.0999999046325684
Formation End Depth UOM:	m

Plug ID:	933310666
Layer:	2
Plug From:	0.30000001192092896
Plug To:	3.9600000381469727
Plug Depth UOM:	m

Plug ID:	933310665
Layer:	1
Plug From:	0.0
Plug To:	0.30000001192092896
Plug Depth UOM:	m

Plug ID:	933310667
Layer:	3

Plug From:	3.9600000381469727
Plug To:	7.320000171661377
Plug Depth UOM:	m

Method Construction ID:	967038486
Method Construction Code:	B
Method Construction:	Other Method
Other Method Construction:	

Pipe ID:	11769008
Casing No:	1
Comment:	
Alt Name:	

Casing ID:	930893538
Layer:	1
Material:	5
Open Hole or Material:	PLASTIC
Depth From:	0.0
Depth To:	4.269999980926514
Casing Diameter:	3.809999942779541
Casing Diameter UOM:	cm
Casing Depth UOM:	m

Screen ID:	933422345
Layer:	1
Slot:	10
Screen Top Depth:	4.269999980926514
Screen End Depth:	7.320000171661377
Screen Material:	5
Screen Depth UOM:	m
Screen Diameter UOM:	cm
Screen Diameter:	3.6700000762939453

Hole ID:	11847236
Diameter:	8.25
Depth From:	0.0
Depth To:	7.320000171661377
Hole Depth UOM:	m
Hole Diameter UOM:	cm

Radon Information

Detailed radon information for the project property is provided below.

Radon Zone Information

ID:	144852	**Radon Rank:**	LOW

Health Canada Radon Information

Health Region:	3551
Health Region Name:	City of Ottawa Health Unit
Province or Territory:	ON
Number Homes in Survey:	64
% Below 200 Bq/m3:	93.8
% Above 200 Bq/m3:	6.2
200 to 600 Bq/m3:	6.2
% Above 600 Bq/m3:	0

Area of Natural and Scientific Interest Information

Area of Natural & Scientific Interest (ANSI)

ANSI Area

Source: ANSI (ANSI) March 2017, Ontario Ministry of Natural Resources

Area of Natural and Scientific Interest Information

Detailed ANSI information is provided below.

ANSI ID: 251213648

ANSI Name:	Pinhey Forest
Type:	Candidate ANSI, Life Science
Significance:	Regional
Area (sqm):	1620058.434
Comments:	Ansi, Life Science

Appendix

Federal Sources

Bedrock Geology of Canada — **BEDROCK GEOLOGY**

The Geological Map of Canada is scaled at 1:5,000,000. This map is created by Geological Survey of Canada and published by Natural Resources Canada.

Health Canada Radon Information — **RADON**

This source is the results from the Cross-Canada Survey of Radon Concentrations in Homes, a two-year study conducted by Health Canada's National Radon Program. The aims of this study were to obtain an estimate of the proportion of the Canadian population living in homes with radon gas levels above the guideline of 200 Bq/m3, to identify previously unknown areas where radon gas exposure may constitute a health risk, and to build, over time, a map of indoor radon gas exposure levels across Canada.

National Energy Board Wells — **NEBP**

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.

Soil Landscapes of Canada (SLC) — **SLC**

Major characteristics of soil and land such as surface form, slope, water table depth, permafrost and lakes.

Surficial Geology of Canada — **SURFICIAL GEOLOGY**

This map contains information on surficial materials and associated landforms left by the retreat of the last glaciers and non glacial environments. It is based on compilation of existing maps. This data was authored by the Geological Survey of Canada and published by Natural Resources Canada.

Toporama — **TOPORAMA**

Toporama covers the entire area of Canada's landmass and provides topographic, geo-referenced, and symbolic information in a raster format at 1:50,000 scale. This is a digital topographic reference product made available by Natural Resources Canada (NRCan).

Provincial Sources

Area of Natural and Scientific Interest — **ANSI**

Areas of Natural and Scientific Interest (ANSIs) are lands and waters with features that are important for natural heritage protection, appreciation, scientific study or education. This dataset is made available by Ontario Ministry of Natural Resources.

Bedrock Geology of Ontario — **BEDROCK GEOLOGY**

The Bedrock Geology layer shows the distribution of bedrock units underlying Ontario at a 1:250,000 scale. The geology of the province consists of Precambrian rocks of the Canadian Shield and Phanerozoic sedimentary rocks that overlie the Canadian Shield. This layer was compiled by the Precambrian Geoscience Section of Ontario Geological Survey.

Ontario Detailed Soil Survey (DSS3) — **SOIL SURVEY**

Soil surveys have been published for most of the agricultural areas, and many surrounding areas, across Canada. Data from these surveys comprise the most detailed soil inventory information in the National Soil DataBase. Data is made available by Agriculture and Agri-Food Canada

Ontario Oil and Gas Wells — **OOGW**

In 1998, the Ministry of Natural Resources (MNR) handed over to the Ontario Oil, Gas and Salt Resources (OGSR) 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 includes well owner/operator, location, permit issue date, and well cap date, license number, 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 provided for each well record.

Provincial Groundwater Monitoring Network — **GROUNDWATER**

Appendix

Groundwater level and chemistry data from monitoring wells that are part of the Provincial Groundwater Monitoring Network (PGMN) Program. Precipitation data (rain) is also available for some sites. This data is provided by Ontario Ministry of Environment and Climate Change.

Surficial Geology of Ontario **SURFICIAL GEOLOGY**

The Surficial Geology dataset contains a layer depicting the distribution and characteristics of surficial deposits across southern Ontario. This data set is authored by the Ontario Geological Survey.

Topographic Map of Ontario **TOPOGRAPHIC MAP**

The Ontario Basic Mapping program provides a relationship between topographic information and the provincial geographical referencing grid, thereby forming the foundation for a comprehensive provincial geographical referencing system. This data is made available by the Ontario Ministry of Natural Resources and Forestry. This is ERIS self-designed topographic map template at 1:10,000.

Water Well Information System **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.

Wetlands of Ontario **WETLAND**

The Ministry of Natural Resources and Forestry has made available a database of wetlands in Ontario. Certain attributes identify wetlands that have been evaluated with the Ontario Wetland Evaluation System (OWES), and of those which ones have been designated as Provincially Significant Wetlands (PSW).

Private Sources

Oil and Gas Wells **OGWE**

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.

Radon Zone Information **RADON**

The Radon Potential Map is developed by Radon Environmental Management Corporation. Its objective was to illustrate the relative variation of radon risk across the country, and in 2011 it published its first geologic Radon Potential Map of Canada.

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