



# Phragmites Control Projects: Regulations and Recommendations

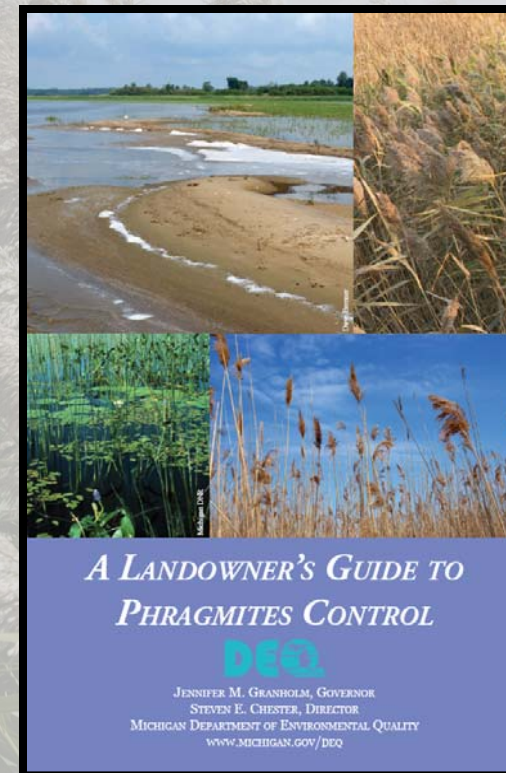
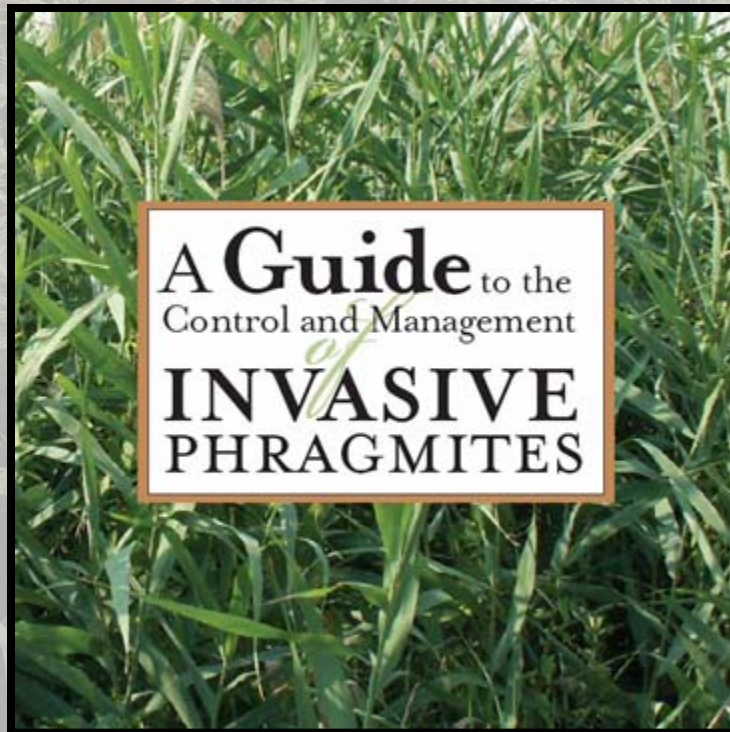
2008 Binational Lake St. Clair Conference

March 19, 2008

- Available Resources
- Permit Requirements for Each Step in a Control Program
- Practical Advice
- Hampton Township Demonstration Project
- Current and Future Research



# Available Resources



[www.michigan.gov/deqaquaticinvasives](http://www.michigan.gov/deqaquaticinvasives)

# Integrated Pest Management

- Understand phragmites life cycle
- Become familiar with herbicide types and application methods
- Determine best sequence for follow up treatments
  - Mechanical
  - Burning
  - Flooding
  - Repeated herbicide treatments

# Aquatic Nuisance Control Permit

- Part 33, Aquatic Nuisance Control, of NREPA Permit Required when treating in:
  - Waters of the State
  - Great Lakes Bottomlands (exposed and submerged)

Inland Lakes

Lake St. Clair

Wetlands

Ponds

Road side ditches

Streams

**ANYWHERE WITH STANDING WATER**

# Initial Herbicide Treatments

- Permit Application Forms
  - Use the Long Form
- Fees: Based on the size of the proposed treatment area.
  - $< \frac{1}{2}$  acre = \$75.00.
  - $\frac{1}{2}$  to 5 acres = \$200.00.
  - 5 to 20 acres = \$400.00.
  - 20 to 100 acres = \$800.00.
  - $> 100$  = \$1,500.00.
- New application required every year

**DEQ**  
MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER BUREAU

**APPLICATION FOR PERMIT OR CERTIFICATE OF COVERAGE  
FOR CHEMICAL TREATMENT TO CONTROL  
NUISANCE AQUATIC PLANT AND/OR ALGAE GROWTH**

Permitted by Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 401, as amended (NREPA), and Part 32, Aquatic Nuisance Control, of the NREPA, application is made by the undersigned for a permit to chemically treat the waters described below for the control of nuisance aquatic plant and/or algae growth.

**SECTION I. GENERAL INFORMATION**

<b>APPLICANT INFORMATION</b>		<b>WATERBODY INFORMATION</b>			
APPLICANT NAME		WATERBODY NAME (IF CANAL/MARINA, ALSO LIST NAME OF CANAL/MARINA)			
MAILING ADDRESS		COUNTY(IES)			
CITY, STATE, ZIP CODE		FOUNDRY NAME(S)	TOWNS	RANGES	SECTIONS
TELEPHONE (DAYTIME)	FACSIMILE	OTHER INFORMATION FOR PRECISE LOCATION (E.G., NEARBY CROSSROADS)			
LAKE ADDRESS (IF DIFFERENT FROM MAILING ADDRESS)		SURFACE AREA OF ENTIRE WATERBODY (ACRES)			

**SECTION II. TREATMENT AREA**

1. DIMENSION OF TOTAL TREATMENT AREA  
Length \_\_\_\_\_ feet Width \_\_\_\_\_ feet Average depth of treatment area \_\_\_\_\_ feet

2. TOTAL SURFACE ACRES PROPOSED FOR TREATMENT \_\_\_\_\_ ACRES (1 acre = 43,560 square feet)  
Multiply length in feet by width in feet and divide by 43,560.

**SECTION III. REQUIRED FEES**  
Fees are based on the size of the proposed treatment area. **ALL FEES ARE NON-REFUNDABLE.** Check appropriate box:

For treatment of areas less than  $\frac{1}{2}$  acre, the required fee is \$75.00.  
 For treatment of areas of  $\frac{1}{2}$  acre or more but less than 5 acres, the required fee is \$200.00.  
 For treatment of areas of 5 acres or more but less than 20 acres, the required fee is \$400.00.  
 For treatment of areas of 20 acres or more but less than 100 acres, the required fee is \$800.00.  
 For treatment of areas of 100 acres or more, the required fee is \$1,500.00.

Certificate of Coverage under General Permit No. \_\_\_\_\_ – \$75.00 (all current General Permits and the list of pre-approved waterbodies may be obtained by visiting <http://www.michigan.gov/deq> or by calling 517-241-7734).

Payment must be made in full or your application will be returned. Checks should be payable to **STATE OF MICHIGAN**. Submit your check, completed application form, and if necessary, a treatment map and authorization letter or contract to:

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY CASHIER'S OFFICE – WB – AQ P.O. BOX 30657 LANSING, MICHIGAN 48909-8157	FOR CASHIERS USE ONLY: 37900-40509-9037-481003-00
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# Practical Advice: Coordination

- Applications may include multiple properties
- Written permission required from each property owner
- Coordination with neighbors is beneficial!
  - Reduced cost
  - Less recolonization from neighboring properties



# Practical Advice

- Shop Around- get at least 3 quotes on herbicide treatment
- Consider chemical costs and benefits
- Be sure your contractor is certified to treat aquatic areas

[www.mda.state.mi.us/pest/](http://www.mda.state.mi.us/pest/)



# Mechanical Treatment

- Part 303, Wetlands Protection, of NREPA
- Part 325, Great Lakes Submerged Lands, of NREPA



- When is it regulated?
  - Great Lakes Bottomlands (exposed and submerged)
  - Repeated mowing in inland wetlands

# General Permit For Limited Great Lakes Shoreline Management



- Expiration of 2003 “Beach Grooming” Exemptions
- Seven Different Types of Activities
  - Leveling of Sand
  - Grooming of Sand
  - Construction and Maintenance of a Path
  - Mowing a Pathway
  - Mowing a Recreation Area
  - Mowing of Previously Mowed Areas in Saginaw and Grand Traverse Bay
  - Mowing as Part of a Invasive Species Control Plan

# General Permit Authorization for Management of Phragmites

**Mowing invasive or non-native species on Great Lakes bottomlands below the OHWM and above the water's edge-**

Mowing areas predominantly vegetated by non-native or invasive species as part of a vegetation control plan in accordance with recommendations provided by the DEQ.

# General Permit

 Michigan Department of Environmental Quality – Great Lakes Shoreline Management General Permit   
U.S. Army Corps of Engineers – Application for Minor Shore Activities  
Application Form and Instructions

This application may be used for shoreline management activities located above the water's edge and below the ordinary high water mark (OHWM) on the bottomlands of the entire Great Lakes shoreline, including Lake St. Clair.  
This application is for the following types of projects, provided they fit within the limits of the Michigan Department of Environmental Quality (MDEQ) General Permit (GP) and the U.S. Army Corps of Engineers (USACE) regional permit (RP) categories:

- Leveling and grooming of sand in areas free of vegetation.
- Construction and maintenance of a temporary path in areas free of vegetation using on-site materials.
- Mowing a pathway.
- Mowing a recreational area.
- Mowing in previously mowed areas of Saginaw and Grand Traverse Bays, if the original mowing was done in compliance with the Natural Resources and Environmental Protection Act, 1994, PA 451, as amended (NREPA).
- Mowing of invasive or non-native species as part of a vegetation control plan in accordance with recommendations from the MDEQ.

A detailed description of the activities authorized under this GP may be accessed at <http://www.michigan.gov/deqwetlands>. Activities qualifying for issuance under the RP can be found at <http://www.frc.usace.army.mil/whc/regulatoryoffice/hotspots/>. Activities below the water's edge, vegetation removal, and beach nourishment are not authorized by the GP/RP categories. Individuals wishing to conduct these activities must complete the joint permit application, available at <http://www.michigan.gov/jointpermit>. Application of herbicide as part of an invasive or non-native species control plan requires a permit from the MDEQ's Aquatic Nuisance Control Program. See <http://www.michigan.gov/inlandlakes>.

**Directions for completing the Great Lakes Shoreline Management General Permit Application Form:**

Make sure you:

- Fill out all boxes pertinent to your project.
- Provide the township, range, and section numbers required in the Property Location and Description section.
- Print your name and sign and date your application on Page 3.
- Provide a letter of authorization if the legal property owner is not the individual who signs the application, or if multiple adjacent property owners are applying for authorization under a single application. A letter of authorization is a letter from the legal landowner(s) authorizing the applicant or agent to apply for the project. The letter should include the signature from the landowner and the project site address.
- If a path or recreation area is proposed, stake or flag the project area for a potential site inspection.
- An application fee of \$50 is required for projects that propose mowing alone. All other projects require a \$100 fee.
- If the application fee will be paid by check, submit all application materials to: MDEQ, LWMD-PCU  
P.O. Box 30204,  
Lansing, MI 48909-7704.

If the fee will be paid using a credit card or electronic funds transfer form, you may submit all application materials to the address above, or to the appropriate MDEQ district office, as shown at <http://www.michigan.gov/deqlwmd>.

**Provide the following maps, drawings, and photographs with adequate detail for review.**

- **Project Location Map:**  
A map to the proposed project location that includes all streets, roads, intersections, highways, or cross-roads to the project. Include written directions from a major intersection. Do not assume MDEQ/USACE field staff will know where your project is located.
- **Project Site Plan:**  
Overhead drawings of the proposed project to scale or with length and width dimensions. Show property lines, the water's edge, approximate ordinary high water mark, and any nearby buildings or other landmarks on the site plan.
- **Photographs of the project area:**  
Photos will aid MDEQ/USACE field staff in the prompt review of your application. If possible, provide photos of the proposed work area showing vegetation and the shoreline. All photos must be labeled with the applicant's name, the date the photo was taken, and a description of what the photo shows. Photo locations should be indicated on the site plan.

Great Lakes Shoreline Management Application EQP 2709 (Rev. 1/2008)  
Page 1 of 3

- Permit Application  
– Use the Short Form  
[www.michigan.gov/deqwetlands](http://www.michigan.gov/deqwetlands)

- Fees:  
– \$50 for all Great Lakes bottomland mowing projects  
– Permits valid for 5 years

# Elements of an Application

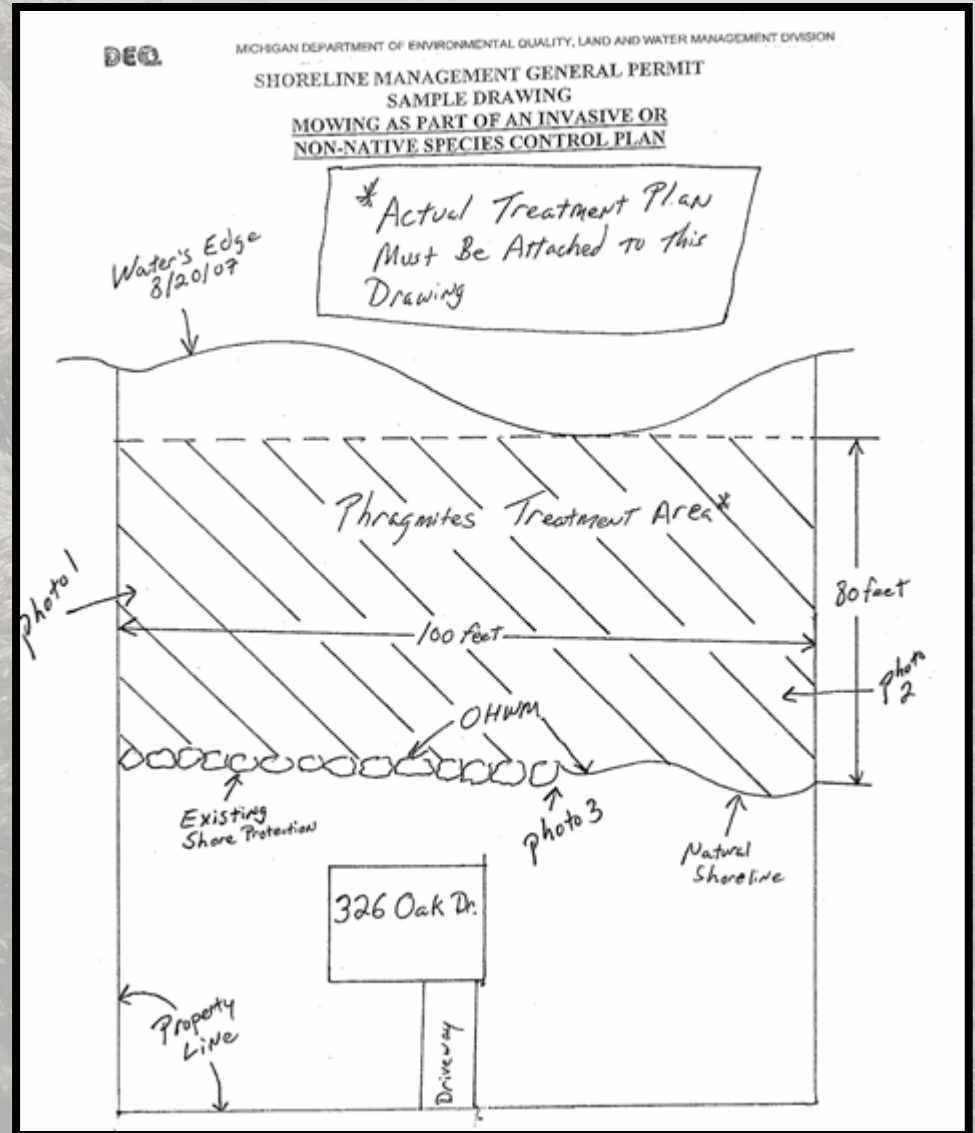
## Control Plan:

- Description of the treatment area.
- Water Depths
- Type of mechanical equipment proposed
- Type of herbicide proposed
- Copy of the ANC permit or application
- A treatment schedule

# Elements of an Application

## Project Site Plan:

- Property Dimensions
- Approximate ordinary high water mark.
- Approximate water's edge.
- Treatment area dimensions
- Non-phragmites areas



# Practical Advice: Mechanical Treatments

Choose the appropriate equipment

Depends on the size and wetness of site

**Weed whips and hand tools:**

dry or wet sites with low density

**Small mowers:**

dry, low density sites

**Brush cutters:**

dry or frozen sites with high densities

**Always set mower and cutter blades to the highest position possible, no lower than 4 inches.**

# Practical Advice: Mechanical Treatment

- Mow in two directions
- Inspect mower blades
- Let herbicide take effect
- Mow wet sites during winter
- Never mow without an herbicide treatment



# Mechanical Treatments

- Should dead, cut stems be removed from the site after the mechanical treatment is complete?
  - Aids in providing sunlight to native plant seed bank.
  - High Cost, Limited equipment
  - Using heavy equipment results in disruption of the site!



# Prescribed Fire



- Check with Local Authorities and Fire Department
- Contact the Michigan Prescribed Fire Council

[www.firecouncil.org](http://www.firecouncil.org)

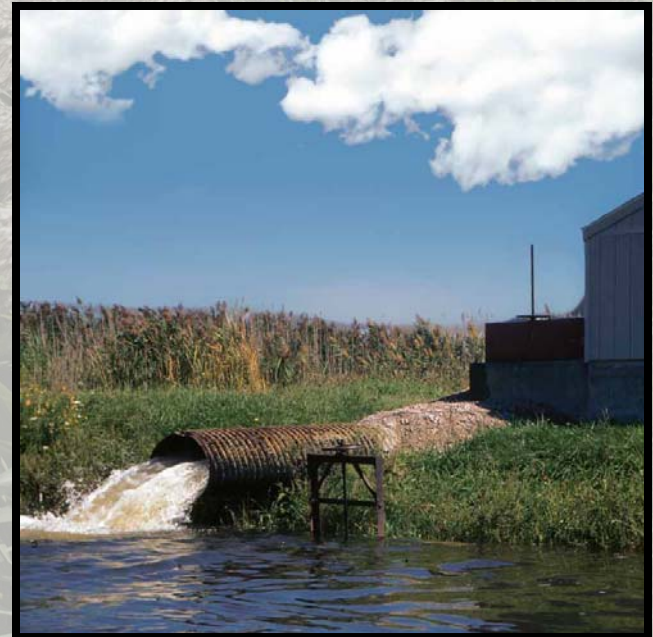
# Practical Advice- Burning

- Not a feasible option for typical landowners
- Training required- Burn crew must be certified
- Create a burn plan
- Never use burning alone as a control technique



# Water Level Management

- Part 303, Wetlands Protection, of NREPA
- Part 301, Inland Lakes and Streams, of NREPA
- Permit Application
  - Joint Permit Form
  - Fee = \$500
  - Public Notice and full environmental review required.



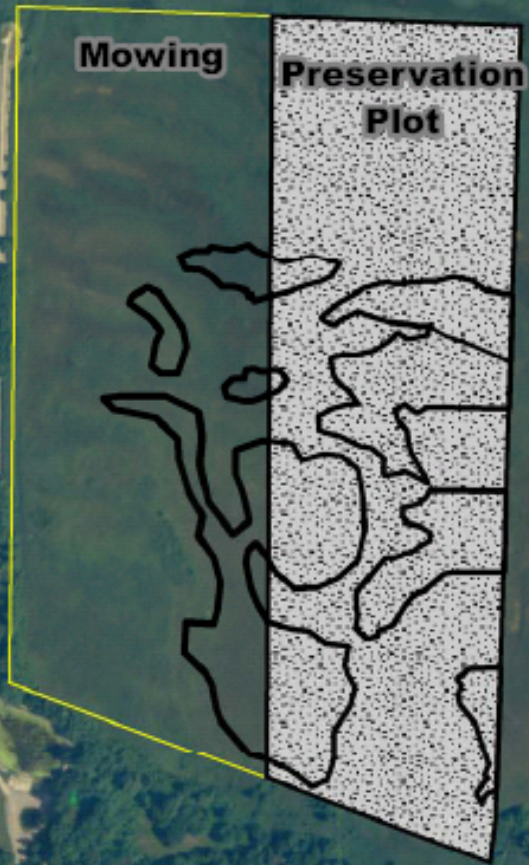
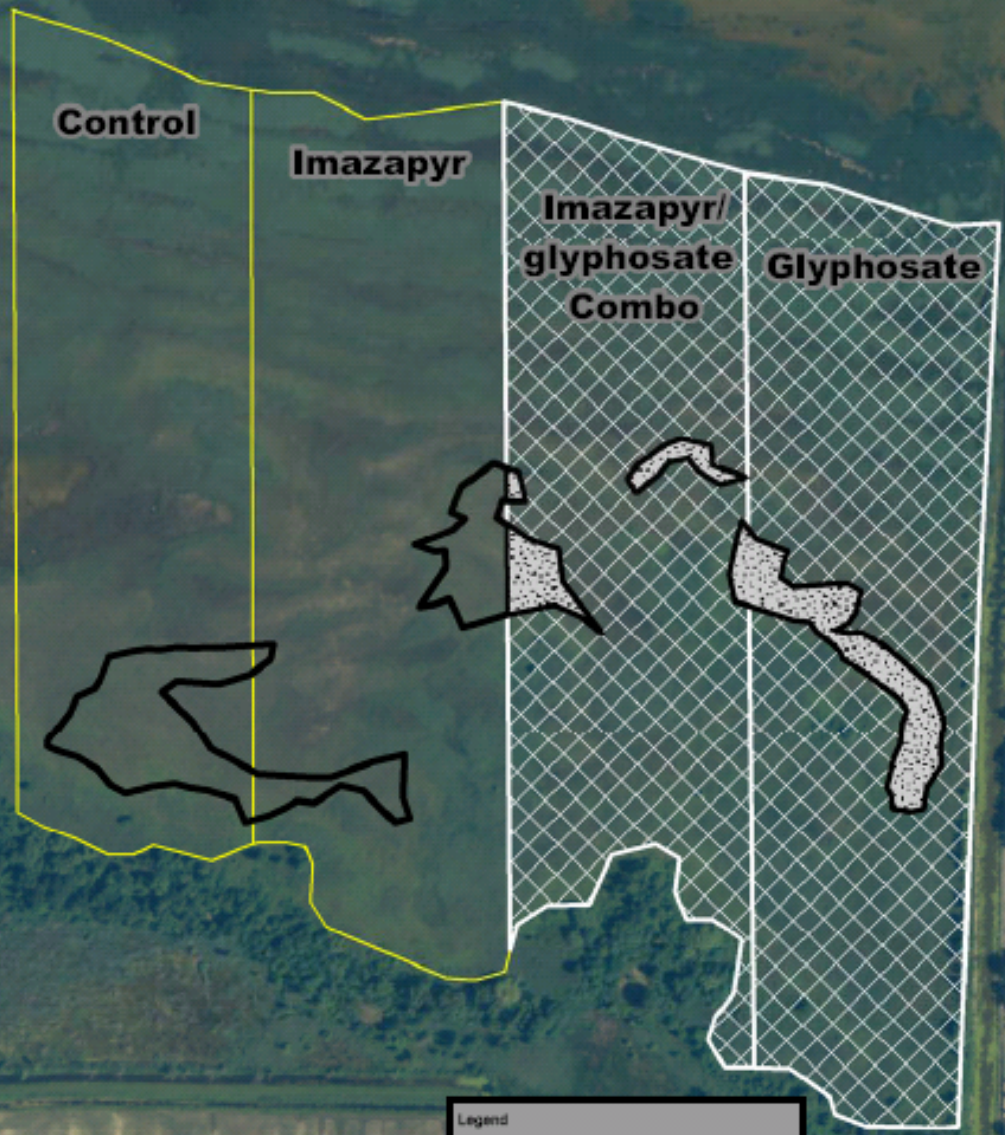
# Phragmites Demonstration Project

- Located on Saginaw Bay in Hampton Township
- Goal is to demonstrate options for typical landowners




- Project Partners
  - U.S. EPA- GLNPO
  - MDEQ
  - MDNR
  - Ducks Unlimited
  - Hampton Township
  - BASF Corporation
  - Cygnet Enterprises

**Lake Huron  
Bay County  
T14NR06E  
Sections 8&9**



500 Feet

Legend

-  Ground Application
-  Aerial Application

# Current and Future Research

- Bernd Blossey- Cornell University
  - 26 herbivores attack phragmites in North America
  - Mostly accidental introductions (5 potentially native)
  - 140 herbivores attack phragmites in Europe
  - 50% of these species are Phragmites specialists
  - No deliberate releases
  - At least 21 accidental introductions



Photo:: Cornell University

Questions?

