Detecting Invasive Species Through a Two-state, Coordinated AIS Snapshot Day

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Wisconsin Lakes Partnership Convention
Stevens Point, WI
April 19, 2018
Overview

• The beginning
• Targeting
• Expanding
The Beginning
The Beginning
The Beginning

• DNR AIS monitoring protocol for streams
• Adapted for volunteers to target fall water garden releases at public access locations

Water hyacinth (Eichhornia crassipes)

Water lettuce (Pistia stratiotes)
The Beginning

- Protocols & datasheet
- Webinar training for local coordinators
- Template PowerPoint
- Press & social media packet
- Flyers & handouts
- Social media
The Beginning

- Local coordinator selects sites
- Recon on sites
- Recruits volunteers
- Prepares maps
- Trains volunteers ID and protocols in morning
Protocol Basics

• Dry or wet site
• Two Minutes per step/transect
  – Look
  – Rake
  – Scoop
• Collect
• Clean
<table>
<thead>
<tr>
<th>BRIDGES</th>
<th>DRY</th>
<th>WET</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Drying Equipment" /></td>
<td><img src="image2" alt="Drying Equipment" /></td>
<td><img src="image3" alt="Drying Equipment" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SHORELINES</th>
<th>DRY</th>
<th>WET</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image4" alt="Shoreline" /></td>
<td><img src="image5" alt="Shoreline" /></td>
<td><img src="image6" alt="Shoreline" /></td>
</tr>
</tbody>
</table>
### Example Datasheet

**AIS Snapshot Day Datasheet**

**Site name:** Murphy's Creek at Later Road  
**Station ID:** 1001954  
**Coordinates:** 42.90346N, -93.36288W

**Names of Volunteers:**  
Amy Smith, Abigail White, Jeremy Block

**Local Site Coordinator/Initial Verifier:**  
Amanda Pendzick

**Protocols (circle one):**  
- Boat launch
- Dry Bridge/Culvert
- Wet Bridge/Culvert

**Did you use a hand scoop?** Yes/No  
**Did you use a rake?** Yes/No

**Start Time:** 10:05  
**End Time:** 10:25

List each aquatic invasive species observed, estimate the area and density of population, or indicate in the check box if none were observed.  
Indicate whether you collected a sample and/or took a picture.

<table>
<thead>
<tr>
<th>Species</th>
<th>Estimated area (m²)</th>
<th>Density*</th>
<th>Sample Collected?</th>
<th>Picture Taken?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invasive Leaf</td>
<td>1</td>
<td>2</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Rusty Coughed</td>
<td>1</td>
<td>1</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>ELM</td>
<td>2</td>
<td>3</td>
<td>Y</td>
<td>N</td>
</tr>
</tbody>
</table>

**LOCAL COORDINATORS**

**Initial Verification (Y/N)**  
**Initial ID Correct (Y/N)**  
**For Voucher (Y/N)**

**Density Ratings:**  
1: A few individuals (1-10)  
2: Many small, scattered populations (11-100)  
3: Dense population (>100)

**Check box if no aquatic invasive species were observed**

**Other observations/notes:**

**Who did you send your voucher specimens to?**

Amanda Pendzick

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**UW Extension**  
University of Wisconsin-Extension

**Wisconsin Dept of Natural Resources**

**River Alliance of Wisconsin**
The Beginning

- Volunteers bring back specimens in afternoon
- Local coordinator IDs and takes photos
- Data in SWIMS
- Submit to DNR
Clean
The Beginning

• First few years very successful!
  – 2014: 135 sites
  – 2015: 126 sites
  – 2016: 145 sites

• Duplicate entries
Count of prohibited species within 15 miles

- 1 - 11
- 12 - 21
- 22 - 36
- 37 - 55
- 56 - 77

Unverified archive records

- Bohemian Knotweed
- Common Reed
- Japanese Knotweed
- Reed Mannagrass

Lakes and AIS Mapping Tool records
2017 – A Broader Effort

Partner with CLMN to add lakes to Snapshot Day
Partner with University of Minnesota ‘Starry Trek’ to create a two-state event
Monitoring Protocol: Site Arrival

1. Identify boundaries of public access
2. Search begins at one end and ends at the other
3. Plan 5 equally spaced locations within public access boundaries
   - Note if there is a dock or pier, make that one of the locations
     • Sample off any side, but try to focus on area(s) boats frequently travel through
Monitoring Protocol: Site Arrival
Sampling Procedure

At each sampling location:

1. SCAN the area for 30 seconds
   - Spend more time if needed (e.g. areas of heavy vegetation)
   - Include plant fragments and shells on shore & plants and animals in the water
   - Use polarized sunglasses (if available)
Sampling Procedure

2. TOSS the sampling rake into the water
   • Aim for concentrations of plants or anything suspicious from the scan
   • Be sure to hang onto one end of the rope
Sampling Procedure

3. EXAMINE material attached to the rake
   Use provided ID resources to help identify suspicious organisms
Volunteers return to the local training site ("rendezvous site") to examine anything suspicious with the local coordinator. 57 lake sites sampled on August 5th, 2017!
Sampling Procedure

4. REPORT new invasive species populations
   Local coordinator enters data and photographs specimens on datasheet
The Beginning

• First few years very successful!
  – 2014: 135 sites
  – 2015: 126 sites
  – 2016: 145 sites
  – 2017: 154!
2017 Snapshot Day Survey

90% of participants are “likely” or “very likely” to participate again in 2018.

67% rated the quality of their Snapshot Day experience as “very good”,

33% as “good”.

98% felt comfortable identifying AIS after participating in Snapshot Day.
Welcome to the team, Natalie!
Questions/Comments

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