GEORGIAN BAY FOREVER

PROTECTING WATER

Invasive *Phragmites* Eradication for the Health of our Water and Wetlands 2025 Report

PO Box 75347, Leslie Street, Toronto, ON M4M 1B3 | 905. 880. 4945 | GeorgianBayForever.org | Registered Charity #89531 1066 RR0001

Table of Contents

Authors 2
Acknowledgements 2
Overview 3
Introduction to Invasive *Phragmites* 7
Breakdown by Area 10
Tay Township 10
Matchedash Bay (Severn Township) 12
Township of Georgian Bay 14
Carling Township 20
Township of The Archipelago 24
Collaborative 29
Bay of Islands Community Association 29
Beausoleil First Nation 29
Georgian Bay Biosphere 29
Georgian Bay Islands National Park 31
Georgian Bay Land Trust 32
Magnetawan First Nation 32
Massasauga Provincial Park 34
McGregor Bay Association 34
Mill Lake Guardians' Association 35
Moose Deer Point First Nation 36
Nature Conservancy of Canada 36
Nipissing First Nation 36
Severn Sound Environmental Association 38
Shawanaga First Nation 38
University of Guelph: FREED Program 41
Wasauksing First Nation 42
Whitefish River First Nation 43
Looking Ahead 44
Conclusion 51
References 52
Appendices 53

Authors

This report was prepared in 2026 by Georgian Bay Forever (GBF)

- Nicole Carpenter, Science Projects Manager
- Erin Allen, Conservation and Restoration Team Lead
- Jack Giroux, GIS Technician

Acknowledgements

Georgian Bay Forever would like to acknowledge the Indigenous peoples who are the traditional guardians of this land that we call Canada, a place in which we are all treaty people. This land is everywhere the territory of those who have been present here since time immemorial, Indigenous people, including the Metis and Inuit, who continue to shape and strengthen this country as a whole. In particular, we recognize the traditional territory of the Haudenosaunee (Iroquois), Ojibway/Chippewa, and Anishinabek. This territory is covered by the Upper Canada Treaties, the Anishinaabeg, whose territory is covered by Lake Simcoe Treaty 16 and the J. Collins land purchase, and the Atikameksheng Anishinaabeg, whose territory is covered by the Robinson-Huron Treaty.

Each of us has the opportunity to acknowledge their relationship to the land upon which they live and work, and to support reconciliation with the people of Indigenous communities. Reconciliation is possible when all are open to learning from history, listening to each other with empathy and respect, and hearing the truth from Indigenous perspectives.

The *Phragmites* Coastal Eradication Program is funded by our donors and community supports:

Township of SEVERN

Township of Georgian Bay Muskoka

Township of Carling Incorporated 1897

The Archipelago

BINCITY.ca BIN RENTALS

Invasive Species Centre

M-T-M Conservation Association

Hodgson Family Foundation

Brad St. Family Foundation

GBF also wishes to acknowledge the support of these partners and groups working on *Phragmites* management in Georgian Bay known to us: the Bay of Islands Association, Beausoleil First Nation, Bluewater Marina, Georgian Bay Association, Georgian Bay Biosphere, Georgian Bay Land Trust, Magnetawan First Nation, Massasauga Provincial park, McGregor Bay Association, Moose Deer Point First Nation, Nature Conservancy of Canada, Nottawasaga Valley Conservation Authority, Pointe au Baril Islanders' Association, Sans Souci and Copperhead Association, Shawanaga First Nation, South Channel Association, Talpines Property Owner's Association, Wasauksing First Nation, West Carling Association, Whitefish River First Nation, and Woods Bay Association.

Cover photo courtesy of Richard Wilson.

Overview

Georgian Bay Forever has been working to remove invasive *Phragmites* along the eastern shorelines of Georgian Bay and Lake Huron for the past 13 years. Wetland ecosystems are extremely important habitats for animal foraging, spawning, and sheltering, as well as for absorbing carbon from the atmosphere. Disturbances such as urban development, agricultural activities, and the introduction of invasive species can be significant threats to these sensitive environments.

In 2019, an eradication plan was developed for each individual invasive *Phragmites* site along a large portion of the eastern shoreline of Georgian Bay. Since then, our sites under management have nearly doubled. Individual site plans are crucial for successful eradication because each site differs in size, density, water depth, and surrounding ecosystem characteristics. This report features maps and tables developed for each region to display the current status of sites and progress over the years. In 2021, we explored an entirely new area of Georgian Bay to identify invasive *Phragmites*. Matchedash Bay, a provincially significant wetland, is one of the most highly biodiverse wetlands in Georgian Bay and is home to hundreds of migrating birds, mammals, amphibians, reptiles, species at risk and other organisms. By 2023, we began work in Carling Township with the help of community members and the West Carling Association. In 2025, we surveyed *Phragmites* in the Township of The Archipelago alongside the Woods Bay, Sans Souci, Copperhead, and South Channel Associations.

In 2025, GBF continued invasive *Phragmites* removal, as well as education, knowledge-sharing, and training with communities throughout eastern Georgian Bay to strengthen existing and build new relationships.

Invasive *Phragmites* sites take 2-7 years of annual cutting to become nonviable (not visible) after which they are designated as in the monitoring/eradicated stage. GBF uses the word **"eradicated"** with the understanding that these sites do not need any further cutting before transitioning to a monitoring stage. This transition involves annually checking the site for a few years to verify that the invasive *Phragmites* are gone. The word **"controlled"** refers to these sites that have been eradicated or are being monitored, as well as sites that have been treated using the cut-to-drown method. Left untreated, invasive *Phragmites* grow into dense monoculture stands, up to 18 feet high, and spread rapidly, threatening biodiversity, habitat, and enjoyment of the shoreline.

Highlights

In 2025, GBF staff, volunteers and partners mapped a total of 1,264 invasive *Phragmites* stands along southeastern Georgian Bay. Due to our successful management plan and control efforts over the past six years, 54% of these patches are now in the control phase. As sites continue to be cut year after year, moving toward eradication, we are able to reallocate time and effort in new locations, which means adding new stands to our management plan. This year, we identified an additional 226 stands that will be assessed and incorporated into management planning. This past year, Georgian Bay water levels continued to decline as we head into a low-water period. High- and low-water cycling is normal for Lake Huron and plays a crucial role in maintaining wetland plant diversity (Keddy & Reznicek, 1986; Wilcox & Nichols, 2008); however, these cycles are impacted by climate change (Montocchio & Chow-Fraser, 2021) and invasive species. Invasive *Phragmites* is a highly effective spreader during low water fluctuations and contributed to the increase in newly observed stands in Eastern Georgian Bay. Facing these challenges, we achieved 33% eradication of invasive *Phragmites* across the Township of The Archipelago, Carling Township, Township of Georgian Bay, Township of Severn (Matchedash Bay), and Tay Township shorelines by 2025. In addition, our summer students cut 262 sites, removing 11,835m^2 of *Phragmites* from coastal wetlands, educated 300 members of the community about invasive *Phragmites*, and recruited volunteers to dedicate 200 hours of their time to protecting Georgian Bay's aquatic ecosystems.

Thank you to our 2025 Phragbusters Claire Hendriks, Avery Booth, Aedan Sheehan, and Kiera Kingsley for spending their summer removing invasive *Phragmites* from Georgian Bay, spreading awareness, and educating the community.

- ✓ GBF staff, volunteers and communities mapped a total of 1264 invasive *Phragmites* sites in the summer of 2025.
- ✓ 226 new stands identified due to an increase in mapping efforts.
- ✓ 412 sites of the 1264, or 33%, are being monitored (i.e., eradicated or on their way toward eradication).
- ✓ 262, or 21% of sites were cut by GBF staff and volunteers.
- ✓ 674, or 54% of sites are under control (eradicated/monitored and cut) by GBF staff and volunteers.

What does this report do?

This report highlights the results of work completed by Georgian Bay Forever in the 2025 field season to remove invasive *Phragmites*. If you have questions about the current report, please contact Science Projects Manager Nicole Carpenter at Nicole.carpenter@gbf.org or 905-880-4945 ext.7.

Overview Table and Map

Table 1. Breakdown of invasive Phragmites *by region in eastern Georgian Bay in 2025 that are under GBF management. Georgian Bay Forever collaborates with organizations that operate outside of the five townships in which we conduct most of our work. Phragmites stands managed outside of municipal boundaries, such as those located within First Nations lands, national and provincial parks, and unincorporated areas, are excluded from this chart. Non-municipal Phragmites management is often led by our partners and will be addressed in their respective collaborative sections, later in the report.*

Region	Total sites	New Sites	# of sites Eradicated/ Monitored	# of sites Cut	Area Cut (m^2)	# of sites Controlled (Eradicated / Monitored + Cut)	# of sites Untreated	% Eradicated / Monitored	% Cut	% Control
Matchedash Bay (Severn Township)	128	25	18	17	564	35	93	14%	13%	27%
Tay Township	325	58	90	77	2182	167	158	28%	24%	52%
Township of Georgian Bay	755	137	277	153	6305	430	325	37%	20%	57%
Carling Township	12	2	0	9	2351	9	3	0%	75%	75%
Township of The Archipelago	43	4	27	5	403	32	11	63%	12%	75%
Other Municipalities	1	0	0	1	30	1	n/a	0%	100 %	100%
Overall Total	1264	226	412	262	11835	674	590	33%	21%	54%

Follow the link to an interactive map of all stands on the eastern shoreline of Georgian Bay in:

2024 https://arcg.is/vSSvy0

2025 https://arcg.is/TmS4e

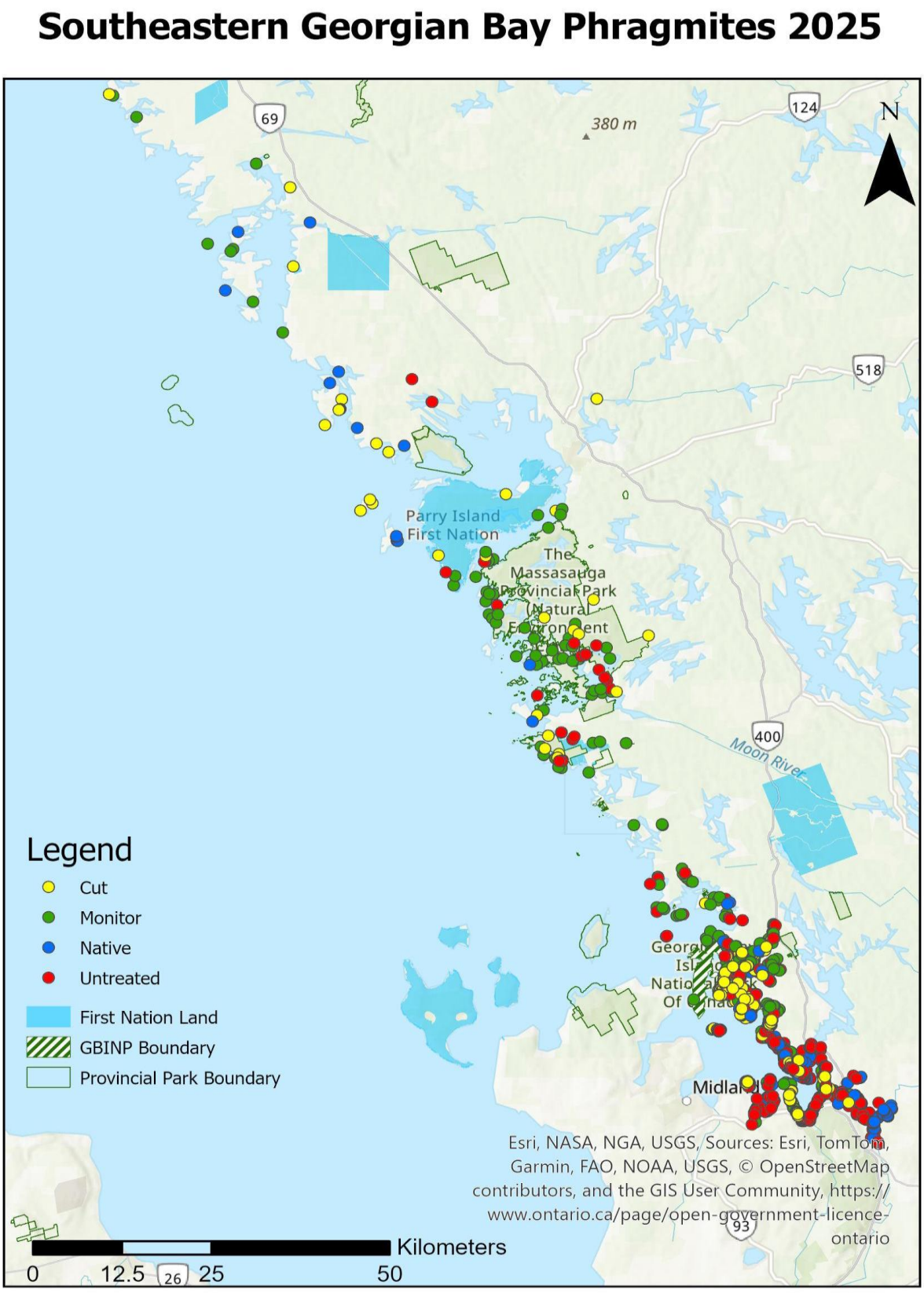


Figure . Locations of all Phragmites stands known to GBF in southeastern Georgian Bay as of 2025 (including stands on non-municipal lands).

Introduction to Invasive *Phragmites*

What is an invasive species?

Invasive species are non-native plants or animals that have been introduced to an ecosystem, spread easily, and disrupt the native wildlife and their habitat. They are a threat to the environment and the broader economy. Non-native *Phragmites,* along with many other invasive species, are a significant threat to the Great Lakes.

Phragmites in Georgian Bay

Georgian Bay and Lake Huron are home to some of Canada's most pristine coastal wetlands. Many organisms depend on these wetlands for life-sustaining activities such as foraging, spawning, sheltering and more. Two lineages of *Phragmites* are present in Canada and found in Georgian Bay: The native subspecies, *Phragmites australis americanus,* and the invasive subspecies, *Phragmites australis australis*. Invasive *Phragmites* is a reed grass that travelled from Europe to Canada in the 1800s through human activity and since developed into a significant threat to Georgian Bay's coastal wetlands. In its native environment, *Phragmites* does not pose any threat to other organisms and lives in balance alongside them. In North America, toxins released by the invasive lineage change the surrounding soil and water conditions, disrupting the growth of neighbouring native plants and allowing invasive *Phragmites* to flourish disproportionately (Rudrappa et al., 2007; Uddin et al., 2017). Unfortunately, invasive *Phragmites* is flourishing in the Great Lakes coastal ecosystems, rapidly forming extremely dense monocultures, outcompeting native vegetation, and reducing the biodiversity and habitat of native plants and animals. Ultimately, *Phragmites'* highly competitive growth impairs the proper functioning of wetlands, which are significant for their ability to enhance water quality, provide shelter and food for other species, and counter human-caused global heating by sequestering carbon.

Identification

Invasive *Phragmites* can be identified by its interconnected root system of hollow rhizomes, beige stems, and tall green stalks with alternating leaves. The stalks, if well-established, can grow up to 18 feet tall. Native *Phragmites* looks quite similar but does not grow as tall or dense, and will co-exist amongst other native species. In late August, invasive *Phragmites* begin to develop large purple/reddish seed heads that eventually turn beige, unlike the native *Phragmites* that develop light-coloured seeds earlier in late July. After seeds disperse in the fall, the stalks die and remain standing throughout the winter. The majority of native plants fall under the weight of snow, break down, contribute nutrients back to the soil, and allow space for new vegetation to grow come spring. The hardier remains of dried-out invasive *Phragmites* stalks block new growth of native plants in the spring. During the summer, one can often identify a stand of invasive *Phragmites* by the presence of leftover standing stalks and seeds from previous years. To find out more information on identification, visit our website or contact us.

Figure . Visual comparison of invasive (left) and native (right) Phragmites.

Control Methodology

GBF maps the eastern shoreline of Georgian Bay in June, recording the location, hydrologic condition, size, density, and status of both recurring sites (from years previous) and newfound sites. GBF returns to sites that have been mapped and cut in previous years, hoping not to see any regrowth. When no regrowth is observed, the stand is put into the eradicated/monitored category and continues to be checked for years to come.

1. **Location:** We identify the locations in which invasive *Phragmites* is present and record them using ESRI GIS mapping software (i.e., FieldMaps). We record the geographic coordinates, size, and density, and take other notes to create a management plan.
2. **Timing:** The optimal cutting season is Mid-July to mid-August, when the plant is directing its energy into the stalks to develop seeds, but before the seeds emerge. This way, we cut the plant underwater to drown it out during its primary growth stage while avoiding spreading seeds.
3. **Equipment and Cutting:** We use raspberry cane cutters, long-reach powered hedge trimmers, and snippers to cut the *Phragmites* via the cut-to-drown method (i.e., cutting the stalks below the water level as close to the bottom as possible).
    - Cut each stalk underwater as close to the sediment as possible.
    - Do not disturb the roots as they can fragment and develop new shoots.
    - In areas with low water, stalks on land are cut with the spading method when possible (i.e., sharpened shovels are used to cut the stalks below the soil surface to smother the roots)
4. **Prioritize:** Priority is given to small stands and stands that have been previously cut. Removing small stands ensures early control before the stand gets large, dense, and difficult to remove. We prioritize returning to manage previously cut stands because it often takes several continuous years of cutting to completely get rid of a *Phragmites* stand. Each year, cut stands should get smaller, more sparse, and easier to tackle. Controlling sites in areas of ecological or cultural importance, such as areas with species at-risk or recreational value, is also prioritized.
5. **Selective Cutting:** The selective cutting process means we only remove invasive *Phragmites* stalks, leaving native vegetation unharmed. If there are seed heads present, they are removed from the stalks and disposed of prior to cutting the plant.
6. **Clean-up:** We bundle the cut biomass and make sure we don't leave any viable pieces behind, specifically the roots.
7. **Disposal:** A designated spot near the stand is identified where the cut stalks can dry and decay. It is far enough from the water's edge that rising waters and storm waves will not pull the biomass back into the water. The disposal site is checked the following year to ensure it is not promoting *Phragmites* growth.
8. **Follow-up:** *Phragmites* is a perennial reed grass, meaning it will grow back every year. If left untreated, it will grow back larger and denser. If treated (cut), the stand will grow back smaller and sparser until eventually there is no regrowth. This process can take 2-7 years of cutting activities, depending on the size and location of the stand. Eventually, native plants will return, and the habitat will be restored.

For more information or training on how to remove invasive *Phragmites* from shorelines in Georgian Bay, contact Science Projects Manager Nicole Carpenter at nicole.carpenter@gbf.org or 905-880-4945 ext. 7.

Interested in volunteering? Email here and let us know!

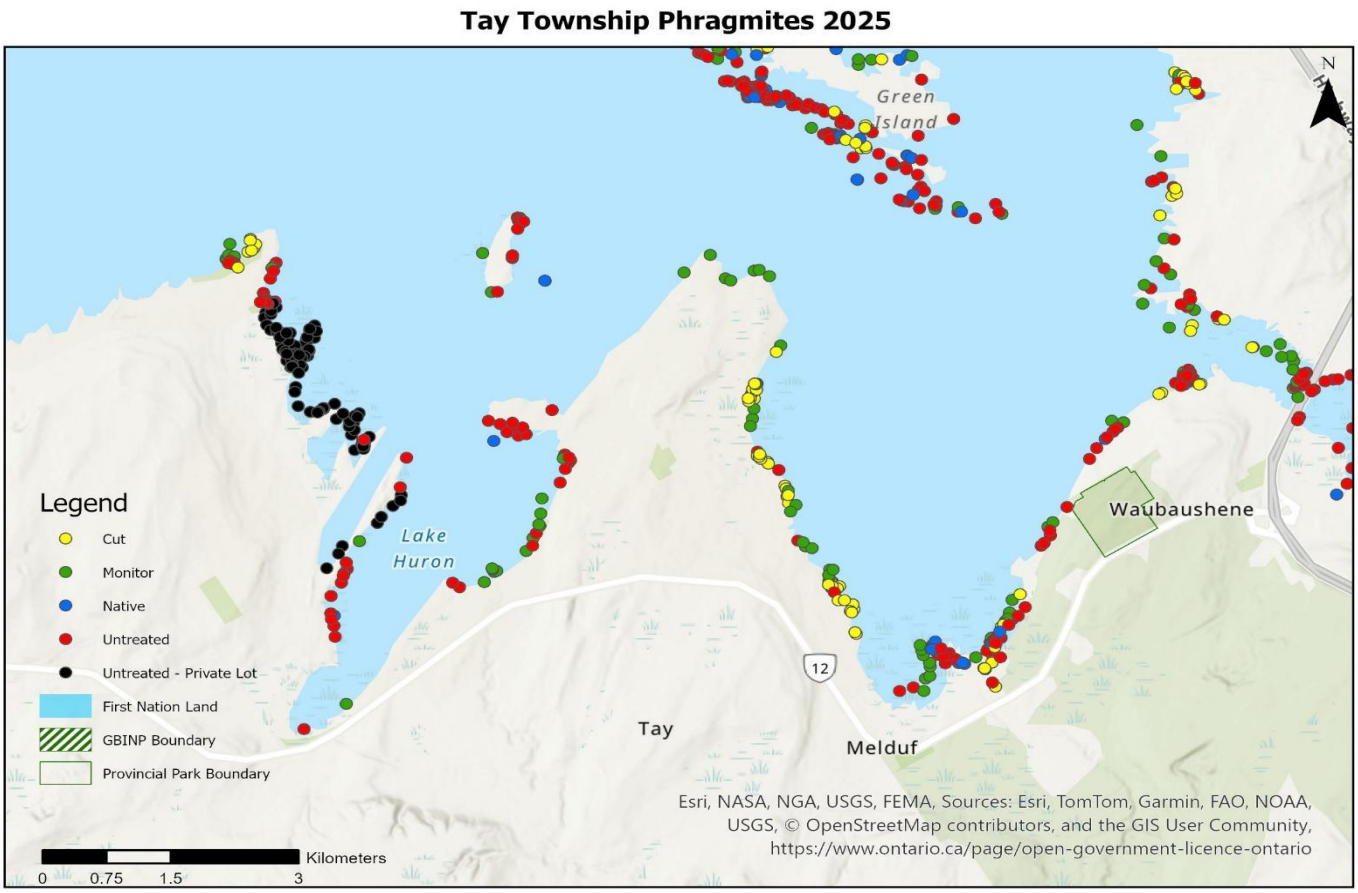
Breakdown by Area

Tay Township

Table 2. Status of the 325 invasive Phragmites stands in Tay Township in 2025. The values in the chart exclude the untreated sites on private lots in Figure 4.

Region	Total sites	New Sites	# of sites Eradicated/ Monitored	# of sites Cut	Area Cut (m^2)	# of sites Controlled (Eradicated/ Monitored + Cut)	# of sites Untreated	% Eradicated/ Monitored	% Cut	% Control
Tay Township	325	58	90	77	2182	167	158	28%	24 %	52%

Figure 4. The status and location of Phragmites stands in Tay Township in 2025.



This year, GBF staff continued to protect Tay Township's shorelines through *Phragmites* mapping and removal. Our fully electric 20HP outboard motor is going strong in its fourth year of phragbusting and reducing our noise pollution and carbon emissions while boating around Tay. We mapped a total of 325 stands of invasive *Phragmites* across 30km of Tay Township's shorelines on Georgian Bay. We discovered 58 new sites while mapping, which were added to our database to be monitored and managed in the future. We considered 90 sites eradicated as they did not appear to grow back after previous years' cutting efforts. We will continue to monitor them to ensure they do not return next year. A total of

77 sites covering 2,182m^2 of wetland were removed. Overall, GBF has controlled 52% of the invasive *Phragmites* observed in Tay when combining the sites with no regrowth and those cut this summer.

MATCHEDASH BAY (SEVERN TOWNSHIP)

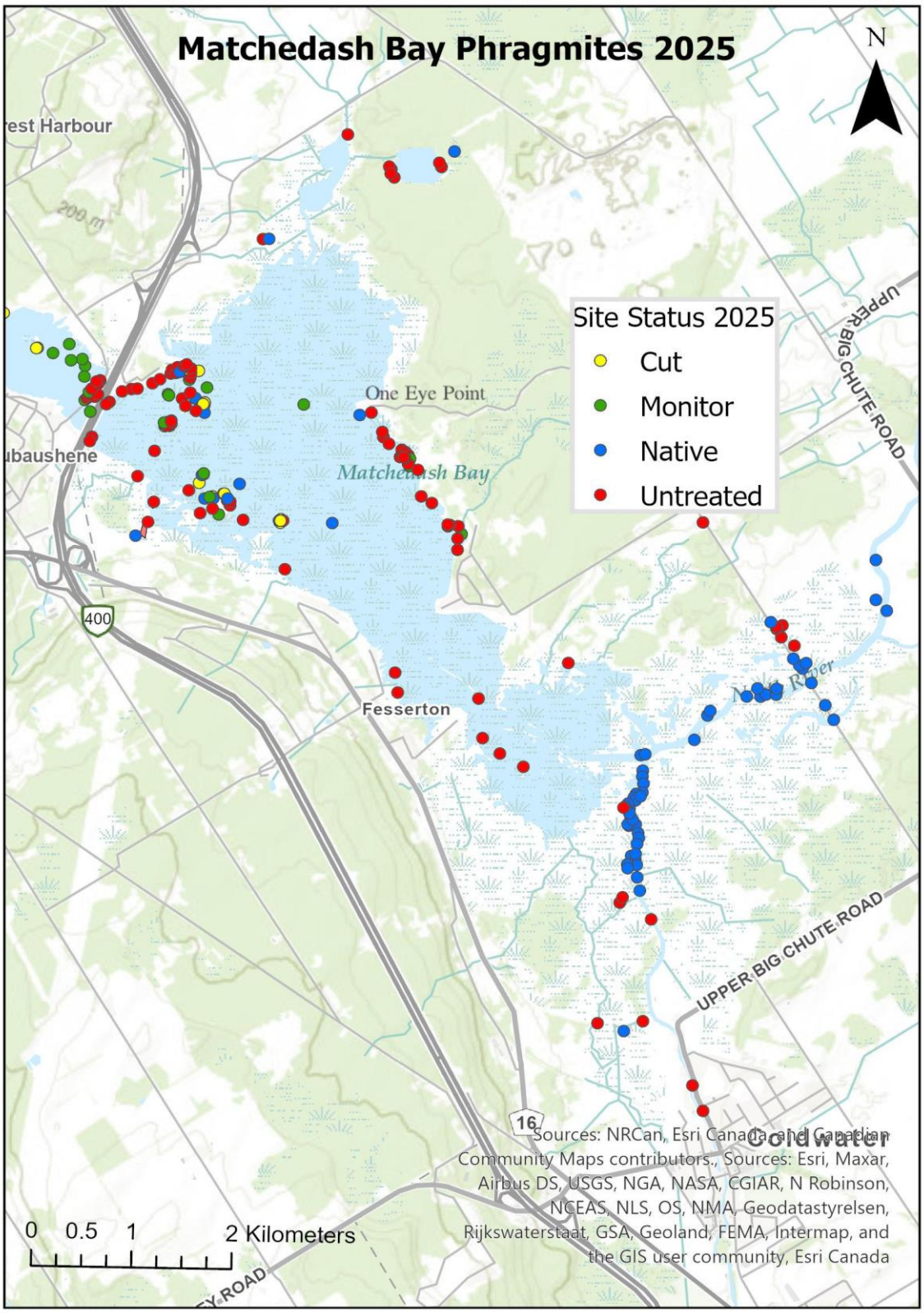


Figure 5. The status and location of Phragmites stands in Matchedash Bay in 2025.

Table 3. Status of the 128 invasive Phragmites stands in Matchedash Bay and on the coast of Severn Township in 2025. Sites within Severn Township outside of Matchedash Bay are not depicted in Figure 5.

Region	Total sites	New Sites	# of sites Eradicated / Monitored	# of sites Cut	Area Cut (m^2)	# of sites Controlled (Eradicated / Monitored + Cut)	# of sites Untreated	% Eradicated / Monitored	% Cut	% Control
Matchedash Bay	128	25	18	17	564	35	93	14%	13 %	27%

In 1996, Matchedash Bay was designated as a Ramsar site, a wetland determined to have international importance, for its habitat diversity (Ramsar, 2001). Matchedash Bay Provincial Wildlife Area encompasses a mixed landscape of swamps, fens, marshes, beaver ponds, freshwater lakes, upland hardwood forest, coniferous wetland forest, native grass meadows, and agricultural lands that provide staging areas for breeding waterfowl and are home to many species of birds, reptiles, amphibians, and vascular plants (Ramsar, 2001). This year, GBF entered Matchedash's main bay, connected tributaries, and adjoining marshes for the fifth year in a row to manage *Phragmites* and monitor species at risk. We mapped 128 sites of invasive *Phragmites*, discovering 25 new sites due to our increased mapping efforts and cutting 17 invasive stands. Our cutting efforts cleared *Phragmites* from 564m^2 of sensitive wetland this year, which we plan to return to and manage again in 2026.

The biggest challenge with managing an area like Matchedash Bay is accessibility. The habitat diversity, which makes Matchedash ecologically important, creates obstacles for our staff working there, requiring diverse and creative methods to navigate deep water, dense cattail marshes, and winding tributaries. Our quiet electric outboard motor helps us monitor the open waters of the main bay, our canoe allows us to access the marsh's weedier shallows and narrow tributaries, and our recently acquired multispectral drone has increased our capacity to monitor the least accessible tracts of wetland that would otherwise have to be painstakingly surveyed on foot. We hope to conduct more work in this ecologically important area in the upcoming years.

Our 2025 work in Matchedash Bay would not have been possible without the support of our partners and funders. Thank you to MTM Conservation, Swift Canoe and Kayak, Severn Sound Environmental Association and the Township of Severn for your contributions!

Township of Georgian Bay

Table 4. Status of the 755 invasive Phragmites stands in the Township of Georgian Bay in 2025. This chart excludes stands located on park and First Nation lands, displayed in Figures 6 through 9.

Region	Total sites	New Sites	# of sites Eradicated / Monitored	# of sites Cut	Area Cut (m^2)	# of sites Controlled (Eradicated/ Monitored + Cut)	# of sites Untreated	% Eradicated / Monitored	% Cut	% Control
Twelve Mile Bay	6	0	2	1	16	3	3	33%	17%	50%
Wah Wah Taysee	17	6	9	3	58	12	5	53%	18%	71%
Go Home Bay	4	0	4	0	0	4	0	100%	0%	100%
Cognashene	34	2	23	1	3	24	10	68%	3%	71%
Honey Harbour	272	36	138	72	1811	210	62	51%	26%	77%
Present Island	14	5	9	1	80	10	4	64%	7%	71%
Quarry Island	59	21	4	28	2317	32	27	7%	47%	54%
Macey's Bay	85	13	45	19	484	64	21	53%	22%	75%
Muskie Bay	45	2	12	1	14	13	32	27%	2%	29%
Potato Island/Channel	46	4	9	2	3	11	35	20%	4%	24%
Green Island	81	24	7	16	349	23	58	9%	20%	29%
Canary Island	48	12	4	8	150	12	36	8%	17%	25%
Port Severn	44	12	11	1	1020	12	32	25%	2%	27%
TOTAL	755	137	277	153	6305	430	325	37%	20%	57%

For reporting purposes, the Township of Georgian Bay has been broken down into different regions or communities: Twelve Mile Bay, Wah Wah Taysee, Go Home Bay, Cognashene, Honey Harbour, Present Island, Quarry Island, Macey's Bay, Muskie Bay, Potato Island and Channel, Green Island, Canary Island, and Port Severn. We have been surveying the shores of Georgian Bay Township since our *Phragmites* program began, and have many sites on record for this region. Grouping this region's *Phragmites* stands into subregions helps measure the effectiveness of our management actions and highlight the contributions of local groups and volunteers.

GBF staff mapped 755 invasive *Phragmites* stands across these 13 subregions. This year, we cut 153 sites, or 20% of the sites in Georgian Bay Township, covering a total area of 6,305m^2 of wetland and coastline, thanks to the efforts of our staff, partners, and community volunteers! We mapped 137 new sites this year, most of which were on the shores of islands in Honey Harbour, Quarry Island, and Green Island. The wetlands bordering these islands were likely particularly impacted by water level fluctuations, so the increase in *Phragmites* growth in these areas may continue as Lake Huron heads into a low-water period (see pg. 4 for more information on low- and high- water periods in Georgian Bay). Continuing to cut in these vulnerable locations will be crucial to maintaining control of *Phragmites* growth until the next high-water period. Despite the challenges associated with lower water levels, we achieved 57% control of the invasive *Phragmites* stands in Georgian Bay Township, with 37% of these sites being eradicated from previous cutting efforts and 20% from cuts in 2025!

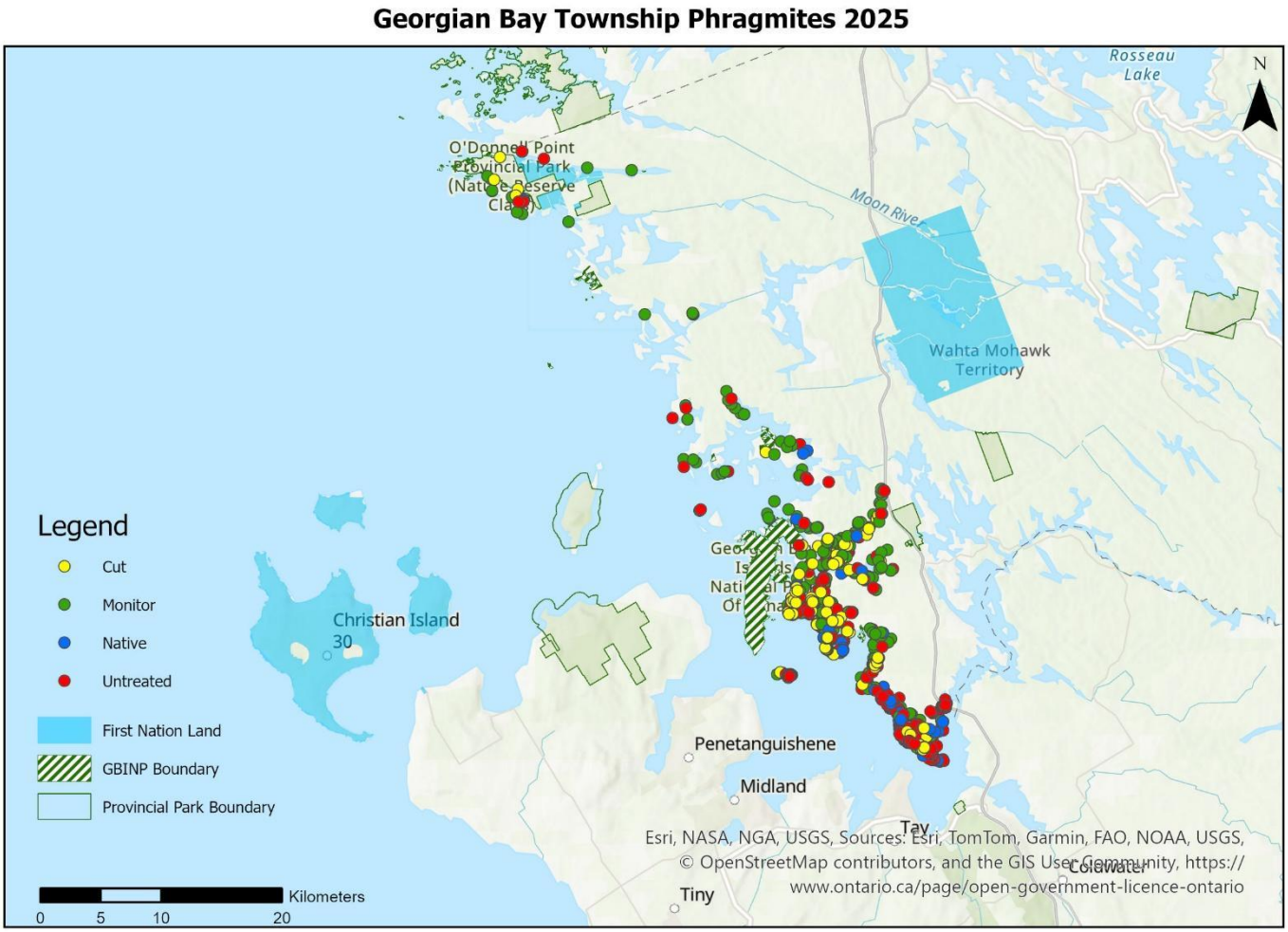


Figure 6. The status and location of Phragmites stands in Georgian Bay Township in 2025.

Twelve Mile Bay, Wah Wah Taysee and Go Home Bay

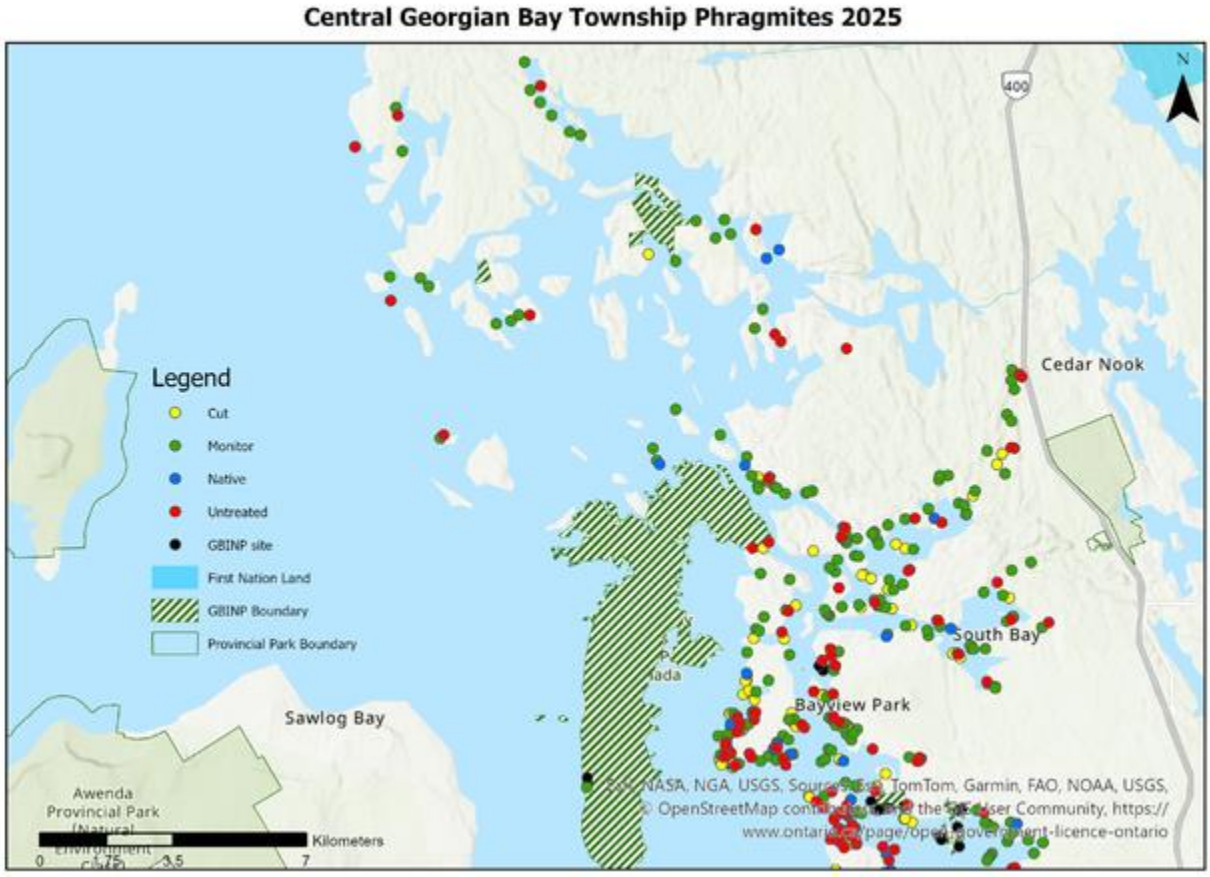
In 2025, GBF monitored 27 sites across Twelve Mile Bay, Wah Wah Taysee, and Go Home Bay. We identified six new invasive stands in Wah Wah Taysee and cut 3 of the 9 sites in this region. In Twelve Mile Bay, we removed 1 of 6 known sites. Many of the sites in this region are located on private property, so our staff have been unable to cut them. Luckily, many of the sites in these regions remain eradicated from previous years' cutting efforts. Currently, the invasive *Phragmites* stands of Twelve Mile, Wah Wah Taysee, and Go Home are 50%, 71%, and 100% controlled, respectively.

Cognashene and Honey Harbour

We surveyed 34 invasive *Phragmites* sites in Cognashene, two of which were discovered this year. 68% of the invasive *Phragmites* in Cognashene remain eradicated from previous cutting efforts. Due to time and weather constraints, only one site was cut in Cognashene in 2025, resulting in 71% control in this region.

Honey Harbour contains more invasive *Phragmites* stands than any other area in Georgian Bay Township, but these have declined significantly since GBF and community volunteers began committing hundreds of hours to monitoring and removing *Phragmites* from their waters and shores. A total of 138 stands have been eradicated after years of cutting, with an additional 72 sites cut this year. This led to 77% of sites being under control by the end of 2025, with 1811m^2 of wetland cleared of invasive *Phragmites* just this year. The sites left untreated in this section include sites that were inaccessible due to changing water levels, located on private property that we are working to secure permission to cut, or were missed due to time and scheduling constraints. The shores and islands surrounding Honey Harbour have been a

focus area for our *Phragmites* control efforts for over five years now, and we are optimistic that we will continue to see declines of this invasive.



Present Island to Port Severn

This year on Present Island, we observed invasive *Phragmites* growth for the first time in four years. This minor setback is likely due to the lowered water levels in the bay. Luckily, our summer staff spotted the young stalks and connected with local cottagers who assisted with cutting later in the summer. We cut one of the larger regrown sites with the cottagers, leaving four to manage next year. Thank you to the inhabitants of Present Island for contributing to Phrag management!

Northeast of Present Island lies Quarry Island, an ongoing success story in *Phragmites* control for GBF. Three years ago, amphibious machines, called truxors, were brought to Quarry Island to remove large swaths of invasive *Phragmites* that were beginning to dominate the island's borders. Contracting truxors required significant planning and fund allocation, but seriously paid off in the long run. In the years following, the truxor-controlled stands grew back smaller and weaker. This year, we observed only sparse, weak regrowth that was easily removed by staff, indicating that the larger-scale intervention efforts taken in 2022 have been largely successful!

We mapped some new growth elsewhere on Quarry's shores, but since it was in the early stages of establishment, our staff were able to remove it. Overall, we removed over 2300m^2 of *Phragmites* from 28 different sites around Quarry Island in 2025. Less than half of the 59 sites in this area remained untreated, with 54% of sites under control by the end of the season.

We were able to allocate more of our cutting efforts to Macey's Bay this year, achieving 19 cut sites covering 484 m^2. Combining this year's cutting efforts with previous *Phragmites* removal, we have achieved 75% control of invasive *Phragmites* in Macey's Bay.

Most of the work undertaken between Muskie Bay and Potato Island was limited to monitoring. This is a challenging area to access due to the numerous shoals and rocks outside of marked channels, particularly during low water periods. Fortunately, 23% of the sites in these areas remain eradicated from previous removal. Although our cutting efforts are currently limited in this region, we will continue to monitor *Phragmites* growth and will return to cut more frequently in the future once other higher priority sites are under control and higher water levels permit safe access. See page eight for more information on how we prioritize *Phragmites* stands for cutting.

Green Island and Canary Island form a large island complex southwest of Port Severn. These are very flat, rocky islands with shallow pools scattered along their south sides. These pools, which connect with the open water of the sound, are ideal locations for wetland plant growth. Unfortunately, *Phragmites* invaded these wetlands a long time ago, leading to the growth of many mature stands of both native and invasive *Phragmites*. These two islands contain 129 mapped stands of invasive *Phragmites*. GBF staff cut 24 stands in 2025, restoring 499m^2 of wetland. Due to the volume of *Phragmites* on these islands, control is a slow-going process. We are conducting aerial surveys of these islands to get a better understanding of the full extent of *Phragmites* growth and aid our management plans going forward (see page 44).

This year, we continued control of one large site in Port Severn. The Georgian Bay Land Trust (GBLT) has organized a collaborative cut with GBF and Nature Conservancy of Canada staff for the past several years. Together we removed 1020m^2 of invasive *Phragmites* in one day! Read more about our partnership with GBLT on page 32.

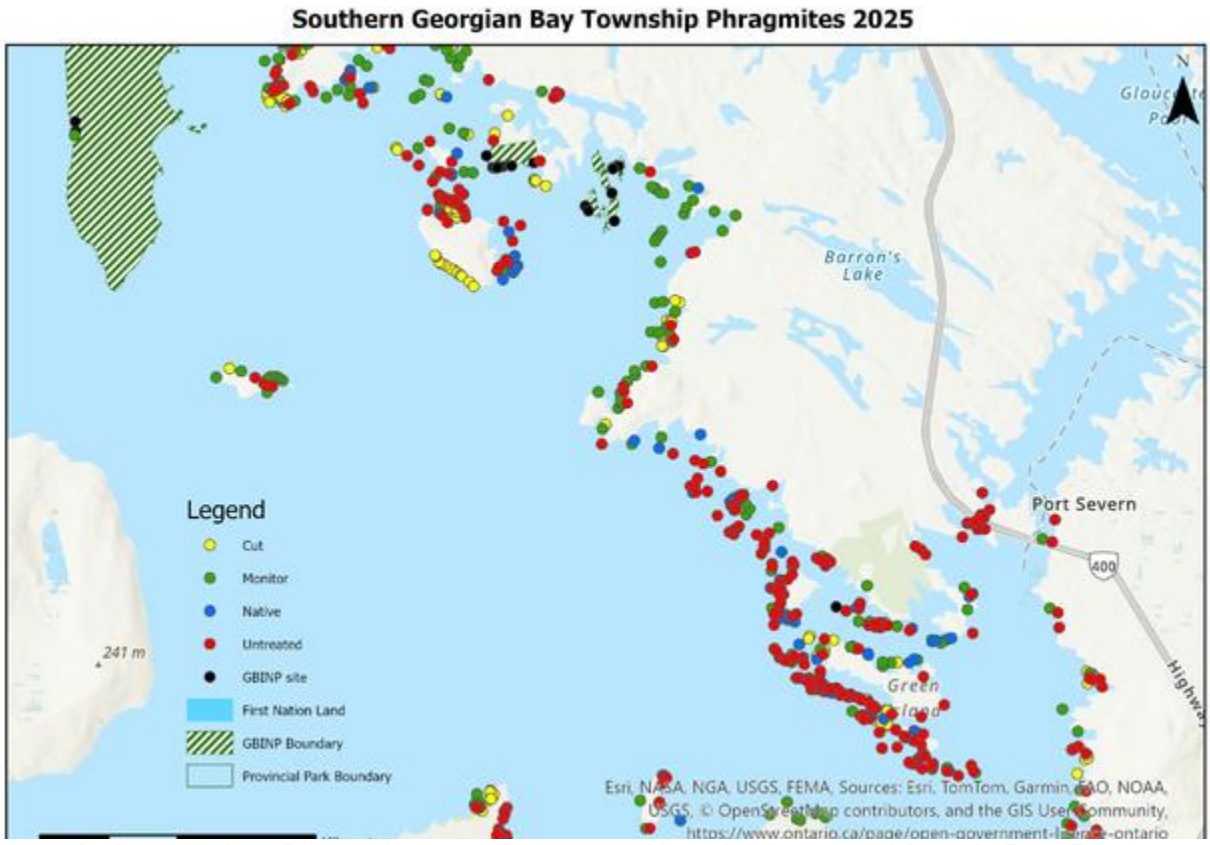


Figure . A closer look at Phragmites stand status and location between Macey's Bay, Present Island, and Port Severn.

Community Events in Georgian Bay Township

Honey Harbour Canada Day Festival

Staff from GBF joined in the town of Honey Harbour's June 28th Canada Day Festival to celebrate all things Canada near the beautiful shores of Georgian Bay! Along with many of our partners, we set up an educational booth outside of the public Library to connect with the community where we work. We shared information on wetlands, invasive species, and plastic pollution prevention with over 40 people during this event! In addition to informational booths, the Canada Day celebrations included themed crafts, sweet treats, prize draws, a book sale, and a variety of family activities. One of our boats is stationed in Honey Harbour's Bluewater Marina, so this event hit close to home for us. We look forward to sharing our knowledge and passion for Georgian Bay at future festivals.

Cognashene Environment Day

Cognashene Environment Day, an event hosted by GBF's very own GIS Technician, Jack, was created to showcase important conservation efforts taking place on Georgian Bay. We made sure to attend and spread knowledge on the *Phragmites* management and plastic pollution prevention projects we lead on the bay. Highlights of the event included a talk on local turtle conservation, a guided nature walk, and kids' crafts inspired by nature. We love opportunities to connect with our community and share the work we do to conserve Georgian Bay.

Carling Township

Table 5. Status of the 12 invasive Phragmites stands in Carling Township in 2025. The chart does not include points on park and First Nation lands depicted in Figure 10.

Region	Total sites	New Sites	# of sites Eradicated / Monitored	# of sites Cut	Area Cut (m^2)	# of sites Controlled (Eradicated/ Monitored + Cut)	# of sites Untreated	% Eradicated / Monitored	% Cut	% Control
Carling Township	12	2	0	9	2351	9	3	0%	75%	75%

This year marks GBF's third trip to Carling Township, managing invasive *Phragmites*. With the support of the West Carling Association (WCA) and three of its volunteers, Richard, Peter, and Thomas, we checked 10 sites from last year and discovered two new sites. With a combined effort from GBF Phragbusters, volunteers, and Georgian Bay Biosphere (GBB) staff, we cut nine stands, removing *Phragmites* from more than 2300m^2 of Carling's shores. Only 3 sites remained untreated. Many thanks to the WCA and its volunteers for their contributions to our monitoring efforts, community cut coordination, and outreach to nearby cottage associations. The commitment of volunteers has been crucial to the success of *Phragmites* management in Carling Township.

Carling Phragmites 2025

Partnerships and Community Events in Carling

Franklin Island Community Cut

At the end of July, more than 15 volunteers from the WCA and the local community boated out to Franklin Island with GBF and GBB staff to remove a large pair of stands on the shore of Franklin Island. Due to the low water levels this year, both stands were entirely on dry land, so we were limited to using spades and cane cutters. Luckily, we had a great turnout, beautiful weather, and the *Phragmites* growth was sparser from previous years of cutting! We were able to clear 1,361m^2 of the invasive plants by early afternoon. Thank you to the enthusiastic volunteers of all ages who showed up to help.

GBB Collaborative Cut on Franklin Island

Figure . Before (left) and after (right) photos of the second stand removed during the Franklin Island community cut.

By the end of the summer, one stand of *Phragmites* remained uncut on Franklin Island, so staff from GBF and Georgian Bay Biosphere teamed up to remove this final patch. We canoed over to the island and portaged our way to the site since it is not accessible with our Baykeeper. Within no time, our teams had the *Phragmites* removed from 110m^2 of wetland. Thank you to the Biosphere staff who made the trip and helped portage equipment to the site.

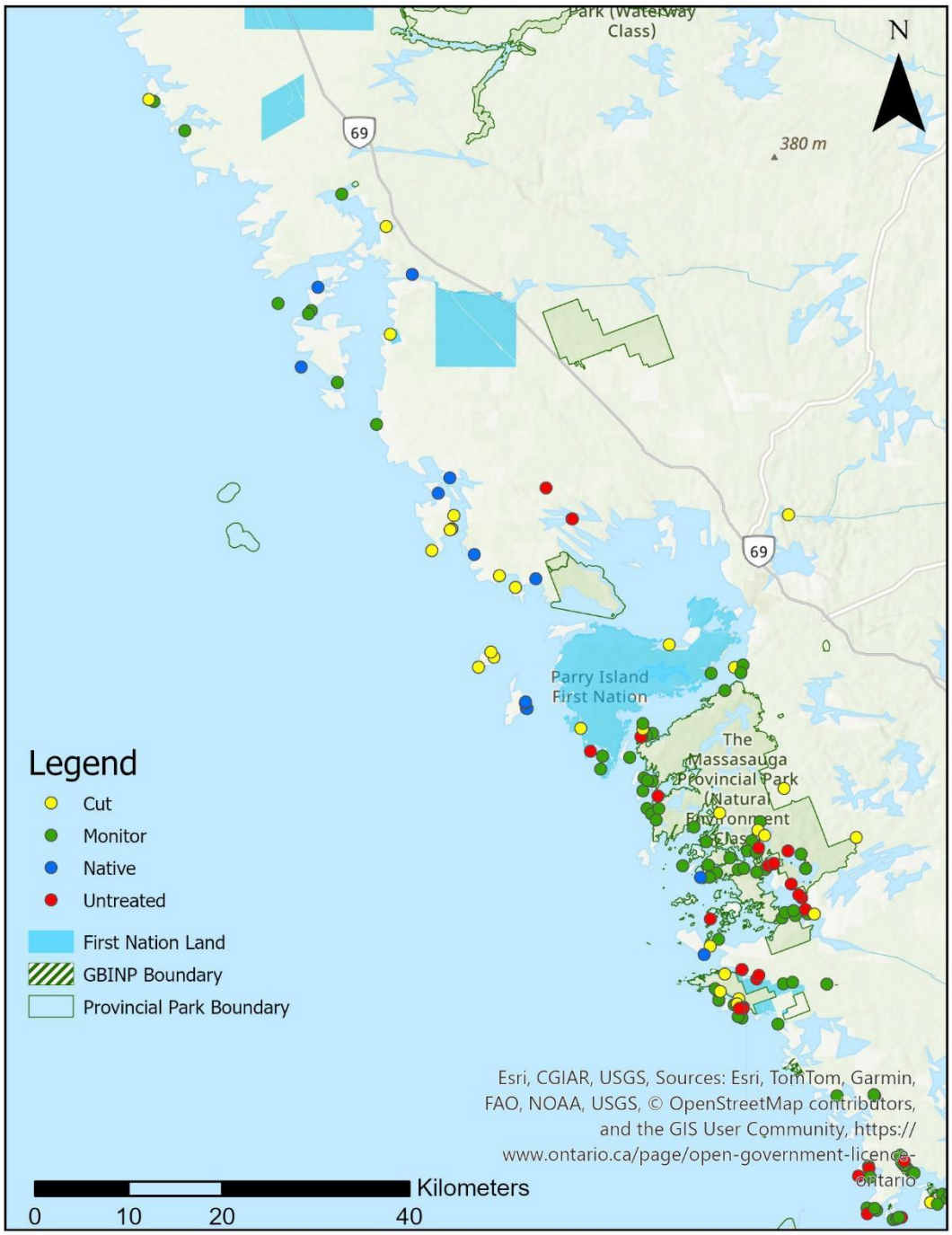
Township of The Archipelago

Table 6. Status of the 43 invasive Phragmites stands in the Township of The Archipelago in 2025. The chart does not include points on non-municipal lands depicted in Figure 15.

Region	Total sites	New Sites	# of sites Eradicated / Monitored	# of sites Cut	Area Cut (m^2)	# of sites Controlled (Eradicated / Monitored + Cut)	# of sites Untreated	% Eradicated / Monitored	% Cut	% Control
Township of The Archipelago	43	4	27	5	403	32	11	63%	12%	75%

By the end of 2025, the 43 invasive *Phragmites* sites in the Township of The Archipelago were 75% controlled. This work was completed through a combination of effort by GBF and the South Channel Association, with previous contributions from the Sans Souci, Copperhead and Woods Bay Associations lightening the load. Four new sites were discovered this year due to the detailed survey we conducted in Woods Bay and Sans Souci. The efforts and communications we receive from local community groups ensure the success of *Phragmites* management in the Township of the Archipelago!

Township of the Archipelago, Carling Township and surrounding areas Phragmites 2025



Partners and Community Events in The Archipelago

Sans Souci and Copperhead Association

This year, GBF continued SSCA's *Phragmites* work by conducting intensive surveys along the shores of the Woods Bay and Sans Souci regions under the guidance of Katherine Denune, SSCA Director of Environment. We checked previously eradicated sites for regrowth, confirmed the locations of previously identified invasive stands, and mapped five stands that were previously unknown to us. These regions contain many islands, and therefore lots of shoreline, so it has been challenging for volunteers from the association to stay on top of tracking and cutting all *Phragmites* stands. The Sans Souci and Copperhead communities have been committed to the fight against invasive *Phragmites* for many years, and GBF wants to keep their momentum going. We will continue to coordinate *Phragmites* surveys and cuts with SSCA in 2026.

South Channel Association

The South Channel Association's *Phragmites* monitoring program has been quite successful thanks to Peter and Beth Adams, Stephen Sprague, Ian Fenton, Matt, Luc, and many other community members. The SCA diligently surveys the area using What3Words, recording locations, inspection dates, and other relevant management information.

Ian Fenton's update on the work conducted by the SCA and local property owners in 2025:

We continue to be in very good shape within the SCA boundaries. We have 11 known sites, all of which are eradicated or under control, with only two of them requiring cutting in 2025. We will continue to survey our known sites in the coming year and watch out for new ones. A big thank you to the property owners who now control their own sites after the initial cuts, and to Luc Voorn and Peter Adams for their work in monitoring and cutting this year.

Iron City Fishing Club Art Show

In July, two GBF summer student staff attended the Iron City Fishing Club Art Show. They set up a booth with educational handouts and answered questions attendees had about GBF and our work controlling *Phragmites.* The art show had a great turnout, and our staff educated over 50 attendees. Participating in events like the art show allows us to engage community members who may not otherwise get the opportunity to learn and ask questions about their local environment.

Figure . GBF summer students, Claire and Aedan, hosting our educational booth at the Iron City Fishing Club Art Show.

Pointe au Baril

Pointe au Baril continues to be managed with 100% control. To our knowledge, only two invasive stands remain, both of which are small and continue to be cut. The legacy of the Pointe au Baril Marine Patrol provides us with historical stand locations that we continue to monitor and limited *Phragmites* growth across the region!

All Pointe au Baril sites are included in our total Township of The Archipelago count, despite some falling just beyond township borders in the adjacent unorganized township.

Pointe au Baril Islander's Association

The Pointe au Baril Islander's Association (PaBia) previously monitored and controlled *Phragmites* in Pointe au Baril through their Marine Patrol Program and the support of volunteers. Since the decommissioning of the Marine Patrol, the PaBia has not been able to dedicate as much effort to managing *Phragmites*. Luckily, their previous work greatly reduced the presence of invasive *Phragmites* in the area. The Association continues to respond to inquiries from property owners who are concerned that invasive *Phragmites* is growing on their property. Thankfully, all inquiries from 2025 were identified as non-invasive *Phragmites* look-alikes! Georgian Bay Forever spent several days this summer surveying the shores of Pointe au Baril to ensure that *Phragmites* does not return to previously cleared areas and to cut any small, straggling stands.

Collaborative

Bay of Islands Community Association

Georgian Bay Forever was invited to join the Bay of Islands Community Association (BICA) annual general meeting for the first time this past July. At the AGM, Science Projects Manager, Nicole, gave a presentation on the environmental health of Georgian Bay and the importance of managing *Phragmites* to improve ecosystem functioning and human enjoyment of its waters. Other speakers at the meeting spoke to other facets of water health, including managing plastic pollution and maintaining safe drinking water systems. Meeting attendees filled the historic River Lodge and were full of questions.

Following the AGM, staff from GBF joined board members and volunteers from BICA on a preliminary *Phragmites* survey to locate and identify stands and provide management guidance. Georgian Bay Forever looks forward to continuing to assist in growing BICA's *Phragmites* control efforts!

Beausoleil First Nation

We began our relationship with the Beausoleil First Nation in 2020 when we conducted a presentation about invasive *Phragmites* identification and management. Since then, we have attended Climate Change Committee meetings and coproduced a *Phragmites* management plan for Christian Island. Additionally, we hosted workshops for students of the Reach Ahead credit program at Christian Island Elementary School in partnership with Water First. In these workshops, students received hands-on training on *Phragmites* removal and plastic surveying from our *Phragmites* and Plastics Projects staff, which they continued to use later in the summer when conducting their own *Phragmites* cuts and shoreline cleanups! Unfortunately, scheduling conflicts prevented us from connecting with the Nation this year, but we hope to continue conducting *Phragmites* control and education on Christian Island together with Beausoleil First Nation and Water First in upcoming years.

For inquiries about our plastics programming, reach out to our Diversion Project 2.0 Project Manager, Sean Mullin, at sean.mullin@gbf.org.

Georgian Bay Biosphere

In 2025, Georgian Bay Mnidoo Gamii Biosphere's (GBB) social enterprise, Generations Effect (GenE), partnered with Seguin Township for a second consecutive year to manage invasive *Phragmites* and restore wetlands. Building on the success of the 2024 pilot, this year's project—Expanding *Phragmites* Control and Wetland Enhancement in Seguin Township—was coordinated by Seguin Township with technical and field support from GenE staff. Funding was provided through the Invasive Species Centre's Invasive *Phragmites* Control Fund.

Over the season, the team achieved significant results in Seguin Township, including:

- Managing 20 sites manually (14 aquatic, 6 terrestrial);
- Removing over 4,300 kg of invasive plant biomass;
- Restoring over 34 hectares of wetlands; and
- Engaging 10 volunteers for a community cut event.

The volunteer community cut event provided residents with hands-on experience removing invasive *Phragmites* and learning about stewardship practices to protect wetlands.

In addition, GenE also partnered with the Township of The Archipelago to identify, manage, and monitor invasive *Phragmites* along key corridors near Healey Lake Road and Blackstone–Crane Lake Road. Across the township, the team:

- Managed 11 sites manually (2 aquatic, 9 terrestrial);
- Removed over 500 kg of invasive plant biomass; and
- Updated invasive *Phragmites* distribution data.

All fieldwork followed best management practices, prioritizing high-value wetlands, new or sparse infestations, and previously treated sites. Using selective cutting tools, such as raspberry cane cutters and serrated spades, invasive biomass was removed while protecting native vegetation, and all sites were tracked in EDDMapS Pro for consistent monitoring and reporting. Refer to Appendix A and B for treatment maps of Seguin and the Archipelago.

Through these partnerships, invasive *Phragmites* is now under control in several priority areas, improving wetland function, biodiversity, and aesthetic values. This collaboration highlights the strength of regional partnerships and reflects GBB and GenE's ongoing commitment to supporting municipalities in enhancing ecological resilience, climate adaptation, and community well-being across the UNESCO-designated Georgian Bay Biosphere region.

Written by: Theryn Corning (GBB/GenE) and Angela Vander Eyken (GBB/GenE)

Figure . (Left) Generations Effect staff with a tall stem of invasive Phragmites *cut from Hamer Bay wetland. Photo courtesy of Emma Christensen. (Right) Generations Effect staff with the Township of the Archipelago Public Works staff after a day of managing invasive Phragmites. Photo courtesy of Stacey Evans.*

GBF and GBB

Georgian Bay Forever was invited to host a booth at the second annual Climate Action Forum held at the Stockeye Centre in Parry Sound by Georgian Bay Biosphere. We were thrilled to join the ranks of the diverse vendors present, providing resources and products to reduce impacts on the global climate. The forum generated discussions and offered climate solutions to organizations hoping to make large changes, as well as individuals looking to take small steps to reduce their environmental impact. As believers in the power of small-scale individual and community action, it was exciting to share and learn the various ways local communities and organizations are taking practical steps toward climate action! Thank you, GBB, for including us in the local climate action movement.

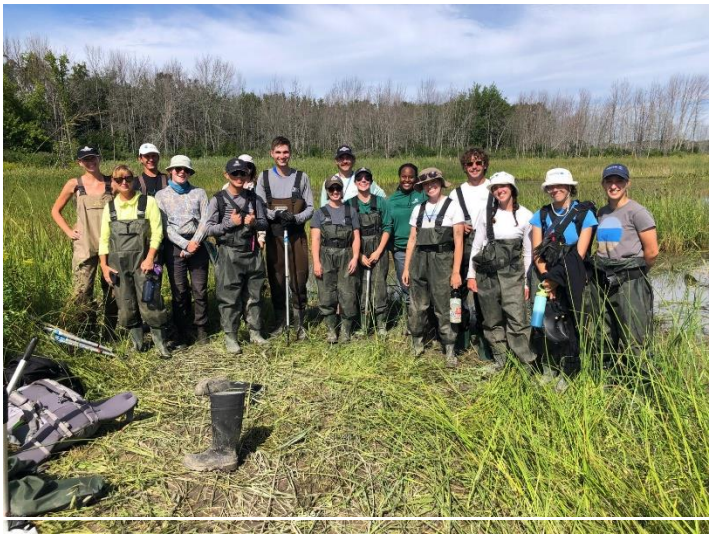
Figure 21. GBF Phragbusters, Aedan, Erin, and Avery, staffing an educational booth at the Climate Action Forum hosted by Georgian Bay Biosphere.

Georgian Bay Islands National Park

Georgian Bay Islands National Park (GBINP) is located near Honey Harbour on Beausoleil and other surrounding islands. The GBINP is known for the unique reptiles and plants it supports due to the fact that it lies along the border between the northern Canadian Shield and the southern Great Lakes-St. Lawrence Lowlands. The park has been one of our partners for several years. We volunteer our time and equipment to cut *Phragmites* on vulnerable park lands, and they join us for collaborative cutting events. This year, GBINP are managing two high-priority stands on Beausoleil Island and mapping *Phragmites* in other key areas.

Georgian Bay Land Trust

This year, Georgian Bay Land Trust was once again joined by teams from GBF and NCC to manage *Phragmites* at Port Severn Wetlands. Thanks to the previous cutting, the aquatic patch was significantly smaller in size and able to be tackled in just one day! GBLT was later joined by volunteers from Tatham Engineering for an afternoon of cutting on the Alexander Islands. Patches on an additional four island properties from Port Severn to Wah Wah Taysee were managed over the course of the season, and the Corridor Team continued management on a small patch in the Township of Georgian Bay.



This season was also spent identifying additional sites in need of management. Sandy Island was surveyed, resulting in the documentation of over 10 patches of native *Phragmites* and numerous invasive stands. Samples were collected from closely situated stands at this location to determine if hybridization is occurring. Several dry sites were also documented in Port Severn Wetlands and along ATV trails on Corridor Road Allowances.

Thank you to all of our partners for their generous assistance. Georgian Bay Land Trust looks forward to a busy 2026, working to manage these new and existing sites.

Keep up with GBLT's ongoing projects at: https://www.gblt.org/

Written by: Stefani Matis, Conservation and Protected Areas Assistant, Georgian Bay Land Trust

Magnetawan First Nation

This year, Magnetawan First Nation (MFN) continued its strong efforts to control invasive *Phragmites australis*, an aggressive invasive species that threatens wetlands and wildlife habitats in Ontario and across Turtle Island. The team focused on three main areas — the Magnetawan River, Highway 69, and the CP Rail Line. Their long-term management along the river continues to show great success, with little to no regrowth observed this season.

This summer, MFN expanded efforts to a patch along the riverside in Britt, where they partnered with Georgian Bay Forever for a collaborative removal day. Together, they cut and bagged mature *Phragmites* before seed dispersal, helping to stop further spread downstream.


Figure . Magnetawan Guardians remove invasive Phragmites from the shore of the Magnetawan River. Photos courtesy of Chris Ricker.

Large patches were also removed along Highway 69 and the CP Rail Line. These efforts improve visibility, drainage, and habitat for native plants, animals and pollinators. Continued follow-up will ensure regrowth remains minimal.

In addition to removal work, MFN conducted DNA testing on *Phragmites* samples from various sites to better understand the origin and type of *Phragmites* present. This information helps the team target management strategies more effectively. DNA testing is providing valuable insight for long-term planning and ensuring the most effective approaches are applied across the landscape.

Magnetawan First Nation's leadership in invasive species management showcases the strength of Indigenous-led environmental stewardship and the dedication of the MFN team to restoring and protecting local ecosystems.

Written by: Chris Ricker, MFN Guardians Coordinator

Figure . Magnetawan Guardians selectively cut Phragmites stalks from a marsh. Photo courtesy of Chris Ricker.

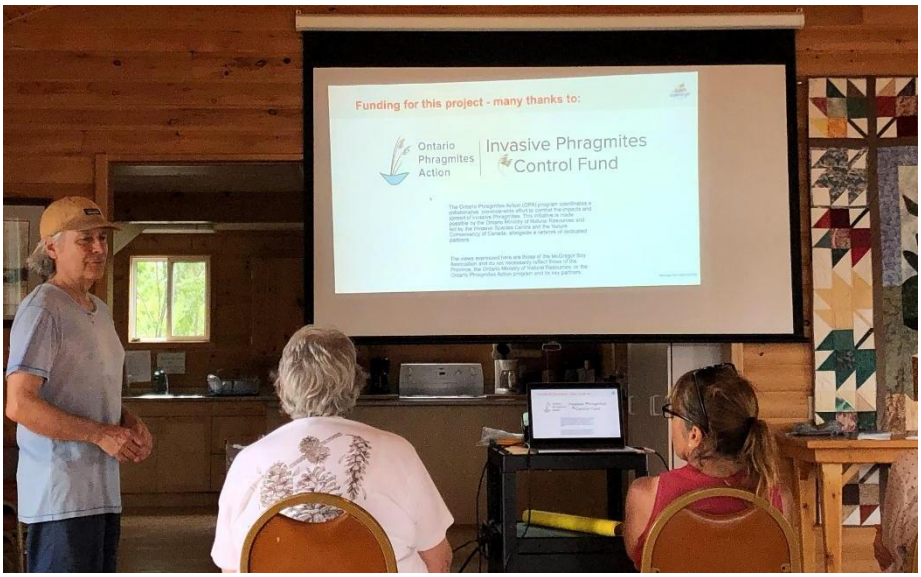
Massasauga Provincial Park

Massasauga Provincial Park is located south of Parry Sound, covers hundreds of windswept islands, inland forests, and lakes, provides ample opportunities for paddling, and acts as a sanctuary for its namesake, the Massasauga rattlesnake. Park staff have steadily conducted *Phragmites* management within the park's boundaries. The park uses a variety of methods to control *Phragmites*, including cutting to drown and a water-safe herbicide called imazapyr. The herbicide has only recently been approved for *Phragmites* control over water, and its use in the park is being monitored to evaluate its effectiveness at controlling invasive *Phragmites* in Eastern Georgian Bay.

McGregor Bay Association

This summer, Georgian Bay Forever and the McGregor Bay Association (MBA) joined forces to manage invasive *Phragmites* for the first time. In partnership with Whitefish River First Nation (WFRN), our three organizations began the Phrag Free McGregor Bay Project. The first year of the project aimed to create a comprehensive map of all *Phragmites* in the bay. Using a geospatial software database managed by Whitefish River (see page 43), volunteers from the McGregor Bay Association conducted small-scale surveys along their local shorelines. These surveys were designed to be beginner-friendly, only requiring volunteers to submit coordinates and photos. Leaders from the MBA and WRFN plan to review the collected data to identify sites as native or invasive *Phragmites.*

Georgian Bay Forever consulted with the MBA Phrag Free Program lead, Doug Whitton, and provided education and training to interested MBA community members. Our community workshop involved identification and cutting training at local *Phragmites* stands. We had about 25 attendees who were eager to jump in the water and test the various cutting tools! Afterwards, the attendees returned to the McGregor Bay community centre to learn to use the survey software in a lesson led by Doug. The Phrag Free McGregor Bay Project is planned to continue in 2026.



Mill Lake Guardians' Association

Mill Lake Guardians' Association rallied together volunteers for the third year in a row to cut the single known patch of invasive *Phragmites* on Mill Lake. The patch grew back much less dense than the year before, demonstrating that the Guardians' commitment to managing *Phragmites* is paying off. The enthusiastic team of volunteers made quick work of the patch, showing up early to beat the incoming thunderstorm and completing cutting and clean up, under the guidance of GBF staff, in only an hour! This passionate community's early detection and quick response to invasive *Phragmites* will hopefully safeguard Mill Lake from this dominating plant for many years to come!

Figure . Mill Lake Guardians' volunteers and GBF staff gather for a photo after removing a stand of invasive Phragmites.

Moose Deer Point First Nation

Georgian Bay Forever and Moose Deer Point First Nation continue to stay in touch and collaborate in *Phragmites* management. Knowledge sharing between our communities allows us to constantly update our programs with the best information and practices. Moose Deer Point faced similar challenges we did this year, with lower water levels making stands difficult to access and labour-intensive to cut. Thankfully, the Moose Deer Point community has passionate members who showed up to lend their assistance to the lands team and kept *Phragmites* under control for another year!

Nature Conservancy of Canada

During the 2025 field season, the Nature Conservancy of Canada (NCC) joined forces with Georgian Bay Land Trust and Georgian Bay Forever and returned to a patch of invasive *Phragmites* around Port Severn Wetlands. In previous years, this patch has required multiple days of mechanical “cut-to-drown" efforts to manage effectively. As a result of these efforts, this year the patch was noticeably less dense and only required one day to control.

Figure . NCC staff removing invasive Phragmites at the Port Severn Wetlands. Photo courtesy of Amanda Henderson/NCC.

Collaborative control efforts such as this to manage invasive *Phragmites* in and around Georgian Bay improve the quality of habitat for numerous species, including many species at risk like the Blandings Turtle, and protect the local community from the ongoing negative impacts of invasive *Phragmites*. This work was completed with support from the Ministry of Natural Resources through the Ontario *Phragmites* Action program.

Written by: Amanda Henderson, Coordinator, Conservation Biology, Nature Conservancy of Canada.

Nipissing First Nation

On August 6, 2025, students from the Kikandaawiwin Mookiisin Canadore College In-STEAM program joined Nipissing First Nation (NFN) environmental students and technicians, alongside members of the Lake Bernard *Phragmites* Working Group, for a collaborative effort to eradicate invasive *Phragmites* at Dokis Point in Garden Village.

The event combined hands-on action with education, as the NFN Environment Department and the Lake Bernard *Phragmites* Working Group provided in-depth learning about the impacts of Common Reed, or invasive *Phragmites* (*Phragmites australis*). Dokis Point has long served as an important outdoor classroom due to the rare coexistence of native *Phragmites americanus*. growing in close proximity to the (*Phragmites* invasive species. The site has also played a key role in advancing monitoring

techniques, including the department's first use of unmanned aerial vehicles (UAVs) and the development of seasonal mapping methods that identify invasive *Phragmites* in the fall, when it remains green and photosynthetic while surrounding native vegetation has turned dormant. In addition, the area supports natural bioremediation efforts and the replanting of wild rice in previously treated zones.

Crews worked throughout the day using canecutters to cut and drown invasive *Phragmites* along the shallow shoreline of Lake Nipissing, while other teams focused on upland infestations. Following the fieldwork, participants gathered for a shared meal featuring fresh fruit, Lake Nipissing whitefish, and a barbecue—marking the inaugural "Phrag-Feast." The day concluded with a live UAV demonstration led by the Environment Department.

The department hopes to establish the event as an annual tradition, building on strong existing partnerships and fostering new collaborations focused on invasive species awareness, education, and environmental stewardship.

Written by: Curtis Avery, Environment Manager, Nipissing First Nation

Figure . UAV image of the Phragmites *removal at Dokis Point on August 6, 2025.*

Severn Sound Environmental Association

The Severn Sound Environmental Association and Georgian Bay Forever continue to work together to map and manage invasive *Phragmites* around Georgian Bay. To learn more about the SSEA's invasive species work in the Severn Sound watershed, please refer to their website: https://www.severnsound.ca/programs-projects/wildlife-habitat-2/invasive-species/

Shawanaga First Nation

Shawanaga's Protecting Habitats and Resources for All Generations (PHRAG) Program: 2025 Year in Review

Project Objectives

This Indigenous-led project focuses on combating and managing invasive *Phragmites* along the Eastern Georgian Bay coastline while supporting partner organizations, particularly neighbouring First Nations, in their management efforts. Key objectives include mapping *Phragmites* occurrences along regional roadways, increasing knowledge of invasive species within Shawanaga First Nation's territory, ensuring proper removal and disposal of *Phragmites*, and building First Nation capacity for invasive species management through training and equipment acquisition.

Since 2023, the Protecting Habitats and Resources for All Generations (PHRAG) project has enabled the mapping and management of more than 35 sites across roughly 85 km of roadway. Shawanaga First Nation is actively managing over 20 sites, while 25 additional sites are stewarded by eight partner organizations.

Skerryvore Road Site

In 2025, the project team revisited previously treated sites and collaborated with partners to address larger infestations. A wetland on Skerryvore Road, managed for four consecutive years, has shown exceptional transformation. Once dominated by invasive *Phragmites* with only small patches of spotted jewelweed and limited standing water, the site now supports diverse native vegetation and insect life, and a small stream has naturally re-established itself. This transformation highlights how consistent and active management can restore ecosystem health. Management has relied on manual removal, using hedge trimmers in the first year to clear dead stalks and switching to shovels and cane cutters in subsequent years to remove new growth.

Partner Spotlight – Wasauksing First Nation

In July 2025, Shawanaga First Nation collaborated closely with Wasauksing First Nation to support the removal of two significant *Phragmites* infestations within major wetland areas. Previous attempts by SFN staff to clear these dense patches were unsuccessful due to the accumulation of old, compacted stalks. This year, however, a coordinated multi-day effort brought together 10–15 team members from multiple partner organizations. Using cane cutters, brush saws, and shovels, the team successfully removed the entire infestation.

This was the second year of work at this coastal wetland, and the progress achieved in 2025 was likely aided by the partial removal of old stalks completed the year prior. The site also provided an opportunity to observe how fluctuating Georgian Bay water levels influence *Phragmites* growth from year to year.

Figure . Phragmites *cut in collaboration with Wasauksing First Nation. Large numbers of cut stalks float together before being removed from the wetland. Photos courtesy of SFN.*

Future Techniques

Shawanaga First Nation has historically focused on newly emerging or early-stage patches to prevent large stands from developing. With many of these now receiving treatment, the team has begun dedicating more time to larger, established patches such as those at Wasauksing and along the highway. In response to community feedback, Shawanaga continues to use exclusively manual removal methods and has not applied chemical treatments at any site.

Recognizing the importance of removing old stalks for increasing future management success, Shawanaga will begin testing the use of controlled burning to clear dead material. With support from the Shawanaga Fire Department, the team plans to pilot winter burns at 1–2 sites to improve access to new growth, reduce summer labour demands, and maintain safe burning conditions.

Written by: Jay Dertinger and Delaney Griffiths of Shawanaga's Species at Risk Team

Figure . A local WFN dog sits in an almost-cleared patch of dense Phragmites.

GBF and Shawanaga

In August, GBF was invited to attend the second annual Shawanaga Island Bioblitz. The goal of the bioblitz is to find and document the biodiversity of Shawanaga Island and provide opportunities for Shawanaga First Nation and their partners to learn about local wildlife, contribute to community science, and spend time on the Land. While guests on the island, we make sure to keep an eye out for invasive *Phragmites*, while learning about the plants and animals inhabiting the area. The Shawanaga Lands Team does a fantastic job bringing eastern Georgian Bay organizations and communities together to increase knowledge of the Land. We look forward to returning for more bioblitzing in the future!

Figure . Cottongrass growing on Shawanaga Island in late August.

University of Guelph: FREED Program

Figure . Freed students and GBF Phragbusters *pose together after a successful workshop. Photo courtesy of Michael Alexander.*

This summer marks the first time GBF partnered with the University of Guelph to lead a workshop for the Field Research in Ecology and Evolution Diversified (FREED) Program. The FREED Program is a weeklong educational excursion for Black, Indigenous, and/or racialized undergraduate students. The goal of FREED is to provide these often-underserved students with opportunities for learning, reflection, and fun in outdoor settings. Many barriers prevent racialized students from accessing field experiences, so programs like FREED can provide life-changing opportunities to gain hands-on experience and connect with nature.

This year, FREED workshops were hosted at the ***rare*** Charitable Research Reserve near Cambridge, Ontario. Georgian Bay Forever staff members, Erin, Aedan, and Avery, made the trip south to deliver a workshop on invasive species management to the FREED students. This workshop began with a talk about the history, identification, environmental impacts, and management of *Phragmites.* The lesson concluded with a trip into ***rare***'s Blair Flats, where students donned waders to search for and remove invasive *Phragmites*. The students seemed thrilled with the challenge of wading through mud and dense vegetation and were full of questions regarding invasive species management occurring locally and around the world. In addition to GBF's invasive species workshop, FREED students gained field training in topics such as bird monitoring, insect pinning, and soil sampling.



WASAUKSING FIRST NATION

In a dedicated effort to restore the ecological integrity of Cadotte Point on Wasauksing First Nation, with partners Shawanaga First Nation and Georgian Bay Forever, Wasauksing First Nation successfully removed an extensive patch of invasive *Phragmites*. Over the course of two days, a stand of approximately 2,000 square meters of *Phragmites* was removed while ensuring the preservation of the native aquatic species in the area. This initiative continues the work completed previously in 2024 to manage this site.

Figure . A stand of invasive Phragmites on Wasauksing First Nation after being cut.

Wasauksing First Nation looks forward to continuing to build partnerships and enhancing community capacity to effectively manage and mitigate the impact of invasive *Phragmites*.

Written by: Neil Canvin, Natural Resources Coordinator, Wasauksing First Nation

Figure . Teams from Wasauksing First Nation, Shawanaga First Nation, and Georgian Bay Forever stand together after a busy day of cutting at Cadotte Point.

Whitefish River First Nation

This summer marked the beginning of the Phrag Free McGregor Bay Project, a collaboration between Whitefish River First Nation (WRFN), Georgian Bay Forever, and the McGregor Bay Association (MBA). The first year of the project aimed to create a comprehensive map of all *Phragmites* in the bay. Whitefish River Lands and Resources led the surveying effort by creating a geospatial software database to map and track *Phragmites* growth in the bay. Additionally, the Lands team conducted large-scale full-time surveying of the region in search of *Phragmites* to compile robust spatial data in the project's first year.

The MBA and GBF supported these efforts by training and mobilizing local cottagers and homeowners in managing *Phragmites.* Volunteer community members supplemented mapping efforts by conducting smaller-scale surveys to fill the gaps in the bay, a region with extensive shorelines (see page 34). Georgian Bay Forever hopes to lead a workshop with WRFN members in the future. The Phrag Free McGregor Bay Project is planned to continue in 2026.

Looking Ahead

Aerial Surveying

As new research arises, technology advances, and invasive *Phragmites* continue to threaten aquatic ecosystems, Georgian Bay Forever recognizes the need for innovation within invasive species management. Remote sensing provides an efficient and cost-effective approach for classifying complex wetland environments. Beginning in 2024, Georgian Bay Forever is utilizing remotely piloted aircraft systems (RPAS) to collect multispectral imagery of wetland ecosystems invaded with invasive *Phragmites*.

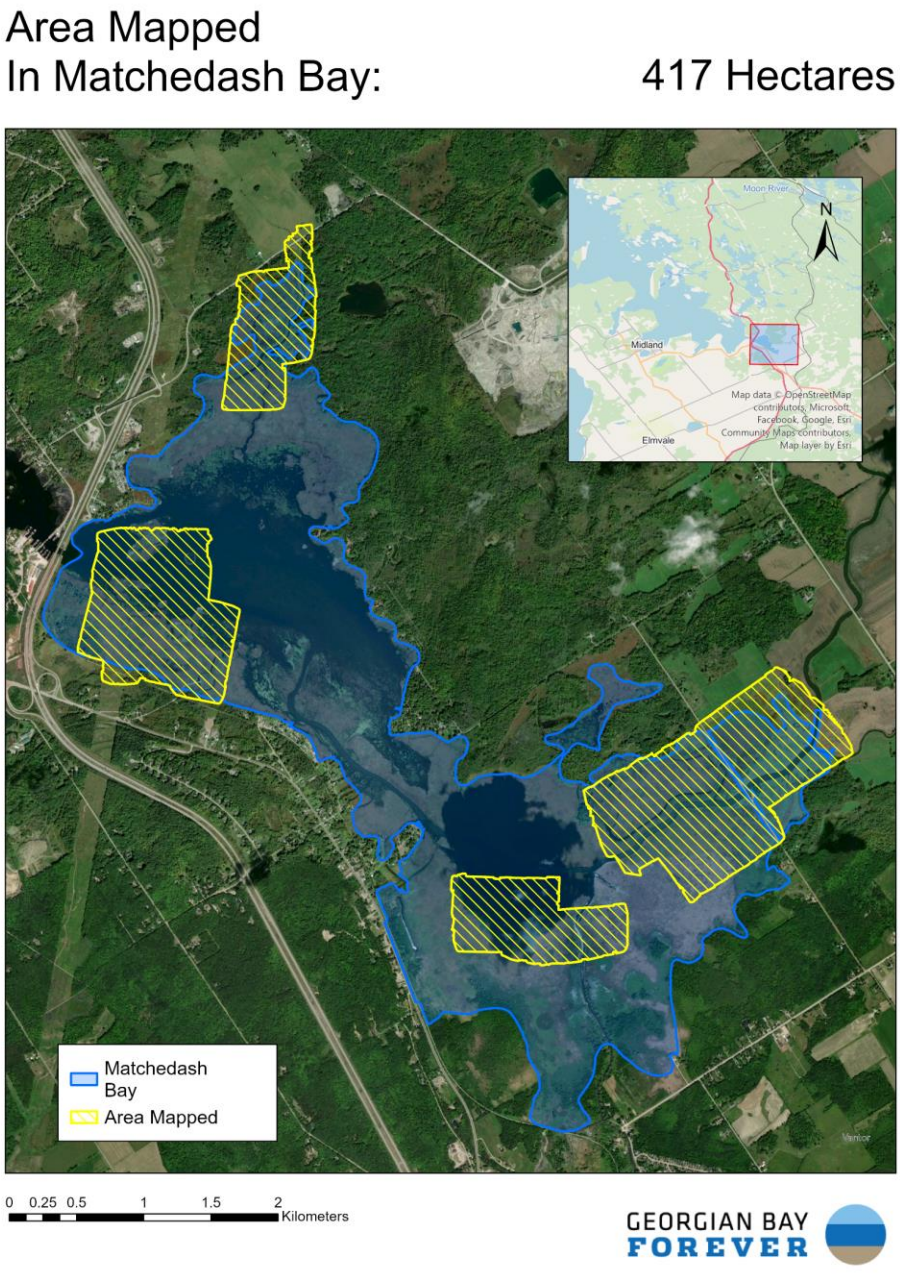


Figure . The areas that have been surveyed by drone (yellow) in 2024 and 2025 over the wetlands of Matchedash Bay (blue).

Since our first drone deployment in 2024, GBF has been hard at work expanding our multispectral mapping capabilities to detect invasive *Phragmites*. In 2025, GBF mapped over 364.17 hectares of Matchedash Bay, a provincially significant wetland and one of Georgian Bay's most productive. This brings our total mapped area in Matchedash Bay to 417 hectares, allowing us to track changes for almost 40% of the 1,119 hectares that make up this vital wetland.

Not only have we expanded our survey area, but our methodology and detection accuracy for classifying *Phragmites* have also improved significantly. Utilizing machine learning and multispectral image capture technology, we are able to classify hectares of wetland in a matter of hours. Through the power of Geographic Information Systems and after two years of data collection, we are now able to overlay and extract growth measurements for individual patches of Invasive *Phragmites* in Matchedash Bay.

Within our overlapping study areas, our drone was able to accurately identify and compare over 33 patches of *Phragmites*. To reduce uncertainty and minimize our margin of error, all

patches analyzed had an area greater than 100m^2. The level of growth is staggering. On average, patches grew by 16.3% in 12 months. This is an increase of over 16,500m^2 of *Phragmites*. And that's just the patches over 100m^2 that we could compare. With our expanded study area, we were able to detect dozens of new sites in 2025 from a variety of sizes, bringing the total area of *Phragmites* mapped in Matchedash Bay to 102,000m^2, or 10 ha. That's almost 15 CFL-sized football fields worth of invasive *Phragmites*.

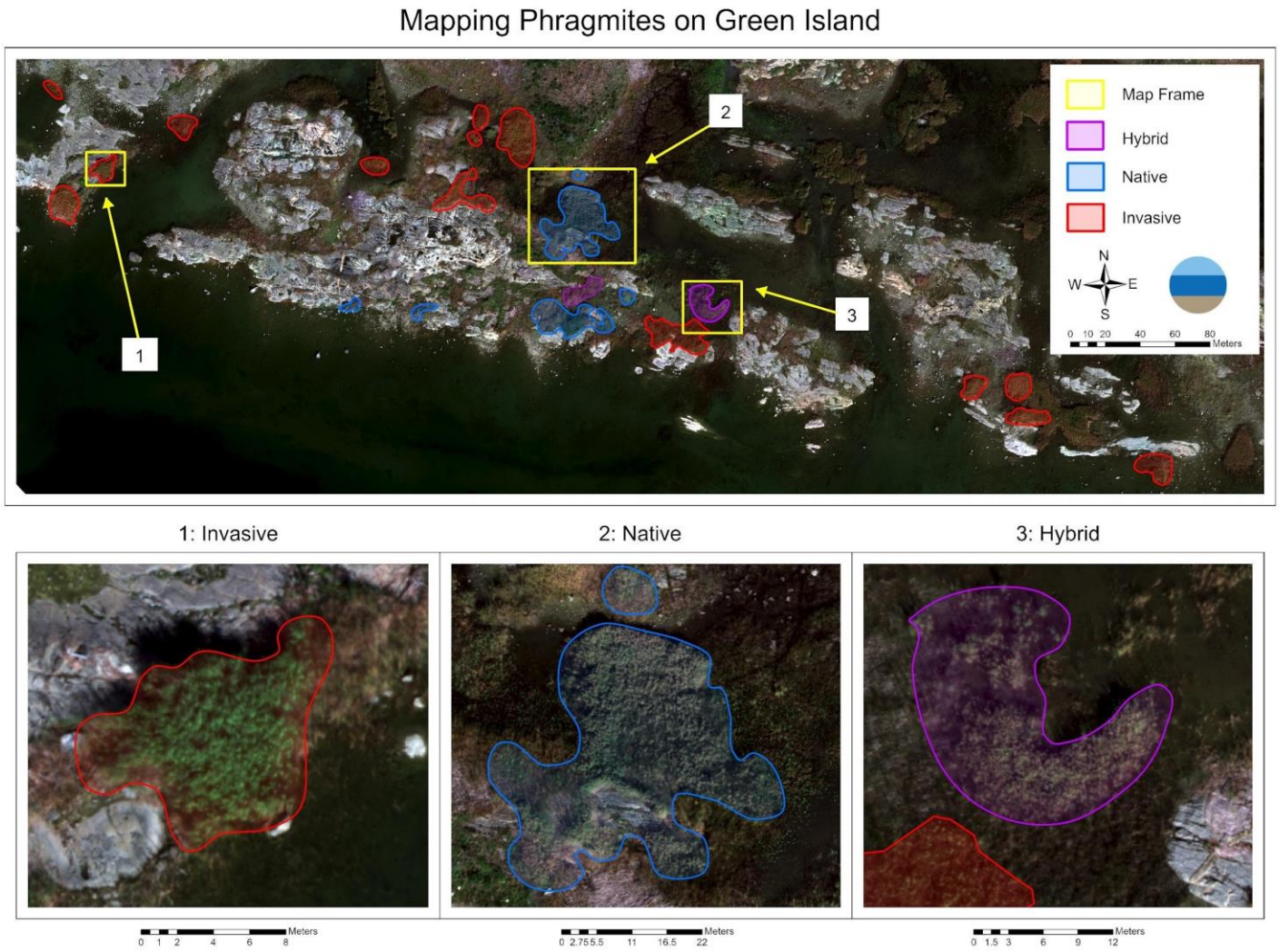


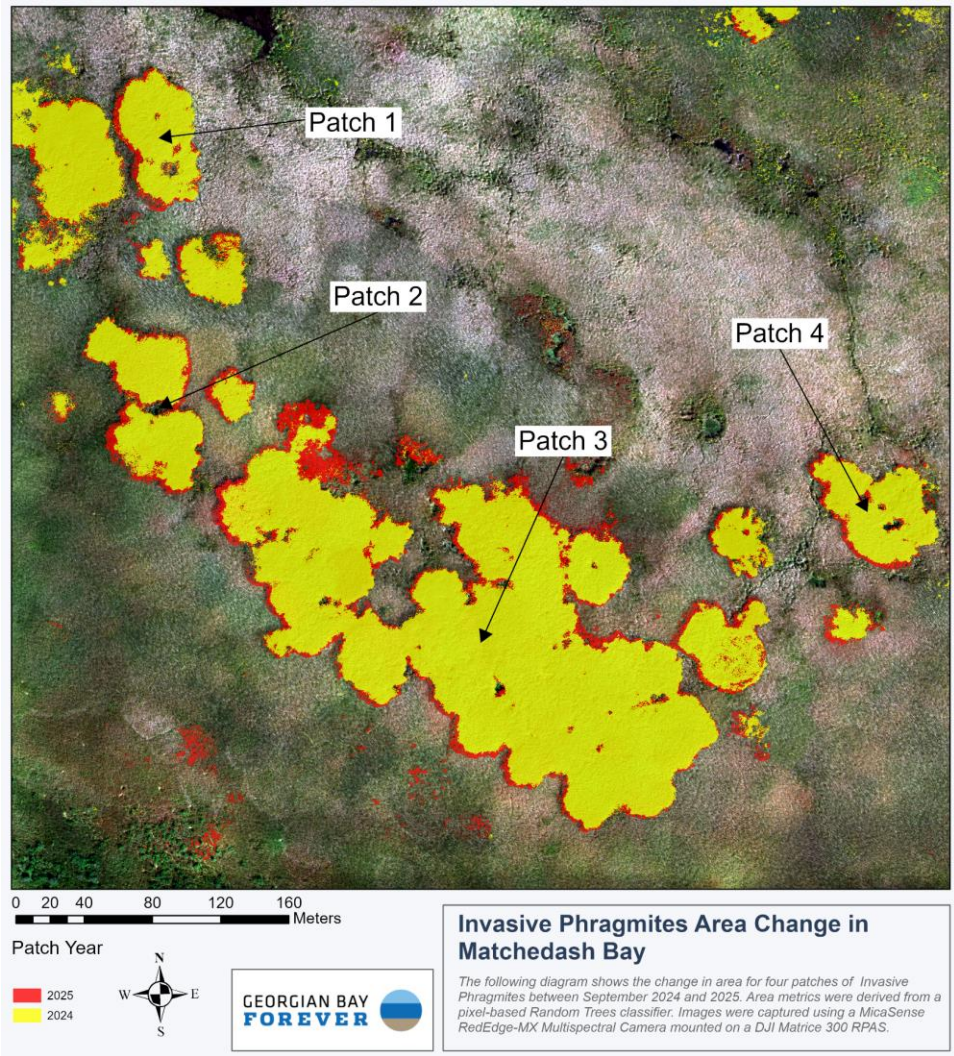
Figure . Aerial imagery of Phragmites stands on Green Island, a large island southwest of Port Severn. Using a combination of ground truthing and machine learning, the stands were identified as invasive (red), native (blue), or hybrid (purple).

Several large patches of invasive *Phragmites* are growing in relatively inaccessible areas within southern Matchedash Bay. The largest patch we have mapped is over 33,000m^2 and grew by over 4,800 m^2 between 2024 and 2025. Based on this first year of monitored spread, we know large patches in Matchedash Bay are capable of growing at a rate of over 14% per year. This patch highlights the pervasiveness of *Phragmites* stands that are left unchecked. We are witnessing the devastating effects of *Phragmites* infestation in real time.

Capturing this process through RPAS (Remotely Piloted Aircraft Systems, aka drones) technology is vital to our understanding of how *Phragmites* spreads. Adding to this time series with successive years of data collection will serve

as a time capsule, allowing us to look back and compare the impact of *Phragmites* growth in other wetlands with the lessons learned in Matchedash Bay.

Hybrid *Phragmites*



Patch 1: Phragmites Area Change Summary

Metric	Value
Phragmites Area 2024 (m²)	2,437.26
Phragmites Area 2025 (m²)	2,724.16
Change (m²)	286.90
Change (percent)	10.53

Patch 2: Phragmites Area Change Summary

Metric	Value
Phragmites Area 2024 (m²)	3,521.01
Phragmites Area 2025 (m²)	4,147.15
Change (m²)	626.14
Change (percent)	15.10

Patch 3: Phragmites Area Change Summary

Metric	Value
Phragmites Area 2024 (m²)	28,705.44
Phragmites Area 2025 (m²)	33,571.26
Change (m²)	4,865.82
Change (percent)	14.49

Patch 4: Phragmites Area Change Summary

Metric	Value
Phragmites Area 2024 (m²)	2,661.45
Phragmites Area 2025 (m²)	2,983.03
Change (m²)	321.58
Change (percent)	10.78

What is a hybrid?

The word hybrid describes a plant or animal with two different parental lineages; in simpler terms, a hybrid is the offspring of two different types of plants or animals. Mules, the offspring of horses and donkeys, are a common animal hybrid. Mules, like other hybrids, have traits of both their horse and donkey parents. Mules inherit donkeys' intelligence and hardiness, but also horses' size and agility, in addition to looking like a combination of both parents. Some hybrids are sterile and cannot reproduce, such as mules, while others, such as labradoodles, can have their own offspring.

Many hybrids are intentionally created by humans wishing to combine the desirable traits of two plants or animals, but also occur without human interference. Plant hybridization is relatively common in nature and is an important component of plant evolution (Neri, Wendt, and Palma-Silva 2018). Plant hybrids are created when insects or wind carry the pollen from one species to another compatible species, and the resulting seed successfully grows into a new hybrid plant.

Hybrid *Phragmites* in North America

Hybridization between the native *Phragmites* subspecies (*Phragmites australis americanus*) and the invasive subspecies (*Phragmites australis australis*) is of growing concern in North America. Although plant hybridization is an important natural process, hybridization between native and invasive species can increase the competition faced by native biodiversity. Firstly, native-invasive hybrids have the potential to be even more successful spreaders than their invasive counterparts, since they can adopt the invasive parent's aggressive growth habits in addition to the native parent's local adaptations (Saltonstall, 2022). Secondly, successful hybrids may genetically "swamp" the native lineage if they manage to cross-pollinate its native parent species. Genetic swamping can result in the loss of either or both parental species (Saltonstall, 2022). Scientists are concerned that hybrid *Phragmites* could outcompete native plant communities through vigorous competition and genetic swamping.

To date, few naturally occurring hybrid *Phragmites* stands have been discovered despite ongoing surveying across several states and provinces. Natural hybrid presence is confirmed in Seneca Falls, New York (Saltonstall, Castillo, and Blossey 2014), Las Vegas, Nevada (Saltonstall, Lambert, and Rice 2016), and Georgian Bay, Ontario. The extent of the threats posed by hybrids is not well understood. *Phragmites* managers and researchers are currently working to define the traits of hybrids, understand if and how hybrids threaten native plant communities, and proactively and carefully control their populations.

Figure . (Left) Seed heads removed from native, hybrid, and invasive (left to right) Phragmites stands to compare their structure and colour. (Right) DNA kits being prepped for shipping. Leaf samples must be sent to a lab to confirm what stands are hybrids.

GBF and Hybrid *Phragmites*

GBF first discovered hybrid *Phragmites* in Georgian Bay in 2024 when selecting difficult-to-identify stands for the Invasive Species Centre's genetic testing program. We responded to this finding by collecting additional samples in the same area for testing in 2025. With these tests, we identified 2 additional hybrid stands. In the fall of 2025, we collected detailed photos of the confirmed hybrid stands to aid in the future visual identification of hybrid *Phragmites* and

collected aerial imagery to thoroughly map the area containing known hybrids (see sample of imagery in Figure 41). We plan to use this imagery to aid in identifying nearby stands that may be hybrids, so we can submit additional samples to the Invasive Species Centre for testing in 2026. Lastly, we hope to head off any negative effects on native plant assemblages by beginning the removal of confirmed hybrids in 2026.

New Addition to Our Phrag Fleet!

Thanks to the Bradstreet Family Foundation, the Invasive Species Centre, and our committed donors, we acquired a brand new 22' Stanley Pulsecraft to add to our fleet of phragbusting equipment! In the Fall of 2025, we were able to get the boat delivered, wrapped, and put in the water for a few test runs in Honey Harbour and up to Parry Sound. Larger, faster, and more effective in Georgian Bay waters, the Baykeeper II will be an incredible addition to our organization, and we are beyond excited to put it to use in 2026! The original Baykeeper has been moved down to Collingwood and will remain there for the 2026 season to increase our on-the-water presence and monitor water quality in Nottawasaga Bay. Keep an eye out for us on the water next summer, and don't be afraid to wave us down or stop by and check out the work we are doing.

Developing a New Plan

In 2019, GBF developed a 5-year plan to aim for 90% eradication of the original 588 stands mapped in the Township of the Archipelago, the Township of Georgian Bay, and Tay Township.

At the end of the 2024 field season, the 5th year since the start of the plan, 55% of the original 588 were eradicated (see figure). Though this is off from our original goal of 90% eradication, our team continues to work diligently to manage invasive *Phragmites* alongside communities to enhance coastal wetland ecosystems. What we didn't expect to find after the first year of our five-year plan was the number of new *Phragmites* sites discovered each year. By 2024, we had nearly doubled the number of sites detected in eastern Georgian Bay from 588 to 1,121. New sites were a result of the rapid spread of *Phragmites*, as well as increased time and effort by the GBF team in surveying coastal wetlands. We became more familiar with the area and *Phragmites* identification, allowing us to investigate further into the wetlands and discover sites we hadn't seen before. Over the years, the involvement and support from the community, including financial support from local municipalities, also increased, allowing our program to grow. In addition to the discovery of new sites and the incorporation of new regions into our management plan, we faced a significant challenge in more recent years with low water levels. With low water levels, *Phragmites* control is negatively impacted. Originally, the use of the "cut to drown" method in 2019 was very effective, as most sites were found in at least 1 foot of water. Now, many of these sites are considered terrestrial, and thus the control method switches to "spading," which is much more labour-intensive and less effective in a shorter period of time.

With many years of *Phragmites* control under our belts, we are currently working to renew our *Phragmites* management plan for eastern Georgian Bay to incorporate things such as changing water levels, property ownership and rate of spread into decision-making and prioritization of sites.

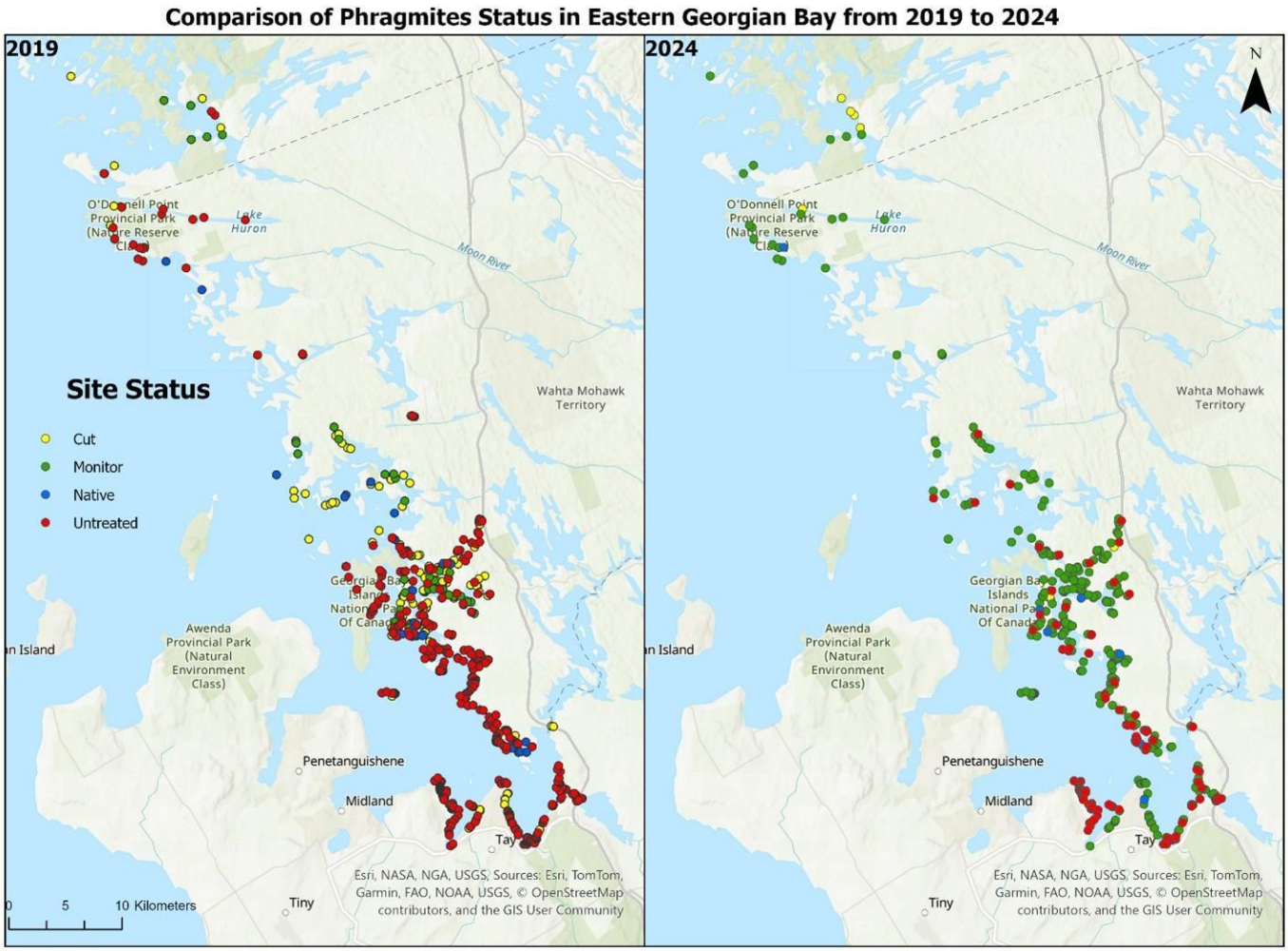


Figure . Phragmites mapped in southeastern Georgian Bay in 2019 (left) and 2024 (right). A significant number of patches that were unmanaged (red) in 2019 are now eradicated (green) or in the process of being removed (yellow).

Conclusion

2025 was the 13th year of Georgian Bay Forever's efforts in invasive *Phragmites* management on the southeastern shores of Georgian Bay. We can't thank our donors, staff, and volunteers enough for all of their hard work and dedication to protecting Georgian Bay wetlands. Each year, we continue to grow and move into new areas of Georgian Bay, increasing our overall total number of sites under management.

- ✔ GBF staff, volunteers and communities mapped a total of 1264 invasive *Phragmites* sites in the summer of 2025.
- ✔ 226 new stands identified due to an increase in mapping efforts.
- ✔ 412 sites of the 1264, or 33%, are being monitored (i.e., eradicated or on their way toward eradication).
- ✔ 262, or 21% of sites, were cut by GBF staff and volunteers.
- ✔ 674, or 54% of sites, are under control (eradicated/monitored and cut) by GBF staff and volunteers.
- ✔ 143 volunteer hours dedicated.
- ✔ 300 community members educated by GBF staff at local in-person events.

References

Keddy, P. A., Reznicek, A. (1986). Great Lakes vegetation dynamics: the role of fluctuating water levels and buried seeds. *Journal of Great Lakes Research* **12**, 25–36. https://doi.org/10.1016/S0380-1330(86)71697–3.

Montocchio, D., Chow-Fraser, P. (2021). Influence of water-level disturbances on the performance of ecological indices for assessing human disturbance: A case study of Georgian Bay coastal wetlands. *Ecological Indicators* **127.** https://doi.org/10.1016/j.ecolind.2021.107716.

Neri, J., Wendt, T., & Palma-Silva, C. (2018). Natural hybridization and genetic and morphological variation between two epiphytic bromeliads. *Annals of Botany: Plants* **10**(1). https://doi.org/10.1093/aobpla/plx061.

Ramsar, "Matchedash Bay", Ramsar Sites Information Service, 2001. https://rsis.ramsar.org/ris/866. Accessed 23 January 2025.

Rudrappa, T., Bonsall, J., Gallagher, J. L., Seliskar, D. M., Bais, & H. P. (2007). Root-secreted allelochemical in the noxious weed *Phragmites australis* deploys a reactive oxygen species response and microtubule assembly disruption to execute rhizotoxicity. *Journal of Chemical Ecology* **33**, 1898–1918. https://doi.org/10.1007/s10886-007-9353-7.

Saltonstall, K., Castillo, H. E., & Blossey, B. (2014). Confirmed field hybridization of native and introduced *Phragmites australis* (Poaceae) in North America. *American Journal of Botany* **101**(1), 1–5. https://doi.org/10.3732/ajb.1300298.

PHRAGBUSTERS
WWW.GBF.ORG

Saltonstall, K., Lambert, A. M., & Rice, N. (2016). What happens in Vegas, better stay in Vegas: *Phragmites australis* hybrids in the Las Vegas Wash. *Biological Invasions* **18**, 2463–2474. https://doi.org/10.1007/s10530-016-1167-5.

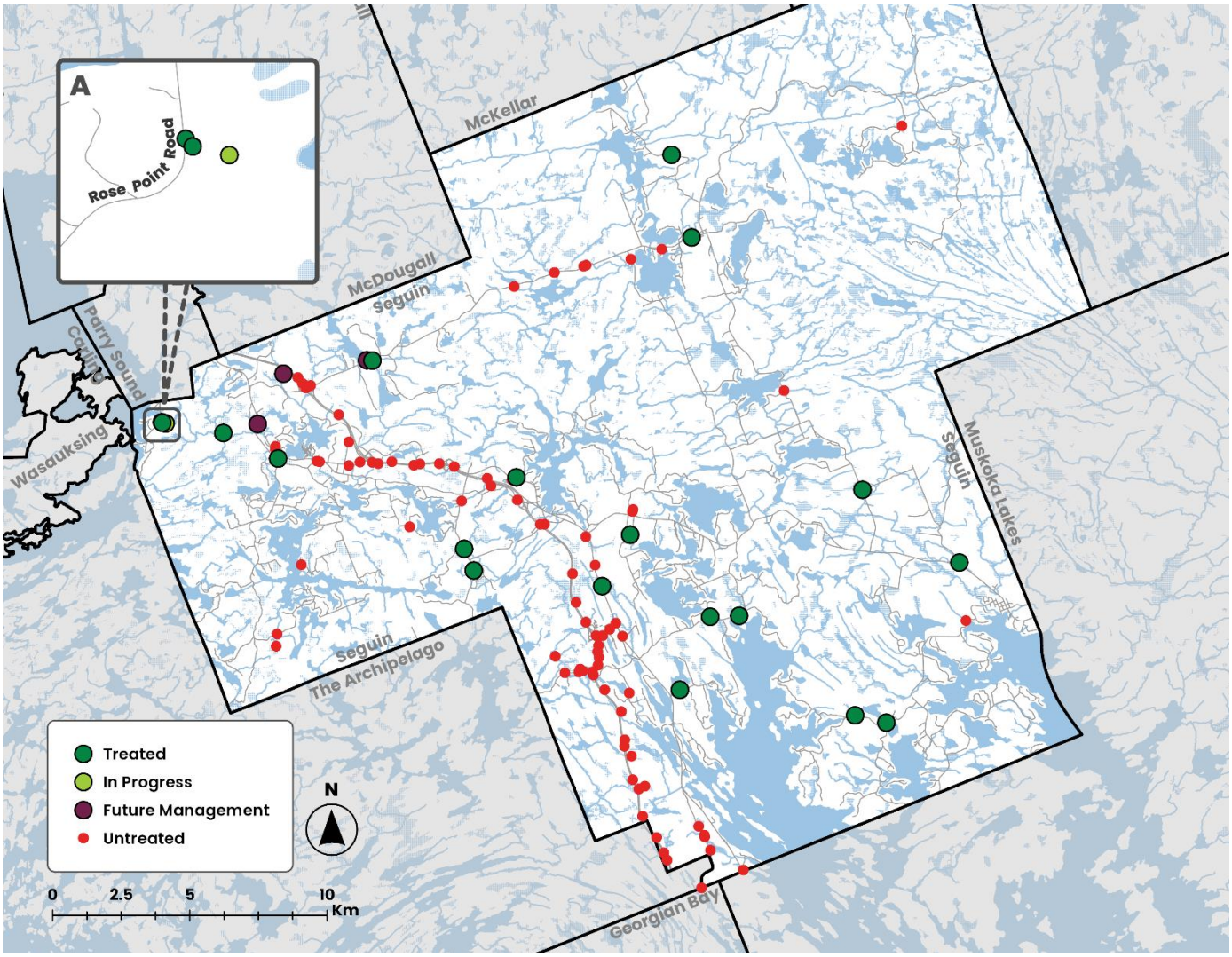
Saltonstall, K., "Hybrid *Phragmites australis* in North America", Great Lakes *Phragmites* Collaborative, 2022. https://www.greatlakes*Phragmites*.net/blog/hybrid-*Phragmites*-australis-in-north-america/. Accessed 29 September 2025.

Uddin, N., Robinson, R. W., Buultjens, A., Al Harun A. Y., and Shampa, S. H. Role of allelopathy of *Phragmites australis* in its invasion process. 2017. *Journal of Experimental Marine Biology and Ecology* **486**, 237–244. http://dx.doi.org/10.1016/j.jembe.2016.10.016.

Wilcox, D. A., Nichols, S. J. (2008). The effects of water-level fluctuations on vegetation in a Lake Huron wetland. *Wetlands* **28** 487-501. https://doi.org/10.1672/07-129.1.

Appendices

Appendix A. Seguin Phragmites Treatment and Future Plans with GBB. Map developed by Emily Holdsworth.



Appendix B. Township of the Archipelago Phragmites Treatment with GBB 2025. Map developed by Emily Holdsworth.