

Collaborating to Restore Coastal Wetlands

The Long Point Phragmites Emergency Use Registration
Pilot Project – 2017 Update

Ontario Invasive Plant Council Webinar
February 7, 2018



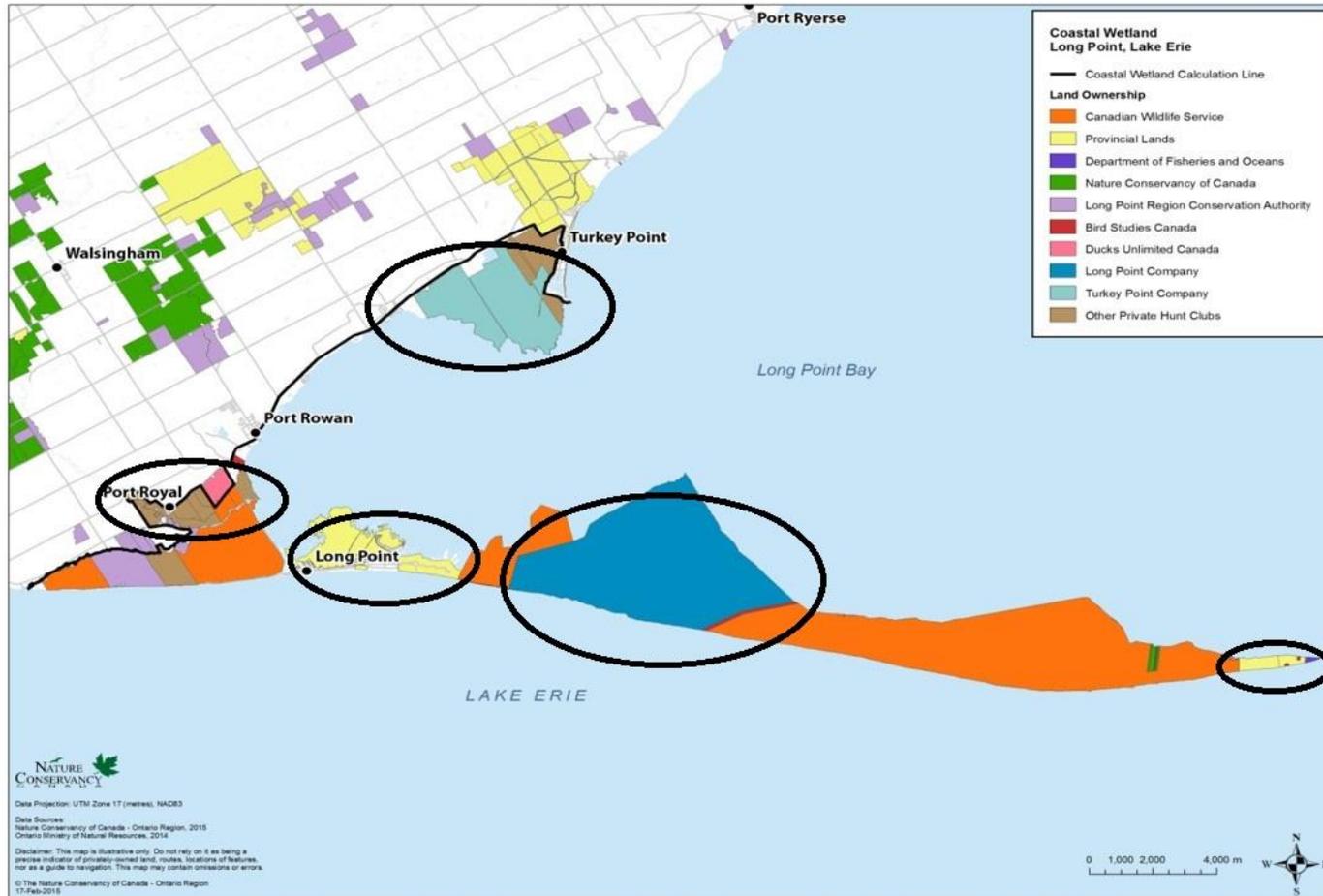
Phragmites australis

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 MNR
- Using GPS-based software to control spray booms
- Accu-Flo nozzles at ASAE Coarse classification to control drift
- Max. height of spray – 3m of above plants
- Max. aircraft speed of 60 km/h/ & wind <16 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 pre-treatment land, water, locations of features, or as a guide to navigation. This map may contain omissions or errors. Not to be graded.

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

October 24, 2017



Ground Treatment

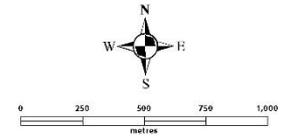


PHRAGMITES AUSTRALIS GROUND TREATMENT SITES, LOWER BIG CREEK

 Common Reed

Common Reed Treatments

 Marsh Master Sprayer (21.9 ha)



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Edits: N046-046
Nature Conservancy of Canada - Ontario Region, 2017
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October 24, 2017



Ground Treatment

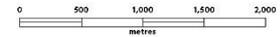


PHRAGMITES AUSTRALIS GROUND TREATMENT SITES, LONG POINT COMPANY BIRD STUDIES CANADA

 Common Reed

Common Reed Treatments

 Marsh Master Sprayer (150.9 ha)



This map is illustrative only. Do not rely on it as being a precise indication of ground-treatment field locations. Locations of features may be a guide to navigation only. This map may contain omissions or errors. Not to any grade.

Data Source:
Riparian Conservancy of Canada - Ontario Region, 2017
Ontario Ministry of Natural Resources and Forestry, 2017
ESR, 2017
October 24, 2017



OMNRF Aerial & Ground Treatment

2017 Phragmites Treatment Sites Long Point Crown Marsh

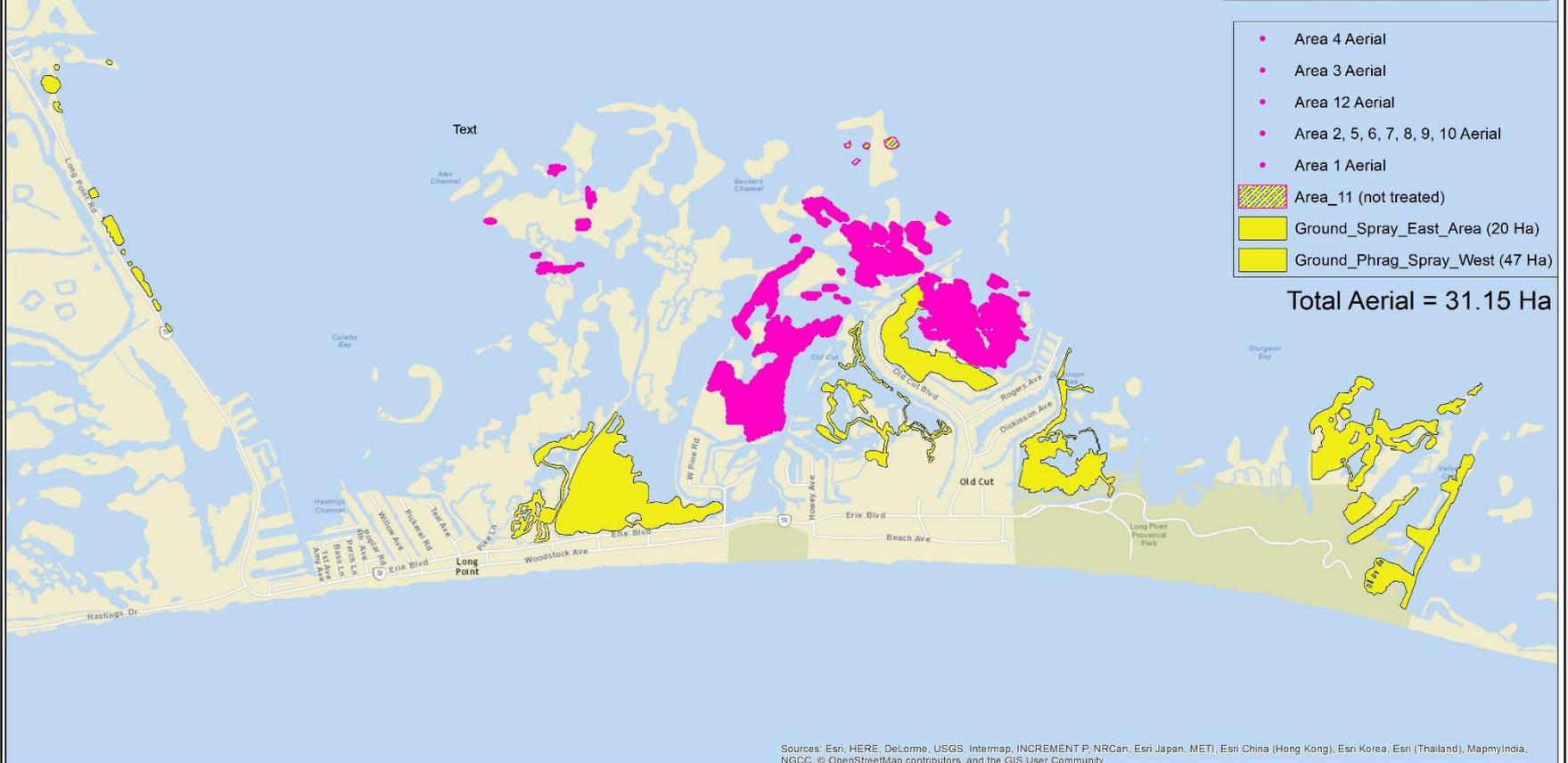
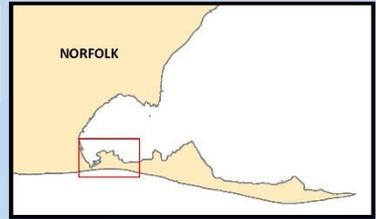
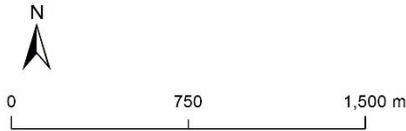
UTM NAD83 Zone 17N.

Data Source: DUC 2015 Phragmites

This map was produced by the Aylmer District Office GIS Unit, Ministry of Natural Resources.

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- Area 4 Aerial
- Area 3 Aerial
- Area 12 Aerial
- Area 2, 5, 6, 7, 8, 9, 10 Aerial
- Area 1 Aerial
- ▨ Area_11 (not treated)
- Ground_Spray_East_Area (20 Ha)
- Ground_Phrag_Spray_West (47 Ha)

Total Aerial = 31.15 Ha

Sources: Esri, HERE, DeLorme, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), MapmyIndia, NGCC, © OpenStreetMap contributors, and the GIS User Community

Ground Program Technology

The screenshot displays the MRF Sprayer System web application. The browser address bar shows the URL www.mrfsprayer.com/SprayerWeb/view.aspx. The page title is "MRF Sprayer System". The interface includes a navigation menu on the left with options for "Legend", "Work Layers", and "Base Layer". The main area features a map with a grid overlay, a scale bar (500 m / 1000 ft), and a copyright notice: "Copyright © 2014 - 2016 MRF. All rights reserved". The map shows a large area of green data points, likely representing ground program locations, overlaid on a terrain map with various colored regions. The Windows taskbar at the bottom shows several open applications, including Citrix, MRF, and various office software.

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?

