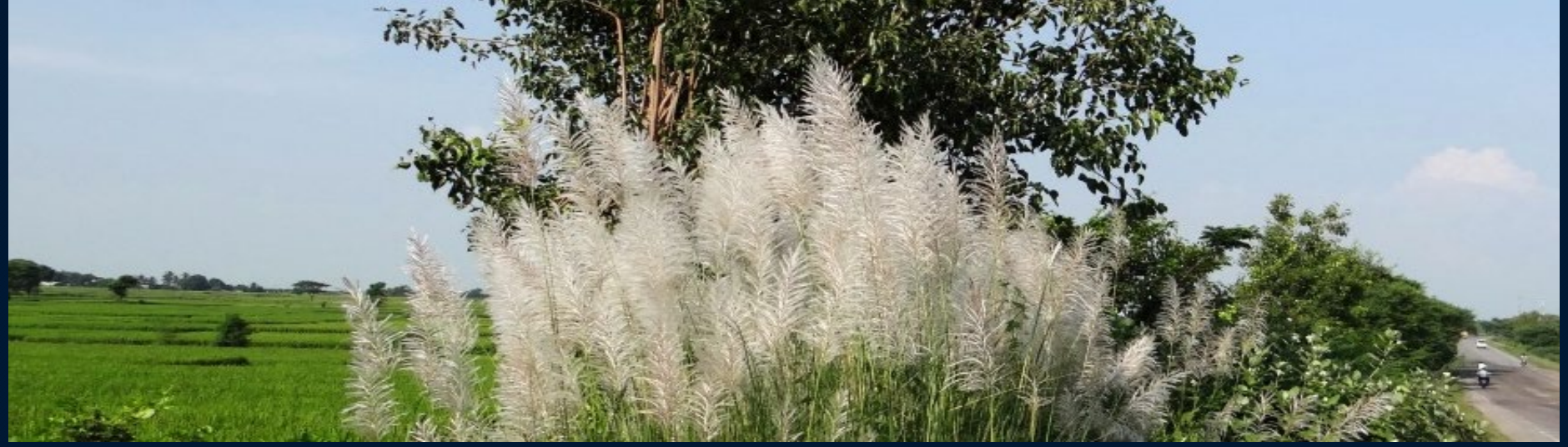


Pilot Phragmites Treatment Update

April 11, 2023

Phragmites

- Phragmites australis Subsp. Australis (Common Reed) is an invasive perennial grass that causes damage to lakeshores, wetlands and beaches in North America

- In the Middlesex County context, this reed has primarily colonized water carrying roadside ditches, disturbed wetlands and municipal drains

- Primarily spread via transportation corridor vectors - contaminated machines and seed hitching a ride on vehicles

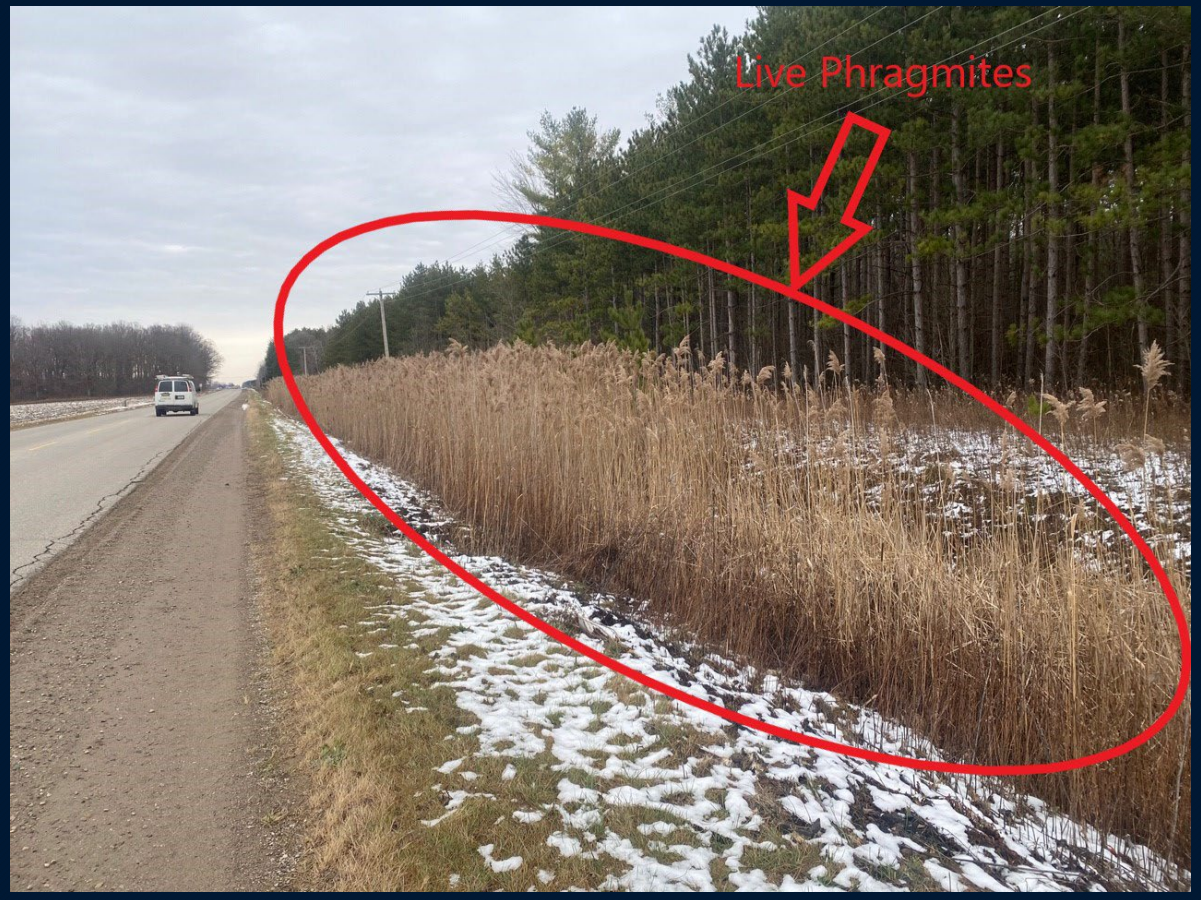
Weed Control Act

- Phragmites is not a noxious weed under the Weed Act
- Private / Public nuisance and damaging to ecology
- Control measures are limited

Transportation Department

- Readily colonizes wet roadside ditches
- Seeds are spread along transportation corridor
- May be inadvertently spread during road reconstruction and municipal drainage projects (Clean Machine Protocols)
- Spreads from private lands
- Can create sightline issues
- Annual weed spray program

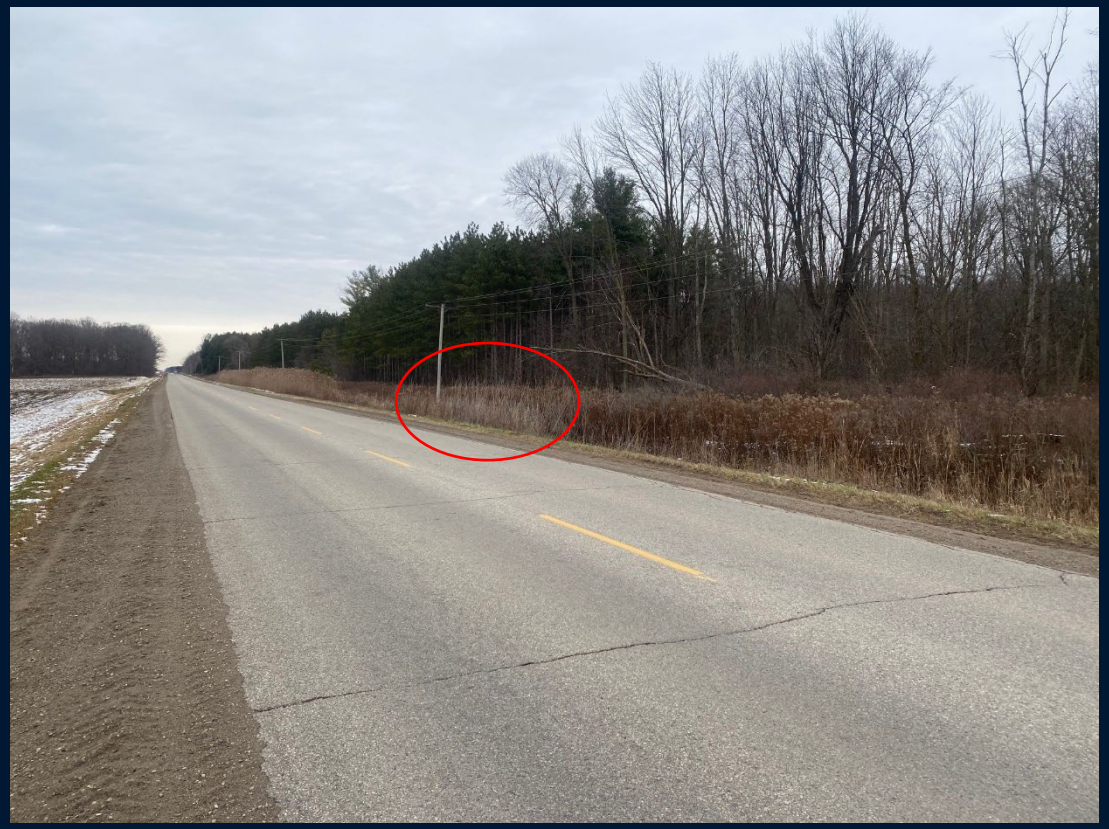
Pilot Project – Concession Drive

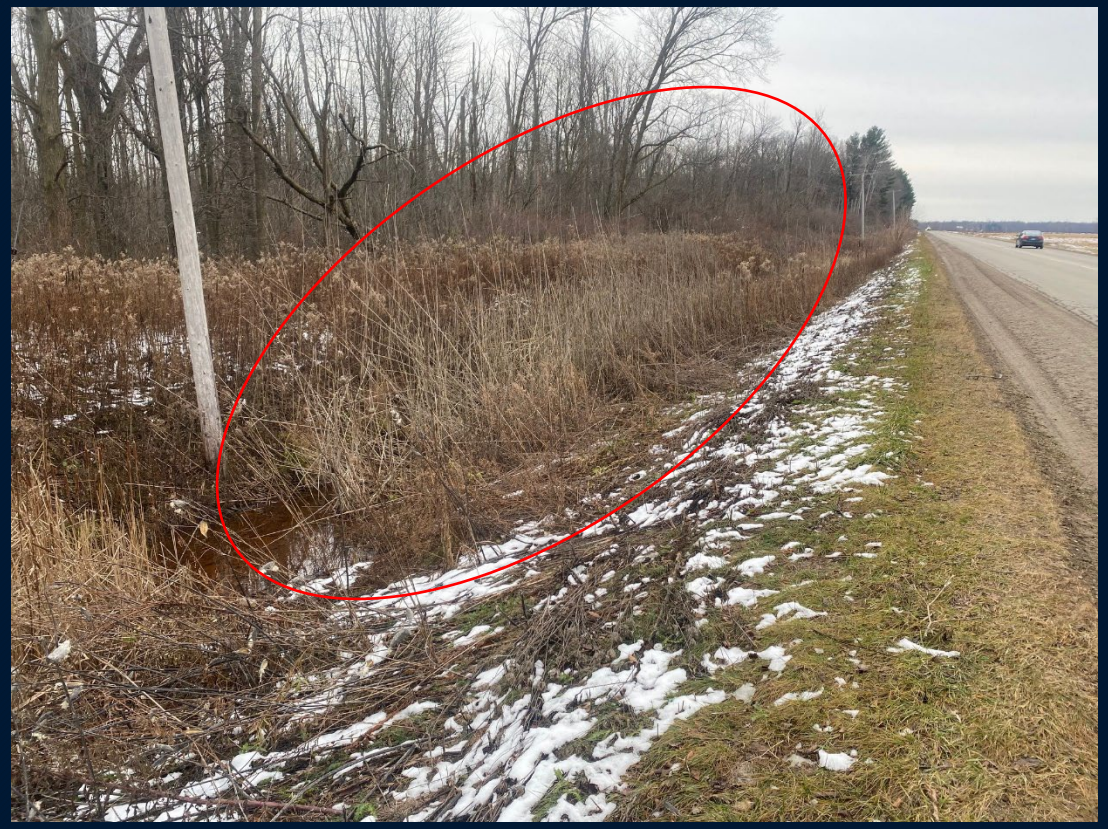


- Treat area 1 (240 m2)
  - Roundup WeatherMax + MSO + Valid
  - Cost approx. $6,000 per hectare
  - Or $2,400 per km of roadside ditch
  - Does not include mowing costs

- Treat area 2 (420 m2)
  - Roundup WeatherMax + Arsenal Powerline
  - Cost approx. $8,000 per hectare
  - Or $3,200 per km of roadside ditch
  - Does not include mowing costs

Treated Patch – Dead Phragmites





Phragmites Control

Cutting

- Provides quick solution for sightline issues in ditches
- Can cause the spread of phragmites through contaminated equipment and releasing seeds into air
- Phragmites will come back following year as cutting does not kill the plant.

Spraying

- More likely to kill the Phragmites and less likely the Phragmites will regrow
- Must be very careful with spray as it will kill all plants not just weeds
- Possible issues with erosion control in ditches; grass will be killed as well
- Still require cutting or removal of debris in ditch
- Must be careful around watercourse with spraying
- Very weather dependent

Southwest Middlesex Request

The Municipality of Southwest Middlesex passed a resolution requesting that:

> "..Middlesex County investigate the success of the County of Elgin, Municipality of Lambton Shores and other neighbouring municipal programs.."

Other Programs

The Counties of Lambton and Elgin have been active in this area including budget allocation (ie $70,000 annually Lambton)

Their approaches generally follow the ‘Smart Practices for the Control of Invasive Phragmites along Ontario’s Roads’ steps:

1) inventory of colony sites 2) selective spraying and cutting or rolling the dead biomass 3) monitoring and 4) revisiting

Transportation – Next Steps

- Inventory is underway and currently road superintendent's prioritize areas with mowing and spot spraying
- Developing a decision matrix / policy for how and when areas might be treated - sightlines, intersections, encroachment, ecological sensitivities, no spray zones and education component
- Include prioritized areas in budget and maintenance schedule
- Encourage Municipalities to inventory phragmites on their roads and in municipal drains

Forestry – Next Steps

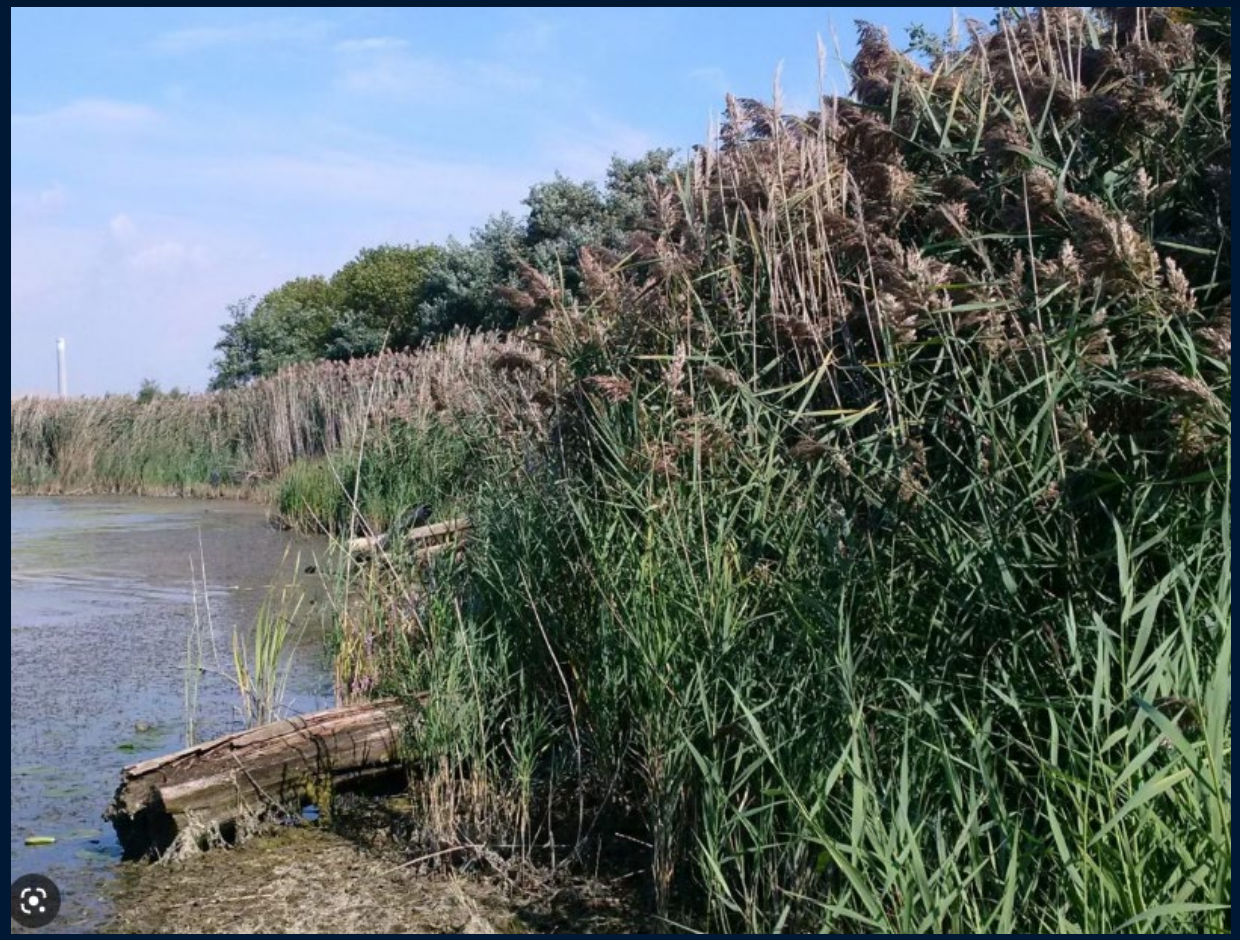
- Continue research into efficacy of different treatments options
- Inventory / mapping of priority locations adjacent County woodlots
- Treat areas before they spread into County woodlands / wetlands
- Weed Inspector education / outreach
- Inter-agency collaboration

Bio Control Opportunity?

- University of Waterloo biologists, in partnership with Agriculture and Agri-Food Canada and the University of Toronto, are working on a North American pilot program that uses moths as a management tool to control invasive plant
- “We’re one of the first 13 sites in North America to trial insect-based biocontrol for invasive phragmites,” says Dr. Rebecca Rooney “This offers hope for chemical-free invasive phragmites control.”
- Although not yet available to municipalities, staff are monitoring, may control the further spread

https://uwaterloo.ca/news/moths-are-new-tool-protect-canadas-wetlands

Discussion



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