Class 1,2 and 3 Land Loss Resulting From Urban Development and Economic Development

Ontario Institute Agrologists

Symposium

November 19th, 2025

Presented by Gary R Eagleson P.Ag

eagleson@hay.net

519 878 3794

A Little History of Soils in Ontario

- **Those interested in soils of Ontario I would recommend reading the following website: www.saskoer.ca/soil/science/chapter/soils-of-ontario**

  By Daniel Saurette, Jim Warren and Richard Heck

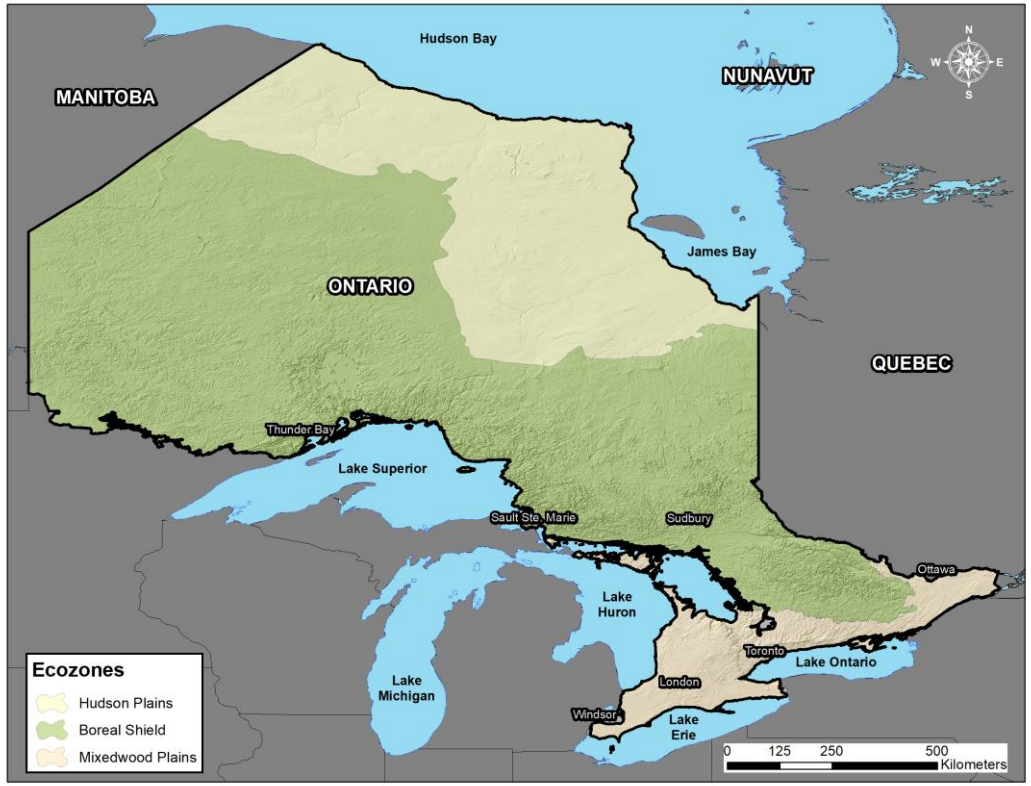
- **We are all familiar with the Ice Age. We were covered by the Laurentide Ice Sheet of the Wisconsinian Glaciation. The Ice shield was up to 1 km thick. About 13,000 years ago it began to thaw leaving our diverse topography from Hudson Bay to the shores of Lake Erie and Lake Ontario.**

Ecosystems Found in Ontario

- **Hudson Plain Ecozone- 25% of land base in Ontario**
- **Boreal Shield Ecozone- 66% of land base in Ontario**
- **Mixedwood Plains Ecozone- 9% of land base in Ontario**

- **This presentation is focused on the Mixedwood Plains Ecozone**

Ecosystems of Ontario



Mixedwood Plains Ecosystem

- In 2018 agriculture accounted for 53.2% of the land base or approximately 4.5 million hectares of land (AAFC 2018)
- Forests accounted 23% of which 11.5% were broadleaf, 8.4% were mixed wood and 3.4% were conifers
- Urban or developed land covered over 11% (934,898 hc). This would include the City of Toronto, Ottawa, Kitchener, Guelph and so forth as well as number of towns, villages and hamlets. Within these urban and developed areas would be found homes, commercial, industrial, parks and recreation, road, railroads and museums.
- The problem now is urban and industrial development is eating away at the 53.2% of agricultural land. The Mixedwood Plains Ecozone is in the most populated area of Canada and with ever increasing population growth.

The Limits to Growth

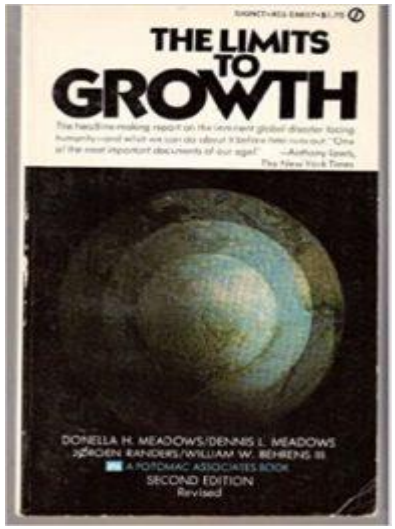
- The Limits to Growth was published in 1972. I studied this book in a university course in 1974 and is the reason my wife and I decided to have only two children. Keep in mind the below were known 50+ years ago.
- “The Limits to Growth” contains six main messages: ▫Firstly, that the environmental impact of human society had become heavier between 1900 and 1972 due to both an increase in the number of humans and the amount of resources consumed and pollution generated per person per year.
- That our planet is physically limited, and that humanity cannot continue to use more physical resources and generate more emissions than nature is capable of supplying in a sustainable manner. In addition, it will not be possible to rely on technology alone to solve the problem as this would only delay reaching the carrying capacity of the planet by a few years.

The Limits To Growth

- Third, the authors cautioned that it is possible, and even likely, that the human ecological footprint will overshoot the carrying capacity of the planet, further explaining that this would likely occur due to significant delays in global decision making while growth continued, bringing the human footprint into unsustainable territory.
- Once humanity has entered this unsustainable territory, we will have to move back into sustainable territory, either through “managed decline” of activity, or we will be forced to move back through “collapse” caused by the brutal inherent processes of nature or the market.
- The fifth message is one of hope. The authors state that: “The challenge of overshoot from decision delay is real, but easily solvable if human society decided to act”, meaning that forward looking policy could prevent humanity from overshooting the aforementioned planetary limits.

The Limits to Growth

- Lastly, the authors advocated for an early start – in 1972 that was 1975 – to achieve a smooth transition to a sustainable world without needing to pass through the overshoot and contraction phases.
- The authors of the Limits To Growth were Donella H. Meadows, Dennis L. Meadows, Jorgen Randers and William Behrens 111



Present Class 1,2,3 Agricultural Land Use

- It has been widely discussed that Ontario has been taking 320 acres per day of Class 1 Class 2 and class 3 land out of production since approximately 2018. According to AAFC 2018 there is approximately 4.5 million hectares of agricultural land in Southern Ontario. Statistics Canada data based on Nov. 14th 2023 says there is approximately 11.766,071 million acres of land in Southern Ontario. The make-up is as follows
  - Crop land- 9,051,011 ac
  - Tame or seeded pastures- 400,480 ac
  - Natural land for pasture- 626,366 ac
  - Summer fallow- 13,964 ac
  - All other lands- 1,674,250 ac.
  - Total- 11,766,071 ac

Present Class 1,2,3 Land Use

- Between 2001-2021 Canada lost 9.9 million acres of land to development
- For every 1 million increase is population Canada lost 530 sq km or about 131,000 acres of prime agricultural farmland mostly near urban centres.
- Ontario lost 116,000 acres of farmland per year between 2016-2021 which is 320 acres per day
- I would recommend you look and read Dr. Lowdermilk's "Conquest of the Land Through Seven Thousand Years" written in 1938-1939. He discovered that soil erosion, deforestation, overgrazing, neglect, and conflicts between cultivators and herdsman have helped topple empires and wipe out entire civilizations. At the same time, he learned that careful stewardship of the earth's resources, through terracing, crop rotation, and other soil conservation measures, has enabled other societies to flourish for centuries.

Class 1,2,3 Land Use
Once “Paved Over” It is gone

- Mathematical Equations to give an insight into the future.
- Using the same agricultural land going out of production from 2016-2021 which was 320 acres per day and use the existing class 1,2,3 agricultural land existing in Nov 14th 2023 then what is the expected timeline before every square foot of cropland will be used up on Southern Ontario.
- (9,051,011acres / (320 acres x 365 days)) = 77.492 years
- This still leaves the pasture land, summer fallow and all other lands which would not be the land required to sustain the population. We could rely on imports but most other countries are facing rising population numbers. Countries like Russia, China and Japan are experiencing decreasing population growth warning signs for their fiscal economic stability.
- What a mess we are in when it could have been controlled if our decision makers had read *Limits to Growth* 50 years ago.

Is Armageddon Within our Children's Lifetime

- Starting point November 19th, 2025
- 28, 284.5 days from now is 929.9 months
- 929.9 months = 77.492 years
- Therefore, the big fall will occur around:
  - May 17th, 12:00 pm, 2103
  - That is my subsequential year of birth but I still care. You should also. Every square foot of Class 1,2,3 land in Ontario will be lost.

Population intensity