

Invasive Phragmites

Collaborating to Address the Threat

Long Point Phragmites Pilot Project

Ontario Invasive Plant Council
Winter Webinar Series
February 27, 2019

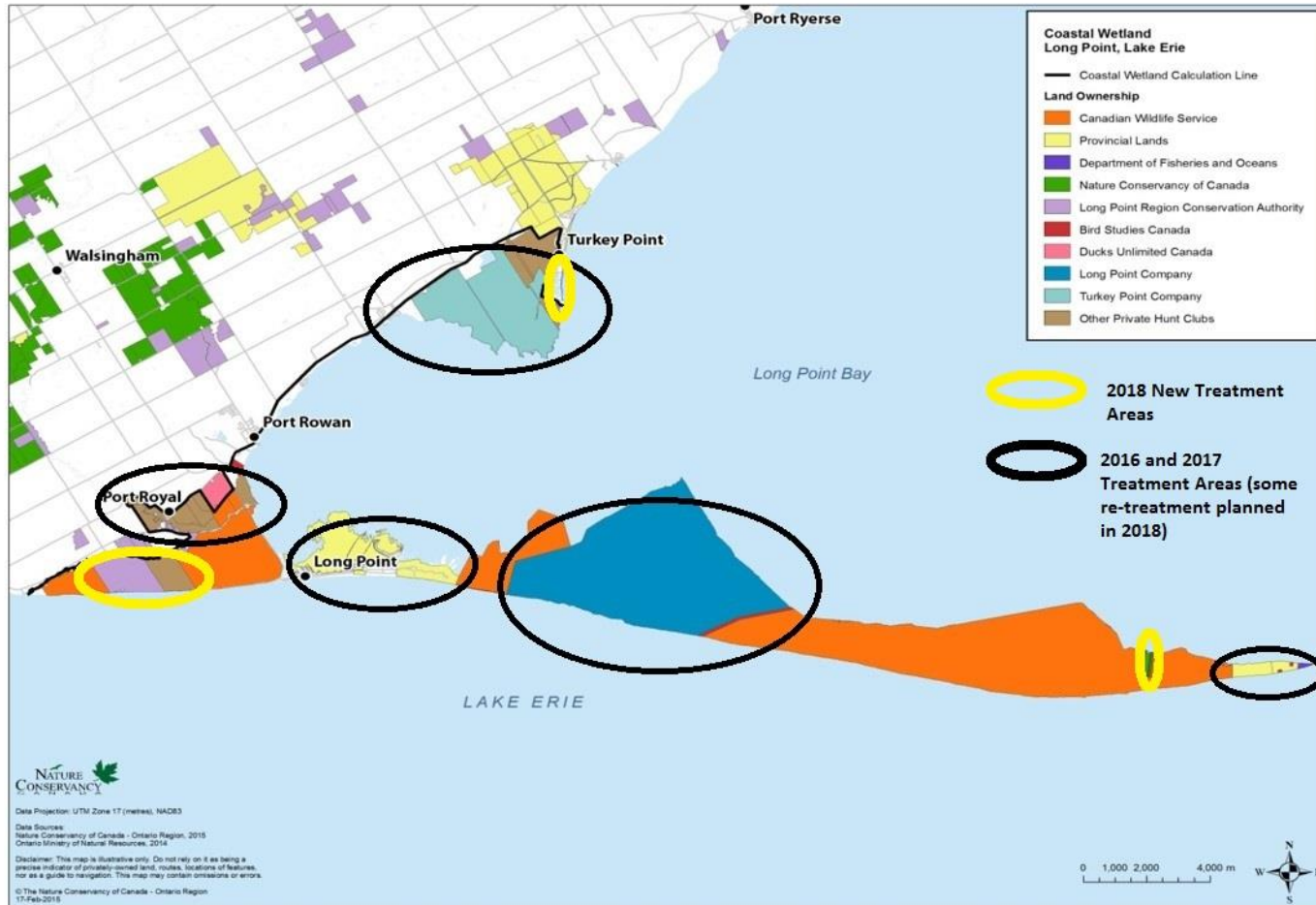


Phragmites (*Phragmites australis*)

- 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



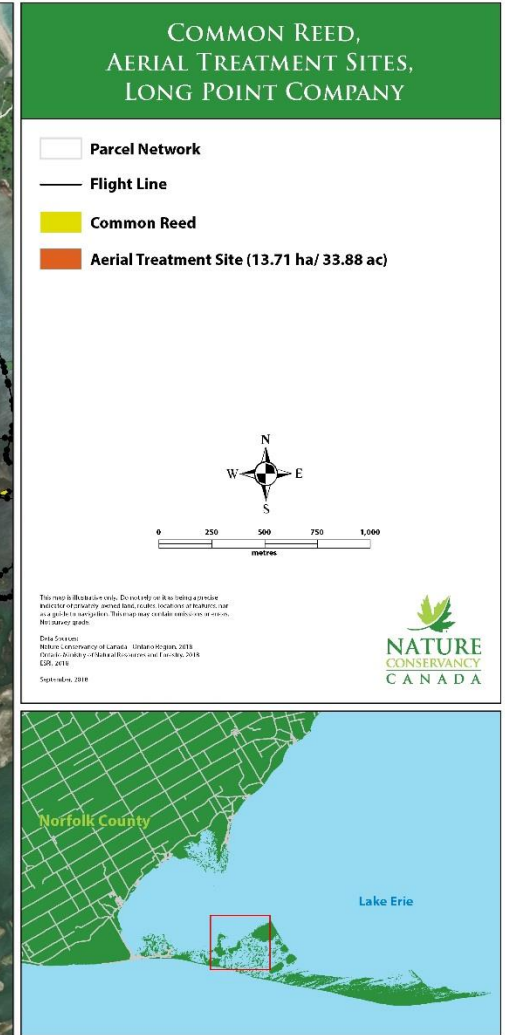
NCC's Role

- 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

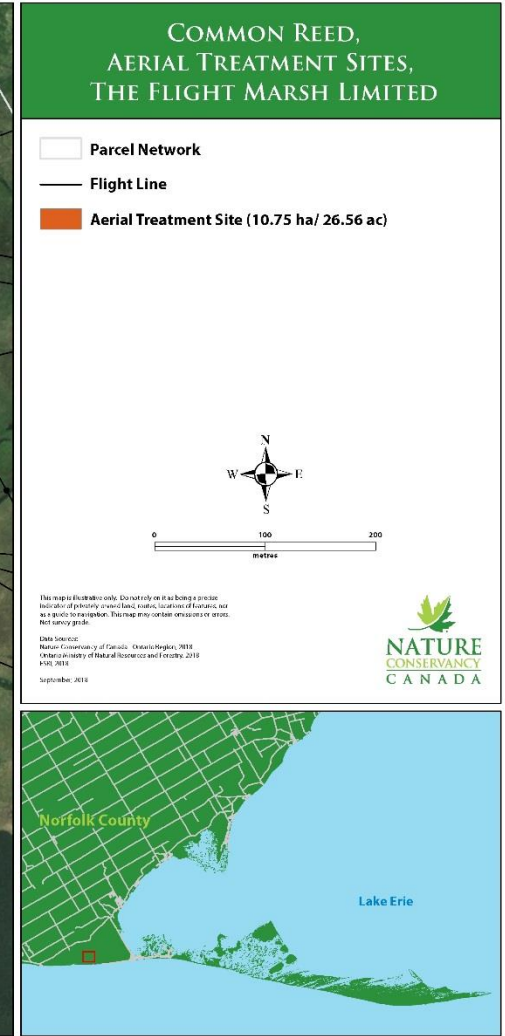
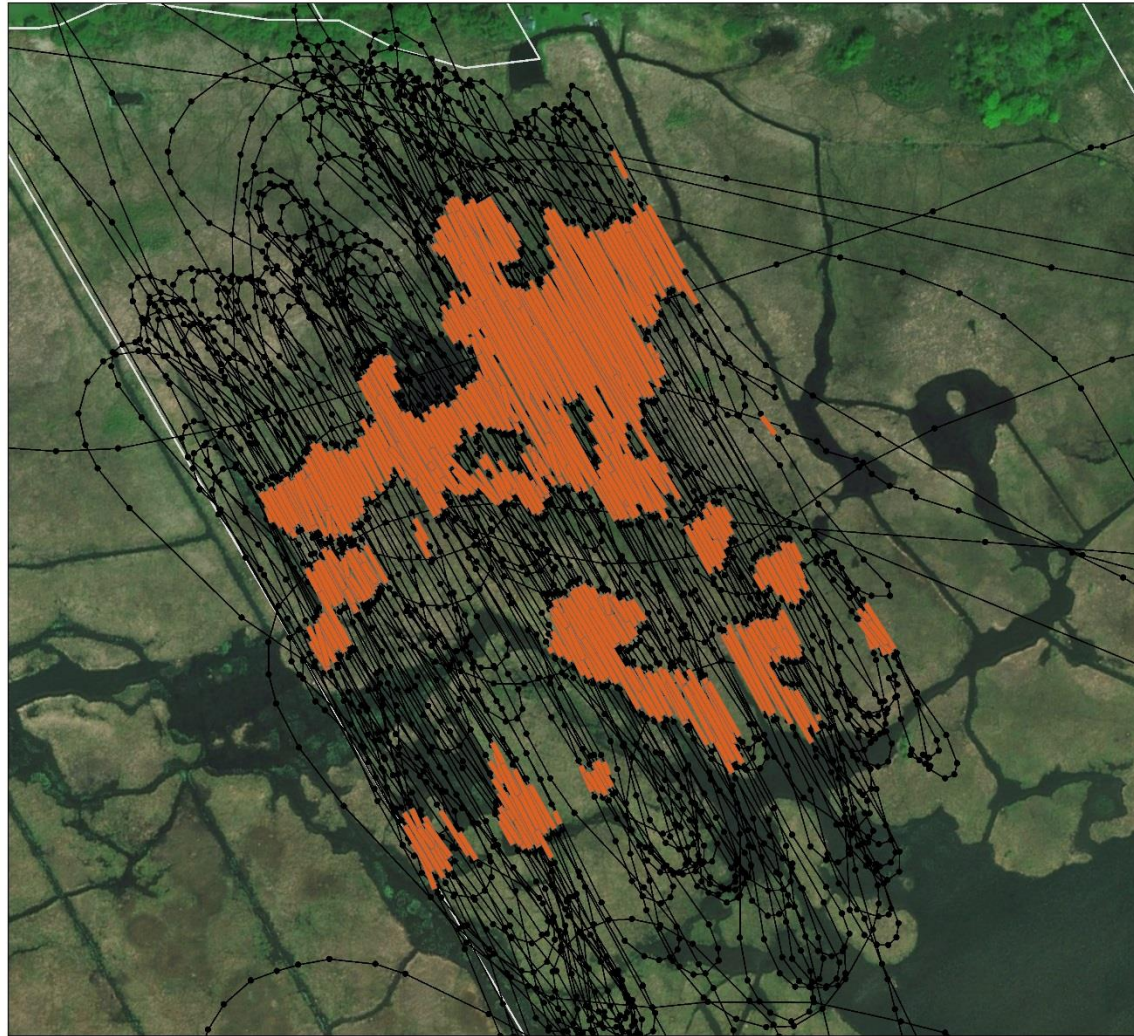
Tools of the Trade



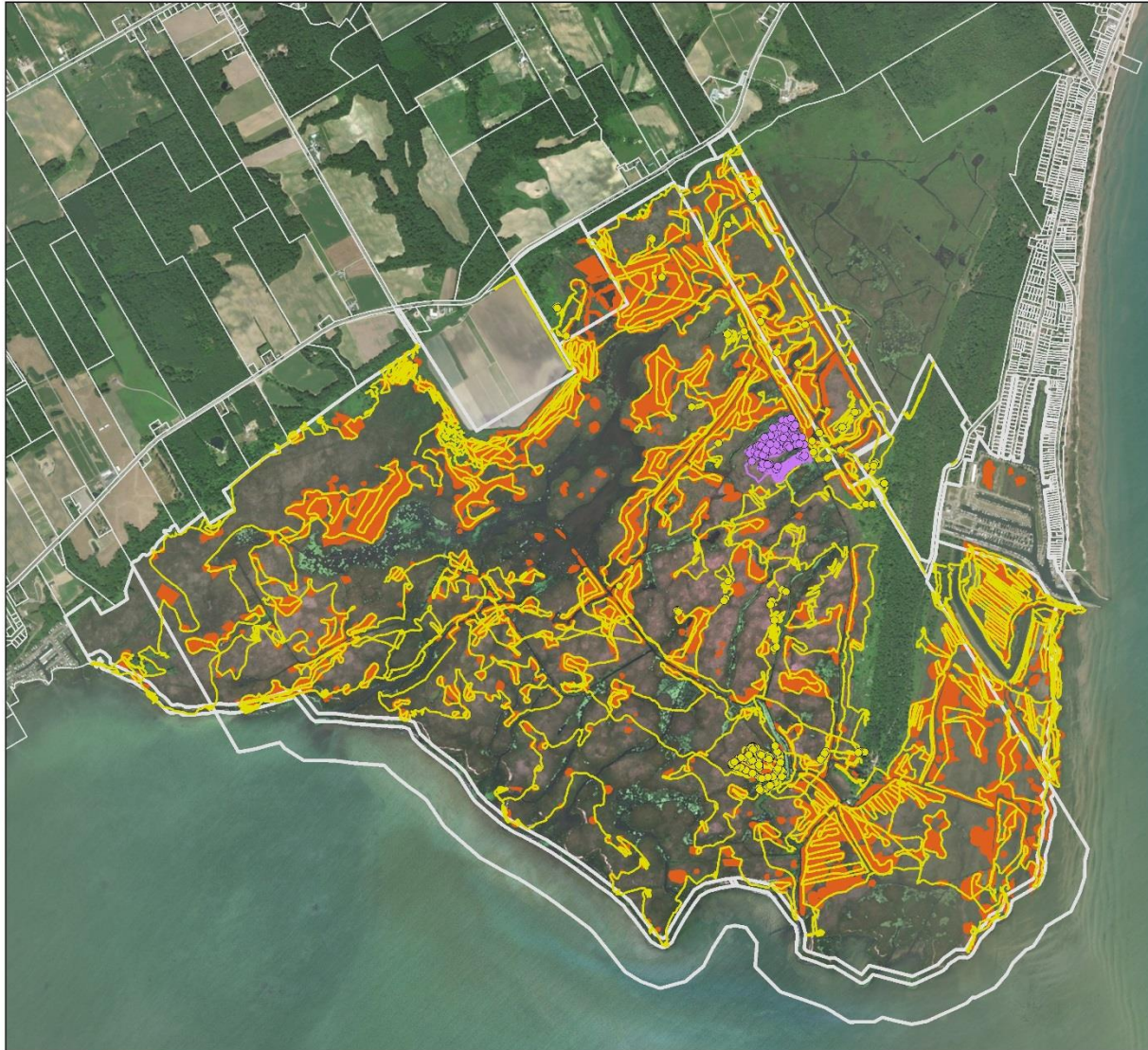
Aerial Treatment



Aerial Treatment

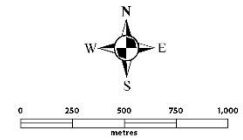


Ground Treatment



PHRAGMITES AUSTRALIS GROUND TREATMENT, TURKEY POINT

- Property Boundary
- Phragmites Australis
- New Treatment Area**
 - Ground Treatment Site - Hand Spray
 - Ground Treatment Site - Marsh Master
- Retreatment Area**
 - Ground Treatment Site - Hand Spray
 - Ground Treatment Site - Marsh Master

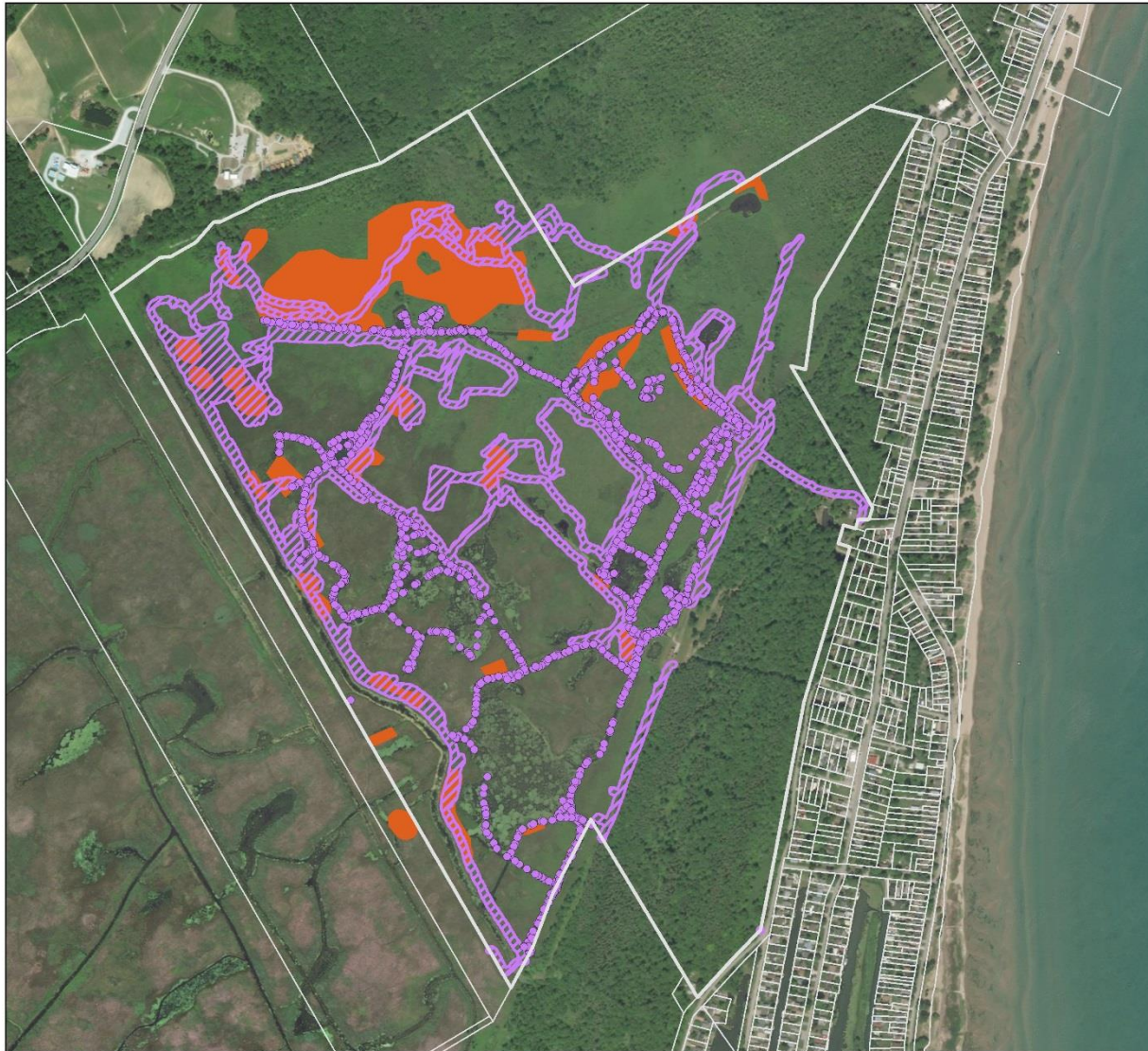


This map is illustrative only. Do not rely on it as being a precise indication of pre-determined land, water, locations of features, or as a guide to navigation. This map may contain omissions or errors. Not to be used for navigation.

Map Sources:
Nature Conservancy of Canada - Ontario Region, 2015
Ontario Ministry of Natural Resources and Forestry, 2015
ESRI, 2015
October 25, 2018



Ground Treatment



**PHRAGMITES AUSTRALIS
GROUND TREATMENT,
TEEPEE FARMS**

- Property Boundary
- Phragmites Australis

New Treatment Site

- Ground Treatment Site - Hand Spray
- Ground Treatment Site - Marsh Master

This map is illustrative only. Do not rely on it as being an accurate indicator of privately-owned land, routes, locations of features, nor as a guide to navigation. This map may contain omissions or errors. Not to be used as a guide.

Edits: N04-0-0-0
Nature Conservancy of Canada - Ontario Region, 2015
Canadian Ministry of Natural Resources and Forestry, 2015
ESR, 2015
November 5, 2018



Ground Treatment



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

Property Boundary

New Treatment Area

Ground Treatment Site - Marsh Master
16.41 ha/40.54 ac

Retreatment Area

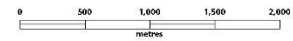
Ground Treatment Site - Hand Spray

Ground Treatment Site - Marsh Master

Aerial Treatment

Aerial Flight Line

Aerial Treatment Site (13.71 ha/33.88 ac)



This map is illustrative only. Do not rely on it as being a precise indication of property, current land records, boundaries or features, nor as a guide to navigation. The map may contain inaccuracies or errors. Not to be used for legal purposes.

1:25k, VectorMap
Nature Conservancy of Canada - Ontario Region, 2018
Ontario Ministry of Natural Resources and Forestry, 2018
ESR, 2018

October 26, 2018



Ground Treatment



PHRAGMITES AUSTRALIS GROUND TREATMENT, LOWER BIG CREEK

-  Property Boundary
-  Phragmites Australis
- Retreatment Site**
 -  Ground Treatment Site - Hand Spray
 -  Ground Treatment Site - Marsh Master

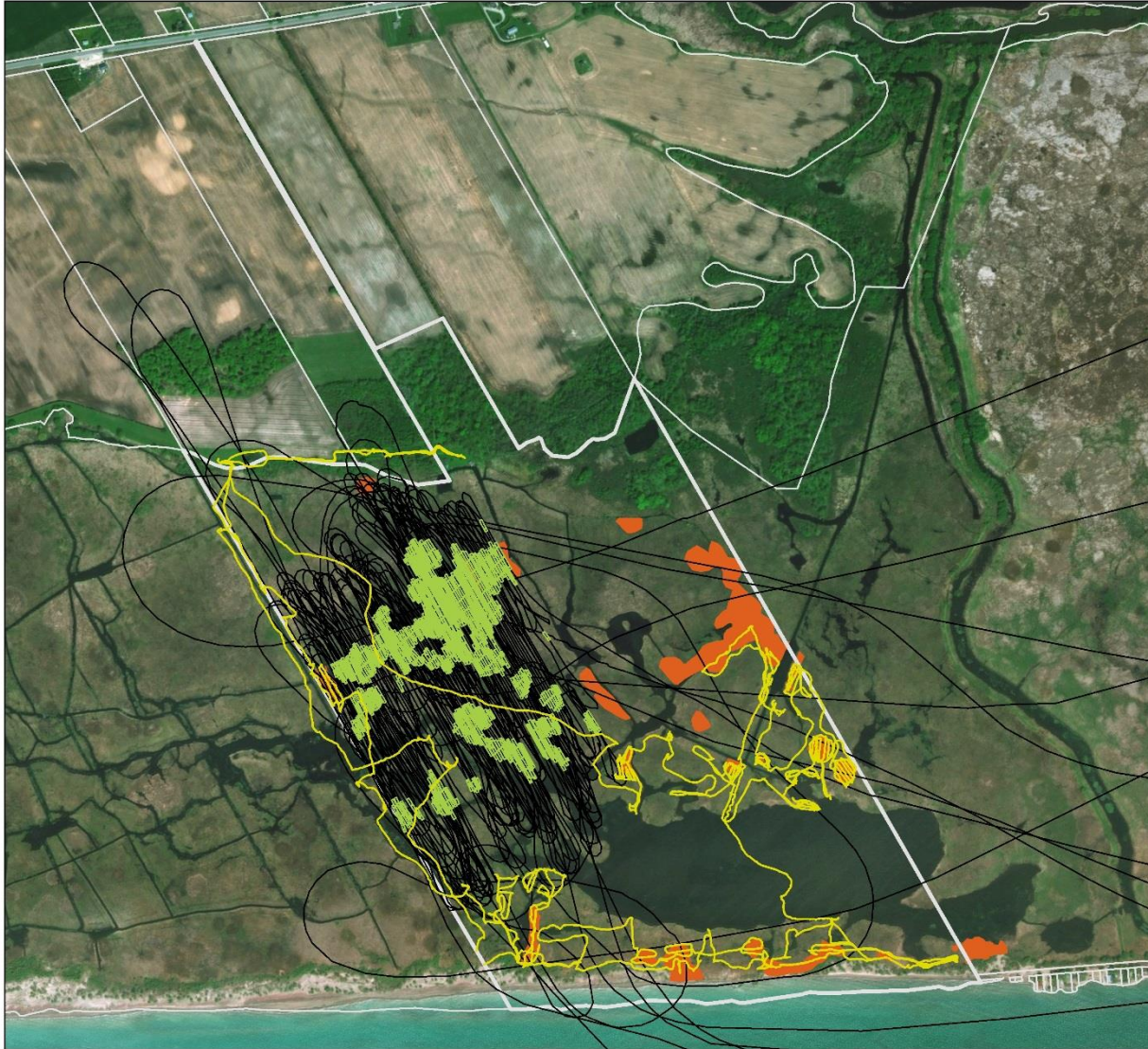


This map is illustrative only. Do not rely on it as being a precise indication of ground-water levels, locations of features, or as a guide to navigation. This map may contain omissions or errors. Not to be navigated.

1:840 Scale only
Nature Conservancy of Canada - Ontario Region, 2018
Ontario Ministry of Natural Resources and Forestry, 2018
ESR, 2018
October 24, 2018

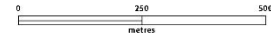


Ground Treatment



PHRAGMITES AUSTRALIS, GROUND & AERIAL TREATMENT SITES, THE FLIGHT MARSH LIMITED

- Property Boundary
- Phragmites Australis
- Retreatment Area**
 - Ground Treatment Site - Marsh Master
- Aerial Treatment**
 - Aerial Flight Line
 - Aerial Treatment Site (10.75 ha/26.56 ac)



This map is illustrative only. Do not rely on it as being a precise indication of ground/aerial flight routes, locations of features, or as a guide to navigation. This map may contain omissions or errors. Not to any scale.

1:6400 Scale
Nature Conservancy of Canada - Ontario Region, 2018
Ontario Ministry of Natural Resources and Forestry, 2018
ESR, 2018
October 25, 2018

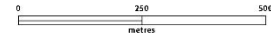


Ground Treatment



PHRAGMITES AUSTRALIS, GROUND & AERIAL TREATMENT SITES, LONG POINT REGION CONSERVATION AUTHORITY

-  Property Boundary
-  Phragmites Australis
- Retreatment Area**
-  Ground Treatment Site - Marsh Master



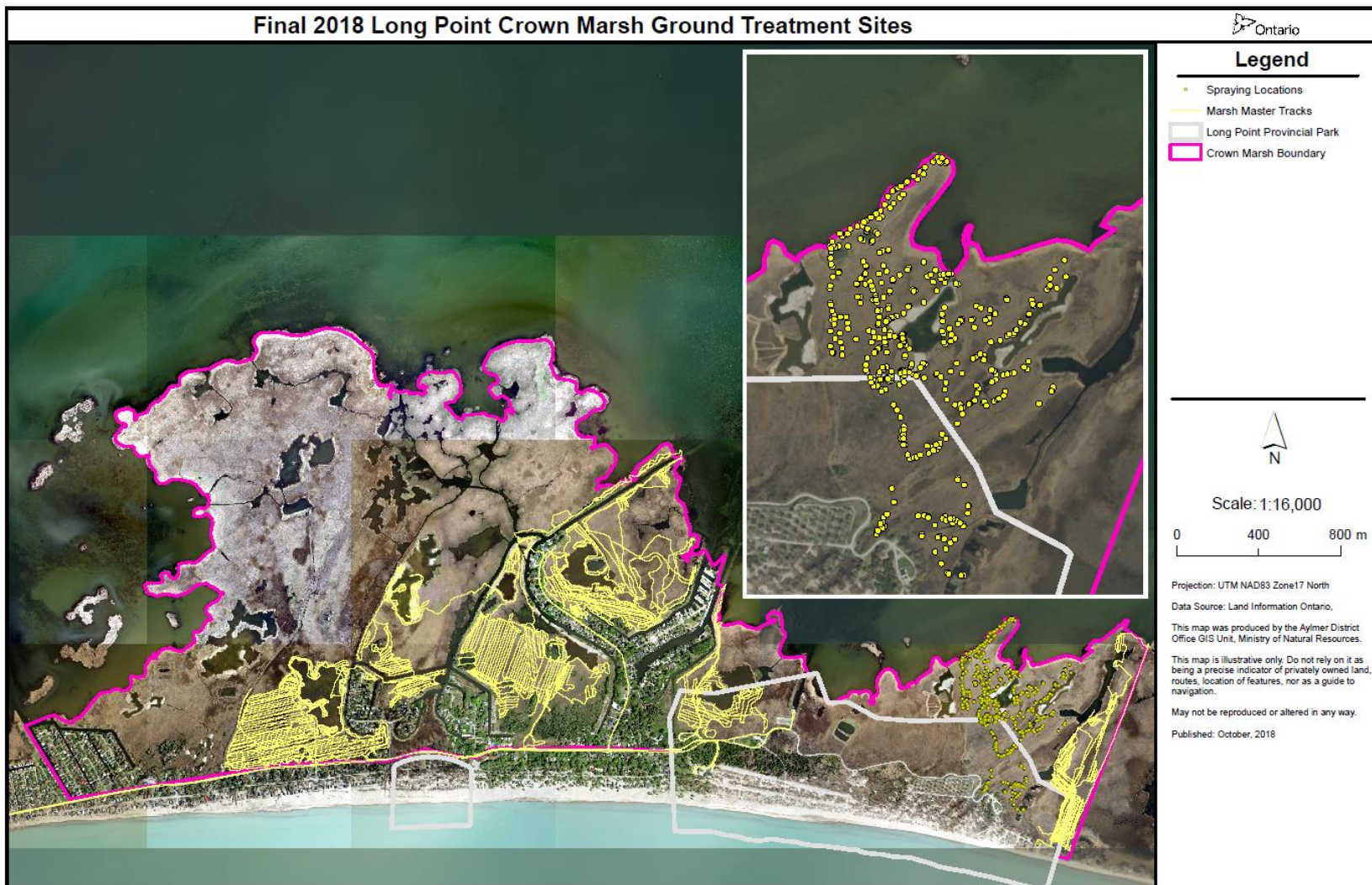
This map is illustrative only. Do not rely on it as being a precise indication of ground/aerial treatment locations. Locations of features may vary as a guide to navigation only. This map may contain omissions or errors. Not to any grade.

1:840 Scale only
Nature Conservancy of Canada - Ontario Region, 2018
Ontario Ministry of Natural Resources and Forestry, 2018
ESR, 2018
October 25, 2018



OMNRF Aerial & Ground Treatment

Final 2018 Long Point Crown Marsh Ground Treatment Sites



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 for reptiles and amphibians
- PAMF – Phragmites Adaptive Management Framework

Next Steps – Integrated Pest Management

- Develop follow-up treatment plans for sites that were treated with herbicide using guidance from MNR's *Invasive Phragmites BMP, 2011*
- Could including cutting, rolling or prescribed burns



Next Steps – Landscape-scale Phragmites Control

- Develop a pilot landscape-scale project in the Long Point region – 2019 Big Creek Watershed inland treatment Phase 1 begins
- Identify follow-up treatment needs in 2016 - 2018 spray sites
- Engage federal government - ECCC Canadian Wildlife Service
- Expand to include other critical coastal wetlands in the lower Great Lakes and associated watersheds

Thank You



Eric Cleland

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