Invasive Aquatic Plants in Connecticut

Summer Stebbins

Connecticut Agricultural Experiment Station

Department of Environmental Sciences

Invasive Aquatic Plant Program

The Importance of Vegetation to Lakes and Ponds



- Habitat for fish and other aquatic organisms
- Improve water clarity
- Stabilize shoreline and sediment
- Diversity of native species may inhibit invasive species

Invasive Aquatic Plants

- Ecosystem Impacts
  - Displace native species
  - Alter native ecosystems
- Economic Impacts
  - Reduce recreation
  - Lower property values and tax revenue
  - Interfere with navigation
  - Economic damages and management costs of $3 billion per year

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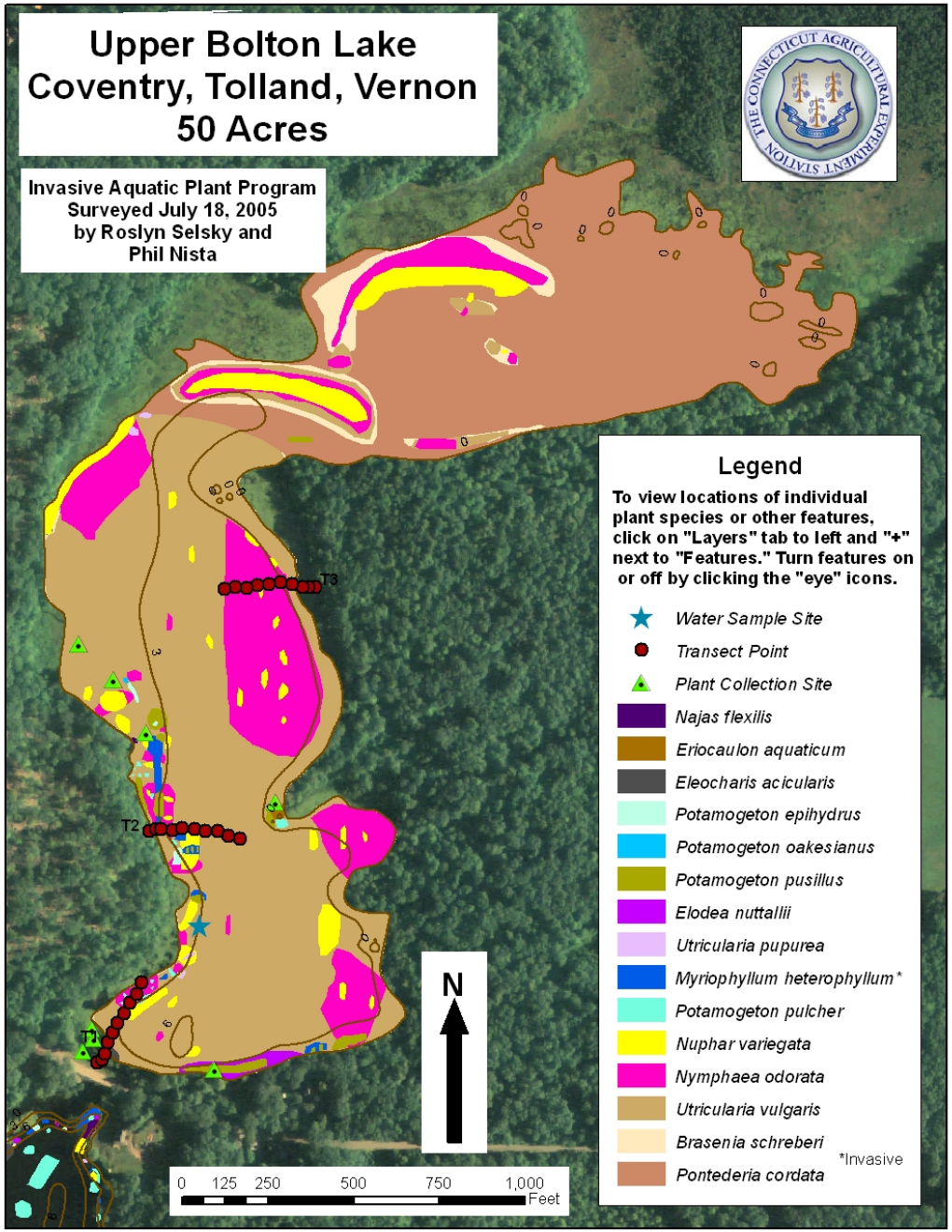
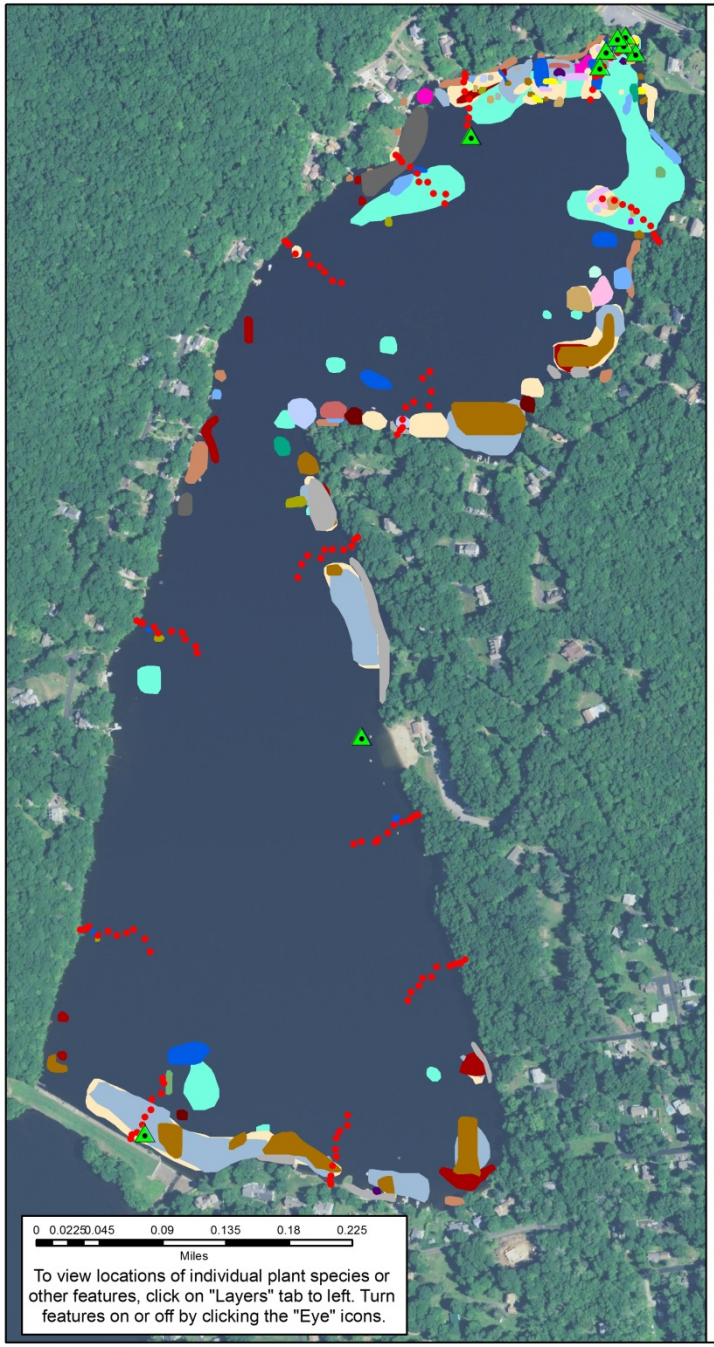

Upper Bolton Lake
Coventry, Tolland, Vernon
50 Acres
Invasive Aquatic Plant Program
Surveyed July 18, 2005
by Roslyn Selsky and
Phil Nista
THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION
T3
T2
T1
N
0 125 250 500 750 1,000
Feet
Legend
To view locations of individual plant species or other features, click on "Layers" tab to left and "+" next to "Features." Turn features on or off by clicking the "eye" icons.
Water Sample Site
Transect Point
Plant Collection Site
Najas flexilis
Eriocaulon aquaticum
Eleocharis acicularis
Potamogeton epihydrus
Potamogeton oakesianus
Potamogeton pusillus
Elodea nuttallii
Utricularia pupurea
Myriophyllum heterophyllum*
Potamogeton pulcher
Nuphar variegata
Nymphaea odorata
Utricularia vulgaris
Brasenia schreberi
Pontederia cordata
*Invasive



Middle Bolton Lake, Vernon
121 acres

Surveyed July 15 and 20, 2010
By Michael Cavadini, Jennifer Fanzutti, and Julius Pasay
Invasive Aquatic Plant Program

Legend

- Plant Collection
- Transect Point
- *Polygonum sp.*
- *Ceratophyllum echinatum*
- *Elodea nuttallii*
- *Isoetes sp.*
- Unidentified sedge
- *Potamogeton pusillus*
- *Ludwigia sp.*
- *Najas minor**
- *Potamogeton epihydrus*
- *Utricularia radiata*
- *Najas flexilis*
- *Potamogeton bicupulatus*
- *Eleocharis sp.*
- *Utricularia gibba*
- *Utricularia purpurea*
- *Nuphar variegata*
- *Myriophyllum heterophyllum**
- *Utricularia macrorhiza*
- *Eriocaulon aquaticum*
- *Brasenia schreberi*
- *Sparganium sp.*
- *Gratiola aurea*
- *Elatine sp.*
- *Sagittaria sp.*
- *Nymphaea odorata*
- *Pontederia cordata*
- *Potamogeton pulcher*

*Invasive

N

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Lower Bolton Lake

Bolton, CT

179 Acres

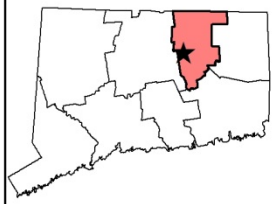
Surveyed June 14, July 20 and July 27, 2018
By Greg Bugbee, Summer Stebbins, and Riley Doherty
Invasive Aquatic Plant Program

Legend

To view locations of individual plant species or other features, click on "Layers" tab to left. Turn features on or off by clicking the "Eye" icons.

- DEEP Boat Launch
- Collection Point
- Transect Point
- Water Data
- Bathymetry (ft)
- Broadleaf Arrowhead
- Bur-Reed
- Cattail
- Curlyleaf Pondweed*
- Large-Leaf Pondweed
- Leafy Pondweed
- Mudmat
- Pickerelweed
- Primrose-Willow
- Quillwort
- Slender Naiad
- Snailseed Pondweed
- Spikerush
- Tapegrass
- Watershield
- Waterwort
- White Water Lily

*Invasive



N

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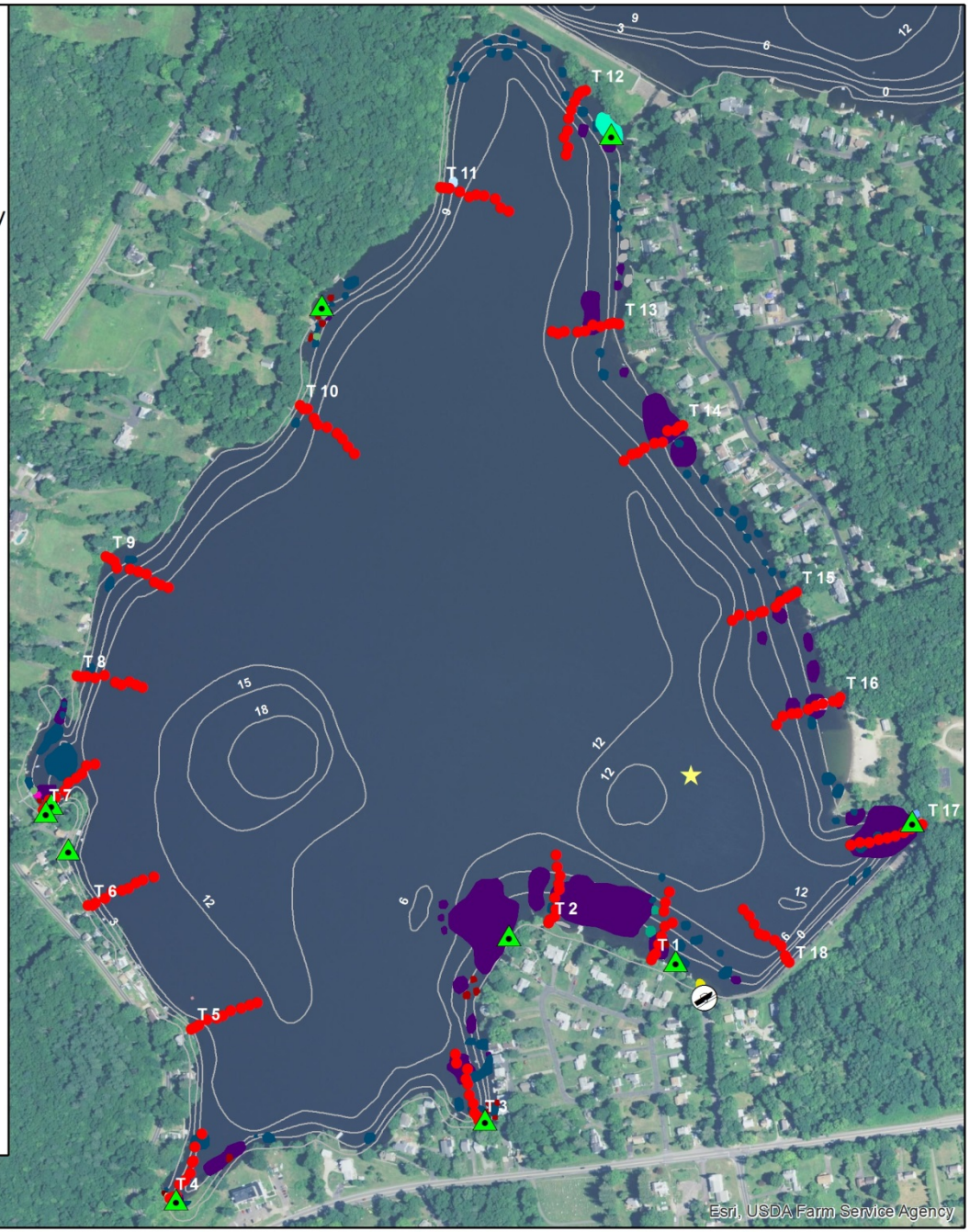
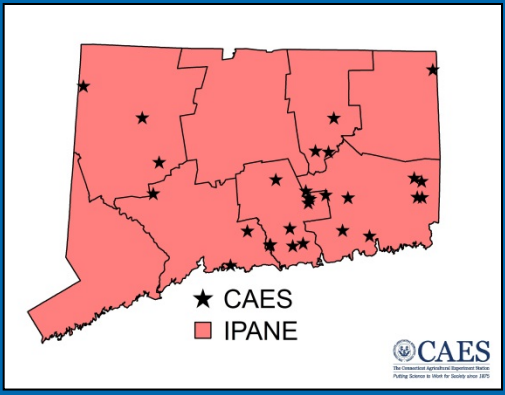
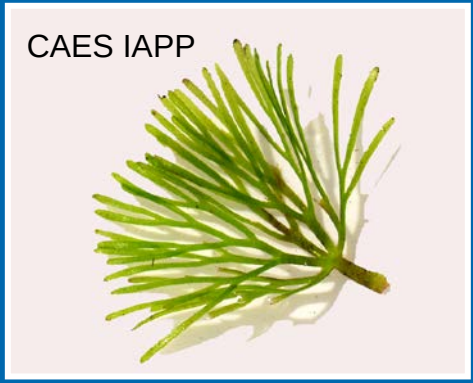
Meters
0 130 260 520



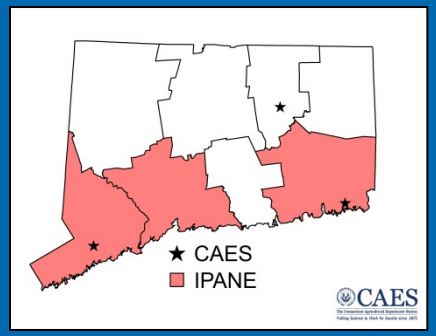
The Invasives

Fanwort
Cabomba caroliniana

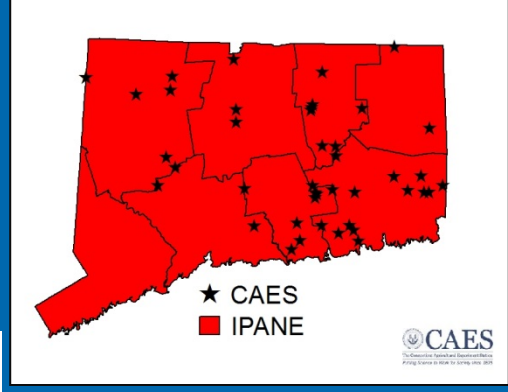




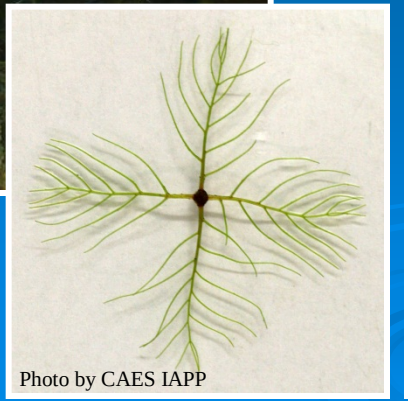
Hydrilla
Hydrilla verticillata

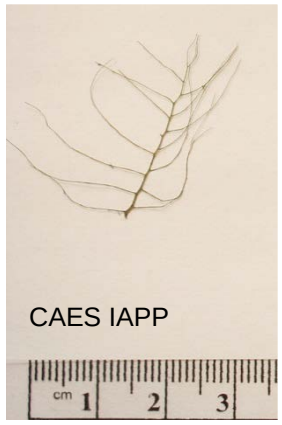


Myriophyllum heterophyllum (Variable Watermilfoil)



Leaves collapse out of water





Leaves < 1 inch apart

≤ 11 pairs of leaflets

Triangular leaf

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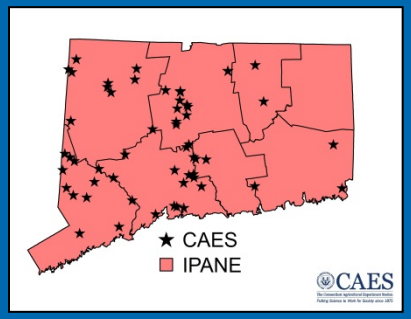
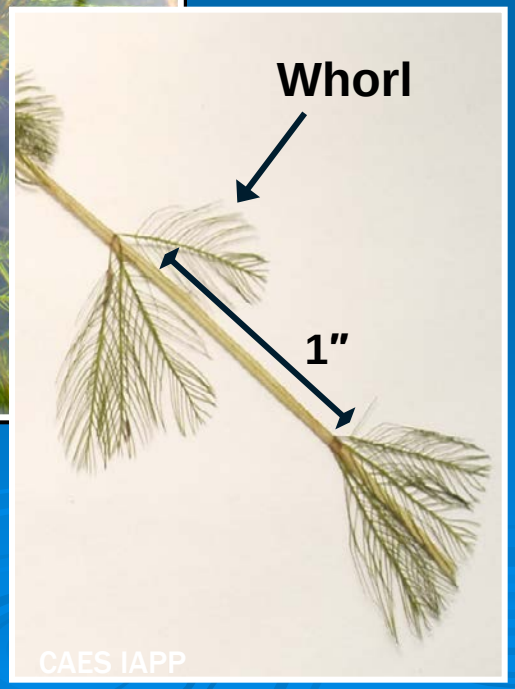
Eurasian Watermilfoil
Myriophyllum spicatum



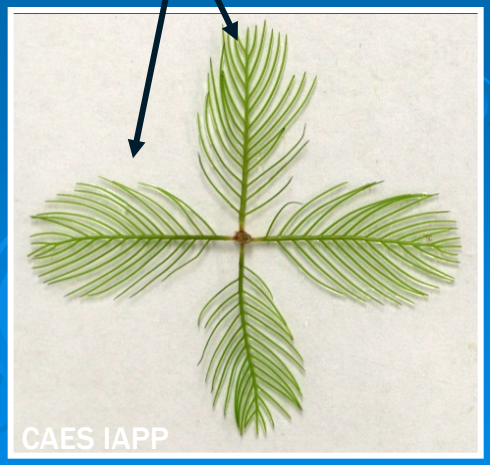
Leaves 1 inch apart

≥ 12 pairs of leaflets per leaf

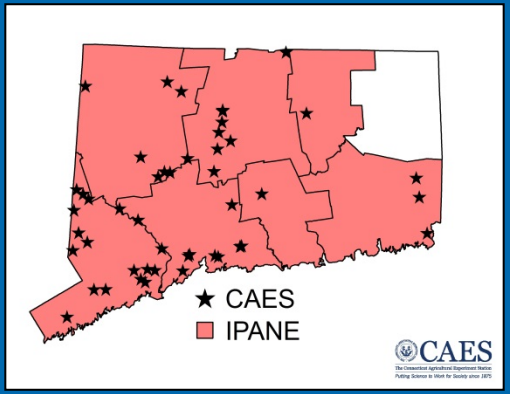
Rectangular leaf

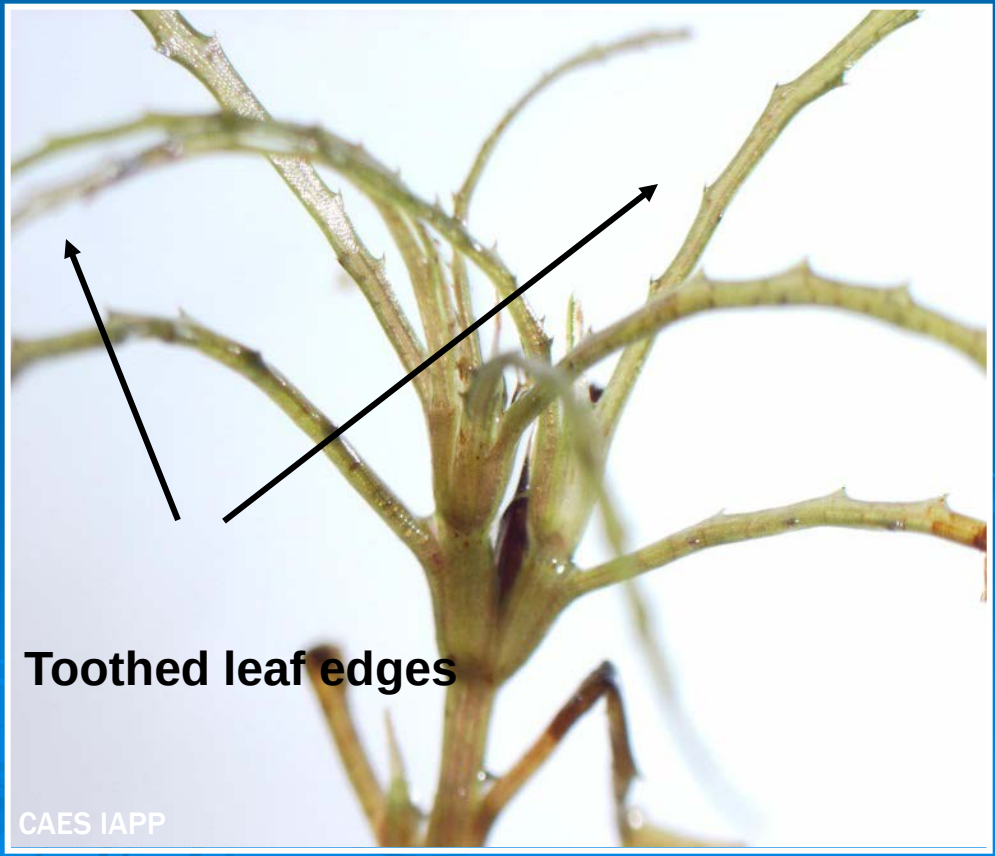


Rectangular leaves

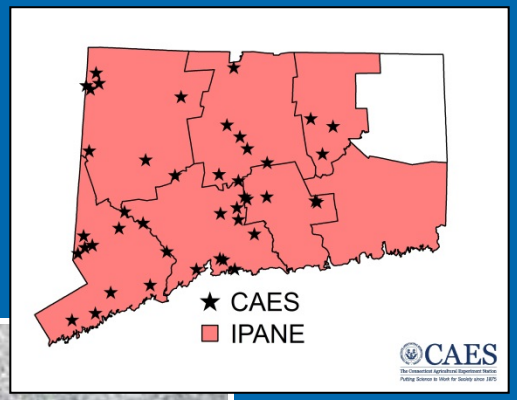


Brittle Waternymph
Najas minor

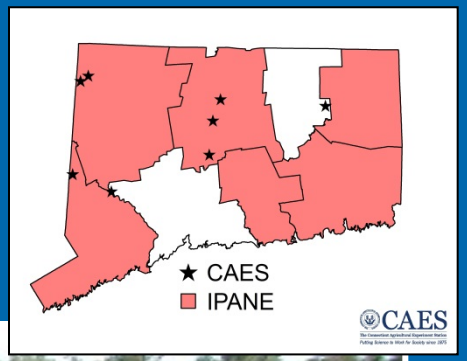




Curlyleaf Pondweed
Potamogeton crispus



Water Chestnut
Trapa natans



Potential Nuisances

Eel grass
(*Vallisneria americana* – Native)

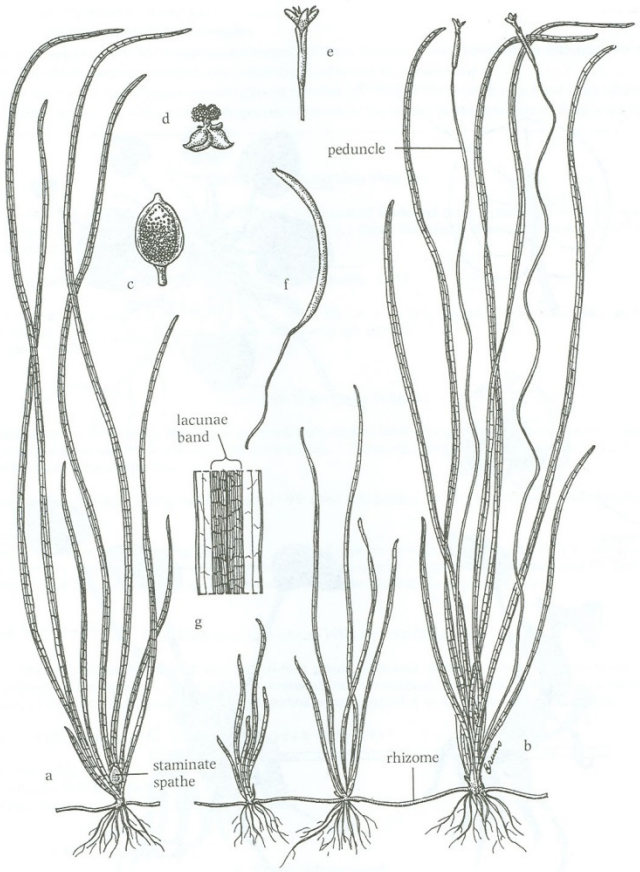
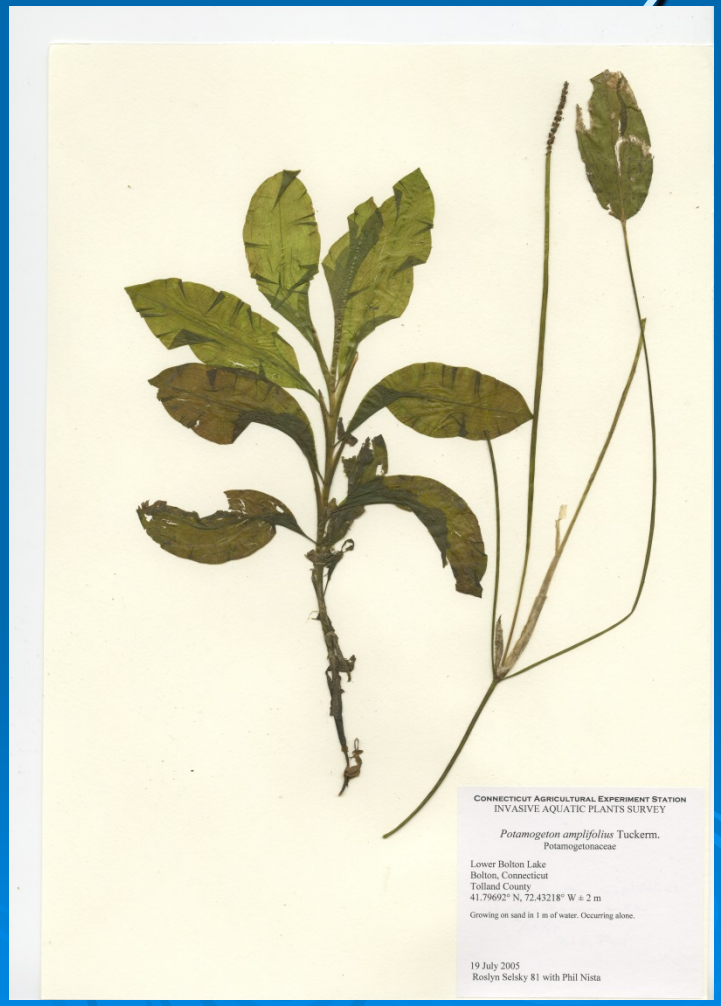


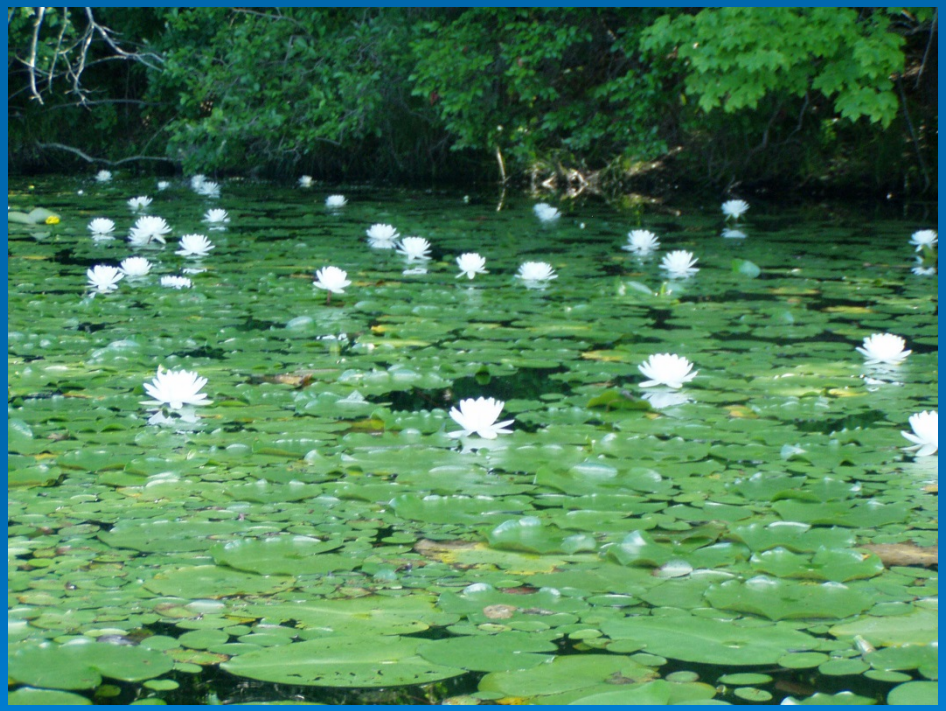
Fig. 361. *Vallisneria americana:* a. habit, staminate plant; b. habit, pistillate plant; c. staminate spathe; d. staminate flower; e. pistillate flower; f. fruit; g. section of leaf showing lacunae band (NHAES).

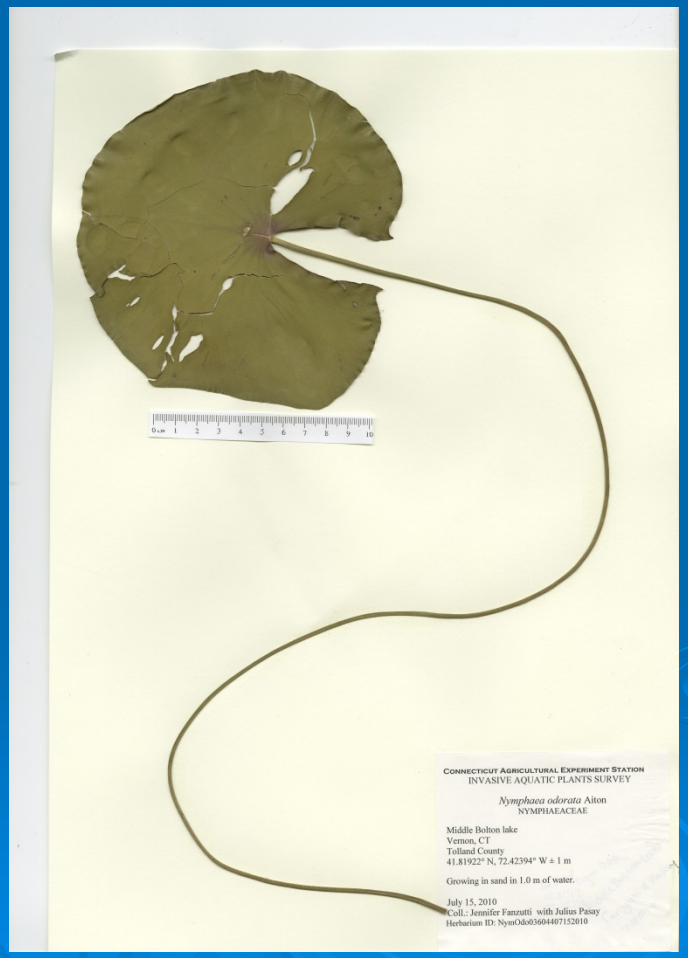
Mudmat
(*Glossostigma cleistanthum* - Invasive)

Largeleaf pondweed (*Potamogeton amplifolius* – Native)

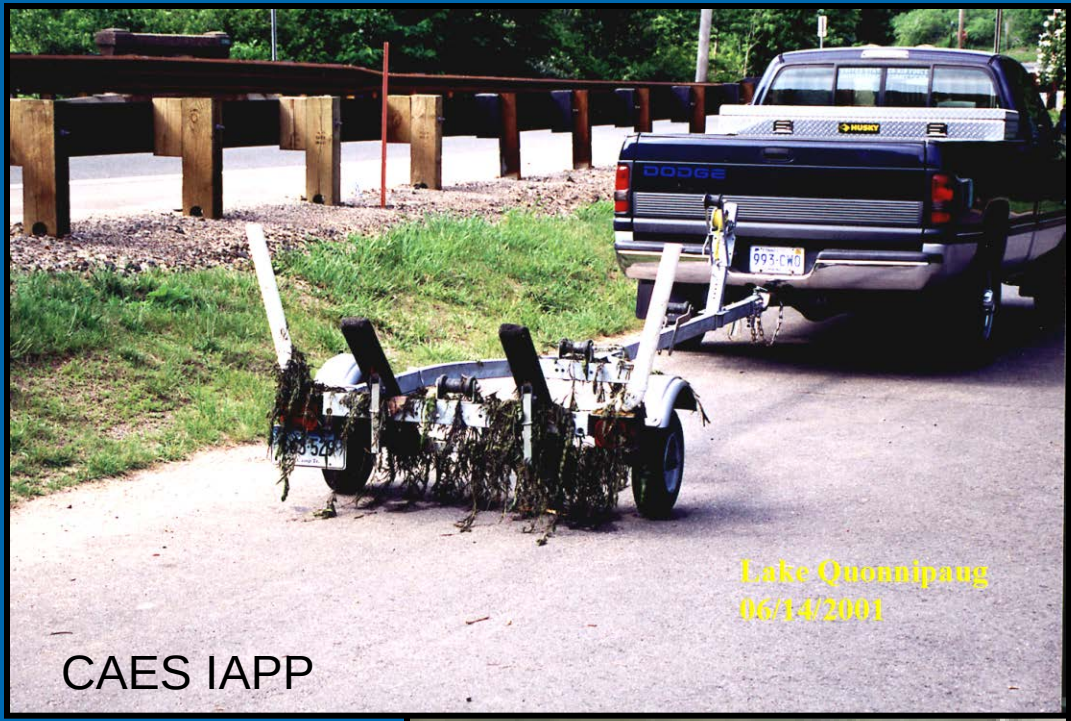


White water lily (*Nymphaea odorata* – Native)





Introduction and Dispersal



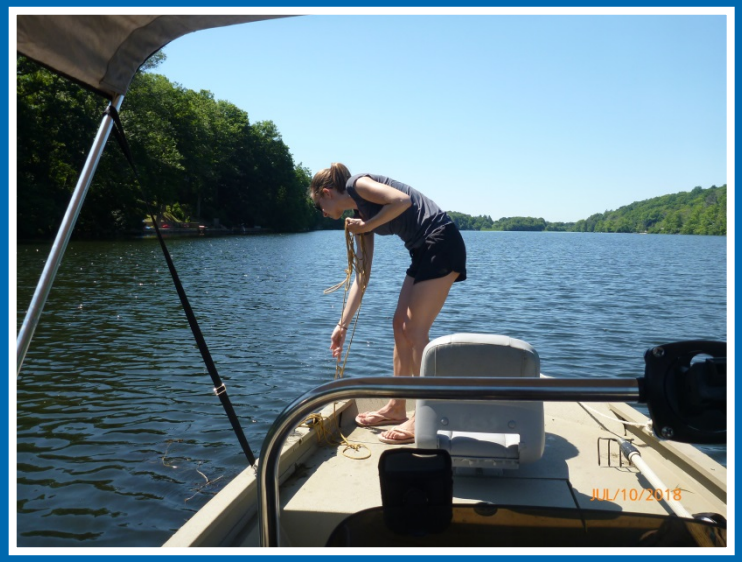
CAES IAPP

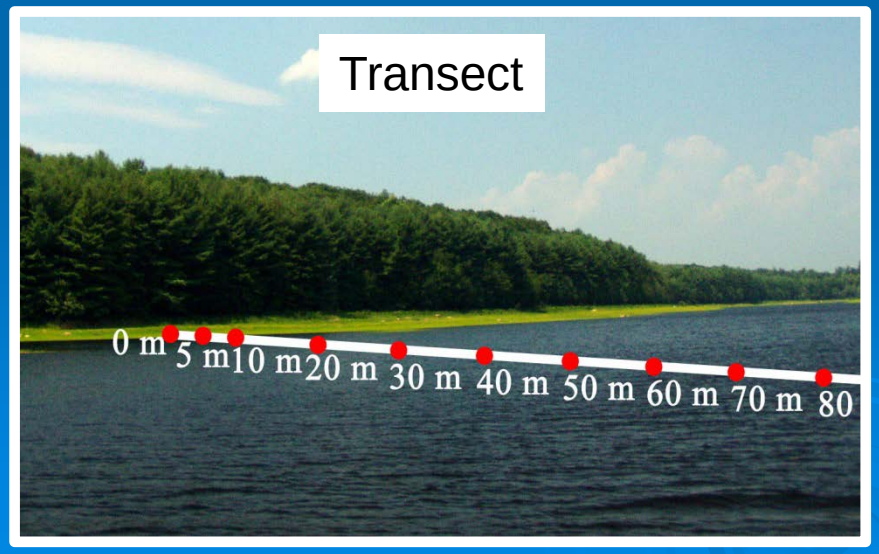
www.noaa.gov

www.scsc.k12.ar.us

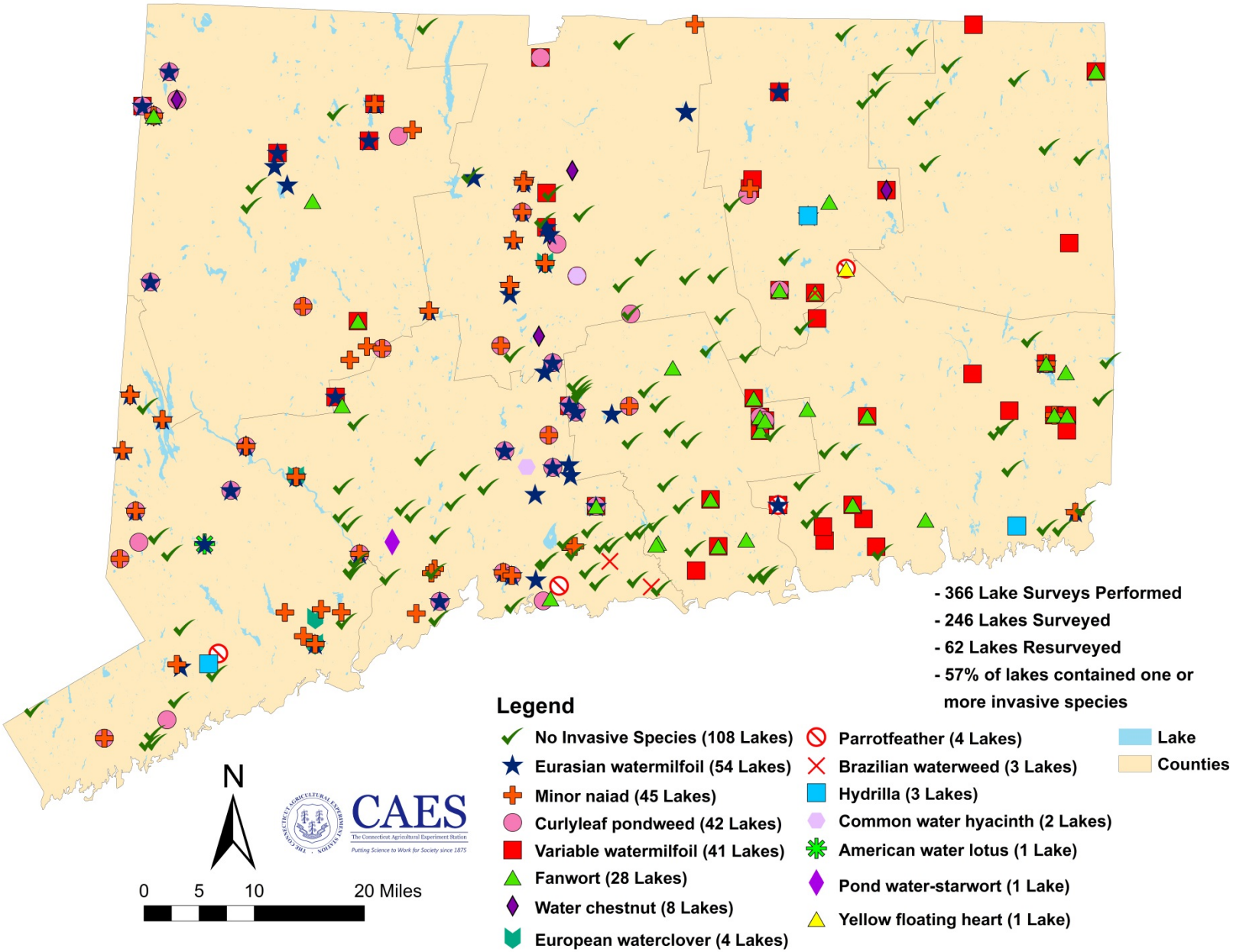
www.noaa.gov

Vegetative Surveys



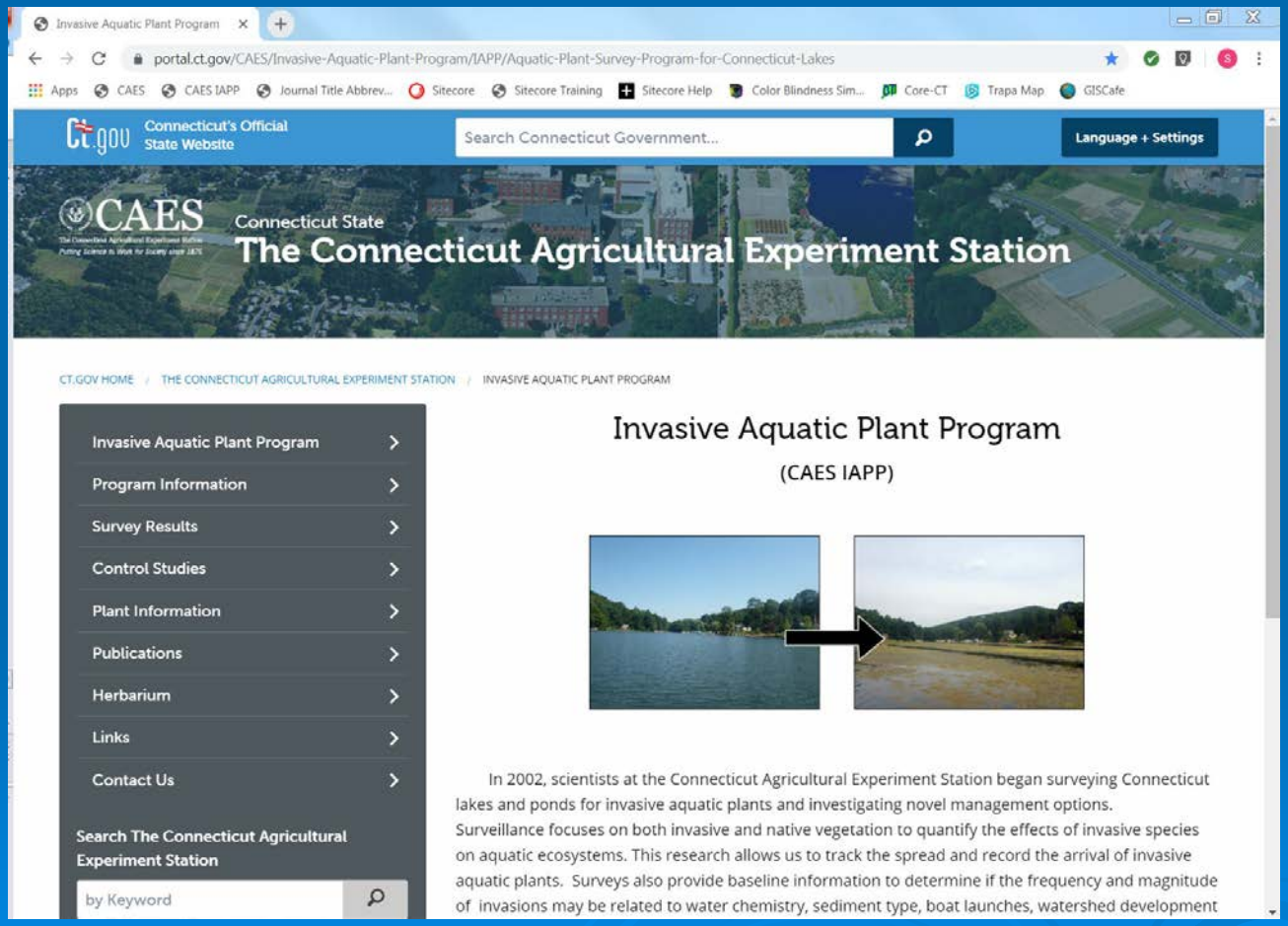


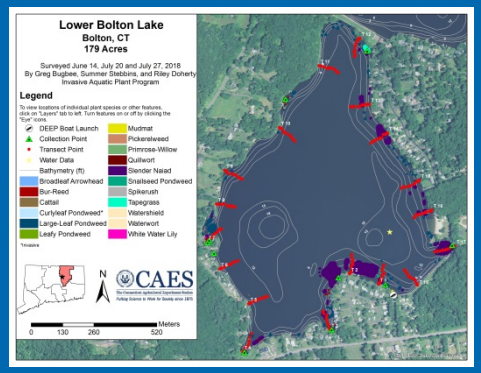
Locations of Invasive Plants Found by CAES IAPP 2004-2019



CAES IAPP Website

portal.ct.gov/caes-iapp





Aquatic Herbicides

Biological Control

Grass Carp

Ctenopharyngoden idella

Milfoil weevil, *Euhrychiopsis lecontei*

Benthic Barriers

Questions?

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