

## October 2024, Phragmites Working Group Lake Bernard Annual Season End Report – Year Seven

### **Year seven of Goal to be Phrag Free by 2033**

The Phragmites Working Group Lake Bernard (PWGLB) completed season seven of invasive Phragmites australis removal from the shore and water of Lake Bernard, provided demonstration events at various locations across the district, hosted a student from the Federation of Anglers and Hunters Invading Species Program (ISAP), mapped and managed stands of Japanese knotweed. Dry land events started in June, and in - water work went from July 15 until the end of September the last event was a dry- land demonstration October 28. See Appendix A for an excellent visual of summarized charted data year over year (thank you to Karin Mertins).

### **2024 Volunteer Cutting events as of end of October 2024.**

Thank you to the Village of Sundridge and Township of Strong for transportation of the cut biomass to the landfill. This season we implemented repeated removal by two or three on several sites to deplete the underground rhizome structures on these small sites. The ISAP student was participating in a removal event every day of his summer term with us.

- 107 different volunteers participated in 79 cutting events in 2024
  - 19 properties were cleared that were municipal, business, church, or charity.
  - 8 new sites were managed.
  - **43 Phrag sites** and **4 Japanese knotweed sites** were managed. On some dates more than one site was managed. Some sites took more than one event to manage.
  - **842 Phrag fighter hours as of October 2024.**
  - 66 saw operator hours were paid for and, 4 saw operator hours were donated.
  - 2 days were contracted from the Invasive Phragmites Control Centre (IPPC), for a Truxor to cut on 5 West End stands on the lake, and to apply herbicide by backpack sprayer on six sites as follows: one west end stand, the ditches at the dam, one property zoned industrial and three small stands on municipal property.) <https://www.phragcontrol.com/>
  - Biomass removed: (one half ton truck is 1.5 cubic metres in size). There were approximately 103.88 cubic metres of cut phragmites and 5.214 cubic metres of cut Japanese knotweed taken to the landfill by works or roads department crew. Other bagged or tied phrag was transported by volunteers.
  - Many sites received more than one cut. Several sites would have benefited from more than one, but we were unable to schedule another this season.
  - Sites in rock, gravel, or pit-run will be very difficult to permanently remove with mechanical removal therefore herbicide would be more effective there. Several sites in the village that have been managed for 6 or 7 seasons were smaller and done more quickly.
  - 101 shoreline property owners on an email list of 200 received email information regarding weekly removal events.
  - 7 local businesses provided business services (T-shirts, purchased services, food, equipment, signage etc.).
- We continue to see decreases in the size of stands, smaller stalks, less density, and less regrowth, with the best results in deep water, allowing us to occasionally work on up to three small sites in one morning.

The environmentally complex dam and the large west end stands will need more than one method of management, including application of herbicide by licenced applicators. Although there was interest in use of aqua habitat an in-water herbicide in the fall of 2023, there was no support from key property owners in the spring of 2024. The cost, years of time and human effort required to manage these large areas with saws,

shovels and cane cutters alone is unsustainable. We continue to consult with the Invasive Phragmites Control Centre team led by Dr. Gilbert regarding best practices for management for these sites.

Demonstration sites were provided outside our immediate area. The following Almaguin groups consulted with us this season to assist with their removal efforts: Evergreen Heights Public School, Canadore College Indigenous STEAM program, Sustainability North Bay, Premier Road North Bay Beach front owners, Round Lake Association, Ahmic Lake, Whitestone Wahwashkesh Lake, Chisholm, Ryerson Township and Magnetawan River sites. We will continue to assist with development of removal groups across Almaguin.

Here is the best management practices (BMP) document which outlines methods currently used effectively in Ontario: [https://www.ontarioinvasiveplants.ca/wp-content/uploads/2021/05/OIPC\\_BMP\\_Phragmites\\_April302021\\_D10\\_WEB.pdf](https://www.ontarioinvasiveplants.ca/wp-content/uploads/2021/05/OIPC_BMP_Phragmites_April302021_D10_WEB.pdf)

Since the BMP was published, a new herbicide has been approved for use in wetlands in Ontario: <https://www.better-vegetation-management.basf.ca/en/products/habitat-aqua.html>.

### **Partnerships:**

We are thankful for the support, advertising, provision of administrative time, and hands-on assistance from our 5 collaborative agencies: the Near North Enviro- Education Centre (NNEEC) <https://www.nneec.ca/> the Lake Bernard Property Owners Association (LBPOA), <https://lakebernard.ca/> our municipal leaders, the respective works, and roads departments from the Village of Sundridge <https://www.sundridge.ca/en/index.aspx> , Strong <https://www.strongtownship.com/en/index.aspx> and Joly Township. <https://www.townshipofjoly.com/> We acknowledge the significant contribution of our 3 arborists, and many who donated items to help us such as: Phoenix <https://phoenixbuilding.ca/> for tarps, and Kidd’s Hardware for leaf litter bags and tarps, others for three-hole bricks to secure the boom, twine and rakes. Thank you to homeowners for snacks. Thank you to our excellent photographer Steve Kyzar, and as well as Wendy MacCrimmon [www.wmacphotography.com](http://www.wmacphotography.com) for the excellent drone shots of the Japanese knotweed along a creek and on the shore of Lake Bernard. Special thanks to Scott Hubbard of Scotty’s Lake Tours for spreading the Clean Drain Dry message. Thank you to Bill Black, for maintaining our saws. Thank you to Brooke Schryer and the team from the Ontario Federation of Anglers and Hunters, Invading Species program. <https://www.invadingspecies.com/> Thank you to current and past phragmites fighters – as YOU continue to be our water and wetland heroes.

### **Funding:**

Recognition with our thanks needs to be given to the partners (NNEEC, and Strong Township) who submitted the applications for grants received from:

- **The Invasive Species Action Fund micro grant:** \$2,500.00 through Township of Strong
- **The Invasive Phragmites Control Fund– Invasive Species Centre:** \$22,000.00 through NNEEC
- **Invasive Species Summer Technician Position** – through Township of Strong, funded by the Ontario Federation of Anglers and Hunters (OFAH) Invading Species Program.

Donations were received throughout the summer.

### **Purchased services:**

- Friday cutting events required saw operators. Two skilled arborists Todd Cruz “Wolverine” and John Paul Bressan “Arborist Alliance” ran the Stihl Kombi saws on Fridays. An additional arborist Paul McDonald Electric Arborist/Eco Trim Tree Solutions assisted when needed, and will remove phragmites for private owners for a fee. Other volunteers ran a saw on four occasions.

- Saw Maintenance: Cutting in water required that the saws be assessed, greased, and maintained after each cut, as recommended by Dr. Gilbert and the supplier.
- The Invasive Phragmites Control Centre (IPCC) team of 3 was hired for two days

#### **Scheduling:**

- Regular Tuesday and Friday morning cutting days were scheduled. Sites requiring saw operators were mostly scheduled on Fridays.
- Events started at 7:30 am with set up of the boom, signs, tarps, and tools. Saws started early and volunteers arrived after 8:00, we aimed to finish at noon. Pizza lunches were provided for the two large Truxor days. Volunteers brought their own water. Small snacks (butter tarts) and some drinks were provided.

#### **Volunteers**

Volunteers continue to be the force behind this work, and they assist with planning, evaluation, and motivation to get the Phrag gone!

**Meetings: Thank you to the committee members:** 7 Meetings of the Executive were held as per the terms of reference for the working group.

#### **Executive of the Phragmites Working Group Lake Bernard 2024**

Jocelyn Palm – Founder and Director of the Near North Enviro-Education Centre (NNEEC)

Lois Brisbois – Founding member Phragmites Working Group/lake property owner

Dan Burton – Naturalist, member Muskoka Conservancy

Marilee Koenderink – Chair, lake property owner

Karin Mertins – Vice chair, Lake Bernard supporter/naturalist

Robert Renaud – LBPOA until July

Jeff Brown LBPOA president from July on

Dave McGirr – Lake property owner/supporter until spring 2024

New 2024-25 members:

Linda Sloka – Lake Bernard property owner and long time Phrag fighter

Dava Slater – Lake Bernard property owner and long time Phrag fighter

#### **Receiving Minutes:**

- Justine Leveque – Mayor Village of Sundridge
- Tim Bryson – Mayor Township of Strong
- Brian McCabe – Mayor of Joly Township
- Marianne Stickland – Councillor Strong Township, supporter
- Jennifer Boyce – Lake property owner, supporter
- Bob Attwell –Chair Almaguin Lakes and Watersheds Committee/ lake property owner
- Kathy Pike – Founding member of the Phragmites Working Group Lake Bernard /lake property owner
- Jeremy St. Onge- Canadore College School of Environmental Studies, Technician and Technology program
- Vicki Whitmell – Lake property owner
- Jane Smith – Lake property owner

#### **What is needed now?**

We continue to follow the recommendations for management of the Phragmites australis on Lake Bernard from the report received in October 2019.

[https://www.nneec.ca/files/ugd/1acc58\\_8c667559849c4337bbc41232be0373be.pdf](https://www.nneec.ca/files/ugd/1acc58_8c667559849c4337bbc41232be0373be.pdf).

The recommendations were for three areas:

1. The dam,
2. The west end and
3. The smaller stands scattered along the shoreline in and around the lake.

Consultation with Dr. Janice Gilbert from the Invasive Phragmites Control Centre (IPCC)

<https://www.phragcontrol.com/> occurs in the fall and in May via pictures and emails.

Mechanical removal, repeated cane cutting, and spading for stands in water too shallow to immediately drown, and on shorelines will be needed (more than once per season if possible).

Application of Herbicide: The dam and the west end stands will be assessed in the spring of 2025 to see if spraying is needed to achieve a return to a native marsh and reed bed area. The 0.9-acre lakeside portion of the west end stands separated from the shore stand by a small channel (considered crown land and belonging to MNRF) has been reduced significantly. The 1.3-acre shore stand will need a second application. Returning the reed bed to native aquatic plants is now occurring on the lakeside stand.

Bio Control: In 2019, following more than two decades of rigorous research and testing the Canadian Food Inspection Agency approved the use of two European moths (*Archana neurica* and *Lenisa gemnipuncta* natural predators of invasive phragmites), as a biocontrol for invasive phragmites. They currently have more than 30 release sites across southern Ontario and are building a network of new release locations across a wide geographic range. In March 2025 the University of Toronto will re-introduce the moths to invasive *Phragmites australis* at a specific site on Lake Bernard. Both moth species are specific to invasive *Phragmites australis*. They are specialist species that cannot complete their life cycle on other plants and have proven through controlled field releases to be safe for crops and other native plant species. For further information see: "**Controlling Canada's 'worst' invasive plant species using bio-control**" webinar by Claire Schon [https://www.youtube.com/watch?v=28f7ynvkWUo&ab\\_channel=WatershedsCanada](https://www.youtube.com/watch?v=28f7ynvkWUo&ab_channel=WatershedsCanada)

**Management Strategies** follow the Best Management Practice document and are stand- specific. Success depends on:

- the shore bottom composition,
- size of the stand, age (how high and how long established),
- depth of water (If the phragmites is growing in 0.6 metres of water, is cut at the shore bottom, and kept underwater for 6 weeks, a high proportion will drown. Murky water blocks the sunlight best from reaching the roots).

Factors considered:

- location of the phragmites (dry land, shore, or deep water),
- the nature of the shoreline (sand or soft soil for spading versus rocky substrate which makes it difficult to spade rhizomes below the ground)
- weather – drought, flooding, or changing lake water levels,
- climate heating (longer ice off periods, warm weather and longer phragmites growing seasons). It is a plant – we can tarp it, spade it, cut it, drown it, thoughtfully apply herbicide, and we can make it gone.

**How long will this take, how many stands are there, and can they be cut?**

Our goal for Almaguin continues to be: “Phrag Free by 2033”. Ongoing monitoring for regrowth and immediate management action for any regrowth will be needed. The number of small stands on the lakeshore is unknown. Many Property owners continue to remove it on their own. There are properties on the lake where owners do not remove phragmites from their property. All sites need to be managed.

**Our Municipal partners** assist and support this work and could declare invasive phragmites australis a noxious weed, leading to more owners removing it or asking for assistance

**Businesses:** There is now an arborist willing to remove phragmites for a fee.

**CN, MTO, Private and Municipal Property:** A coordinated watershed approach is needed to ensure the roads, CN tracks, private and municipal properties and especially wetlands are all managed according to best practices. Phragmites does not stop along lot lines and spreads easily from roads to private property and wetlands. We continue to map and report phragmites on roads and along train tracks.

**Residents:** Please convince property owners to:

- allow assistance with removal, and
- maintain removal each season and
- begin removing using best practices if they have not already done so.

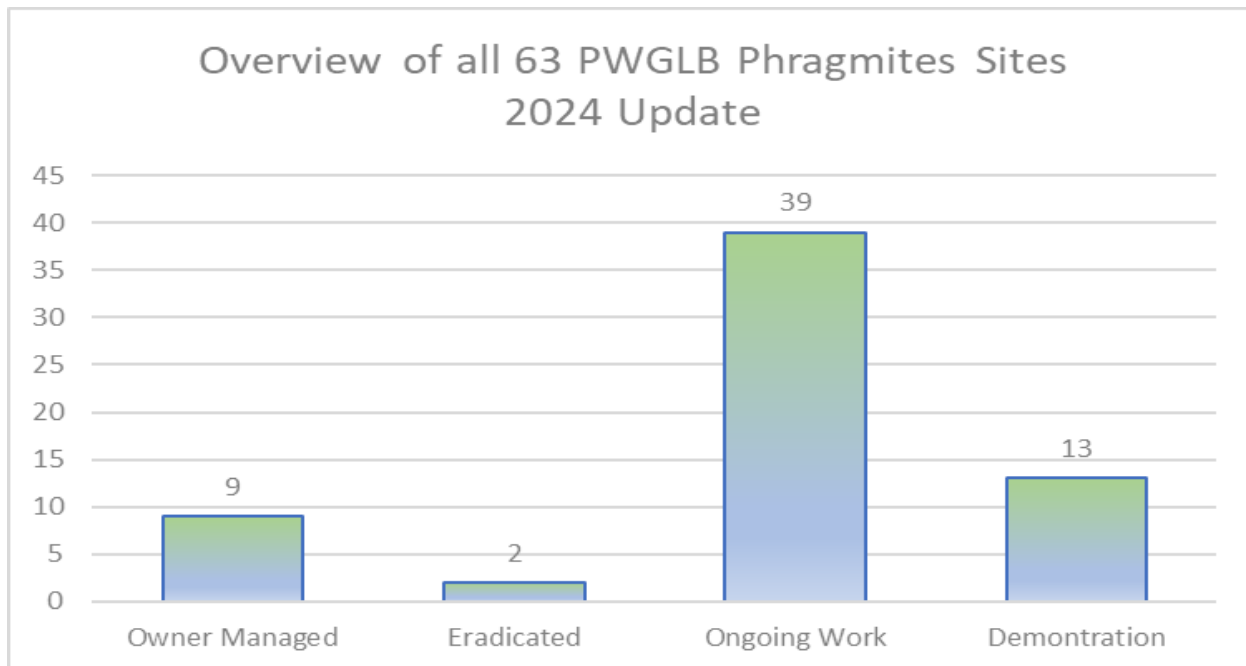
**Another Invasive Japanese knotweed:** A presentation by Dr. Janice Gilbert on a Japanese knotweed control plan for this area will be given to the municipalities in early 2025. See below drone shots of Japanese knotweed along a heavily infested creek entering Lake Bernard and the stands starting along the lake.



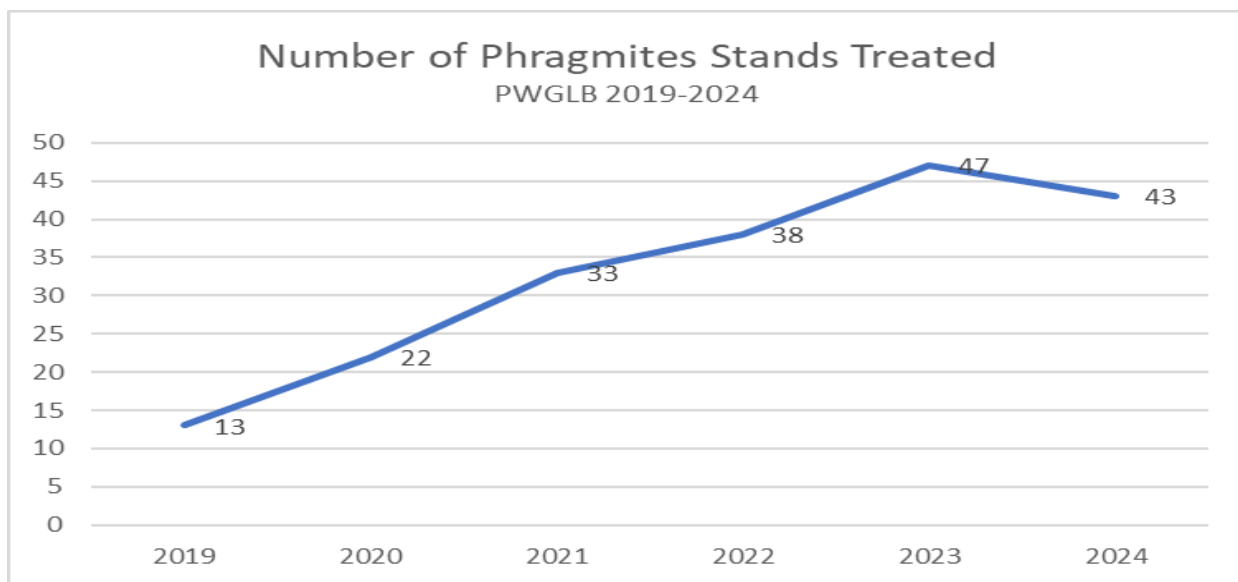
Please see as well the thorough report from Mathew Joiner our ISAP student about his time with our group this summer.

## Appendix A

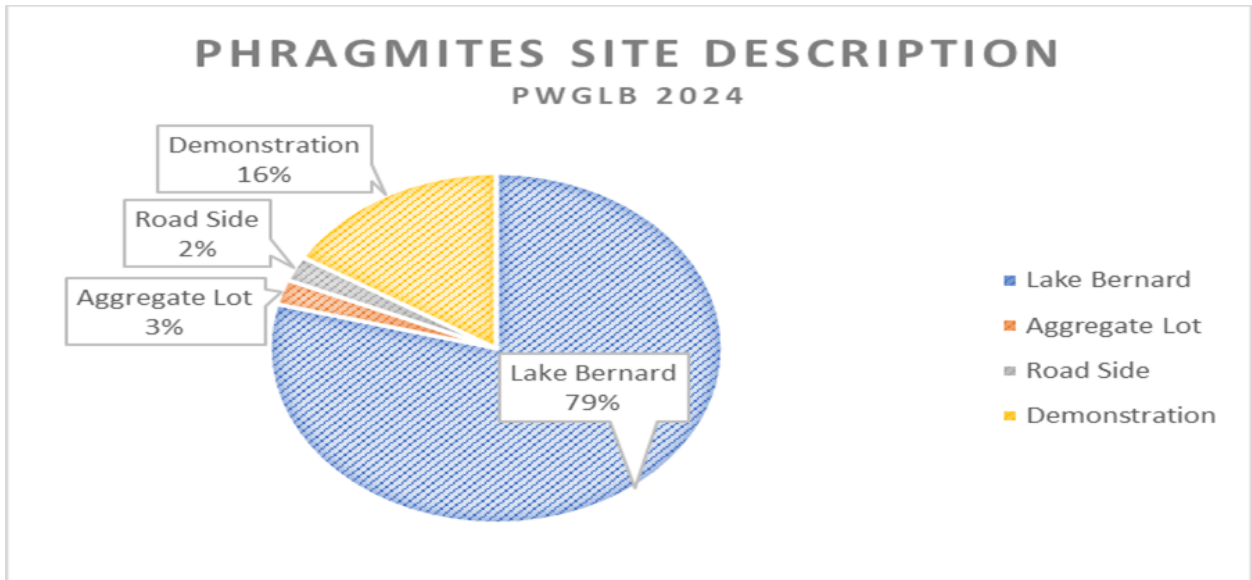
### Phragmites Working Group Lake Bernard (PWGLB) 2024 DATA



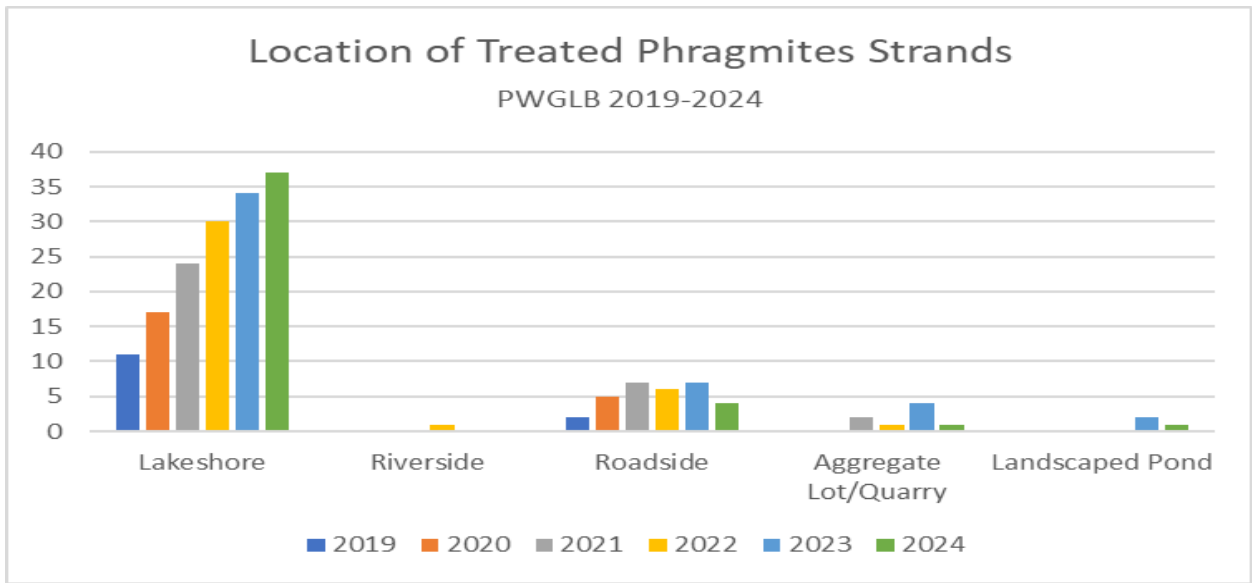
- Since 2018, PWGLB has been active on 63 sites with *Phragmites australis* infestations. This chart captures the 2024 status of each site. Of note, the 2 eradicated sites were located roadside and chemically treated once in 2023. The 13 demonstration sites reflect interest in learning about Phragmites in communities outside of the Townships of Joly and Strong or the Village of Sundridge.



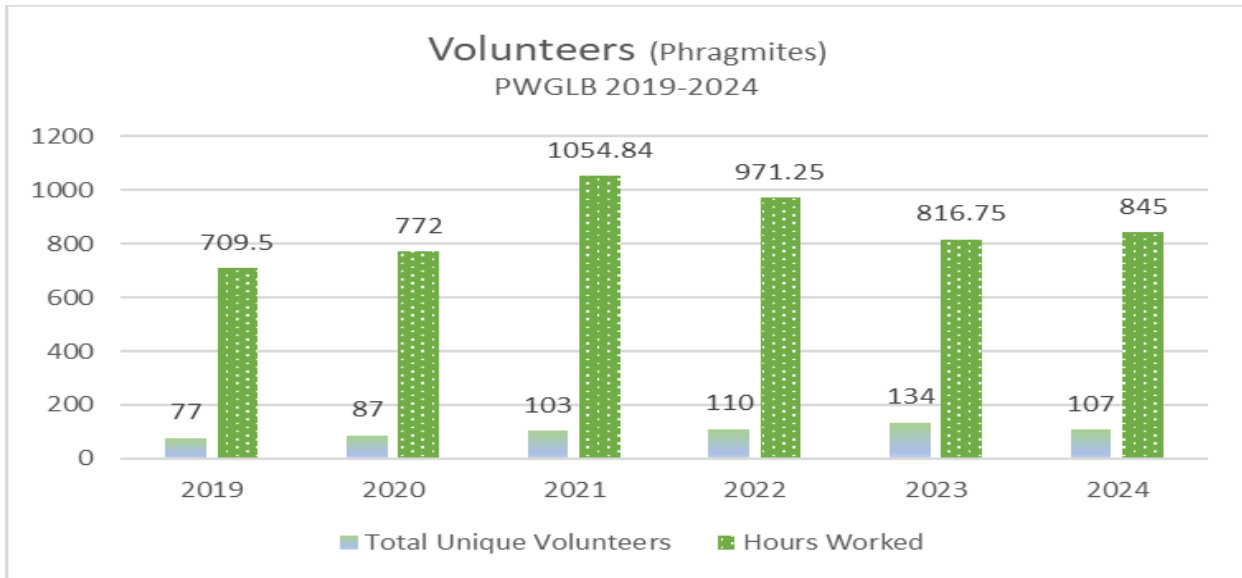
- The decrease in the number of stands treated in 2024 is a result of 4 roadside sites in the Townships of Joly and Strong not being cut this season because of shifting priorities as well as health challenges of an aging volunteer population.



- The majority of the work undertaken by PWGLB continues to be on Lake Bernard with demonstrations to other interested community groups also occupying time and resources.



- Phragmites is located in a range of environments. It is important to note that PWGLB has contributed to data mapping stands along municipal roadways, including the Highway 124 and 11 corridors, but not undertaken treatment in these locations.



- While the number of unique volunteers decreased in 2024, the total number of volunteer hours worked rose, indicating that fewer people are doing more work.

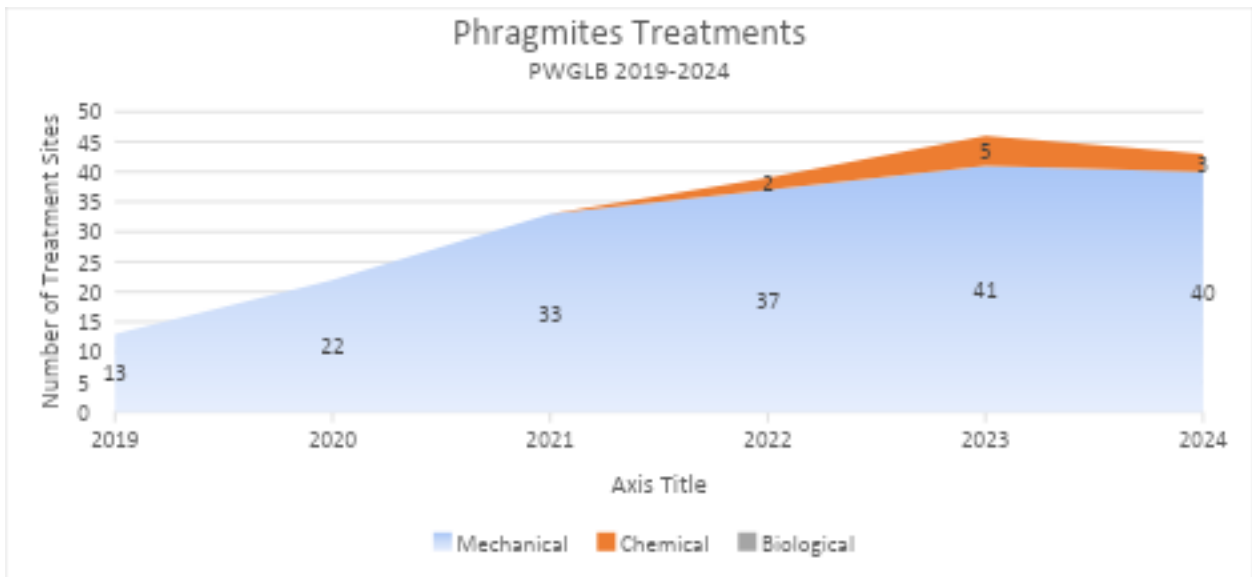


- The majority of volunteers are adults. Youth were comprised mostly of students associated with a demonstration site and involved with a school program. Two demonstration sites have requested presentations and hands-on removal events, using mechanical removal methods for two consecutive years.

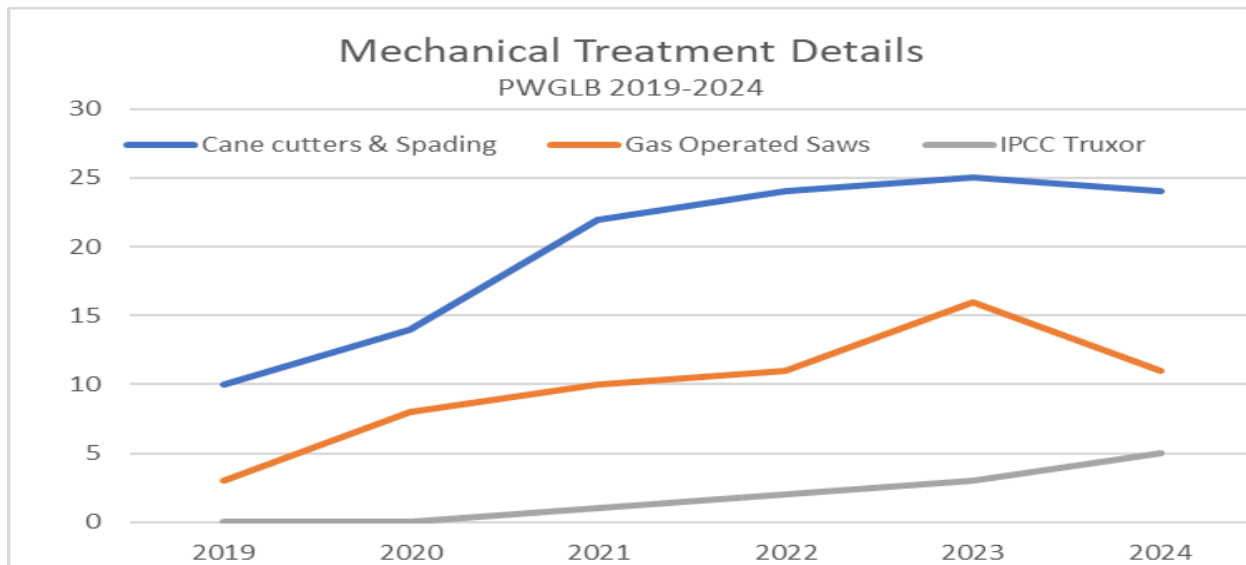




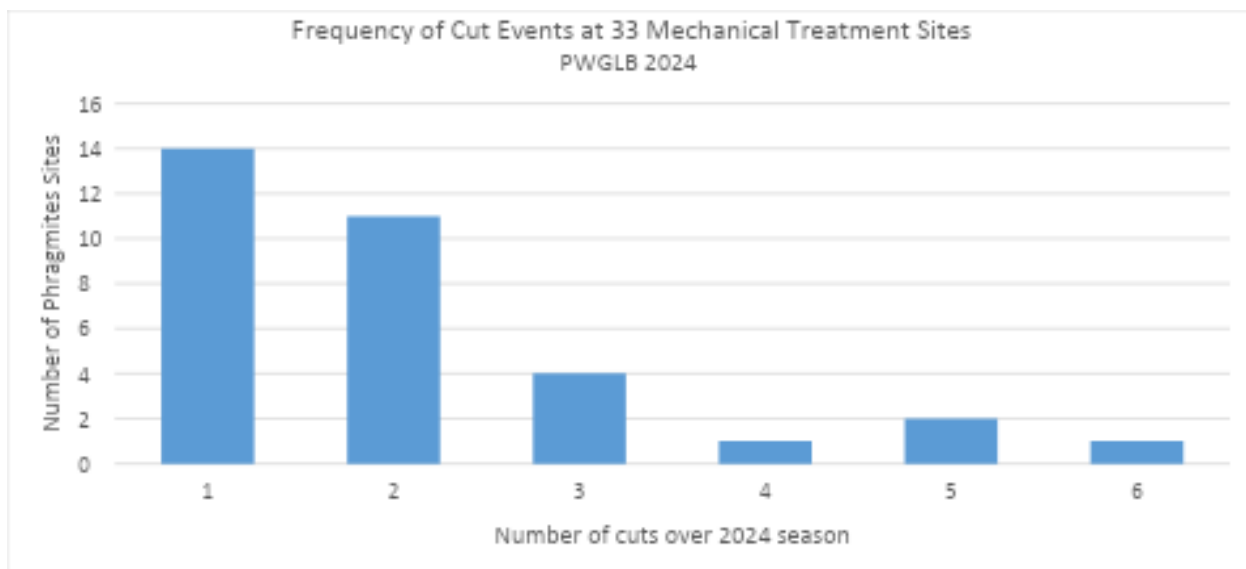
- The decrease in paid saw operator time reflects progress. After as many as 7 consecutive years of mechanical treatments, most stands are smaller and less dense. Saw operation is physically demanding, skilled work. Volunteers with the required skills and stamina are difficult to retain year over year.



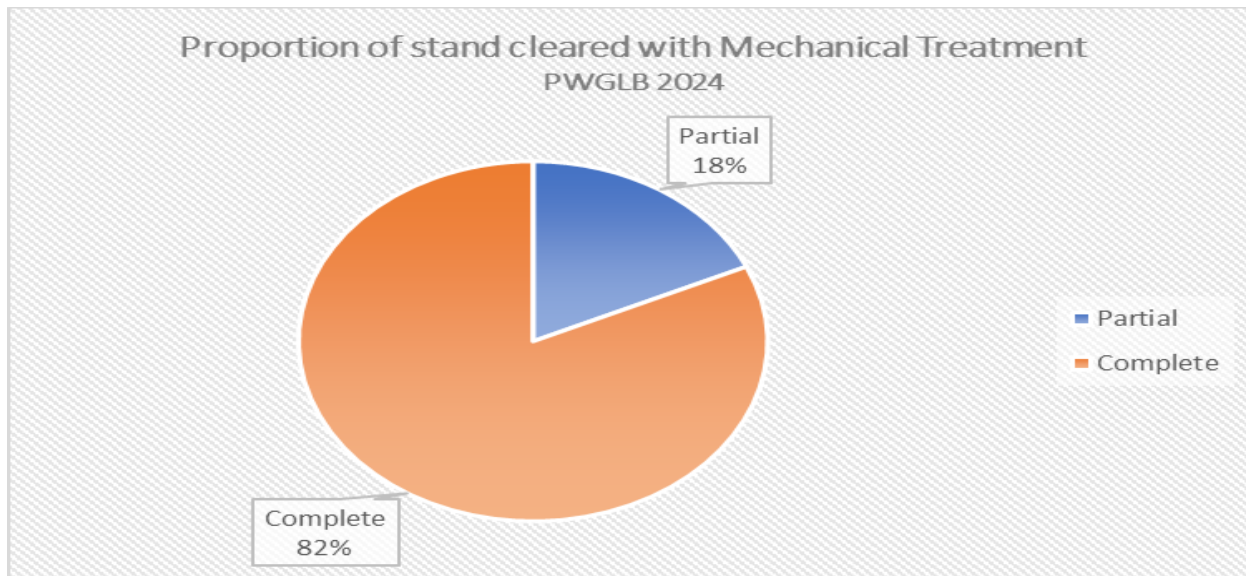
- The majority of sites continue to be treated using mechanical methods (i.e., cane cutters, spades, gas operated saws, Invasive Phragmites Control Centre truxor).



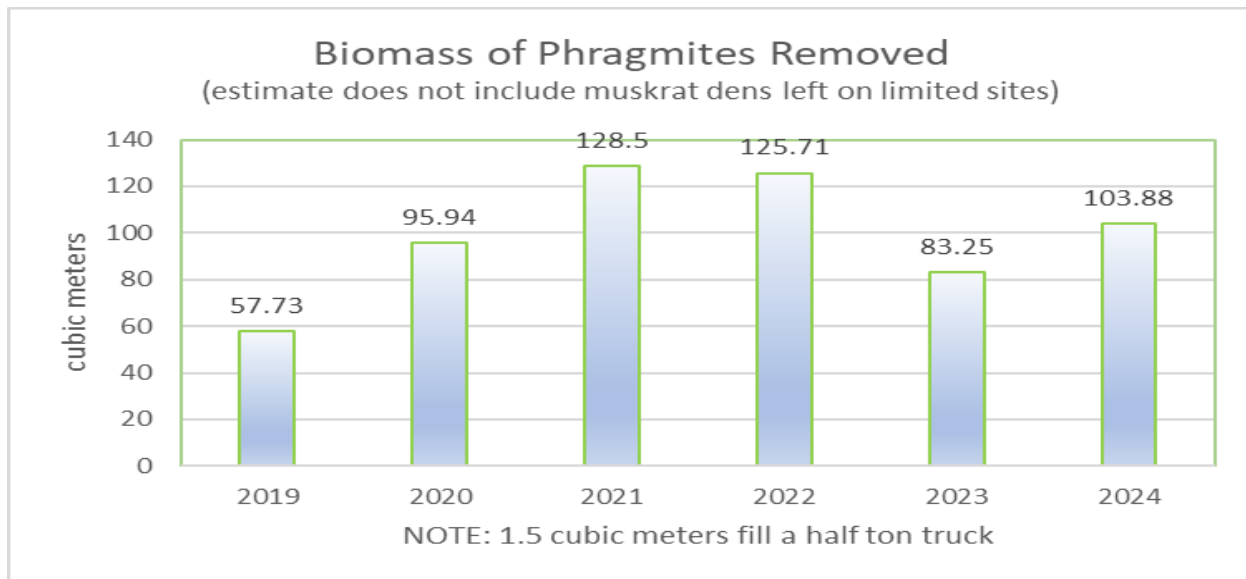
- The use of cane cutters and spades continued to be the most appropriate management approach in most of the sites treated. This year, the use of spades to disrupt the below ground rhizomes increased.



- Because the density and size of phragmites stands is decreasing, cutting the same site more than once in a season has become possible. While 14 sites were managed with one cutting event, another larger and more complex site was visited 6 times. Note that in-water cuts are not permitted until after July 15<sup>th</sup> to protect spawning beds.

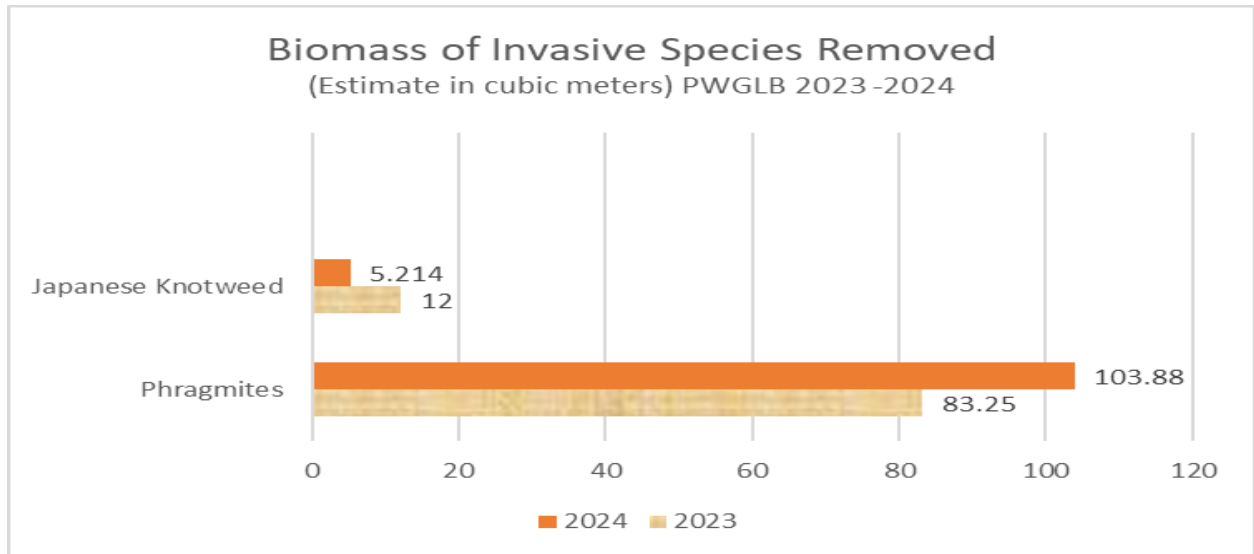


- In the seventh year of PWGLB efforts, it became possible to count whether any given stand was completely or only partially treated over the course of 1 to 6 visits as documented in the previous chart. This data reinforces that many stands are easier to manage and the opportunity to have more than one cutting event per site is important for continued progress. In previous years, the majority of sites were only partially cleared in any given year.

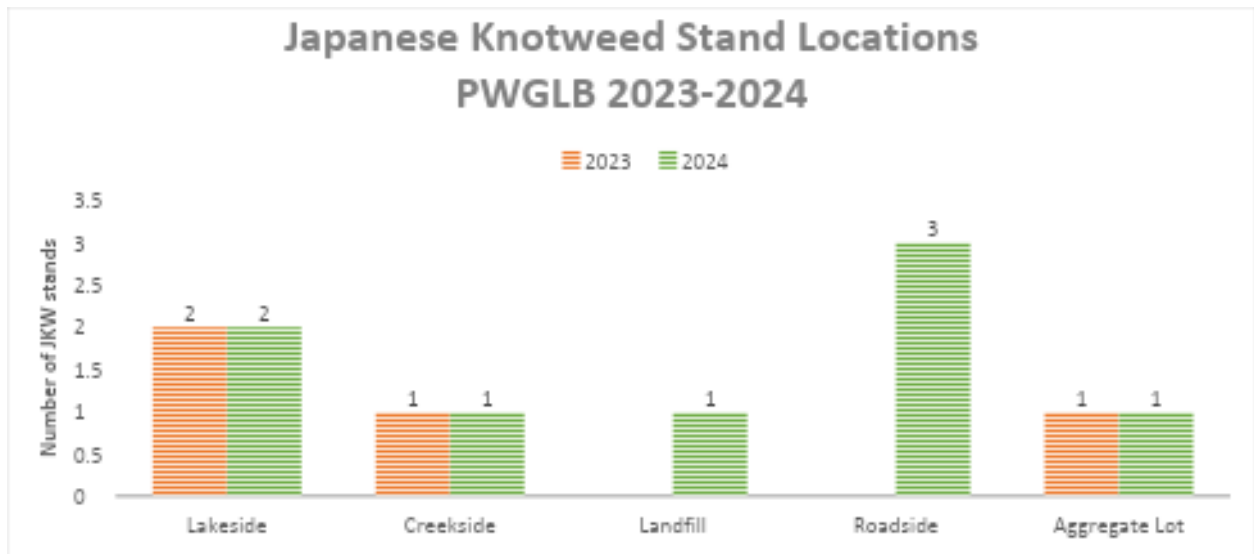


- Township of Strong and Village of Sundridge municipal staff provide invaluable assistance by moving bundled and bagged phragmites from cutting sites to the landfill, where they are typically burned as a preferred management method. On limited sites where prohibitive terrain does not lend itself to moving

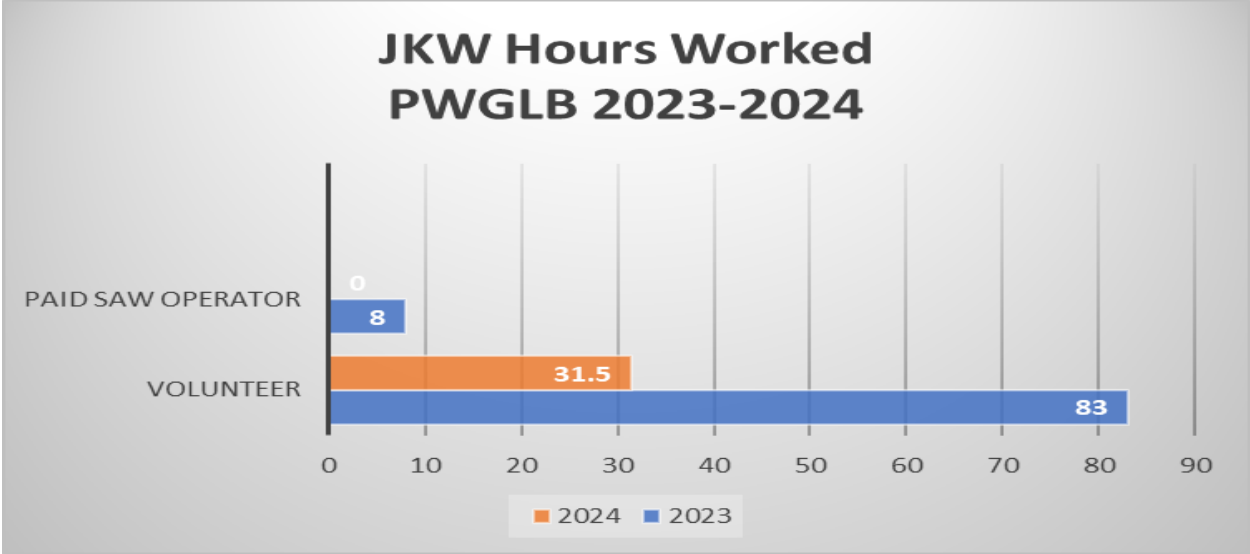
materials to a roadside for collection, the reed is piled into heaps called muskrat dens and will compost in situ.



- Some work has begun with the management of Japanese Knotweed, initially identified in the process of phragmites removal.



- Japanese Knotweed management is in its infancy. The focus of work in 2024 was on mapping, education, and contracting out the development of a control plan to be presented to the Tri-Council in January 2025.



- Fewer volunteer hours in 2024 reflects the success of tarping efforts in 2023 as well as contracted out herbicide application for the management of stands on public property.

