Status Report: Invasive Aquatic Plants in Maine

Karen Hahnel
Maine DEP
Statutory Charge

2000 and 2001 legislation:

✓ Established dedicated funding source - Invasive Aquatic Plant and Nuisance Species Fund!
✓ Listed eleven prohibited species
✓ Required outreach; control; inspection programs
✓ Required development of a Task Force and Action Plan (USFWS/ANSTF approved)
Eleven *Prohibited* Invasive Plants

1. Variable water milfoil
2. Hydrilla
3. Curly-leaved pondweed
4. Eurasian water milfoil
5. Brittle naiad
6. Yellow floating heart
7. Water chestnut
8. Fanwort
9. European frogbit
10. Brazilian elodea
11. Parrot feather
12. Yellow floating heart
Five INVASIVE Aquatic Plants Found in Maine

- *Potamogeton crispus*
- *Hydrilla verticillata*
- *Najas minor*
- *M. heterophyllum*
- *Myriophyllum spicatum*
Invasive Aquatic Plants
Infested Maine Public Waters, January 2018
www.maine.gov/dep/water/invasives/

- Variable Leaf Milfoil (VLM)
- Eurasian Water Milfoil (EWM)
- Hydrilla (HYD)
- European Naiad (EN)
- Curly Leaf Pondweed (CLP)

Infested Systems

1. Annabeth Luck Lake
   VLM
2. Bolch Pond
   VLM
3. Bryant Pond
   VLM
4. Cushman Pond
   VLM
5. Damariscotta Lake
   HYD
6. Great Pond
   VLM
7. Hagan Pond
   VLM
8. Lake Arrowhead
   VLM
9. Lake Auburn
   VLM
10. Legion Pond
    VLM
11. Little Sebago Lake
    VLM
12. Messalonskee Lake
    VLM
13. Mill Stream
    VLM
14. Ossipee River
    VLM
15. Pickerel Pond
    HYD
16. Pleasant Pond/Cobbussee
    VLM
17. Pleasant Lake
    VLM
18. Pleasant Hill Pond
    EWM
19. Presumpscot River
    VLM
20. Sac River
    VLM
21. Salmon Falls River
    VLM
22. Sebago Lake
    VLM
23. Shag Pond
    VLM
24. Thompson Lake
    VLM
25. West Pond
    VLM
26. Woolwich Ponds
    HYD

Online Map

MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
www.maine.gov/dep
Program Funding

- Funded by the sale of the Lake & River Protection Sticker
- Required for all motorized boats used on inland waters
- $10 Resident; $20 Nonresident
- These are dedicated funds
- Maine DEP receives 80% of these funds of which a portion mandated for ‘eradication activities’
- Remaining 20% goes to DIFW
Major Expenditures

- DEP Staff
- Grants
  - Prevention (Boat Inspections)
  - Early Detection (Plant surveys, education /outreach)
  - Plant Removal
- Rapid Response
### Courtesy Boat Inspections - Annual Totals

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<tr>
<th>Year</th>
<th>Number of Inspections</th>
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<td>87,413</td>
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<td>2016</td>
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**Total Number of Inspections:** 88,165
VLMP Workshops

• Multiple formats including Plant Paddle
• 225-300 trained annually
• Over 4000 trained to date
• Emphasis on teams: 67 teams and counting as of 2017 (some teams are regional, covering multiple lakes)
Maine Waterbodies With Reported IAP Survey Activity (2001-2016 Cumulative)
Northeast Pond/Salmon Falls River Infestation

*Najas minor* (Brittle naiad)
Northeast Pond/Salmon Falls River Infestation

- Discovered 9/2015 by volunteer
- Annual plant
- Similar to native naiads; distinguishable by July
- Dies back in October
- Found downstream in Spaulding Pond 2016
Total Travel Distance: 22+ Miles
2017 Management

Integrated Management
DASH
Herbicide

Objectives
Eradication
Long-term Suppression

Local/State Partnership
NH DES, TTPA Lake Assoc.
New Infestation 2017
Long Lake, Naples

- Variable-leaf milfoil – Long Lake, Naples
- Angler reported to CBI
- LEA checked and confirmed – variable-leaf milfoil
- Limited area – dense in two coves with campgrounds; scattered outside the coves
- Rapid Response: DEP provided $12K to LEA
- LEA organized plant survey involving staff, volunteers and VLMP Ubber IPPer Teams
Vulnerability Index

- 2004 – MNAP & DEP created scoring index (VI)
- Used to assess lakes vulnerability to infestations
- Assigns each lake a numerical ‘risk’ score placing them in a lower, medium or higher risk category
- 2017 – updated the VI
- Created a statistical model to help predict likelihood of an infestation
Vulnerability to Infestations Comparing 2004 to 2017

• Analyzed 2664 lakes > 10 acres
• 75% (1995) lakes showed no change from 2004 analyses
• 7% (191) decreased their score
• 18% (478) increased their score
  – 3% (93) lakes increased enough to put them into a higher risk category: 50 of these increased from lower risk to moderate and 43 moved from moderate to higher risk category
Lakes Identified by the Model

81 Lakes Identified

• 30 currently infested.
• 51 not infested
  • 31 have CBI program or IPP survey
  • 7 have a partial survey or a CBI program in the past
  • 13 have never been surveyed
Less than 1% of Maine lakes have known IAP infestations.
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