

REPORT FOR: CROWE VALLEY CONSERVATION AUTHORITY WATERSHED ADVISORY BOARD

**REGARDING: ONTARIO REGULATION 041/24, PERMIT APPLICATION NO. 109/24 BEING:
A DWELLING AND SEPTIC SYSTEM LOCATED WITHIN A FLOOD HAZARD AND
WITHIN THE SETBACK OF A WETLAND GREATER THAN TWO HECTARES**

DATE: NOVEMBER 06, 2025

HEARING DATE	November 20 th , 2025
DATE APPLICATION RECEIVED	July 2 nd , 2024
DATE HEARING REQUESTED	July 15 th , 2025
APPLICANT	Ms. Stacey Wilkes Mr. James Wilkes Mr. Evan Vieira
LOCATION	199B Wilkes Settlement Lane Part of Lot 13, Concession 5 Municipality of Marmora and Lake ARN: 1241 141 015 20620
PROPOSAL	Construction of a new single-family dwelling and installation of a new septic system within the flood hazard of Beaver Creek and within the setback of a wetland greater than two hectares.
OVERVIEW	The proposed development activity does not conform to the CVCA's Watershed Planning and Regulations policies because: ▪ The proposed development activity is located within the flood hazard of Beaver Creek ▪ The proposed development activity is located within the setback of a wetland greater than two hectares.

Executive Summary

An application for development has been submitted by Ms. Stacey Wilkes, Mr. James Wilkes and Mr. Evan Vieira with regard to *Ontario Regulation 41/24: Prohibited Activities Exemptions and Permits* (see Appendix A). The application is requesting permission for development within the flood hazard associated with Beaver Creek and within the setback of a wetland greater than two hectares on a vacant lot of record. CVCA staff cannot grant approval because the application does not meet policy.

The proposed development does not conform to the CVCA's Watershed Planning and Regulations Policies for the following reasons:

1. CVCA Policies do not permit new development within the 1:100-year floodplain
 - Proposed development activity is within the 1:100-year floodplain of Beaver Creek.
2. CVCA Policies do not permit new development within 30-metres of a wetland greater than two hectares
 - The proposed development activity is 6-metres from a wetland greater than two hectares

Background and Subject Lands

The subject property is located at 199B Wilkes Settlement Lane in the Municipality of Marmora and Lake and is located on the west side of Beaver Creek. The property is approximately 3.24 hectares (8 acres) in size. The majority of the property is wetland as confirmed on site and is located within the flood hazard of Beaver Creek as per the FHIMP mapping (Flood Hazard Identification and Mapping Program) which was approved in November 2024. The property is vacant and already has a driveway constructed.



Figure 1: Aerial imagery of the property (Google Earth Pro, 2025)

In 2018, the previous landowners contacted the CVCA to determine if there would be any restrictions to building on the subject lands. CVCA staff completed a site visit in 2018 to determine the extent of the wetlands on the subject property. During the 2018 site visit, an inaccurate wetland boundary was delineated giving the false impression that there was room outside of the wetland setback for development to take place. Additionally, in 2019, the previous landowners contacted the CVCA to ensure that subject lands were not within the flood hazard associated with Beaver Creek and provided a letter and drawing prepared by Groundwork Engineering Limited. The Groundwork Engineering Limited showed spot elevations and plotted a 30-metre setback from the shoreline of Beaver Creek. It was communicated to the landowners by the CVCA that *“Reviewing the map and the letter I can state that it definitely satisfies my requirements . . . As such there is ample room on the property for the construction of a dwelling and septic, and depending on the size and configuration other accessory structures may be possible”* (Appendix B). It should be noted that the work completed by Groundwork Engineering Limited was not completed by an Ontario Land Surveyor and it is not in the CVCA’s practice to accept elevation surveys not completed by Ontario Land Surveyors. The property was then purchased by Ms. Stacey Wilkes and Mr. Evan Viera with the intention of constructing a dwelling and installing a septic system.

On July 2nd, 2024, Ms. Stacey Wilkes and Mr. Evan Viera submitted a permit application to the CVCA for the proposed construction of a new single-family dwelling and installation of a new septic system.



On July 23rd, 2024, CVCA staff completed a site visit to the property and determined that the proposed development location is within the wetland setback and that the previous wetland delineation was inaccurate. As a result of the July 2024 site visit findings an Environmental Impact Statement (EIS) was requested and prepared by Mr. Rob West of Oakridge Environmental. The wetland boundary determined by CVCA staff in July 2024 was confirmed by Mr. Rob West as being the true wetland boundary. The proposed development location is in the area identified in the EIS as the area having the least impact to the wetland as it has already been cleared and the proposed development takes into consideration the recommendations made in the EIS, for example a planting plan and reduction in dwelling footprint and septic system size.

During preparation for the Hearing, it was determined that the subject lands and proposed development location are within the flood hazard of Beaver Creek as shown on the FHIMP mapping. When the permit application was applied for in July 2024 the FHIMP mapping project had not been completed. Therefore, at the time the permit application was submitted the most restrictive feature was the wetland greater than two hectares. Ms. Wilkes obtained a letter from P.A. Miller Surveying, Ontario Land Surveyors, confirming that the proposed development location is within the flood hazard of Beaver Creek. The applicants have prepared a site plan showing that the proposed development will be floodproofed as per CVCA policies.

Timeline

2018	CVCA staff complete site visit to delineate the wetland boundary
25 October 2019	CVCA staff communicate to the previous landowners that <i>“Reviewing the map and the letter I can state that it definitely satisfies my requirements . . . As such there is ample room on the property for the construction of a dwelling and septic, and depending on the size and configuration other accessory structures may be possible”</i> (appendix B)
02 July 2024	Ms. Stacey Wilkes, Mr. James Wilkes & Mr. Evan Vieira submit a permit application to the CVCA for the proposed construction of a dwelling and installation of a new septic system
23 July 2024	CVCA staff complete a site visit to delineate the wetland boundary.
30 August 2024	CVCA staff and Mr. Rob West met on site with the property owner
13 November 2024	Environmental Impact Statement submitted to the CVCA (appendix C) Environmental Impact Statement confirms wetland boundary delineated by CVCA staff in July 2024
Winter 2024	CVCA staff work with the applicants to collect information required for a Hearing before the Watershed Advisory Board
11 July 2025	CVCA staff meet with Ms. Wilkes and Mr. Wilkes on site and confirm that staff cannot grant permission for the proposed development and that a hearing before the Watershed Advisory Board will be required.
15 July 2025	Applicants formally request a Hearing before the Watershed Advisory Board.
16 July 2025	Based on available mapping CVCA staff determine that the proposed development is located within the flood hazard of Beaver Creek (appendix D).
01 August 2025	Ms. Wilkes submitted a letter from P.A. Miller Surveying confirming that the proposed development is located within the flood hazard of Beaver Creek (appendix E).
14 October 2025	Final site plan received (appendix F).

Proposal Description

As per the permit application information provided:

Existing Development:

None - vacant

Proposed Development:

Single Family Dwelling



- Single storey with a walkout basement
 - o Overall footprint 42-feet by 34-feet
 - o Total habitable space, inclusive of both levels of the dwelling, 2,856 square feet
- Rear uncovered deck
 - o 725 square feet
- Finished floor elevation of dwelling 184.57 metres above sea level (CGVD 2013)
 - o This is 0.3 metres above the regulatory flood elevation

Septic System

- Septic bed
 - o Overall footprint 1,721 square feet
 - o Runs of septic bed to be at 1:100-year flood elevation
- 3,600 L tank
 - o To have a water tight cap
 - o To be anchored to prevent floatation

CVCA Regulated Features:

- Wetland greater than two hectares
 - o Requisite minimum development setback is 30-metres
 - o The proposed development is 6-metres from the wetland
- Flood Hazard of Beaver Creek
 - o Requisite minimum development setback is 6-metres
 - o All components of the proposed development are within the flood hazard of Beaver Creek

Applicability of the *Conservation Authorities Act, Ontario Regulation 41/24 and the Crowe Valley Conservation Authority's Watershed Planning and Regulations Policy Manual*

Ontario Regulation 41/24, was made pursuant to section 28 of the *Conservation Authorities Act*, R.S.O. 1990. *Ontario Regulation 41/24* is attached as Appendix G.

The subject property is within an area regulated by the CVCA due to the flood hazard associated with Beaver Creek and a wetland greater than two hectares.

The *Conservation Authorities Act* states:

Prohibited activities re watercourses, wetlands, etc.

28 (1) No person shall carry on the following activities, or permit another person to carry on the following activities, in the area of jurisdiction of an authority:

1. Activities to straighten, change, divert or interfere in any way with the existing channel of a river, creek, stream or watercourse or to change or interfere in any way with a wetland.
2. Development activities in areas that are within the authority's area of jurisdiction and are,
 - i. hazardous lands
 - ii. wetlands
 - iii. river or stream valleys the limits of which shall be determined in accordance with the regulations,
 - iv. areas that are adjacent or close to the shoreline of the Great Lakes-St. Lawrence River System or to an inland lake and that may be affected by flooding, erosion or dynamic beach hazards, such areas to be further determined or specified in accordance with the regulations, or
 - v. other areas in which development should be prohibited or regulated, as may be determined by the regulations.

Ontario Regulation 41/24 contains the following sections which speak to hazardous lands:



(2) For the purposes of subparagraph 2 iv of subsection 28 (1) of the Act, areas adjacent or close to the shoreline of the Great Lakes-St. Lawrence River System or to inland lakes that may be affected by flooding, erosion or dynamic beach hazards include,

(a) the area starting from the furthest offshore extent of the authority's boundary to the furthest of the following distances:

(i) the 100-year flood level, plus the appropriate allowance for wave uprush, and, if necessary, for other water-related hazards, including ship-generated waves, ice piling and ice jamming, except in respect of Wanapitei Lake in the Nickel District Conservation Authority, the applicable flood event standard for that lake being the one set out in item 1 of Table 16 of Schedule 1,

Ontario Regulation 41/24 contains the following sections speaking to wetlands:

(3) For the purposes of subparagraph 2 v of subsection 28 (1) of the Act, other areas in which development activities are prohibited are the areas within an authority's area of jurisdiction that are within 30-metres of a wetland.

The Conservation Authorities Act states:

28.1 (1) An authority may issue a permit to a person to engage in an activity specified in the permit that would otherwise be prohibited by section 28, if, in the opinion of the authority, with any conditions specified in the regulations.

(a) the activity is not likely to affect the control of flooding, erosion, dynamic beaches or unstable soil or bedrock;

(b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; and

(c) any other requirements that may be prescribed by the regulations are met.

Hearing Process and Role of the CVCA's Watershed Advisory Board

When an application for development does not conform to the CVCA policies, CVCA staff cannot grant permission. The applicant then has the ability to request a Hearing with the CVCA's Watershed Advisory Board. The Watershed Advisory Board is tasked with reviewing the application for development, considering the applicable CVCA policies that have not been satisfied, and ultimately making a decision as to whether the application is consistent with the tests of the *Conservation Authorities Act*.

Tests of the *Conservation Authorities Act*

Permits

28.1(1)

An authority may issue permission to a person to engage in an activity specified in the permit that would otherwise be prohibited by section 28, if, in the opinion of the authority,

(a) the activity is not likely to affect the control of **flooding**, erosion, dynamic beaches or unstable soil or bedrock;

(b) the activity is not likely to create conditions or circumstances that, in the event of a natural hazard, might jeopardize the health or safety of persons or result in the damage or destruction of property; and

(c) any other requirements that may be prescribed by the regulations are met.

The CVCA Watershed Advisory Board may grant or refuse permission. Permission may be granted with or without conditions. The applicant will receive written notice of the decision. **The notice of decision must state the reasons for which the application was either approved or refused.** If the authority, after holding a hearing, refuses a permit or issues the permit subject to conditions, within 90 days after receiving the reasons for the authority's decision, the applicant may appeal this decision to the Ontario Land Tribunal.

Staff Conclusion

Hazard land management was delegated by the Province to the CVCA through the administration of the *Conservation Authorities Act* and *Ontario Regulation 41/24*. Through the administration of the Act and Regulation, CVCA staff review



development proposals in an effort to limit development and protect people and property in flood susceptible areas and in areas that could interfere with the hydrological function of a wetland.

Overall, it is the goal of CVCA to protect people and their property in areas susceptible to natural hazards such as flooding and other areas where development could interfere with the hydrologic function of wetlands. Deviation from the policies represents a risk that requires careful consideration. The proposal requires a permit from the CVCA pursuant to the *Conservation Authorities Act* and *O. Reg. 41/24*, and does not conform to the CVCA's Watershed Planning and Regulations (*O. Reg 41/24*) Policy Manual. Limiting development proposals such as this is intended to minimize the risk of property damage/loss and investment in an area that is susceptible to natural hazards. As such, staff are not in a position to grant permission for the proposed development activity.

Administrative Policies

The following sections speak to over-arching policies that every application must be tested against. Areas subject to the regulation include lands adjacent to the wetlands and hazardous lands.

These policies are as follows:

General Regulation Policies

- 3.8.1** *That development, interference or alteration will not be permitted within a regulated area, except in accordance with the policies contained within this document. In the event of a conflict between the policies applicable to the development, interference or alteration, the most restrictive policy shall apply*
- 3.8.2** *That notwithstanding Policy 3.8.1, the CVCA's Board of Directors may grant permission for development, interference and/or alteration where the application provided evidence acceptable to the Board of Directors that documents the development and/or activity will have no adverse effect on the control of flooding, erosion, and unstable soil or bedrock with respect to river or stream valleys, hazardous land, wetland and areas of interference, or result in unacceptable interference with a watercourse or wetland.*
- 3.8.4** *That notwithstanding Sections 3.8.1, 3.8.2 and 3.8.3, where there is an existing vacant lot of record, (including an infill lot), no new development will be permitted where the lot has no safe access, or is entirely within one or more of the following:*
- a) **the flood hazard** (One Zone Policy Area), or erosion hazard of valley and stream corridors, other hazardous lands;*
 - b) a wetland; or*
 - c) any natural features, areas and systems contributing to hydrologic functions.*

Conformity: The entirety of the subject property is within the flood hazard of Beaver Creek.

- 3.8.7** *That notwithstanding supplementary policies or stand-alone policies as specified in Sections 4.0 through to and including 7.0, development within a regulated area shall be set back the greater of the following:*
- a) Valley and Stream Corridors: 6-metres from the long-term stable top of slope, stable toe of slope, meander belt and any contiguous natural features and areas that contribute to hydrologic functions;*
 - b) **Natural Hazards: 6-metres from the extent of a hazard;***
 - c) **Wetlands: 30-metres from provincially significant wetlands and wetlands greater than two hectares and 15-metres from all other wetlands; and***
 - d) Setbacks based upon the results of a comprehensive environmental study or technical report completed to the satisfaction of the CVCA.*

Conformity: The proposed development activity is 6-metres from a wetland greater than two hectares and within the flood hazard of Beaver Creek.



Hazardous Lands Policies

This component of the Regulation applies to development within hazardous lands which is defined under Section 28 of the *Conservation Authorities Act* as land that could be unsafe for development due to naturally occurring processes associated with flooding, erosion, dynamic beaches, or unstable soil or bedrock.

General Flood Hazard Policies

5.2.1 *Development within the Regulatory floodplain shall not be permitted*

Conformity: The proposed development activity is within the flood hazard associated with Beaver Creek.

5.2.7 *Development within the Regulatory floodplain on vacant lots of record shall not be permitted.*

Conformity: The subject property is vacant and is located within the flood hazard of Beaver Creek.

Specific Policies for Flooding Hazards

5.3.1.1 *New residential development (single and/or multiple) will not be permitted within a flooding hazard, regardless of previous approvals provided under other regulatory process (e.g. Planning Act, Building Code Act, etc.)*

Conformity: The proposed development activity is within the flood hazard associated with Beaver Creek.

5.3.10.1 *Fill placement and or excavation for the purpose of changing the grade on a property within the flood hazard for the purpose of permitting development will not be permitted.*

Conformity: The proposal will require the grade within the flood hazard of Beaver Creek to be changed.

General Policies for Wetlands

7.3.2 *In general, there shall be no development or interference within 30-metres of Provincially Significant Wetlands and wetlands greater than two hectares.*

Conformity: The proposed development is 6-metres from a wetland greater than two hectares in size

7.3.2.1 *For Provincially Significant Wetlands and wetlands greater than two hectares, a 15-metre vegetative buffer from the edge of the wetland boundary shall be encouraged to protect the wetland from surface runoff which could impact the area and/or hydrologic function of the wetland.*

Conformity: The proposed development activity is 6-metres from a wetland greater than two hectares. The Environmental Impact Statement prepared by Oakridge Environmental lists potential impacts to the wetland, including but not limited to:

- *Displacement and/or degradation/alteration of the on-site wetland vegetation communities/hydrological feature.*
- *Excavation into the highwater table on the subject property, intersecting groundwater that naturally discharges to the surface resulting in concentrated flows rather than diffuse flows downgradient of the existing cleared area of the subject site, draining to the adjacent creek/PSW feature. The excavations could also alter drainage patterns within the on-site wetland habitat altering the moisture regimes in this area, directly impacting the downgradient wetland vegetation outside of the proposed building envelope.*
- *Permanent loss of wetland habitat on-site in the area where the building envelope is proposed to occur.*
- *Alteration of thermal gradients within the shallow groundwater should the subsurface flows be intersected by construction equipment, resulting in discharge to surface as concentrated flows rather than diffuse flows within the on-site wetland vegetation, thereby impacting potential fisheries spawning associated with Beaver Creek.*
- *Potential impacts related to potential flooding in the Beaver Creek/PSW system during the freshette/peak flow season rising to the level of the proposed development components.*

Development within the Setback (Buffer) of a Wetland

7.4.2.1 *Development shall not be permitted within the setback of a wetland on vacant land.*

Conformity: The subject lands are vacant and the proposed development activity within the setback of a wetland greater than two hectares.



Summary

The proposed development activity does not conform to the CVCA's Watershed Planning and Regulations policies because:

- The proposed development activity is located within the flood hazard of Beaver Creek
- The proposed development activity is located within the setback of a wetland greater than two hectares.

The application **does not conform** with the CVCA's Watershed Planning and Regulations policies and is likely to affect the control of flooding and could have an impact on the hydrological function of the wetland.

Appendix A
Permit Application



Date Received

109/24.

Jul-02/24.

PERMIT APPLICATION FORM

FOR A DEVELOPMENT, INTERFERENCE WITH WETLANDS AND ALTERATIONS TO SHORELINES AND
WATERCOURSES PERMIT (CONSERVATION AUTHORITIES ACT - ONTARIO REG. 159/06)
Please provide the completed Permit Application Form to info@crowevalley.com

Contact Information (please print clearly and legibly)

Property Owner's Name(s):

Mailing Address (Street, P.O. Box)

City

Postal Code

Telephone: Home

Work

Mobile

Email

Agent's Name(s):

**property owner's letter of authorization or signature to be attached*

Mailing Address (Street, P.O. Box)

City

Postal Code

Telephone: Home

Work

Mobile

Email

Is the Owner aware of this application? Yes ☒ If No Please explain: _____

Have you contacted the municipality/township to determine if a Planning Act Application is required? Yes ☐ No ☐

Is a Planning Act Application (minor variance or zoning by-law amendment) required for the proposed development? Yes ☐ No ☐

Location of Proposed Works (please ensure a map and driving directions are attached)

Lot

Concession

Municipality

Part of Lot 13

5

Township of marmora, County of Hastings

Civic Address (i.e. 70 Hughes Lane)

Assessment Roll Number (can be found on your tax bill)

Watercourse/Waterbody (i.e. Belmont Lake, Crowe River, creek)

Creek

Existing Land Use (vacant, residential, etc.)

Proposed Land Use

Vacant

Cottage

The processing fee will be determined by the Conservation Authority. The site plan and application **MUST** include the following:

1. General location of property in relation to roads, shoreline, natural features, etc.
2. **Location and dimensions of all existing structure(s) on property and a site plan with lot dimensions.**
3. Location of any waterway, open water, wetland, steep slope on or near the property and any drainage features (ditches/culverts).
4. Intended location and dimensions of fill, construction, or waterway alteration proposed.
5. Cross-section of proposal showing existing and final grade with elevations from the current water level of any nearby waterway, and elevations of the lowest structure(s) opening if applicable.
6. Current photographs of the property (shoreline, area of proposed development, etc.) with no snow on the ground.

Proposed Works (please complete all sections that apply)

Section A, please refer to page 7:

- ☒ Construction of a new structure
- ☐ Add to an existing structure(s)
- ☐ Renovations resulting in a change in use of an existing structure(s)
- ☐ Alter an existing structure(s)
- ☐ New dock
- ☐ Replace existing dock

Section B, please refer to page 11:

- ☒ Install Sewage System
- ☐ Place or Remove Fill Material

Section C, please refer to page 12:

- ☐ Watercourse Crossing (culvert)

Section D, please refer to page 13:

- ☐ Shoreline Protection

Section E:

If proposing a bridge, please contact the CVCA office to determine permit application requirements

- ☐ Pond Construction, clean out or repair.

Other: If you do not see your proposed active here, please contact the office for direction and information or see our website.

Please provide a detailed description of the proposed works (If there is not sufficient space below, please provide the required information on a separate piece of paper and/or in the body of your email.)

Example 1: Tear down existing one storey dwelling that is 10 metres from the shoreline of Crowe Lake. Build new two storey dwelling with covered deck and detached garage all being at least 25 metres from the shoreline of Crowe Lake.

Example 2: Replace existing septic bed in same location as existing.

Example : Complete 15 metres of shoreline protection using gabion stone.)

Building a new cottage building with a foundation and upper structure 42'x31' being 330' from the road.

Bungalow with a basement & install a septic system

I/We the undersigned hereby certify to the best of my/our knowledge and belief that all of the above-noted, attached and/or supporting documentation and information is correct and true. I/we further solemnly declare that I/we have read and fully understand the contents of this application and specifically the terms and conditions on the following page, and the declaration written below.

By signing this application, consent is given to the Crowe Valley Conservation Authority, its employees and authorized representatives to access the property for the purposes of obtaining information and monitoring any approved works pursuant to Section 28(20) of the Conservation Authorities Act.

I, (please print name) _____ declare that the above information is correct to the best of my knowledge and I agree to abide by Ontario Regulation 159/06.

Signature: _____

Date: 10/1/21

NOTE: Signature or Written Authorization of Landowner is Mandatory. Landowner authorization form follows this page.

I am the:



Owner



Agent



Contractor



Other: _____

The information on this form is being collected, and will be used, for the purposes of administering a Regulation made pursuant to Section 28 of the Conservation Authorities Act, R.S.O. 1990 C27.

NOTE: Further information and studies may be required by the Crowe Valley Conservation Authority (CVCA) in order to process this file, the cost of which will be borne by the applicant or their agent. This information may include details related to wetlands, floodplains, hydraulics, slope stability or stream systems. Once completed, all studies become the joint property of the CVCA and the landowner and the information may be used by the CVCA, its member municipalities and partners. In order for members of the public to view any studies, plans and reports related to your permit, a formal request under the **Municipal Freedom of Information Protection and Privacy Act**, RSO 1990, c.M.56, is required. Access is subject to statutory exemptions. The same is true should you wish to access any studies, plans and reports pertaining to other's permits. Insufficient information may delay the processing of your application. This application does not relieve the applicant of the obligation to secure any other necessary approvals. Fees are subject to change without notice.

If this Permit Application is to be submitted by a solicitor/ contractor/ agent on behalf of the owner(s), this Landowner Authorization must be completed and signed by the owner(s). If the owner is a corporation acting without agent or solicitor, the application must be signed by an officer of the corporation and the corporation's seal (if any) must be affixed.

Please note that the Crowe Valley Conservation Authority staff reserve the right to discuss any or all aspects of the permitting process with the property owner.

1/ We _____
Print full name of owner

Hereby Authorize _____
Print full name of Solicitor/ Contractor/ Agent)

To submit the enclosed Application of Permit to the Crowe Valley Conservation Authority and to provide any further information or material required by Authority Staff relevant to the Application of Permit for the purpose of obtaining a Permit to fill, construct or alter a watercourse in accordance with the requirements of Ontario Regulation 159/06.

Signature of Owner(s) _____ Date 1/11/24

Signature of Solicitor/ Contractor/ Agent _____ Date _____

The Applicant, by acceptance and in consideration of the issuance of this Permit Application agrees to the following conditions:

1. The Owner and Applicant agree:
 - a. to indemnify and save harmless, the CVCA and its officers, employees, or agents, from and against all damage, loss, costs, claims, demands, actions and proceedings, arising out of or resulting from any act or omissions of the Owner and Applicant or any of his/her agents, employees or contractors relating to any of the particulars, terms or conditions of this Permit Application
 - b. that this Permit Application shall not release the Owner and Applicant from any legal liability or obligation and remains in force subject to all limitations, requirements and liabilities imposed by law;
2. This Permit Application shall not be assigned or assumed by any subsequent purchaser, transferee or grantee.
3. This Permit Application does not absolve the Applicant of the responsibility of obtaining necessary permission from applicable federal, provincial or local agencies.
4. Should default be made by the Owner and Applicant in compliance with, or satisfaction of, the enumerated conditions and or submitted application, the CVCA may enter upon the property with respect to which conditional approval is granted and cause said conditions to be satisfied if necessary, the expense of which will be the sole responsibility of the Owner and Applicant.
5. The work shall be carried out as per the approved plans and specifications submitted in support of the application and as amended by the approval of this permit.
6. The Owner and Applicant agree to maintain all existing drainage pattern(s), and not to obstruct external drainage from other adjacent private or municipal lands. Changes to existing drainage pattern(s) requires permission from the CVCA.
7. The permit granted under this regulation is valid for TWO years from the date of issue and it is the responsibility of the Owner and Applicant to ensure that a valid permit is in effect at the time of works occurring.
8. The Owner and Applicant may appeal any or all of the stated conditions of the permit to the Board of the Conservation Authority.

MINIMUM APPLICATION REQUIREMENTS

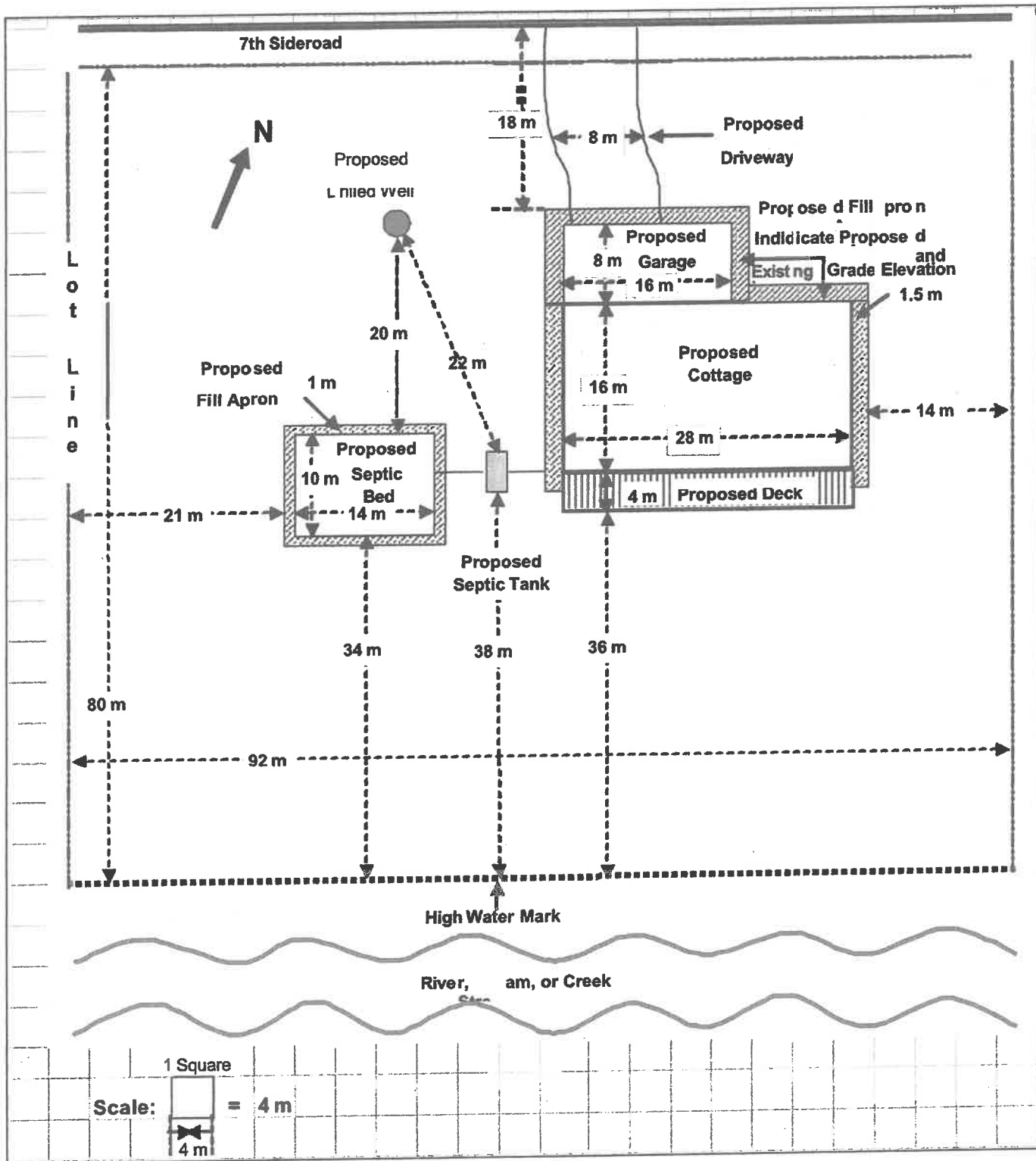
General Requirements

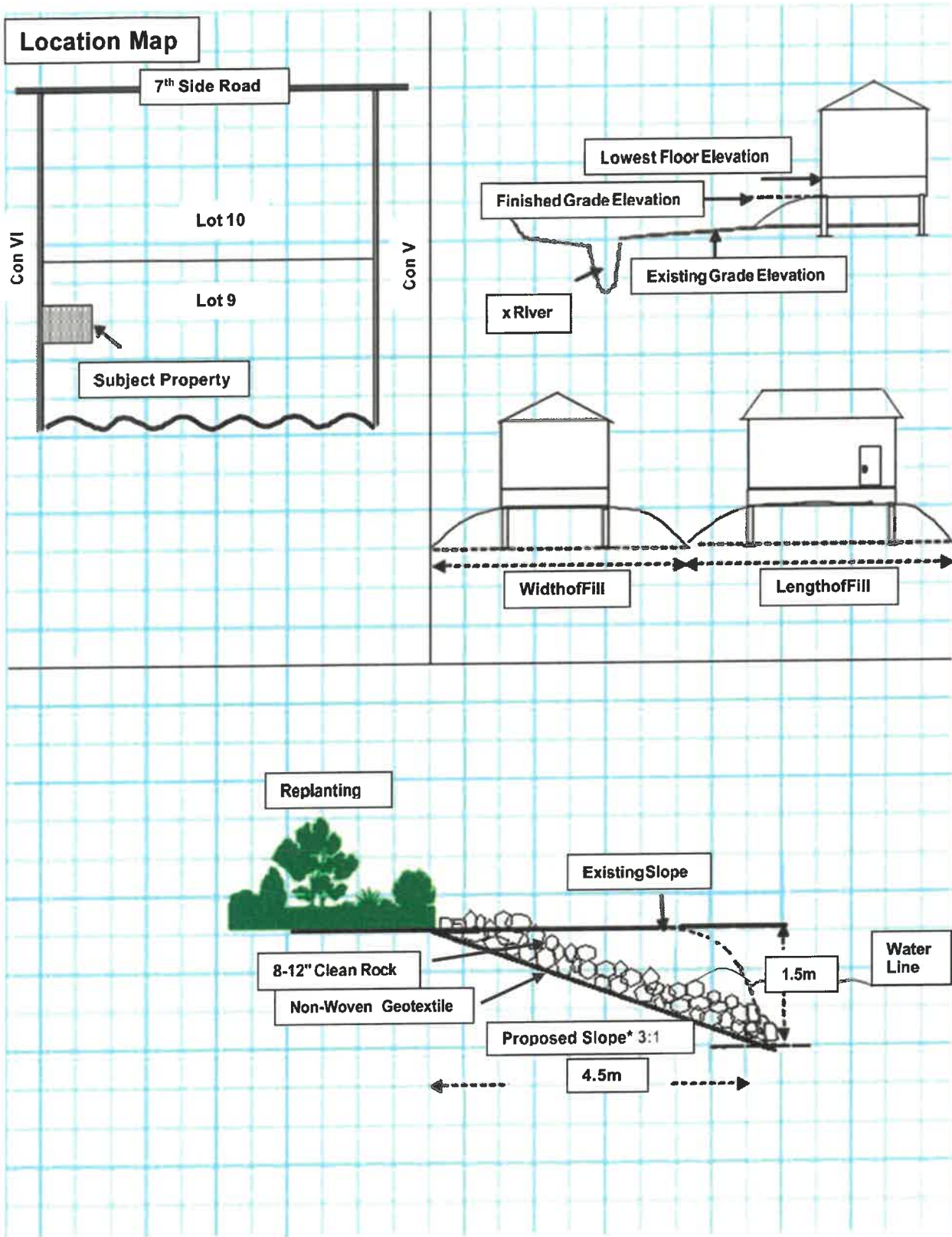
Your Checklist.

Please check off each of these items once they are completed.

☐	Completed application form signed and dated by landowner or authorized agent.
☐	Location map of subject property, and clear driving directions.
☐	Site Plan of property showing location, area and dimensions of existing structure(s), wells and septic systems to scale on the property.
☐	Location of any natural features on or adjacent to the property including: watercourses, shorelines, wetlands, ponds, drainage routes (including seasonal/annual spring flood areas), woodlots and valleys.
☐	Detailed design drawings of the proposed development (if available).
☐	Current photographs of the property (shoreline, area of proposed development, etc.) with no snow on the ground
☐	Do you own shoreline allowance? Yes ☐ No ☐ If no, please obtain a letter of permission from your municipality/township.
☐	Detailed Site Plan (accurate & legible). Please provide measurements in metres or feet (not inches or millimeters). As an example measurement should read 37 feet 4 inches or 11.4 metres not 448 inches or 11,379 mm. <i>If a site plan is not provided, your application will be considered incomplete and <u>WILL NOT BE PROCESSED.</u></i> -If renovating or replacing or adding to an existing structure(s) please provide: (1) a site plan of the existing development, (2) a site plan of the proposed development and (3) a site plan of the proposed development overlaid on the existing development on three (3) separate site plans. Should your proposed development fall within a known or potential hazard (i.e. floodplain or erosion hazard) Additional information that may be required to process a permit application includes but is not limited to: • Copy of a legal survey of the property; • Professionally prepared topographic survey, Lot Grading/Drainage Plan; • Flood Plain Analysis/Delineation Study, Hydrology/Hydraulic Analysis; • Environmental Impact Study, Planting or Vegetation Plan or Tree Retention Plan; • Hydrogeological Analysis, Fluvial Geomorphological Assessment, Meander Belt Allowance Assessment; • Stormwater Management Plan or Sediment and Erosion Control Plan; and/or, • Slope Stability/Erosion Study.

SAMPLE SITE PLAN





*Slopes must be 3:1 or gentler unless there is not enough space, the rise is less than 1m, or it is replacing a vertical wall.

Section A: Structure(s) (New or Altered).

In addition to the general requirements the following is required. If there is not sufficient space below, please provide the required information on a separate piece of paper and/or in the body of your email. If a portion is not applicable, please fill in as N/A. If it is determined that the proposed works are within the floodplain or erosion hazard additional information will be required, please see page 14.

Existing Dwelling (if applicable):

Size of main/ground level of existing dwelling. We will require both the square footage **and** footprint dimensions.
(i.e. square footage = 720 square feet, footprint = 36 foot by 20 foot):

Number of storey(s) of existing dwelling including second storey, basement (finished or unfinished), lofts, and crawlspace:

Size of additional storey(s)/loft of existing dwelling. We will require both the square footage **and** footprint dimensions

Size of basement (finished or unfinished) or crawlspace of existing dwelling. We will require both the square footage **and** footprint dimensions.

Distance from high water mark or natural feature(s), roadway, property lines, other structure(s) to existing dwelling:

Existing Deck/Porch/Veranda (if applicable):

Size of existing deck. We will require both the square footage **and** footprint dimensions.
(i.e. square footage = 144 square feet, footprint = 12 foot by 12 foot)_

Is the existing deck/porch/veranda covered ☐ or Uncovered ☐

Distance from high water mark, natural feature(s), roadway, property lines, other structure(s) to existing deck/

porch/veranda: _____

Existing Garage (if applicable):

Size of existing garage We will require both the square footage **and** footprint dimensions.

(i.e. square footage = 240 square feet, footprint = 20 foot by 12 foot)

Is the existing garage attached ☐ Detached ☐

Is the existing garage habitable? Yes ☐ No ☐

Number of storey(s) of existing garage (if applicable): _____

Distance from high water mark, natural feature(s), roadway, property lines, other structure(s) to existing garage:

Proposed Dwelling (if applicable):

Size of proposed dwelling. We will require both the square footage **and** footprint dimensions.

(i.e. square footage = 1,200, footprint = 40 foot by 30 foot)

1200 - 1400 sq ft

Number of storey(s) of proposed dwelling including second storey, basement, lofts, and crawlspace:

Bungalow with basement

Size of additional storey(s)/loft of proposed dwelling. We will require both the square footage **and** footprint dimensions:

Size of basement or crawlspace of proposed dwelling. We will require both the square footage **and** footprint dimensions.

Distance from high water mark or natural feature(s), roadway, property lines, other structure(s) to proposed dwelling:

Proposed Deck/Porch/Veranda (if applicable):

Size of proposed deck. We will require both the square footage **and** footprint dimensions.
(i.e. square footage = 300 square feet, footprint = 15 foot by 20 foot).

Is the proposed deck/porch/veranda covered ☐ or Uncovered ☐

Distance from high water mark, natural feature(s), roadway, property lines, other structure(s) to proposed deck/porch/veranda:

Proposed Garage (if applicable):

Size of proposed garage We will require both the square footage **and** footprint dimensions.
(i.e. square footage = 400 square feet, footprint = 20 foot by 20 foot)

Is the proposed garage Attached ☐ or Detached ☐

Will the proposed garage be habitable? Yes ☐ No ☐

Number of storey(s) of proposed garage, if more than one storey please provide details (i.e. loft, full second storey):

Distance from shoreline or natural feature(s), roadway, property lines, other structure(s) to proposed garage:

Section A(i): Accessory and Detached Structure(s) (i.e. boathouse(s), dock(s), shed(s), bunkie(s), etc.).
In addition to the general requirements the following is required. If there is not sufficient space below, please provide the required information on a separate piece of paper and/or in the body of your email. If a portion is not applicable, please fill in as N/A.

Existing Development (if applicable)

Size of existing development/structure(s). We will require both the square footage **and** footprint dimensions.
(i.e. square footage = 300 square feet, footprint = 20 foot by 15 foot)

Number of storey(s) of existing structure(s) (if applicable):

Distance from high water mark, natural feature(s), roadway, property lines, other structure(s):

Proposed Development (if applicable):

Size of proposed development/structure(s) We will require both the square footage **and** footprint dimensions.
(i.e. square footage = 500 square feet, footprint = 25 foot by 20 foot)

Distance from high water mark, natural feature(s), roadway, property lines, other structure(s):

Section B: Fill Placement, Grading or Sewage Systems (In addition to the general requirements the following is required)

Dimensions of the proposed fill area and the depth of fill required:

Tbd

Description of proposed fill (e.g. crushed stone, sand, and/or mix):

Tbd

Volume of fill (in cubic metres):

Tbd

New Sewage System ☒ or Replacement of Existing ☐

If replacing an existing septic system is this an emergency replacement? Yes ☐ No ☐

Size of septic tank (if applicable): Tbd

If the sewage system is a replacement system is it the same size as the existing system? Yes ☐ No ☐

If no, please explain the reason for the change in size: _____

Is the sewage system in a new location? Yes ☐ No ☐

If yes, please explain: _____

Size (footprint dimensions) of septic bed: _____

If the sewage system is replacing a failed sewage system please explain (if known) why the existing sewage system failed:

Distance from high water mark, natural feature(s), edge of roadway, property lines, other structure(s) of the proposed

sewage system: Tbd by the septic designer

Section C: Culverts and Water Crossings. In addition to the general requirements the following is required, please check off once you have confirmed you have included the below. If the proposed works is a bridge, please contact the CVCA office for permit application requirements

☐	Statement and purpose of proposed works.
☐	Drawing showing in plain view and cross-sectional detail the existing and proposed watercourse or watercourse crossing including dimensions.
☐	Location, length, diameter, type and pipe invert for any proposed culvert(s).
☐	Details of staging construction (commencement, order of works, completion, etc.) if required.
☐	Drawing showing plan view and cross-sectional detail of existing and proposed shoreline including dimensions.
☐	Site restoration plan including planting details.
☐	Details of erosion and sediment control measures to be implemented prior to commencement of work and throughout construction period.

Please provide the following information:

Drawing showing in plain view and cross-sectional detail the existing and proposed watercourse or watercourse crossing detail including dimensions.

Is it replacing an existing culvert? Yes ☐ No ☐

If yes, reason for culvert replacement: _____

Is the proposed culvert in the same location as the existing culvert? Yes ☐ No ☐

If the proposed culvert is in different location, please provide details:

Length of existing culvert: _____ Diameter of existing culvert: _____

Length of proposed culvert: _____ Diameter of proposed culvert: _____

Type and pipe invert for any proposed culvert(s):

Same Number of Culvert(s)? Yes ☐ No ☐

If no, please provide number of new culverts, sizes and reason for change:

Details of any proposed fill (i.e. rip rap) to be placed around culvert:

Length: _____

Width: _____

Volume: _____

Please provide a detailed de-watering plan: _____

Section D: Shoreline Works. In addition to the general requirements the following is required.

****Photographs of the shoreline are required (no snow), demonstrating that active erosion is taking place****

Have you considered a natural shoreline (i.e. planting of native plants, targeted placement of rocks, bioengineering)?

Yes ☐ No ☐ , if no please explain why: _____

Please explain, in detail, the erosion concern(s) you or your client are experiencing and why hardening of the shoreline is proposed: _____

Total length of shoreline: _____

Total length of shoreline with active erosion: _____

Total length of proposed shoreline works: _____

Height of existing shoreline embankment: _____

Height of proposed shoreline embankment: _____

Type of material (i.e. gabion stone, boulders): _____

Volume of material (cubic metres): _____

Is the material going on non-woven geotextile material? Yes ☐ No ☐

Will the proposed works maintain the existing contours and height of the shoreline embankment? Yes ☐ No ☐

If no, please explain: _____

Please indicate the proposed slope (check all that apply). Below we are requesting information on the proposed slope measured as run over rise, i.e. 3 Horizontal feet for every 1 foot of Vertical rise.

3H:1V or gentler ☐ 2H:1V ☐ 1H:1V ☐ Existing Retaining Wall Replacement ☐

Replacement of existing retaining walls exceeding two tiers (greater than one metre in height) will require engineered drawings. New retaining walls are not permitted.

Please note: Bioengineering combines structural engineering principles with the use of vegetation for shoreline stabilization and erosion control. Hard material such as rocks, boulders, and armour stone do NOT qualify as bioengineering

Requirements for Development within the Floodplain and Erosion Hazard

New development will not be permitted within hazardous lands unless the proposed development is replacing an existing development or development that by its nature is within hazardous lands (i.e. docks by their nature are within the flood and erosion hazard). Development within hazardous lands that cannot be moved outside of the hazard will be subject to current CVCA Board Approved Policies (i.e. size limitations, floodproofing, additional engineering requirements, etc.).

Floodplain

If it has been determined that your proposed development is within the floodplain additional information and requirements will be requested as part of your permit application. Size restrictions will also be applied. As part of a complete application for development within a floodplain the CVCA will require the following:

- The applicant will have to demonstrate that there is no feasible alternative outside of the flood hazard. If there is room to move outside of the floodplain the existing footprint will not be honoured regardless of other approvals such as the Planning Act.
- An elevation survey, completed by an Ontario Land Surveyor, showing the following:
 - o Plot the 1:100-year floodplain in CGDV28 (please contact the CVCA office for the regulatory flood elevations)
 - Spot elevations (in 2m by 2m grid pattern.)
 - o Plot the 6 metre setback from the floodplain
 - o Elevations of the proposed build footprint taken in an "X" pattern (four corners and center)
 - o Elevations of the finished floor elevation of the main level, finished floor elevation of the crawlspace or basement and lowest opening into the proposed structure(s). Please see table below for floodproofing requirements.
 - o Elevations of the lowest level opening and finished floor elevation of existing structures (if applicable)

The minimum standards for floodproofing are based on the Regulatory Flood elevation. The following table depicts the minimum elevations for various features and structure(s):

Opening into structure(s)	Regulatory flood elevation +0.3m
Basement Floor	Regulatory flood elevation -1.0m
Fill places around buildings and structure(s)	Regulatory flood elevation
Electrical and Heating circuits	Regulatory flood elevation +0.3m
1st floor (main) on raised buildings and structure(s)	Regulatory flood elevation +0.3m
Access roads, parking areas	Regulatory flood elevation -0.3m
Pedestrian Access	Regulatory flood elevation -0.8m

Erosion Hazard

If it has been determined that your proposed development is within the erosion hazard additional information and requirements will be requested as part of your permit application. Size restrictions will also be applied. As part of a complete permit application for development within the erosion hazard the CVCA will require the following:

- The applicant will have to demonstrate that there is no feasible alternative outside of the erosion hazard (if there is room to move outside of the erosion hazard the existing footprint will not be honoured regardless of other approvals such i.e. the Planning Act).
- If there is no alternative outside of the erosion hazard, a geotechnical assessment, completed by a qualified professional, may be required to include the following:
 - o Toe erosion allowance
 - o Stable slope allowance
 - o Erosion access allowance. A minimum erosion access allowance of 6 metres is used from the top of stable slope (after accounting for toe erosion).
 - o A cross section showing the top of slope (after accounting for toe erosion)
 - o Completion of a slope inspection record and a slope stability rating chart (Tables 4.1 and 4.2 from the MNR Technical Guide – River & Stream Systems: Erosion Hazard Limit (2002). The results of these findings will determine the level of investigation required.
 - o Potential impacts of the proposed development on neighbouring properties
 - o Design bearing values
 - o Caisson/pile/foundation designs
 - o Potential for settlement
 - o Potential causes of instability
 - o Safe slopes of banks and excavation walls
 - o Soil stabilization methods and comparison of benefits
 - o Relation of hazards to proposed development
 - o Long-term stable slope crest position and inclination
 - o Factor of safety
 - o Failure surfaces
 - o Methods for soil erosion/sedimentation control
 - o Methods for minimizing impacts on vegetation and root systems

Appendix B

Historic CVCA Correspondence

Shaw Webmail

fmwilkes@shaw.ca

Fwd: 199B Wilkes Settlement Lane Marmora

From : Florence Wilkes <fmwilkes@shaw.ca>
Subject : Fwd: 199B Wilkes Settlement Lane Marmora
To : Orchidstaginganddesign <Orchidstaginganddesign@gmail.com>, Evanmwv <Evanmwv@live.com>

Tue, Jan 16, 2024 10:56 AM

External images are not displayed. [Display images below](#)

Hi Stacey and Evan:

Here where they, Crowe Valley said yes we can build. I think this and the stuff I will send will have you get a permit with no problem.

Love Marlene

From: "Robert cole" <robert.cole@crowevalley.com>
To: "Florence Wilkes" <fmwilkes@shaw.ca>
Sent: Friday, October 25, 2019 9:50:06 AM
Subject: RE: FW: 199B Wilkes Settlement Lane Marmora

Hey Florence,

Reviewing the map and the letter I can state that it definitely satisfies my requirements. They put the 30m setback from the floodplain, but from the CA Act you only have to be set back 6m (~20') from the floodplain. As such there is ample room on the property for the construction of a dwelling and septic, and depending on size and configuration other accessory structures may be possible. Please keep in mind that if you were to elect to have a basement on this location the lowest point of entry must be 0.3m above the flood elevation of 183.88MASL and would include any windows or doors into the basement.

If you used a copy of this map to make a site plan we would be able proceed with a permit.

Thanks for your patience and I look forward to working with you through the next steps!

Thanks,
Robert Cole

From: Florence Wilkes [mailto:fmwilkes@shaw.ca]
Sent: October 25, 2019 10:27 AM
To: Robert cole <Robert.cole@crowevalley.com>
Subject: Fwd: FW: 199B Wilkes Settlement Lane Marmora

Hi Robert:

Here you go.

Thank you,
Florence Marlene Wilkes

----- Forwarded Message -----

From: Martin Burger (Groundwork Engineering) <mburger@groundengineer.ca>
To: Florence Wilkes <fmwilkes@shaw.ca>
Sent: Wed, 11 Sep 2019 11:02:43 -0600 (MDT)
Subject: FW: 199B Wilkes Settlement Lane Marmora

Hi Marlene,

Please find attached letter with accompanying drawing showing the 100 year flood elevation contour based on elevation points taken throughout the property and an interpolated 30m setback line from the 100 year flood contour.

Please contact me if you have any questions.

Sincerely,

Martin Burger

Martin Burger

M.Eng., P.Eng.

Groundwork Engineering Limited

Unit 640, 654 Morris Court
Kingston, ON K7P 2R9

613-634-1789 (Office)

613-453-0738 (Cell)

mburger@groundengineer.ca

From: Timothy Farrance (Groundwork Engineering) <tfarrance@groundengineer.ca>

Sent: September 5, 2019 4:34 PM

To: Martin Burger (Groundwork Engineering) <mburger@groundengineer.ca>

Subject: 199B Wilkes Settlement Lane Marmora

Good Afternoon Martin,

Attached is the letter and drawing for the high water level on 199B Wilkes Settlement Lane Marmora, please review and forward if satisfied.

Respectfully
Tim Farrance



*Groundwork
Engineering
Limited*

4 September, 2019

Mrs. Marlene Wilkes
199-B Wilkes Settlement Lane
Marmora, Ontario

Re: 199-B Wilkes Settlement Lane – Beaver Creek High-Water Level

Dear Marlene,

On August 27, 2019, Groundwork Engineering staff transferred a third order benchmark (Cosine Station 01019826454), located on the west side of County Rd. 3, to the property known as 199-B Wilkes Settlement Lane. Utilizing GNSS surveying equipment with an accuracy of plus or minus 0.015m the 100-year high-water elevation of 183.88m was surveyed and staked out on the property.

Attached is a sketch illustrating the 100-year high-water level contour. We have also interpolated a 30m setback line from the high-water level contour. We trust this information is satisfactory for your purposes. Should you require further information, or have any questions please do not hesitate to contact the undersigned.

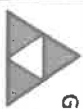
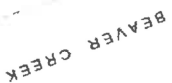
Sincerely,

Martin Burger
MEng., P.Eng.

GEOTECHNICAL • CIVIL • STORMWATER • ONSITE WASTEWATER

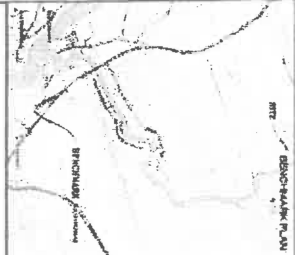
Unit 640 – 654 Norris Ct Kingston, ON K7P-2R9
Tel: (613)-634-1789

mburger@groundengineer.ca
www.groundengineer.ca



**Groundwork
Engineering
Limited**

UNIT 640 - 664 MORTIS COURT
KINGSTON, ONTARIO
OFFICE (613) 534-1769

LEONATHON PIAN
K19

No.	Item	Quantity
1	1000	1000
2	2000	2000
3	3000	3000
4	4000	4000
5	5000	5000
6	6000	6000
7	7000	7000
8	8000	8000
9	9000	9000
10	10000	10000

NO.	12-8750	STATION	12-8750
DESCRIPTION:	CLASSIFIED IN ROCK LINE WITH GRAVE W (OR COLANT NO 3) COAST STATION 0101030004		
DATE	LATE 1950S	MARINE WEIGES	

1998 WILLIAMS SETTLEMENT LANE
HIGH WATER ELEVATION

17	18
19	20
21	22
23	24
25	26
27	28
29	30
31	32
33	34
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37	38
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Appendix C

Environmental Impact Study

**Environmental Impact Statement (EIS_t)
Proposed Single Residential Development
199B Wilkes Settlement Road
Part Lot 13, Concession 5 (Marmora)
Municipality of Marmora and Lake,
County of Hastings**

Prepared For:

Stacey Wilkes
38 Loscombe Drive
Bowmanville, Ontario
L1C 3S9

ORE File No. 24-3482

October 2024



ORE
Oakridge Environmental Ltd.
Environmental and Hydrogeological Services



ORE

Oakridge Environmental Limited

Environmental and Hydrogeological Services

October 31st, 2024

38 Loscombe Drive
Bowmanville, Ontario
L1C 3S9

Attention: **Stacey Wilkes**

Re: Environmental Impact Statement (EIS_t)
Proposed Single Residential Development
199B Wilkes Settlement Road
Part Lot 13, Concession 5 (Marmora)
Municipality of Marmora and Lake, County of Hastings
ORE File No. 24-3482

We are pleased to provide this Environmental Impact Statement (EIS_t) report for the above referenced property. Our report has been completed in support of an application for a proposed single residential development consisting of a new residence being constructed on this existing lot of record.

Based on our review of the site conditions, we have revised the mapped boundary of the unevaluated wetland feature which occurs around the existing limit of the cleared/filled area within the lot. The new wetland boundary plus the required 30 m Conservation Authorities Act (CAA) setback would overlap the only upland area on the property. Therefore, a proposed development within the cleared area would not meet the CAA's requirement of maintaining any site alterations or development outside the 30 m protection zone of the regulated wetland feature. As such, our EIS_t includes a series of conclusions and recommendations that, in our opinion, would allow for single residential development to occur within the existing cleared area on the property. However, your development proposal will need to be presented to Crowe Valley Conservation Authority's Board Members as CVCA staff cannot approve a development that does not meet the CAA criteria.

Should you have any questions or require clarification, please do not hesitate to contact our office.

Yours truly,
Oakridge Environmental Ltd.

Rob West, HBSc.
Senior Ecologist

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Environmental Impact Statement (EIS_t)
Proposed Single Residential Development
199B Wilkes Settlement Road
Part Lot 13, Concession 5 (Marmora)
Municipality of Marmora and Lake, County of Hastings

1.0 Introduction

Oakridge Environmental Ltd. is pleased to present this Environmental Impact Statement (EIS_t) report in support of your application for a single residential development.

It is understood that the property is an existing lot of record, is currently vacant, and that a residence with private services is being proposed. Given the presence of wetland on the property, an EIS_t is required to support the development application and to demonstrate that the development will not result in any impacts to on-site and off-site hydrologic features.

This EIS_t was determined by Crowe Valley Conservation Authority (CVCA) to be a requirement to obtain a Permit. A Terms of Reference (ToR) was provided for the study by CVCA staff. This report assumes that an EIS_t will be acceptable, and that one (1) site inspection with the main focus being any sensitive hydrological features will be sufficient.

The following sections outline our data sources, methodologies, findings and recommendations.

2.0 Site Location and Description

The subject site is a vacant lot that is situated at 199B Wilkes Settlement Road, which occurs on a private road that accesses a gated community. The subject property has frontage on Beaver Creek and contains Provincially Significant Wetland, as well as wetland identified by Crowe Valley Conservation Authority (CVCA) staff during their site visit. A tributary of Beaver Creek is also mapped crossing the subject property (Figures 1 and 2). The site occurs within Part of Lot 13, Concession 5 (Marmora) Municipality of Marmora and Lake, County of Hastings, and has an approximate area of 1.714 ha (4.235 acres).

The property is located north of Marmora and is accessed via Cordova Road, by turning east onto Wilkes Settlement Lane and then north on Wilkes Settlement Road. The site is on the east side of Wilkes Settlement Road.

The lot contains wooded swamp conditions around the edge of the existing clearing. The existing cleared area contains some lawn species. There is a drainage swale/ditch feature along the northern edge of the clearing, within the wooded swamp edge. The

swale/drainage ditch is far too straight to be a natural feature, therefore, was likely dug long ago to capture runoff from the cleared area. There was water in the drainage ditch feature during our site inspection.

3.0 Proposed Development / Site Alteration

The current owner (applicant) is proposing to construct a single residential dwelling (approximately 1,500 sq. ft. in size) and associated services on the subject parcel. As there are no municipal services in the area, the development will be privately serviced with a private well and septic system.

The proponent indicated during a personal communication that the approximate locations of the proposed residence and private services were demarcated/identified on-site.

4.0 Policy

According to the information provided, the requirement for this study was triggered due to the proposed development occurring within 30 m of the wooded swamp associated with the Beaver Creek system which overlaps into the subject property. As such, this EIS has been scoped specifically to address any associated hydrological issues and has been formatted in accordance with Township and CVCA requirements.

On August 30th, 2024, Andrew MacIntyre from the CVCA provided the following terms of reference:

- “1. *Assessment property and nearby lands as per OWES (Ontario Wetland Evaluation System)*
 - a. *delineate and map wetland boundary*
 - b. *identify and map wetland types and quality of wetlands (weighted towards hydrological function)*
 - c. *identify and map adjacent non-wetland communities (ELC), if applicable*
 - d. *take borehole samples in cleared area and classify soils, if possible*
- 2 *Wetland impacts and mitigation recommendations*
 - a. *determine if there is a build envelope that could satisfy the CVCA’s*

- requisite 30m setback from all wetland boundaries*
- b. *assess and discuss potential impacts the proposed development may have on the wetlands*
- c. *develop mitigation recommendations (and rationale) to eliminate or minimize those impacts, which may include (not limited to):*
 - i. *adjustments to the development proposed*
 - *size of dwelling, size of septic system*
 - *use of impervious materials*
 - *type of septic system (i.e. tertiary system with less footprint)*
 - ii. *enhanced buffers*
 - *greatest buffer from wetland ranked of highest quality / value based on hydrological function;*
 - *establishment of a vegetative buffer in key areas;*
 - *planting plan*
 - *physical barriers to discourage unknowing or knowing removal of vegetation over the long term.*
 - iii. *water balance*
 - *considerations for water collection, dispersion and grading*
 - iv. *other improvements*
 - *restoration of any manmade features (i.e. trenching to north) that has impacted the hydrological regime of the wetlands / area."*

This EIS has been prepared to address the above-mentioned requirements by CVCA staff.

5.0 Topography and Drainage

The subject site occurs near the southern edge of the Precambrian Shield, immediately north of the Paleozoic limestone terrain. As such, the topography is affected by the Precambrian bedrock structure.

As illustrated by Figure 2, the subject property is situated within the valley of the

Beaver Creek system, on the west side of Beaver Creek. The total topographic relief on-site is minimal, at about 1 m. A low ridge occurs immediately west of the subject property, rising perhaps 1 m above the site. As such, runoff is likely to flow mostly to the east (toward the creek). However, an intermittent watercourse is mapped as crossing the site, entering from the western boundary along the road allowance and exiting the site via its southern boundary, ultimately conveying flows to Beaver Creek.

The large, Provincially Significant Beaver Creek Wetland occurs primarily on the east side of Beaver Creek, however, also extends a short distance on the west side, including the eastern margin of the subject property's frontage. According to the mapping, a large unevaluated wetland occurs immediately west of the site (and west of the road allowance). Some of the wetland boundaries appear somewhat linear, suggesting some alteration may have occurred historically, especially in the site area.

The preponderance of wetlands in the site area that occur at similar elevations (and lack of significant relief) are likely indicative of a shallow water table condition.

6.0 Geological Setting

As illustrated by Figure 3, the subject site is completely underlain by organic deposits associated with the various wetlands. However, the southwest corner of the site is mapped as containing coarse-textured, foreshore-basinal glaciolacustrine deposits, part of an expansive glaciolacustrine plain that extends to the south. Due to the resolution of the mapping, it is not possible to determine how much of the site is actually covered by these coarse, highly permeable deposits. It is likely that those deposits also extend below the surficial organic layer and could extend well into the site.

North and south of the site, Precambrian bedrock outcroppings and subcroppings occur widely, mapped as areas with minimal soil cover, generally referred to as "Precambrian bedrock-drift complex". These soils tend to consist of a silty sand, shield-derived till (with minor gravel) that discontinuously mantle the rock. As such, their composition will reflect the composition of the bedrock in the upgradient (i.e., "up-ice") direction from which the glacial ice advanced.

East-northeast of the site, the mapping indicates the presence of stony, carbonate-rich silt and sand till occur. This till is part of the Dummer Complex. Dummer Complex sediments have a sandy matrix supporting a coarse stony component. The coarse component is typically composed of large and angular (broken) blocks of Paleozoic bedrock limestone. The stone composition primarily reflects the underlying bedrock lithology, although can contain some granitic materials. The Dummer Complex

exhibits scattered, pitted hummocks of blocky, angular debris extending as a broad belt from Lake Simcoe to northeast of Kingston.

Figure 3 also indicates the presence of coarse, ice-contact deposits north of the site. These may be a kame type feature that could also extend below the organic layer, however, is likely truncated by Beaver Creek.

The thickness of the above soils cannot be determined from the mapping. However, from perusal of Ministry of the Environment, Conservation and Parks (MECP) well record database for the site area, we note that nearby well No. 7047950 encountered 11 m of “grey clay” above shale and granite bedrock. Another nearby well (No. 7047949) reportedly encountered 14.6 m of silt, above the granite. These data suggest that the overburden in the site area is fairly thick and not overly permeable, in contrast to the conditions suggested by the geological mapping.

7.0 Inspection Methodologies

The site has been characterized by its various vegetation communities using the methodologies included in the *Ecological Land Classification (ELC) - First Approximation and Its Applications* (1998). The 1998 Ecological Land Classification - First Approximation is a guide used by Ecologists to standardize the classification of different vegetation community types across Ontario. The classification system enables an ecologist to identify vegetation communities based on the species present, soil materials and moisture regimes.

There have been a number of updates to the ELC scheme to further refine the classification of Ecosites throughout Ontario. As a result, the 2008 *Draft ELC Guide* provides a further breakdown of the 1998 ELC Guide - First Approximation communities and includes many new communities to index from. The 2008 ELC scheme also provides a cross-reference to the 1998 guide communities. This report uses a combination of both the 1998 ELC communities (which are considered the primary vegetation communities) and the 2008 Draft ELC to supplement the vegetation community lists.

Prior to conducting the site inspections, aerial photography of the subject site was analysed to roughly delineate communities based on recognizable vegetation differences. Each identified community was subsequently inspected. Dominant vegetation types were recorded and boundaries of the various communities mapped on an air photo or utilizing a dGPS.

In addition to identifying and mapping the ELC communities, ORE staff assessed each vegetation community from the perspective of whether they are hydrologically sensitive. The vegetation survey included examination of the development footprint and immediate surrounding areas.

All wetlands are identified based on the Ontario Wetland Evaluation System (OWES). The wetland boundary has been delineated based on the 50/50 rule, whereby 50% wetland vegetation occurs on one side of the boundary and 50% upland vegetation occurs on the other. Wetland species include both groundcover shrub and tree species and a list of hydrophytic species is provided in the manual.

ORE staff use these basic principles to map the wetland boundary in addition to reviewing the shallow soils stratigraphy as a means of confirming the boundary. Wetland soils tend to not only be saturated near or at surface, they can have either organic or organic/mineralized soils. The soils can also contain mottles and gley which exemplify the high groundwater conditions. Mottles are indicated by an oxidized zone in the upper soils that suggest water levels (high water table conditions) have fluctuated within this shallow depth and gley is a “greyish” zone in the soils that often indicated a shallow groundwater table condition, whereby oxygen is depleted in the soils and continually saturated.

8.0 Site Inspection Data

8.1 Site Inspections

ORE staff attended the site on the following date:

<u>Date of Inspection</u>	<u>Temp. °C</u>	<u>Beaufort (Wind) Scale</u>	<u>Conditions Reason for Inspections</u>
September 10 th , 2024	21	2 - Light Breeze	Clear with minor cloud cover (15%). Relatively warm late summer/early fall season day. Identify ELC types based on vegetation and soils, confirm wetland boundary through hand auger/soils review. Obtain species list for flora and fauna.

Appendix A contains the list of species identified on the property during our inspection.

8.2 Ecological Land Classification (ELC)

Based on our site observations, we have determined that there is one (1) upland community/habitat on-site, and two (2) wetland/aquatic communities associated with the subject property.

Figure 4 illustrates the distribution of the on-site vegetation communities, and the off-site aquatic community. These habitats and their associated vegetation and environmental sensitivities are characterized below.

Representative photos of these communities are provided in Figure 5. Descriptions of the communities are provided below.

Upland Community:

1. Rural Property (CVR_4)

There is no description in the ELC regarding the Residential-type community.

This community includes the existing cleared areas on-site and the wetland limit (i.e. the existing road access and lawn area). The CVR_4 area contains upland non-native grasses typically observed in lawn areas of rural properties and is a residually disturbed area.

This community encompasses where the dwelling, septic system and water well are proposed to occur, and is not considered sensitive to development.

Wetland / Aquatic Community:

2. Maple Mineral Mixed Swamp Ecosite (SWM2)

The ELC states that the Maple Mineral Mixed Swamp community must possess greater than 25% tree and shrub cover, and be dominated by hydrophytic species. The swamp could undergo seasonal variability with respect to flooding (< 2 m deep), vernal ponding and short aeration periods in the mid-summer period.

This is type of wetland habitat surrounds the entire CVR_4 community clearing on the property. This wooded swamp is a mature wooded area containing Silver Maple/Freeman's Maple (*Acer X Freemanii*), Red Maple (*Acer rubra*), Eastern White

Cedar (*Thuja occidentalis*), Balsam Fir (*Abies balsamea*), Yellow Birch (*Betula alleghaniensis*) and minor amounts of Speckled Alder (*Alnus incana*) in the areas that have been recently disturbed such as the drainage ditch.

The wetland boundary is illustrated on Figure 4.

This community is part of the on-site wetland habitat and is sensitive to development.

The majority of the confirmatory surficial soils investigations was completed in this habitat to define the limits relative to the existing open area/CVR_4 area on-site. The soil probe locations are provided on Figure 4 and the soil logs are provided in Appendix B.

3. Open Water (OAW)

The ELC (2008) describes OAW as an environment containing no macrophyte vegetation and no tree or shrub cover. This ecosite tends to be dominated by plankton and has a lake trophic status.

This ecosite represents the open water habitat of Beaver Creek, which occurs adjacent to the entire eastern edge of the subject lot.

This community is part of the creek/PSW habitat and is considered sensitive to development.

9.0 Impact Assessment

9.1 General Considerations

Based on our assessment, it is our opinion that there will be potential impacts to the on-site wetland habitat and the adjacent Beaver Creek/PSW system. These are listed below:

On-site Wetland Habitat

- 1) Displacement and/or degradation/alteration of the on-site wetland vegetation communities/hydrological feature.

- 2) Degradation of the on-site wetland by filling, grading and preparation of the subject site for a single residential development.
- 3) Excavation into the highwater table on the subject property, intersecting groundwater that naturally discharges to the surface resulting in concentrated flows rather than diffuse flows downgradient of the existing cleared area of the subject site, draining to the adjacent creek/PSW feature.

The excavations could also alter drainage patterns within the on-site wetland habitat altering the moisture regimes in this area, directly impacting the downgradient wetland vegetation outside of the proposed building envelope.

- 4) Potential impacts related to construction activities, including destabilisation and denuding of the wetland vegetation by equipment accessing the proposed building construction site, should those activities extend beyond the building envelope identified by the Constraint plan in this EIS.
- 5) Permanent loss of wetland habitat on-site in the area where the building envelope is proposed to occur.

Adjacent Beaver Creek / PSW

- 6) Degradation of the subject property directly upgradient of the shoreline of Beaver Creek and the associated PSW resulting in sedimentation and water quality deterioration of this hydrological feature.
- 7) Alteration of thermal gradients within the shallow groundwater should the subsurface flows be intersected by construction equipment, resulting in discharge to surface as concentrated flows rather than diffuse flows within the on-site wetland vegetation, thereby impacting potential fisheries spawning associated with Beaver Creek.
- 8) Potential impacts related to potential flooding in the Beaver Creek/PSW system during the freshette/peak flow season rising to the level of the proposed development components.

All of the above would be in direct contravention of the Conservation Authorities Act (Ontario Regulation 41/24).

These general impact considerations are further discussed in the following sections.

9.2 Development Envelope

Our field investigations have confirmed that the main concern with respect to the construction of a new dwelling on-site is the location relative to the on-site wetland communities and Beaver Creek/PSW (as illustrated on Figure 6).

Considering that the wetland completely surrounds the existing cleared area on the subject lot, the only viable building envelope occurs within the existing cleared area. Any additional filling and grading could result in a relatively large area of filled/bare soils around the proposed dwelling being exposed to the elements, adjacent to the surrounding wetland habitat. That being said, it is expected that the construction zone can be entirely contained within the existing cleared area (proposed building envelope) for the planned dwelling, septic system, well and parking area, while limiting disturbance to the surrounding wetland conditions that dominate the property.

According to the policy requirement in Section 4.0 of this EIS, a 30 m setback should be maintained from the on-site wetland boundary and the development. However, in this case, a 30 m setback would overlap the existing cleared area. For this reason, a 30 m setback is not illustrated on Figure 6. A 30 m setback is illustrated off the PSW, however. Maintaining the 30 m or more distance to the Beaver Creek/PSW system is important as it will maintain a vegetated buffer to the open water area that is adjacent to the subject property.

Overall, the gradient between the proposed building site/disturbance area and shoreline is relatively gentle. As such, the majority of runoff will be slowed in the area of the proposed dwelling, making it more manageable during the construction and post construction phases.

Recommendations are provided in a following section to define the limits of the proposed building envelope and to mitigate impacts on the local hydrologic features.

9.3 Construction Related Impacts

In addition to the list of general potential impacts listed above, the following potential

impacts that relate to construction activities on-site need to be considered:

- equipment related impacts on the on-site wetland vegetation by filling/grading activities outside the proposed building envelope;
- erosion and sediment generated by exposed and/or disturbed soils being tracked into the on-site wetland areas by equipment operating outside the building envelope area;
- presence of construction debris and waste materials during the building stages;
- fauna, such as turtles entering the work area during construction from the Beaver Creek/PSW side of the property;
- permanent stabilization of the construction area in the post construction era as both filling and grading appear to be necessary to establish a building envelope on-site for the proposed dwelling and private services, and
- sensitivity of the site with respect to imported fill materials, invasive species and stockpiling of these materials during construction.

Recommendations are provided below to ensure that the potential for impacts relating to occupation and use of the new dwelling are minimized/mitigated.

10.0 Recommendations

10.1 Development Envelopes and Site Constraints

- Unfortunately, the existing cleared/filled/graded area is the only location available to situate the proposed building envelope outside the wetland on the subject property. This was also confirmed through consultations with CVCA staff during the August 30th, 2024 site meeting between CVCA and the property owner. Therefore, situating all of the proposed development within the existing clearing is the only way wetland loss can be avoided on this existing lot of record. As such, some concessions are necessary on behalf of the property owner to contain the overall building envelope footprint of the proposed development, as illustrated by Figure 6.

- As illustrated, the majority of the disturbance and site alteration should be confined to the existing clearing within the centre portion of the property, as it has been historically and is the only area that occurs outside the wetland. Although there is no way it to situate the proposed development outside the 30 m setback off the on-site regulated wetland feature, it is the only feasible location within the property to target a development that is both outside the wetland and greater than 30 m from the limit of the mapped Beaver Creek/PSW boundary.
- As per our discussions with CVCA staff, they recommended the EIS discuss limiting the development within the existing clearing and include recommended mitigation measures that would prevent impacts to the function of the wetland and Beaver Creek/PSW system.
- CVCA staff stated during the site meeting with the property owner and reiterated the decision during discussions with ORE staff that they would not be in a position to permit a development within the cleared area on the subject property due to its inability to meet the required 30 m setback for a regulated wetland feature, as per the Regulation. Therefore, the property owners will need to bring their application before the Crowe Valley Chair and Board Members to determine whether the concessions and mitigation warrant approval of the proposed single residential development.

According to Figure 6, the development will meet certain CVCA criteria with respect to maintaining a 30 m distance or more to the interface of Beaver Creek and mapped PSW boundary. In addition to maintaining a minimum 30 m vegetated buffer zone to the creek/PSW, a 6 m setback from the clearing limit shall be applied to the septic system and proposed dwelling to centralize these development elements within the fill. The grading and filling can occur beyond the 6 m limit, however, the limit of the fill must be entirely within the existing opening, which means no additional vegetation or tree removal can occur on-site. The 6 m setback is meant to serve as a gradual/slope transition area between the centralized development areas and the on-site wetland to prevent steep slopes at the fill edge. The proponent(s) would have to utilize the existing road access - it may be possible to apply clean fill to the existing clearing and road access to maintain runoff drainage, however, the fill materials cannot exceed the existing vegetation limit identified on Figure 6.

- To meet the Ontario Building Code for Septic Systems in Ontario, a 15 m setback

has been applied to those areas along the northern edge of the existing cleared area where water was observed to be pooling at the base of the fill limit's slope. The 15 m setback is illustrated on Figure 6, the Township's Building Department can provide more content in this regard.

- The on-site wetland is the primary constraint on the subject property. The only upland area that remains outside the wetland habitat is approximately 0.353 ha (0.872 acres).
- ORE recommends the following mitigation measures to off-set not being able to maintain a 30 m setback from the on-site wetland/ hydrological feature on the property.
 - ▶ Reduce the overall size of the combined dwelling structure to only what is needed (the proponent stated they are requesting to build up to 1,500 sq. ft., which is a reasonable/feasible sized dwelling for this property).
 - ▶ Reduce the overall size of the septic system to minimize the footprint and fill materials necessary to construct the unit. This could include construction of a filter bed or the inclusion of a tertiary treatment unit.
 - ▶ If additional floor space is determined to be needed either during this application process or in the future, the additional floor space could only be achieved by elevating the dwelling structure to a 2nd level. The additional space cannot be obtained by increasing the floor space on the ground level beyond 1,500 sq. ft.
 - ▶ Compensate with shrub and/or tree plantings in the remaining open areas around the perimeter of the cleared area of the property to improve the quality of the wetland. The plantings should be located towards the entrance of the property, along the edge of the existing laneway and around the perimeter of the existing opening where machinery has damaged the wetland vegetation in these areas.
 - ▶ Allow the areas around the perimeter of the existing clearing to grow-in naturally (i.e., do not mow the groundcover or remove the vegetation outside the fill placement limit/building envelope,

thereby allowing these areas to become a naturalized wetland again, excluding a pathway to access Beaver Creek/PSW.

- ▶ It may be necessary to construct some small crossings to span low-lying drainage features between the building envelope and the shoreline of Beaver Creek. The trail should not exceed 2 m wide.
- ▶ Use woodchips as a base to create a walkway down to the shoreline and docks.
- ▶ Construct either a slab-on-grade or partially in-ground dwelling (depending on fill levels) to keep the base outside the water table of the on-site wetland habitat, thereby not impacting the hydrologic function of the on-site wetland.
- ▶ Minimize the amount of fill being placed on-site to only what is necessary to elevate the proposed dwelling structure and for construction of the septic system.
- ▶ Locate the dwelling and septic system entirely within the existing clearing to retain the form of the on-site wetland and buffering capacity/separation distance of 30 m or more from the shoreline of the creek/PSW. By maintaining this distance, it will protect the natural function of the creek/PSW such as fisheries and other biota associated with this adjacent hydrological feature.

By applying the above mitigation/concessions into the development plan, the form and function of the on-site wetland and Beaver Creek/PSW system will remain unchanged and in a natural state in the post construction era.

Additional mitigation / recommendations not discussed during the discussions with CVCA staff:

- In addition to the above-mentioned mitigation measures, ORE staff recommend planting thirty (30) new native trees/shrubs (bare-root whips or plugs) within the areas impacted by machinery that imposed on the wetland habitat to construct the drainage ditch, etc. The plantings will offset the minor loss of wetland vegetation as a result of constructing the road access and filling the existing opening to its existing level in the clearing. The trees/shrubs will also enhance the property with respect to erosion-stabilization while improving the buffering

capacity for runoff and/or potential shallow groundwater flows/seepage in the area around the limit of the existing cleared/proposed building envelope.

The trees would aid in the uptake of non-point source nutrients/pollutants from the proposed development. Eventually, these planted trees would cast seeds of the native wetland trees/shrubs elsewhere within the wetland, which should be allowed to naturally germinate/succeed.

The smaller stock should be obtained from a reputable nursery and cannot be transplanted from any nearby woodland habitats. The stock should be distributed around the perimeter of the clearing where the machinery historically impacted the wetland vegetation allowing them to grow to their full potential. ORE staff can provide recommendations in this regard.

10.2 General Design Considerations

- The site plan should illustrate which native trees/shrubs will be planted on-site to enhance those areas outside the clearing where equipment imposed upon this feature. It may be best to target the majority of the trees/shrub plantings within the meadow marsh habitat on the property, while allowing the wetland groundcovers to naturalize beneath the planted stock. The planted trees/shrubs can become part of the landscaping plan.
- All recommended erosion controls should be installed prior to commencing any work on the property to reduce sprawl of any imported fill materials beyond the building envelope/existing cleared area defined on Figure 6. The prescribed trees/shrubs to be planted on the property will help stabilize the soil/slopes between the existing opening and wetland to reduce erosion effects. Vegetation/seed/sod must be established on any/all bare soil areas by the end of the construction. The works cannot be considered complete until all surfaces are stable. The Site Plan should illustrate how all surfaces/grades will be stabilized/finished.

10.3 Construction Mitigation

- Proper erosion/sedimentation controls will be required at all times while heavy equipment operates at the site. Heavy-duty silt fence (Appendix C) should be installed around the entire perimeter of the work zone/building envelope, as illustrated by Figure 6. Construction should not continue during heavy precipitation events. After these events, the fence should be checked to ensure

its effectiveness.

- The heavy-duty silt fence provides a solution to mitigate sheet runoff, not concentrated flows. Therefore, if a concentrated flow results from a precipitation event during construction (not anticipated), another type of erosion/sedimentation control, such as a rock check dam that incorporates stone and geotextile filter cloth to prevent sediment laden runoff from entering the sensitive watercourse features, should be utilized. The contractor or owner should illustrate any such controls on their Site Plan.
- To ensure the development does not advance any closer than necessary to Beaver Creek and the PSW, the building envelope/fill limit should be clearly demarcated on-site by installing a heavy-duty silt fence, as illustrated by Figure 6. This will prevent the construction crew from unnecessarily increasing the overall disturbance footprint within some of the areas where machinery imposed on the on-site wetland. The heavy-duty silt fencing will ensure that any loose/unconsolidated materials associated with the placement and grading of the fill material will not migrate beyond this limit, thereby protecting the form and function of the on-site wetland and downgradient Beaver Creek/PSW.
- As there is a potential for turtles to occur within Beaver Creek during the growing season (e.g., Snapping Turtle), the heavy-duty silt fence will not only serve as a building envelope boundary, it will serve as a turtle exclusion fence, as recommended by the Ministry of Natural Resources and Forestry (MNR). Light-duty fence is not considered an exclusion fence material, as large turtles such as Snapping Turtle could dig beneath the fence or potentially push the fence over.
- Only clean fill should be imported to the site. The fill should not contain organic materials such as plant debris or topsoil that may contain exotic or invasive species that could out-compete native species along the lakeshore. Screened topsoil should be the only material applied to top-dress the fill. Any imported materials that are stockpiled on-site (not within the building envelope) should be surrounded by heavy-duty silt fence until the materials are applied to the building envelope. The fence will also prevent species such as turtles from leaving Beaver Creek to nest within the loose unconsolidated materials during construction. This time of year (when the report was written) is the best time of year to fill and grade the site as turtles are overwintering in their respective

habitats. Similarly, any snakes species that may occur in the general vicinity of the subject property would not be mobile/overwintering during this period and avoided.

- The contractor should ensure their machinery is clean as per the Clean Equipment Protocol for Industry (May 2016) to prevent species such as European Common Reed (*Phragmites australis*), which could impact the drainage ditch and areas impacted beyond the limit of the cleared areas on-site by machinery.
- Absolutely no construction equipment should be operated beyond the construction/work zone limitation, nor should equipment grade any new swales or other drainage works on-site to direct water toward Beaver Creek. The building envelope should maintain radial-type runoff flows to avoid any concentrated flow conditions within the on-site wetland. All equipment must remain within the area designated for construction (to be outlined by the heavy-duty silt fence).

10.4 Closing Remarks

The subject property is an existing lot of record which the property owners obtained not knowing that the entire property contained wetland vegetation. That being said, they are prepared to work within the existing cleared/filled limit/extents to retain the form and function of the on-site wetland habitat as much as possible. This is in addition to maintaining the 30 m setback/vegetation protection zone off Beaver Creek (and the associated Provincially Significant Wetland) to ensure the overall form and function of the wetland habitat is retained.

Therefore, it is our opinion that the applicant should be granted a Building Permit and CVCA Permit for the purpose of constructing a new single residential dwelling and private services on the subject property, provided the mitigation measures recommended herein are adhered to.

The proponent should recognize that this Environmental Impact Statement provides recommendations pertaining only to natural environmental issues. Other issues related to Land Use Planning, servicing and/or Engineering may also need to be addressed with respect to any future application(s) and/or development plans.

ORE staff anticipate that it will be necessary to request a CVCA Board Hearing

regarding this proposal, as per the comments provided during the on-site meeting. Once the proponents have a complete application, they should schedule a date for the hearing. If needed, ORE staff can attend and discuss the site condition findings and our recommendations/mitigation as outlined in this report.

Should the Board approve the application, the proponent should obtain all required permits from the agencies prior to commencing any alterations/construction on-site. Failure to do so may result in delays and/or other liabilities.

****End of *Scoped* EIS Report****

Yours truly,
Oakridge Environmental Limited

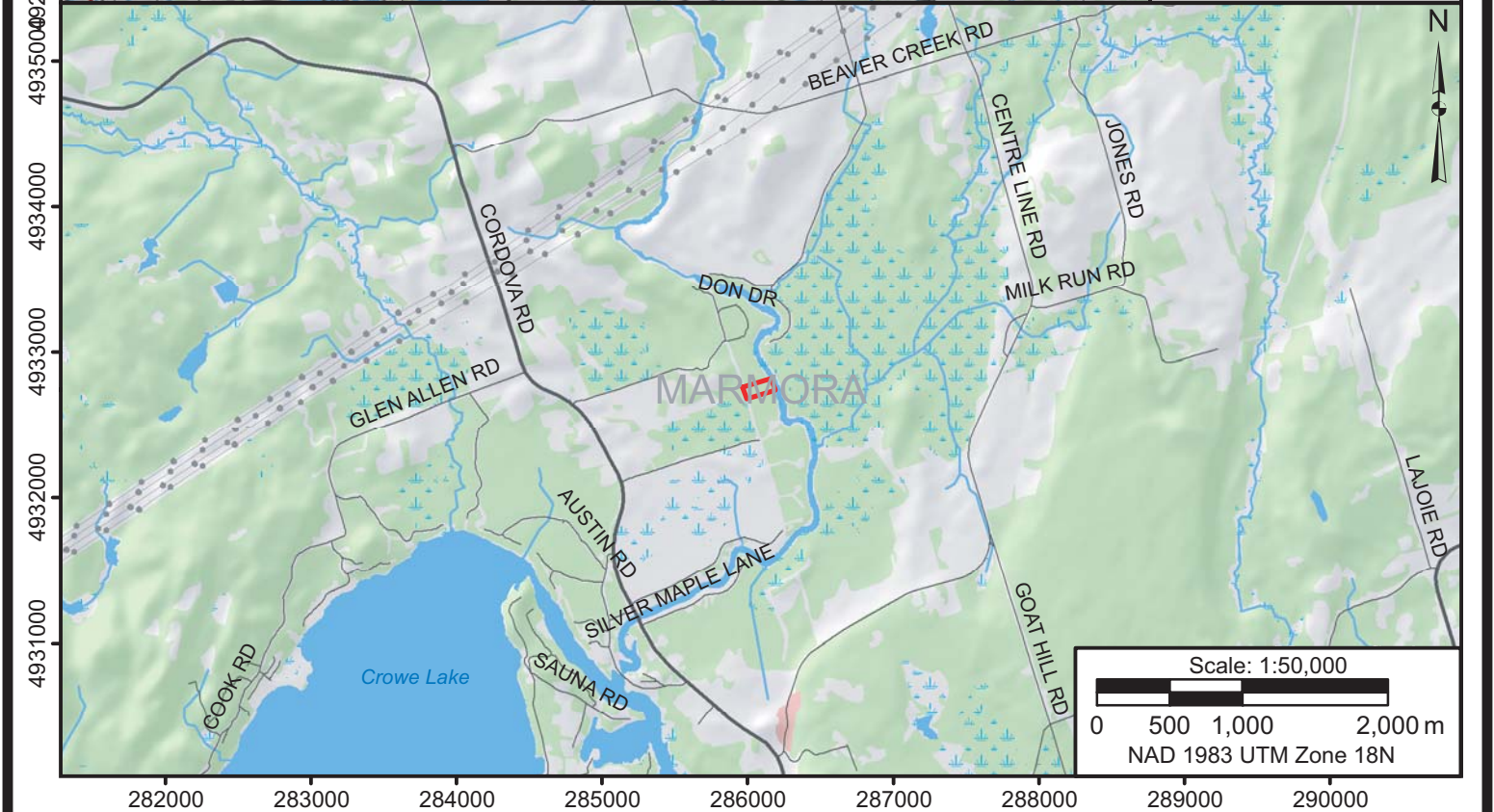
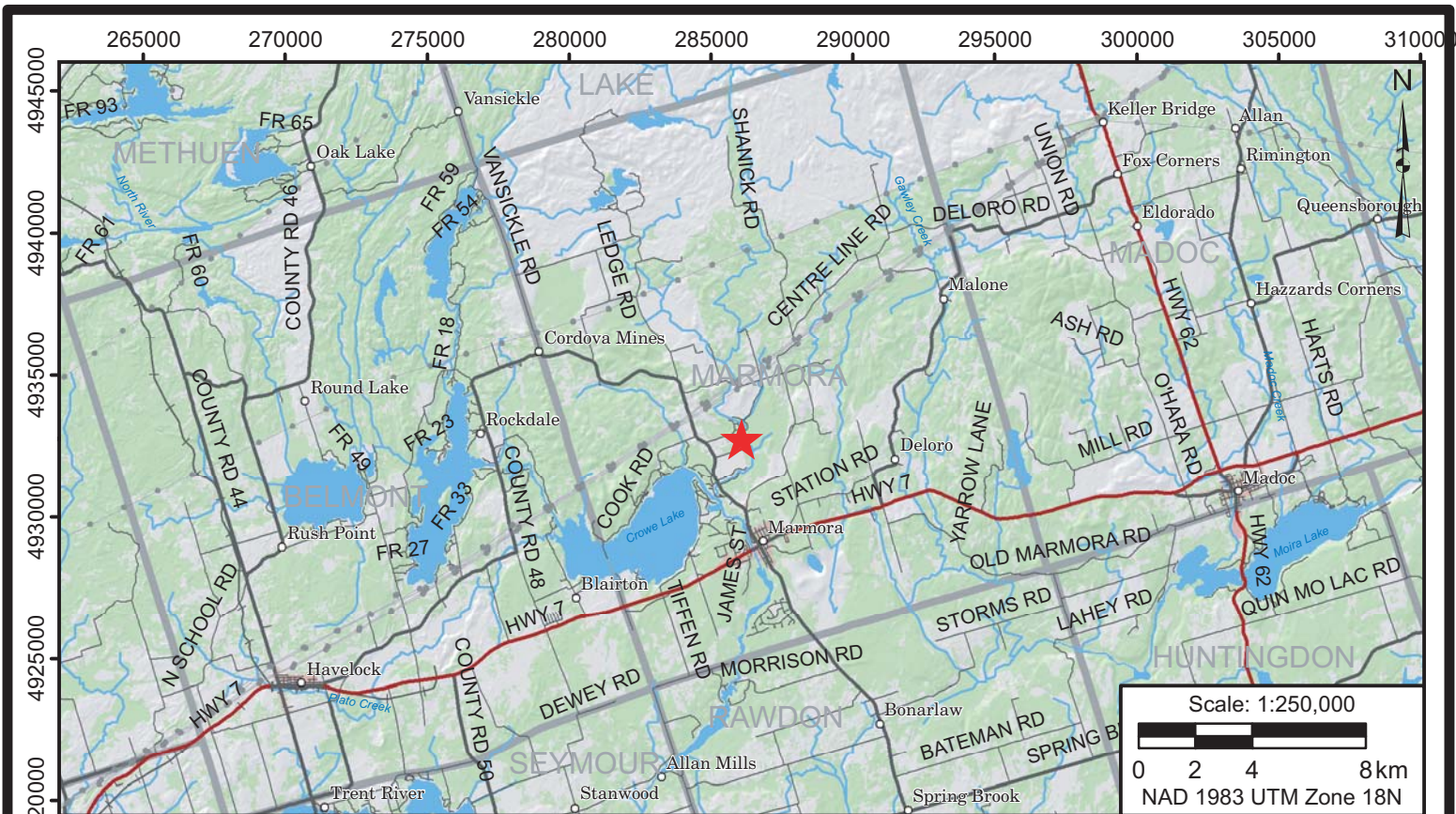


Rob West, HBSc.
Senior Ecologist

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Figures



Approximate Site Location: ★

Environmental Impact Statement (EIS)
Proposed Single Residential Development
199B Wilkes Settlement Road
 Part Lot 13, Concession 5 (Marmora)
 Municipality of Marmora and Lake,
 County of Hastings

North American Datum (NAD) 1983

TITLE

General Location

Notes:
 Base mapping provided by the Ontario Ministry of
 Natural Resources and Forestry (MNRF) Land
 Information Ontario (LIO) database, copyright
 the King's Printer

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PROJECT #

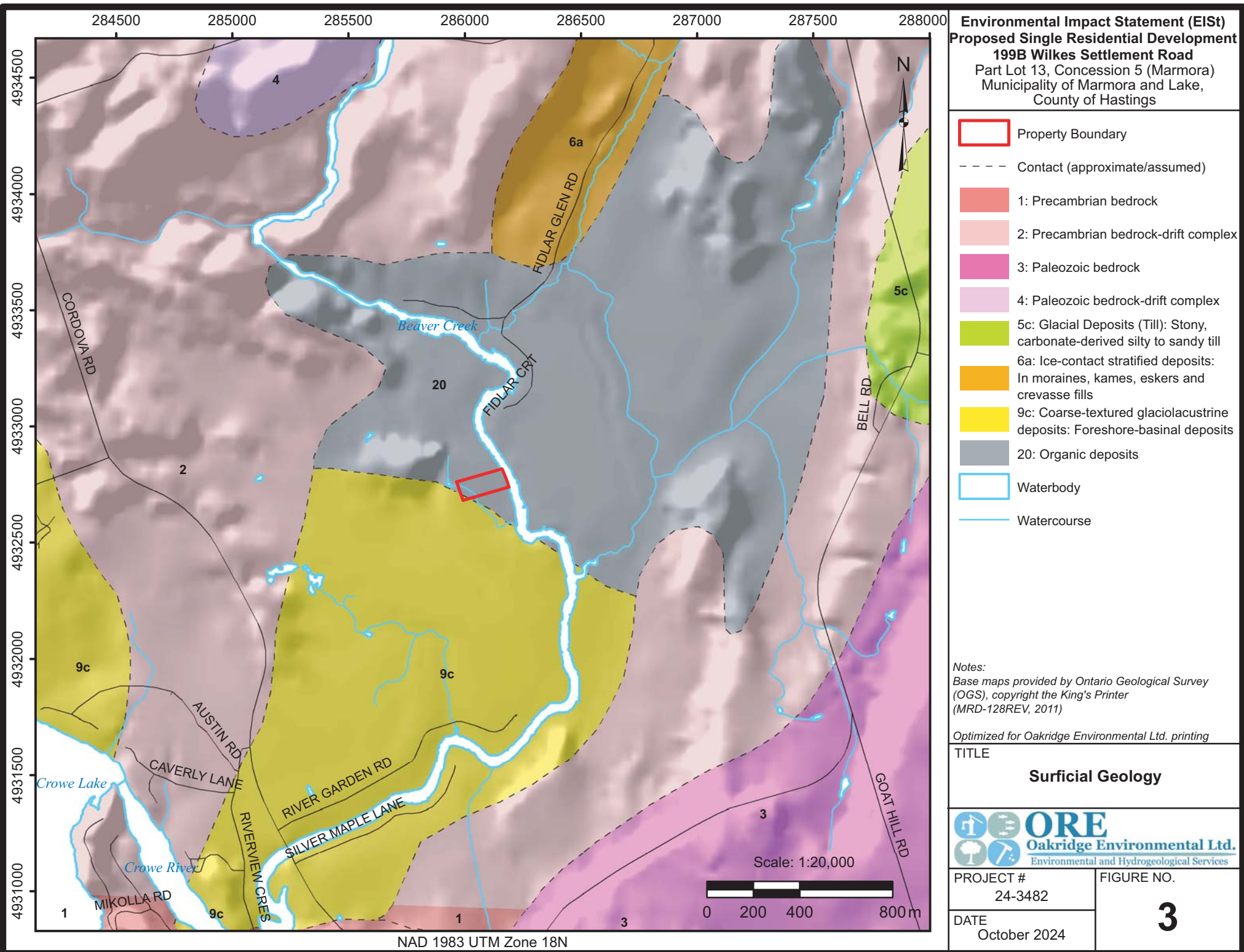
24-3482

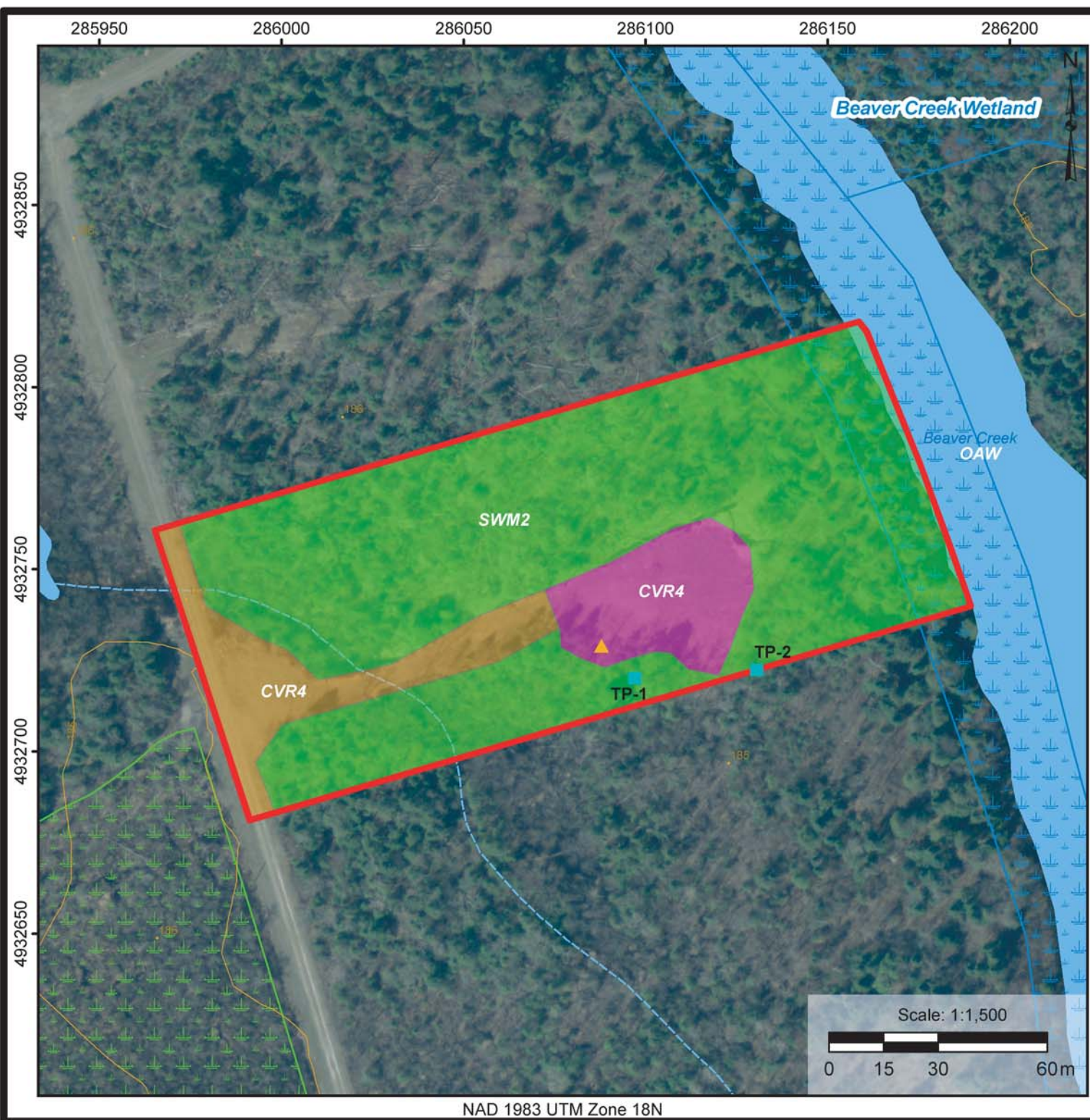
DATE

October 2024

FIGURE NO.

1





Environmental Impact Statement (EIS)
Proposed Single Residential Development
199B Wilkes Settlement Road
 Part Lot 13, Concession 5 (Marmora)
 Municipality of Marmora and Lake,
 County of Hastings

- Property Boundary (VuMap)
- Fill Area (CVR4 - Rural Property)
- Roadway (CVR4 - Rural Property)
- SWM2 - Maple Mineral Mixed Swamp Ecosite
- OAW - Open Water
- Wetland (Unevaluated)
- Wetland (Provincially Significant)
- Dug Test Pit (ORE GPS)
- ▲ Auger Test Hole (ORE GPS)
- Intermittent Watercourse
- Contour (5 m Intervals)
- Spot Height (m asl)

Notes:
 Base mapping provided by the Ontario Ministry of Natural Resources and Forestry (MNRF) Land Information Ontario (LIO) database, copyright the King's Printer (2024)

Imagery provided by South Central Ontario Orthophotography (SCOOP) 2013 - Web Map Service

Feature locations determined by differential GPS (+/- 3.0 m)

m asl - metres above sea level

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TITLE
Vegetation

ORE
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 Environmental and Hydrogeological Services

PROJECT # 24-3482	FIGURE NO. 4
DATE October 2024	

Photo A (Right): Photo was taken on the northeastern corner cleared area. The driveway access is visible in the background of the photo. The clearing edge is lined with small shrubs and goldenrods prior to the tree-line which represents the wetland boundary/edge on the property.

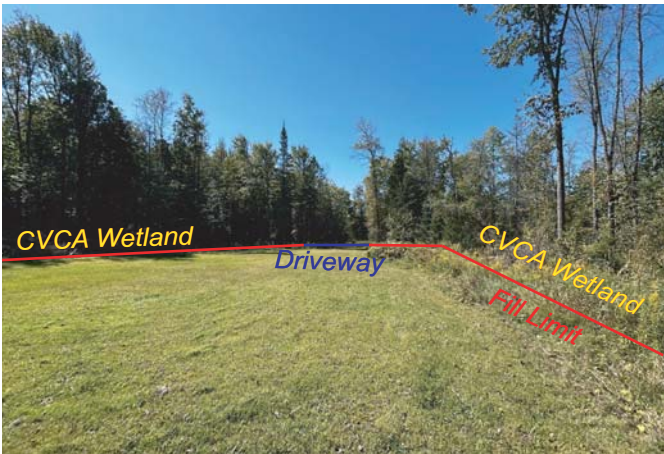


Photo B (Left): Photo was taken from the end of the driveway, facing east. Beaver Creek is located beyond the tree line in the background of the photo. Just beyond the clearing the elevation drops off towards the creek and there's evidence of shallow water table and surface water flows are more prominent in this area. There was also seasonal surface water within the north ditch feature along the left side of the photo.

Photo C (Right): The conditions in and around TP-2 are illustrated within this photo. TP-2 was excavated along the southern edge of the clearing, just inside the woodland edge. The photo illustrates the different soil horizons which includes an upper organic topsoil and a relatively massive till that extends to the base of the test pit. A small amount of groundwater was observed to percolate into the base of the test pit. For more details regarding the soils stratigraphy on-site, please refer to the soil logs in Appendix B.



Site photos were taken on September 10th, 2024	Environmental Impact Statement (EIS) Proposed Single Residential Development 199B Wilkes Settlement Road Part Lot 13, Concession 5 (Marmora) Municipality of Marmora and Lake, County of Hastings	TITLE Site Photos	
		PROJECT # 24-3482 DATE October 2024	FIGURE NO. 5
Notes: CVCA - Crowe Valley Conservation Authority	 ORE Oakridge Environmental Ltd. Environmental and Hydrogeological Services		



Environmental Impact Statement (EIS)
Proposed Single Residential Development
199B Wilkes Settlement Road
Part Lot 13, Concession 5 (Marmora)
Municipality of Marmora and Lake,
County of Hastings

- Approximate Property Boundary
- Limit of Fill / Wetland Boundary (ORE, 2024)
- Seasonal Surface Water Inundation (i.e., seasonal drainage ditch)
- Wetland (Unevaluated)
- Wetland (Provincially Significant)
- Wetland (CVCA)
- Waterbody
- Intermittent Watercourse
- Contour (5 m interval)
- Spot Height (m asl)
- Proposed Wetland Setback (6 m)
- Provincially Significant Wetland (PSW) Setback (30 m)
- Ontario Building Code Sewage Distribution/Leaching System Surface Water Setback (15 m)
- OPSD Heavy-duty Silt Fence
- Conceptual Residence (1,500 sq. ft.)
- Conceptual Drilled Well Location with 15 m Sewage System Setback

Scale: 1:1,200

0 10 20 40 m

TITLE

Constraints



PROJECT #
24-3482

DATE
October 2024

FIGURE NO.

6

Appendix A

Species List

Species List

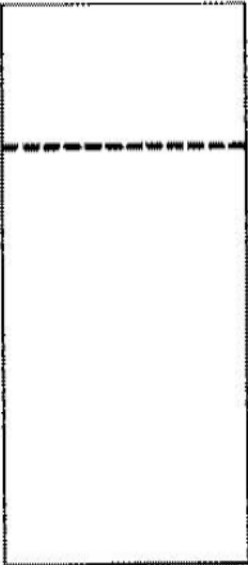
KINGDOM	Common Name	Scientific Name	SARO	SARA
Animalia				
	American Bumble Bee	Bombus pensylvanicus	SC	Special Concern/Préoccupante
	Black-capped Chickadee	Poecile atricapillus		
	Canada Warbler	Cardellina canadensis	SC	Threatened/Menacée
	Eastern Phoebe	Sayornis phoebe		
	Monarch	Danaus plexippus	SC	Special Concern/Préoccupante
	Northern Leopard Frog	Lithobates pipiens	NAR	
	Spring Peeper	Pseudacris crucifer		
	Turkey Vulture	Cathartes aura		
	Wood Frog	Lithobates sylvaticus		
Plantae				
	American Water-horehound	Lycopus americanus		
	Basswood	Tilia americana		
	Black Spruce	Picea mariana		
	Black Willow	Salix nigra		
	Bladder Sedge	Carex intumescens		
	Bog Goldenrod	Solidago uliginosa		
	Bracken Fern	Pteridium aquilinum		
	Broad-leaved Cattail	Typha latifolia		
	Bulbous Water-hemlock	Cicuta bulbifera		
	Bur Oak	Quercus macrocarpa		
	Canada Goldenrod	Solidago canadensis		
	Canada Mint	Mentha canadensis		
	Coltsfoot	Tussilago farfara		
	Dark-green Bulrush	Scirpus atrovirens		
	Eastern Cottonwood	Populus deltoides		
	Eastern White Cedar	Thuja occidentalis		

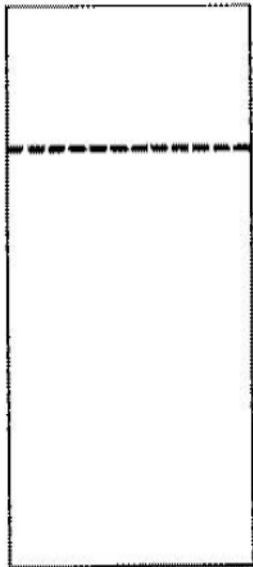
KINGDOM	Common Name	Scientific Name	SARO	SARA
	Evergreen Wood Fern	Dryopteris intermedia		
	Flat-top White Aster	Doellingeria umbellata		
	Fowl Mannagrass	Glyceria striata		
	Grass-leaved Goldenrod	Euthamia graminifolia		
	Meadow Willow	Salix petiolaris		
	Narrow-leaved Cattail	Typha angustifolia		
	New England Aster	Symphyotrichum novae-angliae		
	Northern Red Oak	Quercus rubra		
	Paper Birch	Betula papyrifera		
	Purple Foxglove	Digitalis purpurea ssp. purpurea		
	Purple Loosestrife	Lythrum salicaria		
	Pussy Willow	Salix discolor		
	Red Ash	Fraxinus pennsylvanica		
	Red Maple	Acer rubrum		
	Red Raspberry	Rubus idaeus		
	Reed Canarygrass	Phalaris arundinacea		
	Rough Canada Goldenrod	Solidago lepida var. salebrosa		
	Sensitive Fern	Onoclea sensibilis		
	Silver Maple	Acer saccharinum		
	Speckled Alder	Alnus incana ssp. rugosa		
	Spotted Joe Pye Weed	Eutrochium maculatum		
	Stinging Nettle	Urtica dioica		
	Swamp Milkweed	Asclepias incarnata		
	Swamp Thistle	Cirsium muticum		
	Trembling Aspen	Populus tremuloides		
	White Ash	Fraxinus americana		
	White Elm	Ulmus americana		
	White Heath Aster	Symphyotrichum ericoides		
	White Meadowsweet	Spiraea alba		
	White Oak	Quercus alba		

KINGDOM	Common Name	Scientific Name	SARO	SARA
	White Spruce	Picea glauca		

Appendix B

Soil Logs

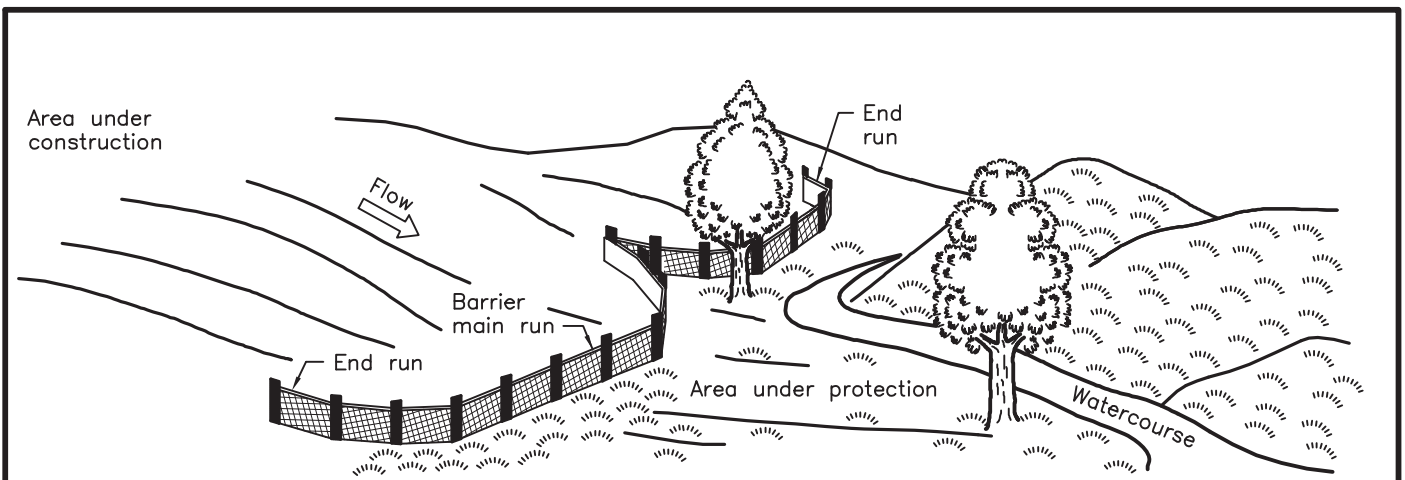
ELC STAND and SOIL CHARACTERISTICS			SITE: 199B Wilkes Settlement Road			
			POLYGON: CVR4 - Soil Probe No. 1			
			DATE: September 10th. 2024			
TREE TALLY BY SPECIES:			SURVEYORS: Rob West, Senior Ecologist ORE			
PRISM FACTOR:			GPS Location: 18N 286087 4932728 UTM			
N/A						
SPECIES	TALLY1	TALLY2	TALLY3	TALLY4	TOTAL	RELATIVE AVERAGE
Lawn Area/No trees					not tallied	Estimated 100%
TOTAL					not tallied	100
BASAL AREA (BA)					not tallied	
DEAD						
STAND COMPOSITION: predominantly open, filled area						
SOIL ASSESSMENT:	1	2	3	4		
TEXTURE	Topsoil	Silt Till	Sandy Till			
DEPTH TO MOTTLES:	none observ.	1.02	none observ.			
DEPTH TO GLEY:	none observ.	none observ.	1.14			
DEPTH OF ORGANICS:	0.25	none observ.	none observ.			
DEPTH TO BEDROCK:	none observ.	none observ.	none observ.			
MOISTURE REGIME:	(1)	(3)	(6 to 7)			
COMMUNITY PROFILE DIAGRAM:	N/A	N/A	N/A			
		Soil Depth (m)	Soils Descriptions			
		0-0.25 m	Upper organic peat soil. Greasy feeling texture. Moderately fresh.			
		0.25-0.76 m	Gray/brown silt clay till with mottling present, very fresh.			
		0.76-1.24 m	Sandy texture with moisture present from 0.89 m to 1.14 m, then gley for the remaining 1.14 m to 1.24 m, very moist to moderately wet.			
		1.24 m EOH				
SOIL PROFILE						
NOTES: Hole was hand augured within the open filled area and had a total depth of 1.24 m, and ended presumably due to gravel or harder packed sand.						

ELC STAND and SOIL CHARACTERISTICS		SITE: 199B Wilkes Settlement Road				
		POLYGON: SWM2 - TP-1				
		DATE: September 10th. 2024				
		SURVEYORS: Rob West, Senior Ecologist ORE				
TREE TALLY BY SPECIES:		GPS Location: 18N 286096 4932719 UTM				
PRISM FACTOR:	N/A					
SPECIES	TALLY1	TALLY2	TALLY3	TALLY4	TOTAL	RELATIVE AVERAGE
Silver Maple					not tallied	30%
American Elm					not tallied	25%
Green Ash					not tallied	10%
Black spruce					not tallied	15%
Eastern White Cedar					not tallied	10%
Hemlock					not tallied	10%
TOTAL					not tallied	100%
BASAL AREA (BA)					not tallied	
DEAD					8%	
STAND COMPOSITION: predominantly deciduous with a minor amount of conifer.						
SOIL ASSESSMENT:	1	2	3	4		
TEXTURE	Topsoil	Silt Till	Sandy Till			
DEPTH TO MOTTLES:	none observ.	0.2	none observ.			
DEPTH TO GLEY:	none observ.	none observ.	none observ.			
DEPTH OF ORGANICS:	0.18	none observ.	none observ.			
DEPTH TO BEDROCK:	none observ.	none observ.	none observ.			
MOISTURE REGIME:	(2)	(3)	(7 to 8)			
COMMUNITY PROFILE DIAGRAM:	N/A	N/A	N/A			
		Soil Depth (m)	Soils Descriptions			
	Top Soil	0-0.18 m	Upper organic peat soil. Greasy feeling texture. Fresh.			
		0.18-0.86 m	Gray/brown silt clay till with mottling present at 0.20 m to 0.45 m, very fresh.			
	0.18 m	0.86 -1.32 m	Sandy texture soil with ground water present between 1.14 m and 1.32 m, moderately wet to wet.			
	Till					
Sand						
Water						
1.32 m EOH						
NOTES: Shallow groundwater filled the test pit rapidly uponTP-1 being excavated, there was several cm of water in the base of the test upon completion.						

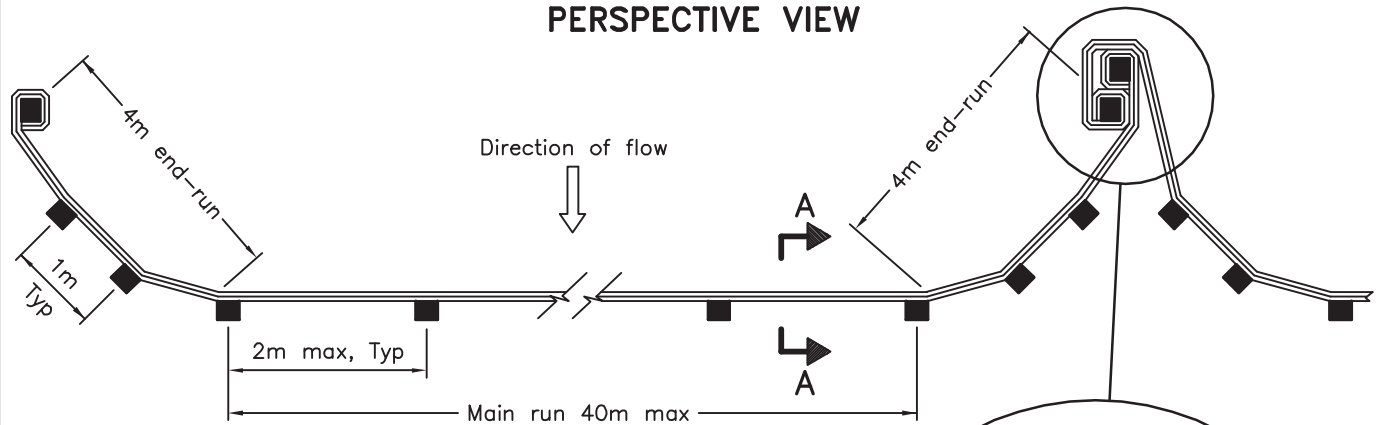
ELC STAND and SOIL CHARACTERISTICS			SITE: 199B Wilkes Settlement Road			
			POLYGON: SWM2 - TP-2			
			DATE: September 10th. 2024			
			SURVEYORS: Rob West, Senior Ecologist ORE			
TREE TALLY BY SPECIES:			GPS Location: 18N 286130 4932722 UTM			
PRISM FACTOR:		N/A				
SPECIES	TALLY1	TALLY2	TALLY3	TALLY4	TOTAL	RELATIVE AVERAGE
Silver Maple					not tallied	25%
American Elm					not tallied	20%
Green Ash					not tallied	5%
Black spruce					not tallied	25%
Eastern White Cedar					not tallied	15%
Hemlock					not tallied	10%
TOTAL					not tallied	100%
BASAL AREA (BA)					not tallied	
DEAD					12%	
STAND COMPOSITION: predominantly deciduous with a minor amount of conifer.						
SOIL ASSESSMENT:	1	2	3	4		
TEXTURE	Topsoil	Silt Till	Sandy Till			
DEPTH TO MOTTLES:	none observ.	0.78	none observ.			
DEPTH TO GLEY:	none observ.	none observ.	none observ.			
DEPTH OF ORGANICS:	0.30 m	none observ.	none observ.			
DEPTH TO BEDROCK:	none observ.	none observ.	none observ.			
MOISTURE REGIME:	(2)	(3)	(6-8)			
COMMUNITY PROFILE DIAGRAM:	N/A	N/A	N/A			
		Soil Depth (m)	Soils Descriptions			
	Top Soil	0-0.30 m	Upper organic peat soil. Greasy feeling texture. Fresh.			
	0.30 m	0.30-1.44 m	Gray/brown silt clay till with mottling present from 0.78 m to 1.20 m. Ground water was observed at a depth of 1.41 m to 1.44 m Very Moist to Wet.			
	Till					
	Water 1.44 m EOH					
SOIL PROFILE						
NOTES: Similar soil stratigraphy to TP-1, however less groundwater entered the base of TP-2.						

Appendix C

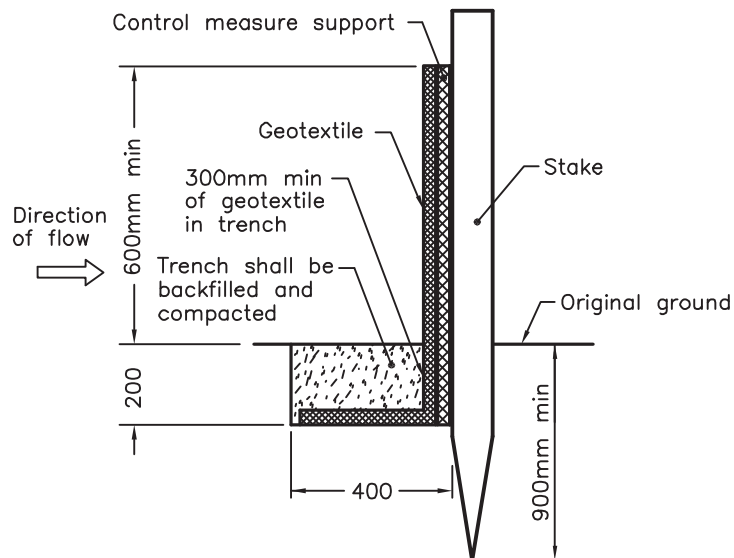
OPSD Heavy-duty Silt Fence



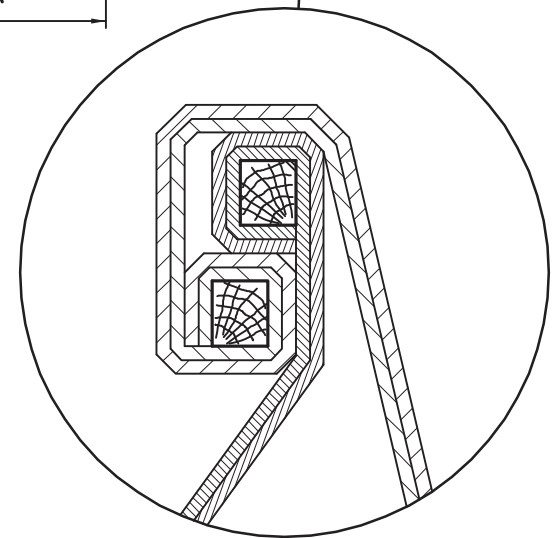
PERSPECTIVE VIEW



PLAN



SECTION A-A



JOINT DETAIL

NOTE:

A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING

Nov 2015

Rev 2

HEAVY-DUTY
SILT FENCE BARRIER



OPSD 219.130

Appendix D

Maps

FLOOD HAZARD AND REGULATION MAP BEAVER CREEK

ONTARIO REGULATION 41/04: PROHIBITED ACTIVITIES, EXEMPTIONS AND PERMITS

LEGEND



Index Contour Interval 1 Meters
Generated from LIDAR-derived Digital Elevation Model
North American 1983 CSRS

SYMBOLLOGY



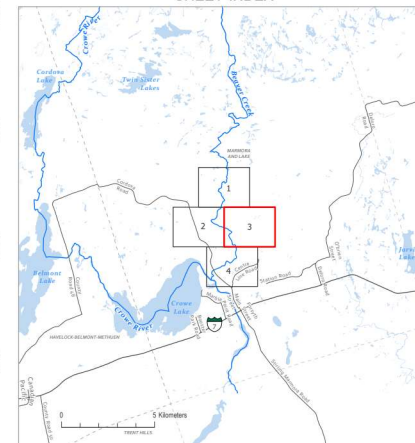
GENERAL INFORMATION

Horizontal Datum: North American 1983 CSRS
Vertical Datum: Canadian Geodetic Vertical Datum of 2013
CGVD2013 height

Map Frame (Lower Left): 274750E 4921649N m
Map Projection: Transverse Mercator
NAD 1983 CSRS UTM Zone 18N



SHEET INDEX

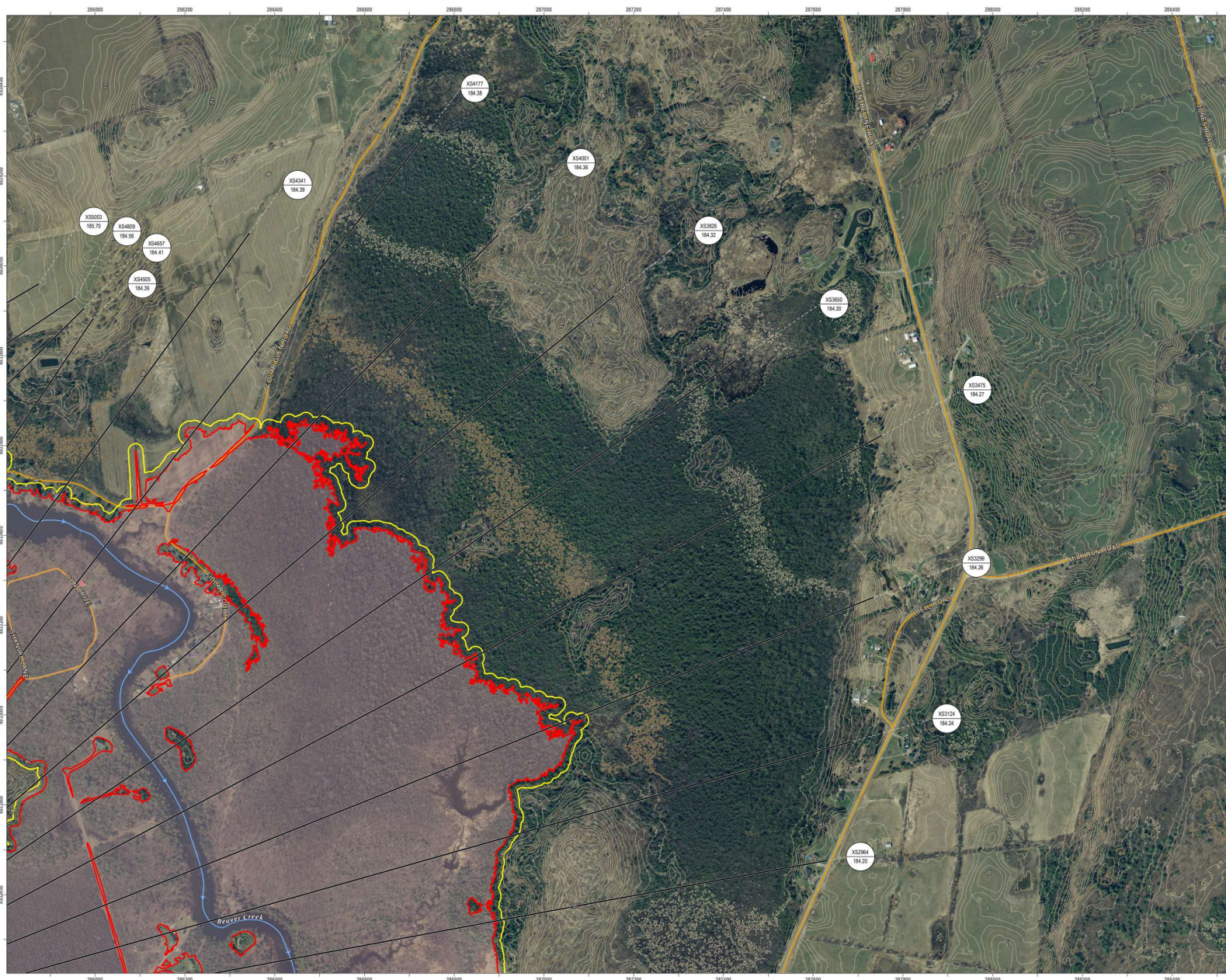


Note 1: The Regulation Limit represents areas regulated under the Conservation Authorities Act, Section 28 and Ontario Regulation 41/04. This map only illustrates the extent of the regulatory flood event standard and Regulation Limit as it pertains to flooding hazards. The Regulation Limit is defined as any combination of flooding hazards and erosion hazards of river or stream valleys, hazardous lands, wetlands or other areas where development could interfere with the hydrologic function of a wetland, as identified in Section 2(1) of Ontario Regulation 41/04. Where there is a conflict between the Regulation Limit as shown on this map and the areas described in section 2(1), the text of the Regulation prevails. Development is regulated in these areas in an effort to maintain the vitality of Ontario watersheds while protecting lives and property from natural hazards.

Note 2: The regulation limit at the lakes are based on water surface elevation from the hydrologic study.

Note 3: The cross sections were cut to contain the Climate Change storm and accommodate the mapping thereof.

No.	Description	By	Date
4	Issued for Final Submission	WB	2024-08-28
3	Issued for Final Submission	WB	2024-05-28
2	Issued for Final Submission	WB	2024-03-05
1	Issued for Review	WB	2023-12-15



This map illustrates floodplains and the associated Regulation Limit based on the applicable flood event standard: 100 year flood level, Ontario Regulation 41/04.

This map and the associated information should not be used for navigation. The data displayed are derived from sources of varying accuracy. Representations and/or information provided herein are approximate and are to be verified by the user. User hereby acknowledges that this map is not intended to be relied upon for navigational purposes and hereby accepts and assumes all inherent risks associated with the use of this map.

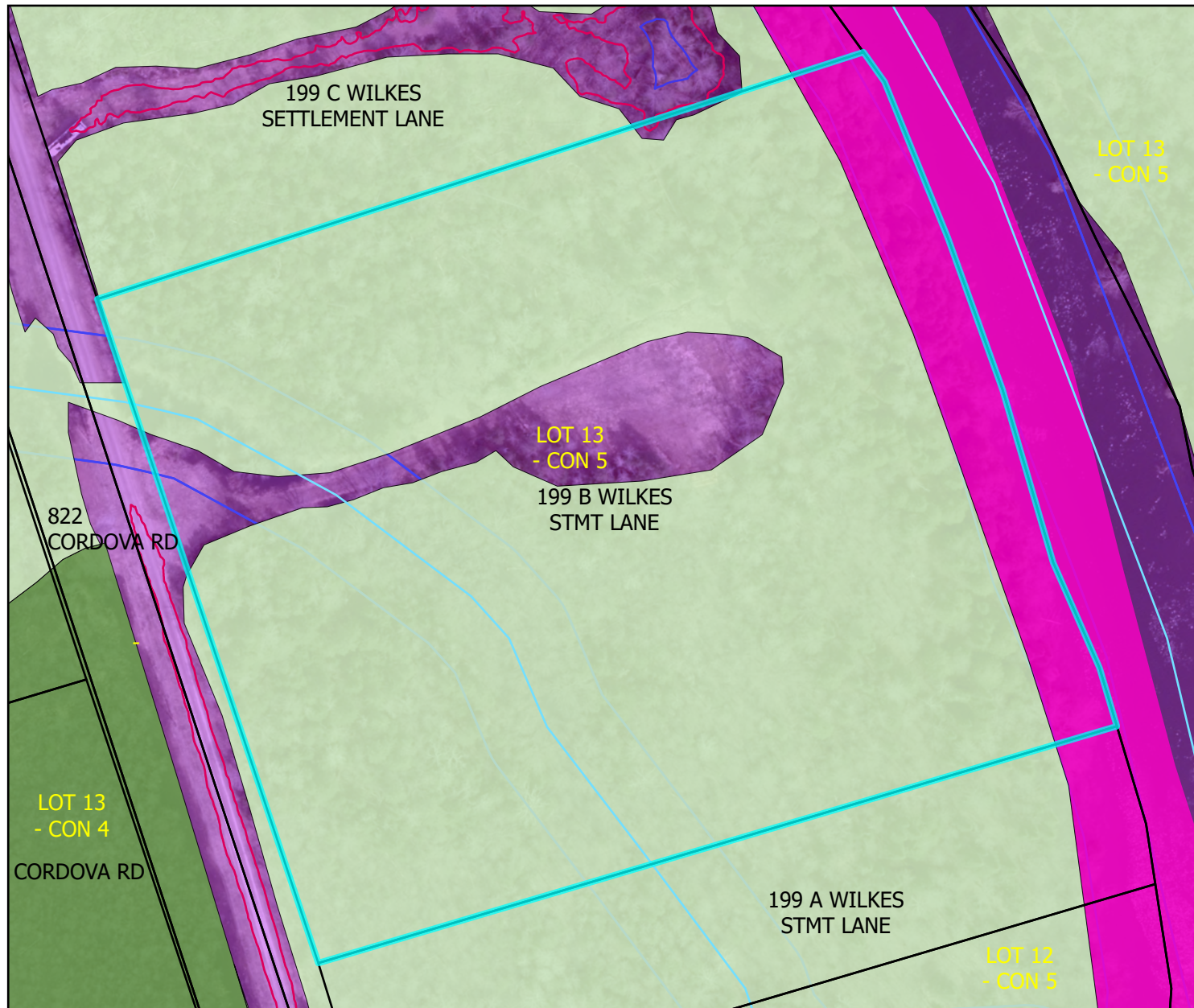


This map is produced in part with data provided by various sources including the Ontario Geographic Data Exchange under license with the Ontario Ministry of Natural Resources and Forestry, Land Information Ontario, and the King's Printer for Ontario, 2023.

Aerial Imagery - South Central Ontario Orthophotography (SCOPP) 2013 © Ontario Ministry of Natural Resources and Forestry, received in December 2023
Digital Elevation Information - Peterborough County (2019) © Ontario Ministry of Natural Resources and Forestry, Quinte-Belleville (2023) © Natural Resources Canada

WILKES
199B Wilkes Settlement Road, Marmora & Lake
Part Lot 13, Concession 5
ARN: 1241-141-015-20620

CROWE VALLEY CONSERVATION AUTHORITY
Permit #109/24



LEGEND

- Subject Property
- Watercourse
- Watercourse Setback
- Flood Hazard
- Provincially Significant Wetland
- MNRF Unevaluated Wetland
- CVCA Wetlands
- Wetland Setback

15 October 2025

Produced by Crowe Valley Conservation Authority with data supplied under license by Ontario Geospatial Data Exchange and local County data. For demonstrative purposes only - not to be used as an official source of data.

0 25 50 100 Metres

0 100 200 400 Feet



WILKES
199B Wilkes Settlement Road, Marmora & Lake
Part Lot 13, Concession 5
ARN: 1241 141 015 20620

CROWE VALLEY CONSERVATION AUTHORITY
Permit 109/24



LEGEND

- Subject Property
- Flood Hazard
- CVCA Wetlands
- MNRF Unevaluated Wetland
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15 October 2025

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199B Wilkes Settlement Road, Marmora and Lake
Part Lot 13, Concession 5
ARN: 1241 141 015 20620

CROWE VALLEY CONSERVATION AUTHORITY
Permit #109/24



LEGEND

— Subject Property

0 25 50 100 Metres

0 100 200 400 Feet



15 October 2025

Produced by Crowe Valley Conservation Authority with data supplied under license by Ontario Geospatial Data Exchange and local County data. For demonstrative purposes only - not to be used as an official source of data.



Appendix E

Letter from P.A. Miller



MEMBER

P.A. MILLER SURVEYING LTD.

Ontario Land Surveyors • Canada Lands Surveyors



Association of Canada Lands Surveyors

MEMBER

P.O. Box 520, 18 Campbellford Rd.
STIRLING, ON K0K 3E0
Tel: (613) 395-3070
Fax: (613) 395-3079
Paul Miller BSc., OLS, CLS
Kevin R.D. Smith BSc. ENG, OLS, CLS
Taylor G. DeRuiter BSc. Eng, OLS, OLIP

Email: admin@millersurveying.ca

CONSULTATION OFFICE
Tuesdays 8:30am – 4:00pm
17 York River Drive
BANCROFT, ON K0L 1C0
Tel: (613) 332-3654

Stacey Wilkes
38 Loscombe Drive
Bowmanville, Ontario, L1S 3S9

July 31, 2025

Our reference 25-12472
Benchmark Installation at
1099B Wilkes Settlement Road
Geographic Township of Marmora
Municipality of Marmora and Lake
COUNTY OF HASTINGS

Dear Ms. Wilkes:

As instructed, we attended at the above location on July 28th of this year to establish two benchmarks on site for use in verifying the elevation of a proposed building site. Our crew met your father Jim Wilkes on site and established a third benchmark per his request. Benchmark #1 is the top of an existing one inch square iron bar located a short distance north of the driveway on the western side of the road. Benchmarks #2 and #3 are the tops of rebars set on site. Each benchmark has been marked with a wood stake labelled with black marker.

I would like to confirm the elevation of each benchmark in the CGVD2013 datum as follows:

BM #1: 184.17
BM #2: 184.00
BM #3: 183.99

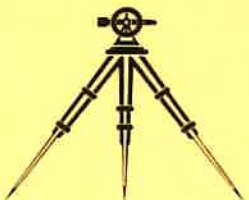
Yours truly,
P. A. MILLER SURVEYING LTD.
Per:

Taylor G. DeRuiter, BSc. Eng, O.L.S., O.L.I.P.

/tgd

Enclosures.

Note: Please direct all correspondence to our Stirling office address. Thank You.



Field notes and records of:

P.J. STRINGER OLS, M.J. McALPINE OLS, W.W. LORENZ OLS, B.J. RAYMOND OLS,
K.R. AMER OLS, C.D. ROYCE OLS, W.E. LUMB OLS and C.F. AYLSWORTH OLS

Appendix F

Site Plan

Table of Contents

3 - 30 plantings

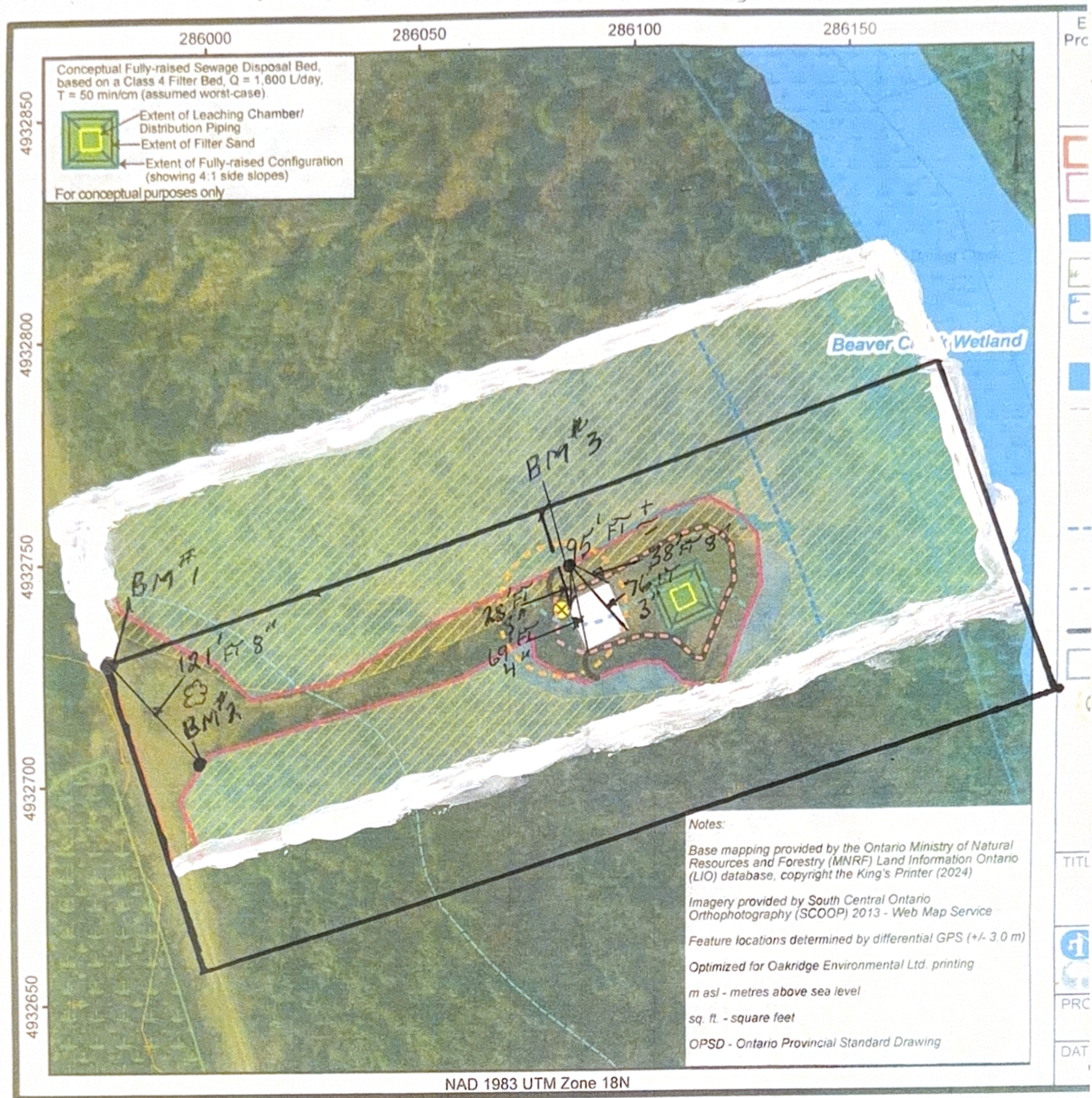
BM - Benchmarks (1, 2, 3)

121' ft 8" is the distance between BM 1 and BM 2

95' ft +/- is the distance from the property boundary to BM 3

38' ft 8" is the distance between BM 3 and the north east corner of the proposed building

76' ft 3" is the distance between BM 3 and the south east corner of the proposed building



Planting Plan

- * Shrub and/or tree plantings will be planted around the perimeter of the cleared area of the property to improve the wetland
- * the plantings will be located towards the entrance of the property, along the edge of the existing laneway
- * planting of 30 new native trees/shrubs (bare-root whips or plugs within the areas impacted by machinery)

Grading Plan

- * Only clean fill to be used on site, the fill will not contain any organic materials, such as plant debris or topsoil that may contain exotic or invasive species
- * The 2 downspouts are on the north side
- * There will be approximately 500 tonnes of clean fill to raise the ground for the dwelling

Deck/dwelling footprint

- * There will be a 725 sq ft rear uncovered deck
- * The dwelling footprint is 1428 sq ft
- * 42' x 34' ft
- * 2' 34' ft 11" from the watercourse

Additional Notes

- * The dwelling will be floodproofed
- * The dwelling will have a walkout, there will be no crawlspace, and will be elevated to accommodate the walkout basement
- * The finished floor elevation of the walkout will be no lower than 184.57 meters above sea level
- * The driveway will be no lower than 183.97 meters above sea level
- * There will be 200 tonnes of aggregates put down to make sure the driveway has safe access

Septic System

- * The septic system footprint is 1721 sq ft
- * The size of the tank is 3600 L (800 IMP Gd)
- * The runs in the septic bed are to be at the 1:100 year flood elevation
- * The septic tank cap will be water tight and anchored
- * The setback from watercourse is 34' 5" 11"
- * The setback from wetland is 6m "approximate"

Appendix G

Ontario Regulation 41/24

ONTARIO REGULATION 41/24
made under the
CONSERVATION AUTHORITIES ACT

Made: December 5, 2023
Filed: February 16, 2024
Published on e-Laws: February 16, 2024
Published in *The Ontario Gazette*: March 2, 2024

PROHIBITED ACTIVITIES, EXEMPTIONS AND PERMITS

CONTENTS

1.	Definitions
2.	Prohibited activities, subparagraph 2 iii of s. 28 (1) of the Act
3.	Applicable Flood Event Standards
4.	Maps of regulated areas
5.	Exceptions
6.	Pre-submission consultation
7.	Application for permit
8.	Request for review
9.	Conditions of permits
10.	Lake Simcoe Protection requirements
11.	Period of validity of permits and extensions
12.	Policy and procedure documents re permits
13.	Commencement
Schedule 1	Flood event standards
Schedule 2	Description of standards
Schedule 3	Water surface elevations

Definitions

1. (1) In section 28 of the Act and in this Regulation,

“development activity” means,

- (a) the construction, reconstruction, erection or placing of a building or structure of any kind,
- (b) any change to a building or structure that would have the effect of altering the use or potential use of the building or structure, increasing the size of the building or structure or increasing the number of dwelling units in the building or structure,
- (c) site grading, or
- (d) the temporary or permanent placing, dumping or removal of any material, originating on the site or elsewhere; (“activité d’aménagement”)

“hazardous land” means land that could be unsafe for development because of naturally occurring processes associated with flooding, erosion, dynamic beaches or unstable soil or bedrock; (“terrain dangereux”)

“watercourse” means a defined channel, having a bed and banks or sides, in which a flow of water regularly or continuously occurs; (“cours d’eau”)

“wetland” means land that,

- (a) is seasonally or permanently covered by shallow water or has a water table close to or at its surface,
- (b) directly contributes to the hydrological function of a watershed through connection with a surface watercourse,
- (c) has hydric soils, the formation of which have been caused by the presence of abundant water, and
- (d) has vegetation dominated by hydrophytic plants or water tolerant plants, the dominance of which have been favoured by the presence of abundant water. (“terre marécageuse”)

(2) The definition of “wetland” in subsection (1) does not include periodically soaked or wet land used for agricultural purposes which no longer exhibits a wetland characteristic referred to in clause (c) or (d) of that definition.

Prohibited activities, subparagraph 2 iii of s. 28 (1) of the Act

2. (1) For the purposes of subparagraph 2 iii of subsection 28 (1) of the Act, river or stream valleys include river or stream valleys that have depressional features associated with a river or stream, whether or not they contain a watercourse, the limits of which are determined as follows:

1. Where the river or stream valley is apparent and has stable slopes, the valley extends from the stable top of the bank, plus 15 metres, to a similar point on the opposite side.
2. Where the river or stream valley is apparent and has unstable slopes, the valley extends from the predicted long term stable slope projected from the existing stable slope or, if the toe of the slope is unstable, from the predicted location of the toe of the slope as a result of stream erosion over a projected 100-year period, plus 15 metres, to a similar point on the opposite side.
3. Where the river or stream valley is not apparent, the valley extends,
 - (i) to the furthest of the following distances:
 - A. the distance from a point outside the edge of the maximum extent of the flood plain under the applicable flood event standard to a similar point on the opposite side, and
 - B. the distance from the predicted meander belt of a watercourse, expanded as required to convey the flood flows under the applicable flood event standard to a similar point on the opposite side, and
 - (ii) an additional 15-metre allowance on each side, except in areas within the jurisdiction of the Niagara Peninsula Conservation Authority.

(2) For the purposes of subparagraph 2 iv of subsection 28 (1) of the Act, areas adjacent or close to the shoreline of the Great Lakes-St. Lawrence River System or to inland lakes that may be affected by flooding, erosion or dynamic beach hazards include,

- (a) the area starting from the furthest offshore extent of the authority's boundary to the furthest of the following distances:
 - (i) the 100-year flood level, plus the appropriate allowance for wave uprush, and, if necessary, for other water-related hazards, including ship-generated waves, ice piling and ice jamming, except in respect of Wanapitei Lake in the Nickel District Conservation Authority, the applicable flood event standard for that lake being the one set out in item 1 of Table 16 of Schedule 1,
 - (ii) the predicted long-term stable slope projected from the existing stable toe of the slope or from the predicted location of the toe of the slope as that location may have shifted as a result of shoreline erosion over a 100-year period, and
 - (iii) where a dynamic beach is associated with the waterfront lands, an allowance of 30 metres inland to accommodate dynamic beach movement, except in the areas within the jurisdictions of the Mattagami Region Conservation Authority, the Nickel District Conservation Authority and the North Bay-Mattawa Conservation Authority where the allowance is 15 metres inland; and
- (b) the area that is an additional 15 metres allowance inland from the area described in clause (a).

(3) For the purposes of subparagraph 2 v of subsection 28 (1) of the Act, other areas in which development activities are prohibited are the areas within an authority's area of jurisdiction that are within 30 metres of a wetland.

Applicable Flood Event Standards

3. The applicable flood event standards with respect to an authority, for the purposes of paragraph 3 of subsection 2 (1) and to determine the maximum susceptibility to flooding of lands or areas in the area of jurisdiction of an authority are the standards specified in Schedule 1 as those standards are described in Schedule 2.

Maps of regulated areas

4. (1) An authority shall develop maps depicting the areas within the authority's area of jurisdiction where development activities are prohibited under paragraph 2 of subsection 28 (1) of the Act which shall be filed at the head office of the authority and made available to the public on the authority's website, and by any other means that the authority considers advisable.

- (2) At least once annually, the authority shall,
 - (a) review the maps referred to in subsection (1) and determine if updates to the maps are required;
 - (b) make and file such updates to the maps at its head office if required; and
 - (c) make the updated maps available to the public on its website and by any other means it considers advisable.

(3) Where new information or analysis becomes available that may result in significant updates to the areas where development activities are prohibited under paragraph 2 of subsection 28 (1) of the Act, including enlargements or reductions

to such areas, the authority shall ensure that stakeholders, municipalities and the public are notified of the proposed changes in any manner that the authority considers advisable, including making any relevant information or studies available online at least 30 days prior to an authority meeting during which the proposed changes are on the agenda.

(4) Where significant changes to the areas where development activities are prohibited have been made in accordance with subsection (3), the authority shall promptly update the maps described in subsection (1).

(5) For greater certainty, in case of a conflict regarding the boundaries of the areas where development activities are prohibited under paragraph 2 of subsection 28 (1) of the Act, the description of those areas in that paragraph and in section 2 of this Regulation prevail over the depiction of the areas in the maps referred to in subsection (1) of this section.

Exceptions

5. Paragraph 2 of subsection 28 (1) of the Act does not apply to,

- (a) the construction, reconstruction, erection or placement of,
 - (i) a seasonal or floating dock that,
 - (A) is 10 square metres or less,
 - (B) does not require permanent support structures, and
 - (C) can be removed in the event of flooding,
 - (ii) a rail, chain-link or panelled fence with a minimum of 75 millimetres of width between panels, that is not within a wetland or watercourse,
 - (iii) agricultural in-field erosion control structures that are not within and that do not have any outlet of water directed or connected to a watercourse, wetland or river or stream valley,
 - (iv) a non-habitable accessory building or structure that,
 - (A) is incidental or subordinate to the principal building or structure,
 - (B) is 15 square metres or less, and
 - (C) is not within a wetland or watercourse, or
 - (v) an unenclosed detached deck or patio that is 15 square metres or less, is not placed within a watercourse or wetland and does not utilize any method of cantilevering;
- (b) the installation of new tile drains that are not within a wetland or watercourse, within 30 metres of a wetland or within 15 metres of a watercourse, and that have an outlet of water that is not directed or connected to a watercourse, wetland or river or stream valley, or the maintenance or repair of existing tile drains;
- (c) the installation, maintenance or repair of a pond for watering livestock that is not connected to or within a watercourse or wetland, within 15 metres of a wetland or a watercourse, and where no excavated material is deposited within an area where subsection 28 (1) of the Act applies;
- (d) the maintenance or repair of a driveway or private lane that is outside of a wetland or the maintenance or repair of a public road, provided that the driveway or road is not extended or widened and the elevation, bedding materials and existing culverts are not altered;
- (e) the maintenance or repair of municipal drains as described in, and conducted in accordance with the mitigation requirements set out in the Drainage Act and the Conservation Authorities Act Protocol, approved by the Minister and available on a government of Ontario website, as it may be amended from time to time; and
- (f) the reconstruction of a non-habitable garage with no basement, if the reconstruction does not exceed the existing footprint of the garage and does not allow for a change in the potential use of the garage to create a habitable space.

Pre-submission consultation

6. (1) Prior to submitting an application for a permit under section 28.1 of the Act, an authority and the applicant may engage in pre-submission consultation for the purposes of confirming the requirements of a complete application to obtain a permit for the activity in question, which may include,

- (a) requests by the authority to the applicant for,
 - (i) initial information on the proposed activity such as a description of the project and any associated plans, or
 - (ii) details about the property upon which the activities are proposed to be carried out, including copies of plans, maps or surveys; or
- (b) meetings between the authority and the applicant prior to the submission of an application, including any site visits to the property where the activities are proposed to be carried out.

(2) If the applicant requests a pre-submission consultation under subsection (1), the authority is required to engage in the pre-submission consultation.

Application for permit

7. (1) An application for a permit under section 28.1 of the Act shall be submitted to an authority and shall include,

- (a) a plan of the area showing the type and location of the proposed development activity or a plan of the area showing plan view and cross-section details of an activity to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse, or change or interfere with a wetland;
- (b) the proposed use of any buildings and structures following completion of the development activity or a statement of the purpose of an activity to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse or to change or interfere with a wetland;
- (c) the start and completion dates of the development activity or other activity;
- (d) a description of the methods to be used in carrying out an activity to straighten, change, divert or interfere with the existing channel of a river, creek, stream or watercourse, or change or interfere with a wetland;
- (e) the elevations of existing buildings, if any, and grades and the proposed elevations of any buildings and grades after the development activity or other activity;
- (f) drainage details before and after the development activity or other activity;
- (g) a complete description of any type of fill proposed to be placed or dumped;
- (h) a confirmation of authorization for the proposed development activity or other activity given by the owner of the subject property, if the applicant is not the owner; and
- (i) any other technical information, studies or plans that the authority requests including information requested during pre-submission consultations between the authority and the applicant.

(2) Upon receipt of the information required under subsection (1) and payment by the applicant of the fee charged by the authority under subsection 21.2 (4) of the Act, the authority shall notify the applicant in writing, within 21 days, whether or not the application complies with subsection 28.1 (3) of the Act and is deemed to be a complete application.

(3) If the authority notifies an applicant under subsection (2) that the application is complete, the authority shall not require new studies, technical information or plans under clause (1) (i) from the applicant to make a determination on the application, unless agreed to by the authority and the applicant. For greater certainty, the authority may ask the applicant for clarification or further details regarding any matter related to the application.

Request for review

8. (1) An applicant may request a review by the authority if,

- (a) the applicant has not received a notice from the authority within 21 days in accordance with subsection 7 (2);
- (b) the applicant disagrees with the authority's determination that the application for a permit is incomplete; or
- (c) the applicant is of the view that a request by the authority for other information, studies or plans under clause 7 (1) (i) is not reasonable.

(2) A review requested by an applicant under subsection (1) shall be completed by the authority no later than 30 days after it is requested and the authority shall, as the case may be,

- (a) confirm that the application meets the requirements of subsection 7 (1) and is complete or provide reasons why the application is incomplete; or
- (b) provide reasons why a request for other information, studies or plans under clause 7 (1) (i) is reasonable or withdraw the request for all or some of the information, studies or plans.

Conditions of permits

9. (1) An authority may attach conditions on a permit issued under section 28.1 of the Act only if, in the opinion of the authority, the conditions,

- (a) assist in preventing or mitigating any effects on the control of flooding, erosion, dynamic beaches or unstable soil or bedrock;
- (b) assist in preventing or mitigating any effects on human health or safety or any damage or destruction of property in the event of a natural hazard; or
- (c) support the administration or implementation of the permit, including conditions related to reporting, notification, monitoring and compliance with the permit.

(2) In addition to the conditions referred to in subsection (1), the Lake Simcoe Region Conservation Authority may attach conditions to a permit that relate to designated policies and other policies in the Lake Simcoe Protection Plan that apply to the issuance of the permit.

Lake Simcoe Protection requirements

10. For the purpose of clause 28.1 (1) (c) of the Act, a decision to issue a permit within the area of jurisdiction of the Lake Simcoe Region Conservation Authority shall,

- (a) conform with any designated policies in the Lake Simcoe Protection Plan that apply to the issuance of the permit; and
- (b) have regard to any other policies in the Lake Simcoe Protection Plan that apply to the issuance of the permit.

Period of validity of permits and extensions

11. (1) The maximum period of validity of a permit issued under sections 28.1, 28.1.1 and 28.1.2 of the Act, including any extension, is 60 months.

(2) If a permit is issued for less than the maximum period of validity, the holder of a permit may, at least 60 days before the expiry of the permit, submit an application for an extension of the permit to,

- (a) the authority that issued the permit, in the case of permits issued under section 28.1 or 28.1.2 of the Act; or
- (b) the Minister, in the case of permits issued under section 28.1.1 of the Act.

(3) An authority or the Minister, as the case may be, may approve an extension of the period of validity of a permit that was issued for a period of less than 60 months but the total period of validity of the permit, including the extension, shall not exceed 60 months.

(4) If an authority intends to refuse a request for an extension, the authority shall give notice of intent to refuse to the holder of the permit, indicating that the extension will be refused unless the holder requests a hearing under subsection (5).

(5) Within 15 days of receiving a notice of intent to refuse a request for an extension, the holder of the permit may submit a written request for a hearing to the authority.

(6) If a request for hearing is submitted under subsection (5), the authority shall hold the hearing within a reasonable time, and shall give the holder at least five days notice of the date of the hearing.

(7) After holding a hearing under subsection (6), the authority may,

- (a) confirm the refusal of the extension; or
- (b) grant an extension for such period of time as it deems appropriate, as long as the total period of validity of the permit does not exceed the applicable maximum period specified in subsection (1).

Policy and procedure documents re permits

12. Each authority shall develop policy and procedure documents with respect to permit applications and reviews that, at a minimum, include the following:

1. Additional details regarding the pre-submission consultation process described in section 6 as well as additional details related to complete permit application requirements.
2. Procedures respecting the process for a review under section 8.
3. Standard timelines for the authority to make a decision on permit applications following a notification that an application is complete under subsection 7 (2), as the authority determines advisable.
4. Any other policies and procedures, as the authority considers advisable, for the purpose of administering the issuance of permits under Part VI of the Act.
5. A process for the periodic review and updating of the authority's policy and procedure documents, including procedures for consulting with stakeholders and the public during the review and update process, as the authority considers advisable.

Commencement

13. This Regulation comes into force on the later of the day subsection 25 (2) of Schedule 6 to the *Protect, Support and Recover from COVID-19 Act (Budget Measures)*, 2020 comes into force and the day this Regulation is filed.

SCHEDULE 1 FLOOD EVENT STANDARDS

1. For the following conservation authorities, the applicable flood event standards are those specified in Table 1 below:
 1. Ausable Bayfield Conservation Authority.

2. Catfish Creek Conservation Authority.
3. Credit Valley Conservation Authority.
4. Ganaraska Region Conservation Authority.
5. Grand River Conservation Authority.
6. Halton Region Conservation Authority.
7. Kettle Creek Conservation Authority.
8. Maitland Valley Conservation Authority.
9. Saugeen Valley Conservation Authority.
10. Toronto and Region Conservation Authority.

TABLE 1

Item	Areas	Applicable Flood Event Standards
1.	All areas	The Hurricane Hazel Flood Event Standard, the 100 Year Flood Event Standard and the 100-year flood level plus wave uprush

2. For the following conservation authorities, the applicable flood event standards are those specified in Table 2 below:

1. Cataraqui Region Conservation Authority.
2. Long Point Region Conservation Authority.
3. Quinte Region Conservation Authority.
4. Raisin Region Conservation Authority.
5. South Nation River Conservation Authority.

TABLE 2

Item	Areas	Applicable Flood Event Standards
1.	All areas	The 100 Year Flood Event Standard and the 100-year flood level plus wave uprush

3. For the following conservation authorities, the applicable flood event standards are those specified in Table 3 below:

1. Mississippi Valley Conservation Authority.
2. Rideau Valley Conservation Authority.

TABLE 3

Item	Areas	Applicable Flood Event Standards
1.	All areas	The 100 Year Flood Event Standard

4. For the following conservation authorities, the applicable flood event standards are those specified in Table 4 below:

1. Mattagami Region Conservation Authority.
2. Nottawasaga Valley Conservation Authority.
3. Sault Ste. Marie Region Conservation Authority.

TABLE 4

Item	Areas	Applicable Flood Event Standards
1.	All areas	The 100 Year Flood Event Standard, the Timmins Flood Event Standard, and the 100-year flood level plus wave uprush

5. For the Crowe Valley Conservation Authority, the applicable flood event standards are those specified in Table 5 below:

TABLE 5

Item	Areas	Applicable Flood Event Standards
1.	All	The 100 Year Flood Event Standard, the

	areas	Timmins Flood Event Standard, the Hurricane Hazel Flood Event Standard and the 100-year flood level
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6. For the Kawartha Region Conservation Authority, the applicable flood event standards are those specified in Table 6 below:

TABLE 6

Item	Areas	Applicable Flood Event Standards
1.	All areas	The 100 Year Flood Event Standard and the Timmins Flood Event Standard

7. For the Central Lake Ontario Conservation Authority, the applicable flood event standards are those specified in Table 7 below:

TABLE 7

Item	Areas	Applicable Flood Event Standards
1.	Pringle Creek and Darlington	The 100 Year Flood Event Standard
2.	Lake Ontario in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush
3.	All other areas	The Hurricane Hazel Flood Event Standard

8. For the Essex Region Conservation Authority, the applicable flood event standards are those specified in Table 8 below:

TABLE 8

Item	Areas	Applicable Flood Event Standards
1.	The main branch and the east branch (Silver Creek) of the Ruscom River, and its tributaries within the Town of Lakeshore and the Town of Kingsville and the main and north branch of Canard River in the Town of LaSalle, Concessions I and II, and on the main branch of the Canard River in the Town of Amherstburg, Concessions I, II, III and IV	The March 1985 Flood Event Standard
2.	All other areas	The 100 Year Flood Event Standard

9. For the Grey Sauble Conservation Authority, the applicable flood event standards are those specified in Table 9 below:

TABLE 9

Item	Areas	Applicable Flood Event Standards
1.	The Sauble River Watershed	The 100 Year Flood Event Standard
2.	Lake Huron and Georgian Bay in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush
3.	All other watersheds	The Timmins Flood Event Standard

10. For the Hamilton Region Conservation Authority, the applicable flood event standards are those specified in Table 10 below:

TABLE 10

Item	Areas	Applicable Flood Event Standards
1.	Watercourses WCO, WCI, WC2, 3, 4, 5.0, 5.1, 6.0, 6.1, 6.2, 6.3, 6.4, 7.0, 7.1, 7.2, 7.3, 8.0, 9.0, 10.0, 10.1, 10.2, 11.0 and 12.0 as indicated on Map Figure 1 of Project 98040-A, Stoney Creek, Stormwater Management Assessment, prepared by Philips Engineering and located at the Hamilton Region Conservation Authority head office and Hamilton Harbour in the Great Lakes-St. Lawrence River System	The 100-year flood level
2.	Lake Ontario in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush
3.	All other areas	The Hurricane Hazel Flood Event Standard

11. For the Lake Simcoe Region Conservation Authority, the applicable flood event standards are those specified in Table 11 below:

TABLE 11

Item	Areas	Applicable Flood Event Standards
1.	Bunker's Creek and Sophia Creek	The 100 Year Flood Event Standard
2.	Talbot River and the Trent-Severn waterway	The Timmins Flood Event Standard
3.	Lake Simcoe	The 100-year flood level plus wave uprush
4.	All other areas	The Hurricane Hazel Flood Event Standard

12. For the Lakehead Region Conservation Authority, the applicable flood event standards are those specified in Table 12 below:

TABLE 12

Item	Areas	Applicable Flood Event Standards
1.	The main channel of the Kaministiquia River	The 100 Year Flood Event
2.	Lake Superior in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush
3.	All other areas	Timmins Flood Event Standard

13. For the Lower Thames Valley Conservation Authority, the applicable flood event standards are those specified in Table 13 below:

TABLE 13

Item	Areas	Applicable Flood Event Standards
1.	All areas	The 1937 Regulatory Flood Event Standard and the 100-year flood level plus wave uprush

14. For the Lower Trent Region Conservation Authority, the applicable flood event standards are those specified in Table 14 below:

TABLE 14

Item	Areas	Applicable Flood Event Standards
1.	The main channels of Rice Lake and Trent River	The rainfall, snowmelt, or a combination of rainfall and snowmelt, that would produce the water surface elevations above Canadian Geodetic Datum described in Table 1 of Schedule 3
2.	Lake Ontario in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush
3.	All other areas	The Timmins Flood Event Standard

15. For the Niagara Peninsula Conservation Authority, the applicable flood event standards are those specified in Table 15 below:

TABLE 15

Item	Areas	Applicable Flood Event Standards
1.	The watersheds associated with Shriner's Creek, Ten Mile Creek and Beaverdam Creek (including Tributary W-6-5) in the City of Niagara Falls	The Hurricane Hazel Flood Event Standard
2.	Lake Ontario and Lake Erie in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush
3.	All other areas	The 100 Year Flood Event Standard

16. For the Nickel District Conservation Authority, the applicable flood event standards are those specified in Table 16 below:

TABLE 16

Item	Areas	Applicable Flood Event Standards
1.	Wanapitei Lake	The maximum flood allowance elevation of 267.95 metres Canadian Geodetic Datum (in accordance with Ontario Power Generation's Licence of Occupation Agreement #6168)
2.	All other areas	The Timmins Flood Event Standard and the 100 Year Flood Event Standard

17. For the North Bay-Mattawa Conservation Authority, the applicable flood event standards are those specified in Table 17 below:

TABLE 17

Item	Areas	Applicable Flood Event Standards
1.	Chippewa Creek and its tributaries below the North Bay Escarpment, Parks Creek, the Mattawa River in the Town of Mattawa and the La Vase River	The 100 Year Flood Event Standard
2.	Lake Nipissing	100-year flood level plus wave uprush
3.	All other areas	The Timmins Flood Event Standard

18. For the Otonabee Region Conservation Authority, the applicable flood event standards are those specified in Table 18 below:

TABLE 18

Item	Areas	Applicable Flood Event Standards
1.	Rice Lake, Stony Lake, Clear Lake, Lovesick Lake, Deer Bay, Buckhorn Lake, Chemong Lake, Pigeon Lake, Katchiwanoooka Lake and Lower Buckhorn Lake	The rainfall, snowmelt, or a combination of rainfall and snowmelt, that would produce the water surface elevations above Canadian Geodetic Datum described in Table 2 of Schedule 3.
2.	All other areas	The Timmins Flood Event Standard

19. For the St. Clair Region Conservation Authority, the applicable flood event standards are those specified in Table 19 below:

TABLE 19

Item	Areas	Applicable Flood Event Standards
1.	Perch Creek	The 100 Year Flood Event Standard
2.	Lake Huron, Lake St. Clair and St. Clair River in the Great Lakes-St. Lawrence River System	The 100-year flood level plus wave uprush
3.	All other areas	The Hurricane Hazel Flood Event Standard

20. For the Upper Thames Region Conservation Authority, the applicable flood event standards are those specified in Table 20 below:

TABLE 20

Item	Areas	Applicable Flood Event Standards
1.	All areas	The 1937 Flood Event Standard

SCHEDULE 2 DESCRIPTION OF STANDARDS

1. The Hurricane Hazel Flood Event Standard means a storm that produces over a 48-hour period,
 - (a) in a drainage area of 25 square kilometres or less, rainfall that has the distribution set out in Table 1; or
 - (b) in a drainage area of more than 25 square kilometres, rainfall such that the number of millimetres of rain referred to in each case in Table 1 is modified by the percentage amount shown in Column 2 of Table 2 opposite the corresponding size of the drainage area set out Column 1 of Table 2.

TABLE 1

73 millimetres of rain in the first 36 hours
6 millimetres of rain in the 37th hour
4 millimetres of rain in the 38th hour
6 millimetres of rain in the 39th hour
13 millimetres of rain in the 40th hour
17 millimetres of rain in the 41st hour
13 millimetres of rain in the 42nd hour
23 millimetres of rain in the 43rd hour
13 millimetres of rain in the 44th hour
13 millimetres of rain in the 45th hour
53 millimetres of rain in the 46th hour
38 millimetres of rain in the 47th hour
13 millimetres of rain in the 48th hour

TABLE 2

Column 1 Drainage Area (square kilometres)	Column 2 Percentage
26 to 45 both inclusive	99.2
46 to 65 both inclusive	98.2
66 to 90 both inclusive	97.1
91 to 115 both inclusive	96.3
116 to 140 both inclusive	95.4
141 to 165 both inclusive	94.8
166 to 195 both inclusive	94.2
196 to 220 both inclusive	93.5
221 to 245 both inclusive	92.7
246 to 270 both inclusive	92.0
271 to 450 both inclusive	89.4
451 to 575 both inclusive	86.7
576 to 700 both inclusive	84.0
701 to 850 both inclusive	82.4
851 to 1000 both inclusive	80.8
1001 to 1200 both inclusive	79.3
1201 to 1500 both inclusive	76.6
1501 to 1700 both inclusive	74.4
1701 to 2000 both inclusive	73.3
2001 to 2200 both inclusive	71.7
2201 to 2500 both inclusive	70.2
2501 to 2700 both inclusive	69.0
2701 to 4500 both inclusive	64.4
4501 to 6000 both inclusive	61.4
6001 to 7000 both inclusive	58.9
7001 to 8000 both inclusive	57.4

2. The Timmins Flood Event Standard means a storm that produces over a 12-hour period,
- (a) in a drainage area of 25 square kilometres or less, rainfall that has the distribution set out in Table 3; or
 - (b) in a drainage area of more than 25 square kilometres, rainfall such that the number of millimetres of rain referred to in each case in Table 3 is modified by the percentage amount shown in Column 2 of Table 4 opposite the corresponding size of the drainage area set out in Column 1 of Table 4.

TABLE 3

15 mm of rain in the 1st hour
20 mm of rain in the 2nd hour
10 mm of rain in the 3rd hour
3 mm of rain in the 4th hour
5 mm of rain in the 5th hour
20 mm of rain in the 6th hour
43 mm of rain in the 7th hour
20 mm of rain in the 8th hour
23 mm of rain in the 9th hour
13 mm of rain in the 10th hour
13 mm of rain in the 11th hour
8 mm of rain in the 12th hour

TABLE 4

Column 1 Drainage Area (km ²)	Column 2 Percentage
26 to 50 both inclusive	97
51 to 75 both inclusive	94
76 to 100 both inclusive	90
101 to 150 both inclusive	87
151 to 200 both inclusive	84
201 to 250 both inclusive	82

251 to 375 both inclusive	79
376 to 500 both inclusive	76
501 to 750 both inclusive	74
751 to 1000 both inclusive	70
1001 to 1250 both inclusive	68
1251 to 1500 both inclusive	66
1501 to 1800 both inclusive	65
1801 to 2100 both inclusive	64
2101 to 2300 both inclusive	63
2301 to 2600 both inclusive	62
2601 to 3900 both inclusive	58
3901 to 5200 both inclusive	56
5201 to 6500 both inclusive	53
6501 to 8000 both inclusive	50

3. The 100 Year Flood Event Standard means rainfall, snowmelt, or a combination of rainfall and snowmelt, producing at any location in a river, creek, stream or watercourse a peak flow that has a probability of occurrence of one per cent during any given year.

4. The 100-year flood level means the peak instantaneous still water level plus an allowance for wave uprush and other water-related hazards for inland lakes and the Great Lakes-St. Lawrence River System that has a probability of occurrence of one per cent during any given year.

5. The March 1985 Flood Event Standard means the flood levels observed, surveyed and mapped, and located at the Essex Region Conservation Authority head office, along portions of the relevant prescribed watercourses that exceeded the 100 Year Flood Event Standard.

6. The 1937 Flood Event Standard means the historical observed 1937 flood on the Thames River. This event is equivalent to the combination of events that caused the flood event on the Thames River in April of 1937. The 1937 flood event is estimated to be equivalent to a 1 in 250-year return flood.

7. The 1937 Regulatory Flood Event Standard means the historical observed 1937 flood on the Thames River. This event is equivalent to a flow of 1,540 cubic metres per second (cms) commencing at Delaware and proportionately reducing until 1,160 cms at Thamesville and 1,125 cms at Chatham. The 1937 flood event is estimated to be equivalent to a 1 in 250-year return flood.

SCHEDULE 3 WATER SURFACE ELEVATIONS

1. The water surface elevations above Canadian Geodetic Datum applicable to Item 1 in Table 14 of Schedule 1 are shown in Table 1.

TABLE 1
LOWER TRENT REGION CONSERVATION AUTHORITY

Location	Water Surface Elevation
Rice Lake	187.9 metres
Trent River below Dam #1 (Trenton)	77.2 metres
Trent River below Dam #2 (Sidney)	81.3 metres
Trent River below Dam #3 (Glen Miller)	87.7 metres
Trent River below Dam #4 (Batawa)	95.7 metres
Trent River below Dam #5 (Trent)	101.7 metres
Trent River below Dam #6 (Frankford)	107.9 metres
Trent River below Dam #7 (Glen Ross)	113.5 metres
Trent River below Dam #8 (Meyers)	117.9 metres
Trent River below Dam #9 (Hagues Reach)	128.1 metres
Trent River below Dam # 10 (Ranney Falls)	143.4 metres
Trent River below Dam #11 (Campbellford)	148.3 metres
Trent River below Dam #12 (Crowe Bay)	154.3 metres
Trent River below Dam #13 (Healy Falls)	175.5 metres

Trent River below Dam #14 (Hastings)	186.7 metres
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2. The water surface elevations above Canadian Geodetic Datum applicable to Item 1 in Table 18 of Schedule 1 are shown in Table 2.

TABLE 2
OTONABEE REGION CONSERVATION AUTHORITY

Water Body	Water Surface Elevation
Rice Lake	187.90 metres
Stony Lake	235.95 metres
Clear Lake	235.95 metres
Lovesick Lake	242.16 metres
Deer Bay	244.31 metres
Buckhorn Lake	247.12 metres
Chemong Lake	247.12 metres
Pigeon Lake	247.12 metres
Katchiwanoooka Lake	233.68 metres
Lower Buckhorn Lake	244.31 metres

Made by:
Pris par :

Le ministre des Richesses naturelles et des Forêts,

GRAYDON SMITH
Minister of Natural Resources and Forestry

Date made: December 5, 2023
Pris le : 5 décembre 2023

Français

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