PHASE ONE
ENVIRONMENTAL SITE ASSESSMENT

of

Lot 186 Kalar Road, Niagara Falls, ON

For:
M5V Developments Inc.
Lot 186 Kalar Road
Niagara Falls, ON

November 16, 2020
Project: E-20-71-1

4999 Victoria Avenue
Niagara Falls, ON, L2E 4C9
Tel: (905) 357-4015 Fax: (905) 353-1105

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Lot 186 Kalar Road, Niagara Falls, ON

Prepared by **Hallex Environmental Ltd**. on behalf of:

M5V Developments Inc.

Author(s): Feng Li, P. Eng., Environmental Engineer
Jodie Glasier, B.A. (Hons), PD-EMA, M.MM., EP., Project Manager
Kevin Christian, M.Sc., P.Geo., QP, Principal Geoscientist

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Jodie Glasier, B.A. (Hons), PD-EMA, M.MM., EP
Project Manager

Kevin Christian, M.Sc., P.Geo. QP
Principal Geoscientist

PROFESSIONAL GEOSCIENTIST
KEVIN W. CHRISTIAN
PRACTISING MEMBER
0387
ONTARIO

EXECUTIVE SUMMARY

Hallex Environmental Ltd. was retained by M5V Developments Inc. to conduct a Phase One Environmental Site Assessment (ESA) of the property located at Lot 186 Kalar Road, Niagara Falls, ON. The objectives of the Phase One ESA were an investigation of the subject property and adjacent lands conducted in accordance with O. Reg. 153/04 as amended, and under the supervision of a Qualified Person in order to determine the likelihood that one or more contaminants may have affected any land and/or water on, in or under the property.

Potentially Contaminating Activities (PCAs), and contaminants or materials of potential concern, if revealed on-site, or at properties located within a 250 m radius of the site, were evaluated as to whether they generated 'Areas of Potential Environmental Concern' (APEC). PCAs are itemized in Schedule D Table 2 of O. Reg 511/09. APECs, if identified, were individually evaluated whether they were triggers for additional investigation via a Phase Two ESA.

PHASE ONE ESA SCOPE OF INVESTIGATION

The Phase One ESA scope of investigation includes review of historical background information via examination of:

- Fire Insurance Plans;
- Chain of Title;
- Environmental Risk Information System (EcoLog ERIS);
- Mapping resources including: Niagara Navigator Thematic, MNR Heritage Area, Topographic, Quaternary, Bedrock and Geology;
- Aerial photographs; and
- Water well records from Ontario Oil, Gas & Salt Resources Library & Ministry of the Environment, Conservation and Parks.

A site reconnaissance is completed to observe site grounds, on-site structures (if applicable), and adjacent properties in order to identify PCAs and APECs. This information is utilized to formulate a preliminary Conceptual Site Model regarding potential contaminants, contaminant migration pathways, and human and/or ecological receptors at the site.

SITE DESCRIPTION

The study site is located approximately 1.1 km north of the Welland River in the City of Niagara Falls. It is currently vacant with an approximate area of 45,608.07 m^2, and situated along the east side of Kalar Road.

PHASE ONE ESA FINDINGS

The Phase One ESA findings revealed the following:

- No on-site Potential Contaminating Activities were identified at the study site.
- One (1) off-site Potential Contaminating Activity resulted in one (1) onsite Area of Potential Environmental Concern with the potential to have impacted to the study site's soil.
    - ***PCA-1/APEC-1: Pesticides (including Herbicides, Fungicides and Anti-fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications (#40 as per Regulation)*** - Located along the south adjacent property is a Hydro corridor whereupon the application of herbicides for weed control purposes were identified as a PCA resulting in an on-site APEC to the study site's southern property boundary with respect to target contaminants: Metals (Arsenic) and Herbicides.
- Two (2) additional off-site Potentially Contaminating Activities were noted within 250 m of the study site; however, it is unlikely that any contaminants migrating offsite would present an onsite APEC at the study site due to distances to the study site and interpreted groundwater flow direction away from or cross gradient to the study site.

RECOMMENDATIONS

Based on the above noted findings Hallex therefore recommends:

1) **A limited Phase Two Environmental Site Assessment to determine the presence/absence of potential contaminants of concern in the soil resulting from the historic adjacent Hydro Corridor.**

LIST OF ACRONYMS

ACM	Asbestos Containing Materials
APEC	Area of Potential Environmental Concern
AST	Aboveground Storage Tank
BH	Borehole
BTEX	Benzene, Toluene, Ethylbenzene, Xylene
CSM	Conceptual Site Model
DSS	Designated Substance Survey
EC	Electrical Conductivity
EPA	Environmental Protection Act
ESA	Environmental Site Assessment
ERIS	Environmental Risk Information Services
FIP	Fire Insurance Plans
GPR	Ground Penetrating Radar
masl	Metres above sea level
mbgs	Metres below ground surface
MECP	Ministry of the Environment, Conservation and Parks
MOECC	Ministry of the Environment and Climate Change
MNR	Ministry of Natural Resources
MW	Monitoring Well
NPCA	Niagara Peninsula Conservation Authority
NPRI	National Pollutant Release Inventory
OC/OCP	Organochlorine Pesticides
PAH	Polycyclic Aromatic Hydrocarbons
PCA	Potentially Contaminating Activity
PCB	Polychlorinated Biphenyl
PCE	Perchloroethylene (tetrachloroethylene)
pH	Power of Hydrogen
PHC	Petroleum Hydrocarbons
QA/QC	Quality Assurance/Quality Control
QP	Qualified Person
RA	Risk Assessment
RSC	Record of Site Condition
SAR	Specific Absorption Rate
SCS	Site Condition Standard
SVOC	Semi-Volatile Organic Compounds
TP	Test Pit
UST	Underground Storage Tank
VOC	Volatile Organic Compounds

Potentially Contaminating Activities (PCAs)
Schedule D Table 2 of O. Reg 511/09

PCA#	Description
1	Acid and Alkali Manufacturing, Processing and Bulk Storage
2	Adhesives and Resins Manufacturing, Processing and Bulk Storage
3	Airstrips and Hangars Operation
4	Antifreeze and De-icing Manufacturing and Bulk Storage
5	Asphalt and Bitumen Manufacturing
6	Battery Manufacturing, Recycling and Bulk Storage
7	Boat Manufacturing
8	Chemical Manufacturing, Processing and Bulk Storage
9	Coal Gasification
10	Commercial Autobody Shops
11	Commercial Trucking and Container Terminals
12	Concrete, Cement and Lime Manufacturing
13	Cosmetics Manufacturing, Processing and Bulk Storage
14	Crude Oil Refining, Processing and Bulk Storage
15	Discharge of Brine related to oil and gas production
16	Drum and Barrel and Tank Reconditioning and Recycling
17	Dye Manufacturing, Processing and Bulk Storage
18	Electricity Generation, Transformation and Power Stations
19	Electronic and Computer Equipment Manufacturing
20	Explosives and Ammunition Manufacturing, Production and Bulk Storage
21	Explosives and Firing Range
22	Fertilizer Manufacturing, Processing and Bulk Storage
23	Fire Retardant Manufacturing, Processing and Bulk Storage
24	Fire Training
25	Flocculants Manufacturing, Processing and Bulk Storage
26	Foam and Expanded Foam Manufacturing and Processing
27	Garages and Maintenance and Repair of Railcars, Marine Vehicles and Aviation Vehicles
28	Gasoline and Associated Products Storage in Fixed Tanks
29	Glass Manufacturing
30	Importation of Fill Material of Unknown Quality

PCA#	Description
31	Ink Manufacturing, Processing and Bulk Storage
32	Iron and Steel Manufacturing and Processing
33	Metal Treatment, Coating, Plating and Finishing
34	Metal Fabrication
35	Mining, Smelting and Refining; Ore Processing; Tailings Storage
36	Oil Production
37	Operation of Dry-Cleaning Equipment (where chemicals are used)
38	Ordnance Use
39	Paints Manufacturing, Processing and Bulk Storage
40	Pesticides (including Herbicides, Fungicides and Anti-Fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications
41	Petroleum-derived Gas Refining, Manufacturing, Processing and Bulk Storage
42	Pharmaceutical Manufacturing and Processing
43	Plastics (including Fibreglass) Manufacturing and Processing
44	Port Activities, including Operation and Maintenance of Wharves and Docks
45	Pulp, Paper and Paperboard Manufacturing and Processing
46	Rail Yards, Tracks and Spurs
47	Rubber Manufacturing and Processing
48	Salt Manufacturing, Processing and Bulk Storage
49	Salvage Yard, including automobile wrecking
50	Soap and Detergent Manufacturing, Processing and Bulk Storage
51	Solvent Manufacturing, Processing and Bulk Storage
52	Storage, maintenance, fueling and repair of equipment, vehicles, and material used to maintain transportation systems
53	Tannery
54	Textile Manufacturing and Processing
55	Transformer Manufacturing, Processing and Use
56	Treatment of Sewage equal to or greater than 10,000 litres per day
57	Vehicles and Associated Parts Manufacturing
58	Waste Disposal and Waste Management, including thermal treatment, landfilling and transfer of waste, other than use of biosoils as soil conditioners
59	Wood Treating and Preservative Facility and Bulk Storage of Treated and Preserved Wood Products

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1.0 INTRODUCTION

Hallex Environmental Ltd. was retained by M5V Developments Inc. to conduct a Phase One Environmental Site Assessment (ESA) of the vacant property located at Lot 186 Kalar Road, Niagara Falls, ON (study site). The environmental work was requested for due diligence purposes relating to the potential purchase of the land. As future plans may include site development the Phase One ESA was completed in accordance with O. Reg. 153/04 as amended, for future use in submission of a Record of Site Condition with the Ministry of the Environment, Conservation and Parks (MECP), if required. The site location is shown on Figure 1 and the site layout and adjacent land uses are depicted on Figure 2.

1.1 Phase One Property Information

Municipal address:	Lot 186 Kalar Road, Niagara Falls, ON
Property Identifier Number (PIN)	64263-0079 (LT)
Client(s):	M5V Developments Inc.
UTM co-ordinates:	17T 652128 m E, 4769684 m N
Elevation:	178.83 m asl
Approx. site area:	45,608.07 m^2 (11.27 Acres)

1.2 Limitations and Exceptions of Report

Hallex Environmental Ltd. prepared this report for the account of: M5V Developments Inc. The material in it reflects Hallex Environmental Ltd.'s best judgement based on the information discovered at the time of preparation, within the Phase One ESA scope of work. The investigative procedures and format of this report generally follow the guidelines established in: Part XV.1 of the Environmental Protection Act, per O. Reg. 153/04, as amended. Any information presented concerning materials at the site is based on information gathered during historical document search and site reconnaissance only. There may be materials and/or subsurface soil and/or groundwater conditions on-site, which are not represented by these non-invasive investigations. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. Hallex Environmental Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

Declaration: Hallex Environmental Ltd., and its' Officers and Directors, declare no conflicting business or interests with the client or the subject property.

2.0 SCOPE OF INVESTIGATION

The objectives of the Phase One ESA were an investigation of the subject property and adjacent lands conducted in accordance with O. Reg. 153/04 as amended, and under the supervision of a Qualified Person in order to determine the likelihood that one or more contaminants may have affected any land and/or water on, in or under the property. Potentially Contaminating Activities (PCAs), and contaminants or materials of potential concern, if revealed on-site, or at properties located within a 250 m radius of the site, were evaluated as to whether they generated 'Areas of Potential Environmental Concern' (APEC). PCAs are itemized in Schedule D Table 2 of O. Reg 511/09. APECs if identified were individually evaluated whether they were triggers for additional investigation via a Phase Two ESA.

2.1 Procedures

The Phase One ESA scope of investigation includes review of historical background information via examination of:

- Fire Insurance Plans;
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A site reconnaissance was completed to observe site grounds, on-site structures (if applicable), and adjacent properties in order to identify PCAs and APECs. This information is utilized to formulate a preliminary Conceptual Site Model regarding potential contaminants, contaminant migration pathways, and human and/or ecological receptors at the site.

3.0 RECORDS REVIEW

3.1 General

3.1.1 Phase One Study Area Determination

Review of Fire Insurance Plans, EcoLog ERIS data-based information, aerial photographs, and other historic environmental documents, in addition to the site investigation, revealed that it was not necessary to expand the data search beyond a 250 m radius of the study site, the minimum area of study.

3.1.2 First Developed Use Determination

The first developed land use, as determined through historical documents research and aerial photographs dated to 1934, was Agriculture or Other Use as an undeveloped wood lot.

3.1.3 Fire Insurance Plans

Fire Insurance Plans (FIP) were researched via OPTA Historical Environmental Services Environscan on October 30th 2020, with no plans available for the study site or the study area.

3.1.4 Chain of Title

A chain of title was obtained from *Terranet Express* for the study site known as Property Identifier Number (PIN) 64263-0079 (LT). The chain of title covers the period from 1960 to 2019. Landownership was confirmed as belonging to Muraca, Mario Ferdinando and Muraca, Pietro dating from Sep 25th, 2019 to current. A copy of the Chain of Title is included in Appendix A.

3.1.5 Environmental Reports

No existing environmental reports were provided to Hallex Environmental Ltd. to review concerning the Study Site.

3.2 Environmental Source Information

The following agency databases and documents were reviewed where available and discussed further where necessary, for information regarding the study site and the surrounding area to determine the presence of any activity or material of potential environmental concern.

Source	Description of Data Analysis
National Pollutant Release Inventory (NPRI)	No pertinent information was gleaned from NPRI database regarding the subject site or adjacent properties. Several sites were listed in the Niagara Falls area; however, they were not within the Study Area (250 m).

Source	Description of Data Analysis
PCB Waste Storage Inventory	A review of the "Ontario Inventory of PCB Storage Sites" (MOE April 1995) indicated the study site was not a registered PCB storage site. Adjacent sites were also not listed in the PCB Inventory. Seventeen (17) PCB storage sites were listed in the Niagara Falls area, but outside of the study area. The nearest PCB inventory site located at 7447 Pin Oak Drive, approximately 280 m northeast of the study site.
Environmental Registry of Ontario	A search was conducted on the Environmental Registry database relating to policy, regulation, act, instrument, bulletin, and appeal. Special attention was taken for Environmental Compliance Approvals (ECAs), Permits to Take Water, and Certificates of Property Use (CPU). No records were found relating to the Study Site or adjacent sites.
Coal Gasification Plants	A review of the "Inventory of Coal Gasification Plant Waste Sites" (MOE, April 1989) did not identify any former coal gasification plants for the Study Site or within the Study Area. No plant was listed at the study site or within the study area.
Waste Disposal Site Inventory	Review of the MOE Waste Disposal Site Inventory, June 1991 did not indicate any historic waste disposal sites in the Study Area. The active and closed waste disposal sites were at north, west and east of the study site. The closest waste disposal site is 2.1 km southwest of the study site. However, these sites were outside the study area and were not expected to impact the Study Site.
Waste Management Records	No waste management records were available for the study site and within the study area (250 m).
Record of Site Condition (RSC)	Hallex searched the Brownfield Environmental Site Registry and no RSCs records were identified for the adjacent sites or within the study area.
Ministry of Natural Resources (MNR)	A wooded area is documented at the study site based on MNR database. No Areas of Natural Significance (ANSIs) were identified at the study site according to MNR on-line records. A map showing the MNR Natural Heritage Areas is provided in Appendix B.

3.2.1 EcoLog ERIS Database

The EcoLog ERIS report returned five (5) environmental records, none of the records were affiliated with the study site. All five (5) records were from within 0.25 km of the study site. Records of significance have been summarized below, with the full EcoLog ERIS report located in Appendix C.

Municipal Address	Company	EcoLog ERIS Record	Description	Distance (m) from Study Site	PCA and/or APEC to Study Site
7627 Kalar Road	Agri-Services Inc. & Abitibi Consolidated Inc.	CONV	Paper fiber biosolids deposited at 7627 Kalar Road since 2004	150 m W	Not considered an APEC

CONV = Compliance and Convictions

3.3 Physical Setting

3.3.1 Aerial Photographs

Aerial photographs from 1934, 1954/1955, 1960, 1965, 1968, 1995, 2000, 2006, 2010, 2015 and 2018 were examined and revealed that the study site was agriculture or other use from at least 1934 to present day. The Study Area was a mix of agriculture or other use and residential use. Aerial photographs are contained in Appendix D, with brief summaries provided below.

Date	Comments
1934	The study site appears vacant. No structures are observed at the adjacent properties. A Hydro corridor area is noted at south adjacent area.
1954-1955	The study site appears vacant. Two residential houses are observed at the north adjacent properties. A few residential houses and some wooded areas are observed within the study area.
1960	No discernible change was noted to the study site or study area from 1954/55 to 1960 aerial photograph.
1965	No discernible change was noted to the study site or study area from 1960 to 1965 aerial photograph.
1968	No discernible change was noted to the study site or study area from 1965 to 1968 aerial photograph.
1995	The study site appears vacant. One (1) residential building is noted along west boundary of the study site. A few of commercial or industrial structures are observed at north and north east of the study area. The hydro corridor area disappears at south adjacent area.
2000	No discernible change was noted to the study site from 1995 to 2000 aerial photograph. One Salvage Yard for Auto Wrecking, was identified at 7549 Kalar Road, northwest of the study site.
2006	No discernible change was noted to the study site or study area from 2000 to 2006 aerial photograph.
2010	No discernible change was noted to the study site or study area from 2006 to 2010 aerial photograph.
2015	No discernible change was noted to the study site from 2006 to 2010 aerial photograph. Residential dwellings are noted west area of the study area. The Auto Wrecking no longer appears in the aerial image.
2018	No discernible change was noted to the study site or study area from 2015 to 2018 aerial photograph.

3.3.2 Topography, Hydrology, Geology

Topography

The Ontario Base Map from Ministry of Natural Resources and Forestry was reviewed for the Phase One study area. The geodetic ground surface elevation of the site is approximately 178.83 meters above sea level (masl). The study site had a gentle slope south. The overall study area slope is approximately 0.2%.

Geology and Physiography

The Phase One property and the study area is generally characterized as Clay Plains in "*Physiography of Southern Ontario Map 2715"*. Review of the maps "*Quaternary Geology of*

Ontario – Southern Sheet" (Ontario Geological Survey Map 2556) and "*Bedrock Geology of Ontario (Ontario Geological Survey Map 2544)"* indicated that the subject site overburden was Glaciolacustrine deposits, which include silt and clay, minor sand, basin and quiet water deposits underlain by bedrock noted as part of the Lockport formation of sandstone, shale, dolostone and siltstone. The approximate depth to bedrock, as documented from surrounding well records is at 11.89 m bgs (meters below ground surface) and consisted of shale.

Hydrology:

The depth to the water table is not specifically known for the site. Surface water drainage would be into municipal sewers along Kalar Road. The overall groundwater flow for the area is inferred as south towards Welland River. The site is noted to be within the Central Welland River Watershed.

3.3.3 Fill Materials

Fill material was not identified on-site during the site reconnaissance or through historical research.

3.3.4 Water Bodies and Areas of Natural Significance

A wooded area is documented at the study site based on MNR database. No water bodies and/or areas of natural significance are located on or adjacent to the study site. Welland River is located approximately 1.1 km north of the study site.

3.3.5 Well Records

A review of the water well records from Ontario Oil, Gas & Salt Resources Library as well as the Ministry of the Environment, Conservation and Parks (MECP) well records revealed that there was no relevant data pertaining to the study site, however, four (4) records were available from within the study area (250 m radius). Each record can contain information pertaining to date of installation, well use, type of stratigraphy encountered and groundwater levels. The stratigraphy within the well record was described as follows:

Well ID: 6601384	
Location: Approximately 10 m NW from study site	
Depth (mbgs)	**Stratigraphy**
0-0.3	Loam
0.3-6.4	Clay
6.4-11.89	Clay
11.89-13.4	Shale

mbgs = metres below ground surface

Details of the well records are located in Appendix E.

3.4 Site Operating Records

There were no applicable site operating records available for review.

4.0 INTERVIEW

On October 30th, 2020, an interview questionnaire was sent to Mr. Sherard McQueen, a representative of M5V Developments Inc. The client indicated he was unable to provide any additional information pertaining to the study site.

5.0 SITE RECONNAISSANCE

5.1 General Requirements

The site investigation took place on November 2nd, 2020 at approximately 2:20 pm and was conducted by Hallex staff member Feng Li, *Environmental Engineer* and overseen by Kevin Christian, *Qualified Person*. The Phase One property is not considered an Enhanced Investigation Property (EIP). The weather condition during site reconnaissance was cloudy, approximately 4 °C. Not all areas of the Phase One property were accessible. A wooded area with bush and trees covered the majority of the study site.

5.2 Specific Observations at Phase One Property

The purpose of the site reconnaissance was to identify any PCAs and/or APECs that could present the potential for contaminant sources available for migration via air, surface drainage, soil, and/or groundwater flow to human and/or ecological receptors. A photo log highlights the site in addition to surrounding land uses and is provided in Appendix F. Findings are summarized below and discussed further where necessary. Site layout is illustrated in Figure 3, including annotation to the photographs taken during site reconnaissance.

- The study site is currently vacant, with the majority of the study site occupied by a wooded lot (Photo 1, 3, 4, 5).
- Below-ground structures and utilities were unknown at the time of site reconnaissance, including the type and locations of water, sewer, electrical, gas, etc.
- There were no potable groundwater sources located at the study site
- Some of the ground cover at study site consisted of grass (Photo 1, 3, 4, 5)
- No evidence of debris and inert waste being placed on site was observed during site reconnaissance
- The site occupies an area of approximately 45,608.07 m^2 of land.

Focus Items	Location / Description
Storage tanks (AST/UST)	None observed
Wells	None observed
Wastewater	None observed
Pits and lagoons	None observed
Stained materials	None observed
Stressed vegetation	None observed
Fill	None observed
Surface Water	None observed
Watercourses, ditches, standing water	None observed
Equipment	None observed
Debris	None observed
Chemical storage	None observed

5.3 Surrounding Properties in the Phase One ESA Study Area

The surrounding land uses were a mix of residential properties and agriculture or other use (as seen in Photos 6-8) located within the Study Area. Further descriptions of surrounding property use are presented below.

Description	Current Use	Past Use	Source used
Adjacent/ Surrounding Properties:	**North:** Residential **South:** Residential **East:** Agriculture or other **West:** Community (Kalar Road)	**North:** Residential **South:** Residential **East:** Agriculture or other **West:** Community (Kalar Road)	Historical document research, aerial photos and site investigation (November 2nd, 2020).

6.0 REVIEW AND EVALUATION OF INFORMATION

6.1 Current and Past Uses – Subject Site

The historic documents research and the site reconnaissance revealed the study site as undeveloped Agriculture or Other Use dating from the 1934 to present day.

6.2 Potentially Contaminating Activities

Analyses of the historical research, and information gathered during site reconnaissance, was used to determine if there were any PCAs, current or historic, found on-site and/or within the Study Area that may have resulted in creating an on-site APEC. PCA's within the study area are depicted in Figure 4a.

6.2.1 Historical On-site PCAs

No historical PCAs were noted on the study site.

6.2.2 Recent On-site PCAs

No recent PCA's were identified at the study site.

6.2.3 Adjacent Sites PCAs

One (1) PCA was identified at south adjacent site to the study site.

- ***PCA-1/APEC-1: Pesticides (including Herbicides, Fungicides and Anti-fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications (#40 as per Regulation)*** - Located along the south adjacent property is a Hydro corridor whereupon the application of herbicides for weed control purposes were identified as a PCA resulting in an on-site APEC to the study site's southern property boundary with respect to target contaminants: Metals (Arsenic) and Herbicides.

6.2.4 Study Area PCAs

Two (2) off-site PCAs were noted within 250 m of the study site, however it is unlikely that any contaminants migrating offsite from the two (2) PCAs would present an onsite APEC at the study site due to distance to the study site and interpreted groundwater flow direction. Further details regarding these properties are provided below.

Business Type	PCA (Schedule D)	Address	Reason for counting/discounting
Auto Wrecking	**PCA-2:** #49 Salvage Yard, including automobile wrecking	7549 Kalar Road	• Not an APEC • 210 m northwest of the study site • Inferred south groundwater flow direction • Stratigraphy is mainly clay
Biosolids Deposit	**PCA-3:** #45 Pulp, Paper and Paperboard Manufacturing and Processing	7627 Kalar Road	• Not an APEC • 160 m west of study site • Inferred south groundwater flow direction • Cross-gradient from the study site

Other land uses within the study area did not exhibit visible items of concern that would constitute PCAs relevant to the subject site regarding potential for impact to soil and/or groundwater.

6.3 Areas of Potential Environmental Concern

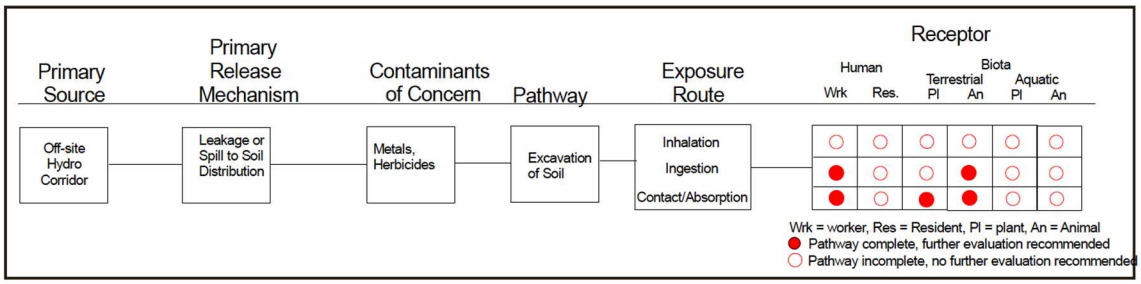
One (1) previously described PCA was determined to create an on-site APEC with the potential to impact the Phase One study site's soil. The on-site APEC is illustrated in Figure 4b, with further details provided below in table format.

Areas of Potential Environmental Concern[1]	Location of Area of Potential Environmental Concern on Phase One Property	Potentially Contaminating Activity[2]	Location of PCA (on-site or off-site)	Contaminants of Potential Concern[3]	Media Potentially Impacted (Ground water, soil and/or sediment)
APEC-1	South portion of the study site	#40 Pesticides (including Herbicides, Fungicides and Anti-fouling Agents) Manufacturing, Processing, Bulk Storage and Large-Scale Applications	On-site	OCPs and Metals	Soil

The Phase One research is considered valid with no absence of information and was completed in full and considered accurate in determining the APECs located on-site.

6.4 Phase One Conceptual Site Model

The conceptual site model (CSM) is to qualitatively consider the potential interaction of primary sources of environmental concern, with suspected contaminants of concern, and the pathway(s) and exposure route(s) to the receptors. Target contaminants of OCPs and Metals were identified with potential migration pathways to human and/or biota receptors.



7.0 CONCLUSIONS & RECOMMENDATIONS

Hallex Environmental Ltd. was retained by M5V Developments Inc. to conduct a Phase One Environmental Site Assessment (ESA) of the property located at Lot 186 Kalar Road, Niagara Falls, ON. The objectives of the Phase One ESA were an investigation of the subject property and adjacent lands conducted in accordance with O. Reg. 153/04 as amended, and under the supervision of a Qualified Person in order to determine the likelihood that one or more contaminants may have affected any land and/or water on, in or under the property.

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PHASE ONE ESA FINDINGS

The Phase One ESA findings revealed the following:

- No on-site Potential Contaminating Activities were identified at the study site.
- One (1) off-site Potential Contaminating Activity resulted in one (1) onsite Area of Potential Environmental Concern with the potential to have impacted to the study site's soil.
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RECOMMENDATIONS

Based on the above noted findings Hallex therefore recommends:

1) **A limited Phase Two Environmental Site Assessment to determine the presence/absence of potential contaminants of concern in the soil resulting from the historic adjacent Hydro Corridor.**

8.0 AUTHOR

Hallex Environmental Ltd. has conducted this Phase One Environmental Site Assessment as permitted by Hallex Certificate of Authorization (#90252). The following employees authored the report:

Feng Li - Mr. Feng Li, P. Eng., was the Environmental Engineer for the project with over nine years of experience in the environmental consulting field. Some projects Mr. Li have worked on included: Phase One & Two Environmental Site Assessments, Human Health Risk Assessment, Remedial Investigation/Feasibility Study, Site Remediation and Records of Site Condition Filing.

Jodie Glasier - Mrs. Jodie Glasier, B.A.(Hons), PD-EMA, M.MM, EP, is a Project Manager with over twelve + years of diverse environmental project experience including work on Phase One & Two Environmental Site Assessments, Records of Site Condition Filing, Environmental Compliance Approvals, Designated Substances and Hazardous Materials Surveys, Site Investigations, Remediation Studies, and Environmental Planning.

Kevin Christian - Mr. Kevin Christian, M.Sc., P.Geo., a Professional Geoscientist (#0387) registered with the Association of Professional Geoscientists of Ontario, and a Qualified Person (Environmental Site Assessment & Risk Assessment) as per Ontario Regulations 153/04 and 511/09, has thirty-two years of experience in the environmental geoscience consulting industry.

9.0 REFERENCES

The following reports, documents and databases were reviewed for the completion of this Phase One ESA.

- EcoLog ERIS
- Brock University Map Library
- Brock University Special Collections Library
- National Pollutant Release Inventory (NPRI) database www.ec.gc.ca.
- Ontario Inventory of PCB Storage Site October 1991, Ministry of the Environment, January 1992.
- Inventory of Coal Gasification Plant Waste Sites in Ontario, Volume II; MOE, 1987
- Ontario Oil, Gas, and Salt Resources Library, www.ogsrlibrary.com.
- Waste Disposal Site Inventory, Ministry of the Environment, 1991.
- Niagara Peninsula Conservation Authority (NPCA) Watershed Explorer; https://npca.ca/conservation#conservation-watershed
- Search Record of Site Condition, Ontario Ministry of Environment, Conservations and Parks; https://www.lrcsde.lrc.gov.on.ca/BFISWebPublic/pub/searchFiledRsc_search?request_locale=en
- Environmental Registry: Search Certificate of Property Use; https://www.ebr.gov.on.ca/ERS-WEB-External/searchNotice.do
- Ministry of Natural Resources (ANSIs) mapping; https://www.gisapplication.lrc.gov.on.ca/matm/Index.html?viewer=Make_A_Topographic_Map.MATM&locale=en-US
- Search Access Environment for Environmental Compliance Approvals; http://www.accessenvironment.ene.gov.on.ca/AEWeb/ae/GoSearch.action?search=basic&lang=en

FIGURES

0 m — 500 m — 1,000 m

HALLEX ENVIRONMENTAL LTD.

Legend

Study Site

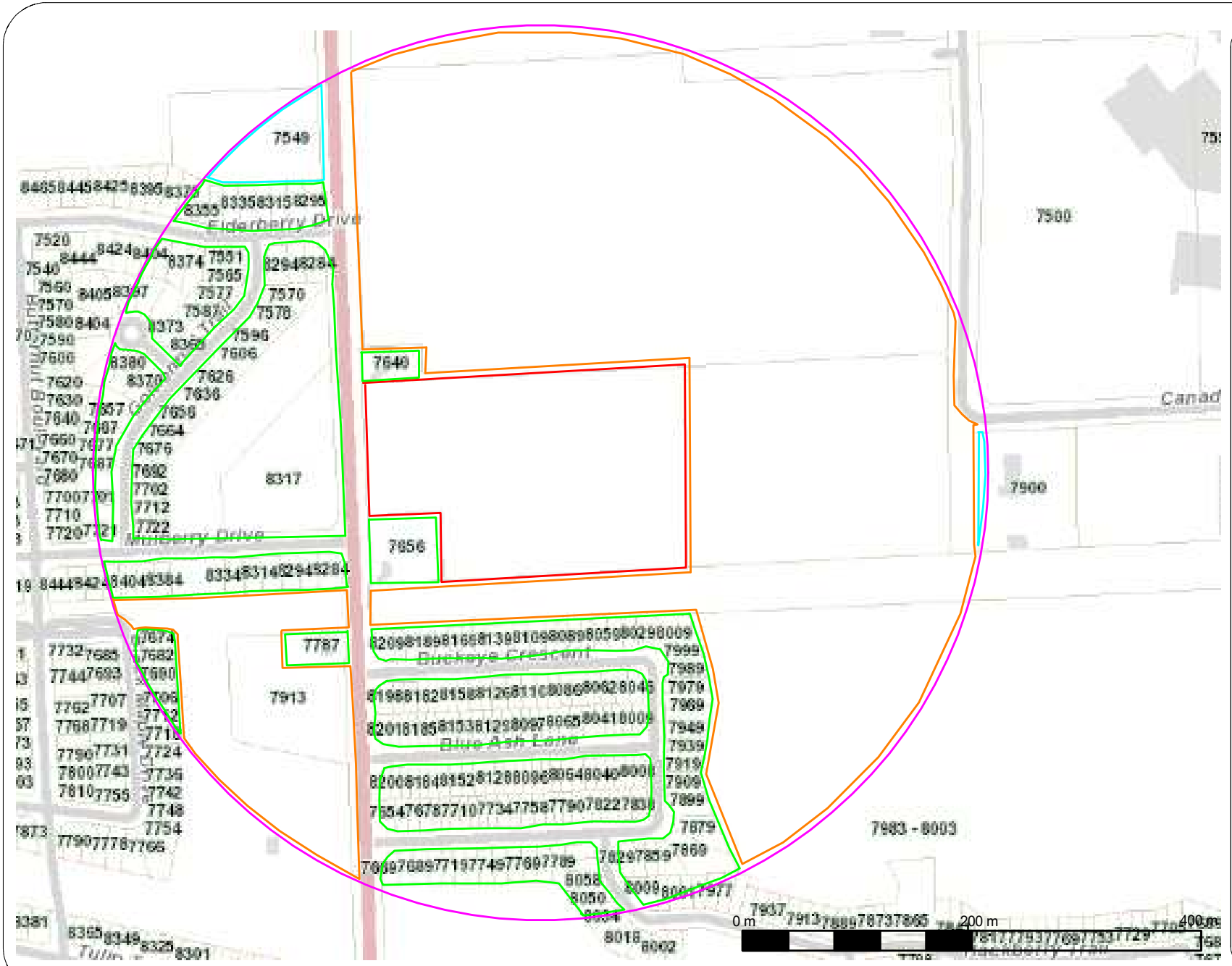
Client
M5V Developments Inc.

Project
Phase One ESA
Lot 186 Kalar Road,
Niagara Falls, ON

Figure Name
Site Location

Project E-20-71-1
Date November 2020
Drafted: N. Metz
Reviewed:JG

Figure 1



Legend

- Phase One Property
- Residential Use
- Commercial Use
- Agricultural Use

HALLEX ENVIRONMENTAL LTD.

Client
M5V Developments Inc.

Project
Phase One ESA
Lot 186 Kalar Road,
Niagara Falls, ON

Figure Name
Site Layout and Adjacent Land Use

Project E-20-71-1
Date November 2020
Drafted: D. Nyland
Reviewed: JG

Figure 2

0 m 10 m 20 m 30 m 40 m 50 m 100 m

HALLEX ENVIRONMENTAL LTD.

Legend

- Phase One Property
- # Photo Log Reference

Arrow point indicates direction of photo taken

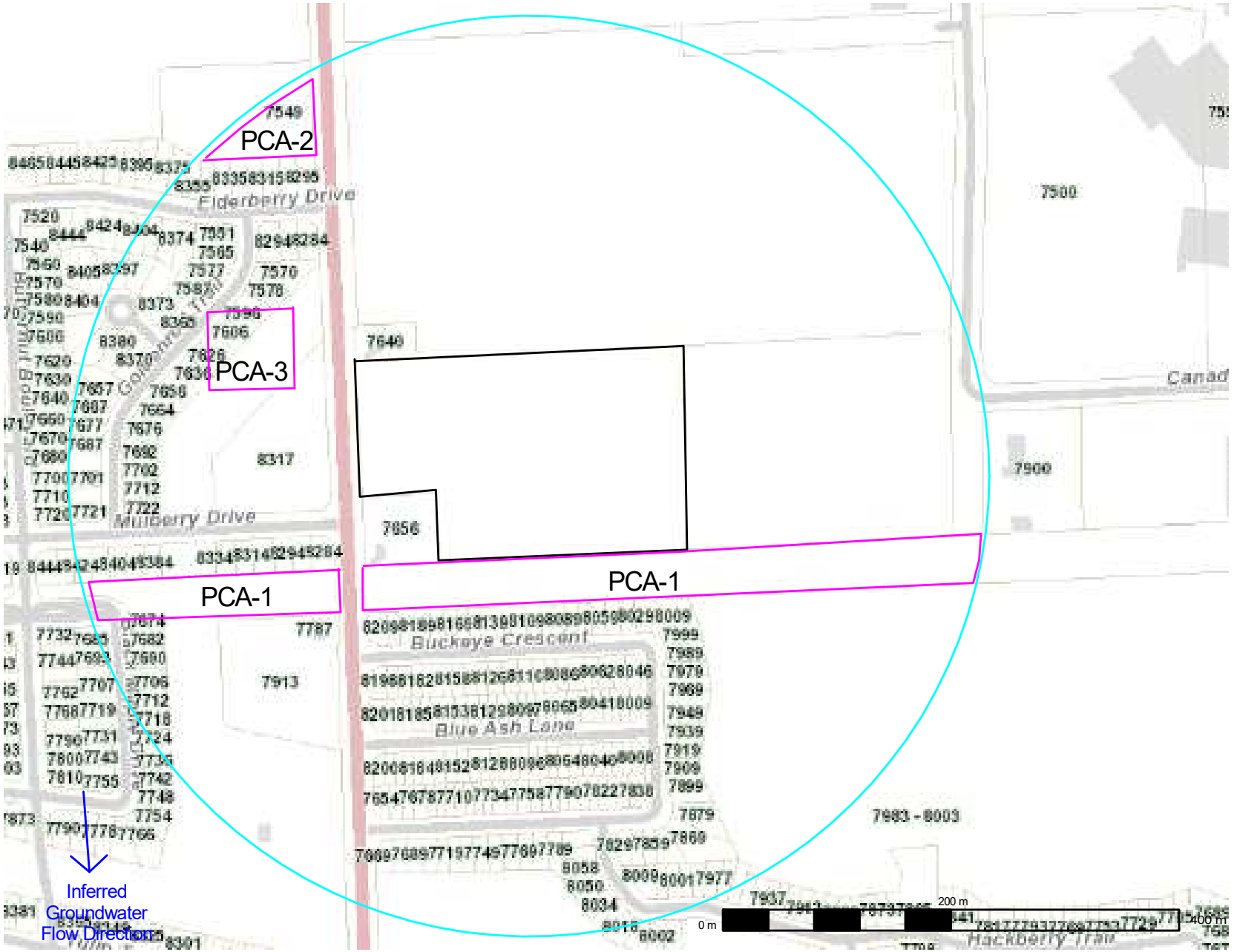
Client
M5V Development Inc.

Project
Phase One ESA
Lot 186 Kalar Road,
Niagara Falls, ON

Figure Name
Site Layout

Project	E-20-71-1
Date	November 2020
Drafted: D. Nyland Reviewed:KC	

Figure 3



HALLEX ENVIRONMENTAL LTD.

Legend

- Study Area
- Phase One Property
- PCA-#

PCA-1: Hydro Corridor
PCA-2: Salvage Yard
PCA-3: Paperboard Manufacturing and Processing

Client
M5V Development Inc.

Project
Phase One ESA
Lot 186 Kalar Road,
Niagara Falls, ON

Figure Name
Potentially Contaminating Activities

Project	E-20-71-1
Date	November 2020
Drafted: D. Nyland	
Reviewed: KC	

Figure 4a

Inferred Groundwater Flow Direction

Legend

- Phase One Property
- PCA-#

PCA-1: Pesticides

- APEC-#

APEC-1: Pesticides

Client

M5V Developments Inc.

Project

Phase One ESA
Lot 186 Kalar Road,
Niagara Falls, ON

Figure Name

Areas of Potential Environmnetal Concern

Project	E-20-71-1
Date	November 2020
Drafted: D. Nyland Reviewed: KC	

Figure 4b

Appendix A:

Chain of Title

Ontario ServiceOntario

PARCEL REGISTER (ABBREVIATED) FOR PROPERTY IDENTIFIER

LAND REGISTRY OFFICE #59

64263-0079 (LT)

PREPARED FOR JessicaT
ON 2020/11/04 AT 13:50:24

* CERTIFIED IN ACCORDANCE WITH THE LAND TITLES ACT * SUBJECT TO RESERVATIONS IN CROWN GRANT *

PROPERTY DESCRIPTION: PART TOWNSHIP LOT 186 STAMFORD, PARTS 1, 2 AND 3 59R11893, S/T RO302682 ; NIAGARA FALLS

PROPERTY REMARKS: PLANNING ACT CONSENT IN DOCUMENT SN603307.

ESTATE/QUALIFIER:
FEE SIMPLE
LT CONVERSION QUALIFIED

RECENTLY:
FIRST CONVERSION FROM BOOK

PIN CREATION DATE:
1999/05/17

OWNERS' NAMES / CAPACITY / SHARE
MURACA, PIETRO — PART
MURACA, MARIO FERDINANDO — PART

REG. NUM.	DATE	INSTRUMENT TYPE	AMOUNT	PARTIES FROM	PARTIES TO	CERT/ CHKD
EFFECTIVE 2000/07/29 THE NOTATION OF THE "BLOCK IMPLEMENTATION DATE" OF 1999/05/17 ON THIS PIN						
WAS REPLACED WITH THE "PIN CREATION DATE" OF 1999/05/17						
*** PRINTOUT INCLUDES ALL DOCUMENT TYPES AND DELETED INSTRUMENTS SINCE 1999/05/14 ***						
***SUBJECT, ON FIRST REGISTRATION UNDER THE LAND TITLES ACT, TO:*						
*** SUBSECTION 44(1) OF THE LAND TITLES ACT, EXCEPT PARAGRAPH 11, PARAGRAPH 14, PROVINCIAL SUCCESSION DUTIES **						
*** AND ESCHEATS OR FORFEITURE TO THE CROWN.*						
*** THE RIGHTS OF ANY PERSON WHO WOULD, BUT FOR THE LAND TITLES ACT, BE ENTITLED TO THE LAND OR ANY PART OF*						
*** IT THROUGH LENGTH OF ADVERSE POSSESSION, PRESCRIPTION, MISDESCRIPTION OR BOUNDARIES SETTLED BY*						
*** CONVENTION.*						
*** ANY LEASE TO WHICH THE SUBSECTION 70(2) OF THE REGISTRY ACT APPLIES.*						
***DATE OF CONVERSION TO LAND TITLES: 1999/05/17 ***						
NOTE: THIS PROPERTY WAS RETIRED ON 2019/10/25. THIS PROPERTY IS NOW DIVIDED INTO THE FOLLOWING PROPERTIES: 64263-1573 TO 64263-1574						
AA37285	1960/04/04	NOTICE		**** DELETED AGAINST THIS PROPERTY ****		
		REMARKS: CONDITIONAL SALE				
AA62067	1961/10/23	BYLAW				C
BB87500	1968/08/15	CHARGE		**** COMPLETELY DELETED ****	VICTORIA AND GREY TRUST COMPANY	
59R648	1973/11/14	PLAN REFERENCE				C
59R2216	1977/10/19	PLAN REFERENCE				C

NOTE: ADJOINING PROPERTIES SHOULD BE INVESTIGATED TO ASCERTAIN DESCRIPTIVE INCONSISTENCIES, IF ANY, WITH DESCRIPTION REPRESENTED FOR THIS PROPERTY.
NOTE: ENSURE THAT YOUR PRINTOUT STATES THE TOTAL NUMBER OF PAGES AND THAT YOU HAVE PICKED THEM ALL UP.

REG. NUM.	DATE	INSTRUMENT TYPE	AMOUNT	PARTIES FROM	PARTIES TO	CERT/ CHKD
RO300113	1977/12/28	TRANSFER	$1		MURACA, PIETRO MURACA, MARIO FERDINANDO	C
	CORRECTIONS: 'TRANSFEREE' CHANGED FROM 'MURACA, MARIO (FERDINANDO)' TO 'MURACA, MARIO FERDINANDO' ON 2003/05/09 BY DEBBIE SARKANY.					
59R11893	2002/11/07	PLAN REFERENCE				C
SN599516	2019/08/23	DISCH OF CHARGE		*** COMPLETELY DELETED *** NATIONAL TRUST COMPANY		
	REMARKS: BB87500.					
SN603275	2019/09/25	APL DEL EXECUTION		*** COMPLETELY DELETED *** MURACA, PIETRO MURACA, MARIO FERDINANDO		
	REMARKS: DELETE S/T 98-01236					
SN603276	2019/09/25	APL (GENERAL)		*** COMPLETELY DELETED *** MURACA, PIETRO MURACA, MARIO FERDINANDO		
	REMARKS: AA37285					
SN603277	2019/09/25	APL (GENERAL)		MURACA, PIETRO MURACA, MARIO FERDINANDO		C
	REMARKS: AMEND PROPERTY DESCRIPTION					
SN603307	2019/09/25	TRANSFER	$1	MURACA, PIETRO MURACA, MARIO FERDINANDO	MURACA, PIETRO	C
	REMARKS: PLANNING ACT STATEMENTS.					
SN603308	2019/09/25	TRANSFER	$1	MURACA, PIETRO MURACA, MARIO FERDINANDO	MURACA, MARIO FERDINANDO	C
	REMARKS: PLANNING ACT STATEMENTS.					

Appendix B:

Ministry of Natural Resources Natural Heritage Map

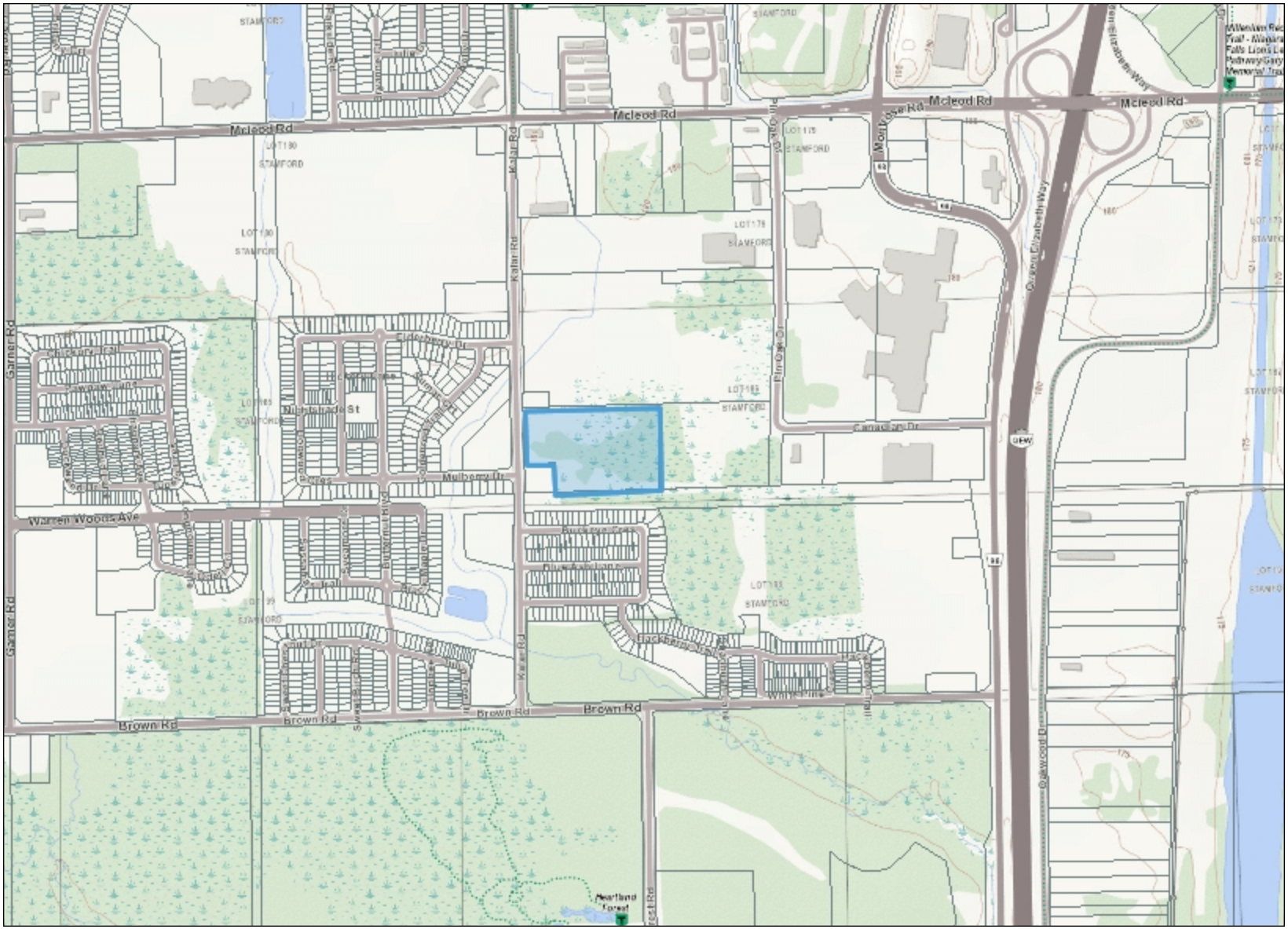
Ontario

MINISTRY OF NATURAL RESOURCES AND FORESTRY

Make a Topographic Map

Ministry of Natural Resources Natural Heritage Map

Notes:
Lot 186 Kalar Road, Niagara Falls, ON



Legend

- Building as Symbol
- Building to Scale
- Airport
- Heliport \ Hospital Heliport
- Seaplane Base
- Ferry Route
- Trail Head \ Trail
- Railway \ Train Station
- Railway with Bridge
- Railway with Tunnel
- Road (Major → Minor)
- Winter Road
- Road with Bridge
- Road with Tunnel
- Primary, Kings or 400 Series Highway
- Secondary Highway
- Tertiary Highway
- District, County, Regional or Municipal Road
- Toll Highway
- One Way Road
- Road with Permanent Blocked Passage
- Road with Address Ranges
- Hydro Line, Communication Line or Unknown Transmission Line
- Natural Gas Pipeline, Water Pipeline or Unknown Pipeline
- Spot Height
- Index Contour
- Contour
- Wooded Area
- Wetland
- Waterbody
- Waterbody Elevation
- Watercourse
- Falls
- Rapids
- Rapids \ Falls
- Rapids
- Rocks
- Lock Gate
- Dam \ Hydro Wall
- Dam \ Hydro Wall
- Provincial \ State Boundary
- International Boundary
- Upper Tier \ District Municipal Boundary
- Lower Tier \ Single Tier Municipal Boundary
- Lot Line
- Indian Reserve
- Provincial Park
- National Park
- Conservation Reserve
- Military Lands

0 0.6 km

Projection: Web Mercator

N

The Ontario Ministry of Natural Resources and Forestry shall not be liable in any way for the use of, or reliance upon, this map or any information on this map. This map should not be used for: navigation, a plan of survey, routes, nor locations.

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Appendix C:

EcoLog ERIS

ENVIRONMENTAL RISK INFORMATION SERVICES

DATABASE REPORT

Project Property:	*Phase One ESA - Lot 186 Kalar Road, Niagara Falls, ON* *7586 Kalar Rd* *Niagara Falls ON L2H 2Y6*
Project No:	*E-20-71-1*
Report Type:	*Standard Report*
Order No:	*20303000024*
Requested by:	*Hallex Environmental Ltd.*
Date Completed:	*November 4, 2020*

Environmental Risk Information Services
A division of Glacier Media Inc.
1.866.517.5204 | info@erisinfo.com | erisinfo.com

Table of Contents

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Executive Summary

Property Information:

Project Property:	*Phase One ESA - Lot 186 Kalar Road, Niagara Falls, ON* *7586 Kalar Rd Niagara Falls ON L2H 2Y6*
Project No:	*E-20-71-1*

Coordinates:

Latitude:	*43.0639639*
Longitude:	*-79.1344039*
UTM Northing:	*4,769,606.89*
UTM Easting:	*651,905.69*
UTM Zone:	*17T*

Elevation: *587 FT*
178.83 M

Order Information:

Order No:	*20303000024*
Date Requested:	*October 30, 2020*
Requested by:	*Hallex Environmental Ltd.*
Report Type:	*Standard Report*

Historical/Products:

Insurance Products	*Fire Insurance Maps/Inspection Reports/Site Plans*

Executive Summary: Report Summary

Database	Name	Searched	Project Property	Within 0.25 km	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
AST	Aboveground Storage Tanks	Y	0	0	0
AUWR	Automobile Wrecking & Supplies	Y	0	0	0
BORE	Borehole	Y	0	0	0
CA	Certificates of Approval	Y	0	0	0
CDRY	Dry Cleaning Facilities	Y	0	0	0
CFOT	Commercial Fuel Oil Tanks	Y	0	0	0
CHEM	Chemical Manufacturers and Distributors	Y	0	0	0
CHM	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	1	1
CPU	Certificates of Property Use	Y	0	0	0
DRL	Drill Hole Database	Y	0	0	0
DTNK	Delisted Fuel Tanks	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	0	2	2
EIIS	Environmental Issues Inventory System	Y	0	0	0
EMHE	Emergency Management Historical Event	Y	0	0	0
EPAR	Environmental Penalty Annual Report	Y	0	0	0
EXP	List of Expired Fuels Safety 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
FRST	Federal Identification Registry for Storage Tank Systems (FIRSTS)	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	0	0
GHG	Greenhouse Gas Emissions from Large Facilities	Y	0	0	0
HINC	TSSA Historic Incidents	Y	0	0	0

Database	Name	Searched	Project Property	Within 0.25 km	Total
IAFT	Indian & Northern Affairs Fuel Tanks	Y	0	0	0
INC	Fuel Oil Spills and Leaks	Y	0	0	0
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
NCPL	Non-Compliance Reports	Y	0	0	0
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
NEBP	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
OGWE	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	0	0
PINC	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	0	0
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	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	3	3
	Total:		0	6	6

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev diff (m)	Page Number

No records found in the selected databases for the project property.

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
1	CONV	Empire Agri-Services Inc.	7627 Kalar Road Niagara Falls ON L2E 6S5	W/89.2	0.00	13
2	WWIS		lot 186 ON ***Well ID:*** 6601384	NW/119.0	1.00	13
3	WWIS		lot 186 ON ***Well ID:*** 6601385	SSW/143.8	-1.00	16
4	WWIS		lot 185 ON ***Well ID:*** 6601383	SW/150.4	0.00	19
5	EHS		n/a Niagara Falls ON	SW/241.9	-1.00	21
5	EHS		n/a Niagara Falls ON	SW/241.9	-1.00	22

Executive Summary: Summary By Data Source

CONV - Compliance and Convictions

A search of the CONV database, dated 1989-Dec 2019 has found that there are 1 CONV site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
Empire Agri-Services Inc.	7627 Kalar Road Niagara Falls ON L2E 6S5	W	89.22	1

EHS - ERIS Historical Searches

A search of the EHS database, dated 1999-Jul 31, 2020 has found that there are 2 EHS site(s) within approximately 0.25 kilometers of the project property.

Lower Elevation	Address	Direction	Distance (m)	Map Key
	n/a Niagara Falls ON	SW	241.93	5
	n/a Niagara Falls ON	SW	241.93	5

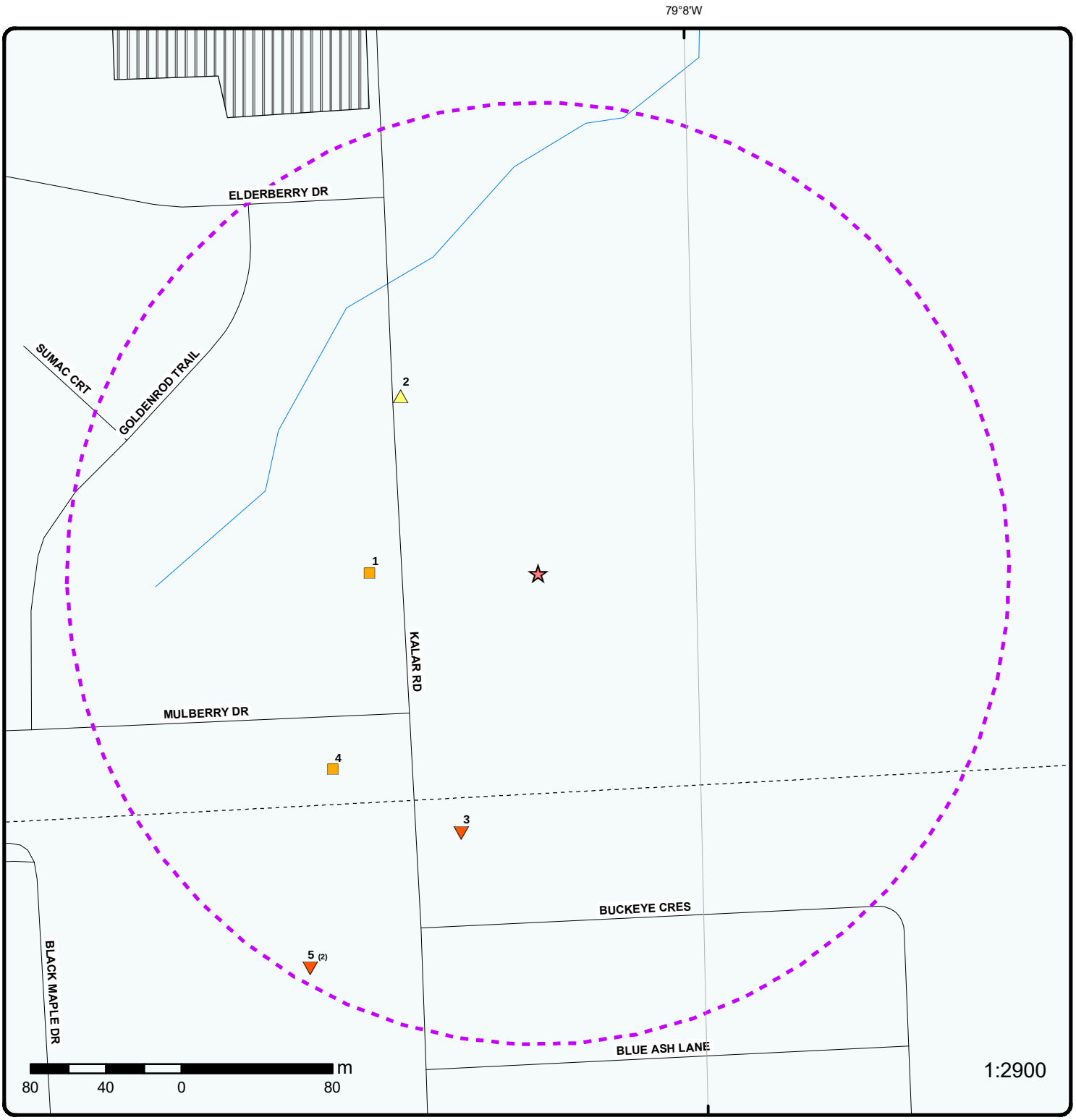
WWIS - Water Well Information System

A search of the WWIS database, dated Apr 30, 2020 has found that there are 3 WWIS site(s) within approximately 0.25 kilometers of the project property.

Equal/Higher Elevation	Address	Direction	Distance (m)	Map Key
	lot 186 ON ***Well ID:*** 6601384	NW	118.98	2
	lot 185 ON ***Well ID:*** 6601383	SW	150.43	4

Lower Elevation	Address	Direction	Distance (m)	Map Key
	lot 186 ON	SSW	143.80	3

Well ID: 6601385



Map : 0.25 Kilometer Radius

Order Number: 20303000024

Address: 7586 Kalar Rd, Niagara Falls, ON

ERIS
ENVIRONMENTAL RISK INFORMATION SERVICES

- Project Property
- Buffer Outline
- Eris Sites with Higher Elevation
- Eris Sites with Same Elevation
- Eris Sites with Lower Elevation
- Eris Sites with Unknown Elevation
- Expressway
- Principal Highway
- Secondary Highway
- Major Road
- Local road
- Trail
- Proposed Road
- Ferry Route/Ice Road
- Industrial and Resource - Regions
- Main Line
- Sidetrack
- Transit Line
- Abandoned Line
- National Park
- Provincial or Territorial Park
- Other Park
- Golf Course or Driving Range
- Park or Sports Field
- Other Recreation Area

Source: © 2015 DMTI Spatial Inc.

© ERIS Information Limited Partnership

79°7'30"W

Aerial

Year: 2018

Address: 7586 Kalar Rd, Niagara Falls, ON

Source: ESRI World Imagery

Order Number: 20303000024

ENVIRONMENTAL RISK INFORMATION SERVICES

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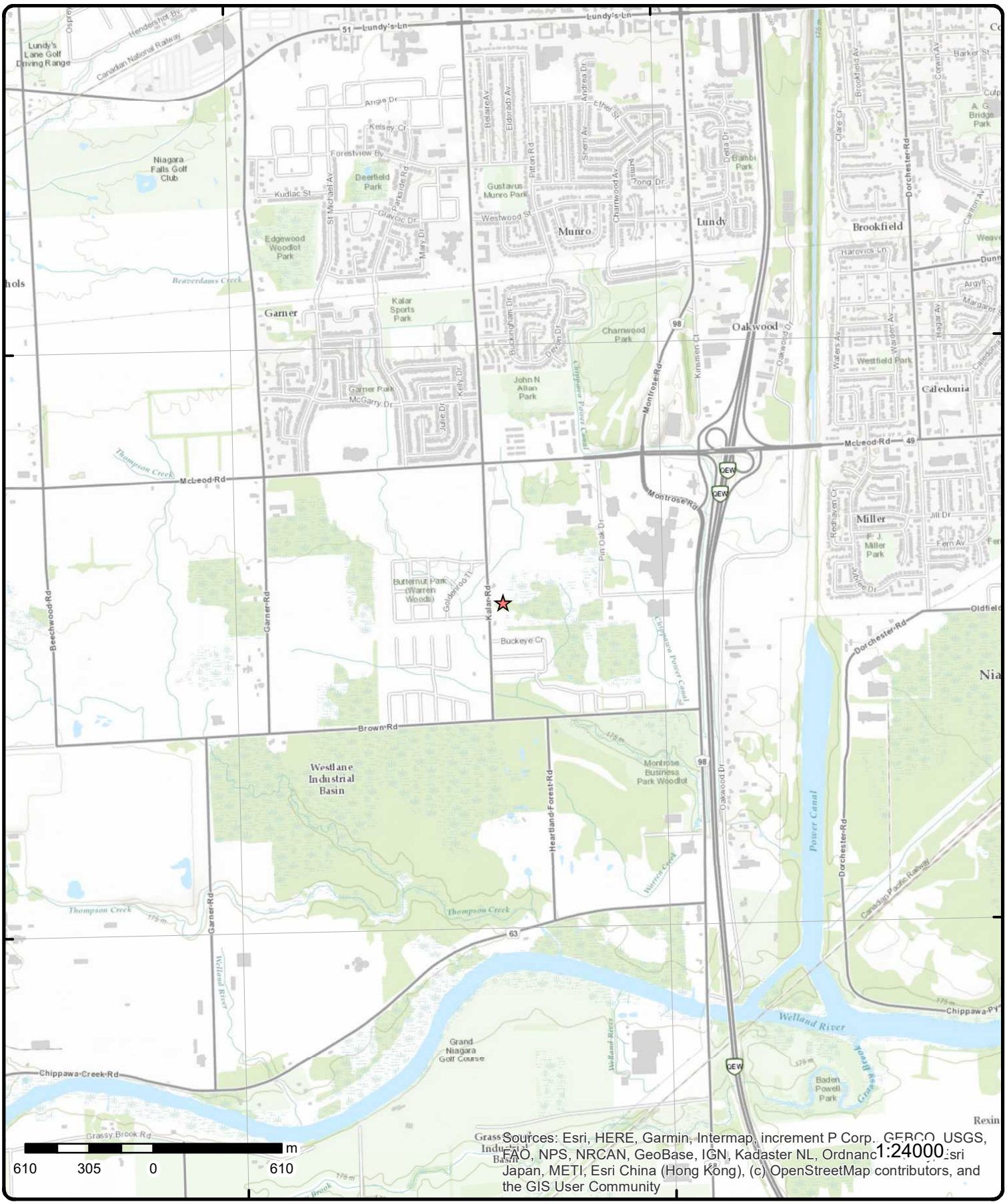

Topographic Map

Address: 7586 Kalar Rd, ON

Source: ESRI World Topographic Map

Order Number: 20303000024

ENVIRONMENTAL RISK INFORMATION SERVICES

© ERIS Information Limited Partnership

Detail Report

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
1	1 of 1	W/89.2	178.8 / 0.00	Empire Agri-Services Inc. 7627 Kalar Road Niagara Falls ON L2E 6S5	CONV

File No: 032401
Crown Brief No:
Court Location:
Publication City:
Publication Title:
Act:
Act(s):
First Matter:
Second Matter:
Investigation 1:
Investigation 2:
Penalty Imposed:
Location:
Region:
Ministry District:

Description: Empire Agri-Services Inc. has been fined $14,000, plus a victim fine surcharge, after pleading guilty to charges under the Environmental Protection Act (EPA). Empire Agri-Services Inc. is located in Canfield, Ontario and is under contract with Abitibi Consolidated Inc.'s Thorold plant to transport and dispose of paper fibre biosolids generated during the recycling of newsprint at the plant. Beginning in April 2004, Empire Agri-Services Inc. deposited paper fibre biosolids from the plant at 7627 Kalar Road in Niagara Falls. In June 2004, the Ministry of the Environment received complaints from residents near the Kalar Road site that odours were preventing them from fully using their properties. The ministry followed up and determined that the paper fibre biosolids deposited at the site were a source of the odours. During an inspection on June 30, 2004, ministry officers noted that paper fibre biosolids had been spread onto fields at the site within two meters of a small creek. Following an investigation by the ministry's Investigations and Enforcement Branch, Empire Agri-Services was charged with permitting the discharge of a contaminant, an odour, that caused an adverse effect contrary to Section 14(1) of the Environmental Protection Act. The company pled guilty and was fined $11,000. The company also pled guilty to spreading paper fibre biosolids within 20 meters of surface water contrary to section 45 of Ontario Regulation 267/03 under the Nutrient Management Act (NMA), 2002 and was fined $3,000. The Court also ordered the company to notify the ministry of when and where it delivers paper fibre biosolids, to ensure that storage on any site is in accordance with the NMA, 2002, and to ensure that it strictly adheres to the method for land application of paper fibre biosolids outlined in the Court Order. In addition, the Court ordered the company to comply with applicable environmental laws and obtain all required approvals.

Background:
URL:

Additional Details

Publication Date:
Count: 2
Act: EPA, NMA
Regulation: 267/03
Section: 14(1), 45
Act/Regulation/Section: EPA, NMA-267/03-14(1), 45
Date of Offence:
Date of Conviction:
Date Charged: 3/23/2006
Charge Disposition: Fine, victim fine surcharge
Fine: $14,000
Synopsis:

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
2	1 of 1	NW/119.0	179.8 / 1.00	lot 186 ON	WWIS

Well ID:	6601384	**Data Entry Status:**	
Construction Date:		**Data Src:**	1
Primary Water Use:	Domestic	**Date Received:**	5/6/1958
Sec. Water Use:	0	**Selected Flag:**	Yes
Final Well Status:	Water Supply	**Abandonment Rec:**	
Water Type:		**Contractor:**	5425
Casing Material:		**Form Version:**	1
Audit No:		**Owner:**	
Tag:		**Street Name:**	
Construction Method:		**County:**	66
Elevation (m):		**Municipality:**	NIAGARA FALLS CITY
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	186
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:			

PDF URL (Map): https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/660\6601384.pdf

Bore Hole Information

Bore Hole ID:	10461118	**Elevation:**	179.161437
DP2BR:	39	**Elevrc:**	
Spatial Status:		**Zone:**	17
Code OB:	r	**East83:**	651832.9
Code OB Desc:	Bedrock	**North83:**	4769701
Open Hole:		**Org CS:**	
Cluster Kind:		**UTMRC:**	9
Date Completed:	4/28/1958	**UTMRC Desc:**	unknown UTM
Remarks:		**Location Method:**	p9
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	932591536
Layer:	1
Color:	
General Color:	
Mat1:	02
Most Common Material:	TOPSOIL
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	0
Formation End Depth:	1
Formation End Depth UOM:	ft

Overburden and Bedrock Materials Interval

Formation ID:	932591537
Layer:	2

Color: 6
General Color: BROWN
Mat1: 05
Most Common Material: CLAY
Mat2:
Mat2 Desc:
Mat3:
Mat3 Desc:
Formation Top Depth: 1
Formation End Depth: 21
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 932591539
Layer: 4
Color:
General Color:
Mat1: 17
Most Common Material: SHALE
Mat2:
Mat2 Desc:
Mat3:
Mat3 Desc:
Formation Top Depth: 39
Formation End Depth: 44
Formation End Depth UOM: ft

Overburden and Bedrock Materials Interval

Formation ID: 932591538
Layer: 3
Color: 3
General Color: BLUE
Mat1: 05
Most Common Material: CLAY
Mat2:
Mat2 Desc:
Mat3:
Mat3 Desc:
Formation Top Depth: 21
Formation End Depth: 39
Formation End Depth UOM: ft

Method of Construction & Well Use

Method Construction ID: 966601384
Method Construction Code: 1
Method Construction: Cable Tool
Other Method Construction:

Pipe Information

Pipe ID: 11009688
Casing No: 1
Comment:
Alt Name:

Construction Record - Casing

Casing ID:	930749055
Layer:	1
Material:	1
Open Hole or Material:	STEEL
Depth From:	
Depth To:	44
Casing Diameter:	6
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Results of Well Yield Testing

Pump Test ID:	996601384
Pump Set At:	
Static Level:	25
Final Level After Pumping:	35
Recommended Pump Depth:	
Pumping Rate:	4
Flowing Rate:	
Recommended Pump Rate:	
Levels UOM:	ft
Rate UOM:	GPM
Water State After Test Code:	2
Water State After Test:	CLOUDY
Pumping Test Method:	1
Pumping Duration HR:	0
Pumping Duration MIN:	30
Flowing:	No

Water Details

Water ID:	933948663
Layer:	1
Kind Code:	1
Kind:	FRESH
Water Found Depth:	43
Water Found Depth UOM:	ft

---

3 | ***1 of 1*** | ***SSW/143.8*** | ***177.8 / -1.00*** | ***lot 186 ON*** | ***WWIS***

Well ID:	6601385	***Data Entry Status:***	
Construction Date:		***Data Src:***	1
Primary Water Use:	Livestock	***Date Received:***	8/8/1962
Sec. Water Use:	Domestic	***Selected Flag:***	Yes
Final Well Status:	Water Supply	***Abandonment Rec:***	
Water Type:		***Contractor:***	3409
Casing Material:		***Form Version:***	1
Audit No:		***Owner:***	
Tag:		***Street Name:***	
Construction Method:		***County:***	66
Elevation (m):		***Municipality:***	NIAGARA FALLS CITY
Elevation Reliability:		***Site Info:***	
Depth to Bedrock:		***Lot:***	186
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:			

PDF URL (Map): https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/660\6601385.pdf

Bore Hole Information

Bore Hole ID:	10461119	***Elevation:***	177.471939
DP2BR:	52	***Elevrc:***	
Spatial Status:		***Zone:***	17
Code OB:	r	***East83:***	651864.9
Code OB Desc:	Bedrock	***North83:***	4769469
Open Hole:		***Org CS:***	
Cluster Kind:		***UTMRC:***	5
Date Completed:	3/28/1962	***UTMRC Desc:***	margin of error : 100 m - 300 m
Remarks:		***Location Method:***	p5
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	932591543
Layer:	4
Color:	
General Color:	
Mat1:	15
Most Common Material:	LIMESTONE
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	52
Formation End Depth:	56
Formation End Depth UOM:	ft

Overburden and Bedrock Materials Interval

Formation ID:	932591540
Layer:	1
Color:	6
General Color:	BROWN
Mat1:	05
Most Common Material:	CLAY
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	0
Formation End Depth:	10
Formation End Depth UOM:	ft

Overburden and Bedrock Materials Interval

Formation ID:	932591541
Layer:	2
Color:	3
General Color:	BLUE
Mat1:	05

Most Common Material:	CLAY
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	10
Formation End Depth:	45
Formation End Depth UOM:	ft

Overburden and Bedrock Materials Interval

Formation ID:	932591542
Layer:	3
Color:	
General Color:	
Mat1:	12
Most Common Material:	STONES
Mat2:	11
Mat2 Desc:	GRAVEL
Mat3:	
Mat3 Desc:	
Formation Top Depth:	45
Formation End Depth:	52
Formation End Depth UOM:	ft

Method of Construction & Well Use

Method Construction ID:	966601385
Method Construction Code:	1
Method Construction:	Cable Tool
Other Method Construction:	

Pipe Information

Pipe ID:	11009689
Casing No:	1
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	930749057
Layer:	2
Material:	4
Open Hole or Material:	OPEN HOLE
Depth From:	
Depth To:	56
Casing Diameter:	6
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Construction Record - Casing

Casing ID:	930749056
Layer:	1
Material:	1
Open Hole or Material:	STEEL
Depth From:	
Depth To:	52
Casing Diameter:	6

Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Results of Well Yield Testing

Pump Test ID:	996601385
Pump Set At:	
Static Level:	21
Final Level After Pumping:	36
Recommended Pump Depth:	36
Pumping Rate:	1
Flowing Rate:	
Recommended Pump Rate:	1
Levels UOM:	ft
Rate UOM:	GPM
Water State After Test Code:	2
Water State After Test:	CLOUDY
Pumping Test Method:	1
Pumping Duration HR:	2
Pumping Duration MIN:	0
Flowing:	No

Water Details

Water ID:	933948664
Layer:	1
Kind Code:	1
Kind:	FRESH
Water Found Depth:	56
Water Found Depth UOM:	ft

4 | ***1 of 1*** | ***SW/150.4*** | ***178.8 / 0.00*** | ***lot 185 ON*** | ***WWIS***

Well ID:	6601383	**Data Entry Status:**	
Construction Date:		**Data Src:**	1
Primary Water Use:	Domestic	**Date Received:**	2/10/1964
Sec. Water Use:	0	**Selected Flag:**	Yes
Final Well Status:	Water Supply	**Abandonment Rec:**	
Water Type:		**Contractor:**	3409
Casing Material:		**Form Version:**	1
Audit No:		**Owner:**	
Tag:		**Street Name:**	
Construction Method:		**County:**	66
Elevation (m):		**Municipality:**	NIAGARA FALLS CITY
Elevation Reliability:		**Site Info:**	
Depth to Bedrock:		**Lot:**	185
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:			

PDF URL (Map): https://d2khazk8e83rdv.cloudfront.net/moe_mapping/downloads/2Water/Wells_pdfs/660\6601383.pdf

Bore Hole Information

Bore Hole ID:	10461117	**Elevation:**	177.675079
DP2BR:	54	**Elevrc:**	
Spatial Status:		**Zone:**	17

Code OB:	r	**East83:**	651796.9
Code OB Desc:	Bedrock	**North83:**	4769503
Open Hole:		**Org CS:**	
Cluster Kind:		**UTMRC:**	5
Date Completed:	11/21/1963	**UTMRC Desc:**	margin of error : 100 m - 300 m
Remarks:		**Location Method:**	p5
Elevrc Desc:			
Location Source Date:			
Improvement Location Source:			
Improvement Location Method:			
Source Revision Comment:			
Supplier Comment:			

Overburden and Bedrock Materials Interval

Formation ID:	932591534
Layer:	2
Color:	
General Color:	
Mat1:	11
Most Common Material:	GRAVEL
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	53
Formation End Depth:	54
Formation End Depth UOM:	ft

Overburden and Bedrock Materials Interval

Formation ID:	932591535
Layer:	3
Color:	
General Color:	
Mat1:	15
Most Common Material:	LIMESTONE
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	54
Formation End Depth:	55
Formation End Depth UOM:	ft

Overburden and Bedrock Materials Interval

Formation ID:	932591533
Layer:	1
Color:	6
General Color:	BROWN
Mat1:	05
Most Common Material:	CLAY
Mat2:	
Mat2 Desc:	
Mat3:	
Mat3 Desc:	
Formation Top Depth:	0
Formation End Depth:	53
Formation End Depth UOM:	ft

Method of Construction & Well Use

Method Construction ID:	966601383
Method Construction Code:	1
Method Construction:	Cable Tool
Other Method Construction:	

Pipe Information

Pipe ID:	11009687
Casing No:	1
Comment:	
Alt Name:	

Construction Record - Casing

Casing ID:	930749054
Layer:	1
Material:	1
Open Hole or Material:	STEEL
Depth From:	
Depth To:	55
Casing Diameter:	6
Casing Diameter UOM:	inch
Casing Depth UOM:	ft

Results of Well Yield Testing

Pump Test ID:	996601383
Pump Set At:	
Static Level:	19
Final Level After Pumping:	50
Recommended Pump Depth:	50
Pumping Rate:	17
Flowing Rate:	
Recommended Pump Rate:	5
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:	No

Water Details

Water ID:	933948662
Layer:	1
Kind Code:	1
Kind:	FRESH
Water Found Depth:	54
Water Found Depth UOM:	ft

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
5	1 of 2	SW/241.9	177.8 / -1.00	n/a Niagara Falls ON	EHS

Order No:	20200302161	***Nearest Intersection:***	
Status:	C	***Municipality:***	

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB

Report Type:	Custom Report	**Client Prov/State:**	ON
Report Date:	05-MAR-20	**Search Radius (km):**	.25
Date Received:	02-MAR-20	**X:**	-79.13594201
Previous Site Name:		**Y:**	43.06210064
Lot/Building Size:			
Additional Info Ordered:			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
5	2 of 2	SW/241.9	177.8 / -1.00	n/a Niagara Falls ON	EHS

Order No:	20200302161	**Nearest Intersection:**	
Status:	C	**Municipality:**	
Report Type:	Custom Report	**Client Prov/State:**	ON
Report Date:	05-MAR-20	**Search Radius (km):**	.25
Date Received:	02-MAR-20	**X:**	-79.13594201
Previous Site Name:		**Y:**	43.06210064
Lot/Building Size:			
Additional Info Ordered:			

Unplottable Summary

Total: 12 Unplottable sites

DB	Company Name/Site Name	Address	City	Postal
CA	R.M. OF NIAGARA	KALAR RD. ODOUR CONTROL FAC.	NIAGARA FALLS CITY ON	
CA	4-Lot Development on Kalar Road	Kalar Road	Niagara Falls ON	
CA	The Corporation of the City of Niagara Falls	Kalar Rd	Niagara Falls ON	
CA	NIAGARA FALLS CITY	KALAR RD., SHRINER'S CREEK	NIAGARA FALLS CITY ON	
CA		Kalar Road	Niagara Falls ON	
CA	800460 Ontario Limited	Kalar Rd	Niagara Falls ON	
ECA	1340258 Ontario Inc.	Part of Township Lot 185, 186, 198, 199	Niagara Falls ON	L2E 6S5
ECA	1340258 Ontario Inc.	Part of Township Lot 185, 186, 198, 199	Niagara Falls ON	L2E 6S5
ECA	The Corporation of the City of Niagara Falls	Kalar Road	Niagara Falls ON	L2E 6X5
ECA	The Corporation of the City of Niagara Falls	Kalar Rd	Niagara Falls ON	L2E 6X5
ECA	1340258 Ontario Inc.	Part of Township Lot 185, 186 & 198	Niagara Falls ON	L2E 6S5
SPL	NIAGARA, REGIONAL MUNICIPALITY	CHIPPAWA HYDRO CANAL, FROM KALAR RD. FORCEMAIN NEAR KENT ST. SANITARY SEWER SYSTEM/PUMPING STATION	NIAGARA FALLS CITY ON	

Unplottable Report

Site: ***R.M. OF NIAGARA***
KALAR RD. ODOUR CONTROL FAC. NIAGARA FALLS CITY ON

Database: ***CA***

Certificate #:	3-1007-96-
Application Year:	96
Issue Date:	9/13/1996
Approval Type:	Municipal sewage
Status:	Approved
Application Type:	
Client Name:	
Client Address:	
Client City:	
Client Postal Code:	
Project Description:	
Contaminants:	
Emission Control:	

Site: ***4-Lot Development on Kalar Road***
Kalar Road Niagara Falls ON

Database: ***CA***

Certificate #:	0172-5B8RQ2
Application Year:	02
Issue Date:	6/19/02
Approval Type:	Municipal & Private sewage
Status:	Approved
Application Type:	New Certificate of Approval
Client Name:	Andrew M. Fortuna
Client Address:	3736 Kalar Road
Client City:	Niagara Falls
Client Postal Code:	L2E 6S4
Project Description:	This application is for the construction of sanitary sewer on Kalar Road.
Contaminants:	
Emission Control:	

Site: ***The Corporation of the City of Niagara Falls***
Kalar Rd Niagara Falls ON

Database: ***CA***

Certificate #:	4591-78XQFD
Application Year:	2007
Issue Date:	12/5/2007
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: ***NIAGARA FALLS CITY***
KALAR RD., SHRINER'S CREEK NIAGARA FALLS CITY ON

Database: ***CA***

Certificate #:	3-0096-96-
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: ***Database:*** ***CA***
Kalar Road Niagara Falls ON

Certificate #: 8184-4ZSQKR
Application Year: 01
Issue Date: 8/24/01
Approval Type: Municipal & Private sewage
Status: Approved
Application Type: New Certificate of Approval
Client Name: The Corporation of the Regional Municipality of Niagara
Client Address: 2201 St. David's Road, P.O. Box 1042
Client City: Thorold
Client Postal Code: L2V 4T7
Project Description: This application is for the construction of a sanitary sewer extension on Kalar Road from the existing sanitary line on Westwood Street to serve the Long Term Care Facility.
Contaminants:
Emission Control:

Site: ***800460 Ontario Limited*** ***Database:*** ***CA***
Kalar Rd Niagara Falls ON

Certificate #: 5894-77KSJS
Application Year: 2007
Issue Date: 10/17/2007
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: ***1340258 Ontario Inc.*** ***Database:*** ***ECA***
Part of Township Lot 185, 186, 198, 199 Niagara Falls ON L2E 6S5

Approval No: 4494-AV3SX3 ***MOE District:***
Approval Date: 2018-01-25 ***City:***
Status: Approved ***Longitude:***
Record Type: ECA ***Latitude:***
Link Source: IDS ***Geometry X:***
SWP Area Name: ***Geometry Y:***
Approval Type: ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS
Project Type: MUNICIPAL AND PRIVATE SEWAGE WORKS
Address: Part of Township Lot 185, 186, 198, 199
Full Address:
Full PDF Link: https://www.accessenvironment.ene.gov.on.ca/instruments/1706-ARTQDQ-14.pdf

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Site: ***1340258 Ontario Inc.*** ***Database:*** ***ECA***

Part of Township Lot 185, 186, 198, 199 Niagara Falls ON L2E 6S5

Approval No:	0536-ASXKBV	***MOE District:***	
Approval Date:	2017-11-10	***City:***	
Status:	Revoked and/or Replaced	***Longitude:***	
Record Type:	ECA	***Latitude:***	
Link Source:	IDS	***Geometry X:***	
SWP Area Name:		***Geometry Y:***	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Address:	Part of Township Lot 185, 186, 198, 199		
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/0707-ASQJXC-14.pdf		

Site: ***The Corporation of the City of Niagara Falls***
Kalar Road Niagara Falls ON L2E 6X5

Database: ***ECA***

Approval No:	0605-AZFRCZ	***MOE District:***	
Approval Date:	2018-06-22	***City:***	
Status:	Approved	***Longitude:***	
Record Type:	ECA	***Latitude:***	
Link Source:	IDS	***Geometry X:***	
SWP Area Name:		***Geometry Y:***	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Address:	Kalar Road		
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/1381-AZBRPB-14.pdf		

Site: ***The Corporation of the City of Niagara Falls***
Kalar Rd Niagara Falls ON L2E 6X5

Database: ***ECA***

Approval No:	7721-78XRB3	***MOE District:***	
Approval Date:	2007-12-05	***City:***	
Status:	Approved	***Longitude:***	
Record Type:	ECA	***Latitude:***	
Link Source:	IDS	***Geometry X:***	
SWP Area Name:		***Geometry Y:***	
Approval Type:	ECA-Municipal Drinking Water Systems		
Project Type:	Municipal Drinking Water Systems		
Address:	Kalar Rd		
Full Address:			
Full PDF Link:			

Site: ***1340258 Ontario Inc.***
Part of Township Lot 185, 186 & 198 Niagara Falls ON L2E 6S5

Database: ***ECA***

Approval No:	1478-9NDLQL	***MOE District:***	
Approval Date:	2014-12-03	***City:***	
Status:	Approved	***Longitude:***	
Record Type:	ECA	***Latitude:***	
Link Source:	IDS	***Geometry X:***	
SWP Area Name:		***Geometry Y:***	
Approval Type:	ECA-MUNICIPAL AND PRIVATE SEWAGE WORKS		
Project Type:	MUNICIPAL AND PRIVATE SEWAGE WORKS		
Address:	Part of Township Lot 185, 186 & 198		
Full Address:			
Full PDF Link:	https://www.accessenvironment.ene.gov.on.ca/instruments/7619-9J2P2H-14.pdf		

Site: ***NIAGARA, REGIONAL MUNICIPALITY***
CHIPPAWA HYDRO CANAL, FROM KALAR RD. FORCEMAIN NEAR KENT ST. SANITARY SEWER SYSTEM/PUMPING STATION NIAGARA FALLS CITY ON

Database: ***SPL***

Ref No:	119995	***Discharger Report:***	

Site No:		***Material Group:***	
Incident Dt:	10/24/1995	***Health/Env Conseq:***	
Year:		***Client Type:***	
Incident Cause:	PIPE/HOSE LEAK	***Sector Type:***	
Incident Event:		***Agency Involved:***	
Contaminant Code:		***Nearest Watercourse:***	
Contaminant Name:		***Site Address:***	
Contaminant Limit 1:		***Site District Office:***	
Contam Limit Freq 1:		***Site Postal Code:***	
Contaminant UN No 1:		***Site Region:***	
Environment Impact:	POSSIBLE	***Site Municipality:***	18101
Nature of Impact:	Multi Media Pollution	***Site Lot:***	
Receiving Medium:	LAND / WATER	***Site Conc:***	
Receiving Env:		***Northing:***	
MOE Response:		***Easting:***	
Dt MOE Arvl on Scn:		***Site Geo Ref Accu:***	
MOE Reported Dt:	10/24/1995	***Site Map Datum:***	
Dt Document Closed:		***SAC Action Class:***	
Incident Reason:	MATERIAL FAILURE	***Source Type:***	
Site Name:			
Site County/District:			
Site Geo Ref Meth:			
Incident Summary:	NIAGARA R.M.: UKN AMT OF SEWAGE TO GROUND & HYDRO CANAL FROM BROKEN MAIN.		
Contaminant Qty:			

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 2020

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-Oct 2018

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

Aboveground Storage Tanks: Provincial AST

Historical listing of aboveground storage tanks made available by the Department of Natural Resources and Forestry. Includes tanks used to hold water or petroleum. This dataset has been retired as of September 25, 2014 and will no longer be updated.

Government Publication Date: May 31, 2014

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-Jun 30, 2020

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 2018

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*

Dry Cleaning Facilities: Federal CDRY

List of dry cleaning facilities made available by Environment and Climate Change Canada. Environment and Climate Change Canada's Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations (SOR/2003-79) are intended to reduce releases of tetrachloroethylene to the environment from dry cleaning facilities.
Environment and Climate Change Canada cites the coronavirus pandemic as an explanation for delays in releasing data pursuant to requests.

Government Publication Date: Jan 2004-Dec 2017

Commercial Fuel Oil Tanks: Provincial CFOT

Locations of commercial underground fuel oil tanks. This is not a comprehensive or complete inventory of commercial fuel tanks in the province; this listing is a copy of records of registered commercial underground fuel oil tanks obtained under Access to Public Information.
Note that the following types of tanks do not require registration: waste oil tanks in apartments, office buildings, residences, etc.; aboveground gas or diesel tanks. Records are not verified for accuracy or completeness.

Government Publication Date: Jul 31, 2020

Chemical Manufacturers and Distributors: 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-Jan 31, 2020

Chemical Register: Private CHM

This database includes a listing of locations of facilities within the Province or Territory that either manufacture and/or distributes chemicals.

Government Publication Date: 1999-Jun 30, 2020

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 2012 - Sep 2020

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-Dec 2019

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-Sep 30, 2020

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 - Sep 2019

Delisted Fuel Tanks: Provincial DTNK

List of fuel storage tank sites that were once found in - and have since been removed from - the list of fuel storage tanks made available by the regulatory agency under Access to Public Information.

Government Publication Date: Jul 31, 2020

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-Sep 30, 2020

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-Sep 30, 2020

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-Sep 30, 2020

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-Jul 31, 2020

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

Environmental Penalty Annual Report: Provincial EPAR

This database contains data from Ontario's annual environmental penalty report published by the Ministry of the Environment and Climate Change. These reports provide information on environmental penalties for land or water violations issued to companies in one of the nine industrial sectors covered by the Municipal Industrial Strategy for Abatement (MISA) regulations.

Government Publication Date: Jan 1, 2011 - Dec 31, 2019

List of Expired Fuels Safety Facilities: Provincial EXP

List of facilities and tanks for which there was once a fuel registration. This is not a comprehensive or complete inventory of expired tanks/tank facilities in the province; this listing is a copy of previously registered tanks and facilities obtained under Access to Public Information. Includes private fuel outlets, bulk plants, fuel oil tanks, gasoline stations, marinas, propane filling stations, liquid fuel tanks, piping systems, etc; includes tanks which have been removed from the ground.
Notes: registration was not required for private fuel underground/aboveground storage tanks prior to January 1990, nor for furnace oil tanks prior to May 1, 2002; registration is not required for waste oil tanks in apartments, office buildings, residences, etc., or aboveground gas or diesel tanks. Records are not verified for accuracy or completeness.

Government Publication Date: Jul 31, 2020

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. Includes fire training sites and sites at which Per- and Polyfluoroalkyl Substances (PFAS) are a concern.

Government Publication Date: Jun 2000-Apr 2020

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-Sep 2019

Federal Identification Registry for Storage Tank Systems (FIRSTS): Federal FRST

A list of federally regulated Storage tanks from the Federal Identification Registry for Storage Tank Systems (FIRSTS). FIRSTS is Environment and Climate Change Canada's database of storage tank systems subject to the Storage Tank for Petroleum Products and Allied Petroleum Products Regulations. The main objective of the Regulations is to prevent soil and groundwater contamination from storage tank systems located on federal and aboriginal lands. Storage tank systems that do not have a valid identification number displayed in a readily visible location on or near the storage tank system may be refused product delivery.

Government Publication Date: May 31, 2018

Fuel Storage Tank: Provincial FST

List of registered private and retail fuel storage tanks. This is not a comprehensive or complete inventory of private and retail fuel storage tanks in the province; this listing is a copy of registered private and retail fuel storage tanks, obtained under Access to Public Information.
Notes: registration was not required for private fuel underground/aboveground storage tanks prior to January 1990, nor for furnace oil tanks prior to May 1, 2002; registration is not required for waste oil tanks in apartments, office buildings, residences, etc., or aboveground gas or diesel tanks. Records are not verified for accuracy or completeness.

Government Publication Date: Jul 31, 2020

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-Jul 31, 2020

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 2017

TSSA Historic Incidents: Provincial HINC

List of historic incidences of spills and leaks of diesel, fuel oil, gasoline, natural gas, propane, and hydrogen recorded by the TSSA in their previous incident tracking system. The 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, the TSSA regulates fuel suppliers, storage facilities, transport trucks, pipelines, contractors and equipment or appliances that use fuels. Records are not verified for accuracy or completeness. This is not a comprehensive or complete inventory of historical fuel spills and leaks in the province. This listing is a copy of the data captured at one moment in time and is hence limited by the record date provided here.

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*

Fuel Oil Spills and Leaks: Provincial INC

Listing of spills and leaks of diesel, fuel oil, gasoline, natural gas, propane, and hydrogen reported to the Spills Action Centre (SAC). This is not a comprehensive or complete inventory of fuel-related leaks, spills, and incidents in the province; this listing in a copy of incidents reported to the SAC, obtained under Access to Public Information. Includes incidents from fuel-related hazards such as spills, fires, and explosions. Records are not verified for accuracy or completeness.

Government Publication Date: Jul 31, 2020

Landfill Inventory Management Ontario: Provincial LIMO

The Landfill Inventory Management Ontario (LIMO) database is updated every year, as the Ministry of the Environment, Conservation and Parks compiles new and updated information. Includes small and large landfills currently operating as well as those which are closed and historic. Operators of larger landfills provide landfill information for the previous operating year to the ministry for LIMO including: 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 include information such as site owner, site location and certificate of approval # and status.

Government Publication Date: Feb 28, 2019

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-Jan 2020

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, 2018

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-Apr 2018

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 Canada Energy Regulator (CER) - previously 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-Mar 31, 2020

National Energy Board Wells: Federal 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.

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 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.

Government Publication Date: 1988-Aug 31, 2020

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-Jun 2020

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-Sep 30, 2020

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, 2009-2014

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: Oct 2011-Sep 30, 2020

Pipeline Incidents: Provincial PINC

List of pipeline incidents (strikes, leaks, spills). This is not a comprehensive or complete inventory of pipeline incidents in the province; this listing in an historical copy of records previously obtained under Access to Public Information. Records are not verified for accuracy or completeness.
The coronavirus pandemic is cited by the agency responsible for tank regulations and data as an explanation for delays in releasing data pursuant to requests.

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-Sep 30, 2020

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-Sep 2020

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-Jun 30, 2020

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

List of spills and incidents made available the Ministry of the Environment, Conservation and Parks. 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.
The Ministry of the Environment, Conservation and Parks cites the coronavirus pandemic as an explanation for delays in releasing data pursuant to requests.

Government Publication Date: 1988-Nov 2019

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-Dec 31, 2017

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-Aug 2018

Variances for Abandonment of Underground Storage Tanks: Provincial VAR

Listing of variances granted for storage tank abandonment. This is not a comprehensive or complete inventory of tank abandonment variances in the province; this listing is a copy of tank abandonment variance records previously obtained under Access to Public Information. In Ontario, registered 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.
Records are not verified for accuracy or completeness.

Government Publication Date: Jul 31, 2020

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 2011-Sep 30, 2020

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: Apr 30, 2020

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.

Appendix D:

Aerial Photographs

Aerial Photographs

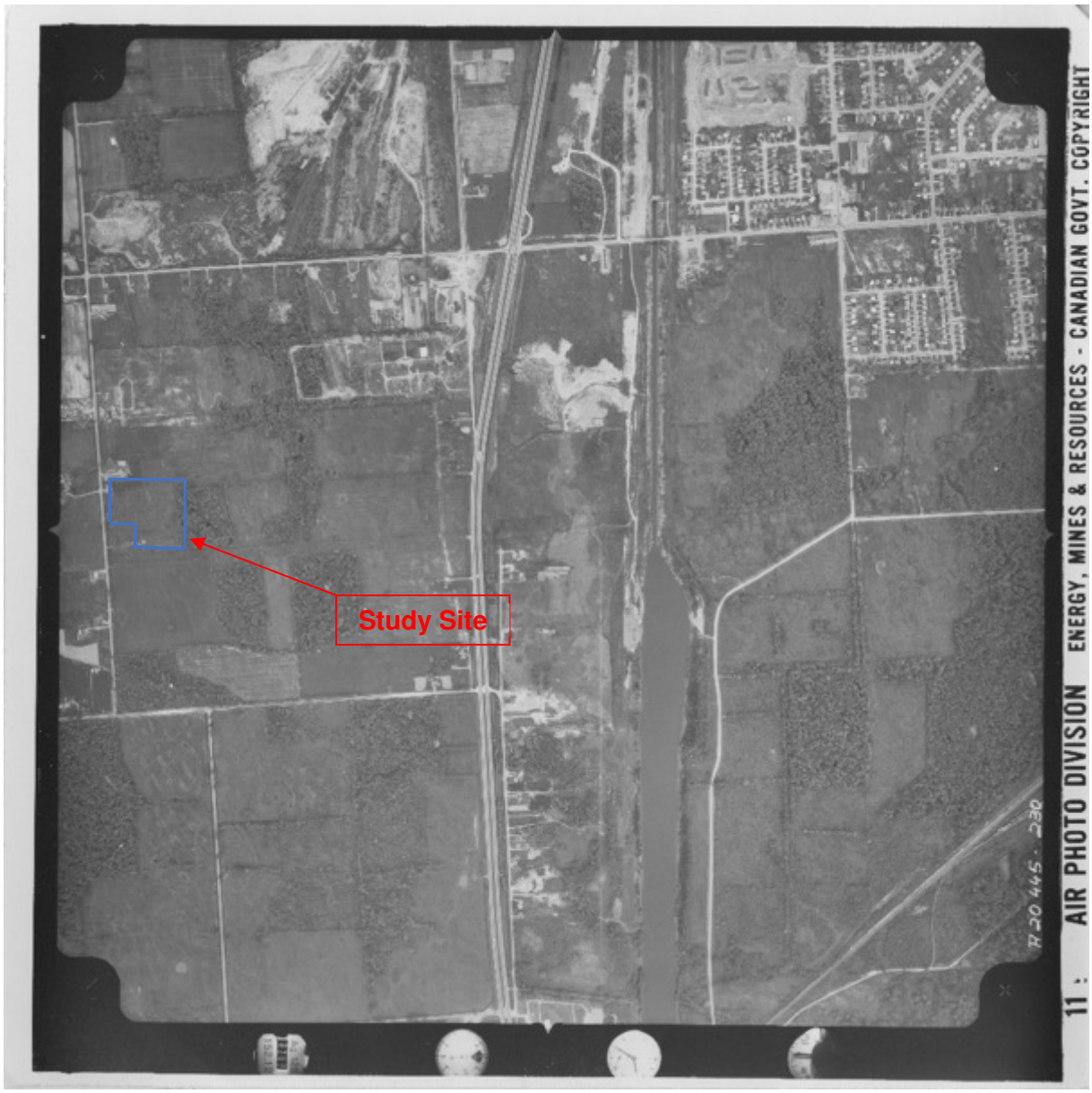
1934

1954-55

1960

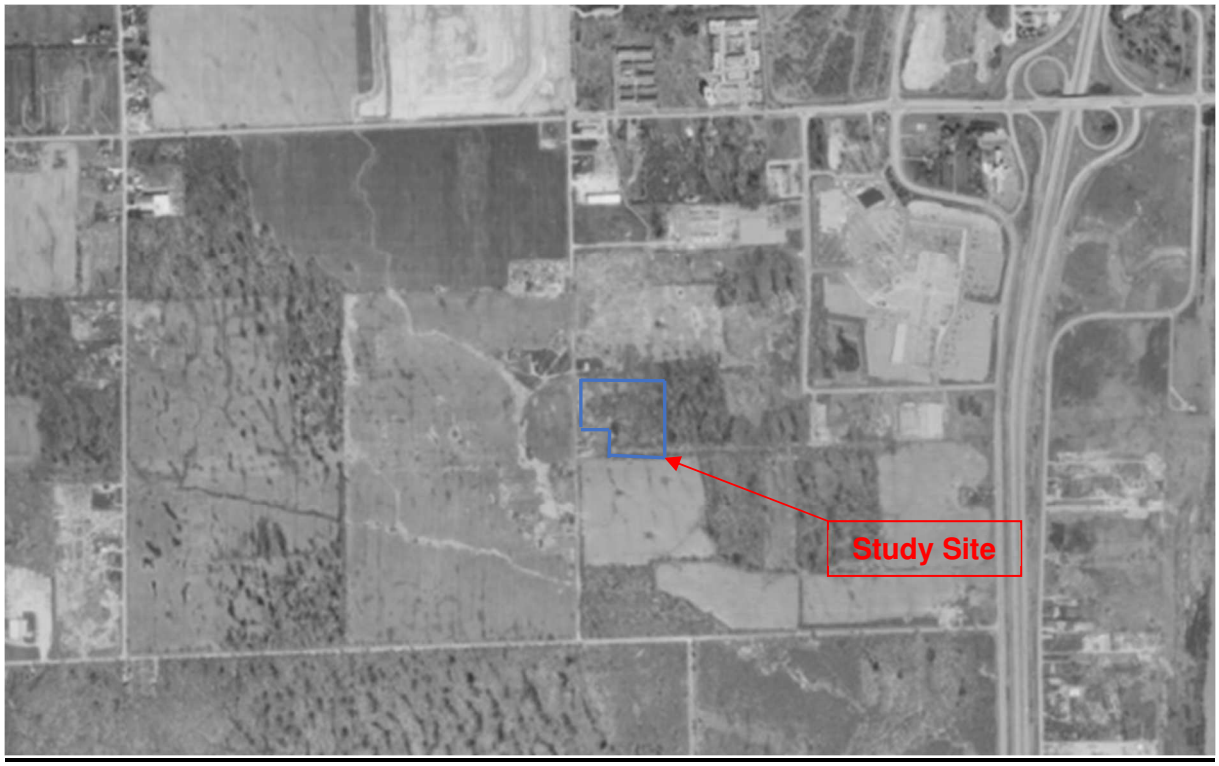
1965

1968


Study Site
11 : AIR PHOTO DIVISION ENERGY, MINES & RESOURCES - CANADIAN GOVT. COPYRIGHT

1995

2000



2006

2010

2015

2018

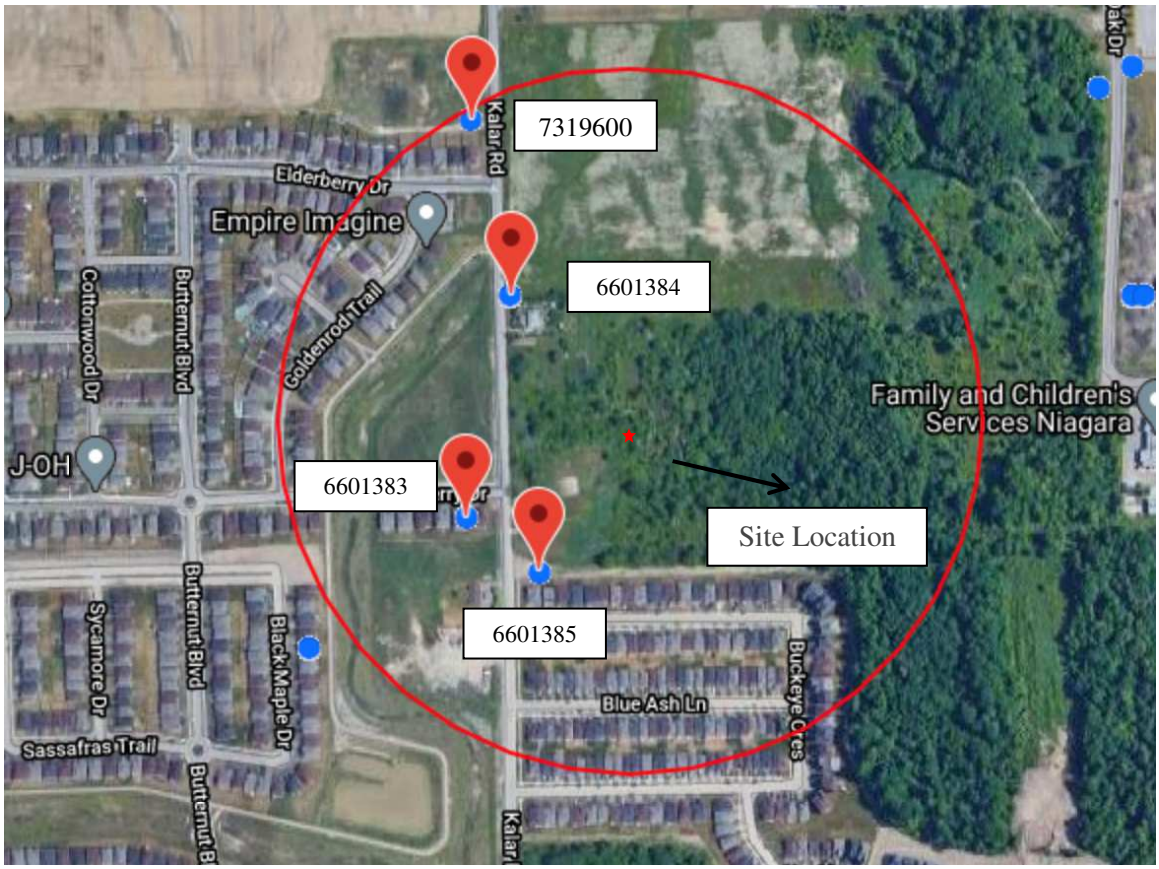

Elderberry Drive
Dogwood Crescent
Cottonwood Drive
Butternut Boulevard
Goldenrod Trail
Kalar Road
Pin Oak Drive
Canadian Drive
Mulberry Drive
Buckeye Crescent
Blue Ash Lane
Study Site
Sassafras Trail
Sycamore Drive
Black Maple Drive
Tulip Tree Drive
Hackberry Trail
White Pine Crescent
Brown Road

Appendix E:

Ontario Oil, Gas & Salt Resources Library as well as the Ministry of the Environment, Conservation and Parks Water Well Records

Oil, Gas & Salt Resources Library & Ministry of the Environment, Conservation and Parks Well Records Database:

Lot 186 Kalar Road, Niagara Falls, ON



According to the Ministry of the Environment, Conservation and Parks Well Records database, there were no well records associated with the study site, however, four (4) records were available from within the study area (250 m radius). Each record can contain information pertaining to date of installation, well use, type of stratigraphy encountered and groundwater levels. The available records are included below.

Well ID

Well ID Number: 7319600
Well Audit Number: *Z287102*
Well Tag Number: *A248365*
This table contains information from the original well record and any subsequent updates.

Well Location

Address of Well Location	7389 KALAR RD.
Township	NIAGARA FALLS CITY
Lot	
Concession	
County/District/Municipality	NIAGARA (WELLAND)
City/Town/Village	NIAGARA FALLS
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 651799.00 Northing: 4769859.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	CLAY		----	0 ft	15 ft
RED	CLAY		WBRG	15 ft	35 ft

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed
0 ft	24 ft	3/8 BENTONITE	

Method of Construction & Well Use

Method of Construction	Well Use
Boring	
	Monitoring

Status of Well

Observation Wells

Ontario — Ministry of the Environment and Climate Change

Measurements recorded in: ☐ Metric ☑ Imperial

Well Tag No. *(Place Sticker and/or Print Below)* A248365

Well Record

Regulation 903 Ontario Water Resources Act

Page 1 of 1

Well Owner's Information

First Name	Last Name / Organization	E-mail Address	☐ Well Constructed by Well Owner
	2607305 Ontario Inc		

Mailing Address (Street Number/Name)	Municipality	Province	Postal Code	Telephone No. (inc. area code)
266 Wellington St N	Hamilton	ON	L8L5A1	8905321072100

Well Location

Address of Well Location (Street Number/Name)	Township	Lot	Concession
7389 Kalar Rd			

County/District/Municipality	City/Town/Village	Province	Postal Code
	Niagara Falls	Ontario	L2H2Y6

UTM Coordinates	Zone	Easting	Northing	Municipal Plan and Sublot Number	Other
NAD 83	17	651794	7698519		

Overburden and Bedrock Materials/Abandonment Sealing Record *(see instructions on the back of this form)*

General Colour	Most Common Material	Other Materials	General Description	Depth (m/ft) From	Depth (m/ft) To
Brown/Red	Clay		Damp	0	15
Red/Grey	Clay		Wet	15	35

Annular Space

Depth Set at (m/ft) From	Depth Set at (m/ft) To	Type of Sealant Used (Material and Type)	Volume Placed (m³/ft³)
0	21	3/8" Bentonite	

Method of Construction

☐ Cable Tool ☐ Diamond
☐ Rotary (Conventional) ☐ Jetting
☐ Rotary (Reverse) ☐ Driving
☑ Boring ☐ Digging
☐ Air percussion
☐ Other, *specify*

Well Use

☐ Public ☐ Commercial ☐ Not used
☐ Domestic ☐ Municipal ☐ Dewatering
☐ Livestock ☐ Test Hole ☑ Monitoring
☐ Irrigation ☐ Cooling & Air Conditioning
☐ Industrial
☐ Other, *specify*

Construction Record - Casing

Inside Diameter (cm/in)	Open Hole OR Material (Galvanized, Fibreglass, Concrete, Plastic, Steel)	Wall Thickness (cm/in)	Depth (m/ft) From	Depth (m/ft) To
1.8	Plastic	0.1	0	25

Construction Record - Screen

Outside Diameter (cm/in)	Material (Plastic, Galvanized, Steel)	Slot No.	Depth (m/ft) From	Depth (m/ft) To
2.0	Plastic	10	25	35

Status of Well

☐ Water Supply
☐ Replacement Well
☐ Test Hole
☐ Recharge Well
☐ Dewatering Well
☑ Observation and/or Monitoring Hole
☐ Alteration (Construction)
☐ Abandoned, Insufficient Supply
☐ Abandoned, Poor Water Quality
☐ Abandoned, other, *specify*
☐ Other, *specify*

Water Details

Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, specify	Hole Diameter Depth (m/ft) From	Depth (m/ft) To	Diameter (cm/in)
		0	35	8
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, specify			
Water found at Depth (m/ft)	Kind of Water: ☐ Fresh ☐ Untested ☐ Gas ☐ Other, specify			

Results of Well Yield Testing

After test of well yield, water was:
☐ Clear and sand free
☐ Other, *specify*

If pumping discontinued, give reason:

Pump intake set at (m/ft)

Pumping rate (l/min / GPM)

Duration of pumping ____ hrs + ____ min

Final water level end of pumping (m/ft)

If flowing give rate (l/min / GPM)

Recommended pump depth (m/ft)

Recommended pump rate (l/min / GPM)

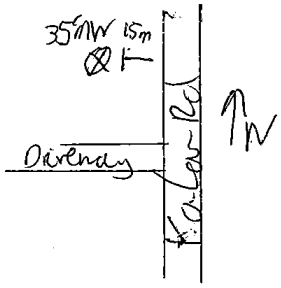
Well production (l/min / GPM)

Disinfected? ☐ Yes ☐ No

	Draw Down Time (min)	Draw Down Water Level (m/ft)	Recovery Time (min)	Recovery Water Level (m/ft)
Static Level				
1			1	
2			2	
3			3	
4			4	
5			5	
10			10	
15			15	
20			20	
25			25	
30			30	
40			40	
50			50	
60			60	

Map of Well Location

Please provide a map below following instructions on the back.



Comments:

Well Contractor and Well Technician Information

Business Name of Well Contractor	Well Contractor's Licence No.
Determination Drilling	7195

Business Address (Street Number/Name)	Municipality	Province	Postal Code	Business E-mail Address
2493 Henderson Rd	Hamilton	ON	L0R1C0	Dan@determinationdrilling.ca

Bus. Telephone No. (inc. area code)	Name of Well Technician (Last Name, First Name)	Well Technician's Licence No.	Signature of Technician and/or Contractor	Date Submitted
9056722481	Matt Niewhoh	3135		2018/08/02

Well owner's information package delivered	Date Package Delivered	Date Work Completed
☐ Yes ☐ No		2018/05/31

Ministry Use Only

Audit No. Z287102

Received OCT 05 2018

0506E (2014/11)

Ministry's Copy

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Well ID

Well ID Number: 6601385
Well Audit Number:
Well Tag Number:
This table contains information from the original well record and any subsequent updates.

Well Location

Address of Well Location	
Township	NIAGARA FALLS CITY
Lot	186
Concession	
County/District/Municipality	NIAGARA (WELLAND)
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 651864.90 Northing: 4769469.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	CLAY			0 ft	10 ft
BLUE	CLAY			10 ft	45 ft
	STNS	GRVL		45 ft	52 ft
	LMSN			52 ft	56 ft

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed

Method of Construction & Well Use

Method of Construction	Well Use
Cable Tool	Domestic
	Livestock

Status of Well

Water Supply

FORMERLY STAMFORD TWP.

UTM Zone | E | N

Lot 15 R

Elev. 14 R

Basin 24

The Ontario Water Resources Commission Act

WATER WELL RECORD

GROUND WATER BRANCH
A008 No 1962 1385
ONTARIO WATER RESOURCES COMMISSION

NIAGARA FALLS

County or District Welland County. Township, Village, Town or City Stamford Twp.

Con. Lot 16 Date completed 28 March 1962. (day month year)

[redacted] Address R. R. # 2, Niagara Falls, Ont.

Casing and Screen Record

Inside diameter of casing 7 Inch. (6 5/8").

Total length of casing 52 Feet.

Type of screen Nil.

Length of screen

Depth to top of screen

Diameter of finished hole 6 5/8"

Pumping Test

Static level 21 Feet.

Test-pumping rate 75 G.P.H. G.P.M.

Pumping level 36 Feet.

Duration of test pumping 2 Hours.

Water clear or cloudy at end of test Cloudy.

Recommended pumping rate 75 G.P.H. G.P.M.

with pump setting of 36 Feet. feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
Hard Brown Clay.	0 Ft.	10 Ft.	56 Ft.	Fresh.
Soft Blue Clay.	10 Ft.	45 Ft.		
Small Stones, little gravel.	45 "	52 Ft.		
Limestone Rock.	52 Ft.	56 Ft.		

For what purpose(s) is the water to be used?
House & Farm use.

Is well on upland, in valley, or on hillside? Upland.

Drilling or Boring Firm W. A. Lounsbury & Sons,

Address 30 Dunlop Dr.
St. Catharines, Ont.

Licence Number 252.

Name of Driller or Borer G. K. Lounsbury,

Address 30 Dunlop Dr, St. Catharines, Ont.

Date 28 March 1962.

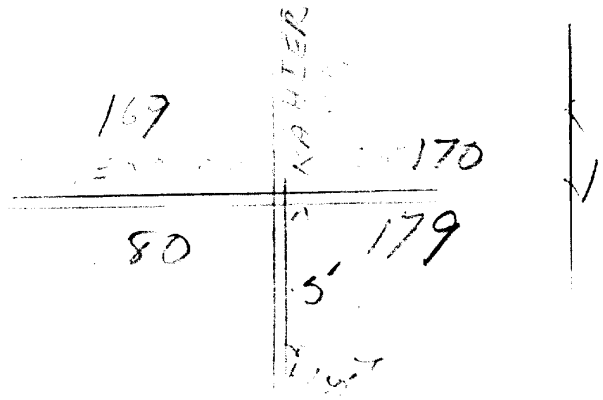
G. K. Lounsbury
(Signature of Licensed Drilling or Boring Contractor)

Form 7 5M-61-3852

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



CSS.S8

Well Location

Address of Well Location	
Township	NIAGARA FALLS CITY
Lot	186
Concession	
County/District/Municipality	NIAGARA (WELLAND)
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 651832.90 Northing: 4769701.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
	LOAM			0 ft	1 ft
BRWN	CLAY			1 ft	21 ft
BLUE	CLAY			21 ft	39 ft
	SHLE			39 ft	44 ft

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed

Method of Construction & Well Use

Method of Construction	Well Use
Cable Tool	
	Domestic

Status of Well

Water Supply

UTM FORMERLY STAMFORD TWP.

19 R [ ] N

Elev. 19 R [ ]

Basin 24 [ ]

ONTARIO

The Water-well Drillers Act, 1954
Department of Mines

GROUND WATER BRANCH
MAY 6 1958
No 1384
ONTARIO WATER RESOURCES COMMISSION

Water-Well Record

NIAGARA FALLS

County or Territorial District Welland Township, Village, Town or City Stamford

[redacted] Village, Town or City)

Address RR no 2 Niagara falls

Date completed 20 (day) Sept (month) 1957 (year)

Pipe and Casing Record

Casing diameter(s) 6"
Length(s) 44 ft
Type of screen None used
Length of screen

Pumping Test

Static level 25 ft
Pumping rate 4 gal a min
Pumping level 35
Duration of test ½ hour

Well Log

Water Record

Overburden and Bedrock Record	From ft.	To ft.	Depth(s) at which water(s) found	No. of feet water rises	Kind of water (fresh, salty, or sulphur)
Topsoil	0	1	43 ft	18 ft	Fresh
Brown Clay	1	21			
Soft Blue Clay	21	39			
Shale rock	39	44			

For what purpose(s) is the water to be used?
House
Is water clear or cloudy? Clearing
Is well on upland, in valley, or on hillside?

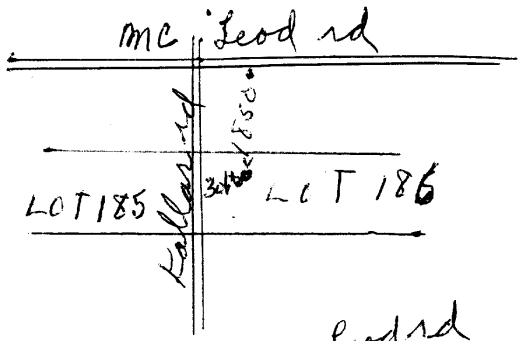
Drilling firm Walter Hunger & Son
Address 209 Emerick Ave
Fort Erie
Name of Driller Walter Hunger
Address 209 Emerick
Fort Erie
Licence Number 671

I certify that the foregoing statements of fact are true.

Date May 1 Walter Hunger
Signature of Licensee

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



1850 ft south of MC Leod rd
30 ft East of Kallar rd

Form 5

CSS.S8

Well ID

Well ID Number: 6601383
Well Audit Number:
Well Tag Number:
This table contains information from the original well record and any subsequent updates.

Well Location

Address of Well Location	
Township	NIAGARA FALLS CITY
Lot	185
Concession	
County/District/Municipality	NIAGARA (WELLAND)
City/Town/Village	
Province	ON
Postal Code	n/a
UTM Coordinates	NAD83 — Zone 17 Easting: 651796.90 Northing: 4769503.00
Municipal Plan and Sublot Number	
Other	

Overburden and Bedrock Materials Interval

General Colour	Most Common Material	Other Materials	General Description	Depth From	Depth To
BRWN	CLAY			0 ft	53 ft
	GRVL			53 ft	54 ft
	LMSN			54 ft	55 ft

Annular Space/Abandonment Sealing Record

Depth From	Depth To	Type of Sealant Used (Material and Type)	Volume Placed

Method of Construction & Well Use

Method of Construction	Well Use
Cable Tool	
	Domestic

Status of Well

Water Supply

UTM | | Z | | | | | | | E

Former Twp. Stamford Twp. | | | | N

Lot. 185 | | | | |

Basin 24 | | | | |

GROUND WATER BRANCH
66 No. 1383
FEB 10 1964
ONTARIO WATER RESOURCES COMMISSION

The Ontario Water Resources Commission Act

WATER WELL RECORD

Formerly Stamford Twp.
NIAGARA FALLS

County or District Welland County. Township, Village, Town or City

Con Lot 185 Date completed 21 November 1963.
(day month year)

[redacted] ress 3104 Lundy's Land, Niag. Falls, Ont.

Casing and Screen Record

Inside diameter of casing 6½"

Total length of casing 55 Feet.

Type of screen Nil.

Length of screen

Depth to top of screen

Diameter of finished hole 6½"

Pumping Test

Static level 19 Feet.

Test-pumping rate 1000 G.P.H. G.P.M.

Pumping level 50 Feet.

Duration of test pumping 2 Hours.

Water clear or cloudy at end of test Clear.

Recommended pumping rate 300 G.P.H. G.P.M.

with pump setting of 50 Feet. feet below ground surface

Well Log

Overburden and Bedrock Record	From ft.	To ft.	Water Record: Depth(s) at which water(s) found	Water Record: Kind of water (fresh, salty, sulphur)
Hard brown clay.	0 Ft.	10 Ft.	54 Ft.	Fresh.
Soft brown clay.	10 Ft.	53½ Ft.		
Small course gravel.	53½ Ft.	54 Ft.		
Limestone Rock.	54 Ft.	55 Ft.		

For what purpose(s) is the water to be used? Household.

Is well on upland, in valley, or on hillside? Upland.

Drilling or Boring Firm W. A. Lounsbury & Sons,

Address 30 Dunlop Dr, St. Catharines, Ont.

Licence Number 1076.

Name of Driller or Borer G. K. Lounsbury.

Address as above.

Date 22 Nov. 1963.

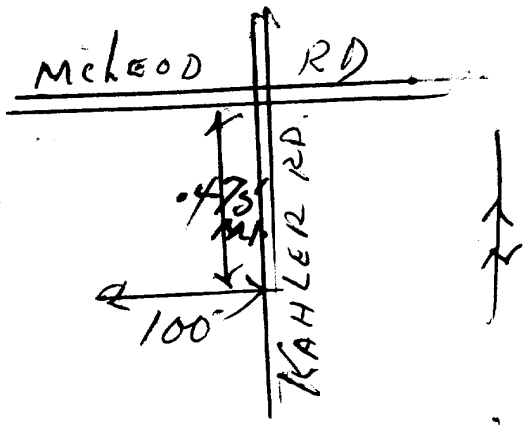
G K Lounsbury
(Signature of Licensed Drilling or Boring Contractor)

Form 7 15M-60-4138

OWRC COPY

Location of Well

In diagram below show distances of well from road and lot line. Indicate north by arrow.



C58.S8

Appendix F:

Site Photograph Log

Photo #	Study Site	Description
1		Southwest corner of the study site, photo facing north.
2		South boundary of the study site, photo facing west.
3		Southeast corner of the study site, photo facing north.

Photo #	Study Site	Description
4		West boundary of the study site, photo facing east.
5		North boundary of the study site, photo facing southeast.

Photo #	Study Site – Surrounding Properties	Description
6		North adjacent residential house, photo facing northeast.
7		South adjacent residential house, photo facing south
8		West adjacent Kalar Road and residential houses, photo facing southwest