

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.

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