Long Term Phragmites Management on Lake St. Clair: A Status Update

Ernest Kafcas, Wildlife and Wetlands Solutions

Understanding Phragmites

- *The aggressive non native variety of Phragmites,* or common reed, is a wetland plant species that is present in nearly all U.S. states, with the most expansive U.S. populations occurring along the Atlantic Coast, the Mississippi Delta, and the Great Lakes region.
- Phragmites is a perennial, warm season grass that can grow in dense stands, reach heights of 15 feet and is long living.
- Phragmites is capable of reproduction by seeds, but primarily does so asexually by means of rhizomes.

The Problem

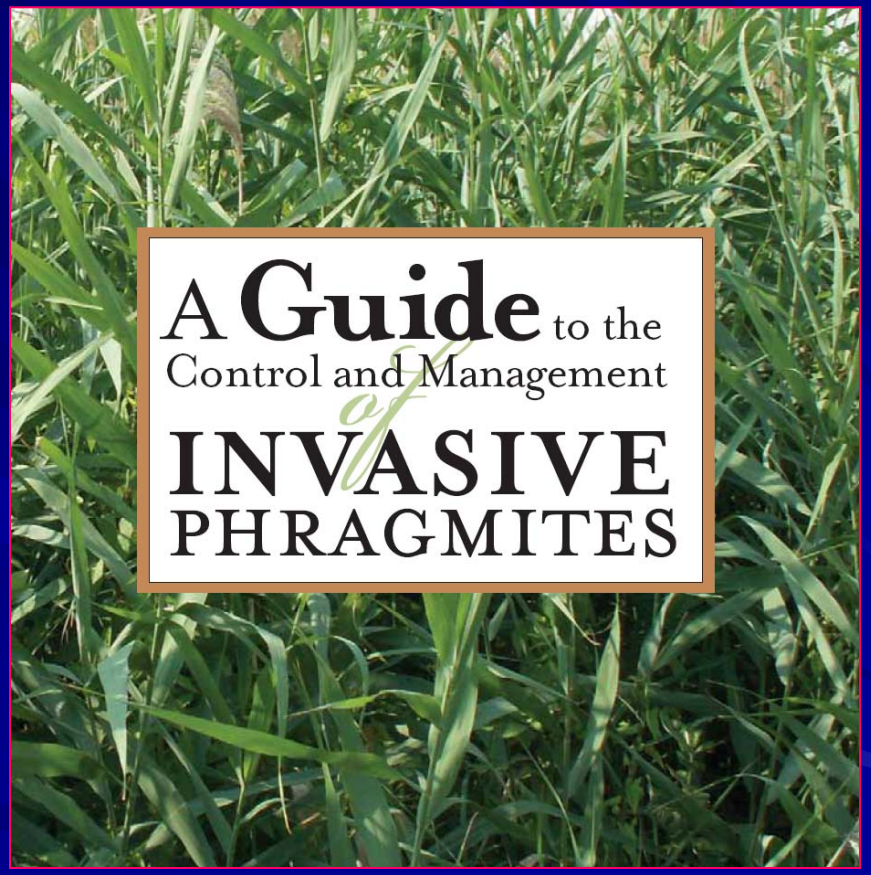
- Threats to coastal and interior wetlands, which are Michigan's most biologically diverse and productive ecosystems.
- Domination of native vegetation, displacing desirable native plant species.
- Reduction of wildlife habitat diversity.
- Alteration of water regime, causing "drying" of marsh soils through increased evaporation and trapping of sediments.
- Restriction of shoreline views thus reduction of property values due to use impairment.
- Creation of potentially serious fire hazard to structures.

Research and Grants

- State lands treatment – 1998 to Present
- Funded research from 2001 through 2005.
- NCWC Grant – 2008 $379,000
- GLRI Grant – 2010 $974,037

Research Summary

- Glyphosate + imazapyr provided better control of phragmites than did glyphosate
- Follow-up treatments especially 2 years post treatment will be required for effective long term control
- Development of a Phragmites control guidebook



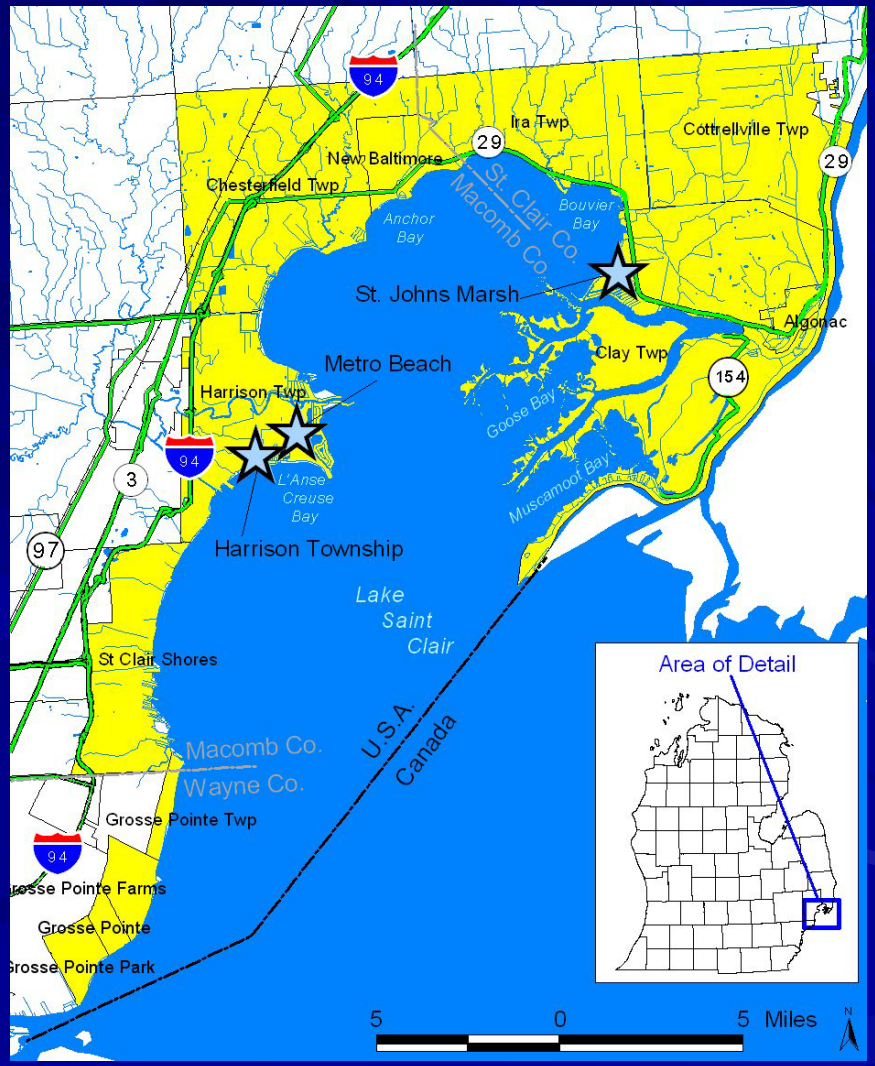
NCWC/GLRI Grant Components

- Phragmites mapping
- Phragmites control
- Assessment and monitoring
- Education and Outreach

NCWC Grant Summary

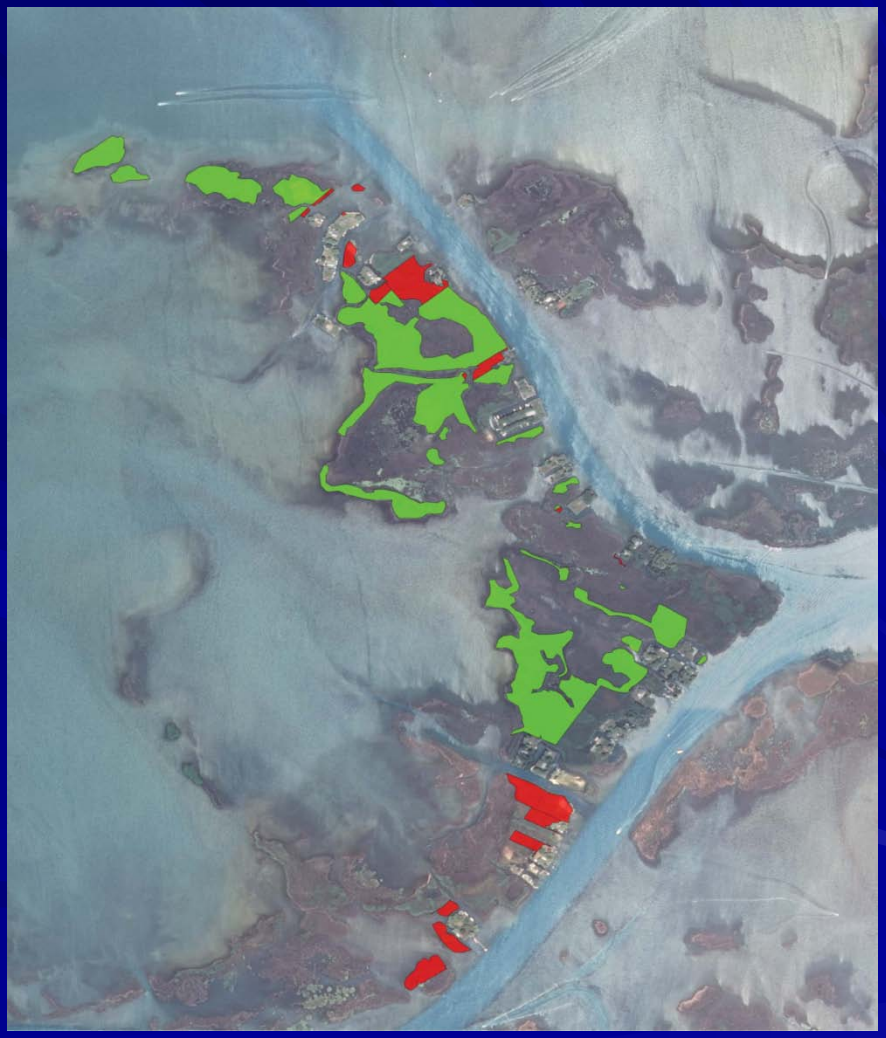
Phragmites Control at 3 sites

- Metro Beach (369 ac)
- Vanter De Beuff Drain (8 ac)
- St. Johns Marsh (487 ac)
- 864 acres total



GLRI Grant Summary

- Phragmites control at 8 focus areas within the SCFWA
- 1,000 acres state land
- 200 acres private land
- Total –1,200 acres

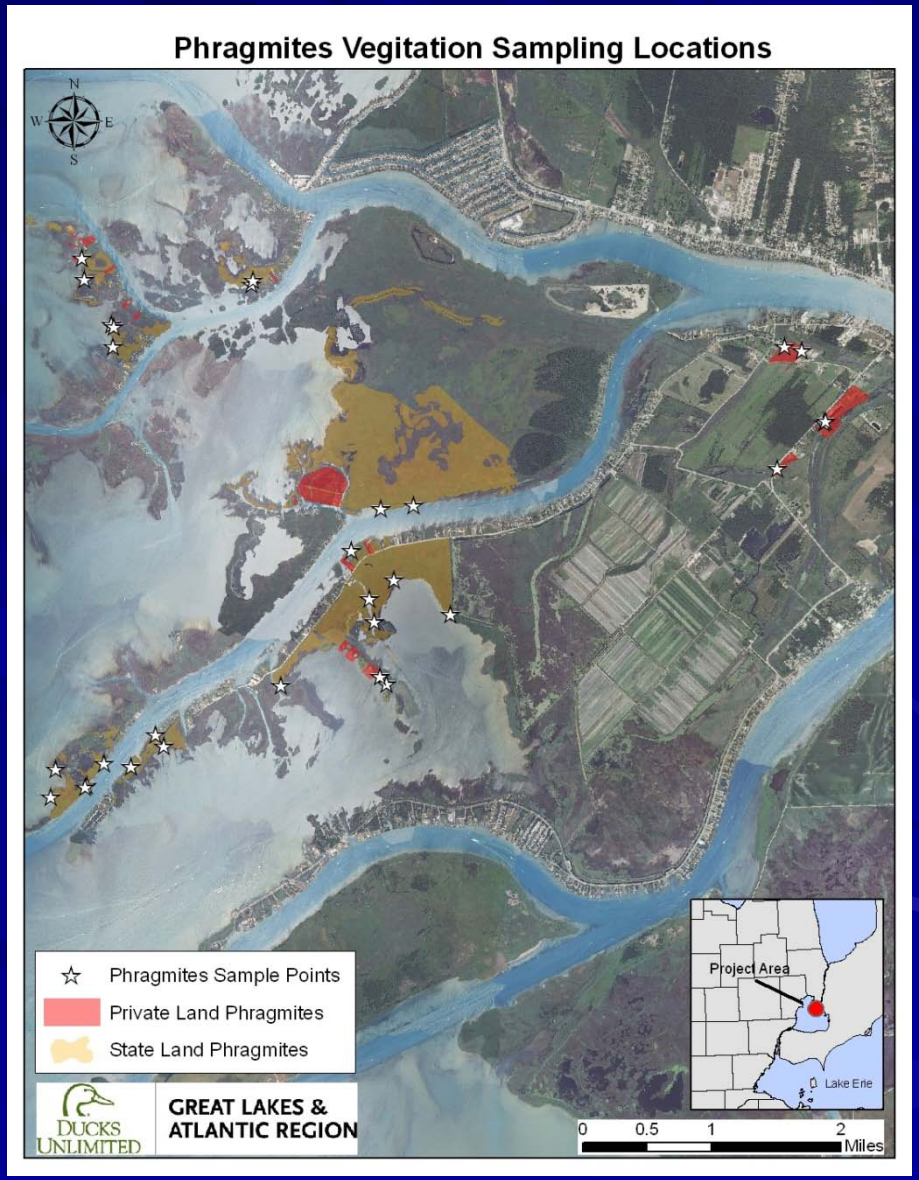


State Land Summary

- St. Johns Marsh, Dickenson Island, and Harsens Island – 1,500 + acres

Monitoring and Assessment

- Vegetation transects
- Photo plots
- Evaluate and monitor the effectiveness of control methods.



Pre - treatment

Post Herbicide Treatment

Post herbicide Treatment – Prescribed Burn

Post Herbicide Treatment – 1 year

Post Herbicide Treatment – 2 years

Education and Outreach

- Recommend a long-term Phragmites control strategy for the entire lake and its watershed
- Builds support for future investments
- General public, riparian property owners, K-12 teachers and students
- Workshops, Public displays, News briefs, School curriculum

Metro Beach Metropark, St. John's Marsh and Harrison Township

Marsh Restoration Project Meeting

Thursday, August 13, 7:00 PM

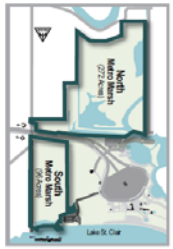
Metro Beach Metropark, Thomas S. Welch Activity Center
31300 Metro Parkway, Mt. Clemens, MI 48046

A meeting will be held at Metro Beach Metropark to discuss the *Marsh Restoration Project*. Experts from the Michigan Department of Natural Resources (MDNR) and the Huron-Clinton Metropolitan Authority will discuss the project, what is involved and its impact on the area. The intent of the project is to protect and restore valuable coastal marshes (wetlands) within the St. Clair watershed through the control of common reed, an invasive wetland grass.

This project is a 4-year cooperative effort of Ducks Unlimited, Harrison Township, Huron-Clinton Metropolitan Authority, Michigan Department of Natural Resources, Michigan Sea Grant and the Southeast Michigan Council of Governments. Other partners/contributors include St. Clair Flats Waterfowlers, Inc., and the St. Clair County Parks and Recreation Commission.

Treatment Areas

Metro Beach Metropark, Harrison Twp.



St. John's Marsh

The Problem:

Once phragmites invades, it causes adverse ecological, economic and social impacts, including:

- *Threats to coastal and interior wetlands – Michigan's most biologically diverse and productive ecosystems.*
- *Domination of native vegetation, displacing desirable native plant species such as sedges, rushes and cattails, and reduction of plant diversity.*
- *Reduction of wildlife habitat diversity resulting in loss of food and shelter.*
- *Reduction of property values due to impaired shoreline views, swimming and fishing.*

Controlling Invasive Common Reed and Restoring the Marsh

Phragmites or common reed has quickly spread through much of Metro Beach Metropark, St. John's Marsh and parts of Harrison Township. Common reed (*Phragmites australis)* crowds out native plants, forming thick stands that can grow up to 20 feet (approximately 6 meters) high and is spread by rhizomes that reach up to 6.5 feet (approximately 2 meters) below ground. Treatment options require a combination of herbicides followed by burning or mowing. These large infestations of common reed make it virtually impossible to remove by digging or pulling once established. While it may appear to be another pretty wetland grass, Phragmites is aggressively taking over entire marsh areas of Metro Beach Metropark, other parts of Harrison Township and St. John's Marsh in Algonac.

Contact Information

Ernie Kafcas, MDNR-Wildlife, 586-465-7214
Paul Muelle, Huron-Clinton Metroparks, 810-227-2757

Next Steps – 2012 and Beyond

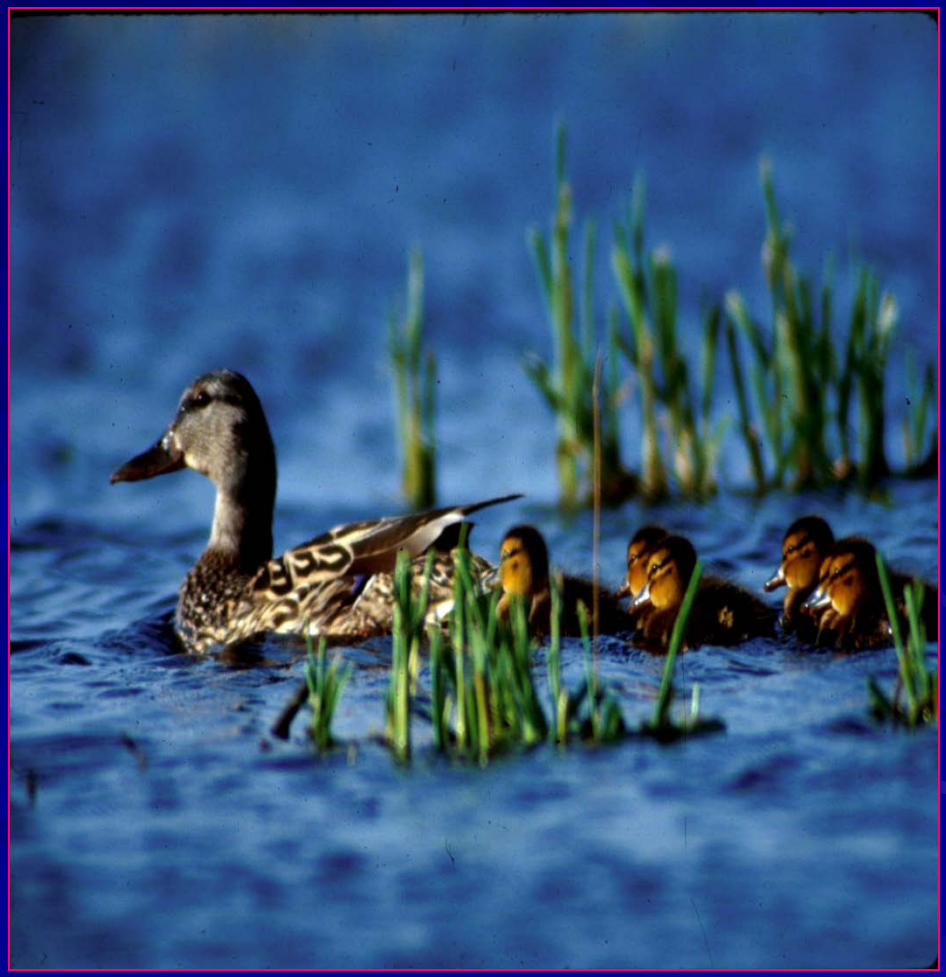
- Continuation of Phragmites control and maintenance of existing sites – follow-up spot treatment, burn/mow
- Mapping/Monitoring
- Education/Outreach
- Develop lake wide long term Phragmites control strategy

Project Partners

- Ducks Unlimited
- Michigan Department of Natural Resources
- Army Corps. Of Engineers
- Michigan Sea Grant
- Southeast Michigan Council of Governments
- Clay Twp./PAB
- Local Waterfowl Groups – St. Clair Flats Waterfowlers/Harsens Island Waterfowlers

A Call to Action

- Whether the goals are to restore native plant communities and wildlife habitat or improve a lakeside view and recreational opportunities, the charge is the same—to control phragmites in coastal and interior wetlands of Michigan.



The End Product…….

- A diversity of plant and animal life.