What actions can I take to minimize the spread of invasive plants in my wetlands and waterways?

Some general things you can do to preserve and improve wetland ecosystems in your watershed are:

- ☑ Do not disturb natural areas, remove native vegetation, or relocate soil.
- ☑ Educate your family and neighbors about the ecological effects of invasive plant species.
- ☑ Plant native plants in your home or business landscape. Native grass mixes and wetland seed mixes are recommended. *(Contact NRICD @ 401-949-1480 for a listing of nurseries that sell native plants.)*
- ☑ Learn more about non-invasive local plants. *(Start by contacting the RI Wild Plant Society, www.riwps.org, 401-789-7497)*
- ☑ Prevent the spread of non-native and invasive species by never planting or disposing of non-native plants in the wild.
- ☑ Clean your boat and motor thoroughly after leaving a water body.

[1,2] *"Rhode Island's Natural Heritage Under Siege: Meeting the Challenge of Invasive Species."* Publication #4015 of the RI Agricultural Experiment Station.

Useful Websites
RI DEM Factsheets: www.dem.ri.gov/topics/wetlands.htm
IPANE website: http://nbii-nin.ciesin.columbia.edu/ipane/
RI Invasive Species Portal:
www.rinhs.org/what-we-do/invasives

This educational brochure was developed by the Northern RI Conservation District with funding from Section 104(b)3 of the Clean Water Act.

Printed with non-toxic ink, on 100% post-consumer content recycled paper.

Common Native Plants in RI's Wetlands and Wetland Buffers

[Inside] Photos From Left to Right:

Photos of plants listed below are from www.wikipedia.org

Ilex verticillata (Winterberry)
Kalmia latifolia (Mountain Laurel)
Juniperus virginiana (Eastern Red Cedar)
Pontederia (Pikerelweeds)
Typha (Cattails)
Acer rubrum (Red Maple)
Cephalanthus occidentalis (Buttonbush)
Aster nemoralis (Bog Aster)
Araceae (Arums)

[Outside/Back] Photos From Left to Right:

Photos of plants listed below are from www.wikipedia.org

Salix discolor (Pussy Willow)
Pinus strobus (White Pine)
Cratageus spp. (Hawthorn)
Ilex opaca (American Holly)
Quercus spp. (Oaks)
Utricularia (Pond Bladderwort)

Common Invasive Plants in RI's Wetlands and Wetland Buffers

[Cover] Photos Upper Left and Right:

Photos of plants listed below are from www.wikipedia.org

Phragmites australis (Common Reed)
Lythrum salicaria (Purple Loosestrife)

Common Invasive Plants in RI's lakes and ponds

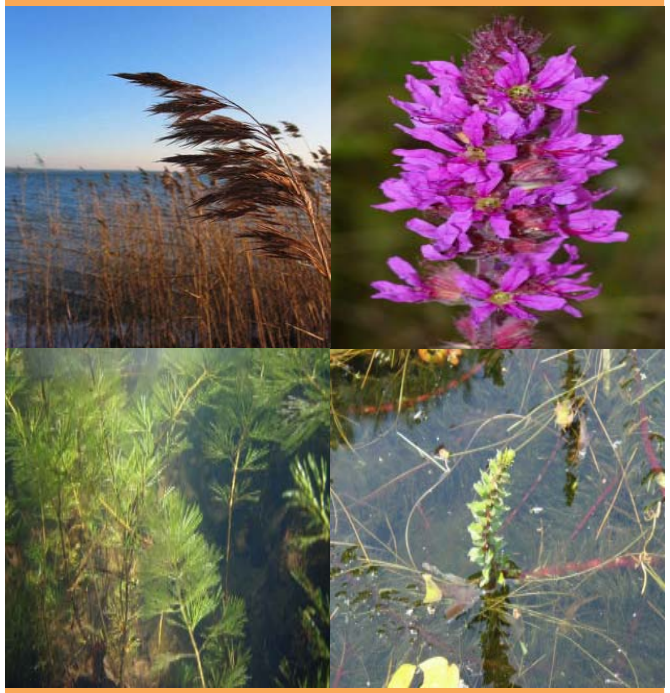
[Cover] Photos Lower Left and Right:

Photos of plants listed below were taken by [respectively] Katie DeGoosh, NEIWPCC and Dan Preli, RI DEM

Cabomba caroliniana (Fanwort)
Myriophyllum heterophyllum (Variable Watermilfoil)

*Please note that there are many other species and types of invasive plants, including herbaceous plants, emergents, vines, trees and shrubs. Rhode Island Dept. of Environmental Management's Wetlands Fact Sheets #7 and #10 served as the basis for the above information.

Wetland Invaders



Invasive Plant species may be degrading your backyard wetland.

Northern RI Conservation District
17 Smith Avenue
Greenville, RI 02828
(401) 949-1480
www.nricd.org

Many wetlands serve as important intermediate areas between dry lands and deeper aquatic systems, like rivers and lakes; others may be isolated within upland areas. Swamps, marshes, and bogs are some of the most commonly known wetland types.

Your property may contain or abut wetlands and their associated buffers. Wetland buffers protect wetland water quality and provide critical habitat for wetland wildlife. Buffers also protect wetlands by filtering pollutants from surface runoff and storing floodwater. Plants in wetlands and buffers may be native or non-native, and certain non-native plants may become invasive. Invasive plant species can lead to wetland degradation, but native plants contribute to healthy wetlands and buffers.

A Wetland Buffer is the area of land closest to the wetland. A buffer planted with native vegetation maximizes its natural functions.

What are Native Plants?

***Vaccinium corymbosum* (Highbush blueberry) is a native shrub commonly found in RI wetland buffers.** Photo from www.wikipedia.org.

Native plants evolve naturally over thousands of years in a particular geographical area. The native plants in Rhode Island's wetlands and buffers are adapted to our local soils and climate. They tend to be vigorous and hardy, able to survive Rhode Island's cold winters and hot summers. These plants have also coevolved with wildlife to maintain natural biological diversity. Your wetlands and wetland buffers benefit from native plants in many ways. (*A listing of a few native wetland plants are provided on the back of this brochure.*)

Benefits of Native Plants

Protect and Improve Water Quality

Many of Rhode Island's native plants grow in wetlands and wetland buffers. These plants have root systems that help rainfall penetrate into the soil, reduce soil erosion and the ill-effects of stormwater runoff, moderate water level fluctuations, and ultimately improve water quality in wetlands and streams. This benefits Rhode Island's wetlands, streams, rivers, lakes, and bay, as well as your drinking water.

Create a Healthy Wetland Ecosystem

Each of Rhode Island's native wetland plant species is an integral part of an ecosystem that includes other plants, animals, and microorganisms. Native species rarely become invasive or troublesome thanks to an established natural balance that keeps each species in check, allowing growth and healthy production in certain conditions while preventing aggressive spreading or single-species domination. Native plants help maintain healthy wetlands and buffers that provide critical habitat and food resources for wetland wildlife.

Nearly half of the plants and animals on the U.S. Endangered Species List are at risk because of invasive species.[1]

What is a Non-Native Plant?

Non-native plants are those plants that have been relocated from their native habitat to a new one, often in a new country. Some non-native plants (commonly referred to as "exotics") have become invasive, or harmful to their new environment.

What is an Invasive Plant?

Invasive plants are non-native species that are characterized by aggressive growth patterns, often outcompeting native plants for space, light, nutrients, and water. Invasives lack the natural restraints that control their native counterparts. Populations of invasive plants generally form thick stands and spread rapidly. Invasives can cause extinction of local plants and animals, lowering biological diversity and weakening the health of wetland ecosystems.

Lythrum salicaria (Purple Loosestrife) and *Phragmites australis* (Common Reed) are two common invasive wetland plants in Rhode Island. *Myriophyllum heterophyllum* (Variable Milfoil) and *Cabomba caroliniana* (Fanwort), also invasives, are often found in Rhode Island's lakes and ponds. Preventing invasive plants from establishing and spreading in Rhode Island's wetlands, buffers, lakes, and ponds is important. They often reduce the quantity and quality of food sources for native animals, insects, and amphibians. Locally, Purple Loosestrife inhibits the successful pollination and seeding of native plants. The Common Reed (often called Phrag) chokes out native plants, which reduces the breeding success of birds, such as the Marsh Wren and Green-winged Teal.[2]

Identifying invasive species in your wetland buffer area is an essential step in creating a healthy wetland ecosystem and protecting water quality. The Invasive Plant Atlas of New England (IPANE) website (listed on back) provides an extensive list of invasive species in the New England area with links to management options for each species.