Controlling Phragmites in Great Lakes Wetlands

ASWM: Wetlands 2008
Michigan Department of Environmental Quality
Tracy Collin
• The phragmites problem in the Great Lakes
• Controlling phragmites
• Phragmites projects in Michigan
• Elements of a phragmites outreach program
What is phragmites?

• Aggressive wetland grass
  – Up to 15 feet tall
  – Forms dense, monotypic stands
  – 80% of biomass is underground

• Native and non-native genotypes are found throughout the U.S.

• Invasive variety has been an increasing problem for the past 10-15 years in Michigan
Invasive Phragmites

• Displaces and crowds native vegetation
• Reduces wildlife habitat diversity
• Dries marsh soils
• Traps Sediments
• Restricts shoreline views
• Reduces shoreline access for swimming, hunting, and fishing
Phragmites and Water Levels

- Water level fluctuations are a natural occurrence in the Great Lakes.
- Since 1998, water levels have dropped to near record lows.
- Low water is important for coastal wetland persistence, but it also opens up bottomlands to new phragmites infestations.
Initial Reaction and Control

• Legislative changes in 2003 allowed shoreline property owners to mow, groom and remove vegetation without a permit.
• Exemptions expired in 2007, allowing regulatory agencies to promote sound management techniques.
Resources for Control

www.michigan.gov/deqaquaticinvasives
Phragmites Life Cycle
Herbicides

- Must use herbicides to adequately control phragmites
- Treatment timing - late summer is best
- Treatment below the OHWM of the Great Lakes requires a permit

<table>
<thead>
<tr>
<th>Treatment Timing</th>
<th>Imazapyr</th>
<th>Glyphosate</th>
<th>Combination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>June – First Killing Frost</td>
<td>Late August – First Killing Frost</td>
<td>Late August – First Killing Frost</td>
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<tr>
<td>Cost</td>
<td>High</td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Effectiveness</td>
<td>High</td>
<td>Medium</td>
<td>High</td>
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Secondary Treatments

- Mowing
- Prescribed Fire
- Flooding

Yearly Follow-up Treatments

Annual maintenance plan should include spot treatment of new growth with herbicide
Phragmites Projects

- Lake St. Clair- St. John’s Marsh
- Saginaw Bay Coastal Initiative Demonstration Project
- Beaver Island Phragmites Ordinance
- Grand Traverse Bay Phragmites Project
St. John’s Marsh
St. John’s Marsh

Herbicide (glyphosate) → Burn (winter)
Saginaw Bay Demonstration Project

ANC TREATMENT MAP
Lake Huron
Bay County
T14NR06E
Sections 8&9
Year 1 Results

Imazapyr (treated June 2008)  Combo (treated Sept 2007)
Year 1 Results

mow
Gly
combo
combo
Imaz
control
Beaver Island Ordinance
Grand Traverse Bay

- Mirroring Beaver Island strategy
- Survey for phragmites locations throughout the bay in Sept 2008
- Stakeholder meeting in October
- Use the meeting and the media to educate the public
Elements of a Phragmites Outreach Program

- Treatment Method Development
- Education and Outreach
- Mapping
- Collaborate to treat large areas
Questions?