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Not Immune: Maine Confronts Hydrilla (Hydrilla Verticillata)

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Up until summer 2002, only one invasive aquatic plant species, variable water-milfoil (*Myriophyllum heterophyllum*), had been documented in Maine waters. Since then, however, two invasive aquatic plants often cited as North America's nastiest have shown up in two small ponds in southern Maine. Hydrilla (*Hydrilla verticillata*) was confirmed in fall 2002 and Eurasian water-milfoil (*Myriophyllum spicatum*) in fall 2004.

This paper focuses on Maine's response to the hydrilla infestation in Pickerel Pond, Limerick, Maine since the Eurasian water-milfoil work is only beginning as of this writing. Key components of Maine's response to hydrilla are early detection, communication, containment, surveillance of neighboring waters, and control of the in-pond plant population.

Early detection by an engaged public. Since 2001, outreach and educational programs from Maine Department of Environmental Protection (DEP) and frequent media coverage helped created a concerned and committed public on the lookout for invasive plants in Maine. If not for this citizen awareness, hydrilla would not have been found relatively soon after establishment and before spreading to other water bodies.

This infestation was initially reported by a lakeshore resident late in 2002. The seasonal timing of discovery was fortunate for DEP because it gave staff time to develop their response plan. This highlights the need to build rapid response capability for future infestations, a process in which the DEP is currently engaged.

Communication. Clear and prompt communication is critical to any successful endeavor. Soon after confirmation of hydrilla by the Volunteer Lake Monitoring Program, the DEP contacted landowners with an initial letter informing of them of the problem and possible management the DEP would undertake. A press release soon followed, and after that point DEP wrote multiple letters to shorefront owners and had close contact with the press. Effective communication was particularly critical to conveying the DEP's plans for the eventual choice to control the hydrilla population with herbicide.

Containment. DEP took immediate steps to contain the hydrilla. Staff installed a screen across the outlet stream in late 2002 to collect any fragments that might wash downstream. In cooperation with the Maine Department of Transportation (DOT), the owner of the only public access site on the pond, DEP restricted use of the ramp to only times when a boat inspector is present. DOT gave permission for installing a gate and

establishing an inspection program in spring 2003; this continued through the 2004 boating season. DEP staff surveyed shorefront property owners about other vectors for spread and offered signs to residents with private ramps that directed boaters to the one public ramp.

Surveillance. DEP and colleagues at the Maine Department of Conservation surveyed ponds within approximately 15 km of Pickerel Pond for hydrilla. We needed to know if the infestation extended beyond Pickerel before we could choose in-pond control of the plant population. To date we have not detected hydrilla in any water body in the vicinity of Pickerel.

In-pond control and monitoring. DEP drew on expertise from colleagues from across the country before deciding to apply the herbicide fluridone to control the hydrilla population in Pickerel Pond. Use of herbicides to control aquatic plants is DEP's technique of last resort, so this was not a decision made lightly. Monitoring included in-pond and downstream fluridone concentrations, water quality monitoring, and macrophyte monitoring for effects on target and non-target species to determine any effects from the in-pond treatment. Methods and data from the macrophyte, fluridone, and water quality monitoring will be presented.

The work continues. DEP has now completed its second year of containment, surveillance, and in-pond control efforts. Communication with public and press, though subsided since the first year, continues to be critical to success of this project. But as we all know, the plants are unlikely to go away. That's why development of a local pond association is high on DEP's list to ensure there's a local group of citizens activated to not only monitor the plant but try to keep it under control.