

# Creating Niagara's Natural Heritage System

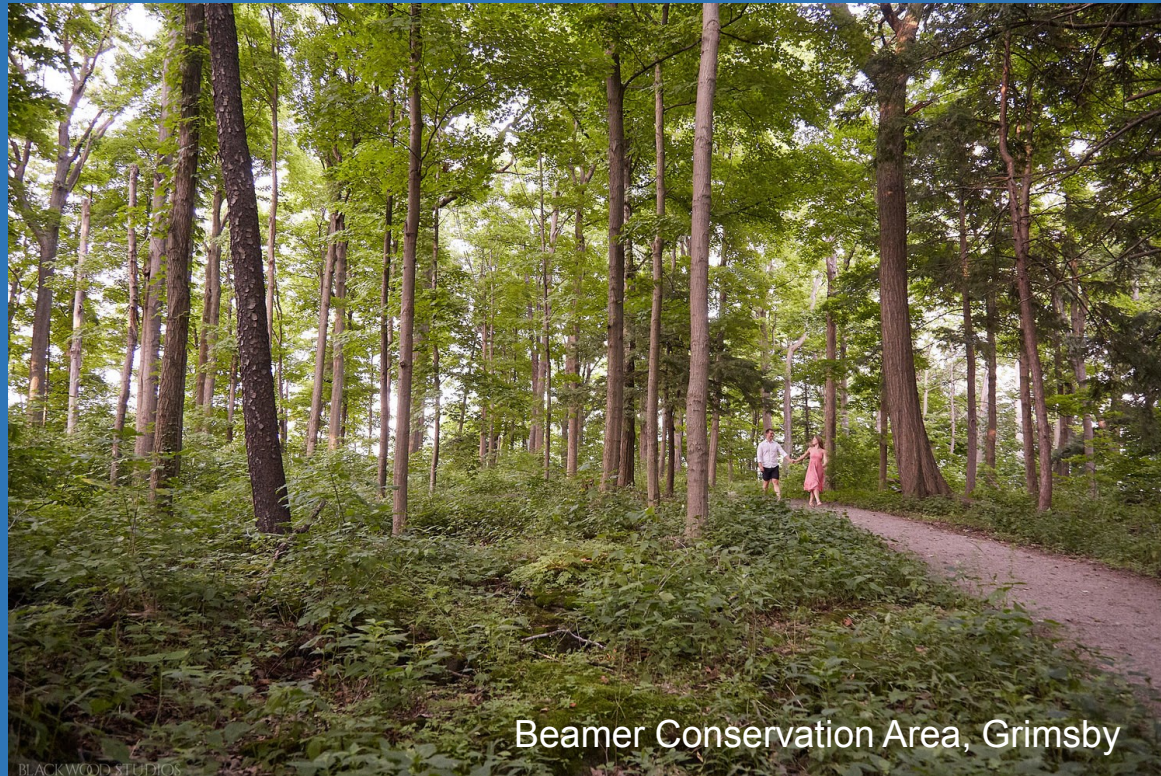


Cave Springs, Lincoln

*Liz Benneian*



# Thank You For Taking A Natural Heritage System Approach



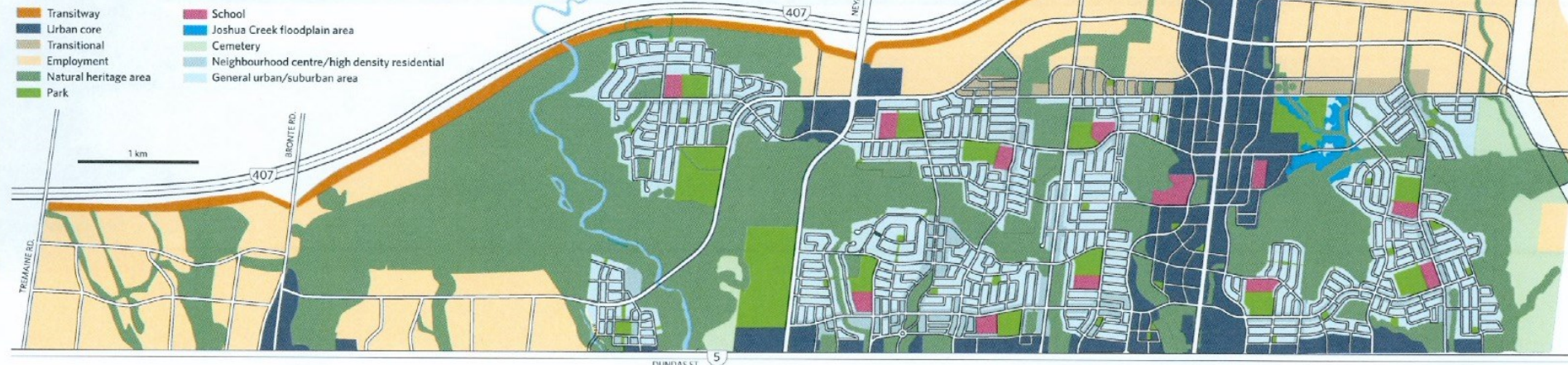
The decisions Council will make on what Natural Heritage System option to support may be the most important decision this Council makes — one that will either protect Niagara's natural legacy for future generations or lead to its inevitable loss.



# Oakville's Natural Heritage System

## North Oakville plan

With OMB endorsement, the town's master plan for development that preserves natural heritage corridors is ready to be put in place.



The dark green areas are the land designated as Natural Heritage System (25+% of the area).

The system preserves ecological integrity over the long-term and allows only passive human use.

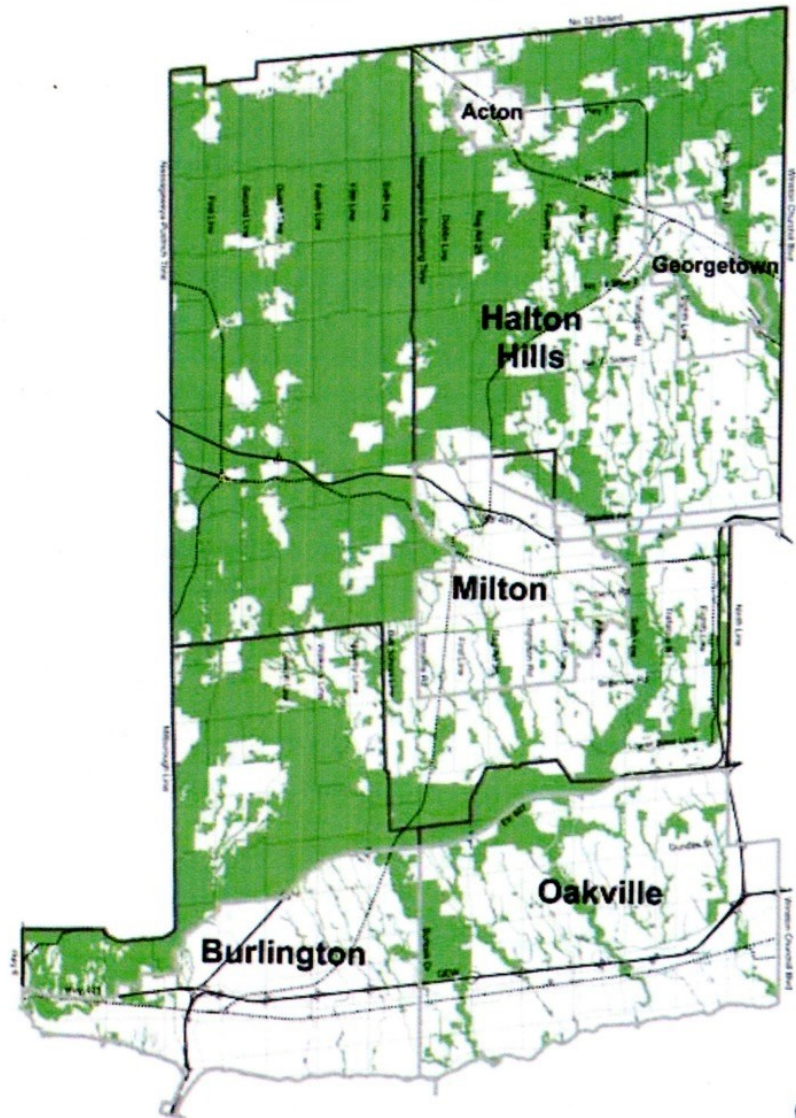
The light green areas are neighbourhood parks and sports fields.

# Halton Region's Natural Heritage System

The plan protects 33% of Halton Region's land.

The system includes Greenbelt and Escarpment lands, woodlands, wetlands and floodplains, core and linkage enhancement areas and other natural areas as identified by municipalities.

Designating NHS does not preclude agricultural uses.



Natural Heritage System

Municipal Boundary

Urban Area

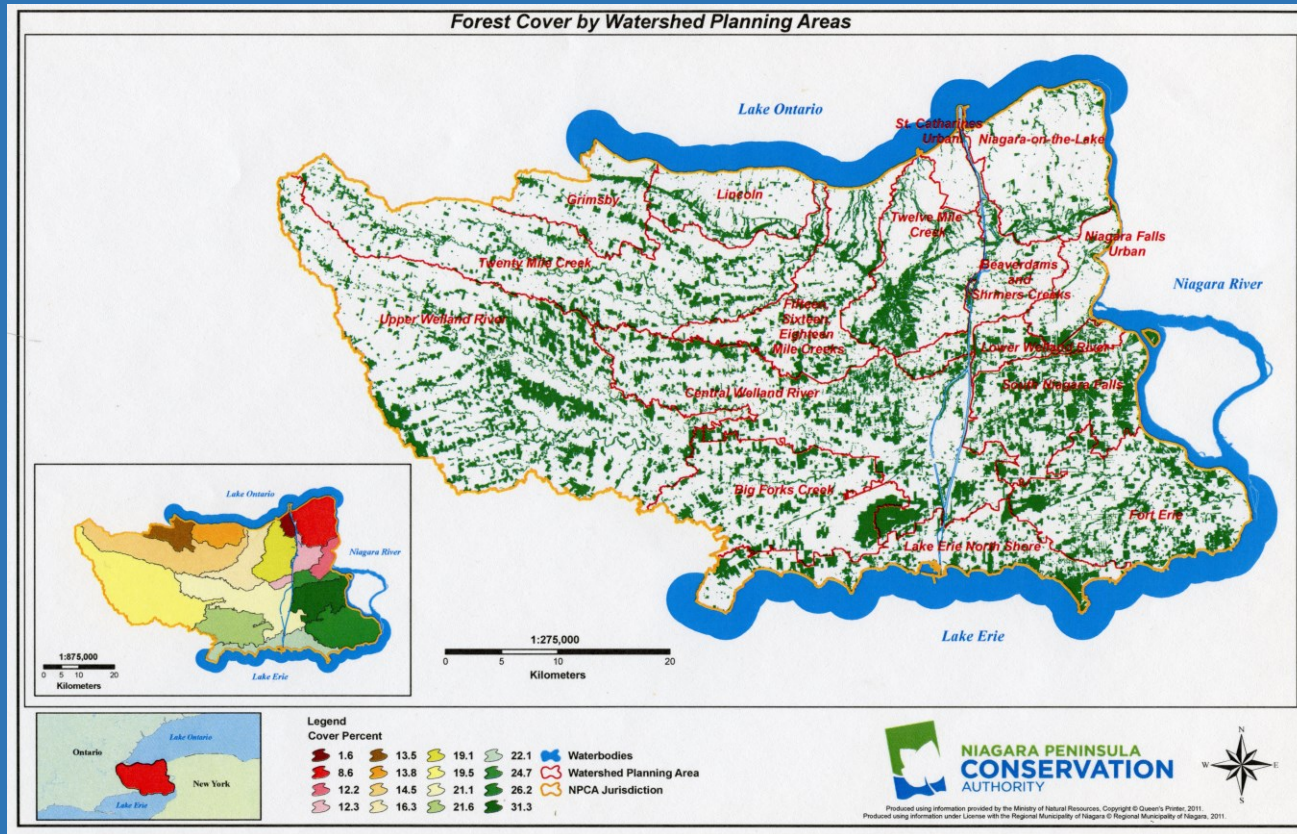


# Development Pressure Will Only Increase In The Years Ahead



As we all know, Niagara is under significant development pressure. If we don't act now to preserve Niagara's natural environment there will be nothing left to save. Niagara has already experienced devastating losses to its natural heritage. 5

# Niagara's Depleted Natural Heritage



Environment Canada says 30% forest cover is the minimum forest cover threshold.

40% will support half of potential species richness and marginally healthy aquatic systems.

50% forest cover is likely to support most of the potential species and healthy aquatic systems.

In Niagara we have 17.5% forest cover. Many large areas of Niagara including Grimsby, Lincoln, St. Catharines, Niagara-on-the-Lake, Thorold, and Niagara Falls have less than 14%.

Some areas are as low as 1.6%. It's important to note this map is from 2011. More has been lost.



# Niagara's Woodlands Are In Bad Shape

They are small, narrow, fragmented and don't have interior forest habitat.

The Natural Heritage System will protect the woodlands that exist and will enhance them with buffers, linkages and through restoration plantings.

## FOREST CONDITIONS

D

Forests are ecosystems that are composed of a diverse group of plants, animals and other organisms. Forests provide many social and ecological benefits such as habitat of flora and fauna, carbon sequestration, building materials, and opportunities for recreation.

The percentages of forest cover, forest interior, and stream side cover were used to evaluate the forest conditions of the watershed.

### What Did we Find?

- The majority of NPCA's watershed scored a D grade as most of the woodlands are small, narrow, fragmented, and do not contain interior forest habitat.
- The highest forest condition grades were found in the southern portions of the watershed.
- The lowest forest condition grades were found in watersheds along the Lake Ontario shoreline, portions of Hamilton, and the urban centres such as St. Catharines and Niagara Falls.



# Niagara's Surface Water Is In Bad Shape

Surface water is contaminated with fertilizer and pesticides from agriculture, faulty septic systems, sewer overflows and urban stormwater.

Its quality has been rated a “D” in Watershed Reports for many years.

Protecting natural areas and enhancing them, as envisioned in the NHS report, is key to improving ground water quality.

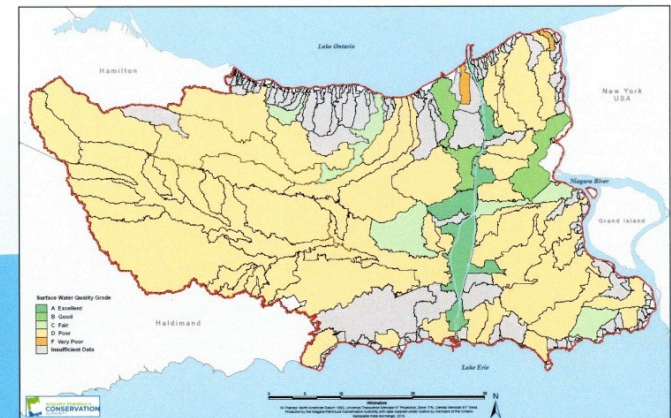
The NPCA monitors water quality at 80 sites throughout its watershed.

Surface water quality is graded using three indicators:

- Phosphorus (contributions from excessive fertilizer use and wastewater discharge)
- E. coli bacteria (found in the intestines of humans and other animals)
- Benthic macroinvertebrates community (small animals without a backbone that live at the bottom of streams). These animals have a range of tolerances to water pollution. Their quantity and variety can provide an indication of the level of water pollution.

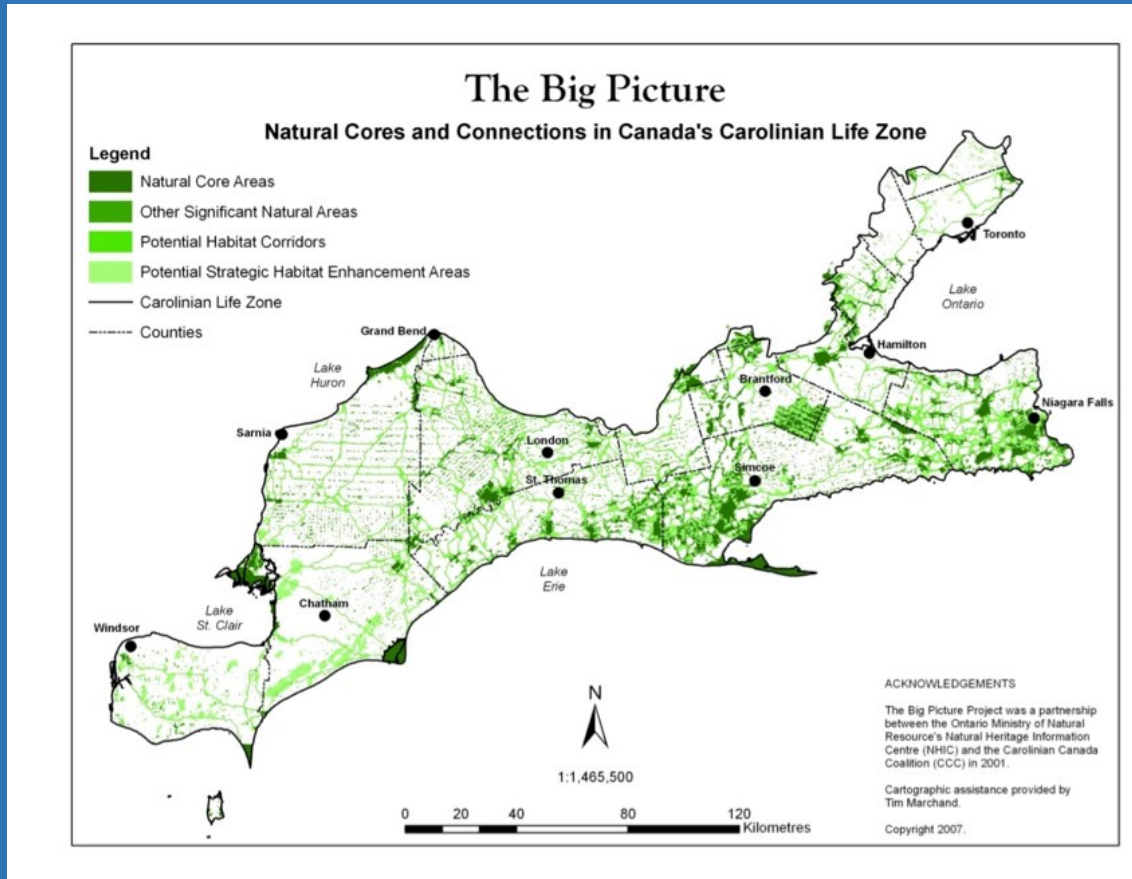
#### What Did we Find?

- Most of the watersheds scored a D grade and have poor water quality.
- The highest surface water quality grades were found in watersheds where cleaner water is redirected from Lake Erie and the Niagara River to support hydroelectric generation and shipping in the Welland Canal.
- Nutrient and bacteria contamination from non-point sources (agricultural/livestock runoff and faulty septic systems) and point sources (combined sewer overflow and urban stormwater) continue to be the major causes of water quality impairment in the NPCA watershed.



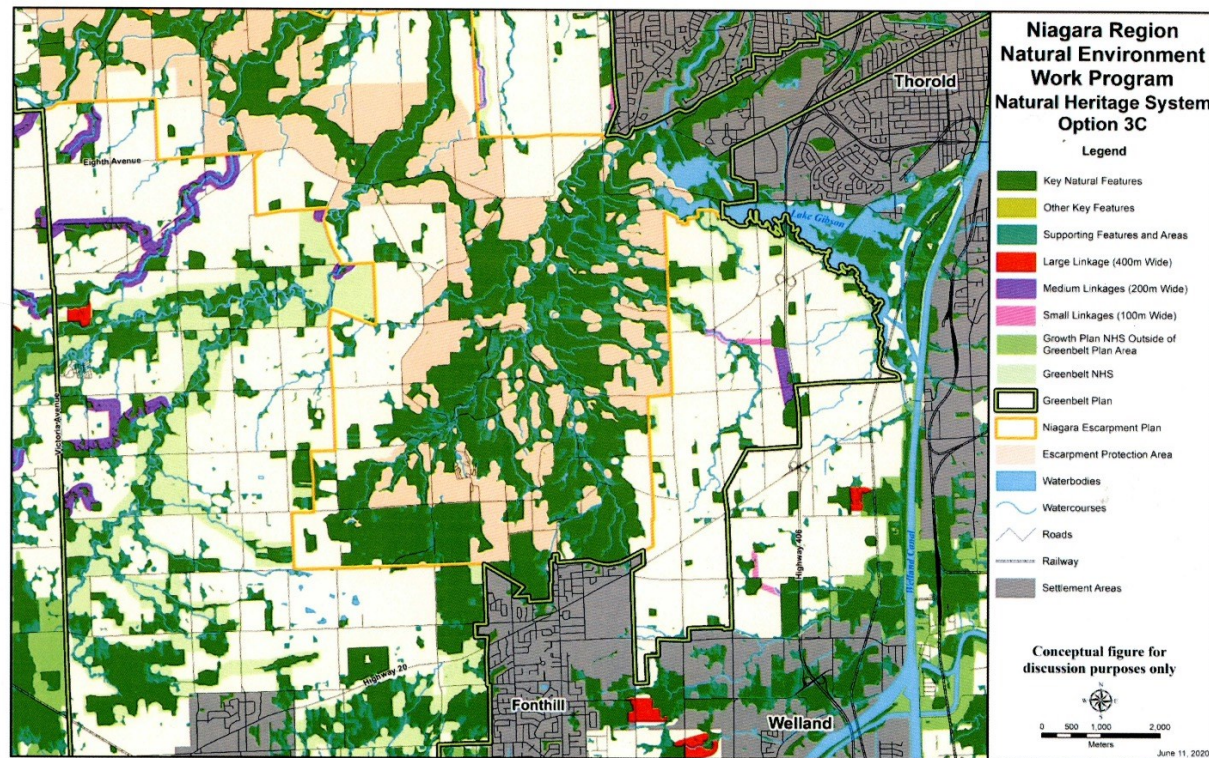


# Niagara's NHS Is Key To Preserving Canada's Most Diverse Ecosystem



The Carolinian Zone is the most diverse bioregion in Canada but due to the loss of natural areas to urban development and agriculture less than 15% of its natural area remains. 125 species are considered vulnerable, species of special concern, threatened or endangered by either the federal or provincial government.

# Please Support the Best NHS Plan: 3C not 3B



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The major difference between Option 3C and # B is that option 3C includes supporting features and small linkages within settlement areas and suggests minimum buffers from key natural features within settlement areas.



# Please Support the Best NHS Plan: 3C not 3B



One of the things COVID-19 has taught us is that people value nature where they live.



# Please Support the Best NHS Plan: 3C not 3B



Our people deserve all the green infrastructure benefits that natural spaces provide: shade/cooling; water purification; flood abatement; oxygen production; erosion control.





**Thank you**