

**THE TOWN OF GEORGINA  
WATERWAYS ADVISORY COMMITTEE  
AGENDA**

January 21, 2020  
6:30 PM  
Council Chambers

1. CALL TO ORDER

“We would like to begin today’s meeting by acknowledging that the Town of Georgina is located over lands originally used and occupied by the First Peoples of the Williams Treaties First Nations and other Indigenous Peoples and thank them for sharing this land. We would also like to acknowledge the Chippewas of Georgina Island First Nation as our close neighbour and friend, one with which we strive to build a cooperative and respectful relationship.”

2. ROLL CALL

3. INTRODUCTION OF ADDENDUM ITEMS

4. APPROVAL OF AGENDA

5. DECLARATIONS OF PECUNIARY INTEREST AND GENERAL NATURE THEREOF

6. ADOPTION OF MINUTES

Pages 1 to 4

- (1) Minutes of the GWAC meeting held on Thursday, November 21, 2019, to be received.

7. DELEGATIONS/SPEAKERS

8. PRESENTATIONS

- (1) Waterfront Strategy Scope by Rob Flindall, Director of Operations and Infrastructure

9. REPORTS

10. COMMUNICATIONS

Pages 5 to 8

- (1) Flexibility in setting Lake Ontario outflows continue (IJC press release).

- Pages 9 to 11**  
(2) High Outflows from Lake Ontario to Continue Over Winter (IJC press release)

- Pages 12 to 15**  
(3) Local mayors not happy with IJC's response to repealing plan 2014

- Pages 16 to 17**  
(4) Township urging province to let municipalities opt out of conservation authorities

- (5) Lakes are a climate change 'ticking time bomb', warn scientists  
(<https://www.telegraph.co.uk/news/2019/11/18/lakes-climate-change-ticking-time-bomb-warn-scientists/>)

- (6) Road salt poses danger to Lake Simcoe  
(<https://www.simcoe.com/news-story/9737463-road-salt-poses-danger-to-lake-simcoe/>)

## 11. OTHER BUSINESS

- (1) "No Wake" signs – update if available

- Pages 18 to 35**  
(2) Council Disposition (November 6, 2019)

- (3) Ongoing items:

- Waterfront Strategy update (if available)
- Marine Unit Headquarters in Jacksons Point (update if available)

## 12. CLOSED SESSION, IF REQUIRED

## 13. MOTION TO ADJOURN

- (1) Motion to Adjourn

Next meeting date: February 18, 2020

**THE TOWN OF GEORGINA  
WATERWAYS ADVISORY COMMITTEE  
MINUTES**

November 21, 2019  
6:30 PM  
Committee Room

1. CALL TO ORDER

The meeting was called to order at 6:45 PM.

“We would like to begin today’s meeting by acknowledging that the Town of Georgina is located over lands originally used and occupied by the First Peoples of the Williams Treaties First Nations and other Indigenous Peoples and thank them for sharing this land. We would also like to acknowledge the Chippewas of Georgina Island First Nation as our close neighbour and friend, one with which we strive to build a cooperative and respectful relationship.”

2. ROLL CALL

The following Committee members were present:

Councillor Frank Sebo, Chair

Councillor Dave Harding

Mayor Margaret Quirk

Andy Adams

Stephen Parker

Ted Brown

The following Committee members were absent with regrets:

David Goldstein, Vice Chair

Natasha Charles

The following staff member was present:

Sarah Elliott, Committee Services Coordinator

3. INTRODUCTION OF ADDENDUM ITEMS

4. APPROVAL OF AGENDA

Moved by Andy Adams, Seconded by David Goldstein

**RESOLUTION NO. GWAC-2019-0024**

That the Georgina Waterways Advisory Committee November 21, 2019 agenda be approved.

**Carried.**

5. DECLARATIONS OF PECUNIARY INTEREST AND GENERAL NATURE THEREOF - *None*

6. ADOPTION OF MINUTES

- (1) Minutes of the GWAC meeting held on Tuesday, October 22, 2019, to be received.

It was noted the word "Committee" was missing from Resolution No. GWAC-2019-0022

Moved by Ted Brown, Seconded by Mayor Quirk

**RESOLUTION NO. GWAC-2019-0025**

That the minutes of the Georgina Waterways Advisory Committee meeting held on October 22, 2019, be adopted as amended.

**Carried.**

7. DELEGATIONS/SPEAKERS

8. PRESENTATIONS

9. REPORTS

- (1) Verbal report by committee member Andy Adams: High Water Level Impacts

Committee member Andy Adams provided a review of the International Joint Commission (IJC), and advised the Committee of concerns relating to the control of water levels. The Committee was advised that dropping an inch of water in Lake Ontario raises the water level in Montreal (St. Lawrence River) by a foot.

Moved by Councillor Harding, Seconded by Ted Brown

**RESOLUTION NO. GWAC-2019-0026**

That the Georgina Waterways Advisory Committee receive the verbal report from Committee member Andy Adams on High Water Level Impacts.

**Carried.**

10. COMMUNICATIONS

- (1) Lighthouse replica brings light to Lake Simcoe  
(<https://www.yorkregion.com/news-story/9674227-what-s-going-on-here->

[lighthouse-replica-brings-light-to-lake-simcoe/](#))

- (2) Ontario Fishing Regulations Summary
- (3) Internet issues at home

The Mayor provided an overview of the York net project. Speed test survey gathered to bolster business case for additional grants and funding opportunities.

- (4) Nari, Grade 6: Eulogy for Lake Simcoe  
(<https://www.youtube.com/watch?v=8U5E1aJoHGA>)  
(<https://www.youtube.com/watch?v=h2ygxFKAKUo&t=2s>)

Moved by Andy Adams, Seconded by Ted Brown

#### **RESOLUTION NO. GWAC-2019-0027**

That the Georgina Waterways Advisory Committee receive the following Communication Items:

1. Lighthouse replica brings light to Lake Simcoe
2. Ontario Fishing Regulations Summary
3. Internet issues at home
4. Nari, Grade 6: Eulogy for Lake Simcoe

**Carried.**

#### 11. OTHER BUSINESS

- (1) “No Wake” signs – waiting for pricing, update if available

Moved by Mayor Quirk, Seconded Ted Brown

#### **RESOLUTION NO. GWAC-2019-0028**

That the Georgina Waterways Advisory Committee authorize the purchase of twelve (12) ‘No Wake’ signs using funds from the 2019 Georgina Waterways Advisory Committee budget.

**Carried.**

- (3) Ongoing items:
  - Waterfront Strategy update (if available)

The committee was advised the RFP had been posted and would close on Dec 3<sup>rd</sup>. At this point 21 potential bidders had taken documents

- Marine Unit Headquarters in Jacksons Point (update if available)  
- *None*

Moved by Mayor Quirk, Seconded Ted Brown

**RESOLUTION NO. GWAC-2019-0029**

That the Committee extend the period of allowable absences to allow Natasha Charles an additional opportunity to attend in January and request the Committee Coordinator and Chair follow up with her regarding to confirm her interest in continuing on with the Committee.

**Carried.**

12. CLOSED SESSION, IF REQUIRED - *None*

13. MOTION TO ADJOURN

(1) Motion to Adjourn

Next meeting date: January 21, 2020

Moved by Stephen Parker, Seconded by Andy Adams

**RESOLUTION NO. GWAC-2019-0030**

That the Georgina Waterways Advisory Committee November 21, 2019, meeting adjourn at 7:59 PM.

**Carried.**

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Councillor Frank Sebo, Chair

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Sarah Elliott,  
Committee Services Coordinator



## Flexibility in setting Lake Ontario outflows to continue

November 22, 2019

The International Lake Ontario – St. Lawrence River Board (Board) announced today that, in directing Lake Ontario outflows, it has been given the ability to continue deviating from the flow specified by Plan 2014.

The Board has had authority to deviate from Plan 2014 since May 7<sup>th</sup>, after Lake Ontario rose above the high water trigger levels specified in a provision known as criterion H14. In light of the present extraordinary circumstances, the International Joint Commission (IJC) has given the Board authority to deviate from Plan 2014 even after Lake Ontario falls below the criterion H14 trigger levels.

The new authority extends until June 2020 when Lake Ontario is forecast to reach its seasonal peak.

From the International Lake Ontario – St. Lawrence River Board:

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We appreciate the IJC's decision to authorize the Board to continue to deviate from Plan 2014 after Lake Ontario water levels fall below the criterion H14 upper trigger levels. The Board has been reviewing data from the past three years to better understand when potential opportunities to deviate from Plan 2014 might be available over the next several months, and what the effects of such deviations might be on water levels and interests throughout the Lake Ontario - St. Lawrence River system.

Forecasts indicate that Plan 2014 outflows will be very high and at or near maximum values for several months. The IJC's decision will allow the Board to further increase outflows when opportunities arise considering the impacts that these flow increases will have on other interests of the system. These opportunities are expected to remove a small amount of additional water from Lake Ontario to reduce the risk of high water in 2020. The Board stresses that while an outflow strategy can influence water levels, the main driver is weather, especially when wet conditions are as extreme as they were in 2017 and 2019. We will continue to communicate the outflow strategy as the Board identifies opportunities to deviate from Plan 2014.

\*\*\*

Across the Great Lakes, water levels remain high and are forecast to continue to be high through at least the winter. Whether they remain high next spring will primarily depend on weather and water supplies. Lake Ontario is the only Great Lake that has a chance of getting near or returning to its long-term average by spring 2020. This possibility is directly related to the influence that water regulation can have on water levels if the conditions to accommodate high flows in the St. Lawrence River occur.

The Board, in conjunction with its staff, continues to monitor conditions on an ongoing basis. Information on hydrologic conditions, water levels and outflows, including graphics and photos, are available on the Board's website and posted to the Board's Facebook page at <https://www.facebook.com/InternationalLakeOntarioStLawrenceRiverBoard> (<https://www.facebook.com/InternationalLakeOntarioStLawrenceRiverBoard>) (English), and more detailed information is available on its website at <https://www.ijc.org/en/loslr> (<https://www.ijc.org/en/loslr>).

Contacts:

Rob Caldwell: (613) 938-5864; [Rob.Caldwell@canada.ca](mailto:Rob.Caldwell@canada.ca) (<mailto:Rob.Caldwell@canada.ca>)

Andrew Kornacki: (716) 879-4349, (716) 352-8669; [Andrew.A.Kornacki@usace.army.mil](mailto:Andrew.A.Kornacki@usace.army.mil) (<mailto:Andrew.A.Kornacki@usace.army.mil>)



*The International Lake Ontario – St. Lawrence River Board specifies the outflows from Lake Ontario, according to Plan 2014 as required in the 2016 Supplementary Order from the International Joint Commission. This plan was agreed to by the United States and Canada in December 2016 in an effort to improve environmental performance while maintaining most of the benefits provided to other interests by the previous Plan 1958-D, which was in use since 1963. In determining outflows, the Board, in conjunction with its staff, pays close attention to water levels in the Lake Ontario-St. Lawrence River system and on the Great Lakes upstream, and to the effects on stakeholders within the basin.*

*Water levels vary from year-to-year and throughout the year depending on weather and water supply conditions. Such variations benefit coastal wetlands and are critical to a healthy lake environment, but may at times and depending on individual circumstances increase the vulnerability of shoreline structures and reduce opportunities for recreational boating activities. The Board urges everyone to be prepared to live within the full range of levels that have occurred in the past and of those that may occur in the future. Based on historical observations and projected future conditions, at a minimum, Lake Ontario water levels are expected to range from a high of 75.88 m (248.9 ft.) to a low of 73.56 m (241.3 ft.) at infrequent intervals. However, it is also recognized that future climate conditions are uncertain, and more extreme water levels may be reached and these extremes may occur more often. Levels on the St. Lawrence River tend to vary more widely than on Lake Ontario. Also, these levels do not include the varying local effects of strong winds and wave action that significantly increase or decrease local water levels on both the lake and river, with temporary changes of over half a meter (two feet) possible in some locations.*

*For more information, please see the Board's website ([ijc.org/loslr](http://ijc.org/loslr) (<https://www.ijc.org/en/loslr>) ) and Facebook page (<https://www.facebook.com/InternationalLakeOntarioStLawrenceRiverBoard> (<https://www.facebook.com/InternationalLakeOntarioStLawrenceRiverBoard>)). To receive a weekly email about water levels and flows in the Lake Ontario–St. Lawrence River system, please send a blank e-mail message to [stlaw-L-subscribe@cciw.ca](mailto:stlaw-L-subscribe@cciw.ca) (<mailto:stlaw-L-subscribe@cciw.ca>) with the word 'subscribe' in the title and body of your message.*

## **Contact Us**

Rob Caldwell, Canadian Secretary  
Canada ON  
Canada

[Contact \(/en/contact/contact\\_the\\_international\\_lake\\_o\)](#)

Bryce Carmichael, U.S. Secretary  
United States, OH  
United States

[Contact \(/en/contact/contact\\_the\\_international\\_lake\\_o\)](#)

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## High Outflows from Lake Ontario to Continue Over Winter; Lake St. Lawrence Levels to Fluctuate Widely in Coming Months

December 03, 2019

While Lake Ontario remains above long-term average, regulated outflows will remain as high as feasible based on river conditions. As a result, residents around Lake St. Lawrence are being warned to expect both extreme high and low water levels this winter, as the Board implements a winter deviation strategy. The strategy aims to take full advantage of all opportunities to safely increase outflows and reduce the impact of future levels on Lake Ontario.

High water levels are anticipated when ice begins forming at critical areas of the St. Lawrence River. When ice begins to form, the International Lake Ontario – St. Lawrence River Board must reduce outflows through Moses-Saunders Dam to help create a stable ice cover on the river. Flow management during ice formation helps to prevent ice jams in the St. Lawrence River that can restrict flows and cause local flooding.

The reduced outflows cause levels of Lake St. Lawrence, immediately upstream of the dam, to rise temporarily. The largest and most rapid increases occur closest to the dam, in the area just west of Cornwall, ON and Massena, NY. These effects are reduced moving upstream and tend to be negligible beyond Iroquois, ON and Lisbon, NY.

With Lake Ontario expected to remain well above average for at least the next several weeks, this will also contribute to higher levels of Lake St. Lawrence this winter. The Board is therefore advising residents of Lake St. Lawrence to prepare for the potential of unusually high levels this winter.

As ice formation is completed, outflows can normally be safely increased under the ice. This causes Lake St. Lawrence levels to drop, and this drop is also expected to be greater than normal this winter, as the Board continues to investigate potential opportunities to deviate from Plan 2014 and release higher outflows over the next several months in an attempt to lower the risk of high Lake Ontario levels next spring.

At present, the timing of ice formation remains uncertain, as it depends on both water and air temperatures, which are highly variable from year-to-year. The Board will continue to communicate with Lake St. Lawrence residents and communities as winter approaches and the timing and risk of fluctuating water levels become clear.

Since construction of the St. Lawrence Seaway and Moses-Saunders Dam in the 1950s, it has been necessary to reduce Lake Ontario outflow as ice forms on the St. Lawrence River. This reduces the risk of ice jams by slowing down the current to reduce the forces acting on floating ice pans and any tiny ice particles (frazil ice) forming in the water column. Slower currents keeps ice at or near the surface, and with

weather conditions permitting, facilitates them forming into large pans that accumulate, solidify and build a cover upriver. Once established, outflows can be safely increased to pass under the stable ice cover, allowing higher outflows later in winter and reducing – but not eliminating – the risk of high Lake Ontario levels in spring.

The Board, in conjunction with its staff, continues to monitor conditions on an ongoing basis. Information on hydrologic conditions, water levels and outflows, including graphics and photos, are available on the Board's website and posted to the Board's Facebook page at <https://www.facebook.com/InternationalLakeOntarioStLawrenceRiverBoard> (<http://icm-tracking.meltwater.com/link.php?DynEngagement=true&H=AqX%2Fyxxn%2FCsKfNEzXNs%2BvxKe7ZZW379%2BlapVVCHkcj06tGRioNXHyQXdvLstjwe03oe79I81272iSakin160-usnbn1&X=MHwxMDQ2NzU4OjVkJZTY4MTJkYzNjZWRiMzZiYmYwOWJINTs%3D&S=3-Zlu8yqjZ35HfyakgF-U9MWNTzMKz3xCubU88GtKrk>) (English), and more detailed information is available on its website at <https://www.ijc.org/en/loslr> (<http://icm-tracking.meltwater.com/link.php?DynEngagement=true&H=AqX%2Fyxxn%2FCsKfNEzXNs%2BvxKe7ZZW379%2BlapVVCHkcj06tGRioNXHyQXdvLstjwe03oe79I81272iSakin160-usnbn1&X=MHwxMDQ2NzU4OjVkJZTY4MTJkYzNjZWRiMzZiYmYwOWJINTs%3D&S=T6vOi4Kxy1NPcOF9Ce7AF1XwbukBOelsilcD7gA8I4Q>)

## Contacts:

Rob Caldwell: (613) 938-5864; [Rob.Caldwell@canada.ca](mailto:Rob.Caldwell@canada.ca) (<mailto:Rob.Caldwell@canada.ca>)

Andrew Kornacki: (716) 879-4349, (716) 352-8669; [Andrew.A.Kornacki@usace.army.mil](mailto:Andrew.A.Kornacki@usace.army.mil) (<mailto:Andrew.A.Kornacki@usace.army.mil>)

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*For more information, please see the Board's website ( <http://icm-tracking.meltwater.com/link.php?DynEngagement=true&H=AqX%2Fyxxn%2FCsKfNEzXNs%2BvxKe7ZZW379%2BlapVVCHkcj06tGRioNXHyQXdvLstjwe03oe79I81272iSakin160-usnbn1&X=MHwxMDQ2NzU4OjVkJZTY4MTJkYzNjZWRiMzZiYmYwOWJINTs%3D&S=T6vOi4Kxy1NPcOF9Ce7AF1XwbukBOelsilcD7gA8I4Q>)*

*Facebook page ( <https://www.facebook.com/InternationalLakeOntarioStLawrenceRiverBoard> (<http://icm-tracking.meltwater.com/link.php?DynEngagement=true&H=AqX%2Fyxxn%2FCsKfNEzXNs%2BvxKe7ZZW379%2BlapVVCHkcj06tGRioNXHyQXdvLstjwe03oe79I81272iSakin160-usnbn1&X=MHwxMDQ2NzU4OjVkJZTY4MTJkYzNjZWRiMzZiYmYwOWJINTs%3D&S=3-Zlu8yqjZ35HfyakgF-U9MWNTzMKz3xCubU88GtKrk>)*

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*To receive a weekly email about water levels and flows in the Lake Ontario–St. Lawrence River system, please send a blank e-mail message to [stlaw-L-subscribe@cciw.ca](mailto:stlaw-L-subscribe@cciw.ca) (<mailto:stlaw-L-subscribe@cciw.ca>) with the word 'subscribe' in the title and body of your message.*

## Contact Us

Rob Caldwell, Canadian Secretary  
Canada ON  
Canada

[Contact \(/en/contact/contact\\_the\\_international\\_lake\\_o\)](/en/contact/contact_the_international_lake_o)

Bryce Carmichael, U.S. Secretary  
United States, OH  
United States

[Contact \(/en/contact/contact\\_the\\_international\\_lake\\_o\)](/en/contact/contact_the_international_lake_o)

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# Local mayors not happy with IJC's response to repealing Plan 2014



Tim Meeks

[More from Tim Meeks](https://www.intelligencer.ca/author/tmeeks) (https://www.intelligencer.ca/author/tmeeks)

Published on: October 3, 2019 | Last Updated: October 3, 2019 4:14 PM EDT



Belleville Mayor Mitch Panciuk, left, listens alongside Quinte West Mayor Jim Harrison as community members voice their concerns regarding the Bay of Quinte's high water levels. ALEX FILIPE *JPG, BI*

It's the weather, not the plan.

That's the International Joint Commission's take on a request from six Quinte region heads of council to repeal Plan 2014 and reinstate Plan 1958 to deal with extreme high water levels along the north shore of Lake Ontario.

The IJC, the body appointed to controlling water levels in Lake Ontario and the St. Lawrence River, sent a letter to the group of six — Belleville Mayor Mitch Panciuk, Quinte West Mayor Jim Harrison, Prince Edward County Mayor Steve Ferguson, Brighton Mayor Brian Ostrander, Greater Napanee Mayor Marg Isbester, and Tyendinaga Township Reeve Rick Phillips — stating they would not be repealing Plan 2014, which was designed to provide for more natural variations of water levels of Lake Ontario and the St. Lawrence River that are needed to restore ecosystem health.

The IJC feels climate change is the cause for the high water levels, not Plan 2014, but the municipal leaders disagree.

Since the IJC's Plan 2014 was enacted, the Bay of Quinte has seen higher water levels and more damage to shorelines than under the previous Plan 1958DD.

There have been 100-year high water levels in two of the past three years and the local municipal leaders say the plan is not working. Currently the Bay of Quinte remains 18 inches higher than it was this time last year, raising further concerns about the spring of 2020.

"Every municipality along Lake Ontario shoreline is compromised by the high water levels. It's our septic systems, our wastewater, our drinking water. We need to address this now," said Harrison. "We're talking about the lives and health of people, their businesses and property."

The IJC says it plans to speed up a review of the performance of Plan 2014 regarding water flows and is looking at several options to reduce water levels ahead of 2020.

"There is a glimmer of hope, they did get back to us quickly, which is appreciated because it gives us some time to look at the options and try to work out a plan going forward," Harrison said.

"It's very frustrating for all of us because we're dealing with the consequences of other people's poor decisions," said Belleville Mayor Mitch Panciuk. "Not only are the IJC responsible for the high water levels, they refuse to accept responsibility for their actions. It demonstrates a level of tone-deafness the IJC members have for this issue."

Panciuk said the time to speak up about the high water levels is now during the federal election campaign. He said he spoke to both Bay of Quinte

Liberal candidate Neil Ellis and Conservative candidate Tim Durkin at Wednesday's all candidates debate at the Empire Theatre, and both promised to get Canada to change its members on the IJC to get some action on the issue.

Panciuk said municipal leaders have to start looking toward 2020 and protecting municipal resources, including water treatment and wastewater treatment facilities, if the IJC is not going to take action to lower lake levels.

"The letter takes no responsibility for the fact they have created this man-made phenomenon, this high-water level is all because of the way they have managed the Great Lakes.

"I'm very concerned that they have slowed down the outflow and their solution is to basically accept high water levels going forward," Panciuk said. "What we've seen so far over the last two out of three years leads us to be concerned because it is getting worse, not better."

The heads of council met last week in Quinte West and identified five issues where they will be working to seek direct action to improve the future outlook of the water situation in the Bay of Quinte region and beyond.

They will request that the International Joint Commission revoke the Lake Ontario – St. Lawrence River Plan 2014 and reinstate Plan 1958-DD. They will request the International Joint Commission take immediate action to reduce water levels and keep them down. They will lobby the provincial and federal governments to improve support to property owners and provide them with immediate assistance. They will also request that the provincial and federal government allow municipalities and property owners to take extraordinary measures to protect their properties, such as the ability to build larger, more permanent retaining walls. They called for a response from the International Joint Commission within 14 days of receiving their requests.

They agreed the current water levels have caused overwhelming damage to local infrastructure, public safety and health. Individual municipalities are spending hundreds of thousands of dollars as a result of flooding, not including the devastating impacts on tourism and economic development.

The group made it clear the flooding is a man made problem — not a result of climate change. They feel the International Joint Commission is refusing to take responsibility and they need to be held accountable.



With more than 40 Ontario municipalities along the shore of Lake Ontario, and even more with watersheds that have been impacted; the repercussions of recent flooding have been felt across the province. This group of elected officials are calling on other municipalities to join together in a united effort to make a change.

Greater Napanee Mayor Marg Isbester posted on Facebook Thursday expressing disappointment in the IJC's response.

"Along with my fellow mayors from our region, I am extremely disappointed in the IJC response to our request to immediately put a plan in process to lower our water levels, which are still above historic levels. Without action being taken now, our municipalities and our residents face even worse flooding next spring. I appreciate their quick response, and the promise of a review, but that doesn't put us in any position to protect our residents and our infrastructure. I expect a gathering of the original group as well as the many additional mayors and reeves who have asked to join us, to take place in the very near future. We cannot let this sit. Action must be taken."

## TRENDING IN CANADA

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### Opinion: Ford v Ferris: 'car guy' generation dead and gone

During all 152 minutes of the film,...




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◀ Previous

# Township urging province to let municipalities opt out of conservation authorities

Dec 6, 2019 1:39 PM By: [Jessica Owen](#)



*Lake Simcoe.*

Ramara Township wants to opt out of the services the Lake Simcoe Region Conservation Authority (LSRCA) provides and, earlier this week, they brought a resolution to the county council table for other municipalities to be allowed to follow suit.

A resolution passed in October at the Ramara Township council table outlined the municipality's position on conservation authorities; the township believes they are duplicative, financially unaccountable and in conflict with citizens and private property rights.

The resolution outlined the difficulties the township has faced in challenging the levy the conservation authority “forces” on municipalities, and questions the efficiency of programs and services the conservation authority provides.

## ADVERTISEMENT

**|| One Quick Question**

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Probably will

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May or may not

---

Probably will not

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Definitely will not

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“This is something we put a lot of thought into,” said Ramara Township Mayor Basil Clarke at the county meeting Wednesday.

“When we first joined the conservation authority, we didn’t have the expertise in-house to manage flood plane mapping and to look after the Lake Simcoe Protection Act, but since then, we do all the same services for both Lake Couchiching, Lake St. John, Lake Dalrymple, and Lake Simcoe, but then we have to send it off to the conservation authority to do the exact same thing,” said Clarke.

In 2018, Ramara Township paid \$42,213 to the conservation authority.

Clarke added that the township now has the expertise on staff to deal with conservation.

“Quite frankly, most of what the Lake Simcoe Region Conservation Authority – (probably) 95 per cent of what they’re doing – we have the staff to do it. We no longer need them to protect Lake Simcoe and to protect the watershed,” he said.

Ramara passed the resolution in October expressing a desire to participate in consultations concerning the future of conservation authorities provincially, and requesting an exit clause be added to any new Conservation Authorities Act for any municipality that can prove and show they can provide the same services at the municipal level, which was forwarded to Jeff Yurek, the Minister of the Environment, Conservation, and Parks.

On Wednesday at the county level, the item was received for information.

## How did this story make you feel?

[view results >](#)

## Sarah Elliott

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**From:** Carolyn Lance  
**Sent:** Monday, November 11, 2019 12:36 PM  
**To:** David Reddon; Sarah Elliott; Tanya A. Thompson  
**Subject:** Disposition Matter, November 6th Council meeting  
**Attachments:** Disposition; Region of York, Annual Update on Invasive Species.pdf

Hi. Please find below a Council resolution from the November 6<sup>th</sup> Council meeting, for disposition purposes:

- (A) Christopher Raynor, Regional Clerk, Region of York, providing report entitled 'Annual Update on Invasive Species'.

Moved by Councillor Harding, Seconded by Councillor Sebo

### **RESOLUTION NO. C-2019-0587**

Dave R.

Sarah E.

That correspondence from Christopher Raynor, Regional Clerk, Regional Municipality of York, providing its report entitled 'Annual Update on Invasive Species' expressing its concern about continued invasive species impacts and requesting that funds be restored to key invasive species partner organizations to assist municipalities with mitigating the impacts of invasive species, be received and referred to the Georgina Waterways Advisory Committee, Georgina Environmental Advisory Committee and to the Georgina Agricultural Advisory Committee for information purposes, to the Communications Division for dissemination to the public, and that the Chief Administrative Officer contact the Federation of Canadian Municipalities (FCM) to determine the current status of federal funding to local municipalities concerning the Emerald Ash Borer program.

**Carried.**



#### **Carolyn Lance**

Council Services Coordinator  
Clerk's Division | Town of Georgina  
26557 Civic Centre Road, Keswick, ON | L4P 3G1  
905-476-4301 Ext. 2219 | [georgina.ca](http://georgina.ca)  
Follow us on [Twitter](#) and [Instagram](#), like us on [Facebook](#)

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**Subject:** FW: Regional Council Decision - Annual Update on Invasive Species  
**Attachments:** Original Staff Report - Annual Update on Invasive Species.pdf

**From:** Regional Clerk <[ClerkGeneralLine@york.ca](mailto:ClerkGeneralLine@york.ca)>

**Sent:** Thursday, October 24, 2019 2:50 PM

**To:** Aurora Clerks General Inbox <[Clerks@aurora.ca](mailto:Clerks@aurora.ca)>; [caguila-wong@markham.ca](mailto:caguila-wong@markham.ca); [clerks@newmarket.ca](mailto:clerks@newmarket.ca); EG Clerks General Inbox <[clerks@eastgwillimbury.ca](mailto:clerks@eastgwillimbury.ca)>; King Clerks General Inbox <[clerks@king.ca](mailto:clerks@king.ca)>; Rachel Dillabough <[rdillabough@georgina.ca](mailto:rdillabough@georgina.ca)>; Richmond Hill Clerks General Inbox <[clerks@richmondhill.ca](mailto:clerks@richmondhill.ca)>; Vaughan Clerks General Inbox <[clerks@vaughan.ca](mailto:clerks@vaughan.ca)>; WS Clerks General Inbox <[clerks@townofws.ca](mailto:clerks@townofws.ca)>

**Subject:** Regional Council Decision - Annual Update on Invasive Species

On October 17, 2019 Regional Council made the following decision:

1. The Regional Clerk forward this report to the Minister of Natural Resources and Forestry, expressing concern about continued invasive species impacts and requesting that funding be restored to key invasive species partner organizations to assist municipalities with mitigating the impacts of invasive species.
2. The Regional Clerk forward this report to the local municipalities.

The original staff report is attached for your information.

Please contact James Lane, Manager, Natural Heritage and Forestry at 1-877-464-9675 ext. 75271 or Laura McDowell, Director, Environmental Promotion and Protection at 1-877-464-9675 ext. 75077 if you have any questions with respect to this matter.

Regards,

**Christopher Raynor** | Regional Clerk, Regional Clerk's Office, Corporate Services

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The Regional Municipality of York | 17250 Yonge Street | Newmarket, ON L3Y 6Z1

O: 1-877-464-9675 ext. 71300 | [christopher.raynor@york.ca](mailto:christopher.raynor@york.ca) | [www.york.ca](http://www.york.ca)

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# The Regional Municipality of York

Committee of the Whole  
Environmental Services  
October 3, 2019

Report of the Commissioner of Environmental Services

## Annual Update on Invasive Species

### 1. Recommendation

The Regional Clerk forward this report to the Minister of Natural Resources and Forestry, expressing concern about continued invasive species impacts and requesting that funding be restored to key invasive species partner organizations to assist municipalities with mitigating the impacts of invasive species.

### 2. Summary

Key Points:

- Invasive species continue to be a significant financial burden to municipalities and conservation authorities in Ontario with an estimated combined annual expenditure of \$50.8 million
- The provincial government has significantly reduced funding to key invasive species-focussed partner organizations which will impact support and resources available to municipalities, conservation authorities and residents
- Emerald Ash Borer Management Plan budget and expenditures remain on track
- Staff remain vigilant and continue to work with local municipalities, conservation authorities, partner organizations and other levels of government to review and respond to emerging invasive species threats

### 3. Background

**Invasive species in Ontario have an estimated \$3.6 billion annual impact and are a growing environmental and economic concern**

Ontario has more invasive species than any other province or territory in Canada (over 660 species) and as a result municipalities continue to face significant pressures and costs. In 2019, an updated analysis was carried out by the Invasive Species Centre, in partnership with the Regional Public Works Commissioners of Ontario's (RPWCO) Urban Forestry Subcommittee. This analysis estimated that invasive species expenditures by Ontario

municipalities and conservation authorities are \$50.8 million per year (Attachment 1). Potential economic impacts from invasive species to Ontario's agriculture, fisheries, forests, healthcare, and tourism and recreation industries are estimated to be \$3.6 billion per year (Attachment 1). Economic impacts to these industries include crop yield losses, increased herbicide use and costs, direct impacts to fisheries and forest resource values and production.

### **Province reduced funding to organizations which provide valuable research and resources for invasive species mitigation**

Climate change is expected to increase the rate at which invasive species become established in Ontario and create conditions that allow established species to spread into new areas. The Region's Climate Change Action Plan will identify actions and objectives to address invasive species in a changing climate. The Province's, A Made-in-Ontario Environment Plan (2018) recognizes that climate change will have significant impacts and identifies specific actions to protect our natural environment from invasive species including working with partners and other governments.

In 2019 the provincial government significantly reduced funding to nine programs devoted to combating the introduction, spread and impacts of invasive species. The Invasive Species Centre received a \$50,000 reduction in funding for 2019. The Invading Species Awareness Program funding was reduced by 43% and funding to the Ontario Invasive Plant Council (OIPC) was eliminated entirely.

These funding cuts represent a set-back for preventing and mitigating invasive species impacts in York Region and Ontario. Elimination of funding to the OIPC threatens the loss of valuable expertise and resources such as best management practice documents for managing invasive plants in Ontario, invasive species factsheets, Clean Equipment Protocol, and The Invasive Plant Management Strategy Framework for Ontario Municipalities.

### **York Region collaborates with local municipalities, provincial and federal governments, non-governmental organizations and academia to manage invasive species**

Since 2008, York Region has worked with its partners to raise awareness of invasive species including emerald ash borer, and to prevent and mitigate adverse effects of invasive species on tree canopy and woodland cover.

Regional staff participate on the Communications Committee of the Ontario Invasive Plant Council and co-chair the Regional Public Works Commissioners of Ontario (RPWCO) Urban Forest Sub-committee, which provides a forum to share experiences amongst public works jurisdictions in Ontario.

Ontario's *Invasive Species Act, 2015* includes provisions to restrict possession, propagation and movement of regulated invasive species, and requires management plans be enacted when a regulated species is discovered. Risk assessments for individual invasive species have been completed by the province with a number of new species being proposed for

regulation later this year. Staff will continue to participate in reviewing regulatory proposals and track new species listings.

Regional staff also chair the York Region Invasive Species Technical Working Group which includes representatives from local municipalities, conservation authorities, surrounding jurisdictions including the Chippewas of Georgina Island First Nation, and the federal and provincial governments. Topics include updates on ash tree removal and replacement, and other priority invasive species (e.g. hemlock woolly adelgid, Phragmites, and dog-strangling vine). On August 7, 2019 Regional staff visited Georgina Island and met with staff from the Chippewas of Georgina Island Environmental Department to discuss the recent discovery of emerald ash borer on Georgina Island and to discuss other invasive species impacting the island such as dog-strangling vine and Phragmites. A follow-up meeting is scheduled to discuss collaboration regarding various environmental and natural heritage projects.

### **June 2011 Council endorsed the York Region Emerald Ash Borer Management**

At its meeting on June 23, 2011, Council endorsed the York Region [Emerald Ash Borer Management Plan](#) outlining an active management approach. The emerald ash borer will likely always be present; however, over the next 10 years, with a diminished supply of living ash trees and the impact of natural and introduced predators (e.g. parasitic wasps), their numbers should decline. Staff continue with proactive management to mitigate emerald ash borer impacts including assessment of priority ash trees for treatment and removal of hazard trees in the York Regional Forest. The Region has also partnered with Local Enhancement and Appreciation of Forests (LEAF) to offer an additional tree planting subsidy for residents who have lost an ash tree to emerald ash borer.

## **4. Analysis**

### **York Region at risk for a number of invasive pests, plants and aquatic species**

Regional staff and regulatory agencies remain vigilant in monitoring for invasive tree pests and diseases. In 2019, monitoring traps were installed in ash trees on Regionally-owned land to monitor the status of emerald ash borer populations. Survey results confirm that emerald ash borer continues to be present throughout the Region, and appears to be impacting urban ash trees to a greater degree than ash trees in woodlands. In April 2019 emerald ash borer was detected on Georgina Island for the first time.

Hemlock woolly adelgid, a tiny (0.8 mm) invasive insect that has killed billions of hemlock trees in the northeastern United States, was detected and eradicated (2012, 2013) at two sites in southern Ontario (Etobicoke and Niagara Region). In 2019, two new infestations were confirmed in Niagara Region: Niagara Gorge and Wainfleet Township. The Canadian Food Inspection Agency has completed a delineation survey and control measures are in place to prevent further spread.



Invasive plants continue to impact natural and agricultural areas throughout York Region. Forestry staff work in partnership with Roads Maintenance staff to implement best practices (e.g. manual removal and herbicide treatments) removing hazardous plants such as wild parsnip and giant hogweed along Regional roads.

There are currently 48 known invasive aquatic species including fish, mussels, plants and disease threatening the health and function of our watersheds including Lake Simcoe. Invasive quagga mussels continue to impact nutrient cycling and algal blooms in our lakes. The Region has made operational changes (\$100,000 annually) to our water intake systems to adapt to increasing levels of quagga mussels which clog the water intakes to our drinking water plants.

For more information and status updates on priority invasive species currently impacting or threatening York Region, see Attachment 2 – Priority Invasive Species in York Region.

### **York Regional Forest is a research site for biological control of emerald ash borer and dog-strangling vine**

Natural Resources Canada's biological control program for emerald ash borer has included release sites in the York Regional Forest since 2015. Two species of tiny (2-4 mm), stingless wasps were released, which pose no threat to residents. Larval wasps destroy emerald ash borer eggs and larvae. Biological control is an effective part of the solution to control introduced invasive species, and has been successful in the past (e.g. purple loosestrife, gypsy moth). Early indication is that the York Regional Forest release site has successfully established a wasp population contributing to the success of the biocontrol efforts across the watershed and beyond.

The biological control of dog-strangling vine with *Hypena* moth continues to advance in the York Regional Forest as part of a research partnership with Agriculture and Agri-Food Canada, the University of Toronto, and a private company. The *Hypena* moth caterpillar feeds only on this invasive plant, reducing its ability to mature and produce seed. Caterpillars have been released at seven sites since 2015 and three sites have confirmed established populations. The work has expanded in 2019 to include additional release sites and monitoring of all sites continues. Biological control is a long-term solution and it is anticipated that it will take several years to see tangible impacts.

### **Invasive European common reed (*Phragmites australis*) persists across York Region**

In 2019, Natural Heritage and Forestry staff, working in partnership with Roads Maintenance, carried out an initial inventory of invasive European common reed (*Phragmites*) within Regional road right of ways (Attachment 3). Findings from this first inventory conducted for *Phragmites* will be compared to future survey data to assess the spread of this invasive plant. Staff will consult with local municipalities, conservation authorities, community groups and other regional departments to identify priority areas for control (e.g. natural heritage feature protection, drainage infrastructure). *Phragmites* is extremely difficult to eradicate. It grows in and around waterways (ditches, ponds, wetlands) and there are no approved

herbicides for use to control it in and around water. In 2020, staff will pilot best management practices to address priority populations and evaluate effectiveness.

### **Public outreach provides tools and options to help residents manage emerald ash borer and other invasive species**

Invasive species education is a core component of programming, and focusses on awareness and identification of priority species, and sharing information resources related to control and mitigation. In partnership with Forests Ontario, the Region developed a Woodlot Owner Advisory Program which provides information to woodlot owners for managing the impacts of emerald ash borer. Through a partnership with Local Enhancement and Appreciation of Forests (LEAF), residents can receive an increased subsidy to replace lost ash trees with trees of a different species through the Backyard Tree Planting Program.

## **5. Financial**

### **Budget supports overall program including emerald ash borer priority tree removals and replacement of Regional road ash trees**

Currently, the majority of costs associated with emerald ash borer include tree protection, street tree removal and replacement along Regional roads, and hazard tree removal within the York Regional Forest. The original cost estimates from the Emerald Ash Borer Management Plan (2012–2021, \$10 million) remain on track. From 2012 to the end of 2019, approximately \$7.8 million will have been spent to manage impacts through the peak of the infestation. Emerald ash borer will likely persist on the landscape indefinitely, and beyond 2021 the Region will remain dedicated to managing impacts by supporting research and monitoring, treating priority ash trees to protect them from emerald ash borer and offering information and resources to residents. Any additional budget pressures associated with emerging invasive species impacts will be brought forward for Council's consideration as part of future budget processes.

### **Minister is requested to restore provincial funding to key invasive species programming in Ontario**

Invasive species continue to be a significant financial burden to municipalities and conservation authorities in Ontario (Attachment 1). The Province's funding cuts to key invasive species programs such as the Invasive Species Centre, Ontario Invasive Plant Council and the Invading Species Awareness Program is a considerable setback. These organizations provide leadership and educational resources, contribute to research, and provide technical expertise and collaborative opportunities for municipalities, conservation authorities and residents across Ontario. Provincial funding cutbacks reduce the Region's ability to provide valuable outreach and education opportunities to residents through invasive species-related programming, and limit staff's ability to provide accurate and reliable information to our residents. Provincial funding for invasive species prevention has supported early detection, rapid response and control which are imperative for a successful response to

the challenge of invasive species in Ontario. This report will be submitted to the Minister of Natural Resources and Forestry requesting the Minister to restore funding to key invasive species partner organizations (Invasive Species Centre, Invasive Species Awareness Program, Ontario Invasive Plant Council) to assist York Region and other municipalities with mitigating the growing impacts of invasive species.

## **6. Local Impact**

The Invasive Species Technical Working Group provides a forum for sharing knowledge about emerald ash borer as well as other invasive species. York Region staff will continue to collaborate with local municipalities in monitoring, prevention, education and outreach activities as well as sharing latest science.

All nine local municipalities have or are working on Emerald Ash Borer Management Plans or implementation strategies, which align with Regional interests. The Region focuses on managing impacts to Regional assets (e.g. street trees along Regional roads, York Regional Forest properties) and local municipalities focus on street trees on local roads, parklands and more. Jurisdictions work collaboratively on communications and outreach initiatives. Most local municipal plans include removing and replacing trees, with some protection of selected trees with insecticide.

## **7. Conclusion**

Emerald ash borer is established throughout York Region, and most recently confirmed on Georgina Island. Efforts to manage and mitigate emerald ash borer impacts will continue to be guided by our Emerald Ash Borer Management Plan, including removal and replacement of street trees and mitigating impacts to the York Regional Forest, as well as offering tree planting rebates to residents who have lost ash trees on their property.

Staff remain vigilant and continue to work with local municipalities, other levels of government and non-profit organizations to review emerging threats and work proactively to prevent and respond to the impacts of invasive species. In light of the recent funding reductions to invasive species focussed partner organizations, staff recommend that the provincial government reinstate funding to these organizations as there is no direct funding to municipalities. These organizations are integral in providing resources to municipalities and community groups working to manage the threat and impact of invasive species in Ontario.

For more information on this report, please contact James Lane, Manager, Natural Heritage and Forestry at 1-877-464-9675 ext. 75271 or Laura McDowell, Director, Environmental Promotion and Protection at ext. 75077.

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Recommended by: **Erin Mahoney, M. Eng.**  
Commissioner of Environmental Services

Approved for Submission: **Bruce Macgregor**  
Chief Administrative Officer

September 19, 2019  
Attachments (3)  
eDocs #9694193

# ESTIMATED EXPENDITURES ON INVASIVE SPECIES BY ONTARIO MUNICIPALITIES & CONSERVATION AUTHORITIES

Between 2017-2019, the Invasive Species Centre (ISC) conducted online and telephone surveys to review current known and reported expenditures on invasive species incurred by municipalities and conservation authorities in Ontario. We received data from 147 municipalities and 23 conservation authorities specific to the most recent fiscal year or annual expenditures. Estimates are based on averages and extrapolations of this data.



Total estimated expenditures by municipalities and conservation authorities across Ontario:

**\$50.8 MILLION/YEAR**

Estimated average expenditure per Ontario municipality:

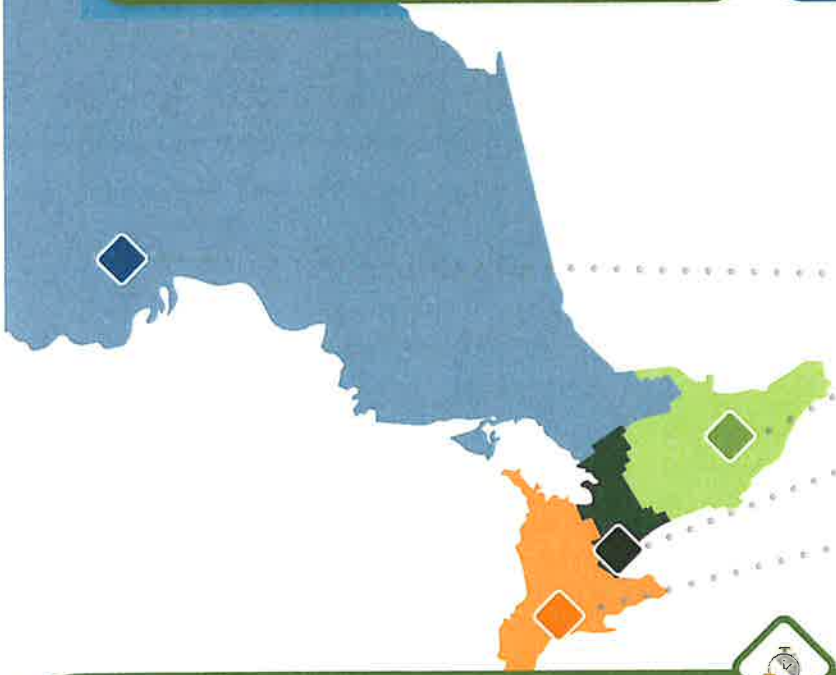
**\$218,148/YEAR**

This number includes an average \$1,077,562/YEAR spent by urban areas, \$213,518/YEAR spent by counties, and \$28,976/YEAR spent by townships.



Estimated average expenditure per Ontario conservation authority:

**\$314,724/YEAR**

AVERAGE ANNUAL EXPENDITURES BY REGION:

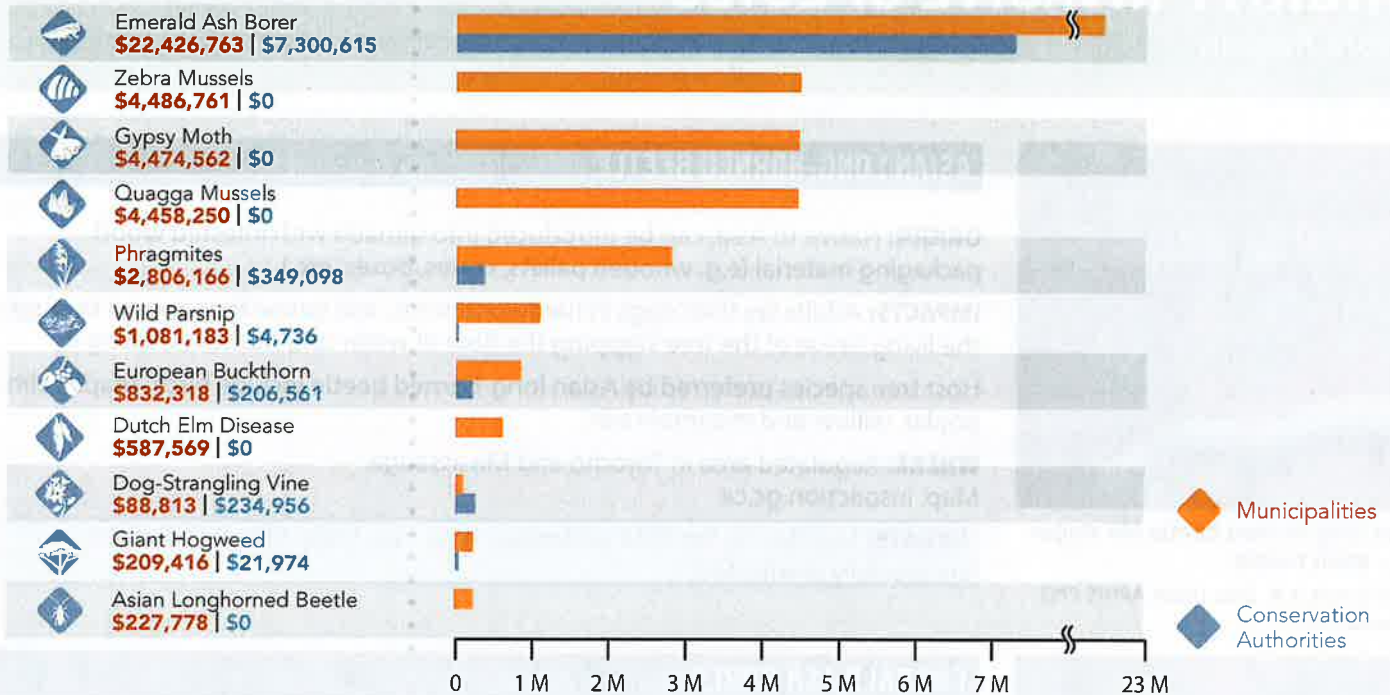
	PER MUNICIPALITY	PER CONSERVATION AUTHORITY
North (Blue Diamond)	\$10,770	\$9,735
Central (Green Diamond)	\$132,424	\$293,757
South (Orange Diamond)	\$527,573	\$710,222
West (Dark Green Diamond)	\$172,939	\$127,403



Invasive Species Centre

While this report estimates what Ontario municipalities and conservation authorities are spending on invasive species, this is just a fraction of the economic impacts of invasive species. The potential economic impacts on agriculture, fisheries, forests, healthcare, tourism and the recreation industry are estimated to be approximately **\$3.6 billion/year in Ontario.**<sup>1</sup>

## ESTIMATED ANNUAL EXPENDITURES ON INDIVIDUAL INVASIVE SPECIES



## HOW WAS THE MONEY SPENT?

### Municipalities

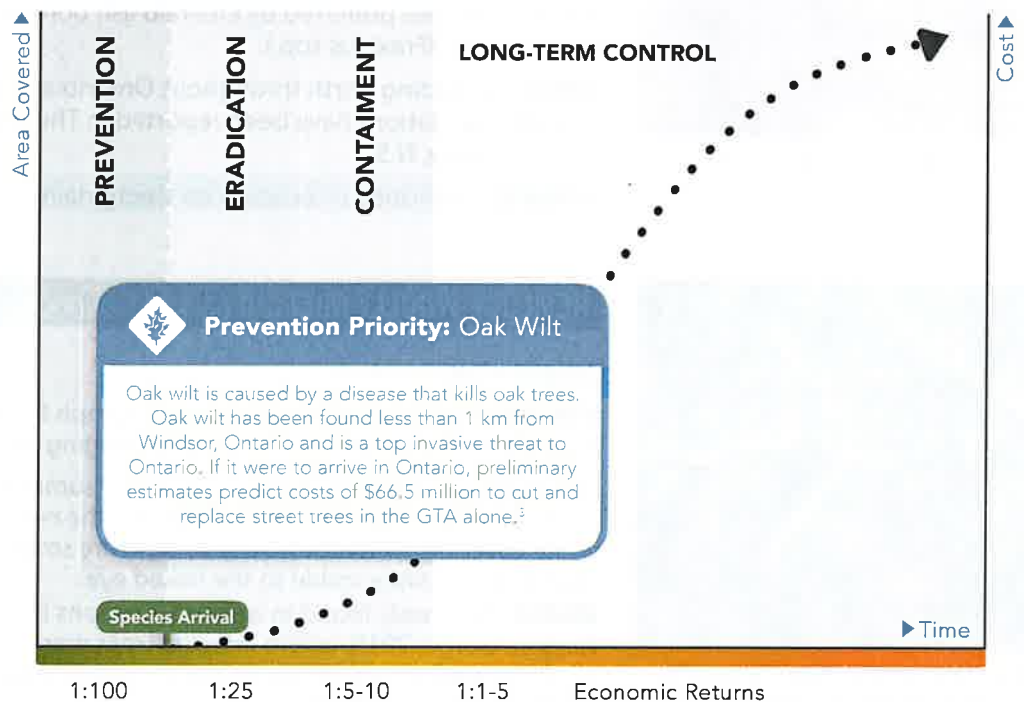


### Conservation Authorities



- ◆ Prevention
- ◆ Detection
- ◆ Control & Management

**It pays to invest in prevention.** The invasion curve shows that investing in prevention provides economic returns **100x higher** than management after species arrival.<sup>2</sup>



<sup>1</sup> Vyn, Richard. 2017. "An Assessment of the Costs and Economic Impacts of Invasive Species in Ontario." Report prepared for the Invasive Species Centre.

<sup>2</sup> Adapted from the Generalised Invasion Curve (Agriculture Victoria, 2009).

<sup>3</sup> Canadian Forest Service, 2018. Unpublished data.

Zebra mussel photo: Amy Benson, U.S. Geological Survey, Bugwood.org.

Vyn, Richard. 2019. "Estimated Expenditures on Invasive Species in Ontario: 2019 Survey Results." Report prepared for the Invasive Species Centre.

Contact [info@invasivespeciescentre.ca](mailto:info@invasivespeciescentre.ca) for a copy of the full report.



Asian long-horned beetle life stages  
egg - adult beetle.

Photo Credit: K.R. Law, USDA APHIS PPQ, Bugwood.org

## ASIAN LONG-HORNED BEETLE (*Anoplophora glabripennis*)

**ORIGIN:** Native to Asia, can be introduced into Canada with infested wood packaging material (e.g. wooden pallets, crates, boxes, etc.).

**IMPACTS:** Adults lay their eggs in hardwood trees, and larvae then tunnel through the living tissue of the tree stopping the flow of water and nutrients, killing it.

Host tree species preferred by Asian long-horned beetle include birch, maple, elm, poplar, willow and mountain ash.

**WHERE:** Regulated area in Toronto and Mississauga.

Map: inspection.gc.ca

**UPDATE:** Monitoring for 2019 underway, if no new finds, CFIA will declare successfully eradicated.



Emerald ash borer - adult beetle.

Photo Credit: CFIA

## EMERALD ASH BORER (*Agrilus planipennis*)

**ORIGIN:** Native to Asia, proven to be highly destructive in its introduced range.

**IMPACTS:** Adults lay their eggs in ash trees, and larvae then tunnel through the living tissue of the tree stopping the flow of water and nutrients, ultimately killing it, usually within three years.

Host tree species preferred by emerald ash borer are green, black, white, blue and European ash (*Fraxinus* spp.).

**WHERE:** Spreading north throughout Ontario and into Quebec and New Brunswick. Satellite populations have been reported in Thunder Bay, ON, Winnipeg, MB and Halifax County, N.S.

**UPDATE:** Confirmed infestation on Georgina Island April 2019.



Adelgid nymphs with white woolly covering feeding on underside of hemlock needles

Photo Credit: Connecticut Agricultural Experiment Station, Bugwood.org

## HEMLOCK WOOLLY ADELGID (*Adelges tsugae*)

**ORIGIN:** Native to Asia.

**IMPACTS:** The hemlock woolly adelgid nymph feeds on the tree's stored starches, depleting its energy stores and thus damaging the tree.

The insect is inactive through much of the summer, resuming feeding and development in the fall. During this time, the nymph produces its distinctive woolly white covering. Hemlock woolly adelgid are small in size and only their woolly coverings are easily visible to the naked eye.

**WHERE:** Previously found in isolated locations in Ontario (Etobicoke, 2012 and Niagara Gorge, 2013) where infested trees were removed and destroyed. In 2017, a well-established population was discovered in southwestern Nova Scotia.

**UPDATE:** Two new reports confirmed in Ontario: Niagara Gorge and Wainfleet Township June 2019.

# PRIORITY INVASIVE SPECIES

in York Region



Gypsy moths in the City of Vaughan  
Photo Credit: R. Clark, York Region

## GYPSEY MOTH (*Lymantria dispar dispar*)

**ORIGIN:** Native to Europe and Asia, gypsy moth was first introduced to North America in the late 1860's in Boston and it has been spreading ever since. Gypsy moth was first discovered in Ontario in 1969 however widespread defoliation did not occur until 1981.

**IMPACTS:** This European defoliator feeds on a wide variety of tree species but appears to prefer oak (*Quercus*). The moth's larvae form (caterpillar) feeds aggressively on the tree's leaves, reducing growth and, in severe cases, killing the tree. Gypsy moth outbreaks occur every 7 to 10 years with peak feeding observed in July.

**WHERE:** The distribution of gypsy moth coincides with the range of the insect's preferred host species of oak however, no known populations of the insect have been found in the northern-most part of the oak species' range (e.g. New Liskeard and west of Thunder Bay). The gypsy moth is considered to be present throughout much of southern Ontario.

**UPDATE:** City of Toronto carried out aerial and ground treatments on public and private property from May 26-June 7, 2019. In York Region, staff continue to monitor gypsy moth populations and treatments are not warranted at this time.



Adult Spotted Lanternfly  
Photo Credit: Lawrence Barringer,  
Pennsylvania Department of Agriculture,  
Bugwood.org

## SPOTTED LANTERNFLY (*Lycorma delicatula*)

**ORIGIN:** Native to southern Asia and is often identified by its distinguished colouring.

**IMPACTS:** A significant potential threat to fruit and timber industries through aggressive sap-sucking by both nymph and adult growth stages. If this pest were to be established in Ontario it would have significant impacts on wine, grape, tender fruit, apple and timber (e.g. pine, oak, walnut) industries which have a total estimate economic total of over \$5 billion.

**WHERE:** The first confirmed North American sighting was in 2014 in Pennsylvania, USA. Currently only confirmed in the USA, it has been placed on Canada's regulated pest list to limit the threat of outbreak.

**UPDATE:** A total of \$17.5 million emergency funding was announced by the Pennsylvania Department of Agriculture in early 2018 to stop the spread in southeastern Pennsylvania.



# PRIORITY INVASIVE SPECIES

in York Region



Dense patch of dog-strangling vine in the York Regional Forest

Photo Credit: D. Laxton, York Region

## DOG STRANGLING VINE (*Vincetoxicum rossicum*)

**ORIGIN:** Native to Eurasia, introduced to the northeastern United States in the mid 1800s for use in gardens.

**IMPACTS:** Forms dense stands that overwhelm and crowd out native plants and young trees, preventing forest regeneration. This is a serious concern for the conifer plantations in the York Regional Forest.

Leaves and roots may be toxic to livestock. Deer and other browsing animals also avoid dog strangling vine, which can increase grazing pressure on more palatable native plants.

This vine also poses a threat to monarch butterfly populations; butterflies lay their eggs on the plant but, the larvae are unable to successfully complete their life cycle.

**WHERE:** Currently it is spreading into backyards and natural areas across York Region at an alarming rate, as it produces seeds that are easily carried by the wind over great distances.



European common reed along road side in York Region

Photo Credit: C. Ogden, York Region

## EUROPEAN COMMON REED (*Phragmites australis*)

**ORIGIN:** Native to Eurasia and introduced to the eastern seaboard of North America in the early 19th century.

**IMPACTS:** An aggressive perennial grass that has been damaging ecosystems in Ontario for decades. The plant grows very quickly to heights of almost 5 metres (15ft) which crowds out native vegetation resulting in decreased plant biodiversity in turn impacting native wildlife populations. Dense stands of the plant can even lower water levels in ponds and wetlands.

**WHERE:** Increased sightings throughout York Region most prominently along road sides and in ditches.

**UPDATE:** As of July 2019, staff completed an inventory of populations along Regional roads and will be consulting with the local municipalities to identify priority areas for piloting removal using best management practices.



Photo Credit: D. Cappaert, Michigan State University, Bugwood.org

## GARLIC MUSTARD (*Alliaria petiolata*)

**ORIGIN:** Herb native to Europe.

**IMPACTS:** Can invade relatively undisturbed forests. Once established it can displace native wildflowers like trilliums (*Trillium spp.*) and trout lily (*Erythronium americanum*). It hinders other plants by interfering with the growth of fungi that bring nutrients to the roots of the plants.

Threatens several of Ontario's species at risk, including American ginseng (*Panax quinquefolius*).

**WHERE:** Established in southern and eastern Ontario (throughout York Region) as far north as Sault Ste. Marie, in parts of Quebec, and south to North Carolina and Kentucky in the United States.

# PRIORITY INVASIVE SPECIES

in York Region



Photo Credit: J. Ferreira, City of Brampton

## GIANT HOGWEED (*Heracleum mantegazzianum*)

**ORIGIN:** Southwest Asia (Caucasus Mountains).

**IMPACTS:** Poses a significant threat to human health. Giant hogweed sap can cause a condition called phytophotodermatitis, which makes skin extremely sensitive to sunlight, and can result in severe burns and blisters. It also outcompetes native plants, reduces biodiversity and degrades the quality of riparian habitats (the zone of land along or around a body of water). Giant hogweed can negatively impact agriculture and is listed as a noxious weed under the Weed Control Act.

**WHERE:** Sparsely scattered throughout York Region (and all of Southern Ontario). Confirmed reports as far north as Sudbury and Elliot Lake.



Photo Credit: K. Reese, York Region

## JAPANESE KNOTWEED (*Fallopia japonica*)

**ORIGIN:** Plant is native to eastern Asia and was first introduced into North America in the late 1800s.

**IMPACTS:** Commonly invades disturbed areas with high light, such as roadsides and stream banks. Reproduction occurs both vegetatively (rhizomes) and seeds, making this plant extremely hard to eradicate. The dense patches shade and displace other plant life and reduce wildlife habitat.

**WHERE:** Increased sightings throughout York Region, road sides and fields.

**UPDATE:** York Region staff are working with local municipalities to monitor the distribution of this plant in York Region. Mapped locations are being compiled.



Wild parsnip along road side in York Region

Photo Credit: C. Ogden, York Region

## WILD PARSNIP (*Pastinaca sativa*)

**ORIGIN:** Native to Eurasia. Likely brought to North America by European settlers, who grew it for its edible root.

**IMPACTS:** Can form dense stands and spreads quickly in disturbed areas such as abandoned yards, waste dumps, meadows, open fields, roadsides and railway embankments. Its seeds are easily dispersed by wind and water and by mowing or other equipment.

Like giant hogweed and other members of the carrot family, it produces sap containing chemicals that can cause human skin to react to sunlight, resulting in intense burns, rashes or blisters.

**WHERE:** Spreading rapidly in southern Ontario, with an increase in sightings along roadsides in York Region.

# PRIORITY INVASIVE SPECIES

in York Region



Photo Credit: Ontario Federation of Anglers and Hunters

## WATER SOLDIER (*Stratiotes aloides*)

**ORIGIN:** Plant is native to Europe and Northeast Asia. Likely introduced as an ornamental water plant sold for water gardens. It is submerged most of the year and rises to the surface in summer months.

**IMPACTS:** Water soldier decreases plant diversity by forming a dense vegetative mat and crowding out other aquatic plant species. Its presence can change water chemistry and influence populations of important aquatic organisms. The plant has sharp, serrated leaves which can be harmful to those who handle it. Dense patches can also obstruct recreational activities such as swimming and fishing.

**WHERE:** The only known populations in North America occur in the Trent River (east of Peterborough, ON) and the Black River (Sutton, ON). No new sightings of plants have been observed in the Black River since 2016, while the population in the Trent Severn continues to spread. Provincial and local partners are currently monitoring known populations and attempting to control the spread of this plant.

**UPDATE:** A new population of water soldier was reported in a large pond on private property within the floodplain of the Black River in the Town of Georgina. The Ministry of Natural Resources and Forestry, and the Ontario Federation of Angler and Hunters are working with the landowner to remove the plants to prevent introduction to the Black River and Lake Simcoe.



Photo Credit: Ohio State University, USDA Forest Service, Bugwood.org  
Water Soldier

## BEECH LEAF DISEASE

**ORIGIN:** The first detection of beech leaf disease was in Ohio, USA in 2012 and has spread rapidly since. The cause and method of spread is unknown.

**IMPACTS:** American beech trees are already at risk from beech scale and beech bark disease. Beech leaf disease shows characteristics of an invasive pathogen and is thought to affect the ability of the tree to photosynthesize. It first appears as dark bands on the leaf, later causing leaves to shrivel and dry.

In areas where the disease is established; close to 100% of American beech trees are affected. It also makes trees more susceptible to other pathogens and pests. After several years with the disease, the tree will die.

**WHERE:** First discovered in Elgin County in 2017 but has not been detected in York Region.

# PRIORITY INVASIVE SPECIES

in York Region



Photo Credit: D.W. French, University of Minnesota, Bugwood.org

## OAK WILT (*Fungus: Bretziella fagacearum*)

**ORIGIN:** First reported in Wisconsin in 1942 however, its origin is technically unknown.

**IMPACTS:** All oak species are at risk. The red oak is the most susceptible with mortality occurring the most rapidly (as soon as 30 days). White and bur oak appear to be slightly more resistant. Oak trees are a highly valuable resource and play a significant ecological role which includes providing food for many forms of wildlife.

**WHERE:** Oak wilt has spread throughout the Eastern United States. In 2016, Oak wilt was confirmed on Bell Isle in the Detroit River less than 1 kilometer from the shores of Windsor. Oak wilt is not currently known to be present in Ontario.

**UPDATE:** St. Clair Region Conservation Authority and Ministry of Natural Resources and Forestry have partnered to trap nitidulid beetles (who spread the fungus) to monitor for oak wilt in St. Clair Township.



Quagga mussels (left) Zebra mussels (right).

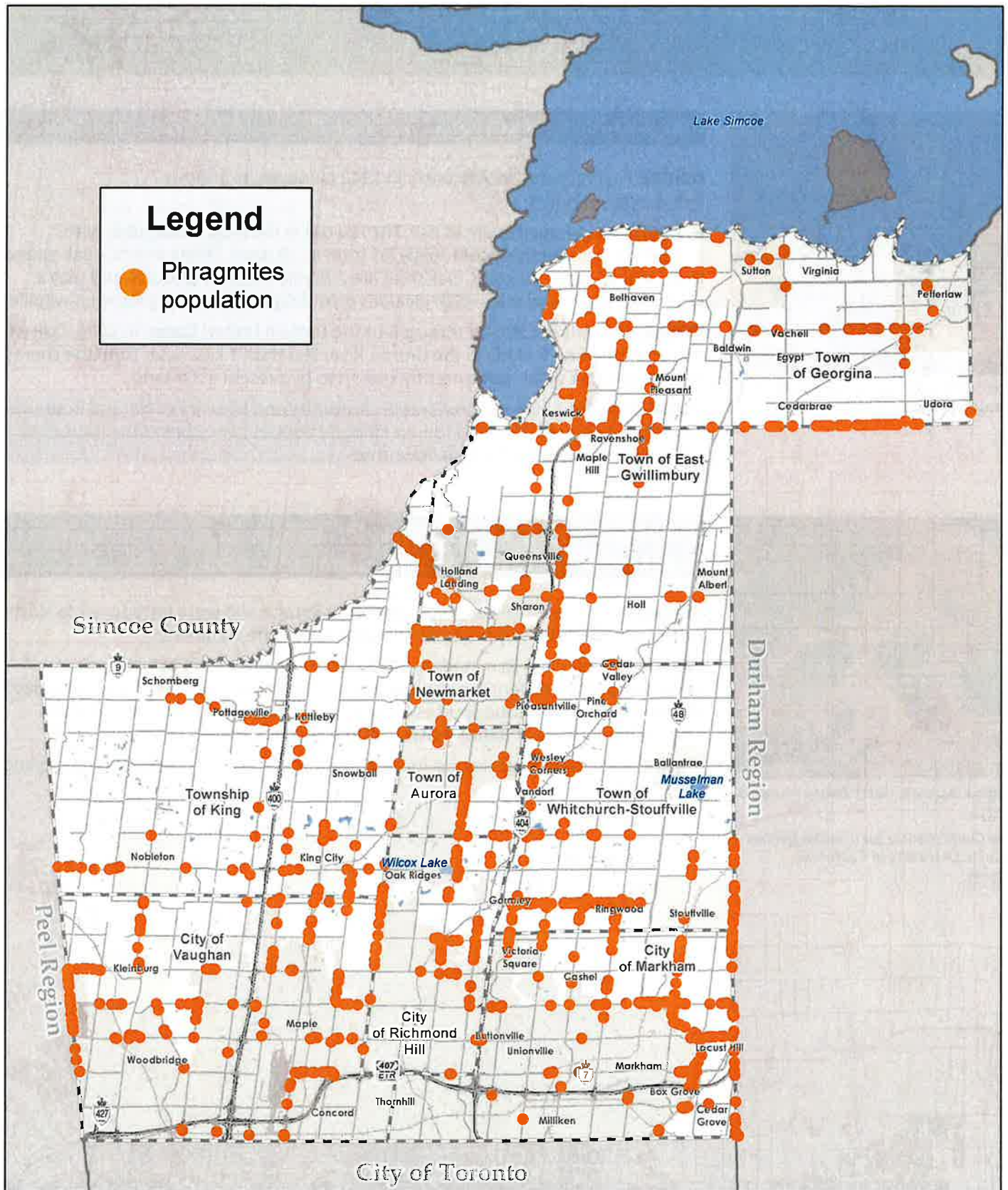
Photo Credit: Centre for Invasive Species Research, University of California, Riverside

## ZEBRA MUSSELS (*Dreissena polymorpha*) & QUAGGA MUSSELS (*Dreissena rostriformis bugensis*)

**ORIGIN:** Both mussel species originated from Europe and were introduced to North America in the 1980's by boats travelling between the continents.

**IMPACTS:** Firmly cling to materials and other organisms causing clogs in pipes, motors and other water-related equipment or infrastructure. They live in abundant clusters, taking away food sources for phytoplankton-dependent species and limiting biodiversity of native mussels, clams, turtles and crustaceans.

**WHERE:** Both mussel species are found throughout the Great Lakes Basin, including Lake Simcoe.



**European common reed (*Phragmites australis*) populations along York Region road right of ways**  
**Annual Update on Invasive Species**  
**October 3, 2019**



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