

St. Thomas Plan of Action

Phragm Free City 2020



Phragmites australis

North America's most invasive species



Prepared for Ontario Invasive Plant Council Webinar January 18, 2017
by David Collins, Chair, St. Thomas Phragmites Control Committee

The
partnership
begins on
Lake
Margaret





This is why we want Lake Margaret to be Phragmites free.



THE PLAN FOR A PHRAG FREE CITY
BEGAN IN JULY 2013 WITH:

CONCERNED RESIDENTS

PETITION TO COUNCIL

COUNCIL ACTION

COMMITTEE FORMED

ERADICATION PLAN CREATED

ACTION BEGAN-JANUARY 2014

The Phragmites Control Committee endorses

Best Management Practices

which very clearly states that -

“EVERY possible care is taken to protect the native vegetation and wildlife.”

St. Thomas City Council

In order to develop a successful eradication programme, your local City Council must be an integral part of the partnership process. This is of ultimate importance when advocating an eradication programme on City, Town or Municipal property. The City should recognize the problem and take action.

From a committed City Council will flow

- An elected Councilor as a committee member
- A Team Partnership with Fire, Police, Parks, Roads and Drainage
- A representative from the Conservation Authority as a committee member
- Access to specially trained staff and equipment
- A negotiated annual budget without having to search for grant funding.

PHASE 1

Lake Margaret Watershed

Year 1(2014) – Initial plan created by Janice Gilbert
MNRF Letter of Opinion permits obtained through to 2019
Budget provided
Eradication programme implemented

Year 2(2015) - Visual check and eradicate as necessary

Year 3(2016) – Add Pinafore Lake and Osprey SWMP
Visual check and eradicate as necessary
Very likely remove Lake Margaret, Butterfly Meadow and 2 SWMPs
as we anticipate NO regrowth. LOO addendum requested.

Year 4 (2017)- Visual check, map and eradicate as necessary. Commence a spot spray programme.



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Lake Margaret Phase 1 (2014) success

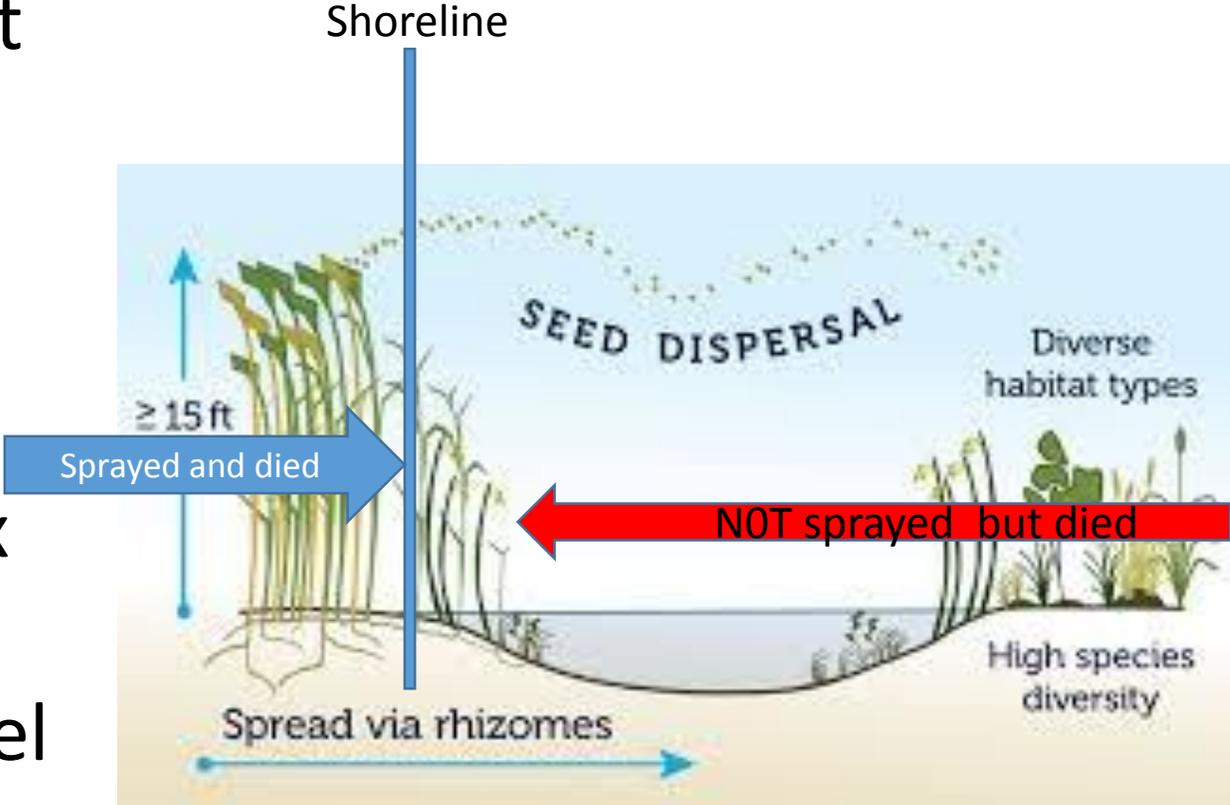


Phragmites growing in the water at the shore **cannot** be sprayed but was cut in the fall. Alternate plans are in the works.



Phragmites on dry land was treated, cut and removed. Every care possible was taken to prevent spray damage to adjacent vegetation.

The Pesticide Management Regulatory Agency has approved Roundup WeatherMax Ultra and its attached label which states you may not spray over water.



The City of St. Thomas, during its first year spraying of the Lake Margaret buffer and using WeatherMax, discovered that the pesticide was carried by osmosis through the rhizomes of the shore plants which are connected directly to the plants in the water. In the first year of spraying and not spraying over water, a kill of 95% of water plants was achieved. No water dwelling species were negatively affected.

Diagram courtesy of greatlakesphragmites.org

September 2014



May 2015



September 2014



May 2015



Same shoreline as in left photo

September 2014



May 2015



SUCCESSFUL ERADICATION IN 2015 (year 2)

South Shore regrowth



Turtle Pond regrowth



July 2015

Eradiation date
September 4, 2015



5 weeks later
October 9, 2015



Lake Margaret buffer sprayed by City Weed Technician September 1, 2016. Buffer free of all Phragmites October 4, 2016.



The Phragmites Control Committee was pleased to announce on January 16, 2017 that Lake Margaret and its adjacent buffer lands are now Phrag Free.

BUT THERE IS A CAVEAT

Until *Phragmites australis* is totally eradicated in the Province of Ontario and even though areas in our City have been\will be deemed Phrag Free, still means that diligence, inspection and spot spraying will be necessary on an annual basis. The City Weed Technician should be assigned to perform these tasks on a regular basis in August and September, annually.

PHASE 2

Balance of City

Mapped (Fall 2014 and updated Fall 2015)

Year 1 – Plan created by committee

Budget provided by Council

Permits through Pesticide Act and Ontario Regulation 63/09

Eradication programme implemented

Severe fire hazard areas eradicated as priority one

Selected road corridors, ditches sprayed

Years 2 to 6 - Visual check and eradicate as necessary

Eradicate identified and mapped cells in the City to limit of budget. In

Year 3 (2017) commence spot spray programme.

Pesticides Act and Ontario Regulation 63/09

Public Works

May 2011

Public Works Exception - Class 9 pesticides are ingredients in products for use only under exceptions to the ban

As set out in subsection 7.1(2) of the Pesticides Act, there is an exception to the ban on the use of Class 9 pesticides in order to promote health or safety. Section 17 of O. Reg. 63/09 further clarifies that the promotion of health or safety means, among other things, the destruction, prevention or **control of plants**, fungi or animals that affect public works within a municipal corporation.

Under the public works exception set out in s.23 of O. Reg. 63/09, it may be necessary to use Class 9 pesticides to:

- prevent damage to the structural integrity of a public work, if the potential damage caused to the public work by
- the plant, fungus or animal would place the health or safety of a person at risk;
- facilitate essential maintenance of a public work, if the plant, fungus or animal would interfere with or prevent the maintenance;
- allow for emergency access to a public work, if the plant, fungus or animal would interfere with or prevent the access;
- ensure the security of a public work, if the plant, fungus or animal would place the security at risk

Hydro Corridor(Burwell to Highbury) – Deemed severe fire hazard by Fire Chief



Eradication date
September 2,
2015



5 weeks later
October 9, 2015





South Edgware and



Burwell Intersection

ROAD CORRIDOR SUCCESS

Before treatment on left
Eradication date September 4, 2015



Southdale between Lake



Margaret Trail and Fairview

After treatment on right
October 9, 2015



Faith Baptist Entrance



Fairview north of Southdale

Road
Corridors
2016

Sprayed
Wait 30
days for
pesticide to
work
completely
Cut



Cutting of dead stalks in Phragmites Cells

One indisputable fact has become very clear after three years of eradicating Phragmites. It is imperative that at the end of each spray cycle, the dead Phragmites stalks be cut down.

After spraying around Lake Margaret in 2014 the dead stalks were cut down. This allowed for spot spraying in 2015 and 2016 as it was much easier to see and target individual and small patches of re-growth. This simple act cut the cost of spraying remarkably.

When doing initial spraying of road corridors and larger swaths of Phragmites using our current techniques we achieve almost a 90% kill with the initial spray. In the follow-up year, re-growth is harder to spot and spray as the dead stalks are an interference. Spray costs remain high as the whole corridor or swath must be resprayed in order to kill a few errant stalks.

We have reached the point in city-wide spraying that the cutting of dead stalks must be implemented on an annual basis until we reach PhragFree status. In 2016 the committee budgeted funds to cut some of the road corridors. This will permit spot spraying in 2017 of these areas and allow for more funds to be applied to new areas to be initially sprayed.

The cutting of dead stalks on an annual basis coupled with the kill success that is achieved will see the spraying costs drop drastically as we are able to move to more and more simple spot spraying conducted by the City Weed Technician. This spot spray programme would be continued annually to and post 2020.

It would be advantageous to build in a cutting programme with the acquisition of an appropriate cutting device to carry through and assist us in achieving PhragFree status by 2020. This device could also be used for regular roadside vegetation cutting well into the future.

The
Team Partnership
Initiative

Parks and Recreation Department

Director of Parks and Recreation is a member of the Phragmites Control Committee.

Committee's budget is integrated into that of Parks and Recreation.(\$13,000 annually to 2020)

Certified P and R employees will liaise with the committee to spot spray as required.

Reported intersection obstructions may be cleared by P and R or Roads staff.

Director of P and R will liaise with public and private rail lines concerning Phragmites on their rights of way. Eradication to begin in 2016.

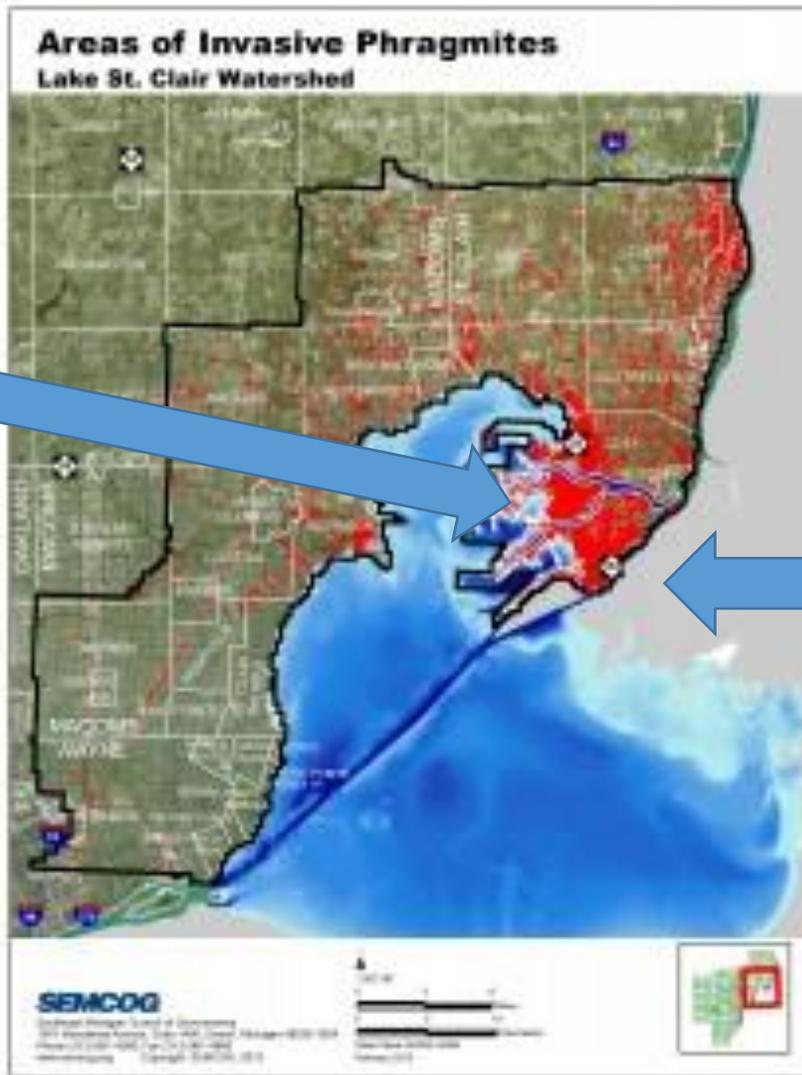
Fire Services

Consultation with St. Thomas Fire Service led to the development of a strategy to fight Phragmites fires within the city. The service was consulted on the eradication plan for 2105 and asked for input into high risk fire sites. Their concerns were incorporated into the plan for 2015. Consultation continues in 2016.

Subsequently, educational information has been provided to the Fire Co-ordinators of Ontario and the Elgin County Fire Chiefs through webinar and face to face presentations.

Residential encroachment creates high risk of fire





Harsens Island

Walpole Island

In 2009, Ducks Unlimited mapped 12,000 acres of *Phragmites* around Lake St. Clair with more than 8,000 acres in the St. Johns Marsh, St. Clair Flats area of Clay Township alone. 2017 estimate is 51,597 acres.



Walpole Island

FIRE STATISTICS

1996 – 2010 New York State 7390 Phragmites fires

Last 15 years Staten Island New York, 103 Phrag fires with flames 70 feet high

April 2010 Staten Island 40 acre wetland Phrag fire, 1 house destroyed 2 houses damaged

March 2012 Auburn Hills, Michigan 175 and Joselyn Road, Phrag fire took 4 hours to control

April 2013 Harsen's Island in Lake St. Clair 150 acre Phrag fire 2000 degree heat created own wind and spread embers

April 2014 Salem, New Jersey 20 acre Phrag wetland fire destroyed two fire vehicles valued at \$200,000

Police Services

Our local Police Service have agreed that patrolling officers will be made aware of and report Phragmites blocking intersections and hydrants. Assistance also provided when city wide spraying is in effect.

Roads Department

Crews will provide the manpower to cut, where deemed necessary, the Phragmites and maintain road corridors according to City/Provincial established protocols.

It may be necessary for crews to respond to an encroachment onto private property. This is established through City procedures.

Equipment cleaning procedures will need updating.

ROAD CORRIDORS ARE SPREAD VECTORS



Proliferation of Invasive Species – Ontario

Roads disturb natural ecosystems and facilitate the spread of invasive plant species (Gelbard and Belnap 2003). Monocultures of the invasive, European variety of common reed, *Phragmites australis* have invaded roadside ditches in Ontario.

Phragmites out-competes native plants because it spreads quickly and is tolerant of the salty roadside conditions. Proliferation is facilitated as seeds readily disperse down road corridors on the wind and once established grow underground stems that give rise to new plants. The most common spread of *Phragmites* is via root fragments carried on road maintenance equipment from one area to the next.

Ontario Road Ecology Group, Toronto Zoo. 2010.
A Guide to Road Ecology in Ontario, prepared for the
Environment Canada Habitat Stewardship Program for Species at Risk.
ISBN: 978-1-89541-50-6
CASE STUDY© Mandy Karch.

COOPERATIVE SUPPORT FROM
KETTLE CREEK CONSERVATION AUTHORITY

KCCA will assess and present to their Board an eradication programme to be conducted on their lands contained within the boundaries of the City of St.Thomas.

Final Piece of the Partnership

To work with our surrounding neighbours to encourage their implementation of local eradication programmes.

Central Elgin, West Elgin, Southwold Township and London have commenced eradication of Phragmites within their borders.

A Province-wide plan to curb the spread for Phragmites

Proposal “A”

In the Province of Ontario, in every Municipality, City, Town, etc. there is an Official Plan for future development. Within this plan there are certain steps that developers must take in order to secure approvals for future building and development.

Proposal “B”

Any roadside or road corridor construction/reconstruction to be undertaken for any reason (see below), within the Province of Ontario by any contractor, developer or municipality, must take certain steps in order to secure approvals for the future construction. This will include new roads, road widening, new or upgraded installation of any utility including sewer, drainage, water, gas, electric, cable, telephone

It is proposed that the following be added:

- at least one year prior to any development taking place on undeveloped land or any construction/reconstruction taking place on any roadside or road corridor, the development company/the construction company/municipality must engage the services of an Invasive Species Expert to determine if such any invasive species listed on the Provincial Invasive Species List exists on the land in question.**
- should an invasive species be discovered, the developer shall take measures to have the species in question eradicated completely from the land in question and satisfy the Invasive Species Expert of this eradication prior to any development beginning**

Rationale:

- invasive species are easily spread to other lands when surface soil is removed and stored for future use.**
- contaminated soil brought back to the original site simply re-contaminates**
- contaminated soils moved to any other site simply creates an invasive situation in a different location**
- Clean Equipment Protocols become far easier for all concerned**
- the spread of Invasive Species is vastly curtailed**
- the eradication of Invasive Species is enhanced**

The contents of this presentation are the
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City of St. Thomas Phragmites Control
Committee.

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David Collins at:

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Thank you

SPREADING THE ST. THOMAS PLAN

Presentations to the following groups:

January 2015 – Fire Co-ordinators of Ontario

February 2015 – Elgin County Council

February 2015 – Elgin County Fire Chiefs

March 2015 – Ontario Phragmites Working Group

April 2015 – Mayor's Symposium on Phragmites Control

June 2015 – Long Point Cottager's and Landowner's Association

November 2015 – Thamesford Lions Club

November 2015 – MorelMag.ca "Stop the Invasion"

March 2016 – West Elgin Nature Club

April 2016 – Invasive Phragmites: Best Management Practices for Roadsides Workshop, Guelph

June 2016 – Friends of Ellice and Gads Hill Swamps

January 2017 – Webinar - Ontario Invasive Plant Council

The plan has been featured on the following web sites:

Ontario Phragmites Working Group

Ontario Invasive Plant Species

Great Lakes Phragmites Collaborative

Ontario Legislature Official Record, October 15, 2015, Jeff Yurek commenting of Invasive Species Act

Several newspaper/magazine articles in 2016 featured the St. Thomas Plan "PhragFree 2020"

Assistance given upon request to:

Private citizen – Niagara on the Lake

Private citizen – Kitchener

Student – Niagara College

Naturalist – City of Windsor, programme for eradication presented to Windsor Council December 21, 2015

Chief Horticulturist, Facilities Management – University of Western Ontario

BASF Corporation Canada

Manager of Parks, Forestry and Horticulture – Sarnia

Ecologist, Environmental and Parks Planning Services – London

Private citizen – Sparta, Ontario

Mayors of Tay Township, Owen Sound

Many thanks to the hardworking committee:

Inge Bowman - Vice Chair

Lynda Pressey

Ted and Helga Bear

Randy Lidkea

Mark Tinlin - Council Representative

Jeff Lawrence – KCCA Representative

Ross Tucker – Director of Parks and Recreation

A very sincere thank you is extended to Mayor Jackson and members of Council for their support and encouragement.