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**NEANS Panel *Hydrilla* Initiative Pilot (HIP):
A Regional Pilot Project to Eradicate Hydrilla from Northeast Waters
Initiated November 2006; Final Summary May 2010**

The HIP Project

Threats and impacts posed by invasive aquatic species cross political boundaries, while most prevention and control efforts are implemented at the state (or even local) scale. Through the Hydrilla Initiative Pilot (HIP), the NEANS Panel attempted to create a framework for prevention and control of an invasive aquatic species on a regional (multi-state/province) scale.

The NEANS Panel selected Hydrilla (*Hydrilla verticillata*), a federal noxious weed, as the focus of a regional project to prevent and control invasive aquatic species. Hydrilla was selected because plant populations are not widespread and there is, therefore, real opportunity to limit its spread in the NEANS region. Furthermore, the NEANS is a forum for Panel members to learn from Hydrilla control efforts within the NEANS region (Hydrilla is in CT, MA, ME, and NY) and apply this experience across the region when new infestations are discovered. The HIP project draws on the considerable regional rapid response planning in the region since 2002. Depending on process and outcomes, this initiative may be a model for future NEANS initiatives.

NEANS Panel Objectives for HIP

At their November 2005 meeting in Stowe, VT, the NEANS Panel set eradication of Hydrilla in the Northeast as a priority. This concept was originally floated at the Panel's May 2005 meeting in Portsmouth, NH, when Lars Anderson from the USDA Agricultural Research Service in California suggested that the NEANS Panel consider embarking on a regional effort to rid Hydrilla from water bodies within the Northeast. Objectives of regional coordination include:

- Preventing additional infestations
- Early detection of any new infestations that may occur
- Responding rapidly to new infestations
- Attempting to eradicate existing populations in the region

The Hydrilla Initiative was the strategic focus of NEANS Panel activities from November 2006 to November 2008. This document includes the workplan, a record of completed tasks, links to Panel products developed through HIP, and possible future tasks. A summary of HIP was presented to the full Panel at the May 2010 meeting in Portland, ME.

Hydrilla Background

Hydrilla, considered the most aggressive and problematic invasive aquatic plant in the U.S., is established in three Northeast states: Maine (two waterbodies), Massachusetts (two waterbodies), and Connecticut (five waterbodies). Hydrilla has not been documented in

Canada. Spread of Hydrilla to other localities within the Northeast would dramatically diminish aquatic habitat and alter recreational opportunities in the region.

Believed to come from Uganda and Tanzania¹, Hydrilla was first identified in the U.S. (Florida) in the late 1950s and has since spread to states including California, Washington, and Maine (2002). A large body of applied research and the consensus of the management and scientific communities assert that Hydrilla has an exceptional capacity to out-compete native vegetation, displace both game and non-game fish populations, and wreak havoc with surface and water-contact recreational uses. This is true of northern tier states as well as southern and Mid-Atlantic States. Extensive information on Hydrilla biology and environmental effects can be found through the Center for Aquatic and Invasive Plants². No state has had as much experience with Hydrilla infestations as Florida, where its control accounts for more than \$20 million each year³.

NEANS Panel Workplan

The Panel developed the following workplan through the Panel's standing committee structure: Science and Technology; Policy and Legislation; and Communication, Education, and Outreach. The responsible committee or other responsible entity is listed for each workplan item along with a target date for implementation. Budget estimates are for several "big ticket" tasks but are not intended to include all projects that NEANS Committees worked on as part of this initiative. The Panel's Hydrilla Initiative workplan included:

1. A Proclamation for adoption by the Governors of the Northeast States and the Premiers of the Atlantic Provinces that endorses this initiative and directs their respective state and provincial agencies to participate in the specific components of the workplan (items 2-10 below);
Panel Policy and Legislation Review by full Panel November 2006; formal
Committee see item #1 below adoption by November 2007
Estimated cost: \$1,000
2. Regional outreach and advertising on the risks posed by Hydrilla and how to prevent spread;
Panel Communication, Education, Run outreach and ads November 2007-
and Outreach Committee, item #2 November 2008
below
Estimated cost: \$30,000 for period May 2007 through November 2008
3. Training of volunteers throughout the region in early detection of invasive aquatic plants, particularly Hydrilla;
Panel Communication, Education, All states adopt training programs by May
and Outreach Committee, item #2 2008
below
Training done by states within
guidance from the Communication,
Education, and Outreach Committee,
item #3 below
Estimated cost: is unknown and dependent on state and provincial capacity

¹ <http://www.ipane.org>

² <http://plants.ifas.ufl.edu/seagrant/hydver2.html>

³ Dr. William Haller, personal communication. 2003

4. Personnel and financial support for plant control work in the region in both rapid response to new infestations and controlling existing infestations. NEANS Panel will attempt to establish a stand-alone fund and disbursement mechanism to support rapid response work in the region;
Steering Committee and outside experts First funds available for use by states during 2008 field season

Estimated cost to establish stand-alone fund: \$60,000 for 2008 field season

Note: Cost based on four control/rapid response projects using the approximately \$15,000 cost for the 2006 herbicide treatment on Pickerel Pond in Limerick, ME. The initial funds will be raised between November 2006 and spring 2008 and the NEANS Panel will establish a mechanism for disbursing funds to states.

5. Posting details of and contact information for successful prevention and plant control projects on the web, including describing ecological and economic impacts of Hydrilla for context, and establishing indicators of success for Hydrilla control;
Science and Technology Committee, By November 2007
item #1, #2, #3, #4 below

Estimated cost: cost covered under Science and Technology Committee project

6. Convening state Panelists semiannually to assess ongoing status of existing Hydrilla infestations in the northeast, to monitor progress of the overall effort, and to adjust the workplan as needed to achieve the NEANS Panel objective;
Science and Technology Committee, Panelists working on Hydrilla Initiative to
item #1 below, and Steering meet just before each Panel meeting
Committee

Costs covered by state agencies

7. Convening national experts on Hydrilla control from Florida and California to assess NEANS' progress and help determine treatment course for specific control projects within the region;
Steering Committee No set timetable; depends on needs identified
by Panelists working on Hydrilla

Estimated cost: \$3,000 for period November 2006 through November 2008

8. Drafting model state Hydrilla early detection/rapid response and plant management plans (use ME and MA plans as starting point);
Science and Technology Committee, May 2008
item #5 below, Policy and
Legislation Committee, item #2
below

Estimated cost: \$10,000

9. Collaboration with the Great Lakes Panel, particularly considering their interest in keeping Hydrilla out of their waters
Steering Committee Consider sending Panelist working on
Hydrilla Initiative to Great Lakes Panel in
May 2007

Estimated cost: \$2,000

10. Implement outcomes of November 2006 social marketing workshop
Communication, Education, and Outreach Committee, item #1 below
Estimated cost: unknown November 2006-November 2008
11. Coordinator for Initiative efforts by the Panel
Steering Committee
Estimated cost: unknown November 2006-November 2008

NEANS HIP Project Products and Status as of April 2010

Steering Committee

The Panel Steering Committee is composed of Panel and standing committee co-chairs. The Steering Committee will oversee and coordinate the project for the Panel, including attempting to establish a stand-alone fund for rapid response work in the region, convening Panel state members working specifically on the Hydrilla Initiative, communicating about the project with the Great Lakes Panel, and overseeing the coordinator.

Potential future task for the Panel: the stand-alone fund and a mechanism to use these funds to support state efforts to respond rapidly to new infestations and control existing infestations, will likely require seeking foundation or similar outside funding (i.e., not state or federal sources).

Science and Technology Committee

1. Assess status of Hydrilla infestations in Northeast and post eventual map on web.
Completed Jan 2008: <http://www.northeastans.org/hydrilla/hydrillaprofile.htm>
2. Compile case studies of Hydrilla control work, esp. in the Northeast.
Completed Jan 2008: <http://www.northeastans.org/hydrilla/hydrillaprofile.htm>
3. Establish indicator(s) of success for Hydrilla control.
Potential future task for the Panel.
4. Compile ecological and economic impacts of Hydrilla.
Completed Jan 2008: <http://www.northeastans.org/hydrilla/hydrillaprofile.htm>
5. Develop model Hydrilla management plan.
Task Change: Instead of a model plan, the S/T Committee intern asked state and provincial invasive plant programs to complete a Hydrilla Early Detection/Rapid Response (ED/RR) survey to reflect their capability to rapidly respond to new invasions. Survey results may not be complete for each state/province because of difficulty finding appropriate respondents. Also, the survey results will change over time as state/provincial capabilities increase. Because of these factors, the S/T Committee HIP workgroup initially chose not to make it available for public distribution. After further discussion, however, the HIP workgroup decided in 2010 to post the information since it may help states/provinces improve their response capability by learning from others.
Completed Jan 2008; to be posted on NEANS website in December 2010.

Policy and Legislation Committee

1. Draft a proclamation on the NEANS Panel Hydrilla Initiative to be signed by Northeast Governors and Eastern Canadian Premiers
 - Complete text and distribute draft proclamation to the P&L listserv for comment (July 2006)
Completed Jan 2007
 - Distribute final draft proclamation to the NEANS Panel for comment (Nov 2006)
Completed May 2008: Final version approved by Panel
 - Develop a briefing packet to accompany the proclamation when presented to Governors and Premiers for signature. Work with the S&T and CEO Committees to outline contents of the packet and identify responsibilities.
Potential future task for the Panel.
2. Recommend state legislation to prevent spread of Hydrilla.
Potential future task for the Panel.

Communication, Education, and Outreach Committee

1. Plan and carry out a social marketing workshop for NEANS Panelists focusing on both preventing spread and early detection/rapid response. While Hydrilla will be the “poster child” for the workshop, outcomes of the workshop will be applicable to preventing spread of all invasive aquatic plants. The outcome of the workshop will be transferable to other regions.
Completed Nov 2006: strategy doc available at
http://www.northeastans.org/docs/NEANS_Panel_CBSM_hydrilla_report_11.2006.pdf
2. Coordinate regional outreach and education efforts.
Potential future task for the Panel. Most education and outreach currently done at state level.
3. Promote state level development of early detection programs.
Potential future task for the Panel.

NEANS website updates needed as of May 2010

NEANS Panel web page updates needed:

- <http://www.northeastans.org/science.htm> update “Objectives” section
- <http://www.northeastans.org/hydrilla/hydrillaprofile.htm> update “Known Introductions”

Appendix A
 Scope of Services for Jennifer Forman Orth
 Northeast Aquatic Nuisance Species Panel Science and Technology Committee project

Tasks

- | | |
|--|--------------------|
| 1. Maintain existing NEANS Panel EDRR resource pages | September 30, 2006 |
| 2. Develop a web page linking to distributional data for invasive species in the Northeast | September 30, 2006 |
| 3. Develop and post a spotlight on the species web page | September 30, 2006 |
| 4. Develop and post a page linking to identification resources for aquatic invasive species. | September 30, 2006 |
| 5. Develop and post a Hydrilla early detection and rapid response web page for the NEANS Panel | September 30, 2006 |

Work products and deliverables

- | | | | |
|--|--------------------|-------|---|
| 1. A web page containing links to distributional data for aquatic invasive species in the regions | September 30, 2006 | \$200 | Completed Dec 2006:
http://www.northeastans.org/georeources.htm |
| 2. A draft and final spotlight on the species web page featuring the alewife (to be developed in conjunction with Amy Smagula) | September 30, 2006 | 200 | |
| 3. A page linking to identification resources for aquatic invasive species likely to occur in the Northeast region | September 30, 2006 | 200 | Completed Dec 2006:
http://www.northeastans.org/specieslists.htm |
| 4. A draft and final Hydrilla web page outline and framework | September 30, 2006 | 300 | Completed Jan 2008:
http://www.northeastans.org/hydrilla/hydrillaprofile.htm |
| 5. A minimum of three case studies on Hydrilla management efforts posted on the NEANS web page | September 30, 2006 | 400 | Completed Jan 2008:
http://www.northeastans.org/hydrilla/hydrillaprofile.htm |
| 6. A minimum of three studies on the ecological and economic impacts of Hydrilla posted to the NEANS web page. | September 30, 2006 | 400 | Completed Jan 2008:
http://www.northeastans.org/hydrilla/hydrillaprofile.htm |