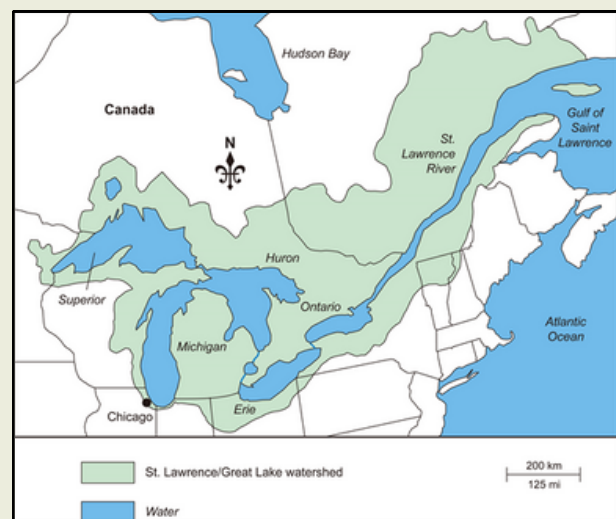


Moths, goats, herbicide?

What will you use to protect wetlands from invasive **phragmites**?

The **St Lawrence-Great Lakes Region**, located in southern Ontario, Québec, and eight American States, is one of the largest watersheds in the world. It contains one fifth of the world's freshwater, supporting millions of people and thousands of native plant and animal species

The invasive grass *Phragmites australis* (common reed), which has no natural predators in North America, has spread quickly in Ontario and Quebec. With reeds growing up to six metres tall, dense stands of phragmites reduce space for habitat, impede native vegetation growth, and lower biodiversity and food supply in wetlands. Recreation and agriculture are also impacted: phragmites can absorb water from irrigation systems, dry out and become a fire hazard, obscure the sightline of drivers, and block access to shorelines.



Above: St Lawrence-Great Lakes Region

For this case study, you are tasked with proposing a management plan to help revive biodiversity in a wetland invaded by phragmites.

Research Questions

To build your case, you need to make sure you fully understand the problem and possible solutions. The research questions below will guide you.

Phragmites and Wetlands

- 1 What makes wetlands rich in biodiversity?
- 2 What is an invasive species?
- 3 What is invasive phragmites and how does it affect wetland biodiversity?

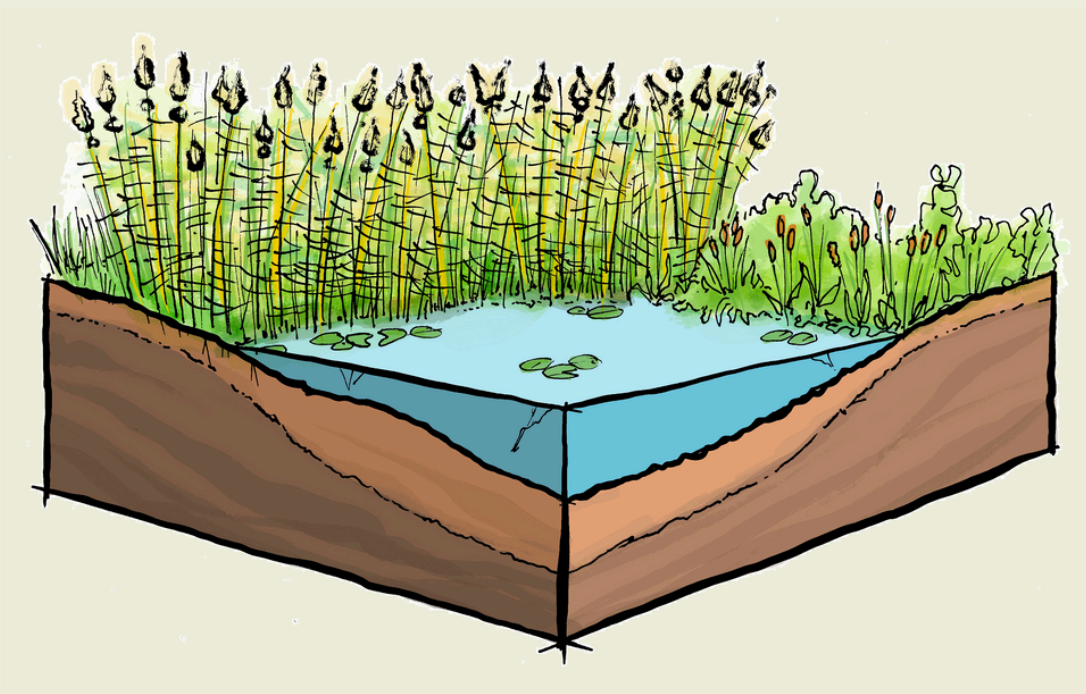
Restoration Tools

- 4 What is mechanical removal of phragmites?
- 5 How have moths (biocontrol) been used to successfully combat invasive phragmites?
- 6 What are the risks with using biocontrol?
- 7 Are herbicides effective in combatting invasive phragmites and are there drawbacks to using herbicides?
- 8 How can different communities and experts be involved in addressing phragmites? (First Nations, volunteer groups, non-profits, academics and researchers)

First Nations communities are profoundly affected by phragmites disruptive impacts to land and water. Danalynn Williams of the Aamjiwnaang First Nation territory founded First Nation Phragmites Control to take the lead in assisting communities with invasive phragmites control. First Nations including Aamjiwnaang, Kettle and Stony Point, and Walpole Island are working to address the impacts to culture, tradition, and lifestyle posed by phragmites through education, training and local partnerships. We encourage you to learn more by visiting [First Nation Phragmites Control \(FNPC\)](#).

Build your case

You've been hired to create a management plan to help restore a wetland threatened by invasive phragmites. Now that you've completed your research, you're ready to build a proposal! Consider the management tools you've explored and create a plan to restore the natural biodiversity of your wetland site.



The final step is to develop your case and present it on Competition Day. Presentations should be no longer than 7 minutes and can be delivered by one or more of your team members. Find out how judges will be evaluating each presentation by checking out the Case Study Competition Rubric