Summary of Invasive Species Activities in Township of Strong/Lake Bernard

Matt Joiner | Ontario Federation of Anglers & Hunters | May 21st-August 22nd, 2024

Summary of Activities

I worked with the Phragmites Working Group Lake Bernard from May-August completing a lot of valuable work. During my tenure I participated in 65 removal events, 15 education outreach events and 10 demo events. During removal events, we would use the best management practices for each site, using many tools such as STIHL Kombi saws, cane cutters, spades, ice sleds, rakes, leaf bags, twine and tarps to properly remove and dispose of the biomass. We would work at cutting or spading the Phragmites knocking it down and collecting it in ice sleds, tying it with twine into bundled sheaves or bagging it in the leaf bags. Sometimes we would have to pile “muskrat huts” of Phragmites on dryland, where the terrain to haul out the biomass was just too much. We would haul all the biomass we could onto tarps and clamshell it so it wouldn’t blow way. The Township of Strong and the Village of Sundridge would then collect it for us and take it to the landfill to be burnt. If we only had a few bags we would dispose of them at the landfill ourselves. Our largest cutting event was when we had the Invasive Phragmites Control Center bring their Truxor to remove Phragmites at 5 sites along Lake Bernard’s shoreline.

I also participated in education and demo events with the public, where we would go to schools, out front of businesses, boat launches and more to help educate citizens on invasive species. We taught how to ID them with specimens, how to manage them, what practices to follow to stop the spread (Clean, Drain, Dry), how to report them, apps that can help you ID or report and information and evidence of work that our group has completed. The demo events were where we showed them how to use all our equipment to remove invasive species especially Phragmites and Japanese Knotweed. Outside of the events I also helped by inputting the data after every event, set up and take down at events, building displays for events, writing up handouts for the Phragmites biocontrol plan, reviewing legislative letters, meeting with municipalities for support, taking on the OFAH Wild Pig Surveillance Program, putting sites on EDDMapS, teaching people how to use iNaturalist, and contacting nearby municipalities with information to help. I also made sure to move any native animals out of our removal sites to ensure they wouldn’t be injured or killed during removal process.

Please answer the following questions as they apply to your activities completed. If a question does not apply, please leave it blank.

1. How many volunteers helped you with your summer activities?

   Throughout the summer removal activities, we had a total of 101 volunteers helping with cutting events. With probably 6-8 consistent volunteers who showed up often to events.

2. How many hours total did these volunteer help?

   In total we had 737.25 volunteer hours throughout the season. The group continues events into September.

3. Were there any additional organizations involved in your summer activities? Please list the organizations.

   Yes, there were.

   Township of Strong
   Village of Sundridge
   Township of Joly
   Black's Small Motors & Engine Repair
   Invasive Species Control Center

Sustainability Canadore
Near North Environmental Education Center
Lake Bernard Property Owners Association
Magnetawan Watershed Land Trust
Scotty's Lake Tours
Wolverine Tree Service
Arborist Alliance
Silver Screen Printing
SignCraft
Phoenix Trusses
Kidd's Home Hardware
Sundridge Foodland

4. Were there any Indigenous communities or groups involved in your summer activities? Please list.

   Kikandaaswiwin Mookiisin Indigenous STEAM Program
   Russell Noganosh -Shirt Logo Designer

5. Please estimate the number of invasive species managed (e.g., number of plants, number of yard waste bags, meters sq., etc).

   Garlic Mustard
   8 Solarized Garbage Bags

   Invasive Thistle
   5 Leaf Bags

   Japanese Knotweed

   39.5 Solarized Garbage Bags
   3 Truck Loads
   5 sites applied dryland herbicide

   Giant Knotweed

1 site applied dryland herbicide

Phragmites
25 large Muskrat Huts piled on dryland
351.5 Leaf Bags
395 Bundled Sheaves
47 Truckloads Worth
5 sites applied dryland herbicide

Wild Pigs
2 Monitoring Kits Set up
0 Wild Pig Evidence at both sites

6. Please estimate the number of invasive species monitored.

   We monitored for invasive Phragmites, Japanese Knotweed, Giant Knotweed, Garlic Mustard, invasive Thistle and Wild Pigs. For a total of 6 invasive species monitored.

7. Were these species entered into EDDMapS?

   Of these species, Phragmites & Japanese Knotweed have been entered to EDDMapS. Giant Knotweed has been entered on iNaturalist.

8. How many events did you attend during your contract?

In total I attended 15 educational events, 10 demo events, and 66 individual removal events. For a total of 91 events during my contract.

9. How many attendees were at these events?

   It varied depending on events, but throughout the season we had 101 different volunteers come put to assist with cutting events. For educational events on average, we spoke with 12 people at each event but at the sunflower festival we spoke with around 50 people. Then the demo events varied whether it was with a class or township worker. In total we had 300+ people attend all our events throughout the season.

10. How many attendees were kids?

65 of the 300+ attendees were kids (mostly Grade 8 and younger) this season.

Training Received

I started with the OFAH onboarding workshop where I received 3 certificates including: Working Together: The Code and the AODA, Serve Ability: Transforming Ontario's Customer Service and Worker Health and Safety Awareness in 4 Steps. I also received training from Phragmites Working Group Lake Bernard on identification of invasive species in and around our area and the best management practices for each species, also where each technique is most effective. The group also trained me on the data entry for the Working Groups statistic tracking. I received the PAMF Monitoring Overview Training that taught us how to use the kits and measurement tools effectively; I then collaborated with someone who had already done the monitoring, and we went and did the measurements on Lake Bernard and submitted the data. I received a certificate for completing the Ontario Invasive Plant Council's Phragmites Management: Developing a Coordinated Response. I also received the ISAP Water Stewardship training from Jeff Berthelette on Saturday June 8th in Aspley, Ontario. I participated in 2024 HIT Squad Training presented by OFAH Invading Species Awareness Program. I completed the Ontario's Invasive Plant Councils Introduction to Invasive Woody Plants online module. I also took it upon myself to watch the EDDMapS 101 video to thoroughly know how to use EDDMapS.

PAMF Monitoring being completed:

Education & Outreach

Throughout my tenure here I participated in many outreach events, the first being our education & demo event with Evergreen Public School in Emsdale. When we met with 20 students and a teacher from the school's Eco-club, we did a small presentation with the students teaching them how to identify Phragmites and the best management practices for it. We then went to the roadside ditches at the school to do a live demo as they had invasive Phragmites on property. We showed the students how to safely use the tools and spent 1.5 hours removing and bagging Phragmites with the Eco-club, in total removing 10 leaf bags worth of biomass. Overall, a very informal and hands-on education event.

Our second event was with the Grade 7s & 8s (approximately 30 students) from Sundridge Public School, where we completed an hour presentation about the importance of not spreading or releasing invasive species, and the importance of Clean, Drain, Dry, how to identify varying invasives in our area, how to manage them, where to go to report them, how to use iNaturalist and where to go if they wanted to volunteer with our group.

I also did some outreach via email to townships in our area asking them to place some information on their websites about the Phragmites Working Group Lake Bernard and invasives in our area. These townships included Township of Armour, Municipality of Callander, Municipality of Magnetawan, and Township of Ryserson.

Completed a presentation and removal event with Canadore College's Kikandaaswiwin Mookiisin Indigenous STEAM Program. We did an hour presentation covering the identification of invasive Phragmites and Japanese Knotweed, best management practices, importance of Clean, Drain, Dry, not releasing invasives into the wild and iNaturalist and EDDMapS introduction. We then went and did a demo removal event on Canadore Campus with them, having the 12 from the presentation join us and assist in removing 1.5 half ton pickup loads worth of biomass.

A few students from the previous event were part of Sustainability Canadore, so we also collaborated with them and some North Bay lakeshore property owners to do a demo removal event with them. We had 4 students from the group and 3 property owners join us in learning the identification of Phragmites and the best management practices for dryland and in-water. We then tackled the Phragmites stand at a public access off Premier Road, North Bay removing 13 leaf bags worth of biomass.

Another event we completed was the Sundridge Lake Bernard Boat Launch education event. We spent a Friday afternoon at the boat launch, set up with some displays and handouts on Clean, Drain, Dry, and not spreading invasive species. We talked with boaters about the importance of following the Clean, Drain, Dry, regulations, even showing boaters how to practice it as well as not dumping fishing baits overboard. We also had some displays showing the Phragmites in the lake and how much it effects the lake health.

The Magnetawan Hardware was another spot where we set up an educational display, speaking with people again about the importance of watching and monitoring for invasive species, showing species that are in the area to watch for, where to go to report invasive species, and how to better identify invasive species. We also had our Clean, Drain, Dry, handouts for any boaters or fisherman that needed more information.

We set up a display at the Sundridge Foodland, where we covered all bases. We had our displays and handouts for identifying invasive, the work our group does on Lake Bernard, iNaturalist and EDDMapS briefing, where to go to report invasives, how to stop the spread and manage invasives, Clean, Drain, Dry and don't release your pets and the Wild Pig Surveillance Program. We covered all the bases to reach out to as many people as possible.

We also did another boat launch education event at the Magnetawan Locks Boat Launch that leads into Ahmic Lake. Once again, we stressed the importance of following Clean, Drain, Dry guidelines, not releasing pets or dumping bait. We also had our Wild Pig Surveillance display as it was in Magnetawan about 4 years ago that they were spotting a small herd of Wild Pigs, so we wanted to see if the locals had any news we didn't know

`about, however there was nothing about them recently. As always, we had our Working Groups information and work we have completed, and how to identify invasives in our area and how to report it.

The Sundridge Sunflower Festival was our largest education event of the season. As the Main Street area is closed to traffic and we had our booth set up with over one hundred vendors and well over a thousand people coming through to see the festival. We spoke with approximately 50+ people and had all our displays set up, live specimens of Japanese Knotweed and invasive Phragmites and lots of handouts including the Grow Me Instead for gardeners. We handed out lots of information pamphlets, received donations and talked with citizens about all the invasives in our area, the risk of other invasives, and how they can help mange the spread, use EDDMapS or iNaturalist, where to report, and to follow Clean, Drain, Dry and Don't Release your Pets/Dump Bait. Any questions people had we answered the best we could, sending people off with a lot more knowledge on invasive species awareness and management.

We also were approached by both the Township of Ryerson and the Township of Whitestone, asking if we could do a small demo with them to help them better manage Phragmites sand other invasive species within their Townships. We would meet with them, show them how to identify invasive Phragmites compared to natives, the best management practices and how to use the tools and where to go to find more information about invasive species management. Both Townships were eager to start managing sites to stop the spread, and to help spread awareness.

We completed 2 media interviews, the first was by Marnie Woodrow of the Muskoka Lakeside Magazine, talking about invasive Phragmites and the work our group does. The second was an interview with Tom Sasvari from the Manitoulin Expositor, where he was asking us about the Phragmites biocontrol that has a site in North Bay.

We were also included in a Canadore College "X" post when doing the presentation and demo on campus and again with Canadore College's Sustainability crew in a Great Lakes Phragmites Collaborative social media post when we were doing the outreach and demo event.

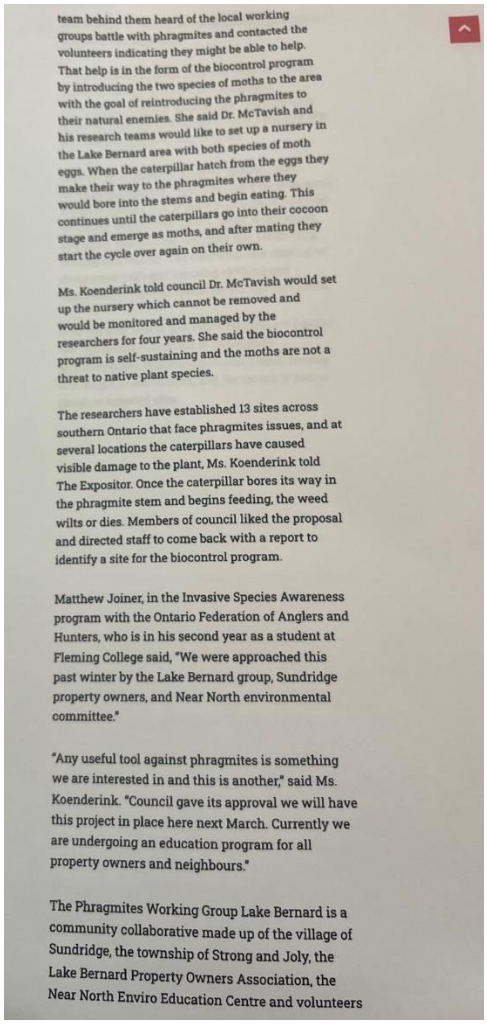
In total, I attended 15 educational outreach events, handing out over 200+ educational resources, making contacts with 250+ people, delivering 5 presentations to classes or groups and was in 2 media interviews and 2 social media post.


Phragmites Working Group
Lake Bernard
Our Mission To Map, Identify & Manage Invasive Species
Invading Species Reporting
1-800-563-7711
Giant Hogweed
Garlic Mustard
Purple Loosestrife
Round Goby
Spiny Flea
Japanese Knotweed
Rusty Crayfish
Phragmites
For More Information Please Visit
Grow Me Instead PDF
PHRAG FIGHTER
CLEAN + DRAIN + DRY


CAUTION
PHRAGS REMOVAL IN PROGRESS
SLOW DOWN


PHRAGMITES BIOCONTROL

Images of 2 News Articles Below: (Left is Manitoulin Expositor, Right is Muskoka Lakeside Magazine)



team behind them heard of the local working groups battle with phragmites and contacted the volunteers indicating they might be able to help. That help is in the form of the biocontrol program by introducing the two species of moths to the area with the goal of reintroducing the phragmites to their natural enemies. She said Dr. McTavish and his research teams would like to set up a nursery in the Lake Bernard area with both species of moth eggs. When the caterpillar hatch from the eggs they make their way to the phragmites where they would bore into the stems and begin eating. This continues until the caterpillars go into their cocoon stage and emerge as moths, and after mating they start the cycle over again on their own.

Ms. Koenderink told council Dr. McTavish would set up the nursery which cannot be removed and would be monitored and managed by the researchers for four years. She said the biocontrol program is self-sustaining and the moths are not a threat to native plant species.

The researchers have established 13 sites across southern Ontario that face phragmites issues, and at several locations the caterpillars have caused visible damage to the plant, Ms. Koenderink told The Expositor. Once the caterpillar bores its way in the phragmite stem and begins feeding, the weed wilts or dies. Members of council liked the proposal and directed staff to come back with a report to identify a site for the biocontrol program.

Matthew Joiner, in the Invasive Species Awareness program with the Ontario Federation of Anglers and Hunters, who is in his second year as a student at Fleming College said, "We were approached this past winter by the Lake Bernard group, Sundridge property owners, and Near North environmental committee."

"Any useful tool against phragmites is something we are interested in and this is another," said Ms. Koenderink. "Council gave its approval we will have this project in place here next March. Currently we are undergoing an education program for all property owners and neighbours."

The Phragmites Working Group Lake Bernard is a community collaborative made up of the village of Sundridge, the township of Strong and Joly, the Lake Bernard Property Owners Association, the Near North Enviro Education Centre and volunteers

SPECIAL FEATURE

THE PHRAGMITES PROBLEM

RELEASE SITE
Stems that have been innoculated with moth larvae are placed in carefully selected wetlands. Lake Bernard, just north of Muskoka, is on its way to becoming a moth nursery site.

And, he says, there is little risk of the moths becoming an invasive pest themselves. "Once they become moths, they are at the end of their life cycle. And after extensive trials, we know we're not causing new problems with this solution, and we're seeing quite a lot of success with this method. Once the moths continue to reproduce, the solution becomes a naturally occurring one."

Locally, the Phragmites Working Group of Lake Bernard, paired with The Near North Enviro-Education Centre has been fighting phragmites using mechanical cutting methods. An army of volunteers works tirelessly to cut the plants down. Volunteers receive a long sleeve Phrag Fighters shirt, emblazoned with a graphic by Indigenous artist Russel Noganosh.

The shirts protect the volunteers' arms from the sharp leaves and ensure they can be seen clearly by others cutting in the same stand. But it's slow work, and with strict regulations governing herbicide use near waterways and wetlands, the group is eager to pursue a natural solution to a massive problem.

Coordinator of the Phrag Fighters Group Marilee Koenderink explains, "We were approached by Dr. McTavish to be a nursery location for the moth program and we're getting very good response at the municipal levels of government. We hope to be an official nursery for the moths by next year."

Marilee is quick to point out that they are one of many, many groups tackling this ecological nightmare all over Ontario.

Local residents can get involved by downloading citizen science apps like iNaturalist, which help property owners to photograph and quickly identify potential invasive plants and report them to groups in their region.

Gardeners can also help prevent the spread of invasive plants by not dumping garden refuse in forests or ditches. It is one of the main ways that invasive species are introduced where they do not belong.

Just as we can unwittingly be part of the problem, we can also become part of the solution. For more information on phragmites and ways to help eradicate it in the area, visit https://www.nneec.ca/phragmites

HUNGRY CATERPILLAR
The caterpillars of two different moths feed almost exclusively on invasive phragmites.

LAKESIDE MAGAZINE | 2024

Monitoring & Early Detection

We monitored 43 sites around Lake Bernard. We monitored Lynch Lake just north of Sundridge for Phragmites. We monitored 2 sites on Lake Nipissing and 1 more in North Bay at Canadore College. We drove the main roads from Sundridge to Trout Creek and back monitoring 23 sites along HWY 124 & HWY 11. We monitored 1 site at Wahwashkesh Lake in Whitestone. We monitored 1 site in Emsdale at Evergreen Public School. We monitored 4 sites along Muskoka Road on the other side of HWY 11 from Sundridge. We monitored 1 site at Old Man's Lake in Magnetawan, and 1 site in Ahmic Lake as well. In total, we monitored 77 sites within the Lake Bernard, Almaguin & Nipissing area.

For EDDMapS, the 23 sites between Sundridge and Trout Creek and the 4 sites from Muskoka Road were posted as a bulk upload on EDDMapS. I also posted individual

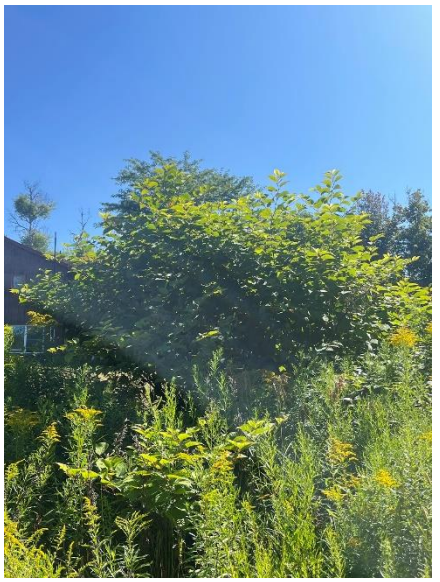
sites on EDDMapS as we discovered them, resulting in me posting 6 new Japanese Knotweed sites and 3 new Phragmites sites. If the site was already posted by someone else, I didn't post it again. I also posted a Giant Knotweed site on iNaturalist. In total, we uploaded 30 new Phragmites sites and 6 new Japanese Knotweed sites to EDDMapS.

EDDMapS Images:









iNaturalist Giant Knotweed:

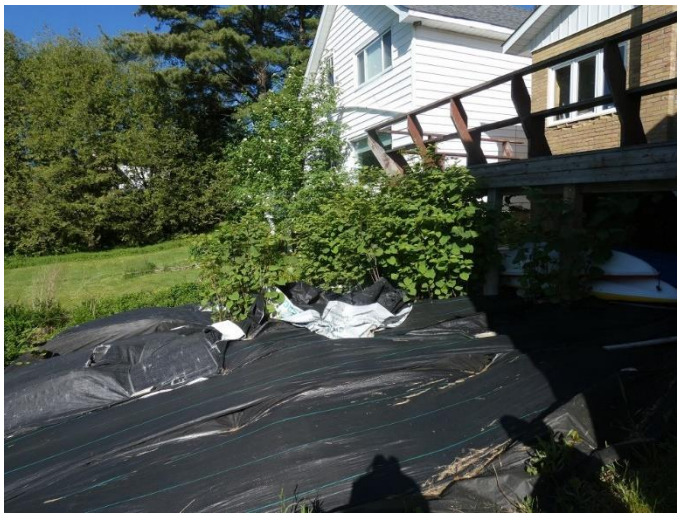
Management & Response

During my time here I participated in 66 removal events at 43 different sites as some sites we returned multiple times to manage it again. We managed Garlic Mustard, Japanese Knotweed and Phragmites but would also remove invasive thistle if found on these sites as well. We used multiple methods to remove invasives including cutting to drown, spading on 45-degree angle, STIHL Kombi saw operators, trimming at base with clippers, tarping for seasons and supporting some herbicide use. Some sites had both Phragmites and Japanese Knotweed on them, so we removed both species during the event. Due to it being volunteer based the number of people involved would vary, our most amount involved in one event was 22 and our lowest was 2 (just Marilee and I). However, throughout the season we had 101 volunteers in total come and help.

For Garlic Mustard we had 1 site that we managed 3 separate times just Marilee and me. In total, we removed 8 solarized garbage bags worth of biomass of Garlic Mustard. We solarized the bags for a week then took them to the landfill burn pile ourselves.

For Invasive Thistles, we removed them on sites we were doing already removal events at for Phragmites or Japanese Knotweed. The thistles were mixed in with some sites. Throughout the season we removed 5 leaf bags worth of biomass, that were taken to the landfill by us to be burnt.

For Japanese Knotweed, we had 4 sites that we managed throughout the season, returning multiple times to remove the new growth. We had a total of 4 volunteers for the Japanese Knotweed sites, removing 39.5 solarized garbage bags worth of biomass, that was solarized and disposed of at the landfill burn pile. This results in 3 truck loads of



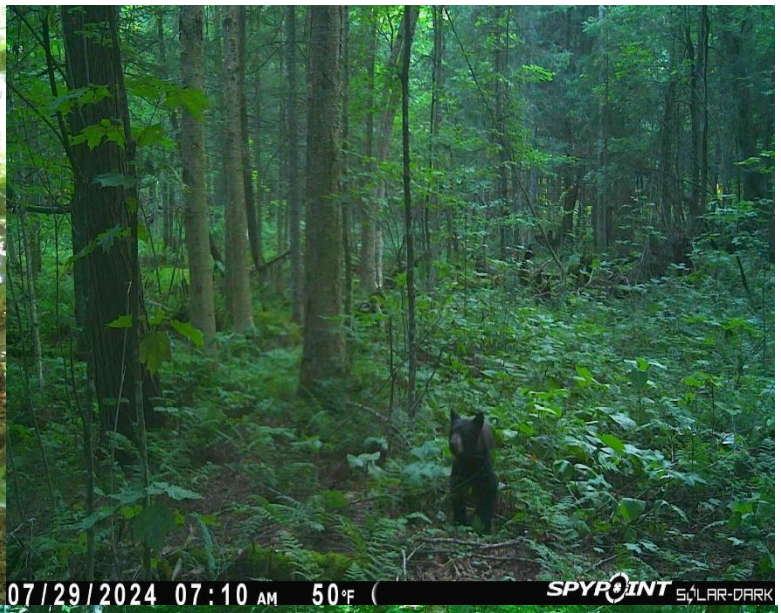
Japanese Knotweed being taken to the landfill by the Township of Strong or Village of Sundridge depending on location of site.

For Invasive Phragmites, we managed 40 sites returning to some multiple times to remove new growth. Throughout the entire season, all the 101 volunteers came to at least 1 Phragmites removal event. All these volunteers worked effortlessly to remove 351.5 leaf bags and 395 bundled sheaves worth of biomass. Resulting in 45 truck loads worth being brought to the landfill burn pile by the Township of Strong. With Phragmites, some of the sites were super rough and steep terrain with a long distance

to the roadside, so instead of killing our volunteers by getting them to haul it through all that, we would pile “muskrat huts with the Phragmites on dryland. In total, we piled 30 muskrat huts on varying sites dryland.

For Wild Pigs, we received Wild Pig Surveillance Kits from OFAH to monitor Wild Pig activity in the Magnetawan area. We spoke with Magnetawan Watershed Land Trust and got permission to set up the trail cameras on one of their protected reserves, which was awesome of them to allow us to do so. We set up 2 cameras to monitor for 6 weeks, with no bait to bring stuff in so we only captured animals that were passing by. In total, we captured around 100 photos combined on both cameras, however a lot of them were using finishing setting it up/taking it down or just wind creating movement. We were able to capture some good photos of native White-tailed Deer and Black Bears, in which I will include our best photos captured below.

Images Below:



For herbicide assistance, we hired the experts from the Invasive Phragmites Control Center while they were here with the Truxor. They had a separate crew go along to locations where we had gotten permission to apply herbicide. It was all in the surrounding Lake Bernard area, applying herbicide to 5 untreated Phragmites sites, as well as touching up any new growth in municipal ditches from last season's application. They also applied herbicide to 5 untreated Japanese Knotweed sites and 1 Giant Knotweed site at a snowplow turnaround.

Conclusion

In conclusion, throughout my tenure as an Invasive Species Summer Technician through Ontario Federation of Anglers & Hunters I gained a lot of valuable experience and knowledge while contributing to helping remove and manage invasive species to create native, healthy habitats. As well as helping the communities in our area better understand the negative impacts and how to manage, remove or report to stop the spread invasive species. I was able to

participate in 66 removal events, 15+ educational events and 10+ demo events throughout the season, resulting in over 90 events attended. Which is essentially 1 event a day for my entire contract. While also contributing to the data entry and statistics tracking for the Phragmites Working Group Lake Bernard's 2024 season stats. I also made-up lots of displays and educational material that we used while educating the community. A suggestion I would have for improving efforts to address invasive species in our community is allocating for multiple Invasive Species Summer Technicians, as the Working Group is 100% volunteer based. Since it is only volunteer based a lot of the volunteers are either young children or retired and 60+ years old, meaning they can't do a lot of the heavier and harder work involved in manual removals. Therefore, the lone summer student has a lot of the heavy and hard work placed on their shoulders on top of all the other work required. Not to mention most events averaged only 3-6 volunteers coming out. Both these factors make these removal events very physically demanding on the student, and in some weeks, we tackled 5-6 removal events in just 5 days. Having even 1 extra summer student would be very valuable to the community as it would allow for more boots on groundwork to be completed.

Images of native species being relocated away from Phragmites cutting areas: