

# Ecological Land Classification Mapping Project

Planning and Economic Development Committee  
PDS 33-2020

December 9<sup>th</sup>, 2020

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making our mark

**NIAGARA**  
OFFICIAL PLAN

**PDS 33-2020**

# **Ecological Land Classification Mapping Project**

**December 9, 2020 – Presentation to Planning and  
Economic Development Committee**



# Overview

- New Niagara Official Plan
  - Mapping of the natural systems for the new Plan will require several sources of data to be compiled; a detailed methodology; and technical criteria for features to be established
  - The Ecological Land Classification (ELC) mapping project is an update to natural area mapping for the Region and is one data source that will contribute to the mapping of the natural systems
  - The exact application and criteria that will be applied to the ELC data is dependent on the natural systems options frameworks that have yet to be selected through the Natural Environment Work Program



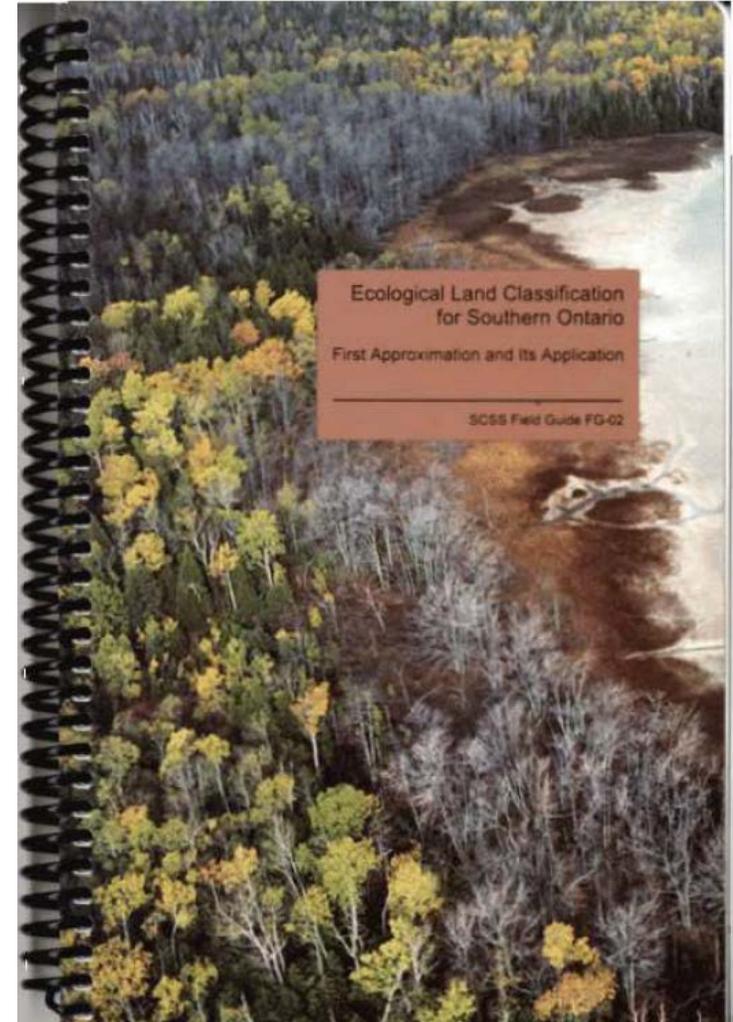
# Overview

- Ecological Land Classification for Southern Ontario (MNRFF)
  - Provides a comprehensive and consistent approach to describing, inventorying, and analyzing vegetation communities
- Project Framework
  - Natural Areas Inventory Project (NPCA, 2006 – 2009)
    - Completion of Community Series (ELC) mapping for watershed jurisdiction
  - Update to the NAI data, in collaboration with the NPCA
- Greenbelt Foundation
  - Partial project funding through the Resilient Greenbelt funding stream

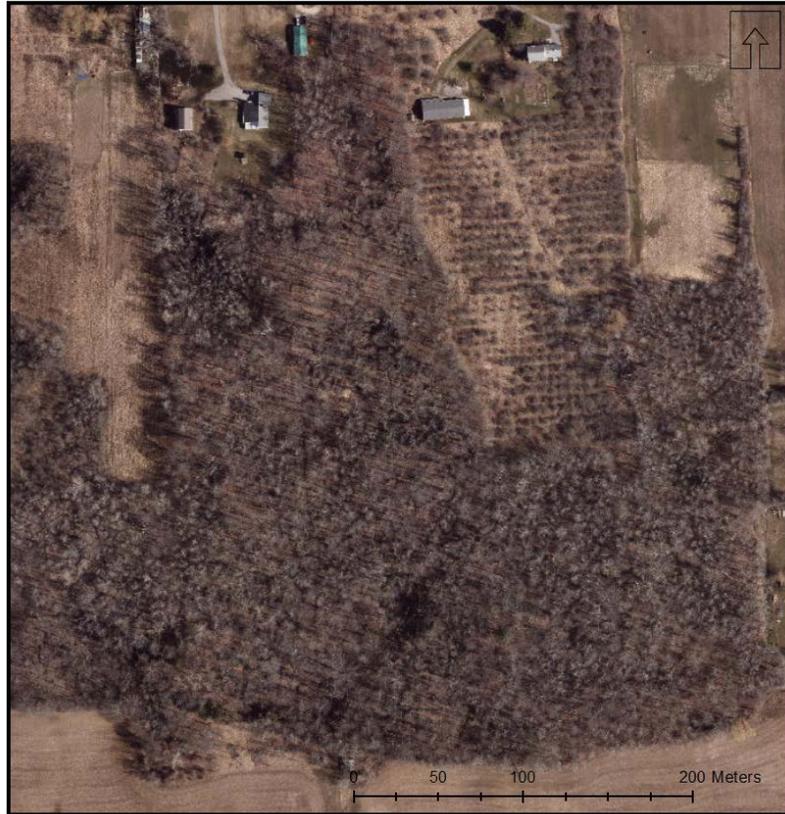


# Ecological Land Classification Protocol

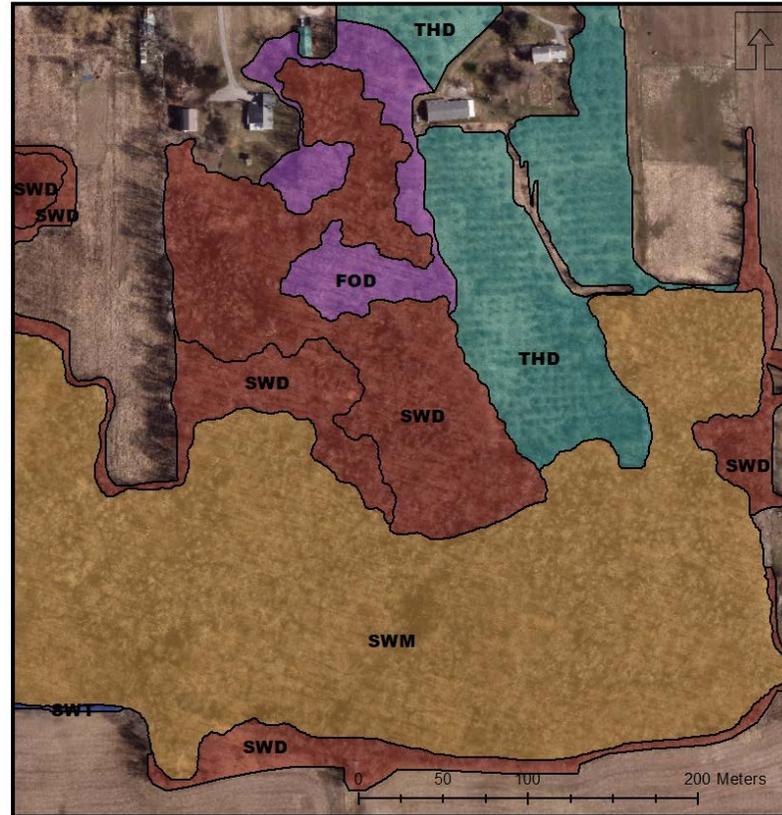
- Comprehensive and consistent province-wide framework for ecosystem description, inventory and interpretation
- Classifies areas into distinct landscape units
- Designed for use at varying scales (hierarchical framework)
- Completed by a certified ecologist or other practitioner



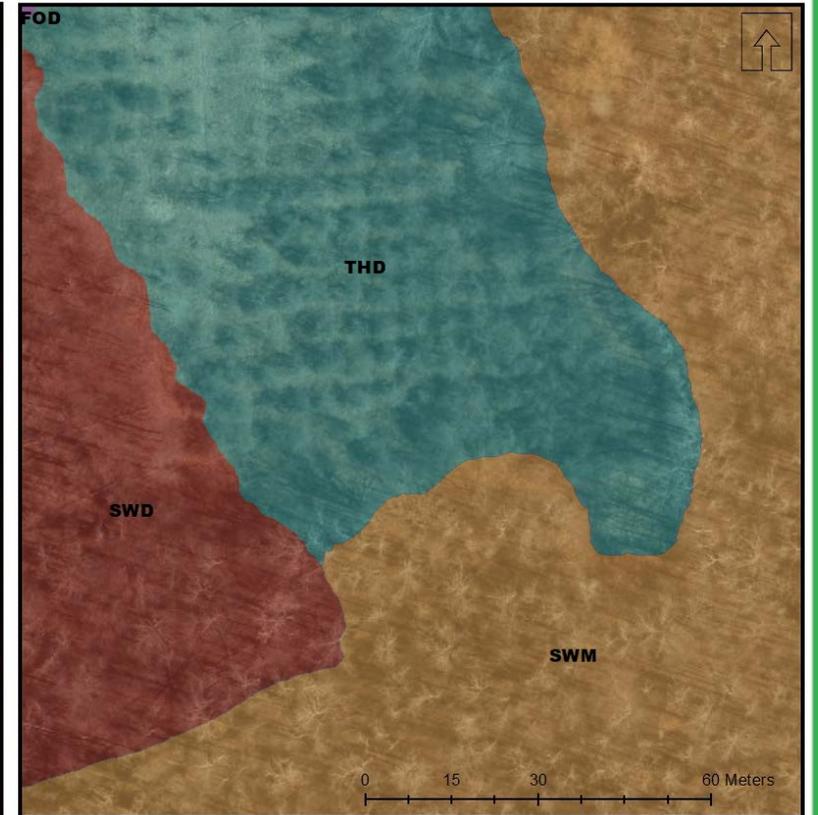
# ELC Mapping



Aerial Imagery



Community Series Map



1:1,000 Scale

# Field Verification Program

- 12 municipalities (August 24<sup>th</sup> to September 21<sup>st</sup>, 2020)
  - Urban and Rural areas – 1233 polygons verified
- Frameworks:
  - Collaborative with Regional, Local and NPCA Staff
  - Consultant only



# Preliminary Data

- 27,166 polygons in dataset
- 50,987 ha of natural communities (27.1% of Region's land area)
- 18 community classes
- 54 community series

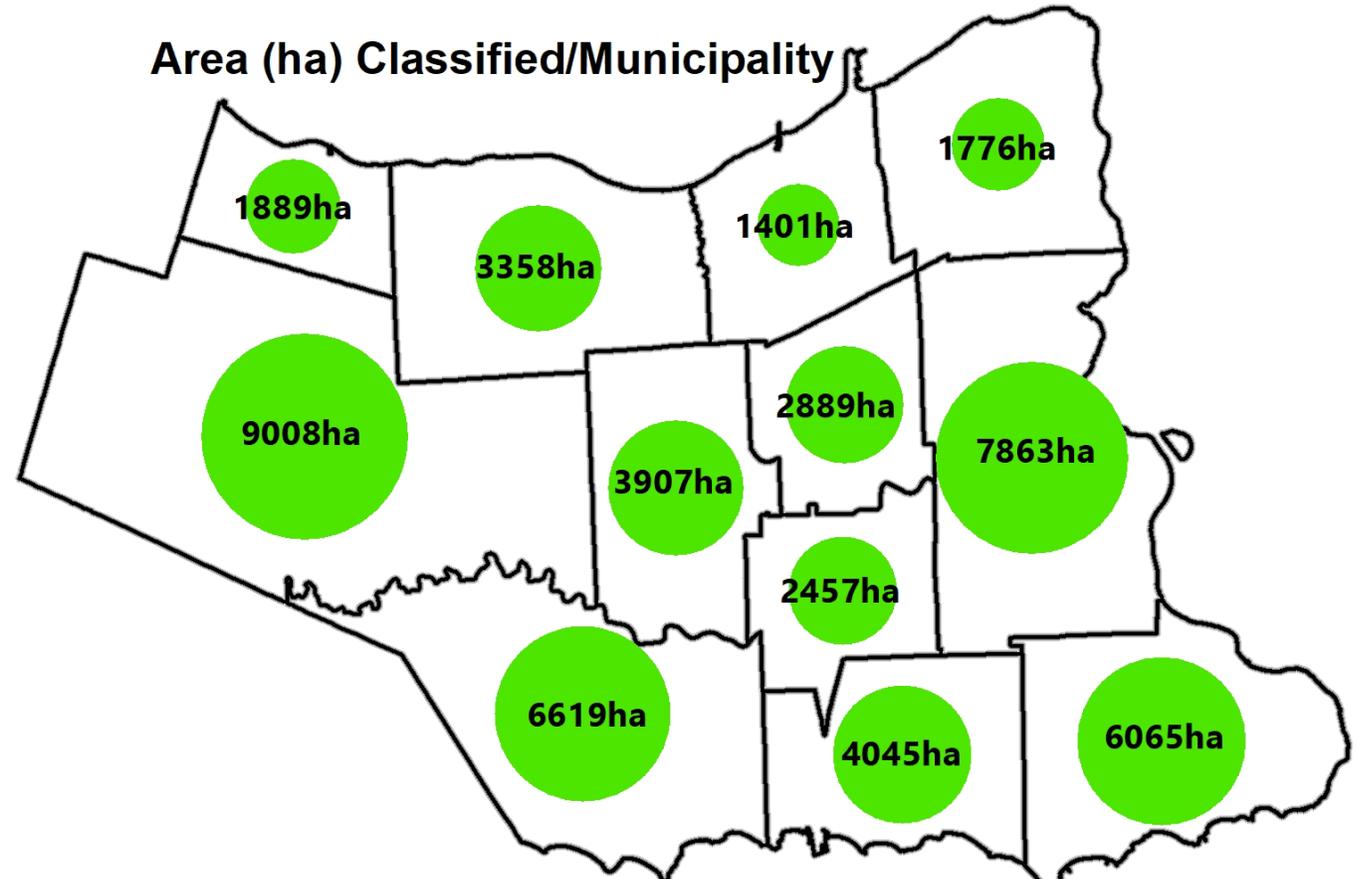
Community Class	Percent of Inventoried Area	Total Communities Identified
Agricultural	1.26%	609
Bluff	0.07%	28
Bog	0.90%	3
Cliff	0.09%	14
Forest	21.27%	5496
Hedgerow	1.68%	1625
Marsh	5.79%	3328
Meadow	8.09%	3052
Open Water	0.52%	75
Rock Barren	0.04%	20
Sand Barren and Dune	0.01%	4
Savanna	0.32%	92
Shallow Water	0.44%	115
Shoreline	0.37%	94
Swamp	49.46%	7788
Talus	0.04%	17
Thicket	6.70%	2973
Woodland	2.72%	1725



# Preliminary Data

- 18.8% (35,515 ha) of the Region is 'wooded' communities
- 15.6% (29,213 ha) of the Region is wetland cover

\*There is overlap between the composition of each of the above\*



- 1233 polygons successfully field verified (86.5% accuracy rate)
  - 47 distinct community series, varying from 1 to 115 polygons of each community series



# Future Use

- Mapping for the new Niagara Official Plan
  - Natural Heritage System
  - Water Resource System
- Environmental planning review
  - Development review
  - Stormwater management
  - Regional Forester
- NPCA
  - Restoration program
  - Land acquisition strategy
  - Watershed report card (2022)

