

**Date:** 2021-06-23

**Subject:** **Information Report: Phragmites at Professors Lake**

**Contact:** Ed Fagan, Acting Director, Parks Maintenance and Forestry  
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**Report Number:** Community Services-2021-784

**Recommendations:**

1. That the report titled: **Information Report: Phragmites at Professors Lake (RM 45/2021)**, to the City Council Meeting of July 7, 2021, be received.

**Overview:**

- **At the meeting of June 16, 2021, Council requested staff report back with an update on possible interim solutions for the 2021 season to address Phragmites in Professor's Lake.**
- **Phragmites have been identified at 10 locations at Professors Lake and are of great concern to residents in the surrounding areas.**
- **In response to resident concerns, City representatives are exploring various mitigating strategies and collaborating with The Ontario Invasive Plant Council and the Ministry of the Environment Conservation and Parks.**
- **The purpose of this report is to provide a status update on Phragmite growth at Professors Lake, preventable steps and options for both long term and short term control.**

**Background:**

Phragmites are a common and invasive tall reed that can grow within aquatic or subaquatic environments up to 6 meters in height. By investigating the surrounding areas, staff have found a mixture of Native and Non-Native Phragmites.

Native Phragmites are less invasive and are usually mixed with other plant species. Their stems tend to break down quickly with smaller seed heads. Non-Native Phragmites are very invasive with large, tall and dense seed heads. They contain both living and dead shoots from previous growing seasons. This makes it easy for the re-sprouting process, if it should be cut down. Due to how tall they can grow, they tend to overcrowd other species by blocking the sunlight.

### **Current Situation:**

The Phragmites are currently in the reproduction phase along the South, East and North side of Professors Lake. They can be dispersed naturally through water, air or animal movement, as well as through human actions and equipment such as horticultural trades, boats and trailers. The most common method of reproduction is through rhizomes that can grow horizontally several meters per year. Vertical plant growth can reach 4cm per day and plants can produce thousands of seeds annually.

Staff are looking into various mitigating strategies that will be communicated with both Council and the Professor's Lake Association. There are 10 sites at Professors Lake that are currently being investigated which includes a mixture of native phragmites, non-native phragmites and other species such as cattails and bulrushes.

### Preventative Measures

#### **1. Do not purposely plant**

Invasive Phragmites are available for purchase at garden and horticultural centers. Gardeners should consider using only native Phragmite plants in their water gardens. By choosing to not plant invasive Phragmites in a garden, the risk of spread is limited.

#### **2. Avoid transportation via equipment**

When leaving an area containing Phragmites, be sure to brush off clothing and clean equipment on-site to avoid the transfer of seeds to new sites.

#### **3. Do not attempt to compost invasive Phragmites**

Seeds and rhizomes can survive and grow in a compost heap, creating a new stand or dispersing to other areas. In order to dispose of invasive Phragmites, plants should be dried and burned or disposed of in the garbage or at a landfill.

### Various Methods

#### **Method 1: Use of treatment (Habitat Aqua Herbicide) directly on foliage**

A new product is Imazapyr, a non-selective herbicide used for the management of broad range of weeds and brush in agricultural and non-agricultural, forestry or industrial setting. It is considered a post emergence that is absorbed by the leaves and roots. It moves rapidly through plants and inhibits activity of a necessary enzyme. Susceptible plants stop growing soon after treatment is administered. Imazapyr is

approved for sale and use in an aquatic setting in non-cropland areas, for the control of certain invasive plants that grow in and around aquatic sites. City representatives are working with the Ministry of the Environment Conservation and Parks to determine the permit process and upon being granted will utilize the product.

### **Method 2: Manually cutting**

The benefits of this process is that the plant will drown and die once it is cut below the water line. Manually cutting the plant above the water line or on the shore will not impact the root system and may stimulate the growth of the plant.

### **Method 3: Use of Truxor machine to mechanically remove Phragmites**

Staff are meeting with a technical expert to determine availability and timelines of the Executive Director for the Invasive Phragmites Control Centre. Our intentions are to use this method upon confirming timelines and costing.

### **Method 4: Controlled burn**

This is an effective way of removing the dead biomass in the winter months and allows staff to re-inspect the following year for any new shoots. However, the scheduling of this procedure has proven to be difficult over the past couple of seasons as the lake has to be completely frozen. Staff will continue to evaluate and explore this option for future seasons.

### Next Steps

As staff seek to discover mitigating strategies for Phragmite growth, staff will continuously evaluate the best option(s) for each location while being mindful of preserving the natural habitat of the environment. Further research and discussions will be made to attain permits for the use of herbicides and or machinery. A management plan will be shared with residents and members of Council that incorporates a variety of the aforementioned options depending on location

### **Corporate Implications:**

#### Financial Implications:

There are no financial implications directly associated with the approval of this report. Staff will ensure any additional resources required will be incorporated in the 2022 Budget Submission or requested through a budget amendment report, subject to Council approval.

#### Other Implications:

There are no other implications associated with the approval of this report.

### **Term of Council Priorities:**

This report supports the following Term of Council Priorities:

- Brampton is a Green City – Implement a Green Framework

- Brampton is a Well-Run City – Continue to transform corporate culture to be more resident-focused in its approach to service delivery

**Conclusion:**

Managing the Phragmite population will be a long term program that will require extensive timeframes to see lasting results. Staff will continue to collaborate with entities that will allow the City to identify environmentally suitable solutions to eradicate the Phragmite growth within the Professor's Lake area. This will also allow staff to develop a feasible plan that can be implemented in other areas that are challenged by this plant. Through this process, we will continue to have open communication with residents that will in return foster a strong relationship with the community.

Reviewed by:

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Ed Fagan, Acting Director  
Parks Maintenance & Forestry

Approved by:

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Marion Nader,  
Commissioner, Community Services

Submitted by:

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David Barrick  
Chief Administrative Officer

**Attachments:**

Appendix A: Phragmites Site Overview Photos  
Appendix B: Truxor Machine