

## **Report to Community & Protective Services Committee**

**To:** Chair and Members  
Community & Protective Services Committee

**From:** Scott Stafford, Managing Director – Parks & Recreation

**Subject:** Invasive Species Management Update and Funding Plan

**Date:** March 30, 2021

## **Recommendation**

That, on the recommendation of the Managing Director, Parks and Recreation:

- a) the invasive species management update provided in this report BE RECEIVED for information purposes;
- b) the financing for the continuation of the invasive species management program in 2021 BE APPROVED as set out in the Sources of Financing Report attached hereto as Appendix “A”; and,
- c) Civic Administration BE DIRECTED to bring forward a budget amendment case during the 2022 Annual Budget Update to establish funding from 2022 to 2024 for the further continuation of the invasive species management program.

## **Executive Summary**

In 2017, the City of London was one of the first municipalities to bring forward a comprehensive City-wide Invasive Plant Management Strategy. With Council’s approval of the Strategy, a three year budget was established from the Woodland Acquisition and Management Reserve Fund to carry out yearly implementation – primarily in London’s parks and open space system. This report seeks funding approval for 2021 to continue the Program.

Several City Divisions have carried out numerous projects across the City to remove invasive species, with a particular focus on Phragmites. A summary of those projects is outlined in this report.

## **Linkage to the Corporate Strategic Plan**

Building a Sustainable City – London has a strong and healthy environment: protect and enhance waterways, wetlands and natural areas.

## **Analysis**

### **1.0 Background Information**

#### **1.1 Previous Reports Related to this Matter**

Planning & Environment Committee – September 25, 2017. A report seeking Council’s approval of the London Invasive Plant Management Strategy (LIPMS) and establishing capital funding to carry out yearly implementation.

### **2.0 Discussion and Considerations**

#### **2.1 LIPMS Program Summary**

The LIPMS set out a detailed vision for controlling multiple invasive species across the entire City. The following recommendations were identified to implement the strategy.

Some recommendations require their own specific strategy to fully and effectively address the problem:

- 1) Develop a *Phragmites* control program. This is the City's highest priority species, as it poses the biggest threat to the ecological integrity and long term health of the City's Natural Heritage System, and creates potential health and safety concerns.
- 2) Further expand what the City is already implementing in our Environmentally Significant Areas. Further expanding control measures will provide a significant net benefit to the City's ESAs over the long-term.
- 3) Further expand the City's Woodland Management Program to address invasive species City-wide more quickly.
- 4) Implement the Council approved Thames Valley Corridor Plan (TVCP), including the Natural Heritage, stewardship, and protection sections of the TVCP Action Plan regarding invasive species.
- 5) Over the long-term, develop further control programs for listed priority species over time, once recommendations 1 through 4 have been implemented and their effectiveness has been tracked, monitored, and verified.
- 6) Develop a process to include in the LIPMS a trigger to identify, map and treat *Phragmites* on vacant lands and future development lands and to work with the various owners.

The Ontario Invasive Plant Council noted that "The City of London is a provincial leader in municipal action against invasive plants. They're doing great work prioritizing invasive plant species and populations to help safeguard urban biodiversity hubs. London's strategic approach to invasive plant planning has helped provide a model for other municipalities to build from."

## **2.2 Invasive Species Projects**

As a top priority, in 2018 staff finalized a city-wide *Phragmites* eradication program that has been implemented by several Divisions within their Programs: ESA Management; Storm Water Ponds; Road-side Operations, Parks Operations and Urban Forestry. All Areas need attention, as invasives species left in road-side ditches and storm ponds eventually migrate to London's downstream natural areas. Working through Service London, a specific process was established for people to report locations of *Phragmites* to the City that require attention. To date, we have received 108 reports.

Many of the City's capital projects now have a process to identify priority invasive species like *phragmites* within the project area and eliminate them before or as part of the project. This requires extra effort early on in the process to address the invasives before the construction project begins. Further education of project managers, and modifications to our internal processes are being looked at to make this effort more efficient.

Most contract documents now include "clean equipment" protocols, to help ensure that invasive species seeds are not transported to other invasive-free sites. More work is needed to make this new process consistent across many Service Areas.

### **Projects by Service Area:**

In London's Environmentally Significant Areas (ESA) three of the five priority species in the LIPMS including *Phragmites*, Japanese Knotweed and Giant Hogweed have in large part been addressed, and are being monitored. Over 17,600 sq m of *Phragmites* in 50 sites in our ESAs has been eliminated. Dog Strangling Vine is being managed in Kilally Meadows following an Integrated Pest Management approach that includes removals

and a biocontrol agent approved by the Canadian Food Inspection Agency. In some ESAs including Kains Woods and Meadowlily Woods, the majority of the Buckthorn has also been removed, but in other ESAs Buckthorn control is still underway to protect and enhance the ESAs.

In 2019, the City received a letter of commendation from the National Invasive Species Centre for the excellent work completed under the LIPMS and the Adopt an ESA program: “Beyond the tremendous ecological benefits of this strategy, London is enabling community-led engagement around invasive species control such as the notable buckthorn removal work undertaken at the Kilally Meadows Environmentally Significant Area.”.

Within London’s 85 larger park woodlands, Common buckthorn (*Rhamnus cathartica*) is the primary invasive plant species that is affecting woodland diversity and health. Buckthorn is problematic as it is aggressive and thrives in poor conditions. It creates dense thickets that put their leaves out first in the spring and are one of the last species to lose them in the fall. It out competes native plants and creates monocultures. It can even alter soil composition so that it suits its own growth and not others. It also produces berries that contain seeds that are very long-lived in the soil “seed bank”. Due to all these factors it is very challenging to manage.

Since 2017, the invasive plants species program in woodlands has gained traction. Fifty one woodlands have been managed for buckthorn encompassing about 125 Ha. Whereas it sprouts from seeds, suckers when cut to the ground and is spread to new locations by birds, follow up applications are needed. Each year, all previous year’s sites are revisited as part of the program and “spot” treated where needed. Although progress has been seen in some woodlands, it is expected that 3-5 years of annual retreatment of the area is needed to eradicate buckthorn.

Woodlands are tracked as part of the City’s Corporate Asset Management (CAM) program. The presence of buckthorn stands affects the structural diversity and biodiversity attributes which make up 60% of the level-of-service rating. Addressing buckthorn in woodlands improves not only the natural forest system but also has a positive impact on the recreational user’s experience in the woodland.

In 2021, there are 21 new woodlands proposed for buckthorn removal along with revisits and spot treatment where needed. In addition to buckthorn, other invasive plant species that are managed in woodlands include: patches of phragmites, garlic mustard, wild carrot, thistle and Japanese knotweed.

Throughout London’s parks, 76 of 166 phragmites sites were addressed, equaling approximately 4.8Ha of land. About two-thirds of those sites are now “clean”, while the rest require the normal follow-up treatment in 2021. Additional park sites will be addressed in 2021.

Along London’s roadways, the Lower Thames Valley Conservation Authority (LTVCA) coordinated Phragmites management along the roadsides in their watershed in 2018-2019. The City split the cost for this work with LTVCA for the roadsides inside the City limits. Subsequently, a contractor was engaged to start to control the remaining 939 identified phragmites sites. To date, 12% of the sites (27% of the area of Phragmites) have been addressed. Annual work on the remaining sites should continue to control further spread and eliminate known phragmites on our roadsides.

In London’s storm water management ponds there are many factors in which we are dependant on in becoming invasive free (including phrag), the largest of which depends on the elimination of these types of species on lands adjacent to and upstream of SWM facilities. This is a longer term joint effort with land owners and developers to address. Through 2018 – 2020, specific actions included 54 stormwater management facilities being treated for invasive species (wet ponds). Of these, several facilities were treated twice over 2 consecutive years, and several were treated 3 times over consecutive years.

Work needs to continue to complete the treatments of these ponds and several new sites, and to begin working upstream.

Within the Thames River Corridor some work has been undertaken in natural areas and parks as part of the Programs above. Starting upstream at the Fanshawe dam, a specific project to eliminate Dog-strangling Vine (DSV) was undertaken, as it spreads its seeds downstream with river flow. Our contractor has removed over 31 hectares of DSV and it is monitored and addressed up as needed.

A specific comprehensive project along the Thames will be undertaken as part of the larger River Management Plan that was a recommendation of the One River EA. This work will first focus on the river banks between Boler Road and Wonderland Road and be coordinated with the Springbank Dam removal and shoreline restoration works.

### 3.0 Financial Impact/Considerations

#### 3.1 Program Funding

To support an increase to the City's efforts to control invasive species, in 2017 Council approved an additional \$350,000 per year in 2018 and 2019 and the funds were allocated to five Program Areas as follows: Thames Valley Corridor; Environmentally Significant Areas; Woodlands; Parklands; Storm Water Ponds; and Roadsides.

With the exception of the funding allocated for works specifically along the Thames River, each Division has utilized its portion of the funding from 2018 and 2019 and additional funding is required to continue work in 2021. This report seeks approval of \$375,000, as set out in Appendix "A", to fund the work in 2021. The allocation of funding will be as follows:

<b>Program</b>	<b>Proposed 2021 Budget</b>
Environmentally Significant Areas	\$75,000
Woodlands	\$75,000
Parklands	\$75,000
Storm Water Management Ponds	\$25,000
Road-sides	\$100,000
Thames Valley Corridor	\$25,000
<b>Totals</b>	<b>\$375,000</b>

A funding request for continuation of the program implementation to eliminate invasive plant species in 2022 through 2024 will be brought forward in a budget amendment case as part of the 2022 Annual Budget Update process.

## Conclusion

London's proactive and comprehensive Invasive Plant Management Strategy is a provincially and nationally recognized Program to address the growing issue of invasive species in urban areas. The Program directly addresses one of Council's Strategic Goals to protect and enhance our natural areas. With the proposed funding in 2021, London can continue to eliminate invasive species across the City.

**Prepared and Submitted by:** Andrew Macpherson  
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**Recommended by:** Scott Stafford  
Managing Director, Parks & Recreation

## APPENDIX A