



Invasive *Phragmites* Control Efforts at Rondeau Provincial Park and Long Point area

Ontario Phragmites Working Group
February 18, 2018

Pilot Project

MNRF approved for Emergency Registration (ER) by Pest Management Regulatory Agency (PMRA) to control Phragmites in wet areas at Rondeau Provincial Park and Long Point area using Roundup Custom.

Summary of Highlights

- Aerial and ground treatments in 2016 (~500ha) and 2017(~600ha)
- First time a project of this scale undertaken in Canada
- Environmental monitoring with University of Waterloo to assess the project.
- Supported by;
 - Nature Conservancy of Canada , Ducks Unlimited Canada, Long Point Waterfowlers' Association, Bird Studies Canada, Long Point Company, Long Point World Biosphere Foundation
 - Local Communities
 - Neighbouring jurisdictions (States of Michigan and Ohio)

Rationale for the ER at Long Point and Rondeau

Ecological Significance

- Global, national and provincial designations (i.e. UNESCO Biosphere Reserve, Earth Science and Life Science Areas of Natural & Scientific Interest, Provincially Significant Wetland, RAMSAR Site, Important Bird Area, etc.)
- Habitat for wetland species, including **23 species at risk**, and many provincially rare species

Threat From Phragmites

- Phragmites expansion poses an imminent threat to SAR and their habitats
- Long Point and Rondeau are at an ecological tipping point. If action is not taken these values are at risk of becoming critically imperilled.
- MNR's Best Management Practices recommend integration of mechanical, chemical and cultural controls. However, this is compromised by the inability to conduct chemical control in aquatic areas.



Steps to Implementation



Developing the Rationale

Letters of Support from MOECC, and the Registrant

Involving Key Partners

MNRF Class Environmental Assessments



Communications

Stakeholder Engagement

First Nations (10 communities)

Public Notifications



Authorizations

PMRA – Emergency Registration

DFO – Fisheries Program Review and SAR Permit

MOECC Permits to Perform an Aquatic Extermination



Implementation

Aerial and ground herbicide treatment(s)

Rondeau (100ha)
Long Point Region (~1000ha)

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Rolling/cutting and prescribed burns
Winter 2018



Monitoring and Evaluation

Herbicide efficacy

Fate of herbicide

Effects on sensitive communities

Collaborating to Restore Coastal Wetlands

The Long Point Phragmites Emergency Use Registration
Pilot Project

Ontario Phragmites Working Group AGM
January 18, 2018



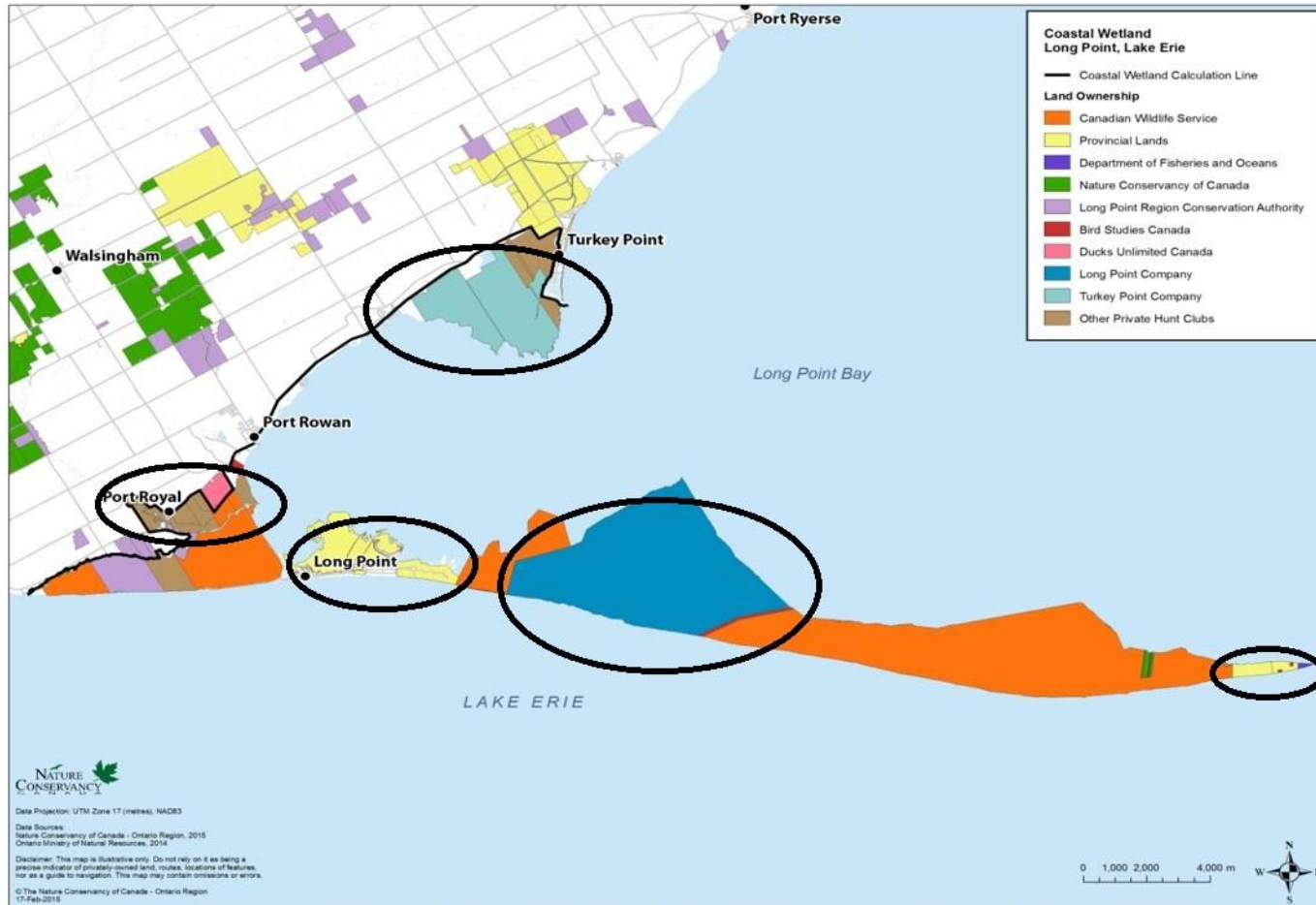
Phragmites australis

The Threat

- Perennial grass; spreads by seed, rhizome, stolon
- Forms dense stands that choke out other vegetation; inhospitable to wildlife
- Allelopathic; nutrient competitor
- Canada's worst invasive plant (P. Catling, 2005, Agriculture and Agri-food Canada)
- European native – no natural controls in North America



Phragmites Control in the Long Point Region



Long Point Region Coastal Wetlands

What's the big deal?

- One of the few remaining coastal wetlands on Lake Erie with natural, hydrological connections and pulses
- Global, national and provincial designations (e.g. UNESCO Biosphere Reserve, Earth Science and Life Science Areas of Natural & Scientific Interest, Provincially Significant Wetland, RAMSAR Site, Important Bird Area, etc.)
- Provides habitat for a high number of wetland-dependent wildlife, including ~23 species at risk.
- High number of provincially rare species and vegetation communities
- Significant opportunity for landscape-scale impact

NCC's Role

- Support the MNRF-led application for Emergency Use Registration of glyphosate (RoundUp Custom) for use in aquatic habitats
- Leading the control work on private lands in Long Point region – aerial and ground
- Support and deliver aspects of Communication and Monitoring Plans
- Support and participate in the **Long Point Phragmites Action Alliance** (LPPAA)
- LPPAA – represents over 25 groups, collaborative to support phragmites awareness, education and control efforts

Tools of the Trade



Aerial Treatment – 236 ha



- Expedition Helicopters contracted by MNRF
- Using GPS-based software to control spray booms
- Accu-Flo nozzles at ASAE Coarse classification to control drift
- Maximum height of spray – 3m of above plants
- Maximum speed of 60 km/h

Aerial Treatment – 236 ha



- Helicopter calibration



Aerial Treatment – 236 ha



PHRAGMITES TREATMENT - HELICOPTER FLIGHT LINES TURKEY POINT



Ground Treatment – 254 ha



- Two Marsh Masters required
- MMs designed for wetland work; low impact travel, low ground pressure, amphibious, built to work in tough conditions
- One 20' Jon boat with Go-devil motor and sprayer



Ground Treatment

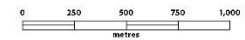


PHRAGMITES AUSTRALIS GROUND TREATMENT SITES, TURKEY POINT

 Common Reed

Common Reed Treatments

 Marsh Master Sprayer (81.1 ha)



This map is illustrative only. Do not rely on it as being a precise indication of predevelopment land, water, locations of features, etc. as a guide to navigation. This map may contain omissions or errors. Not survey grade.

Data Sources:
Nature Conservancy of Canada - Ontario Region, 2017
Ontario Ministry of Natural Resources and Forestry, 2017
ESRI, 2017

October 24, 2017



Ground Treatment

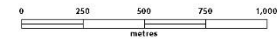


PHRAGMITES AUSTRALIS GROUND TREATMENT SITES, LOWER BIG CREEK

 Common Reed

Common Reed Treatments

 Marsh Master Sprayer (21.9 ha)



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Nature Conservancy of Canada - Ontario Region, 2017
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ESR, 2017

October 24, 2017



Ground Treatment

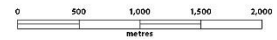


PHRAGMITES AUSTRALIS GROUND TREATMENT SITES, LONG POINT COMPANY BIRD STUDIES CANADA

 Common Reed

Common Reed Treatments

 Marsh Master Sprayer (150.9 ha)

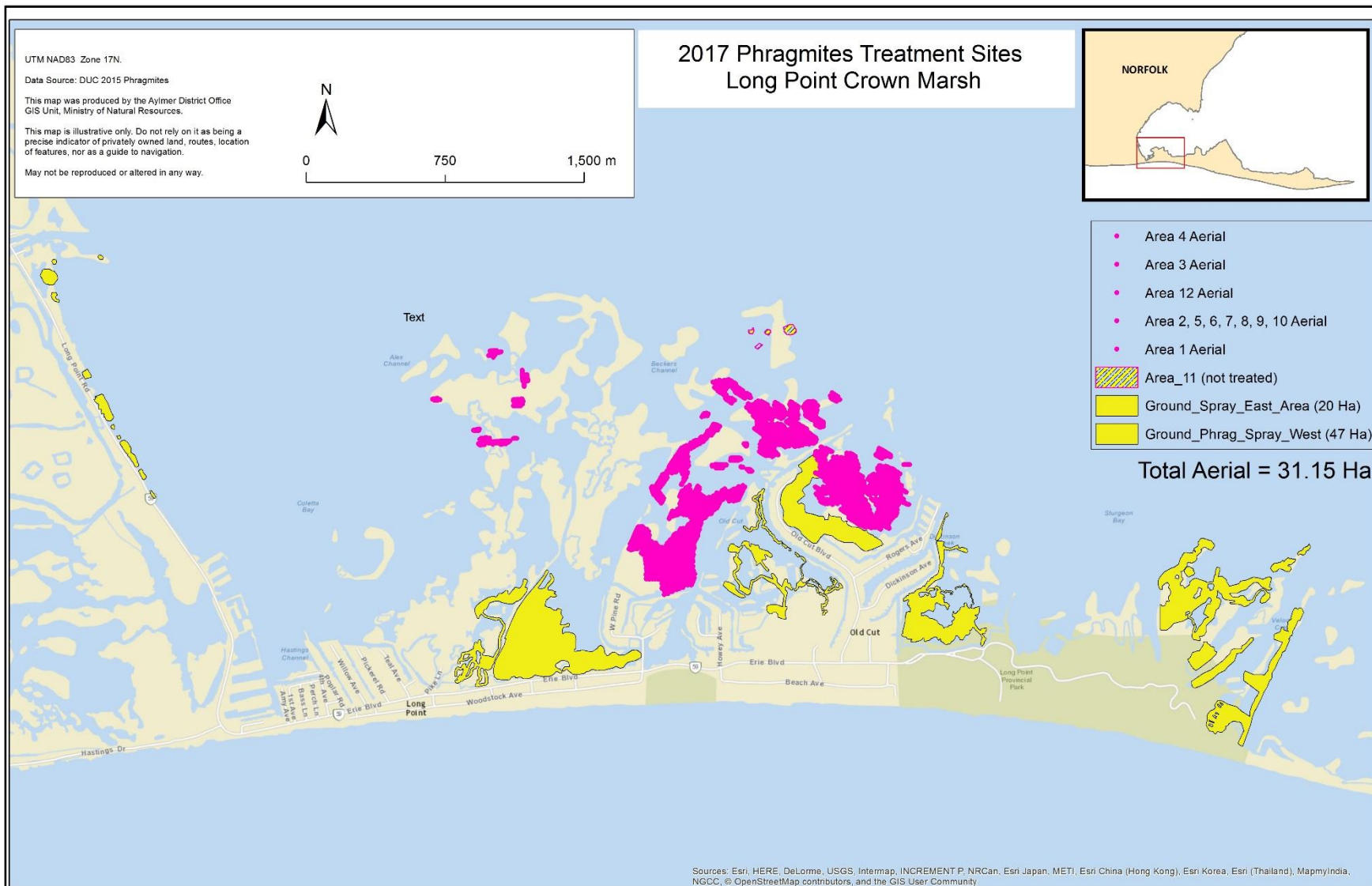


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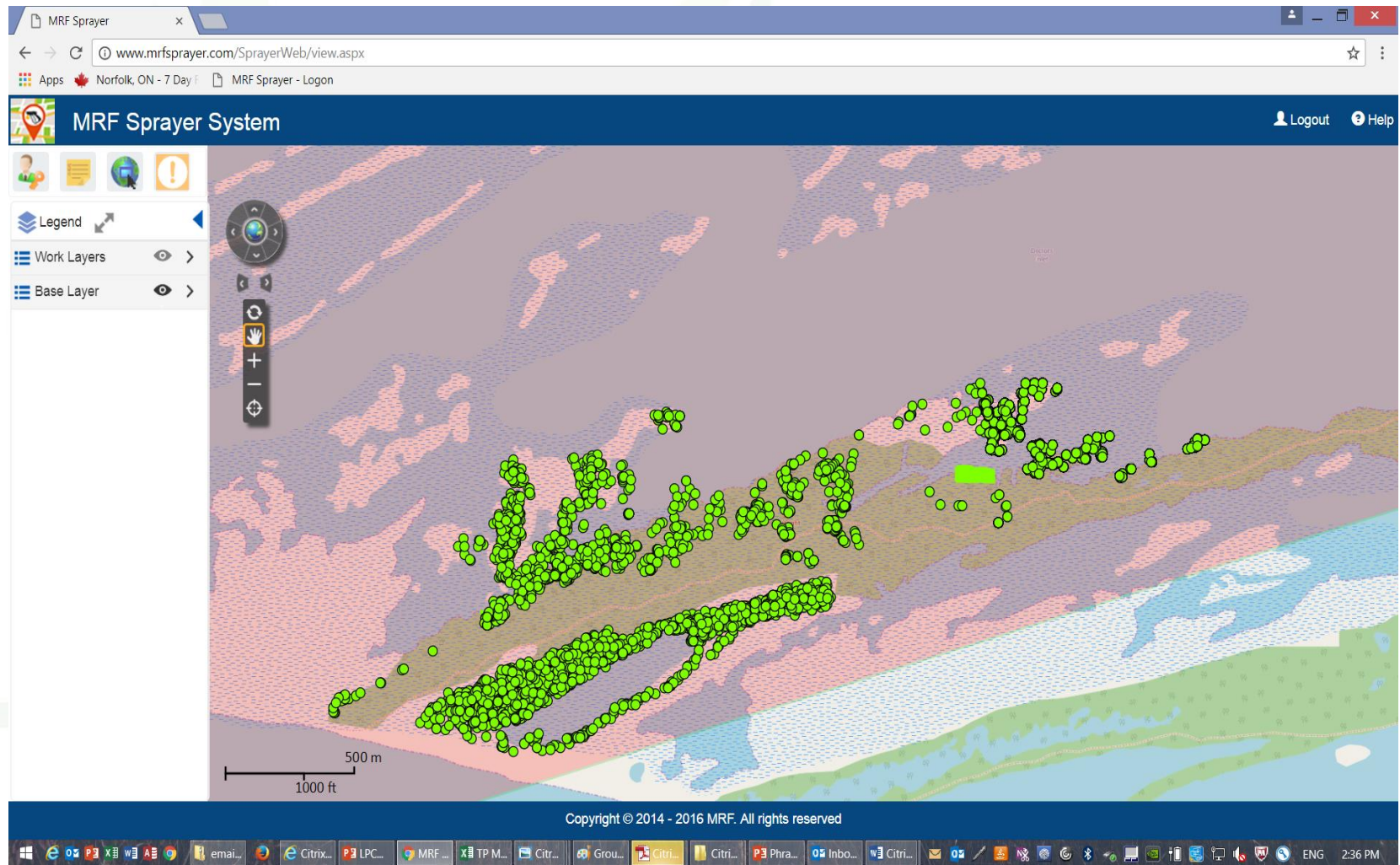
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OMNRF Aerial & Ground Treatment



Ground Program Technology



Monitoring our work

- Drinking water quality – highest importance
- Efficacy – did it work?
- Fate of the herbicide – water and sediment sampling
- Impacts to aquatic organisms – confirm existing science
- Effects on fish and fish habitat
- Sensitive vegetation community response
- Benthic invertebrate monitoring as indicator species
- PAMF – Phragmites Adaptive Management Framework

Next Steps – Ensuring a job well done

Winter 2017-18

- Cutting, rolling and prescribed burn where feasible
- Support MNRF in 2018 EUR Application development

2018 Planning

- Focus on filling in the gaps (new areas) in the 2016 and 2017 control programs
- Identify follow-up treatment (re-growth) needs in 2016 and 2017 spray sites
- Determine application methods that will be most beneficial and least impact for follow-up treatment

Questions?

