Exploratory Noxious Weed Survey of the Middle and Upper Columbia Slough Watersheds

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The Story: MCDD

- Manages drainage in the Columbia corridor
  - 27 miles of levee
  - 45 miles of waterway
  - 12 pump stations

- Aquatic Weeds
  - 2014 – Parrot Feather Observed
  - 2015 – Parrot Feather Middle Slough Mainstem

- Increasing maintenance resources allocated
  - Conveyance checks have doubled
  - Powered rake system: 1 hr/day to 4hrs/day
  - Increased number of blockages cleared
The Story: Columbia Slough Watershed
The Survey

**Primary Goal:** To better understand the presence and extent of aquatic weeds that will impede conveyance in the Middle and Upper Columbia Slough.

**Primary Targets**
- Aquatic primrose (*Ludwigia spp.*)
- Parrot feather (*Myriophyllum aquaticum*)
- Eurasian milfoil (*Myriophyllum spicatum*)
- Fragrant water lily (*Nymphaea odorata*)
- Curly pondweed (*Potamogeton crispus*)

**Other Goals**
- Identify terrestrial weeds of significance
- Provide recommendations for immediate and long term control
Data Collection
Ex: White Water Lily
Ex: White Water Lily Distribution
Ex: Parrot Feather
<table>
<thead>
<tr>
<th>Primary Target Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Middle Slough</strong></td>
</tr>
<tr>
<td>Not Observed</td>
</tr>
<tr>
<td>Light Distribution</td>
</tr>
<tr>
<td>High Distribution</td>
</tr>
<tr>
<td>High Distribution</td>
</tr>
<tr>
<td>Light Distribution</td>
</tr>
</tbody>
</table>

**NOTES:**
- High Distribution observed in Middle Slough.
- Light Distribution observed in Upper Slough.
- Increasing presence in Upper Slough.
Next Steps: Immediate Action

- Containment Strategy
  - Survey non-occupied areas
  - Treat populations at <5% cover or that are rapidly expanding

- Species specific treatments
- Created thresholds for action

<table>
<thead>
<tr>
<th>Target Species</th>
<th>Area of Control</th>
<th>Point of Action (POA)</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ludwigia peploides</td>
<td>Not yet observed</td>
<td>&lt;5% cover</td>
<td>Hand pull/thatch rake</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;5% cover, with suitable emergent leaf area</td>
<td>Chemical Application: 3% glyphosate</td>
</tr>
<tr>
<td>Myriophyllum aquaticum</td>
<td>Buffalo Slough</td>
<td>&lt;5% cover</td>
<td>Hand pull/thatch rake</td>
</tr>
<tr>
<td></td>
<td>Whitaker Slough</td>
<td>&lt;5% cover</td>
<td>Hand pull/thatch rake</td>
</tr>
<tr>
<td></td>
<td>Middle Slough mainstem: NE 142nd to l-205</td>
<td>&lt;5% cover</td>
<td>Hand pull/thatch rake</td>
</tr>
<tr>
<td>Myriophyllum spicatum</td>
<td>Not recommended for immediate control</td>
<td>N/A</td>
<td>Future research for control recommended</td>
</tr>
<tr>
<td>Nymphaea odorata</td>
<td>Middle Slough mainstem</td>
<td>&lt;5% cover</td>
<td>Chemical Application: 3% glyphosate</td>
</tr>
<tr>
<td></td>
<td>Upper Slough mainstem: 4-Corners Natural Area</td>
<td>&gt;20% cover</td>
<td>Chemical Application: 3% glyphosate</td>
</tr>
<tr>
<td></td>
<td>Ponds: 4-Corners Natural Area</td>
<td>&gt;20% cover</td>
<td>Chemical Application: 3% glyphosate</td>
</tr>
<tr>
<td>Potamogeton crispus</td>
<td>Whitaker Ponds</td>
<td>&gt;50% cover</td>
<td>Future research for control recommended</td>
</tr>
</tbody>
</table>
Next Steps: Long Term

• Milfoil Weevil
• Emerging Technologies
• Flow Augmentation
• Nutrient Loading
• Canopy Cover
Next Steps: Long Term
Next Steps: Columbia Slough Aquatic Weed Group?

Stakeholders and potential partners help:
- Explore long and short-term strategies
- Map and review current projects in the Columbia Corridor
- Assess and prioritize projects
- Shared project funding and management

For more information:
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- Brian Eberhardt: MCDD; (503) 281-5675 - beberhardt@mcdd.org
Thank You!

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