

Aquatic Plants of Newfound Lake

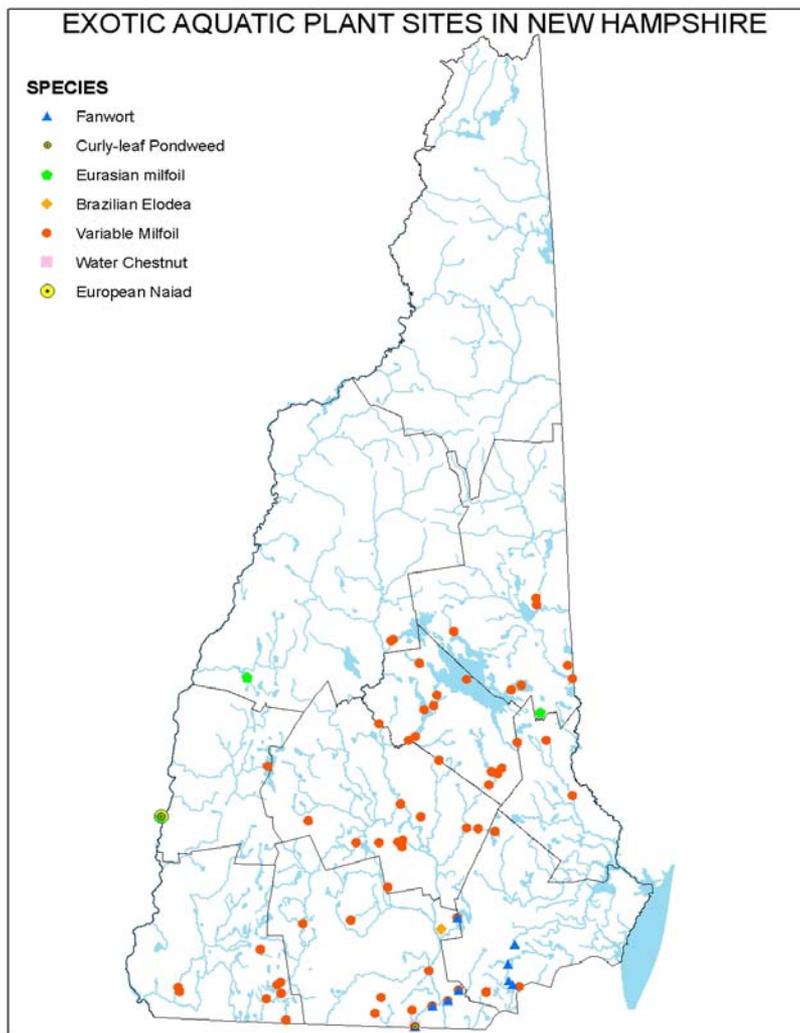
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Current status of exotic plant infestations



- 54 variable milfoil sites
- 3 Eurasian milfoil sites
- 9 fanwort sites
- 1 Brazilian elodea site
- 1 water chestnut site
- 2 curly-leaf pondweed sites
- 1 water naiad site

Plant Refresher

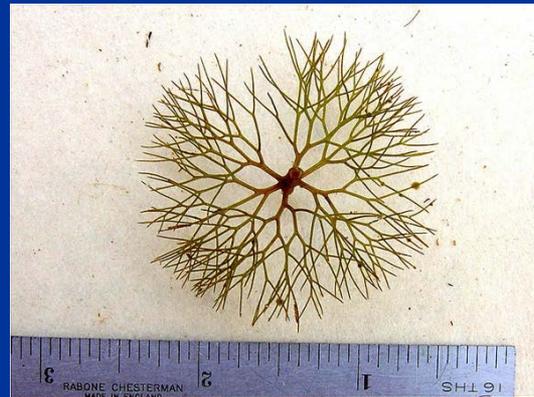
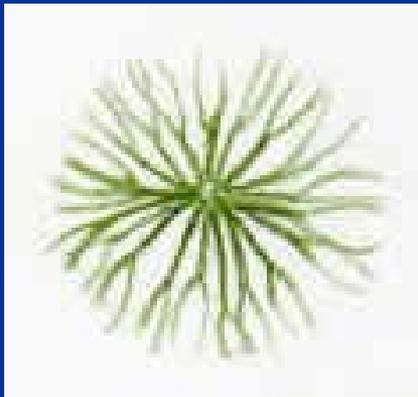
MORPHOLOGY

Structural Plant Characteristics

The Basics

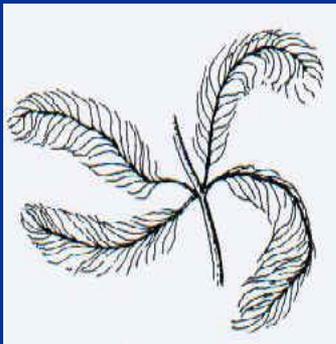
Leaf Type

- **Forked** - These leaves divide into two prongs, resembling the shape of a fork
- **Branched** - Branched leaves have many divisions, which continue to split until the edges are composed of many tiny prongs. This type of leaf resembles the branching pattern of a tree.
- **Feathered** - Feathered leaves have several divisions off of a central stalk. These divisions do not split again. These leaves, as the name implies, look much like a feather.
- **Entire** – These leaves do not split. Each leaf is one continuous unit without lobes or serrated edges.



Leaf Arrangement

- **Alternate** - the pattern of leaf arrangement in which leaves vary back and forth on the stem, with one leaf per node.
- **Whorled** - Leaves are arranged around the stem in a circular pattern. There can be three or more leaves per node.
- **Opposite** - Leaves are arranged in pairs on either side of the stem with two leaves per node.
- **Basal** - the plant lacks an erect stem. Leaves are attached around the a very short stem located just below the soil.
- **Rosette** - Able to move freely at or just below the surface of the water. Leaves are generally arranged in clusters attached to short stems



Leaf Margin

- Smooth: A leaf edge without bumps or points
- Serrated: A margin with tiny points all along the edge much like a serrated knife.
- Lobed: The leaf edge is split into subsection as with the maple leaf.



Types of Aquatic Plants

Emergent



Submergent



Floating



Algae

Plant Refresher

NATIVE

PLANTS

of Newfound Lake

Floating-leaved plants

- Includes both rooted and unrooted here



Watershield

Floating Heart





Pondweed



Duckweed



Yellow lily

White lily



Emergent plants

- Plants that are rooted and have most of their biomass as erect vegetation above the water



Cattail



Pickerelweed



Pipewort

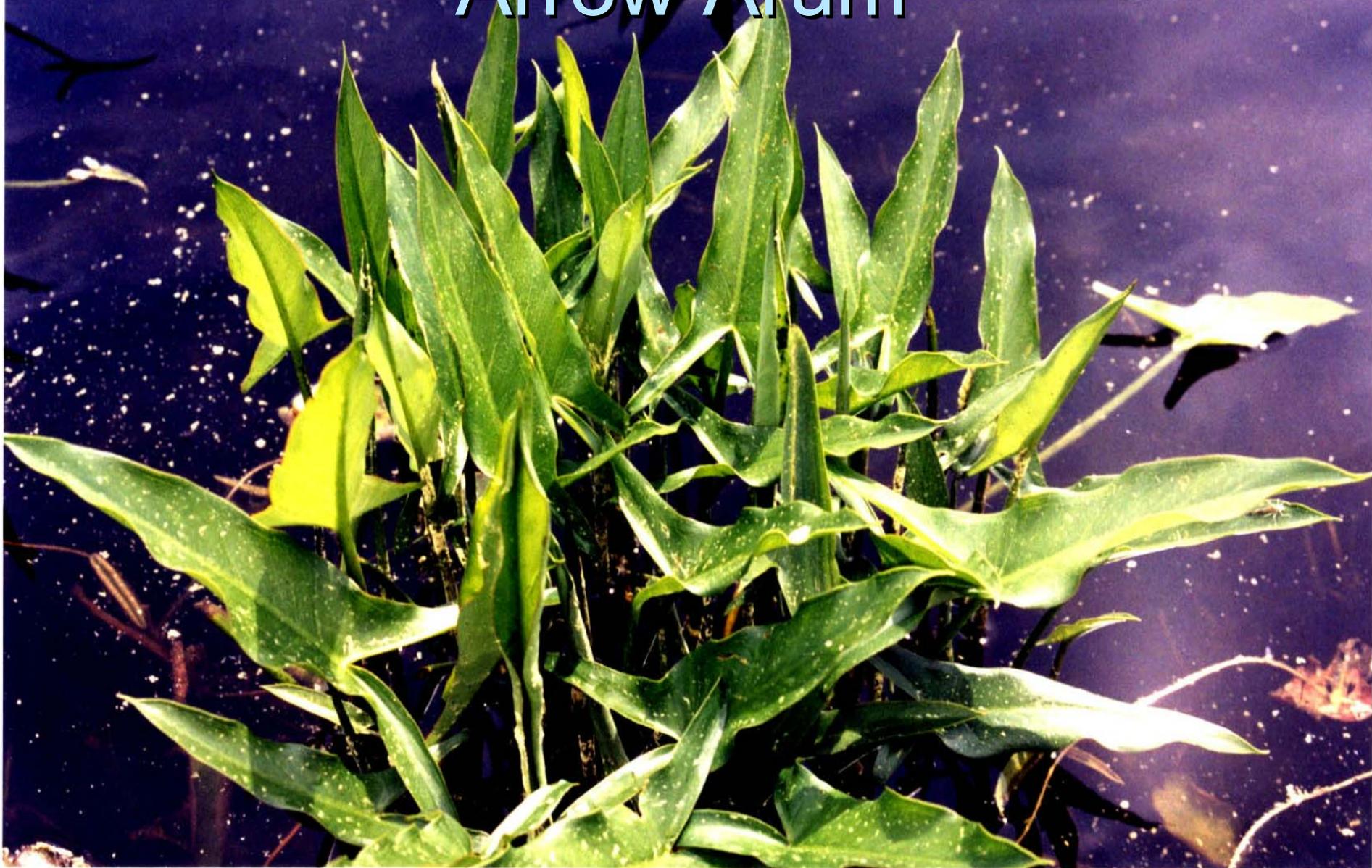
Arrowhead



Swamp Loosestrife



Arrow Arum



Bur-reed



Water Lobelia



Pipewort



Three way sedge



Submergent plants

- Rooted or unrooted
- Vegetative portion wholly underwater
- Flowers may be emergent

A close-up photograph of a hand holding a bladderwort (Utricularia) plant. The plant has numerous thin, yellow, feathery leaves radiating from a central point. A single, dark, round, fleshy fruit is attached to the top of the plant. The background is dark and out of focus.

Bladderwort



Tape grass/water celery



NATIVE milfoil

Submersed bur-reed



Waterweed (native)



Algae

(also important to look at)



- Single celled to colonial
- Simple plants
- Base of the food chain



Green algae = OK



Cyanobacteria (Blue-green algae)-

Call us! These could produce toxins.

The Exotic Plants (aka- plants you don't want)

At this point in time Newfound does not have exotic aquatic plants.
Use these pictures to help you identify any new growth that may
come in.

Report any sightings of these to:

Amy P. Smagula

NH DES

29 Hazen Drive

Concord, NH 03301

asmagula@des.state.nh.us

603-271-2248



Variable milfoil (EXOTIC)



Variable milfoil flower



Eurasian milfoil (EXOTIC)



Fanwort (EXOTIC)



Hydrilla (EXOTIC)



Brazilian elodea (EXOTIC)



Water chestnut- EXOTIC

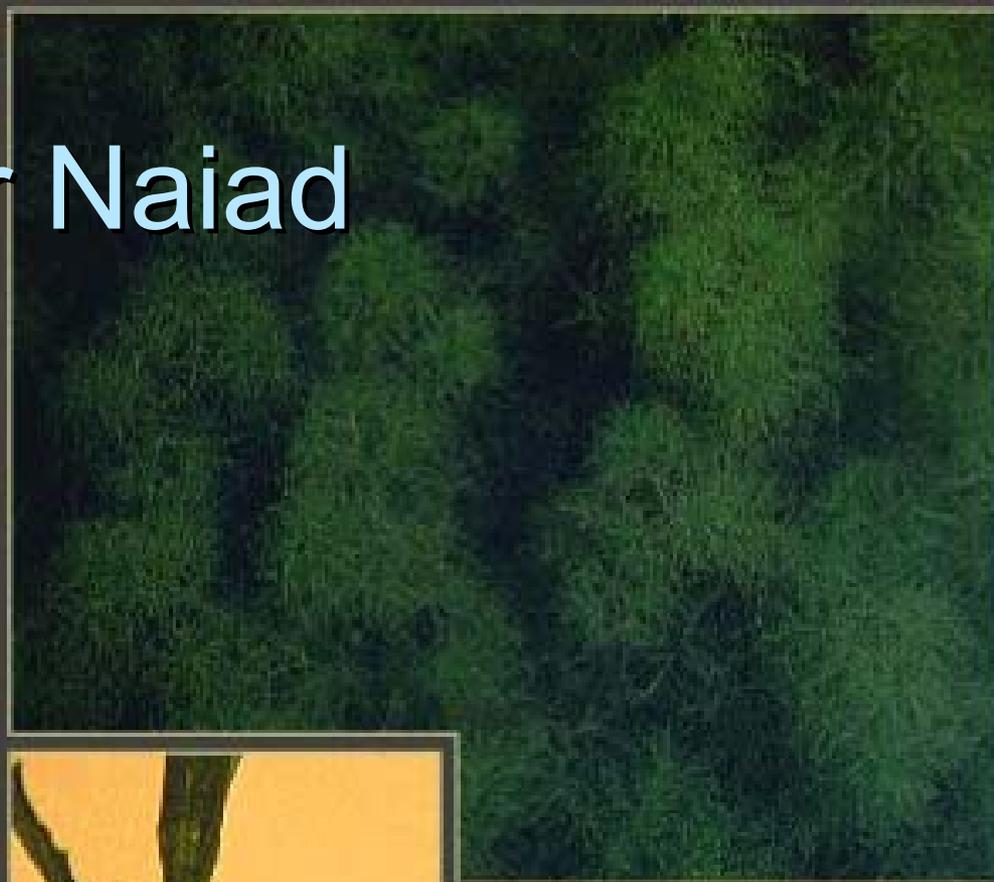


Curly-leaf Pondweed





Water Naiad





Purple loosestrife (EXOTIC)



Common reed (Phragmites) EXOTIC





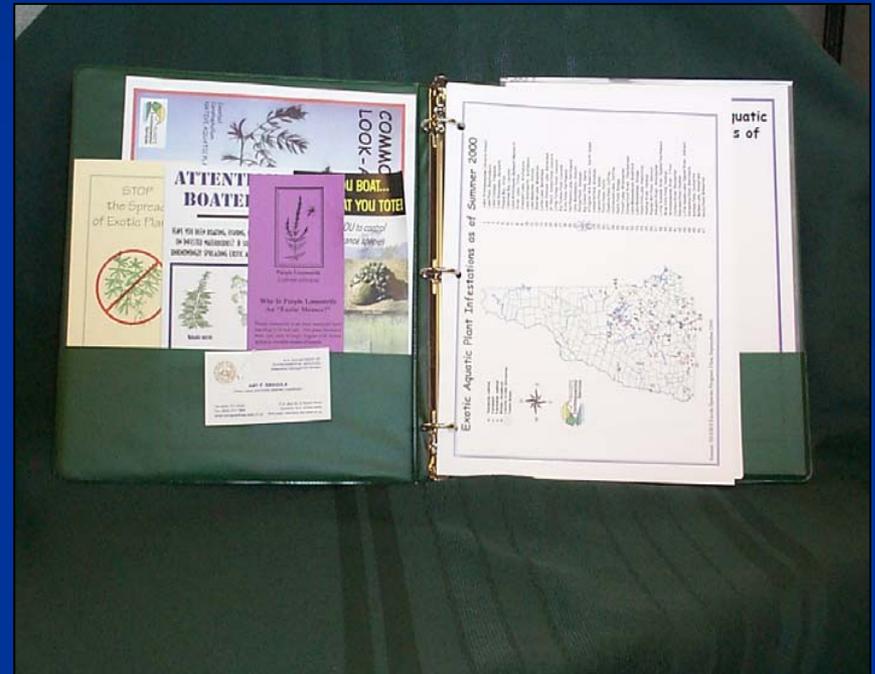
Yellow iris (EXOTIC)

How can you protect your lake or pond?



Weed Watchers

- Early detection is key!



Why Develop a Weed Watcher Program?

- Proactive approach
 - Volunteer Weed Watchers are an important line of defense if an exotic is introduced
- Catch infestations early
- Facilitate a Rapid Response Action
- Prevent the further spread

What is Involved?

- Volunteers are trained to monitor waterbodies for exotics, generally on-site at their own waterbody
 - Once a month from May to September is recommended
- NHDES provides resources:
 - Weed Watcher Kit
 - Pictures
 - Fact sheets
 - Maps of the subject lake/pond (bathymetric and historical plant maps with keys)



Simple steps to being a WW

- Commit to a program
- Put together a group of volunteers
- Request Weed Watcher Kits
- Get trained
- Start monitoring 1x/month in the summer (or at least once in spring, once in fall)
- Report possible infestations to NH DES immediately

DES can:

- Visit your group and do a shoreline or on the lake training
- Provide specimens for you to help you identify good and bad plants
- Provide depth maps, plant maps and keys, and outline maps of your lake
- Teach you methods for Weed Watching
- Teach you how to send specimens to DES for identification and species verification
- Provide you with a list of resources to help you identify plants

Volunteers learn how to identify plants by comparison with pictures provided to them



Don't worry....we'll ID them for you

To have plants identified, simply:

- ✓ Wrap suspect plants in a moist (not dripping) paper towel
- ✓ Seal the plants and moist paper towel in a Ziploc baggie
- ✓ Put baggie and a note with your name, address, e-mail, and phone, along with lake name, in an envelop
- ✓ Mail to Amy Smagula at NH DES, 29 Hazen Drive, Concord, NH 03301
- ✓ Try not to mail specimens on a Thursday or Friday
- ✓ Keep plants refrigerated during holding time
- ✓ We'll identify them and let you know what we found

State Response

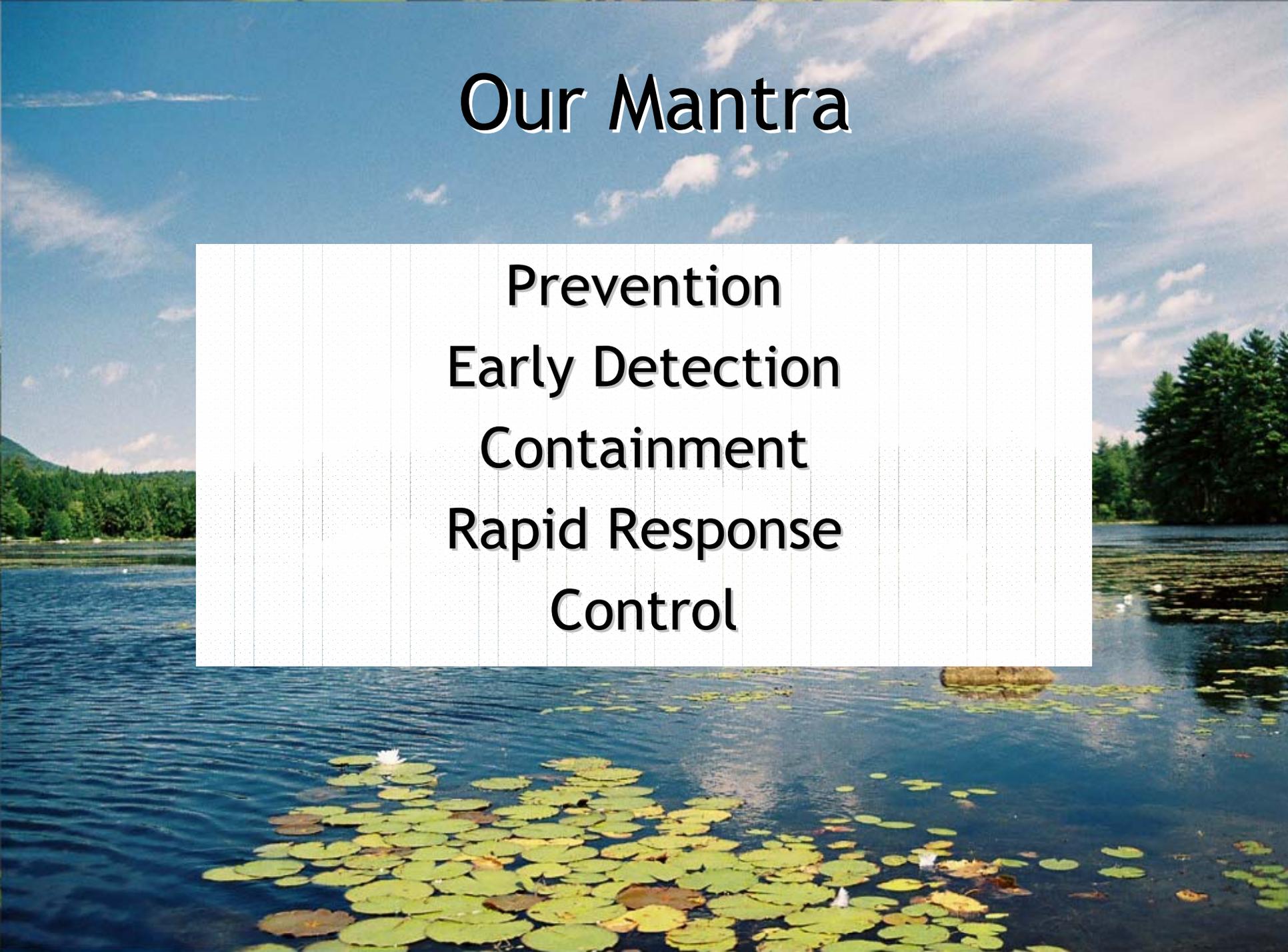


Control



Our Mantra

Prevention
Early Detection
Containment
Rapid Response
Control

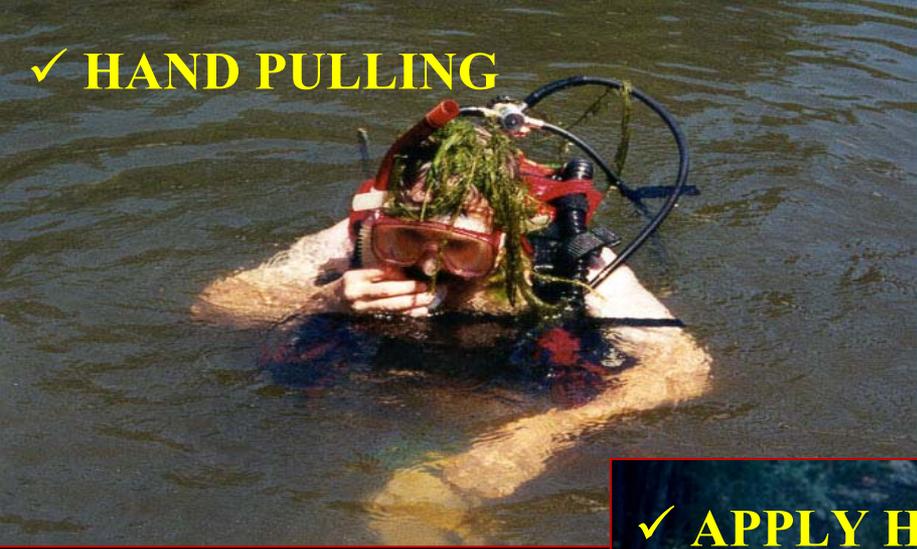


Plant Management



- DES will manage for exotic plants and will pay 100% for new infestations of exotic plants
- Repeat treatments/management will require match from town/lake association/etc.
- No funding for managing native plants
- Scoring matrix for fund allocation

✓ HAND PULLING



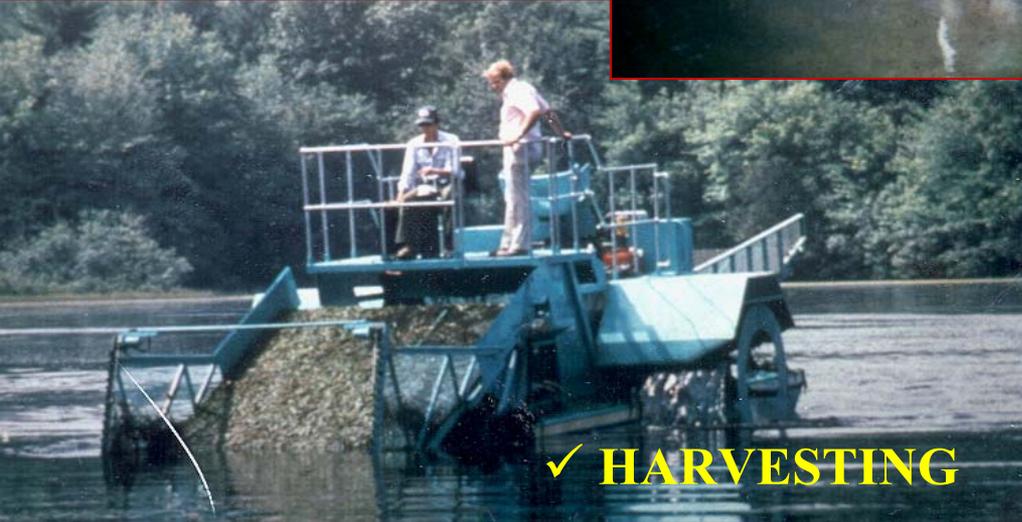
✓ BOTTOM MATS

✓ APPLY HERBICIDES



Management

& Control



✓ HARVESTING



✓ BIOLOGICAL CONTROL

DES Website

www.des.state.nh.us/wmb/exoticspecies

Maine's Virtual Herbarium

www.mciap.org/herbarium