



# Invasive Species Report 2021

## Consolidation of Severn Sound Watershed Municipal Reports

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The 2021 Invasive Species Report summarizes the findings & accomplishments of the SSEA's Invasive Species Program in 2021. A report was individually prepared and delivered to each SSEA Municipality. For enhanced web-based viewing purposes, the information has been consolidated into one document.

64

Invasive species identified in Severn Sound Watershed

15

Priority invasive species in Severn Sound Watershed

Close-up of *Spongy moth*\* (*Ldd*) eggs





# Invasive Species Report 2021

Township of Georgian Bay



*Spongy moth\* (Ldd) eggs*

Severn Sound watershed municipalities are leading the way on cross-municipal invasive species education and management. The Severn Sound Environmental Association (SSEA) works with the Township of Georgian Bay, seven other municipalities and local agencies to coordinate the monitoring and management of invasive species on a watershed scale. With support from the Township of Georgian Bay, monitoring of invasive species has been conducted on municipal properties by SSEA staff and supplemented by additional observations throughout the Township from community members.

In 2021, **13** invasive species of plants and invertebrates were identified within the Township of Georgian Bay, with **7** further classified as Priority invaders in **Table 1**. A total of **34** invasive species have been documented in Georgian Bay to date (**Table 2**). These species pose a threat to the ecosystems, economy and public health of community members and should be a focus for coordinated management activities and educational opportunities. Priority rankings can change as a result of new species introductions, public interest and yearly invasive species monitoring results.

13

Invasive species identified in Georgian Bay

7

Priority invasive species

*\*Spongy moth (formerly referred to as European Gypsy Moth) has been adopted as the new name for Ldd*



Table

01

Priority Invasive Species Detected Within the Township of Georgian Bay



Species Group	Species Name
Aquatic Plants & Algae	Eurasian water-milfoil Starry stonewort
Terrestrial Plants	Glossy buckthorn Japanese knotweed
Wetland Plants	Phragmites
Invertebrates	Spongy moth (Ldd) Mystery Snails

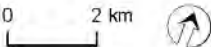


*SSEA staff completing egg mass survey plots for spongy moth*

# Township of Georgian Bay Invasive Species Sightings Map

## Legend

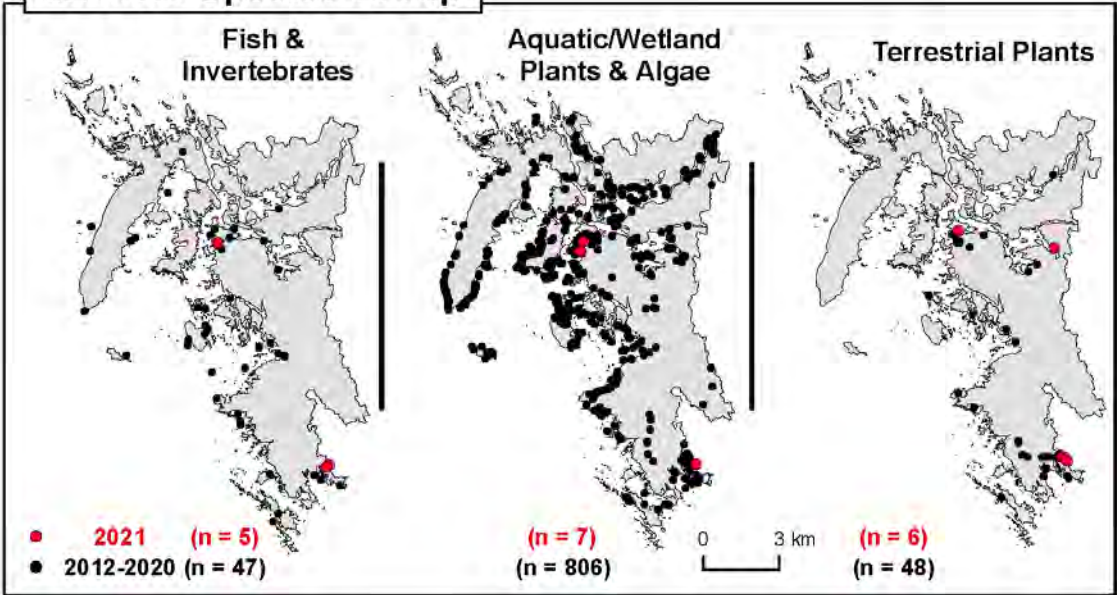
- Invasive Species
- 2021 Sighting
- 2018 to 2020 Sighting
- Roads
- Lake
- Streams



Produced by the Severn Sound Environmental Association with data supplied in part from the Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry (© Queen's Printer 2022) and under license with members of the Ontario Geospatial Data Exchange, 2022. While every effort has been made to accurately depict the base data, errors may exist. Any party relying on this information does so at their own risk. Note: Mapping is limited to the Georgian Bay Township of the Severn Sound Environmental Association watershed jurisdiction.



## Invasive Species Group





## Vulnerable Areas & Summary

Municipalities are vulnerable to the economic and social impacts of priority invasive species such as those listed in **Table 1**. For the Township of Georgian Bay, high traffic areas including public boat launches, public parks and trail systems are examples of places that are at risk for invasive species introduction and establishment.

Four areas were surveyed by SSEA for invasive species in 2021 including Honey Harbour Landing, select sections of Honey Harbour road allowance, Paragon Marina, and Port Severn Park. These locations are susceptible to the introduction and movement of both aquatic and terrestrial invasive species.

In fall of 2021, SSEA surveyed select forested locations across the Severn Sound area for the invasive forest pest, spongy moth. The surveys help to forecast potential defoliation for the upcoming season (2022). The survey results were made available to the municipality in the 2021 Ldd Egg Mass Survey Results and Defoliation Forecast for 2022 report.



*Georgian Bay Honey Bee Festival*



*Eurasian water-milfoil from aquatic plant sample*



*Spongy moth survey plot at Barron's Lake*

## Recommendations

The SSEA proposes to lead the following priority actions with the Township of Georgian Bay in 2022, with accommodations for COVID-19 restrictions as necessary:

- Continue to monitor the spongy moth outbreak across the Severn Sound watershed and use data to help with future defoliation forecasting
- Support and coordinate community invasive species management events
- Continue monitoring for the invasive macroalgae starry stonewort along the Georgian Bay coastline
- Assist with communication about noxious invasive species (e.g., giant hogweed, Japanese knotweed)
- Explore feasibility of installing boot brush stations and educational signage as a pilot project in a high traffic trail area for prevention of invasive plants
- Promote engagement in Citizen Science initiatives to residents to increase invasive species awareness and reporting
- Provide invasive species workshops/educational opportunities for Township of Georgian Bay staff and residents

# Invasive Species Report 2021

Town of Midland



*Spongy moth\* (Ldd) eggs*

*\*Spongy moth (formerly referred to as European Gypsy Moth) has been adopted as the new name for Ldd*

Severn Sound watershed municipalities are leading the way on cross-municipal invasive species education and management. The Severn Sound Environmental Association (SSEA) works with the Town of Midland, seven other municipalities and local agencies to coordinate the monitoring and management of invasive species on a watershed scale. With support from the Town of Midland, monitoring of invasive species has been conducted on municipal properties by SSEA staff and supplemented by additional observations throughout the Town from community members.

In 2021, **33** invasive species of plants and invertebrates were identified within the Town of Midland, with **8** further classified as priority invaders in **Table 1**. A total of **57** invasive species have been documented in Midland to date (**Table 2**). These species pose a threat to the ecosystems, economy and public health of community members and should be a focus for coordinated management activities and educational opportunities. Priority rankings can change as a result of new species introductions, public interest and yearly invasive species monitoring results.

33

Invasive species identified in Midland

8

Priority invasive species



Table

01

Priority Invasive Species Detected Within the  
Town of Midland



Species Group	Species Name
Aquatic Plants & Algae	Eurasian water-milfoil Starry stonewort
Terrestrial Plants	Giant hogweed Glossy buckthorn Japanese knotweed
Wetland Plants	Phragmites
Invertebrates	Chinese mystery snail Spongy moth (Ldd)

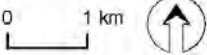


*Invasive Species Technician installing zebra/quagga mussel artificial substrates in Little Lake*

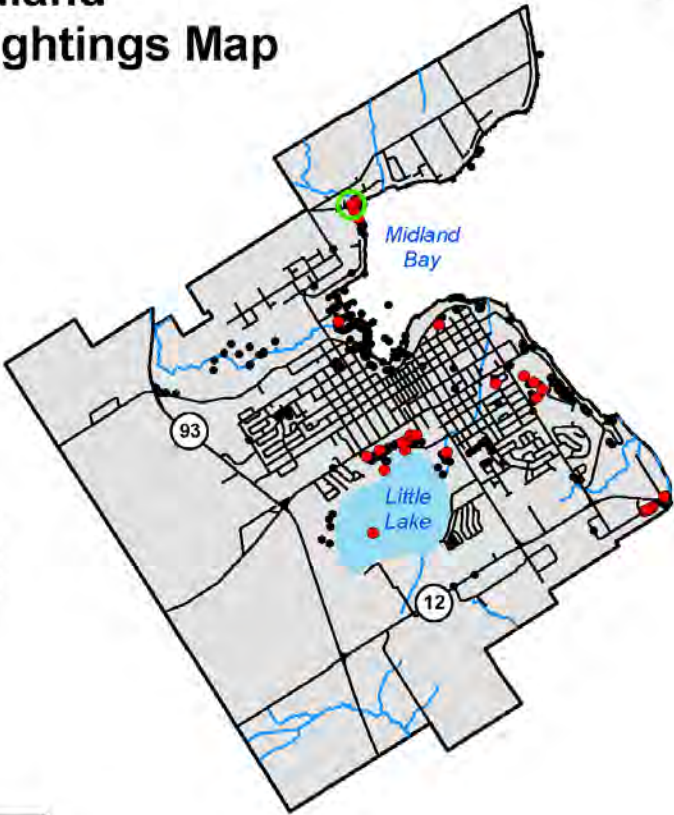
# Town of Midland Invasive Species Sightings Map

## Legend

- Invasive Species
- 2021 Sighting
  - 2006 to 2020 Sighting
  - 2021 Management Site
- Roads
- Lake
- Streams



Produced by the Severn Sound Environmental Association with data supplied in part from the County of Simcoe, the Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry (©Queen's Printer 2022) and under license with members of the Ontario Geospatial Data Exchange, 2022. While every effort has been made to accurately depict the base data, errors may exist. Any party relying on this information does so at their own risk.



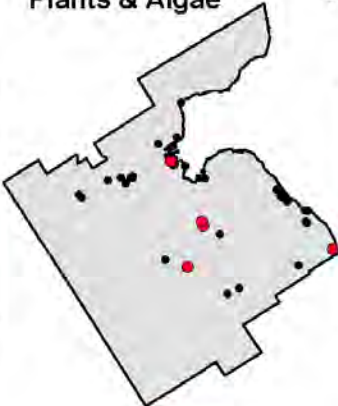
## Invasive Species Group

### Fish & Invertebrates



● 2021 (n = 5)  
● 2006-2020 (n = 34)

### Aquatic/Wetland Plants & Algae



● (n = 7)  
● (n = 54)

### Terrestrial Plants



● (n = 70)  
● (n = 370)





## Vulnerable Areas & Summary

Municipalities are vulnerable to the economic and social impacts of priority invasive species such as those listed in **Table 1**. For the Town of Midland, high traffic areas including public boat launches, public parks and trail systems are examples of places that are at risk for invasive species introduction and establishment. In 2021, with the support of Midland staff, SSEA completed surveillance for zebra/quagga mussels in Little Lake through installing artificial substrates (adult mussels will attach), visual surveys, and collecting samples. The results of the investigation determined that there were no adult mussels present in Little Lake and in addition, no veligers (invasive mussel larvae) were found in SSEA's zooplankton samples for Little Lake in 2021. These results indicate that there has yet to be establishment of an invasive mussel population, however, incidentally two other species were first detected in Little Lake, starry stonewort and Chinese mystery snails.

Midland staff facilitated glossy buckthorn removal at Gawley Park (a Bee City designated site) along with tilling and hydroseeding the site. SSEA staff provided technical support and labour to assist in the site preparation. In fall of 2021, SSEA surveyed select forested locations across the Severn Sound area for the invasive forest pest, spongy moth. The surveys help to forecast potential defoliation for the upcoming season (2022). The survey results were made available to the municipality in the 2021 Ldd Egg Mass Survey Results and Defoliation Forecast for 2022 report.



*Periwinkle identification at Bee City site*



*Noxious/ invasive species identification*



*Buckthorn disposal at Gawley Park*



*Chinese mystery snail found in Little Lake*

## Recommendations

The SSEA proposes to lead the following priority actions with the Town of Midland in 2022, with accommodations for COVID-19 restrictions as necessary:

- Continue to monitor the spongy moth outbreak across the Severn Sound watershed and use data to help with future defoliation forecasting
- Continue to manage invasive species at public sites by hosting community removal events (e.g., designated Midland Bee City sites, stormwater management ponds)
- Assist with and provide input into an integrated management plan for Japanese knotweed at Little Lake
- Complete surveillance for the invasive macroalgae starry stonewort in Little Lake
- Explore the feasibility of installing a boat wash station, to assist the Town with preventing further invasive species introductions into Little Lake
- Promote engagement in Citizen Science initiatives to residents to increase invasive species awareness and reporting
- Provide invasive species workshops/educational opportunities for Town of Midland staff and residents

# Invasive Species Report 2021

Township of Oro-Medonte



*Spongy moth\* (Ldd) eggs*

*\*Spongy moth (formerly referred to as European Gypsy Moth) has been adopted as the new name for Ldd*

Severn Sound watershed municipalities are leading the way on cross-municipal invasive species education and management. The Severn Sound Environmental Association (SSEA) works with the Township of Oro-Medonte, seven other municipalities and local agencies to coordinate the monitoring and management of invasive species on a watershed scale. With support from the Township of Oro-Medonte, monitoring of invasive species has been conducted on municipal properties by SSEA staff and supplemented by additional observations throughout the Township from community members.

In 2021, **16** invasive species of plants and invertebrates were identified within the Township of Oro-Medonte, with **6** further classified as priority invaders in **Table 1**. A total of **39** invasive species have been documented in Oro-Medonte to date (**Table 2**). These species pose a threat to the ecosystems, economy and public health of community members and should be a focus for coordinated management activities and educational opportunities. Priority rankings can change as a result of new species introductions, public interest and yearly invasive species monitoring results.

**16** Invasive species identified in Oro-Medonte

**6** Priority invasive species



Table  
01

Priority Invasive Species Detected Within the Township of Oro-Medonte



Species Group	Species Name
Aquatic Plants & Algae	European frog-bit
Terrestrial Plants	Garlic mustard Glossy buckthorn
Wetland Plants	Phragmites
Invertebrates	Mystery snails Spongy moth (Ldd)



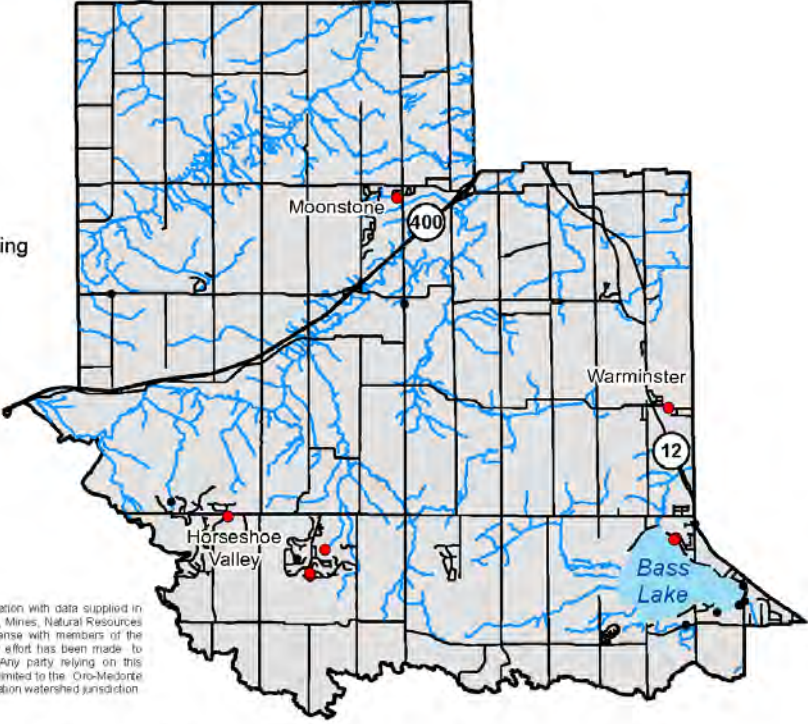
*SSEA staff completing egg mass surveys for spongy moth*

# Township of Oro-Medonte Invasive Species Sightings Map

## Legend

- Invasive Species**
  - 2021 Sighting
  - 2017 to 2020 Sighting
- Roads
- Lake
- Streams

0 2 km



Produced by the Severn Sound Environmental Association with data supplied in part from the Ontario Ministry of Northern Development, Mines, Natural Resources and Forestry (© Queen's Printer 2022) and under license with members of the Ontario Geospatial Data Exchange, 2022. While every effort has been made to accurately depict the base data, errors may exist. Any party relying on this information does so at their own risk. Note: Mapping is limited to the Oro-Medonte Twp. portion of the Severn Sound Environmental Association watershed jurisdiction.

## Invasive Species Group

### Fish & Invertebrates



● 2021 (n = 0)  
● 2017-2020 (n = 4)

### Aquatic/Wetland Plants & Algae



(n = 2)  
(n = 1)

### Terrestrial Plants



(n = 35)  
(n = 11)





## Vulnerable Areas & Summary

Municipalities are vulnerable to the economic and social impacts of priority invasive species such as those listed in **Table 1**. For the Township of Oro-Medonte, high traffic areas including Bass Lake, public parks and trail systems are examples of places that are at risk for invasive species introduction and establishment.

Five areas were surveyed by SSEA for invasive species in 2021 including Bass Lake shoreline (public access areas), Horseshoe Valley Memorial Park, Ramey Memorial Park, Richeliue Park, and Sweet Water Park. These locations are susceptible to the introduction and movement of both aquatic and terrestrial invasive species.

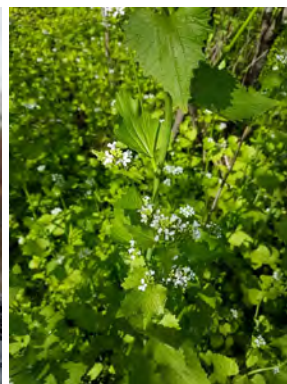
In fall of 2021, SSEA surveyed select forested locations across the Severn Sound area for the invasive forest pest, spongy moth. The surveys help to forecast potential defoliation for the upcoming season (2022). The survey results were made available to the municipality in the 2021 Ldd Egg Mass Survey Results and Defoliation Forecast for 2022 report.



*European frog-bit sample  
collected from Bass Lake*



*Zebra mussels found at Bass Lake*



*Garlic mustard*



*Chinese mystery snail*

## Recommendations

The SSEA proposes to lead the following priority actions with the Township of Oro-Medonte in 2022, with accommodations for COVID-19 restrictions as necessary:

- Continue to monitor the spongy moth outbreak across the Severn Sound watershed and use data to help with future defoliation forecasting
- Support and coordinate community invasive species management events
- Explore feasibility of installing boot brush stations and educational signage as a pilot project in a high traffic trail area for prevention of invasive plants
- Promote engagement in Citizen Science initiatives to residents to increase invasive species awareness and reporting
- Provide invasive species workshops/educational opportunities for Township of Oro-Medonte staff and residents

# Invasive Species Report 2021

Town of Penetanguishene



*Spongy moth\* (Ldd) eggs*

*\*Spongy moth (formerly referred to as European Gypsy Moth) has been adopted as the new name for Ldd*

Severn Sound watershed municipalities are leading the way on cross-municipal invasive species education and management. The Severn Sound Environmental Association (SSEA) works with the Town of Penetanguishene, seven other municipalities and local agencies to coordinate the monitoring and management of invasive species on a watershed scale. With support from the Town of Penetanguishene, monitoring of invasive species has been conducted on municipal properties by SSEA staff and supplemented by additional observations throughout the Town from community members.

In 2021, **15** invasive species of plants and invertebrates were identified within the Town of Penetanguishene, with **7** further classified as priority invaders in **Table 1**. A total of **33** invasive species have been documented in Penetanguishene to date (**Table 2**). These species pose a threat to the ecosystems, economy and public health of community members and should be a focus for coordinated management activities and educational opportunities. Priority rankings can change as a result of new species introductions, public interest and yearly invasive species monitoring results.

15

Invasive species identified in Penetanguishene

7

Priority invasive species



Table  
01

Priority Invasive Species Detected Within the  
Town of Penetanguishene

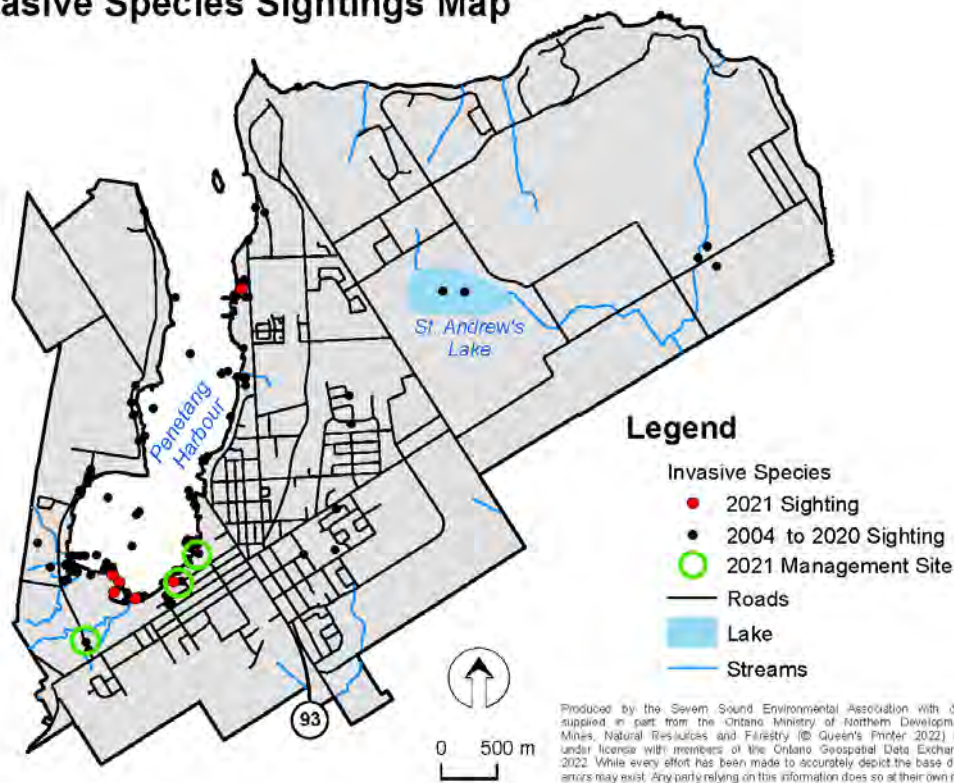


Species Group	Species Name
Aquatic Plants & Algae	Eurasian water-milfoil Starry stonewort
Terrestrial Plants	Glossy buckthorn Spotted knapweed
Wetland Plants	Phragmites
Invertebrates	Spongy moth (Ldd) Zebra mussels

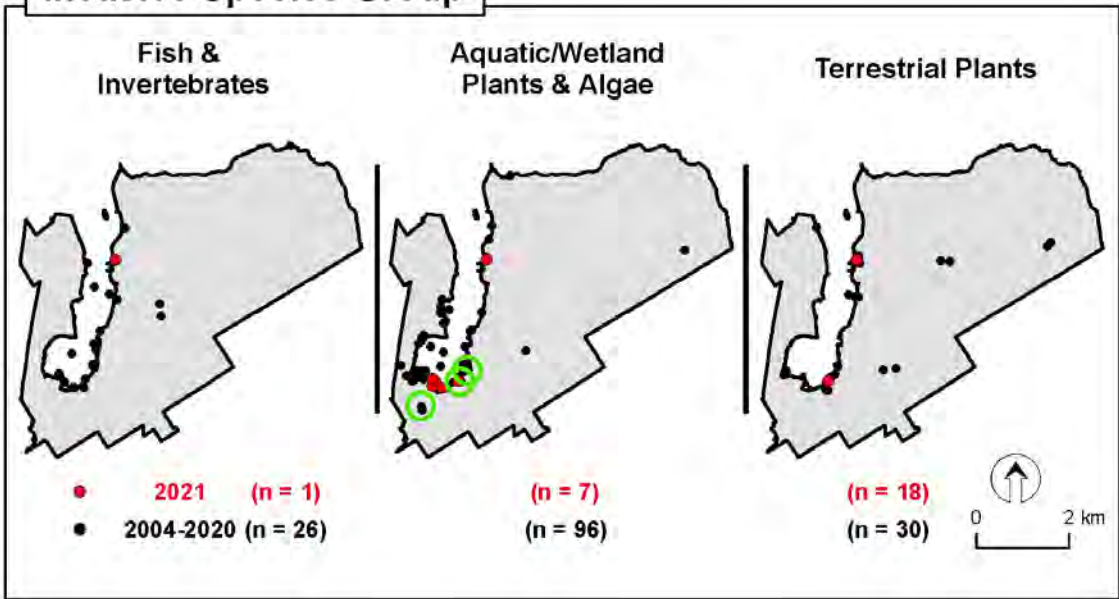


*Penetanguishene Rotary Club volunteers removing invasive Phragmites along Champlain Road*

# Town of Penetanguishene Invasive Species Sightings Map



## Invasive Species Group





## Vulnerable Areas & Summary

Municipalities are vulnerable to the economic and social impacts of priority invasive species such as those listed in **Table 1**. For the Town of Penetanguishene, high traffic areas including public parks, public boat launches and marinas and trail systems are examples of places that are at risk for invasive species introduction and establishment. In 2021, residents of Penetanguishene expressed their concern of invasive Phragmites invading roadsides and parks. The Town and SSEA prioritized community management of Phragmites at Rotary Champlain Wendat Park to help preserve its ecological and recreational value. Two sites have been identified in the park, referred to as the pond site and ditch site which were targeted for removal by manual spading. Phragmites was entirely removed at the pond site, and partial removed at the ditch site. One season alone is not enough to eradicate Phragmites, thus, removal will be a multi-year project. SSEA and the Town thank the Georgian Bay Métis Council and the Trans Canada Trail for their funding contribution to this project.

In fall of 2021, SSEA surveyed select forested locations across the Severn Sound area for the invasive forest pest, spongy moth. The surveys help to forecast potential defoliation for the upcoming season (2022). The survey results were made available to the municipality in the 2021 Ldd Egg Mass Survey Results and Defoliation Forecast for 2022 report.



*Phragmites removal at Rotary Champlain Wendat Park before (left) and after (right)*

*Tree defoliation caused by spongy moth*

*Starry stonewort collected in an aquatic plant sample*

## Recommendations

The SSEA proposes to lead the following priority actions with the Town of Penetanguishene in 2022, with accommodations for COVID-19 restrictions as necessary:

- Continue to monitor the spongy moth outbreak across the Severn Sound watershed and use data to help with future defoliation forecasting
- Continue to manage Phragmites in Rotary Champlain Wendat Park by hosting community removal events, and purchase and plant native local appropriate species
- Continue monitoring for the invasive macroalgae starry stonewort along the Georgian Bay coastline
- Increase outreach to marinas on aquatic invasive species issues and work to coordinate educational signage at marinas
- Explore feasibility of installing boot brush stations and educational signage as a pilot project in a high traffic trail area for prevention of invasive plants
- Promote engagement in Citizen Science initiatives to residents to increase invasive species awareness and reporting
- Provide invasive species workshops/educational opportunities for Town of Penetanguishene staff and residents

# Invasive Species Report 2021

Township of Severn



*Spongy moth\* (Ldd) eggs*

Severn Sound watershed municipalities are leading the way on cross-municipal invasive species education and management. The Severn Sound Environmental Association (SSEA) works with the Township of Severn, seven other municipalities and local agencies to coordinate the monitoring and management of invasive species on a watershed scale. With support from the Township of Severn, monitoring of invasive species has been conducted on municipal properties by SSEA staff and supplemented by additional observations throughout the Township from community members.

In 2021, **24** invasive species of plants and invertebrates were identified within the Township of Severn, with **8** further classified as priority invaders in **Table 1**. A total of **39** invasive species have been documented in Tiny to date (**Table 2**). These species pose a threat to the ecosystems, economy and public health of community members and should be a focus for coordinated management activities and educational opportunities. Priority rankings can change as a result of new species introductions, public interest and yearly invasive species monitoring results.

24

Invasive species identified in Severn

8

Priority invasive species

*\*Spongy moth (formerly referred to as European Gypsy Moth) has been adopted as the new name for Ldd*



Table  
01

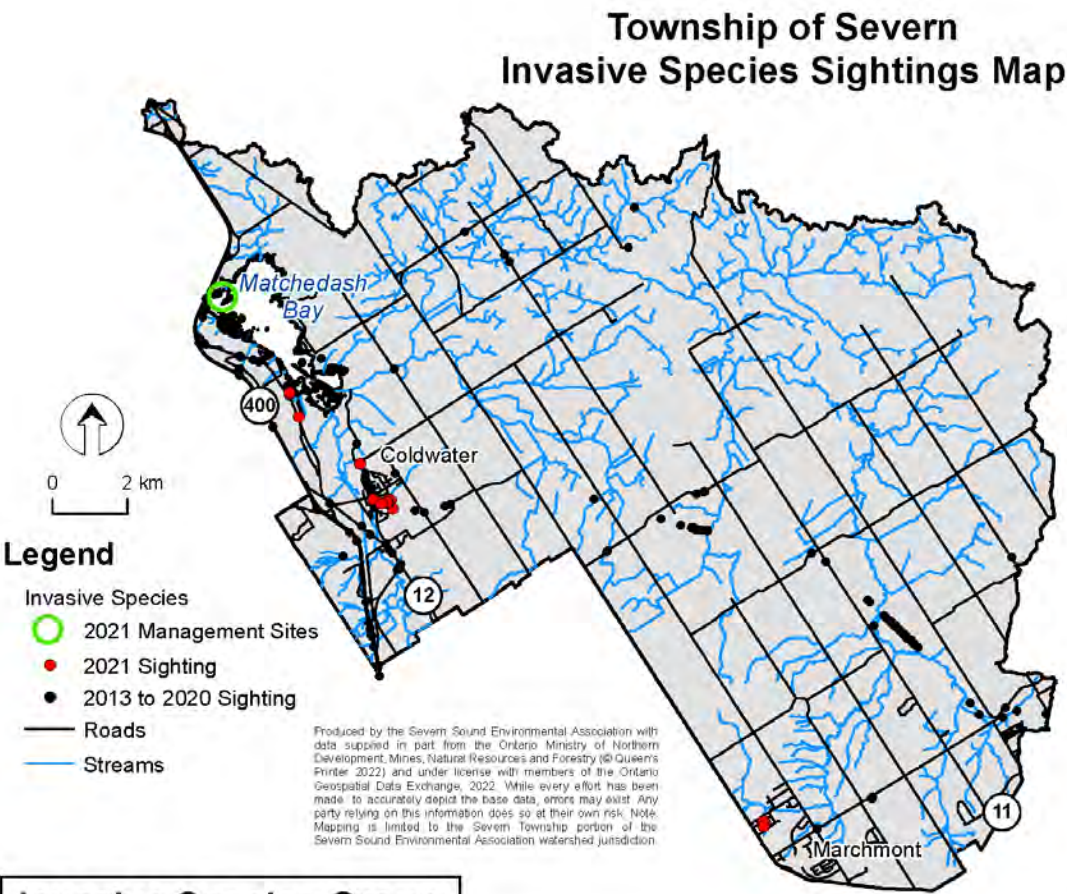
Priority Invasive Species Detected Within the Township of Severn



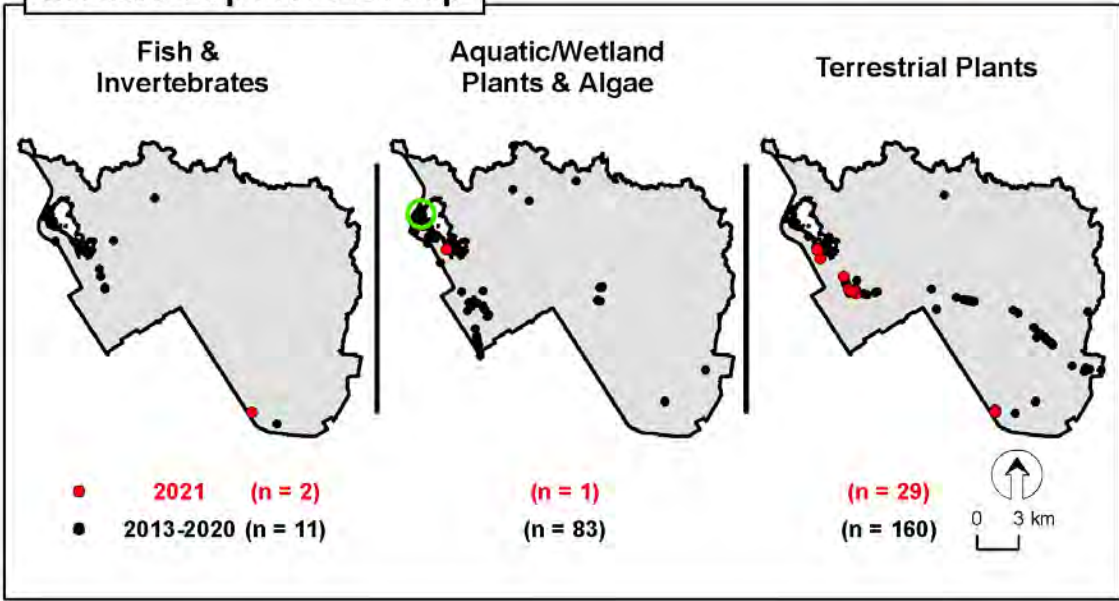
Species Group	Species Name
Terrestrial Plants	Dog-strangling vine Garlic mustard Giant hogweed Glossy buckthorn Japanese knotweed
Wetland Plants	Phragmites
Invertebrates	Chinese mystery snails Spongy moth (Ldd)



*Giant hogweed along the Uthhoff trail*



**Invasive Species Group**





## Vulnerable Areas & Summary

Municipalities are vulnerable to the economic and social impacts of priority invasive species such as those listed in **Table 1**. For the Township of Severn, high traffic areas including public parks and road and trail systems are examples of places that are at risk for invasive species introduction and establishment. In 2021, Severn continued to contract herbicide application to target giant hogweed infestations along the Uththoff trail. In addition to the ongoing trail management program, a roadside hogweed program was created to help mitigate the dangers and spread of hogweed along roadsides, which will begin in 2022. A key component of the management programs is to correctly identify giant hogweed, which SSEA has assisted Severn with and will continue to do so. Several additional invasive species were incidentally observed along the Uththoff trail during 2021 monitoring, including Himalayan balsam, Japanese knotweed, garlic mustard and dog-strangling vine.

In fall of 2021, SSEA surveyed select forested locations across the Severn Sound area for the invasive forest pest, spongy moth. The surveys help to forecast potential defoliation for the upcoming season (2022). The survey results were made available to the municipality in the 2021 Ldd Egg Mass Survey Results and Defoliation Forecast for 2022 report.



*Giant hogweed leaf*



*Black locust tree found while monitoring*



*Parasitized egg mass found in Severn*



*Municipal by-law officer marking giant hogweed*

## Recommendations

The SSEA proposes to lead the following priority actions with the Township of Severn in 2022, with accommodations for COVID-19 restrictions as necessary:

- Continue to monitor the spongy moth outbreak across the Severn Sound watershed and use data to help with future defoliation forecasting
- Assist with giant hogweed and other invasive/noxious weed identification along roadsides, public properties, and trail systems. Support Severn in their hogweed management programs through technical support and staff training
- Support and coordinate community invasive species management events
- Explore feasibility of installing boot brush stations and educational signage as a pilot project in a high traffic trail area for prevention of invasive plants
- Promote engagement in Citizen Science initiatives to residents to increase invasive species awareness and reporting
- Provide invasive species workshops/educational opportunities for Township of Severn staff and residents

# Invasive Species Report 2021

Township of Springwater



*Spongy moth\* (Ldd) eggs*

*\*Spongy moth (formerly referred to as European Gypsy Moth) has been adopted as the new name for Ldd*

Severn Sound watershed municipalities are leading the way on cross-municipal invasive species education and management. The Severn Sound Environmental Association (SSEA) works with the Township of Springwater, seven other municipalities and local agencies to coordinate the monitoring and management of invasive species on a watershed scale. With support from the Township of Springwater, monitoring of invasive species has been conducted on municipal properties by SSEA staff and supplemented by additional observations throughout the Township from community members.

In 2021, **28** invasive species of plants and invertebrates were identified within the Township of Springwater, with **8** further classified as priority invaders in **Table 1**. A total of **36** invasive species have been documented in Springwater to date (**Table 2**). These species pose a threat to the ecosystems, economy and public health of community members and should be a focus for coordinated management activities and educational opportunities. Priority rankings can change as a result of new species introductions, public interest and yearly invasive species monitoring results.

28

Invasive species identified in Springwater

8

Priority invasive species



Table  
01

Priority Invasive Species Detected Within the Township of Springwater

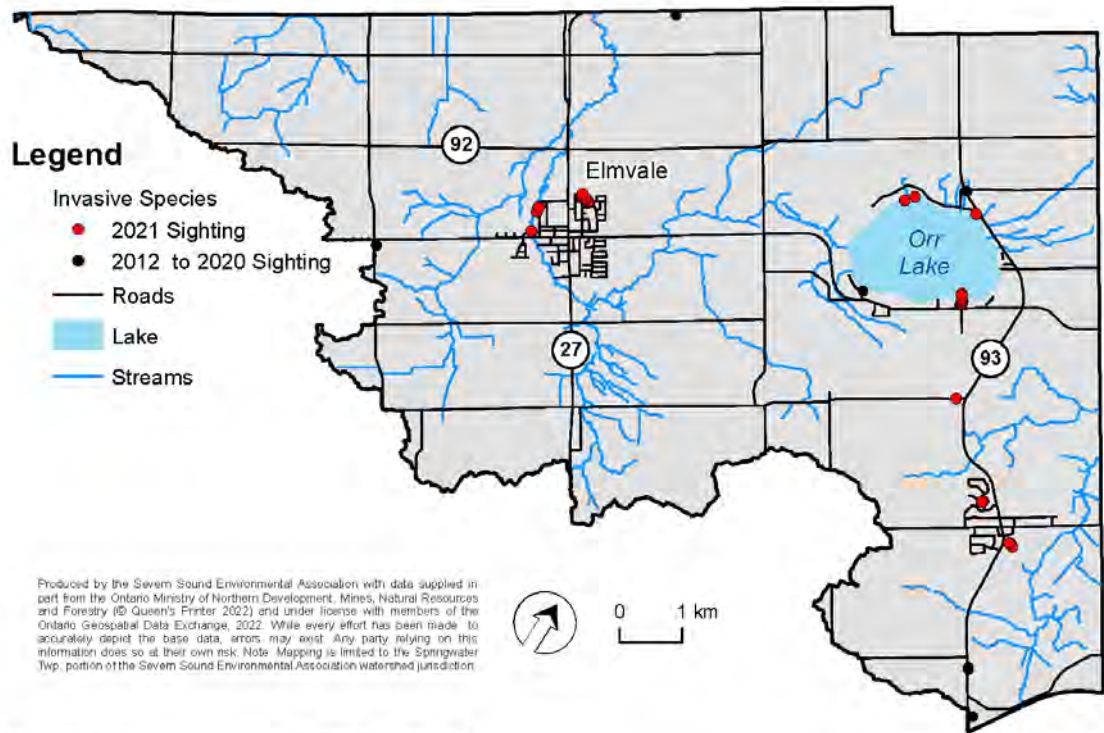


Species Group	Species Name
Aquatic Plants & Algae	Eurasian water-milfoil
Terrestrial Plants	Dog-strangling vine Glossy buckthorn Japanese knotweed
Wetland Plants	Phragmites
Invertebrates	Chinese mystery snails Spongy moth (Ldd) Zebra & quagga mussels

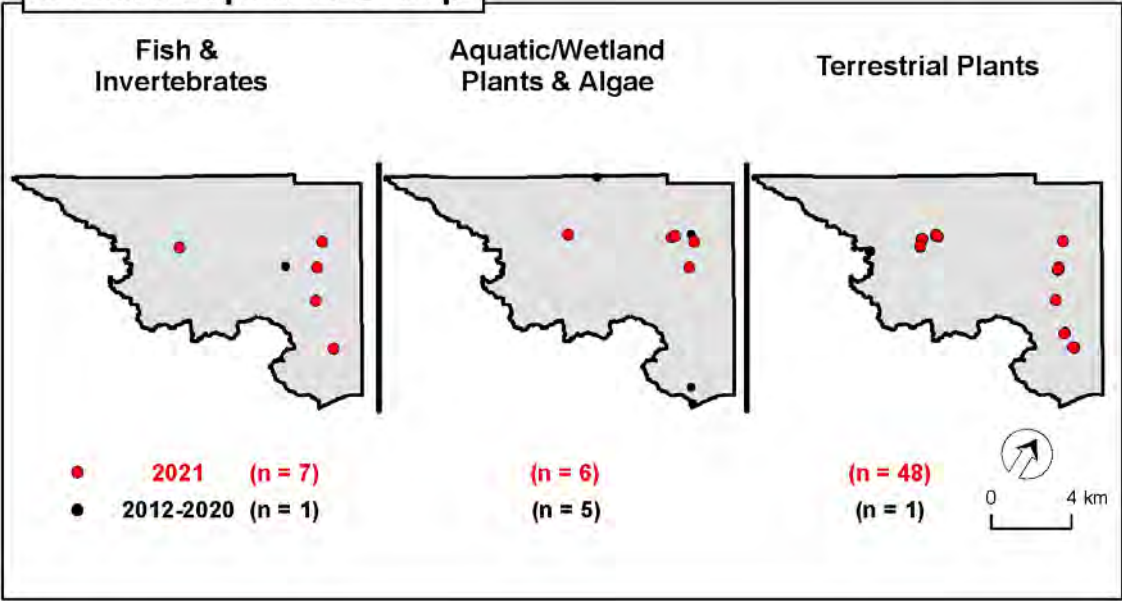


*Chinese mystery snail found in Orr Lake*

### Township of Springwater Invasive Species Sightings Map



### Invasive Species Group





## Vulnerable Areas & Summary

Municipalities are vulnerable to the economic and social impacts of priority invasive species such as those listed in **Table 1**. For the Township of Springwater, high traffic areas including public boat launches, public parks and trail systems are examples of places that are at risk for invasive species introduction and establishment.

Six public areas were surveyed by SSEA for invasive species in 2021 including Bishop Park, Elmvale Heritage Park, Graham Macdonald Park, Hillsdale Community Park, Homer Barret Park and Orr Lake Park. These locations are susceptible to the introduction and movement of both aquatic and terrestrial invasive species. In addition to terrestrial sites, SSEA completed an Orr Lake shoreline survey, which included surveillance for invasive species. Through the survey, zebra mussels were identified in Orr Lake, which was a new finding for SSEA. The extent of the zebra mussel population is currently unknown, and further investigation is recommended.

In fall of 2021, SSEA surveyed select forested locations across the Severn Sound area for the invasive forest pest, spongy moth. The surveys help to forecast potential defoliation for the upcoming season (2022). The survey results were made available to the municipality in the 2021 Ldd Egg Mass Survey Results and Defoliation Forecast for 2022 report.



*Garlic mustard*



*Zebra mussel sample*



*Dog-strangling vine*



*Spongy moth caterpillar*

## Recommendations

The SSEA proposes to lead the following priority actions with the Township of Springwater in 2022, with accommodations for COVID-19 restrictions as necessary:

- Continue to monitor the spongy moth outbreak across the Severn Sound watershed and use data to help with future defoliation forecasting
- Install artificial substrates and complete additional surveys in Orr Lake to detect invasive zebra mussels and determine the extent of the population
- Support and coordinate community invasive species management events
- Explore feasibility of installing boot brush stations and educational signage as a pilot project in a high traffic trail area for prevention of invasive plants
- Promote engagement in Citizen Science initiatives to residents to increase invasive species awareness and reporting
- Provide invasive species workshops/educational opportunities for Township of Springwater staff and residents

# Invasive Species Report 2021

Township of Tay



*Spongy moth\* (Ldd) eggs*

Severn Sound watershed municipalities are leading the way on cross-municipal invasive species education and management. The Severn Sound Environmental Association (SSEA) works with the Township of Tay, seven other municipalities and local agencies to coordinate the monitoring and management of invasive species on a watershed scale. With support from the Township of Tay, monitoring of invasive species has been conducted on municipal properties by SSEA staff and supplemented by additional observations throughout the Township from community members.

In 2021, **19** invasive species of plants and invertebrates were identified within the Township of Tay, with **8** further classified as priority invaders in **Table 1**. A total of **43** invasive species have been documented in Tay to date (**Table 2**). These species pose a threat to the ecosystems, economy and public health of community members and should be a focus for coordinated management activities and educational opportunities. Priority rankings can change as a result of new species introductions, public interest and yearly invasive species monitoring results.

19

Invasive species identified

8

Priority invasive species

*\*Spongy moth (formerly referred to as European Gypsy Moth) has been adopted as the new name for Ldd*



Table  
01

Priority Invasive Species Detected Within the Township of Tay

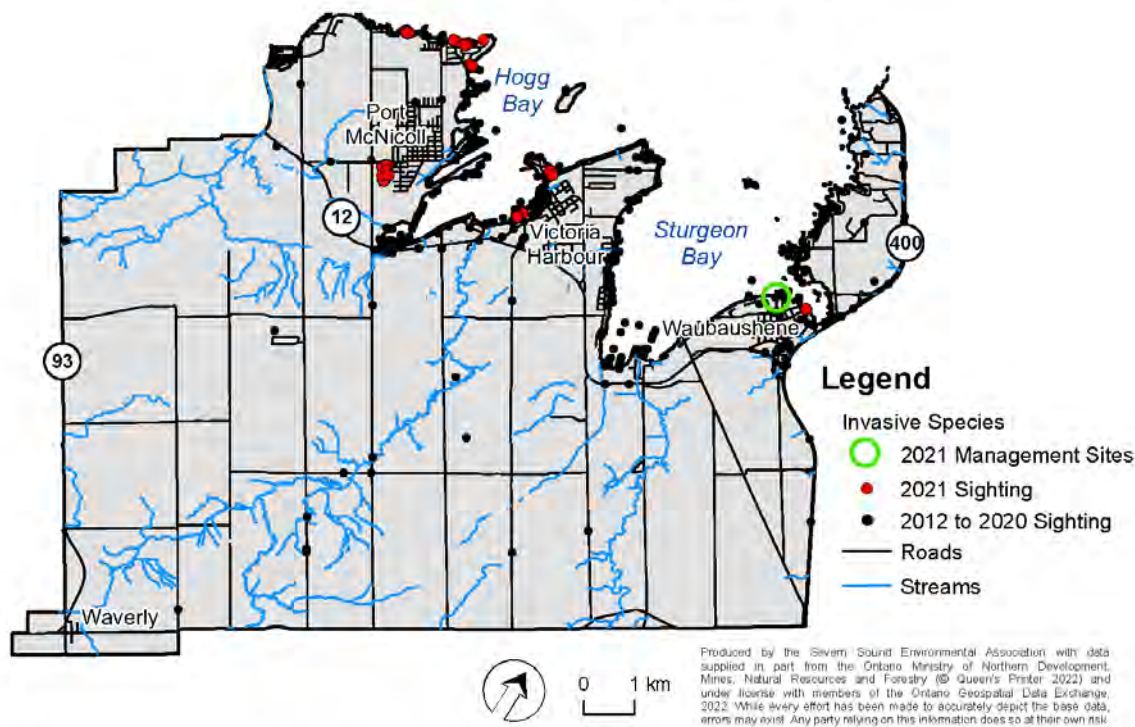


Species Group	Species Name
Aquatic Plants & Algae	Eurasian water-milfoil
Terrestrial Plants	Dog-strangling vine Glossy buckthorn Himalayan balsam Japanese knotweed
Wetland Plants	Phragmites
Invertebrates	Spongy moth (Ldd) Zebra & quagga mussels

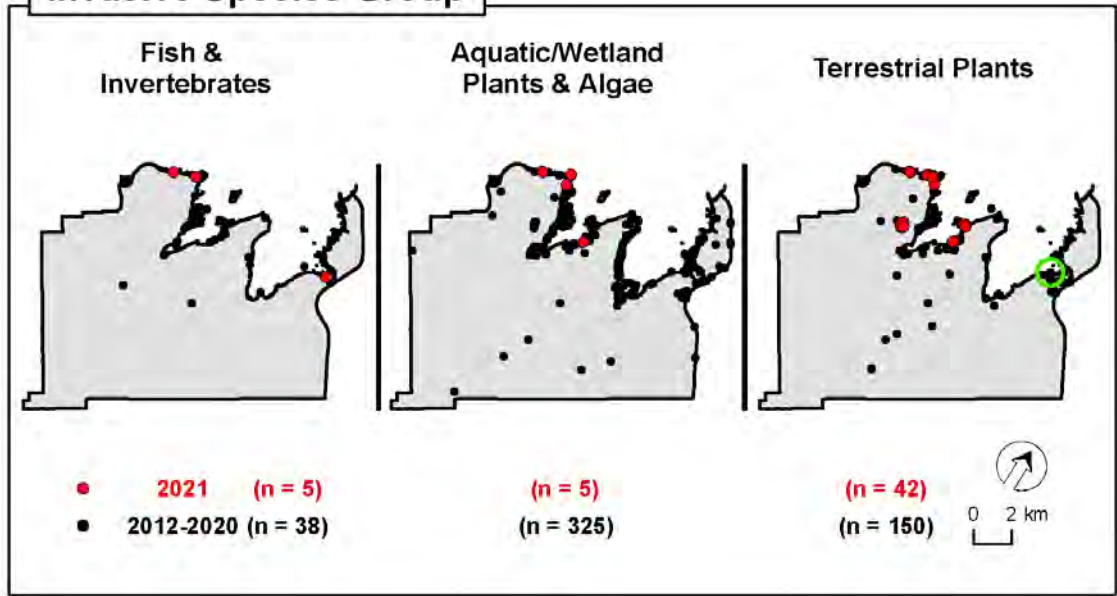


*SSEA staff completing surveys for invasive species at Pete Peterson park*

### Township of Tay Invasive Species Sightings Map



### Invasive Species Group





## Vulnerable Areas & Summary

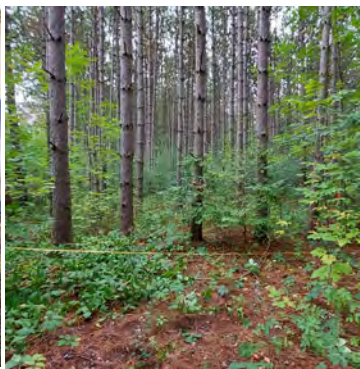
Municipalities are vulnerable to the economic and social impacts of priority invasive species such as those listed in **Table 1**. For the Township of Tay, high traffic areas including public beaches, public parks and trail systems are examples of places that are at risk for invasive species introduction and establishment.

Seven areas were surveyed by SSEA for invasive species in 2021 including Calvert Park, Eplett Park, Magnus Beach, McKenzie Beach, Pete Peterson Park, Talbot Park and the Waubauskene Town Dock. These locations are susceptible to the introduction and movement of both aquatic and terrestrial invasive species. With the Township's support, SSEA coordinated an invasive species management event at Waubauskene beach for Himalayan Balsam.

In fall of 2021, SSEA surveyed select forested locations across the Severn Sound area for the invasive forest pest, spongy moth. The surveys help to forecast potential defoliation for the upcoming season (2022). The survey results were made available to the municipality in the 2021 Ldd Egg Mass Survey Results and Defoliation Forecast for 2022 report.



*Himalayan Balsam removal at Waubauskene Beach*



*Spongy moth survey plot*



*Zebra mussel collected in Waubauskene*



*Noxious weed identification along Tay trail*

## Recommendations

The SSEA proposes to lead the following priority actions with the Township of Tay in 2022, with accommodations for COVID-19 restrictions as necessary:

- Continue to monitor the spongy moth outbreak across the Severn Sound watershed and use data to help with future defoliation forecasting
- Support the Township in managing noxious invasive species along the Tay trail (e.g., dog-strangling vine, Japanese knotweed, wild parsnip)
- Support and coordinate community invasive species management events
- Explore feasibility of installing boot brush stations and educational signage as a pilot project in a high traffic trail area for prevention of invasive plants
- Promote engagement in Citizen Science initiatives to residents to increase invasive species awareness and reporting
- Provide invasive species workshops/educational opportunities for Township of Tay staff and residents

# Invasive Species Report 2021

Township of Tiny



*Spongy moth\* (Ldd) eggs*

Severn Sound watershed municipalities are leading the way on cross-municipal invasive species education and management. The Severn Sound Environmental Association (SSEA) works with the Township of Tiny, seven other municipalities and local agencies to coordinate the monitoring and management of invasive species on a watershed scale. With support from the Township of Tiny, monitoring of invasive species has been conducted on municipal properties by SSEA staff and supplemented by additional observations throughout the Township from community members.

In 2021, **23** invasive species of plants and invertebrates were identified within the Township of Tiny, with **7** further classified as priority invaders in **Table 1**. A total of **43** invasive species have been documented in Tiny to date (**Table 2**). These species pose a threat to the ecosystems, economy and public health of community members and should be a focus for coordinated management activities and educational opportunities. Priority rankings can change as a result of new species introductions, public interest and yearly invasive species monitoring results.

23

Invasive species identified in Tiny

7

Priority invasive species

*\*Spongy moth (formerly referred to as European Gypsy Moth) has been adopted as the new name for Ldd*



Table  
01

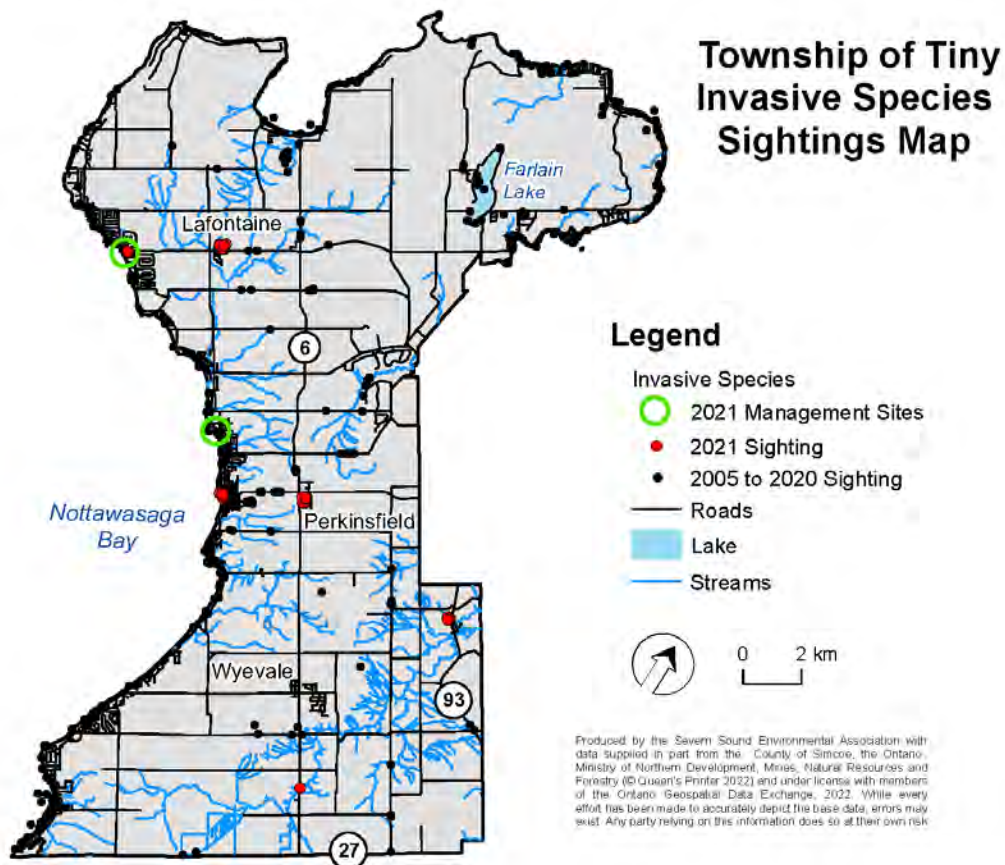
Priority Invasive Species Detected Within the Township of Tiny



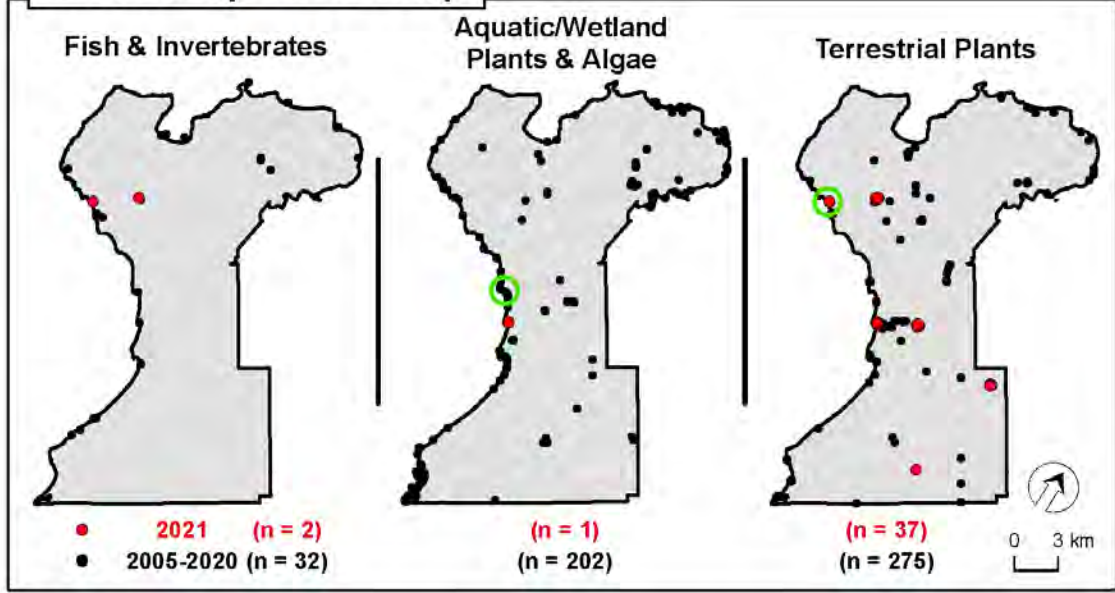
Species Group	Species Name
Aquatic Plants & Algae	Eurasian water-milfoil
Terrestrial Plants	Glossy buckthorn Japanese knotweed Spotted knapweed White sweet clover
Wetland Plants	Phragmites
Invertebrates	Spongy moth (Ldd)



*Invasive Species Technician taking invasive species inventories at Lafontaine Beach*



**Invasive Species Group**





## Vulnerable Areas & Summary

Municipalities are vulnerable to the economic and social impacts of priority invasive species such as those listed in **Table 1**. For the Township of Tiny, high traffic areas including public or shared beach areas, public parks and trail systems are examples of places that are at risk for invasive species introduction and establishment. In 2021, with SSEA's support, the Township's Recreation & Culture department coordinated community invasive species management events including, Spotted Knapweed removal at Lafontaine Beach and Phragmites removals at Cawaja Beach. Seasonal Township staff participated in invasive species training with SSEA to help employees identify common invasive species as part of day-to-day park monitoring activities and help to address questions from residents and cottagers.

The Township and SSEA co-hosted a webinar on spongy moth, to help educate residents about the invasive forest and tree pest and provide information on management actions that can be taken on properties. In fall of 2021, SSEA surveyed select forested locations across the Severn Sound area for the invasive forest pest, spongy moth. The surveys help to forecast potential defoliation for the upcoming season (2022). The survey results were made available to the municipality in the 2021 Ldd Egg Mass Survey Results and Defoliation Forecast for 2022 report.



*Spotted knapweed removal*



*Phragmites monitoring*



*Township staff training*



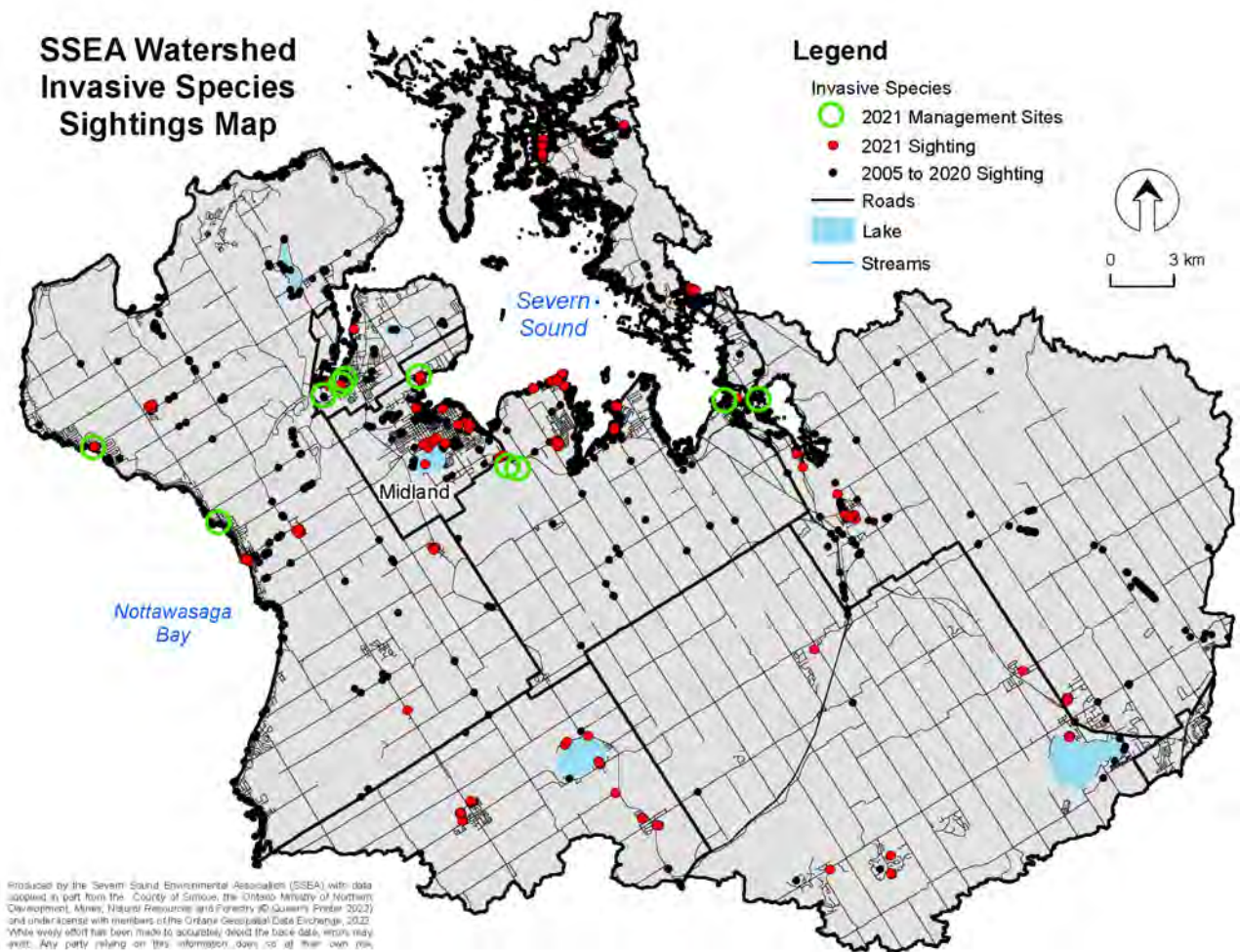
*Phragmites removal at Cawaja Beach*

## Recommendations

The SSEA proposes to lead the following priority actions with the Township of Tiny in 2022, with accommodations for COVID-19 restrictions as necessary:

- Continue to monitor the spongy moth outbreak across the Severn Sound watershed and use data to help with future defoliation forecasting
- Continue to manage spotted knapweed, Phragmites and other priority invasive species at public sites by hosting community removal events, and purchasing and planting native, locally appropriate species following invasive species removal where possible
- Continue to work with the Farlain Lake Community Association on their Eurasian water-milfoil management project, by providing input to management strategies, technical expertise and outreach
- Support M-T-M Conservation in their work to manage invasive Phragmites at Tiny Marsh, by providing in-kind support when possible
- Promote engagement in Citizen Science initiatives to residents to increase invasive species awareness and reporting
- Provide invasive species workshops/educational opportunities for Township of Tiny staff and residents

## SSEA Watershed Invasive Species Sightings Map



**81** species have been identified across the Severn Sound watershed to date. A list of all invasive species documented to date through the SSEA Invasive Species Program is provided in **Table 2**.

### 2021 Watershed Invasive Species Summary

- **43** sites surveyed for invasive species
- **342** occurrences of invasive species
- **10** SSEA/municipal-led community removal projects
- **100+** volunteers involved in community invasive species management
- **330** person hours spent on management (including volunteers, SSEA staff and municipal staff)
- **5** spongy moth egg mass surveys completed across the watershed to provide a potential defoliation forecast for 2022
- **19** locations surveyed for the invasive macroalga starry stonewort (presence/absence), **9** locations identified as positive for starry stonewort



*Japanese knotweed*



# Table 02

List of documented invasive species found within the SSEA watershed. Highlighted rows indicate a species that has become established across eight municipalities. Species that are a considerable determinant to ecosystems, economy or human health have been prioritized in Table 1.

Species	Scientific Name	Midland	Penetanguishene	Tiny	Tay	Severn	Georgian Bay	Oro-Medonte	Springwater
Amur Maple	<i>Acer ginnala</i>			X	X				X
Autumn Olive	<i>Elaeagnus umbellata</i>	X			X				
Banded Mystery Snail	<i>Viviparus georgianus</i>						X	X	
Bird Vetch	<i>Vicia cracca</i>	X	X		X	X		X	
Bittersweet Nightshade	<i>Solanum dulcamara</i>	X	X	X	X	X	X	X	X
Black Locust	<i>Robinia pseudoacacia</i>	X		X	X	X		X	
Bladder Champion	<i>Silene vulgaris</i>	X	X	X		X	X	X	X
Bull Thistle	<i>Cirsium vulgare</i>			X					
Butternut Canker	<i>Ophiognomonia clavignenti-juglandacearum</i>							X	
Canada Thistle	<i>Cirsium aevense</i>	X		X	X				X
Chinese Mystery Snail	<i>Cipangopaludina chinensis</i>	X					X	X	X
Coltsfoot	<i>Tussilago farfara</i>	X	X	X	X	X	X	X	X
Common Buckthorn	<i>Rhamnus cathartica</i>	X		X	X	X		X	X
Common Lilac	<i>Syringa vulgaris</i>	X		X		X	X		X
Common Swift Moth	<i>Korscheltellus lupulina</i>				X			X	
Creeping Bellflower	<i>Campanula rapunculoides</i>							X	
Curly-leaved Pondweed	<i>Potamogeton crispus</i>	X	X						
Dame's Rocket	<i>Hesperis matronalis</i>	X			X	X		X	X
Dog-Strangling Vine	<i>Vincetoxicum rossicum</i>			X	X	X		X	X
Emerald Ash Borer	<i>Agrilus planipennis</i>	X		X	X		X	X	X
English Ivy	<i>Hedera helix</i>	X							
Eurasian Water-milfoil	<i>Myriophyllum spicatum</i>	X	X	X	X	X	X		X
European Frog-bit	<i>Hydrocharis morsus-ranae</i>					X			
Everlasting Pea	<i>Lathyrus latifolius</i>	X	X	X					
Feather Reed Grass	<i>Calamagrostis acutiflora</i>						X		
Forget-Me-Not	<i>Myosotis scorpioides</i>			X					
Freshwater Jellyfish	<i>Craspedacusta sowerbii</i>		X				X		
Garlic Mustard	<i>Alliaria petiolata</i>	X	X	X	X	X	X	X	X
Giant Hogweed	<i>Heracleum mantegazzianum</i>	X			X	X	X	X	X
Glossy Buckthorn	<i>Rhamnus frangula</i>	X	X	X	X	X	X	X	X
Goldfish	<i>Carassius auratus</i>				X	X			
Goutweed	<i>Aegopodium podagraria</i>	X	X	X	X	X		X	X
Ground-Ivy	<i>Glechoma hederacea</i>			X					
Hairy Willowherb	<i>Epilobium hirsutum</i>	X			X		X		
Himalayan Balsam	<i>Impatiens glandulifera</i>			X	X	X		X	

Species	Scientific Name	Midland	Penetanguishene	Tiny	Tay	Severn	Georgian Bay	Oro-Medonte	Springwater
Honeysuckle	<i>Lonicera sp.</i>	X	X	X	X	X		X	X
Hybrid Cattail	<i>Typha x glauca</i>		X		X	X	X		
Japanese Beetle	<i>Popillia japonica</i>	X	X	X		X		X	X
Japanese Knotweed	<i>Fallopia japonica</i>	X	X	X	X	X	X	X	X
Leafy Spurge	<i>Euphorbia esula</i>	X						X	
Lily of the Valley	<i>Convallaria majalis</i>	X	X	X	X	X	X	X	X
Manitoba Maple	<i>Acer negundo</i>	X	X	X	X	X	X	X	X
Mossy Stonecrop	<i>Sedum acre</i>	X					X		
Narrow-leaved Cattail	<i>Typha angustifolia</i>	X	X		X	X	X		
Norway Maple	<i>Acer platanoides</i>	X	X	X	X			X	X
Orange Hawkweed	<i>Pilosella aurantiaca</i>	X							
Orchard Grass	<i>Dactylis glomerata</i>							X	
Oriental Bittersweet	<i>Celastrus orbiculatus</i>	X							
Periwinkle	<i>Vinca minor</i>	X		X	X	X	X	X	X
Phragmites	<i>Phragmites australis ssp. australis</i>	X	X	X	X	X	X	X	X
Purple Loosestrife	<i>Lythrum salicaria</i>	X	X	X	X	X	X	X	X
Quack Grass	<i>Elymus repens</i>	X							
Quagga Mussel	<i>Dreissena bugensis</i>				X		X		
Rainbow Smelt	<i>Osmerus mordax</i>		X						
Reed Canary Grass	<i>Phalaris arundinacea</i>	X	X	X	X	X	X	X	X
Ribbon Grass	<i>Phalaris arundinacea 'Ribbon'</i>	X							
Rough Cocklebur	<i>Xanthium strumarium</i>			X					
Round Goby	<i>Neogobius melanostomus</i>	X	X	X	X	X	X	X	X
Rusty Crayfish	<i>Orconectes rusticus</i>			X		X			X
Scots Pine	<i>Pinus sylvestris</i>	X		X	X	X		X	X
Silver Poplar	<i>Populus alba</i>	X							
Soapwort	<i>Saponaria officinalis</i>	X		X	X				X
Spiny Waterflea	<i>Bythotrephes longimanus</i>			X			X		
Spongy moth (Ldd)	<i>Lymantria dispar dispar</i>	X	X	X	X	X	X	X	X
Spotted Knapweed	<i>Centaurea maculosa</i>	X	X	X	X	X	X	X	X
Starry Stonewort	<i>Nitellopsis obtusa</i>	X	X				X		
Stone Crop	<i>Sedum ssp.</i>			X					
Tansy	<i>Tanacetum vulgare</i>	X	X		X		X	X	
Threespine Stickleback	<i>Gasterosteus aculeatus</i>	X							
Toadflax	<i>Linaria vulgaris</i>				X	X			
Tubenose Goby	<i>Proterorhinus semilunaris</i>	X			X	X	X		
Watercress	<i>Nasturtium officinale</i>	X							
White Mulberry	<i>Morus alba</i>	X							
White Perch	<i>Morone americana</i>	X	X						
White Sweetclover	<i>Melilotus alba</i>	X	X	X	X	X	X	X	X
Wild Parsnip	<i>Pastinaca sativa</i>	X		X		X		X	X
Winged Euonymus	<i>Euonymus alatus</i>	X							
Yellow Archangel	<i>Lamium galeobdolon</i>	X		X					
Yellow Iris	<i>Iris pseudacorus</i>	X	X	X	X	X			X
Zebra Mussel	<i>Dreissena polymorpha</i>	X	X	X	X	X	X	X	X





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