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BALANCING SPECIES AT RISK PROTECTION AND INVASIVE SPECIES MANAGEMENT:

NON-NATIVE PHRAGMITES MANAGEMENT IN THE LONG POINT REGION OF ONTARIO

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OUTLINE

- Background on Long Point Region
- Phragmites Expansion and Management
- Challenges
- Creating a Path Forward


Blandings Turtle

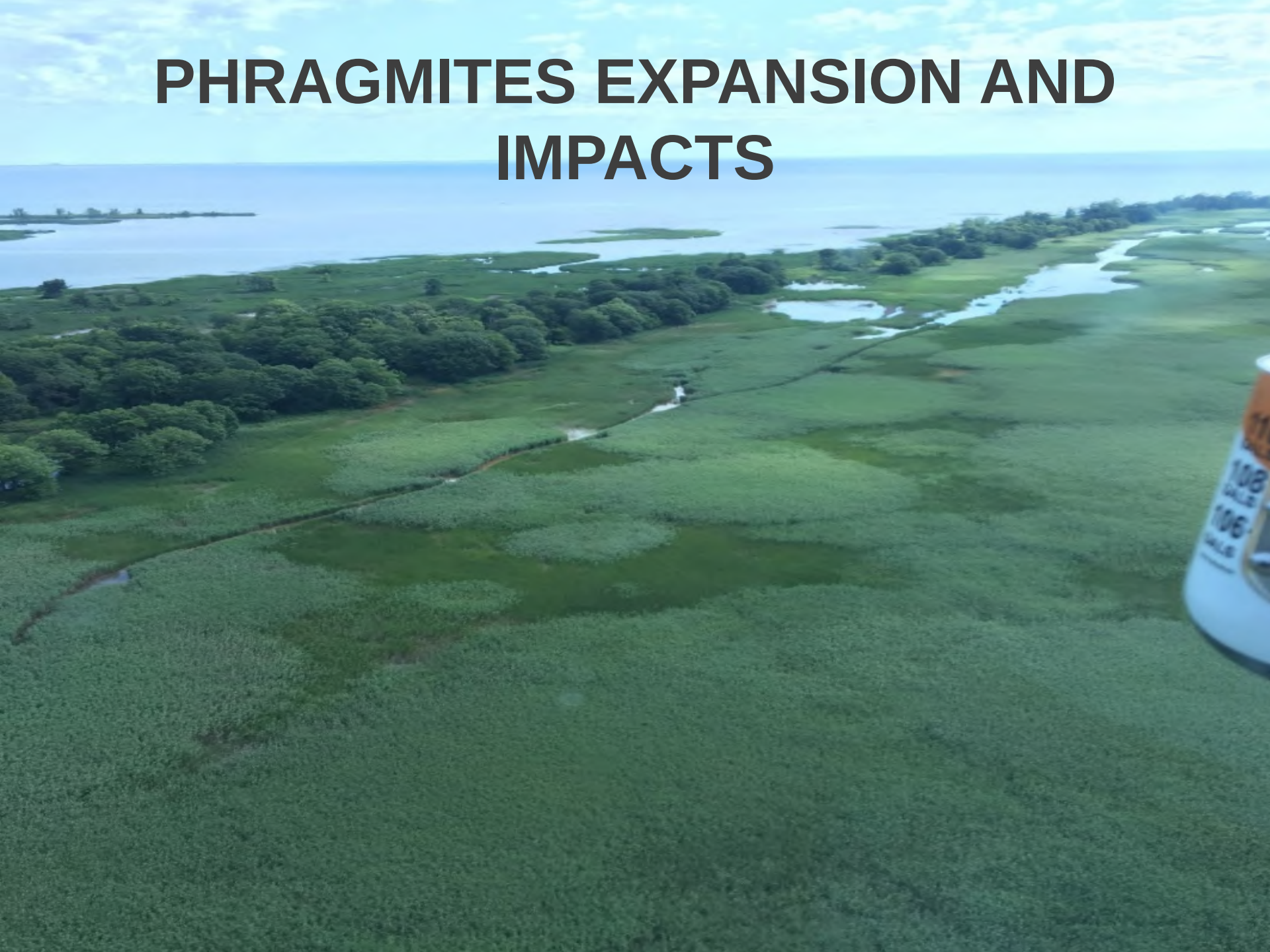
Long Point Region, Ontario

- UNESCO World Biosphere Reserve
- International Monarch Butterfly Reserve
- Ramsar Wetland
- Globally Significant IBA
- 2 NWAs

Priority Place for Conservation Action

PHRAGMITES EXPANSION AND IMPACTS

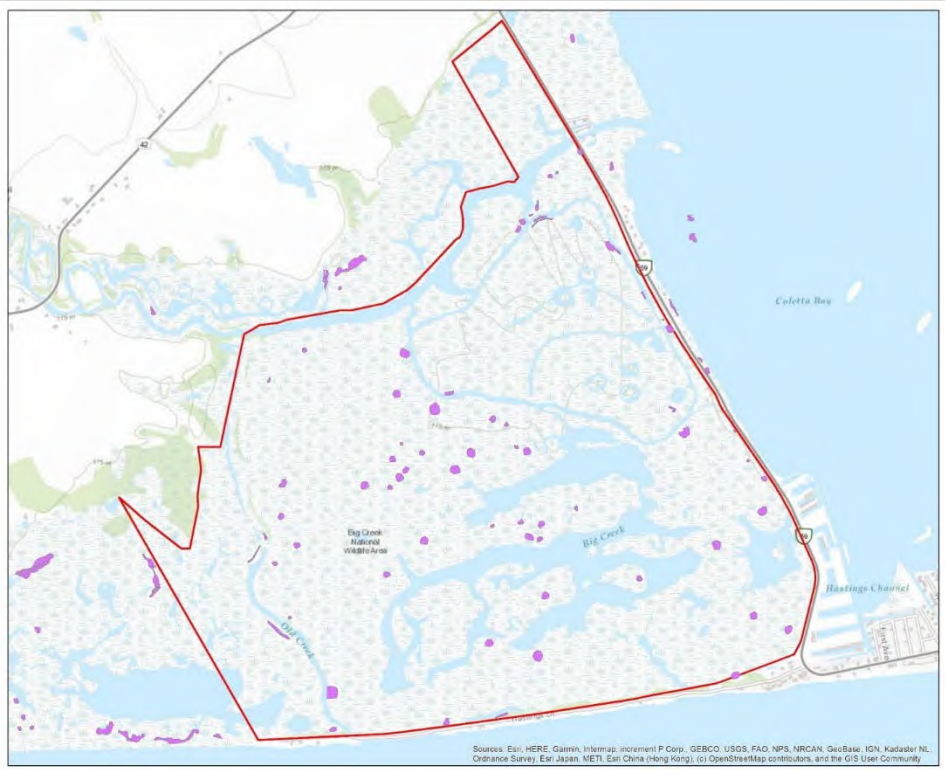
PHRAGMITES EXPANSION AND IMPACTS



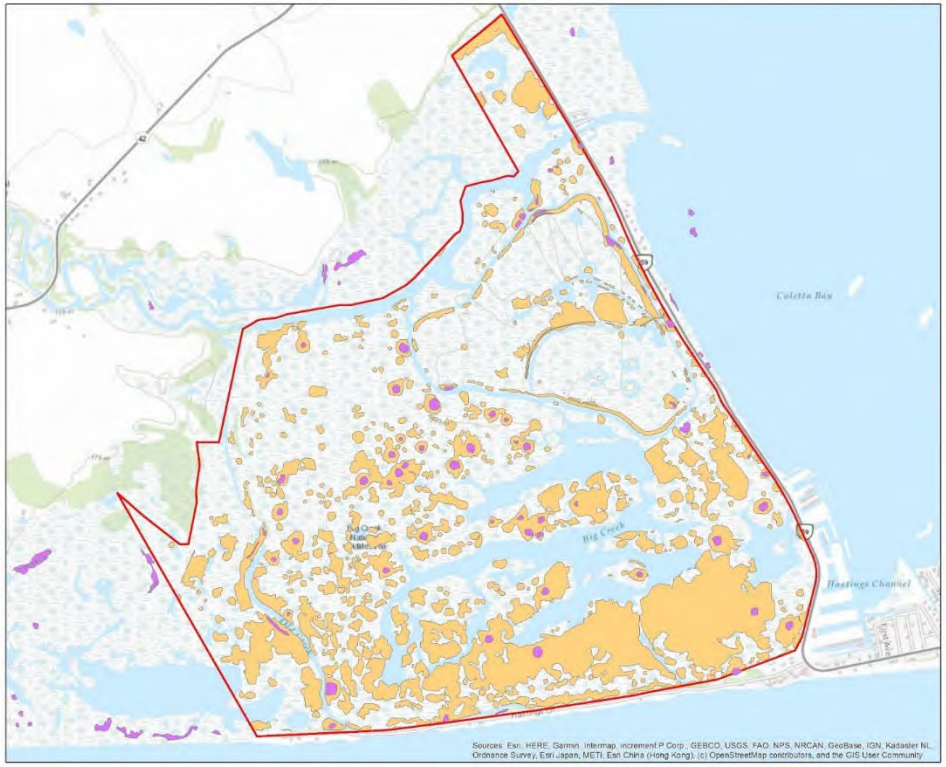
PHRAGMITES EXPANSION

BIG CREEK UNIT

2006: 5HA, 2015: 176HA



0.7% was dominated by Phragmites



>27% of Big Creek is dominated by Phragmites

Estimated Phragmites Australis Extent in the Long Point Region - 2018

Treated Phragmites australis - 1110.7 ha/2744.5 ac

Untreated Phragmites australis - 711.2 ha/1757.5 ac

Note – Untreated Phragmites extent is an estimate using available data sources and often significantly underestimates the actual coverage on the ground.

N
W E
S

Kilometres

NATURE CONSERVANCY CANADA

SAR AT PRIORITY PLACE

Common Name	Scientific Name	COSEWIC Status	Phragmites is a Primary Threat	Phragmites Management is a Recovery Action
Amphibians				
Fowler's Toad	Anaxyrus fowleri	Endangered	X	X
Birds				
King Rail	Rallus elegans	Endangered		
Least Bittern	Ixobrychus exilis	Threatened	X	X
Prothonotary Warbler	Protonotaria citrea	Endangered	X	X
Fishes				
Eastern Sand Darter	Ammocrypta pellucida	Threatened		
Lake Chubsucker	Erimyzon sucetta	Endangered	X	
Pugnose Shiner	Notropis anogenus	Threatened	X	
Spotted Gar	Lepisosteus oculatus	Endangered	X	X
Reptiles				
Blanding's Turtle	Emydoidea blandingii	Endangered	X	
Eastern Foxsnake	Pantherophis gloydi	Endangered	X	X
Eastern Hog-nosed Snake	Heterodon platirhinos	Threatened		
Queensnake	Regina septemvittata	Endangered	X	X
Spiny Softshell	Apalone spinifera	Endangered	X	X
Spotted Turtle	Clemmys guttata	Endangered	X	X
Vascular Plants				
American Water-willow	Justicia americana	Threatened	X	
Bent Spike-rush	Eleocharis geniculata	Endangered	X	X
Horsetail Spike-rush	Eleocharis equisetoides	Endangered		

PROJECT RELEVANCE

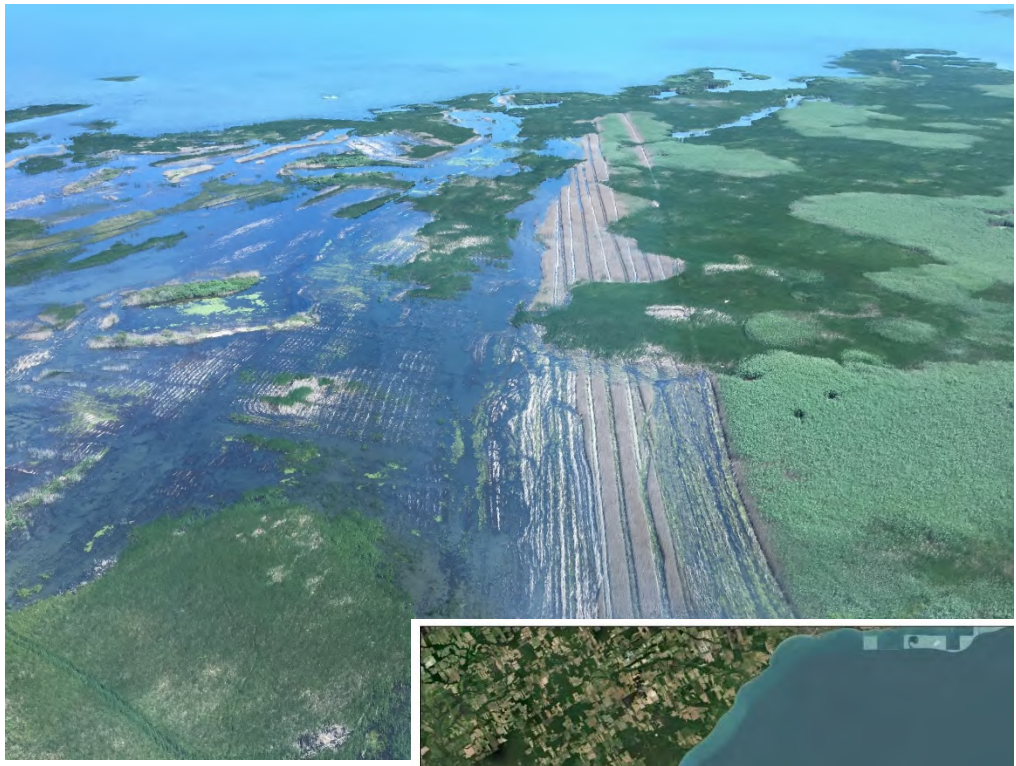
- Non-native Phragmites is a key threat
- Priority Place and NWA management plans goal to reduce Phragmites to 10% of its 2018 extent by 2025
- Implements Recovery Plan actions for 9 SAR
- Advances ECCC’s core responsibilities for SAR and migratory waterfowl

PHRAGMITES MANAGEMENT
IS ONGOING IN LP REGION

- Regional collaboration
- 1,200 ha since 2016
- BMPs: herbicide and biomass removal
- Ecological monitoring
- Millions invested
- Lots of public engagement and support

CHALLENGES

- Herbicide is not legal
- Few qualified contractors
- Location is remote
- Neighbours are not managing



SPECIES AT RISK ACT (SARA)

- **Applies on all lands in Canada**
- **How it applies depends on the species and land tenure**
- **On Federal lands and for federal species legal protection is automatic**

Conservation Dilemma:
ADDRESSING RISK

From Management

- SAR will be impacted by management activities

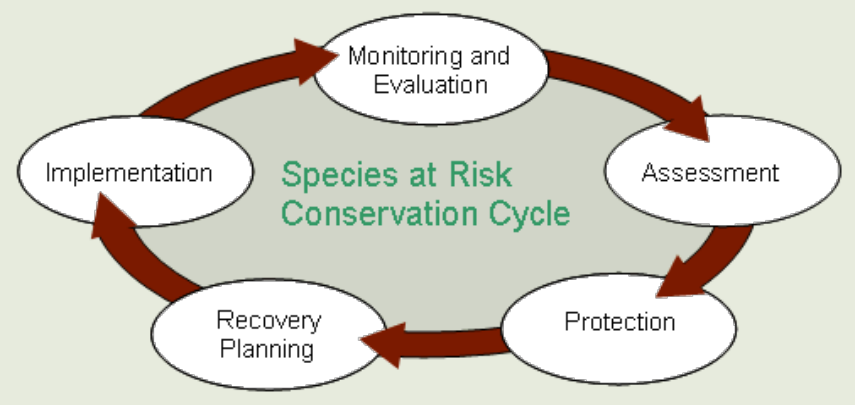
From No Management

- SAR will be impacted
- Migratory birds and other wildlife will be impacted
- Wetland diversity will be reduced
- Phragmites will spread to adjacent land
- CWS' reputation for SAR protection will questioned

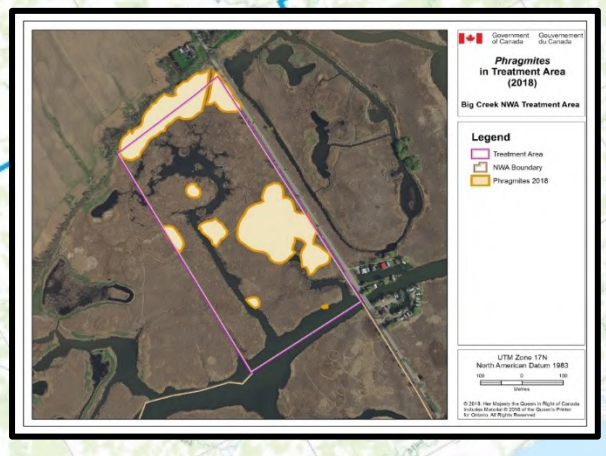
2019 MANAGEMENT PROJECT

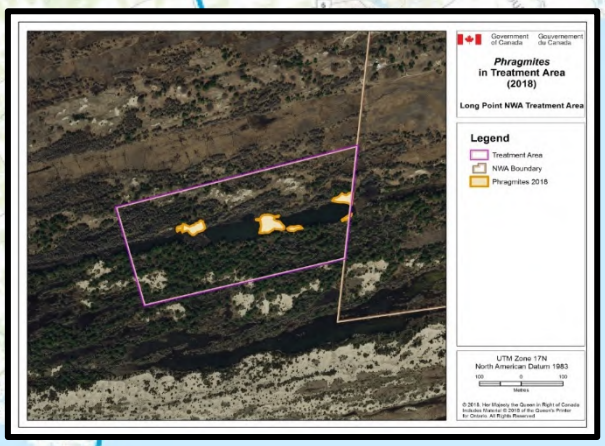
Contribute to the recovery of SAR and other wildlife by:

1. Implementing actions identified in recovery strategies and management plans
2. Monitoring and evaluating the impacts of those actions



2019 MANAGEMENT APPROACH





Government of Canada / Gouvernement du Canada

Long Point Walsingham Forest

Note- Phragmites extent is an estimate using available data sources and may underestimate the actual cover on the ground.

Based on data available from CWS and NCC

UTM Zone 17N
North American Datum 1983

5000500

Metres

ESRI World Topographic Map ArcGIS 10.6.1 © 2019

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MONITORING OBJECTIVES

1. Efficacy of herbicide in *P. australis* eradication
2. Effect on non-target vegetation
3. Recovery of resident vegetation post-treatment
4. Acute exposure risk to wetland biota (water/sediment)
5. Concentration of glyphosate and AE with distance/time after application
6. Effects on wetland biota habitat use
7. Effects on critical fish habitat

IMPLEMENTATION

- Minimize risk by using timing windows, buffers and trained contractors
- Fall herbicide treatment via Marsh Master, boat or backpack
- Winter management to remove standing dead
- Ecological monitoring before during and after

Fall Winter Fall

STATUS
CAUTIOUS OPTIMISM

1. 2019 small scale effort
2. Multi-year project to achieve management objectives needed
3. Evaluate the impacts on SAR, other wildlife and habitat
4. Refine and adapt management approach based on monitoring and evaluation

CONCLUSIONS

- Non-native Phragmites negatively impacts SAR and migratory birds
- Limited information on the impact of management on SAR
- Management actions that impact SAR must be compliant with legislation
- Need to find balance to allow for multi-species, landscape level invasive species management that will have beneficial conservation outcomes for SAR and habitats while complying with SARA

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