TOWNSHIP OF MELANCTHON - ELECTRONIC MEETING
ENVIRONMENTAL SUSTAINABILITY COMMITTEE
FRIDAY, APRIL 9, 2021 - 10:30 A.M.

Join Zoom Meeting

https://us02web.zoom.us/j/81058433188?pwd=ZlVaWjNCT2QzMDZDQ3l2YjVzSW1MZz09

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Meeting ID: 810 5843 3188
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1. Call Meeting to Order

2. Additions/Deletions/Approval of Agenda
Motion - Moved by _____, Seconded by _____ that the Agenda be approved/amended. Carried.

3. Declaration of Pecuniary Interest or Conflict of Interest

4. Approval of Draft Minutes - March 12, 2021
Motion - Moved by _____ Seconded by _____ the minutes of the Environmental Sustainability Committee held on February 12, 2021 be approved as circulated. Carried.

5. Business Arising from the Minutes
1. Follow Up Discussion regarding NVCA presentations

6. General Business
1. Lavender Falls
2. Melancthon Sustainability Day
3. Other/Addition(s)

7. Delegations

8. Confirmation of Meeting

Motion - Moved by _____ Seconded by _____, that all actions of the Members and Officers of the Environmental Sustainability Committee with respect to every matter addressed and/or adopted by the Committee on the above date be hereby adopted, ratified and confirmed; and each motion, resolution and other actions taken by the Committee Members and Officers at the meeting held on the above date are hereby adopted, ratified and confirmed. Carried.

9. Adjournment and Date of Next Meeting

Motion - Moved by _____ Seconded by _____, that we adjourn the Environmental Sustainability Committee at ___:____am to meet again on _____ _____ or at the call of the Chair. Carried.

Invasive Species and the Nottawasaga Valley Conservation Authority – A Brief Overview!

Melancthon Township, Environmental Sustainability Committee

David Featherstone, NVCA | dfeatherstone@nvca.on.ca | March 12, 2021

Presentation Outline

- What is an invasive species?
- NVCA Involvement with Invasive Species
- NVCA's Dirty Dozen
- Melancthon Area Work
- Future Threats
- Off to Rick and Fred!

What Are Invasive Species???

Invasive species are non-native plant and animal species that outcompete native species for resources and dominate space. They may directly kill other species, introduce disease or hybridize with native species. Non-native invasive species typically prefer disturbed habitats, are aggressive, have high reproductive rates, and lack natural predators. Invasive species are spread with the assistance of humans and by animals, wind and water.

NVCA Program
(at least Dave's side of it!)

- Started in 2005 (or thereabouts)
- Informal and, initially, driven to some extent by Ontario Federation of Anglers and Hunters summer student program (now defunct)
- Key species: Phragmites, Garlic Mustard, Dog Strangling Vine, Giant Hogweed, Wild Parsnip (though we tried to track others, too)
- Became more formal over time…fact sheets developed, invasive species strategy, larger projects with various partners
- Assistance with best management practices documents (Ontario Invasive Plant Council)
- Unfortunately, funding cutbacks have reduced capacity of many organizations to undertake work

NVCA Products

Invasive Species Fact Sheet - Giant Hogweed
(Heracleum mantegazzianum)

Where does Giant Hogweed come from?

Giant Hogweed (*Heracleum mantegazzianum*) is a plant native to Asia. It was likely introduced to North America as an ornamental garden plant. With no known diseases or insect pests here in Canada, the plant has escaped into the wild and has become an invasive species which threatens our natural ecosystems.

What does it look like?

Giant hogweed resembles some of our native species such as Angelica, Queen Anne's Lace, and Cow parsnip. Unlike native species, Hogweed can grow up to 5 metres tall and has an herbaceous stem 5 to 10 centimetres in diameter. The stem and leaf stalks are hollow, covered with coarse hairs, and are often purple-spotted. The compound leaf is deeply grooved and can span one metre across. In summer, Hogweed produces a white umbrella-shaped flower from June to July, which will produce large flat oval seeds.

Where is it found?

Although native to Asia, Giant Hogweed has invaded many regions of the world, including Australia, Canada, the United Kingdom, and the United States. Locally, sightings have been reported in the towns of Collingwood and Meaford and the townships of Adjala-Tosorontio and Essa. Hogweed is able to live in a variety of habitats, but is generally found in moist soils. It is often seen along roadside ditches, stream banks, and vacant lots.

How does Giant Hogweed impact our local environment?

With its broad leaves and dense canopy, Giant Hogweed often out-competes native species, reducing the variety of species that grow in the surrounding area. Its invasive potential is increased by the vast number of seeds it can produce - up to 50,000 per plant! These seeds can spread short distances by the wind, be carried by wildlife or human activity, or float downstream in rivers to colonize new areas. Generally they are found within 10 metres of the parent plants. Seeds can remain viable for 7 to 15 years.

Be cautious around Giant Hogweed

Giant Hogweed poses a serious health threat - if you come across it or think you have it on your property, DO NOT touch it. Hogweed stalks, leaves, and bristles contain a noxious sap that sensitizes skin to sunlight. Contact between the skin and sap can occur by brushing up against or breaking the plant's bristles, stalks or leaves. Once the sap comes into contact with skin, exposure to sunlight can cause severe burns and painful blistering, usually within 48 hours. Blisters can develop into purple and black scars, leading to years of recurring inflammation and dermatitis (skin irritation), as well as permanent scarring. Contact between the sap and eyes can lead to temporary or permanent blindness.

European Common Reed
Phragmites australis (subsp. australis)

Invasive Grass Threatening Collingwood's Shoreline!

Description

European Common Reed, often referred to as *Phragmites* (pronounced frag-my-tees), is a tall, non-native perennial grass that has been spreading in Southern Ontario for decades. It grows up to 5 m in height and has large leaves which are beige to blue-green in colour. It has extremely dense seed heads that are spread by the wind. The grass also spreads outwards from existing stands by its persistent root and rhizome structure.

The native subspecies (*Phragmites australis* subsp. *americanus*) is not invasive, and is separated from its non-native counterpart by its sparse stand growth and smaller overall size. It also has reddish-brown stems with less-broad, yellow-green coloured leaves.

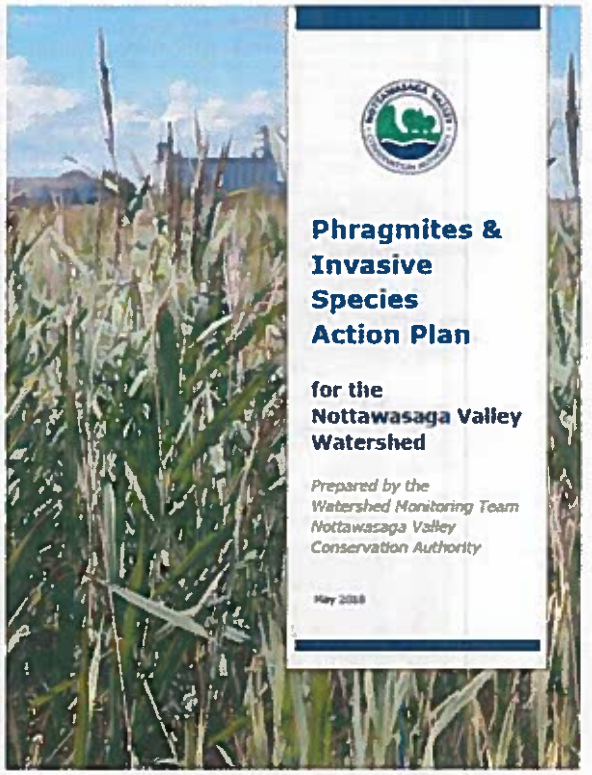
Phragmites along Collingwood's Shoreline

Phragmites can aggressively spread over wetlands and shorelines and crowd out native vegetation. Dense stands of *Phragmites* provide poor habitat for wildlife species due to decreased availability of food and nesting sites. This may affect Species at Risk that currently occupy Collingwood's coastal marshes. *Phragmites'* prolific nature can disrupt views of and access to the shoreline by residents and visitors. It can also negatively impact recreational activities such as boating, angling and swimming.

Dense stands of *Phragmites* are encroaching on the globally rare coastal marshes that occur along Collingwood's shoreline. These coastal marshes are endemic to Great Lake's shorelines (found nowhere else in the world), and contain extremely sensitive habitats. The low nutrient regime associated with Collingwood's coastal marshes may limit the initial distribution and growth of *Phragmites*. However, this does not mean that *Phragmites* will not spread over time.

Did you know...

- *Phragmites* can have a vertical stem growth of 4 cm per day and have a density of 200 stems per m^2.
- One seed head can produce up to 2,000 seeds per year.
- *Phragmites* can reestablish from a single fragment or seed! Clippings and roots should be dried and burned, never composted.
- *Phragmites* is a large water-suck! It transpires water much faster than native vegetation.
- Invasive *Phragmites* releases toxins from its roots that impedes the growth of and/or kills other plant species.
- There are no herbicides currently approved for over or near-water use.



Phragmites & Invasive Species Action Plan

for the Nottawasaga Valley Watershed

Prepared by the Watershed Monitoring Team Nottawasaga Valley Conservation Authority

May 2018

https://www.nvca.on.ca/watershed-science/invasive-species

Collingwood's "Dirty Dozen" Invasive Species

Giant Hogweed
(Heracleum mantegazzianum)

This tall herbaceous plant (2-4 m) looks similar to Queen Anne's Lace and Cow Parsnip. It has a hollow, hairy stem with purple spots and large white flower clusters. This plant contains toxins that cause severe burns when touched. Avoid contact! This plant can be found along the Oak St. canal.

Dog Strangling Vine
(Vincetoxicum rossicum)

This vine grows 1-2 m tall by entangling itself onto other plants. It has pinkish purple star-shaped flowers and bean-shaped seed pods. It can completely cover the forest floor, choking out all other species. Dog Strangling Vine can be found along the shores of White's Bay.

Himalayan Balsam
(Cortaderia selloana)

This 1-2 m tall herbaceous plant has a fleshy-pink stem and distinctly jagged, opposite leaves. It has an irregular cone-shaped pink flower and can be found along stream banks, such as the Oak St. canal.

Garlic Mustard
(Alliaria petiolata)

First year plants have a rosette of dark green foliage. In its second year, white flowers appear on a stalk that is up to 1.2 m tall. In mid-summer narrow seed pods are present. Young plants produce a strong garlic odour when crushed. It can be found under the forest cover in Harbourview Park.

Wild Parsnip
(Pastinaca sativa)

This plant is in the same family as Giant Hogweed, but has yellow coloured flowers and only reaches 1.5 m tall. The dense stands can outcompete native species. Do not touch! It's sap causes severe burns. Wild Parsnip can be seen growing along the Pretty River.

Japanese Knotweed
(Fallopia japonica)

This plant is aggressive and has strong root systems. Stems are round, reddish-purple, smooth and have a bamboo-like appearance. Small flowers are greenish-white and ovate leaves. Japanese Knotweed is one of the hardest invasive plants to control. This plant can be seen along the boardwalk at Harbourview Park.

Phragmites
(Phragmites australis)

Also known as European Common Reed, the invasive grass can grow up to 5 m tall. It has tan stems and large red seed heads. It is very aggressive, creating dense monocultures and is commonly seen along shorelines and roadside ditches. *Phragmites* can be found inhabiting the shoreline of Georgian Bay.

Emerald Ash Borer (EAB)
(Agrilus planipennis)

The creamy white larvae (right) is between 26-32 mm, whereas the green metallic beetle (left) is 8.5 to 13.5 mm long. Signs a tree is infested include a yellowing or thinning canopy, young growth shoots, cracked bark and D-shaped exit holes. Beetles prefer to attack green, white and black ash trees.

Common Buckthorn
(Rhamnus cathartica)

This small tree grows between 5-6 m tall. It has smooth, dark green leaves that are finely toothed, and oppositely arranged along the stem. Most branches older than 1 year end in a thorn. It has small yellow flower clusters and berry-like black fruit in late summer and fall.

Common Carp
(Cyprinus carpio)

Common carp is not an invasive Asian carp, but were introduced here from Europe in the 1800s. Common carp impact our native fish species by eating aquatic vegetation used for habitat. They also muck up the shoreline which can smother native fish eggs.

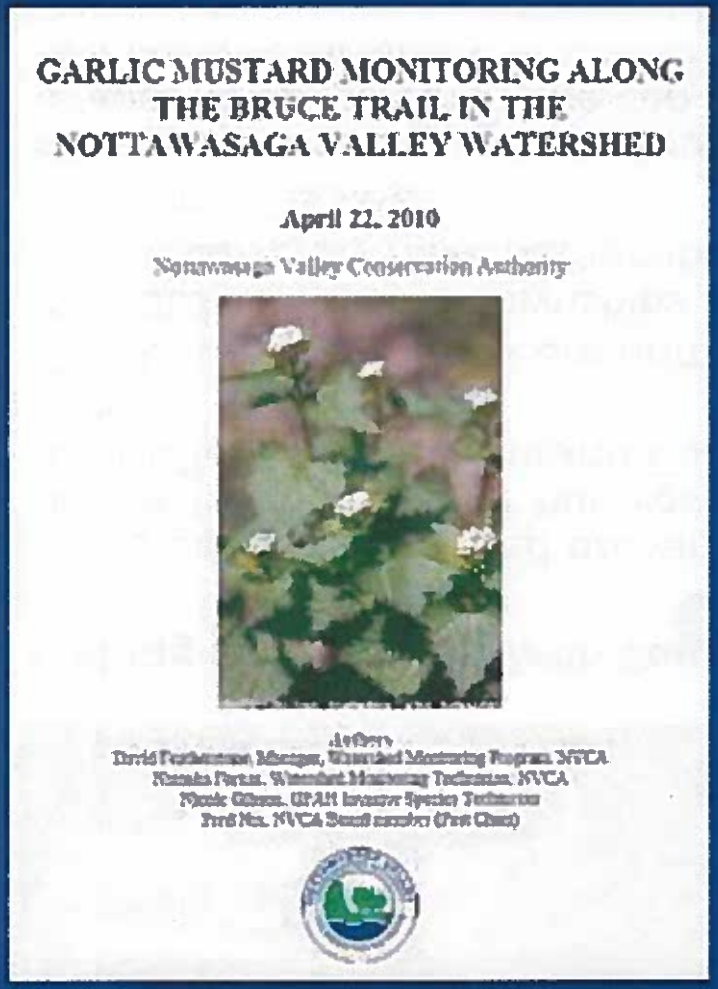
Zebra/Quagga Mussels
(Dreissena polymorpha & D. bugensis)

Zebra mussels are black or brown with white or yellow zigzagged patterns. Quagga mussels have dark concentric rings on their shell with a pale color near the hinge. Zebra mussels sit flat, whereas quagga mussels do not. These mussels occur offshore of Georgian Bay.

Round Goby
(Neogobius melanostomus)

This invasive fish is established in the Great Lakes and Lake Simcoe. It is 6 to 10 centimetres long with a cylindrical body and a rounded, blunt snout. The most distinguishing feature is the black spot on its dorsal fin. Caution: can be confused with native Sculpins!

NVCA's list is similar but doesn't include Himalayan Balsam, Common Carp or Japanese Knotweed. Instead, it includes Norway Maple, Rusty Crayfish and Exotic (Rough) Manna Grass.



Formal survey on Bruce Trail in 2009/2010. Partnership with Collingwood Nature League 2011-2016 (approximate ☺)

Phrag Fighters - Dufferin County

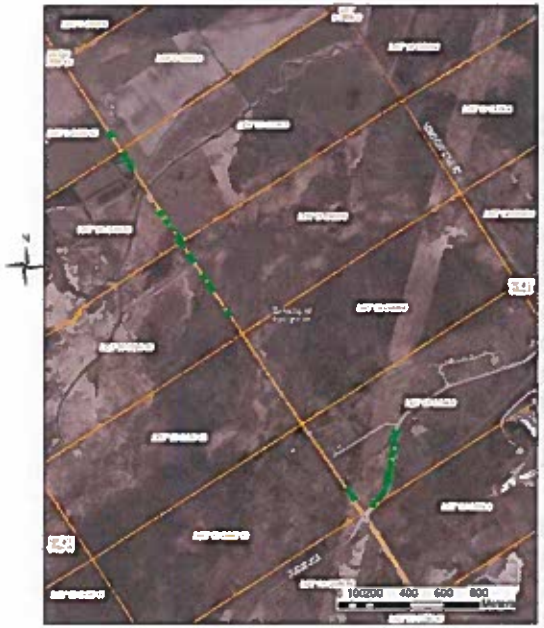
Public group · 215 members

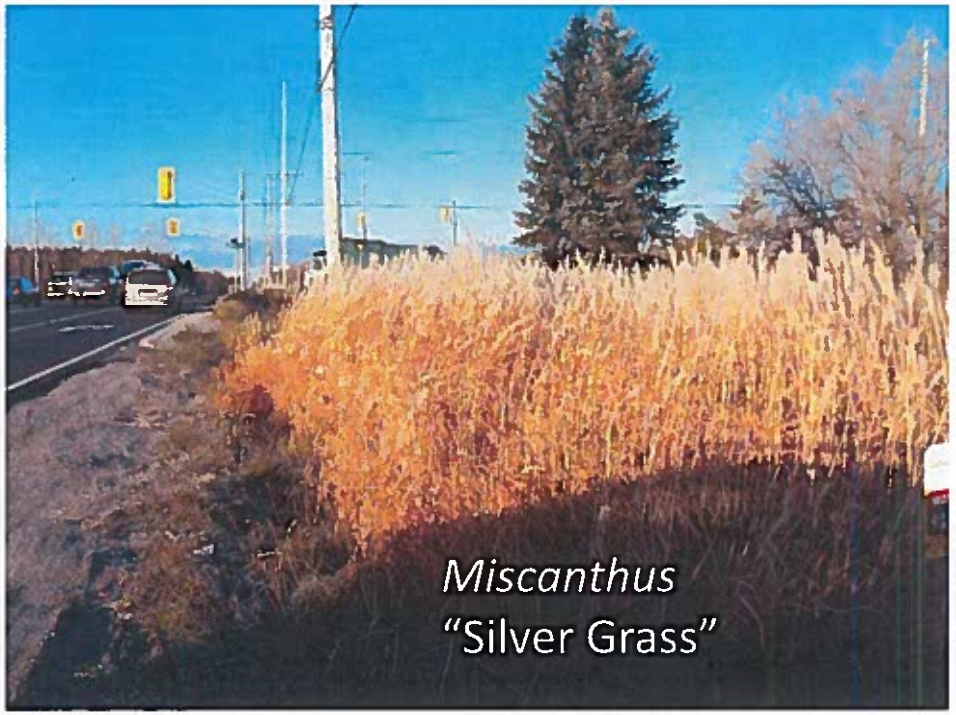
+ Invite

- "This group was formed primarily to fight the onset of phragmite australis in the Town of Mulmur but was expanded to include the towns that make up Dufferin County, Ontario Canada. The goal is to keep Dufferin "phrag free".
- The County Townships are primarily farm and rural but we have two **substantial** urban townships within. Orangeville & Shelburne, both of which currently have phragmites.
- Awareness is key.
- Phrag has a strong grip on Southern Ontario but by catching it in early stages of development we can stop it from spreading to the point where it's out of control.
- Although we are very focused on Dufferin County at the outset we welcome anyone from anywhere to join, learn and raise awareness about phragmites. It exists everywhere in the world except Antarctica (and we're not discounting that in the future either!)."

Emerging Threats and Climate Change

Miscanthus Mapping
George Johnston and Snow Valley Roads
November 2019





Kudzu..."the vine that ate the south"

Invasion of kudzu near Leamington, Ontario, on the shores of Lake Erie. Photo: Sam Brinker, MNR

Northeast RISCC Management

Regional Invasive Species & Climate Change
Management Challenge

Double Trouble
Understanding risks from invasive species + climate change

Summary

Individually, invasive species and climate change are major threats to global ecosystems. Together they create new challenges for effective management. Before we can design management strategies to respond to this double trouble, we need to understand how these two forms of global change interact.

Why is risk higher in the Northeast?

All regions are likely to see interactions between invasive species and climate change (Figure 1). The Northeast is particularly vulnerable for the following reasons:

- Northerly latitudes are warming more than southerly latitudes, leading to more rapid environmental changes.
- Substantial urban and suburban development cause atmospheric CO_2 content to increase more rapidly in the Northeast compared to more rural areas, increasing the competitiveness of invasive plants.
- Trends towards more extreme precipitation are more pronounced in the Northeast than any other region of the U.S., increasing disturbance and stress to native ecosystems.
- Prevalent southerly invasives are shifting their ranges north, making the Northeast a future invasion hotspot.

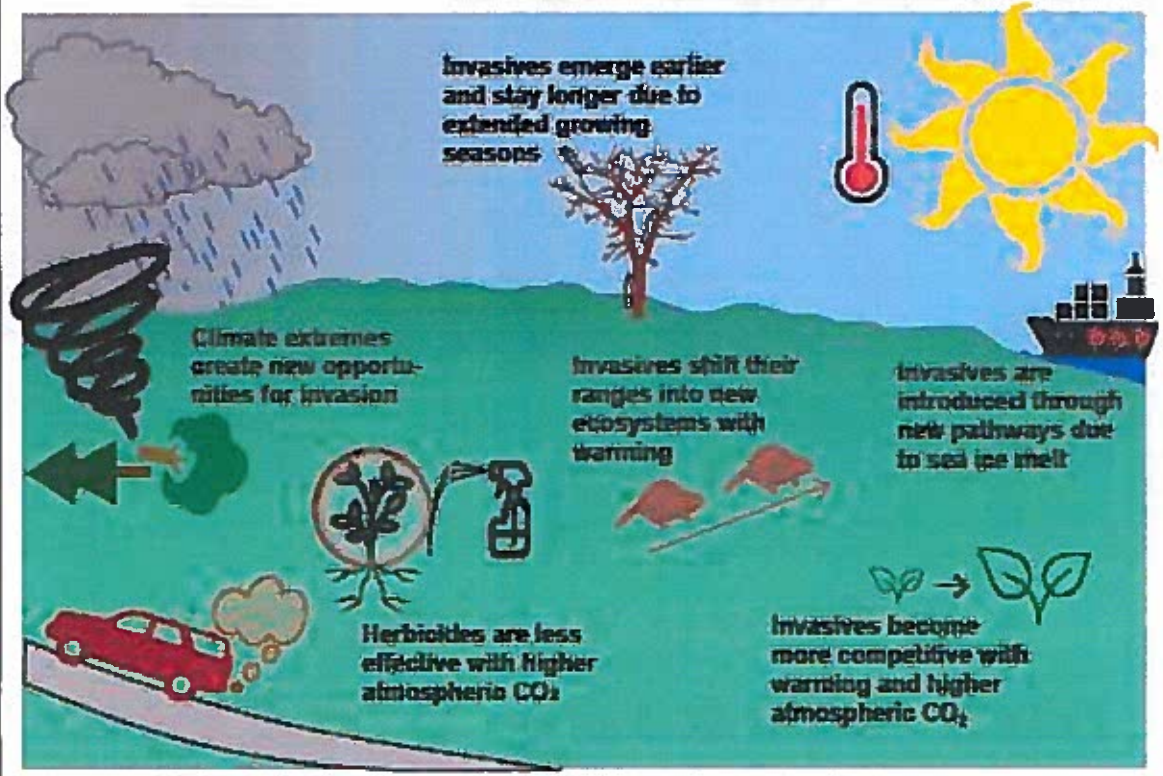


Figure 1. Major interactions between non-native invasive species and climate change.

Summary

Invasive Species

- Are all around us and impacting our communities and watersheds
- More on their way; climate change won't help
- Need to find effective ways to stop them from arriving in first place (and the will to enforce)

Local Control

- Know your enemy
- Partnerships are key – no agency/organization can do it all (even more true today ☹)
- Hit the small bits before they become overwhelming
- Focus efforts to where benefits will be greatest
- Celebrate the wins…no matter how small!!!


Thank You!

Invasive Pests
Forestry

Rick Grillmayer | NVCA | March 2021

Emerald Ash Borer

Now widespread throughout most of Ontario

Emerald Ash Borer

Cannot be stopped, only try to mitigate the loss of the ash

Gypsy Moth

Defoliator – big, ugly, in your face but never stays long

Gypsy Moth

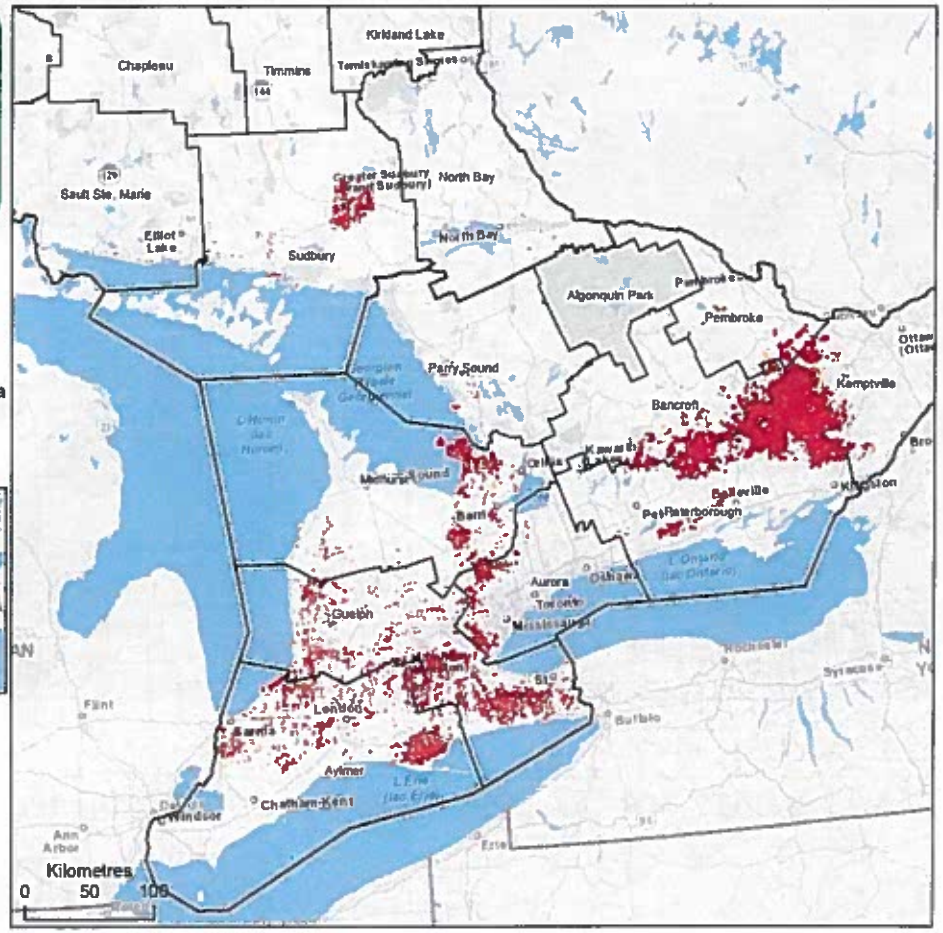
2020 infestation biggest on record – no one really knows why

Gypsy moth
2020

Areas in Ontario where gypsy moth caused defoliation

Light = 17,002 ha
Moderate to severe = 569,384 ha

- Area of light defoliation
- Area of moderate to severe defoliation



Disclaimer:
This map is illustrative only. Do not rely on this map as being a precise indicator of routes, locations of features, nor as a guide to navigation. This map was produced by the Ministry of Natural Resources and Forestry.

Ontario

NOTTAWASAGA VALLEY CONSERVATION AUTHORITY

Gypsy Moth

2021 could be difficult for some, less of an issue for others

Gypsy moth egg mass survey results

Defoliation forecast 2021

- Severe
- Moderate

Gypsy moth damage 2020

- Area of moderate to severe damage
- Area of light damage

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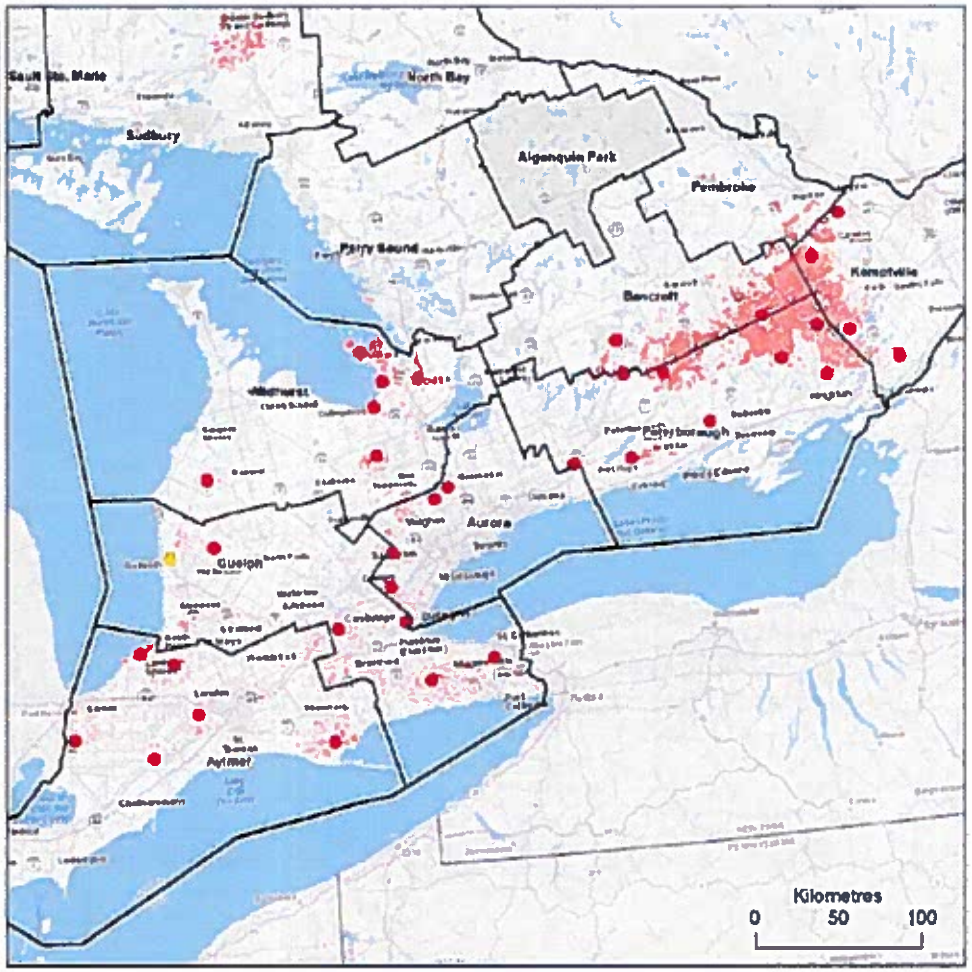
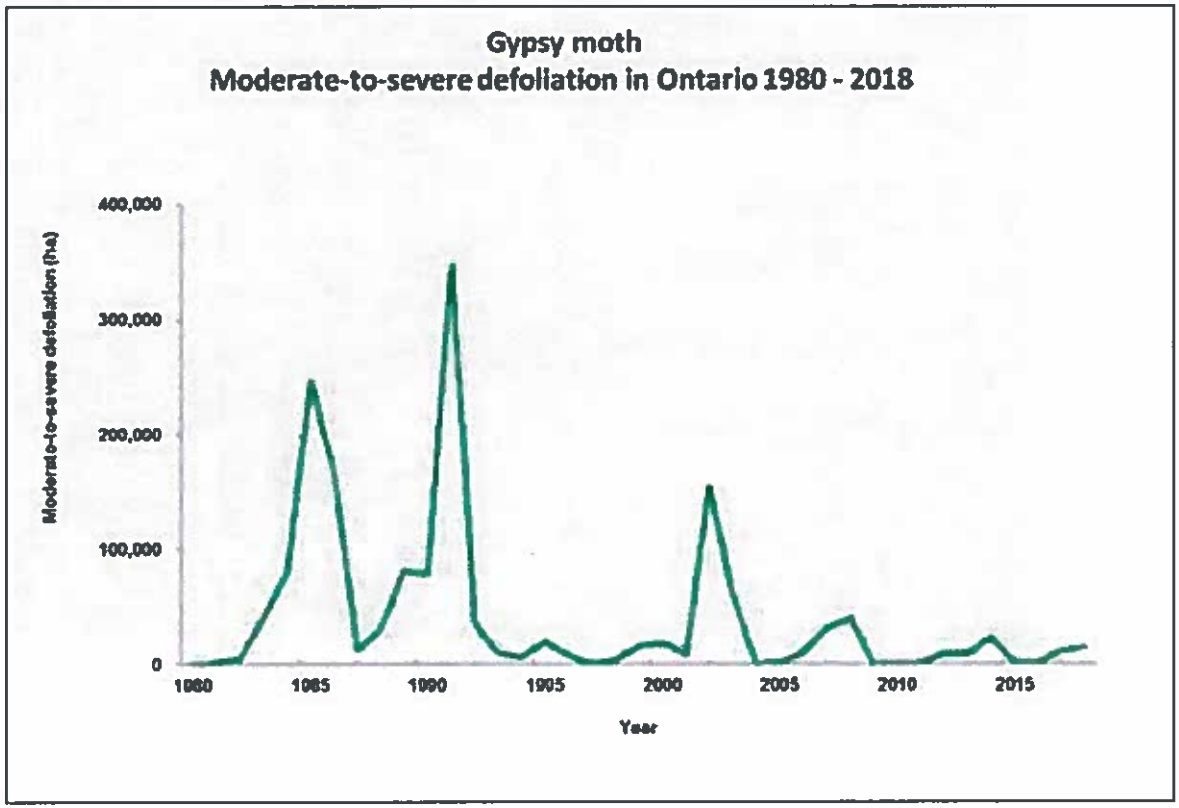
Ontario



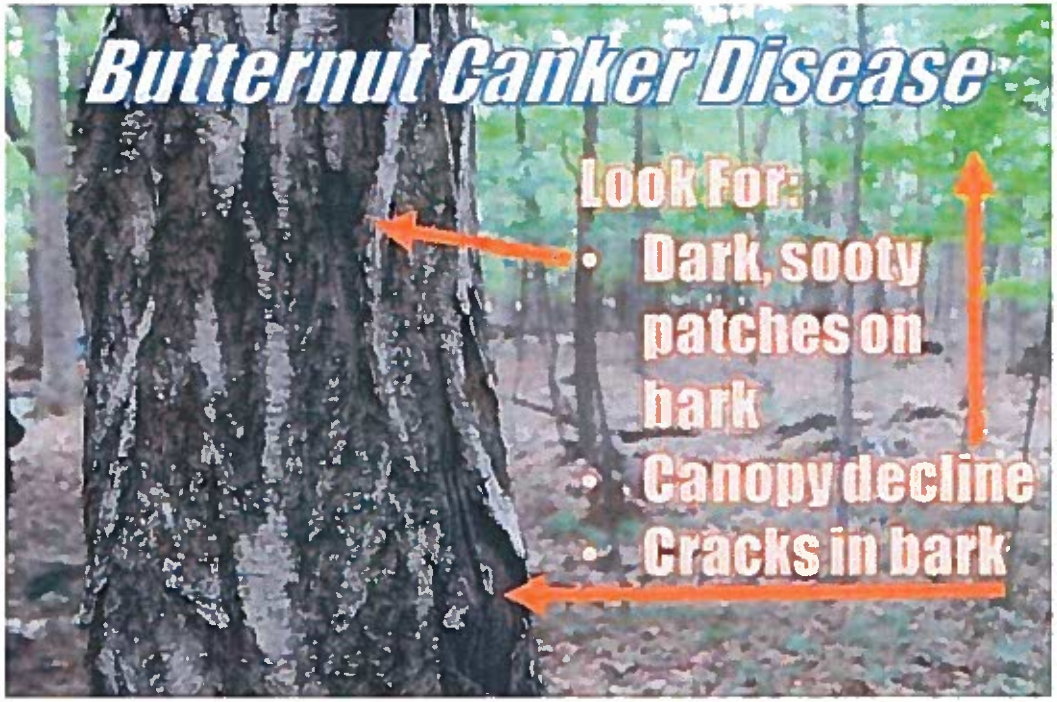
Gypsy Moth

Residential landowners can try to control, large scale landowners let the infestation collapse.



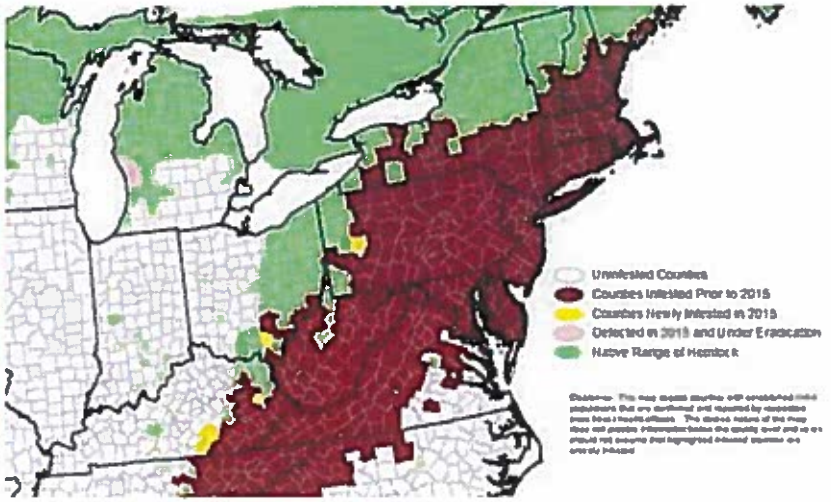
Butternut Canker

Butternut is now an endangered species



2 species we are watching for:

Hemlock woolly adelgid and oak wilt



Oak tree killed by oak wilt

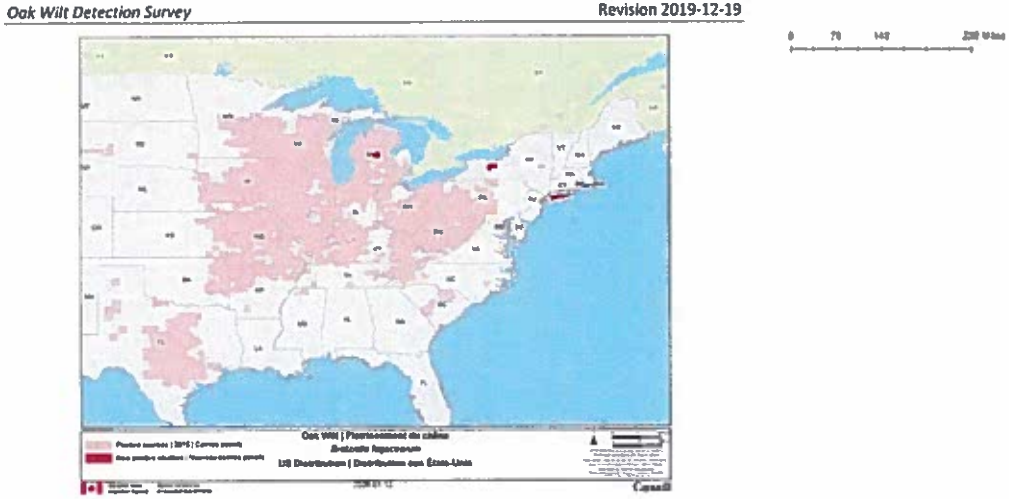


Figure 5. Map of Regulated US counties as of 2019.