

INVASIVE SPECIES ASSESSMENT & CONTROL

Addressed by 3 management objectives, 5 action plans

“STUDIES SHOW THAT INVASIVES CAN REDUCE NATURAL DIVERSITY, IMPACT ENDANGERED OR THREATENED SPECIES, REDUCE WILDLIFE HABITAT, CREATE WATER QUALITY IMPACTS, STRESS AND REDUCE FOREST AND AGRICULTURAL CROP PRODUCTION, DAMAGE PERSONAL PROPERTY, AND CAUSE HEALTH PROBLEMS.”

- GUIDE TO INVASIVE UPLAND PLANT SPECIES IN NEW HAMPSHIRE, 2005

The Piscataqua Region watershed is experiencing increased invasion by terrestrial, freshwater and marine exotic species. Humans through shipping, trade, overland travel, and importation of non-native host species have introduced some of these plants and animals, while others have migrated due to changes in habitat temperatures and storm patterns. Many have the capacity to opportunistically and quickly invade disturbed habitats. Invasive species can be thought of as non-indigenous species that adversely affect the habitats they invade economically, environmentally or ecologically. For instance, research funded by PREP has documented significant native clam mortality from abundant populations of non-native green crabs. Another example is the invasion of local marshes with the non-native invasive variety of common reed (*Phragmites australis*), which forms dense monoculture stands that displace native vegetation and reduce the quality of the habitat for most wildlife.

The NH Coastal Watershed Invasive Plant Partnership (CWIPP) was formed to coordinate regional invasive plant management activities between federal and state agencies and land conservation organizations. Target invasive species include common reed, purple loosestrife, bittersweet, buckthorn, Japanese knotweed, burning bush, pepperweed and Japanese barberry. These plants displace native species and can alter coastal habitats. Soil disturbance and road impacts aid the spread of these invasives, so the rapidly developing Piscataqua Region is particularly at risk.

At present, CWIPP includes all 42 New Hampshire communities in the Piscataqua Region watershed. Several projects are underway in New Castle, Rye, and North Hampton and in the Crommett Creek watershed in Newmarket and Durham. The 10 watershed communities in Maine work with the Maine Department of Conservation and the University of Maine Cooperative Extension on invasives control. Coordination of these programs across the full watershed area would be valuable.

Common freshwater nuisance species are milfoil, water chestnut, fanwort, and didymo (rock snot). These organisms degrade lake, pond and river habitats and affect aquatic recreation and fisheries. Boaters that move from lake to lake can easily carry these plants from place to place. Zebra mussels may pose a threat to rivers and lakes

in the future. Both Maine and New Hampshire have active programs to control the spread of these species through volunteer lake monitoring and through the “Lake Host” program where volunteers check boats at landings and inform boaters about aquatic invasive plants.

Invasive marine plants and animals include the Chinese mitten crab, green crab, Asian shore crab, tunicates, and disease causing parasites, such as MSX and Dermo. These invaders are harmful to shellfish, eelgrass habitats and the overall native biodiversity of estuarine and marine habitats. Research to evaluate the susceptibility of estuaries to these invaders suggests that temperature and salinity are important factors in survivability. Development of a marine invasive management plan will highlight the most effective measures to minimize impacts on existing habitats.



C. Colletti - NH Coastal Program

*Perennial pepperweed (Lepidium latifolium) is an aggressive non-native plant of the mustard family that creates dense stands, out-competing native plant species, and destroying habitat for many species of animals. Through its pepperweed patrol program, the NH Coastal Program has managed the small pepperweed population in New Hampshire through early detection surveys and control using targeted herbicide treatment and hand-pulling.*