

Why hast thou smote me? (Why here?)



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Chief, Lake Monitoring and Assessment Section

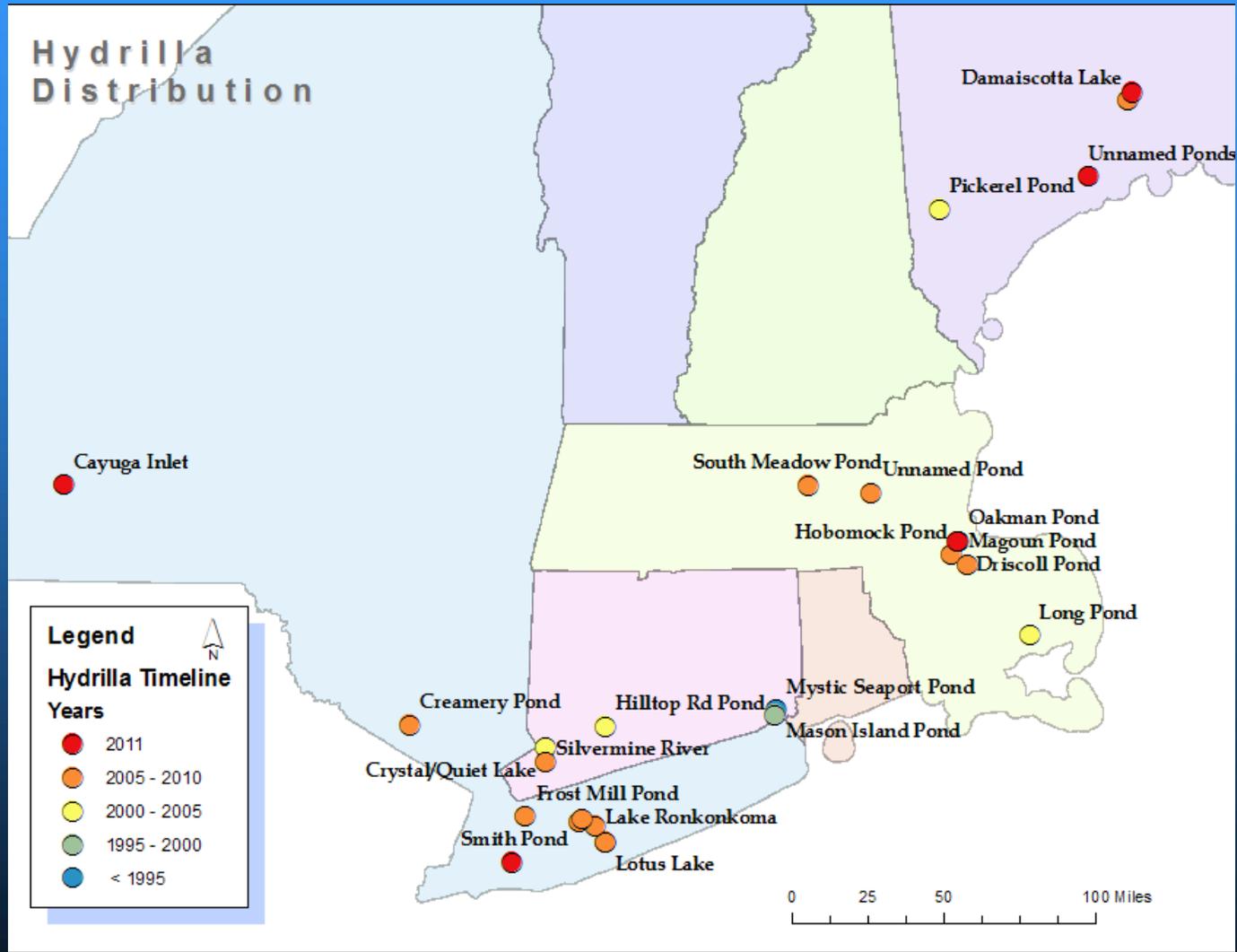
NYSDEC Division of Water

Hydrilla Migration to the Northeastern US

- Introduced to FL 1950s
- First found in North Carolina in 1980
- Reached Potomac River/ mid-Atlantic by early 1980s
- Jumped to New England by late 1980s (no evidence of transitional colonization in upper mid-Atlantic at that time) and Pacific Northwest in mid 1990s

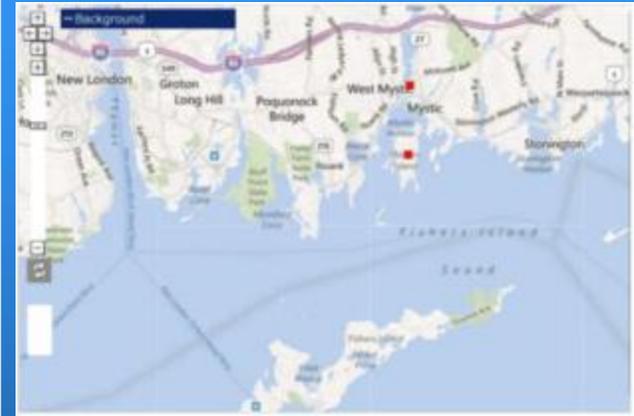


Hydrilla in New England



Mystic CT

Waterbody Name	Mystic Seaport Pond
Size	0.3 acres
Public access?	no
Year of discovery	1989 / 1995
Discovered by	?- originally ID Egeria
Introduced by	Pond enhancement (water hyacinth)
Next closest hydrilla site	>100 miles?
Access next closest site	Not known
Extent Initial Infestation	densely fills the pond
Management Action(s)	fluridone / drained-dredged / grass carp 2007
Duration Management	sporadic
Population 2011	Not known- tuber monitoring planned?



Mystic Seaport Pond

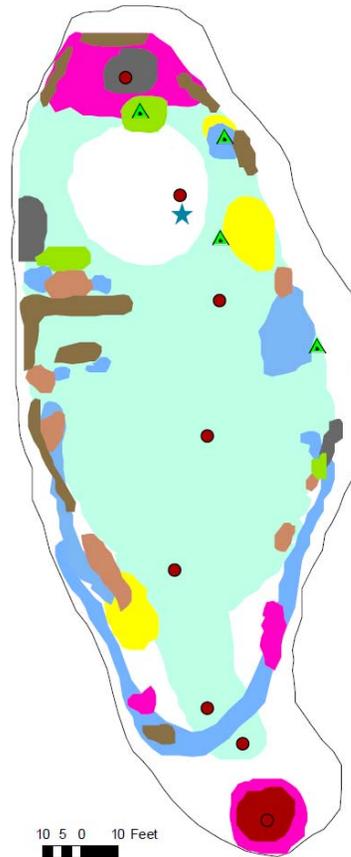
Mystic Seaport Pond, Mystic 0.3 Acres

Invasive Aquatic Plant Program
Surveyed September 8, 2006
By Greg Bugbee and Roslyn Selsky

Legend

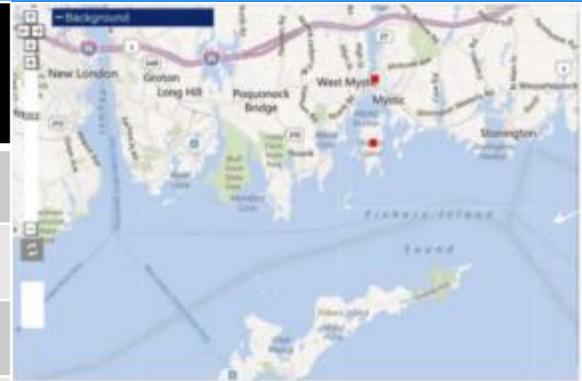
To view locations of individual plant species or other features, click on "Layers" tab to left and "+" next to "Features." Turn features on or off by clicking the "eye" icons.

-  Water Sample Site
 -  Transect Point
 -  Plant Collection Site
 -  Sparganium sp.
 -  Potamogeton natans
 -  Unidentified sedge
 -  Typha latifolia
 -  Pontederia cordata
 -  Nymphaea odorata
 -  Ludwigia lacustris
 -  Sagittaria sp.
 -  Nuphar variegata
 -  Hydrilla verticillata*
- * Invasive Species



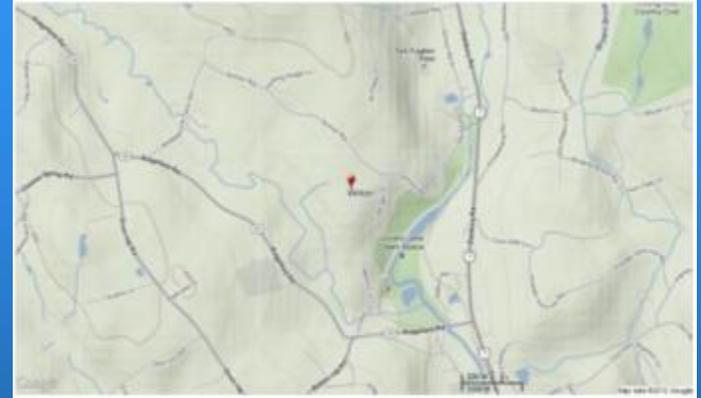
Mystic CT

Waterbody Name	Mason Island Pond (aka Ice Pond)
Size	4 acres
Public access?	no
Year of discovery	1995
Discovered by	?- originally ID'd as Elodea
Introduced by	?
Next closest hydrilla site	<5 miles (Mystic CT)
Access next closest site	No public access
Extent Initial Infestation	Not reported
Management Action(s)	Dredging, Fluridone A.S., PR, Captain (Diquat < 1995)
Duration Management	1995-2003?
Population 2011	Eradicated?



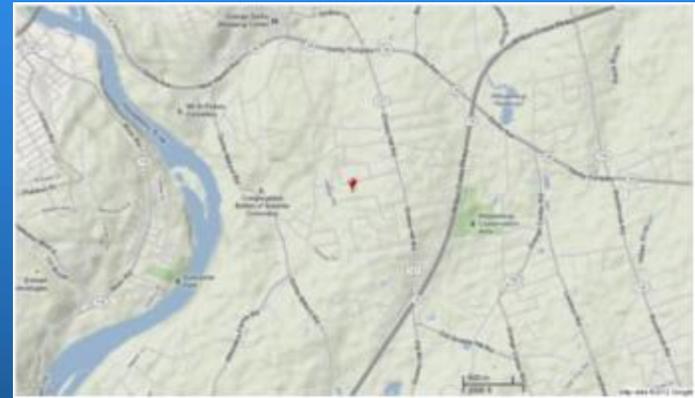
Wilton CT

Waterbody Name	Crystal Lake (aka Quiet Lake?)
Size	< 1 acre?
Public access?	no
Year of discovery	2001
Discovered by	?
Introduced by	nursery purchased water hyacinth
Next closest hydrilla site	90 miles (Mystic CT)
Access next closest site	No public access
Extent Initial Infestation	?
Management Action(s)	Reward 2001, Diquat 2005
Duration Management	Sporadic
Population 2011	?



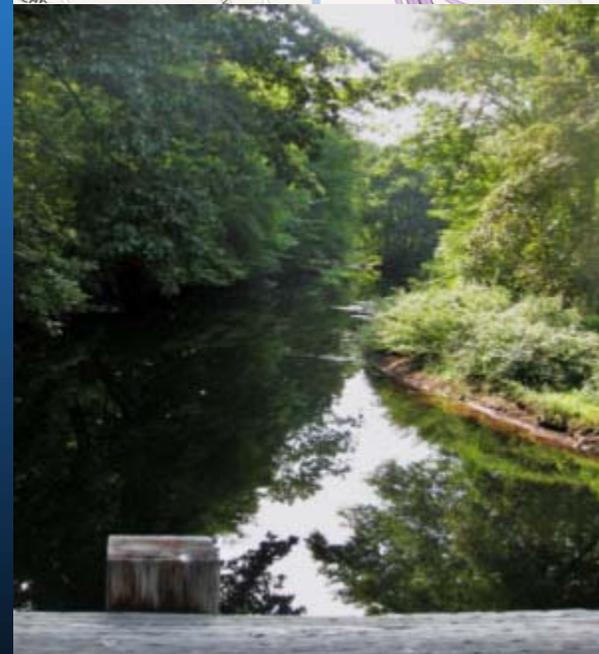
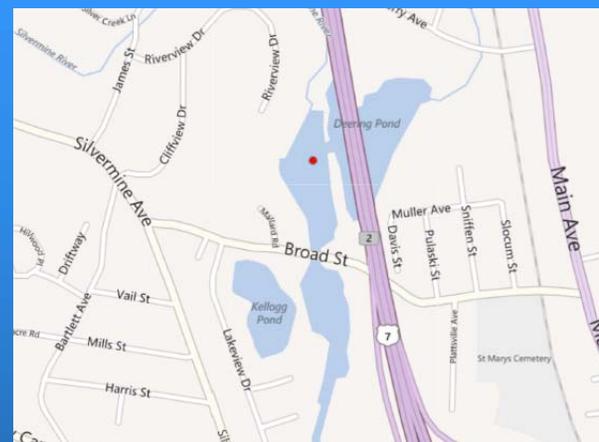
Orange CT

Waterbody Name	Unnamed Hilltop Road pond
Size	< 1 acre
Public access?	no
Year of discovery	2005?
Discovered by	?
Introduced by	?
Next closest hydrilla site	25 miles (Wilton CT)
Access next closest site	No public access
Extent Infestation	?
Management Action(s)	?
Duration Management	?
Population 2011	?



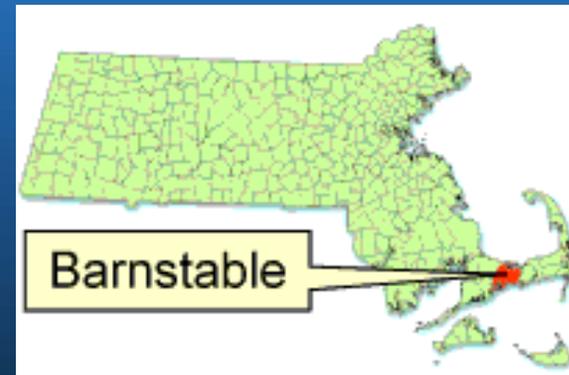
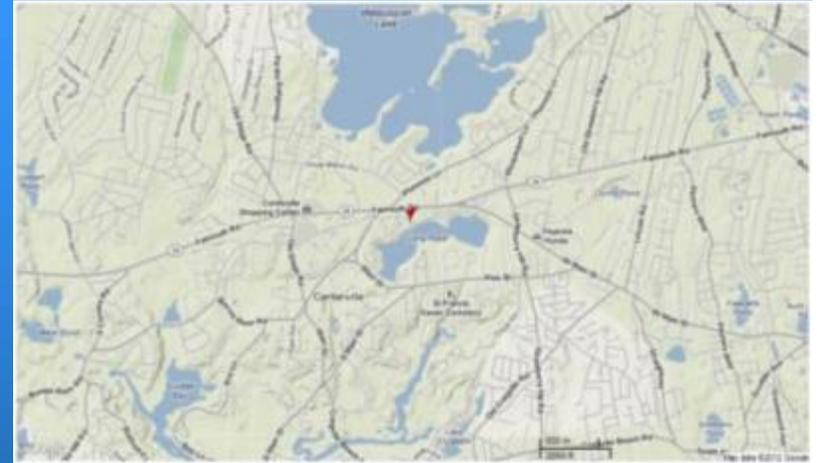
Norwalk/Fairfield County CT

Waterbody Name	Silvermine River
Size	NA
Public access?	no
Year of discovery	2009- initial ID Elodea?
Discovered by	?
Introduced by	?
Extent Infestation	scattered subpopulation in river and some private ponds
Next closest hydrilla site	25 miles (Wilton CT)
Access next closest site	No public access
Management Action(s)	Diquat?
Duration Management	?
Population 2011	?



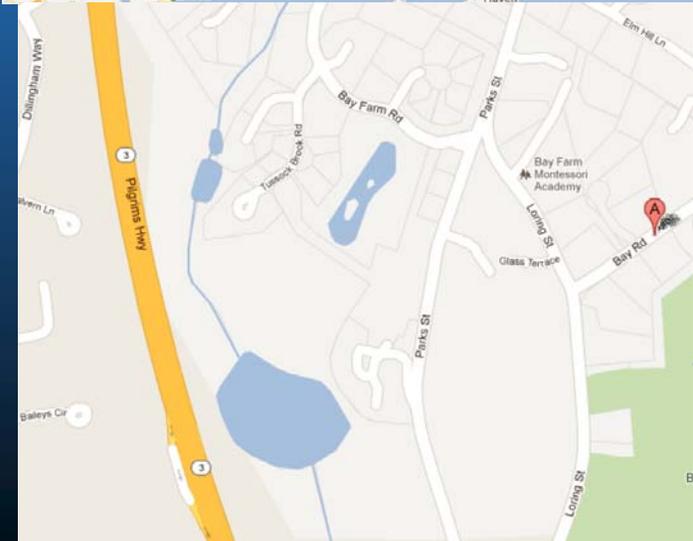
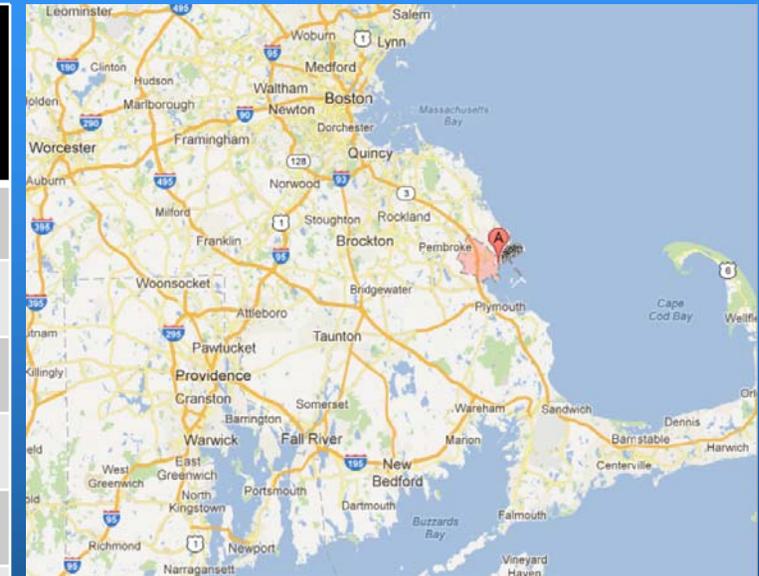
Barnstable MA

Waterbody Name	Long Pond
Size	49 acres
Public access?	Danaskin Road
Year of discovery	2001
Discovered by	Town residents?
Introduced by	
Next closest hydrilla site	120 miles (Mystic CT)
Access next closest site	No public access
Extent Infestation	dense in east basin; patchy in west basin
Management Action(s)	boat ramp closure; fluridone treatment since 2002
Duration Management	Annual/On-going
Population 2011	scattered/trace



Duxbury MA

Waterbody Name	Driscoll Pond
Size	<1 acre
Public access?	none
Year of discovery	2007
Discovered by	ACT Survey
Introduced by	?
Next closest hydrilla site	40 miles (Barnstable MA)
Access next closest site	No public access
Extent Infestation	mixed throughout
Management Action(s)	diquat and copper treatment since 2007
Duration Management	Annual/On-going
Population 2011	trace



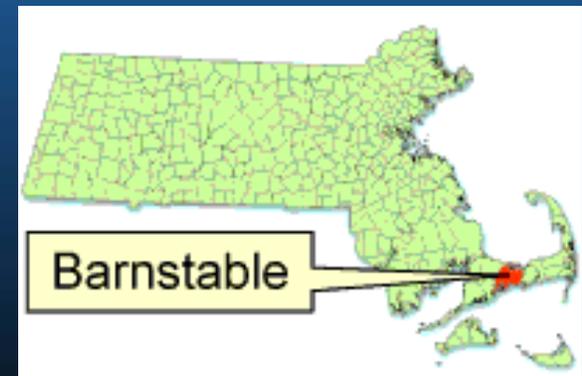
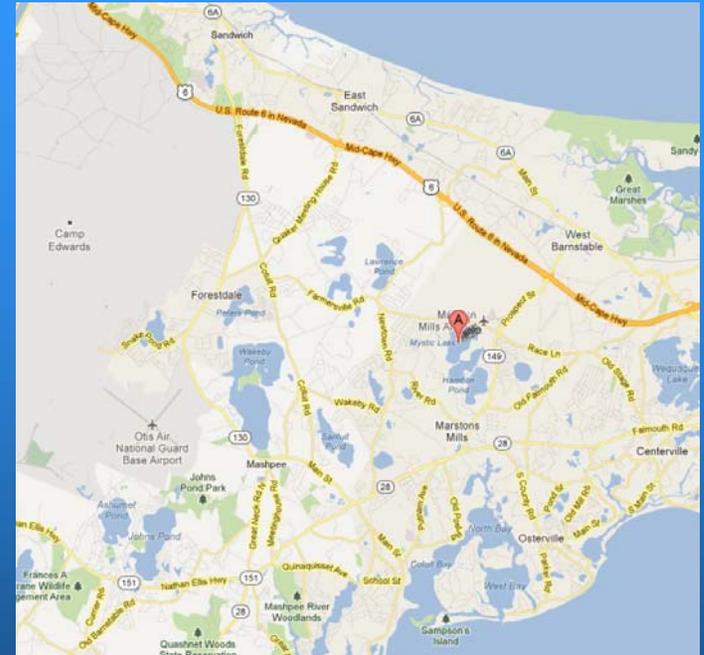
Pembroke MA

Waterbody Name	Hobomock Pond
Size	14 acres
Public access?	none
Year of discovery	2008
Discovered by	DCR
Introduced by	?
Next closest hydrilla site	45 miles (Barnstable MA)
Access next closest site	No public access
Extent Infestation	Dominant littoral zone
Management Action(s)	Fluridone (2009-2012)- closed to boating
Duration Management	Annual/On-going
Population 2011	common/scattered



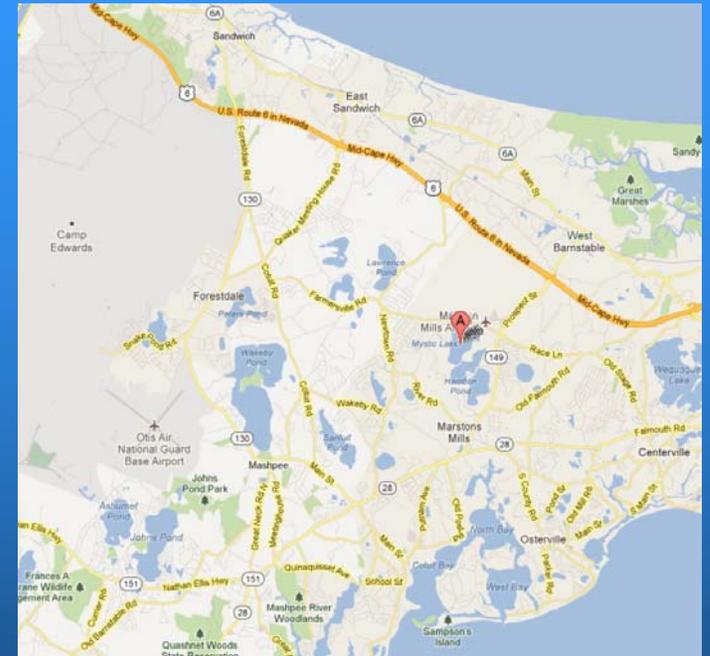
Barnstable MA

Waterbody Name	Mystic Lake
Size	150 acre
Public access?	Via Middle Pond
Year of discovery	2010
Discovered by	Lake association?
Introduced by	?
Next closest hydrilla site	< 5 miles (Barnstable MA)
Access next closest site	No public access
Extent Infestation	scattered patches
Management Action(s)	Volunteer hand pulling, benthic barriers
Duration Management	Annual/ On-going?
Population 2011	?



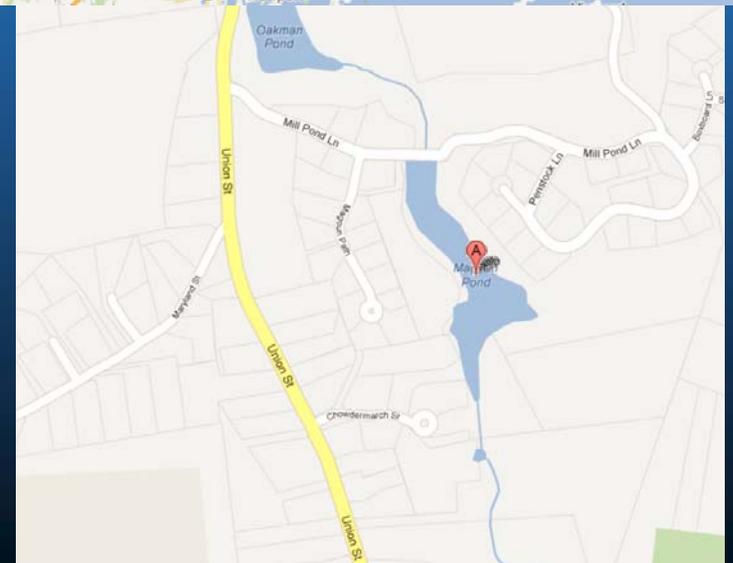
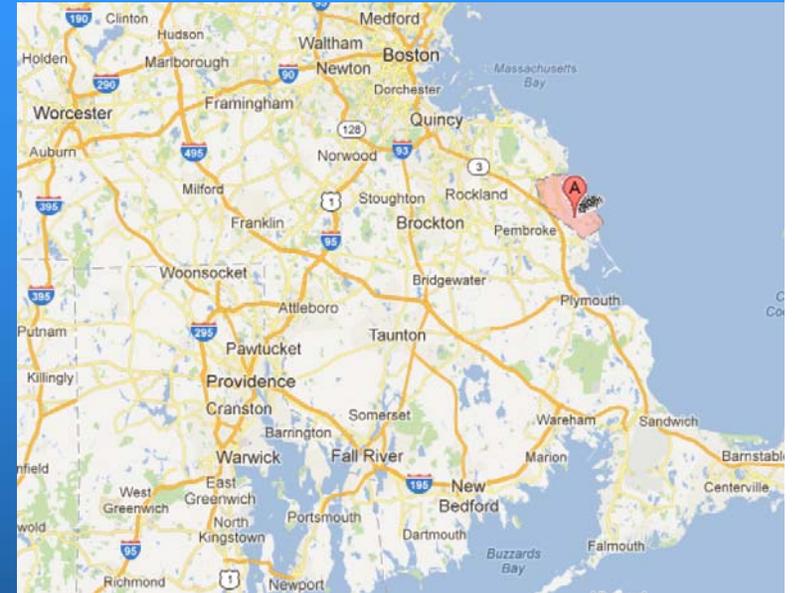
Weston MA

Waterbody Name	Unnamed Pond
Size	< 1 acre
Public access?	Private backyard
Year of discovery	2010
Discovered by	?
Introduced by	?
Next closest hydrilla site	25 miles (Clinton MA)
Access next closest site	Public launch
Extent Infestation	Small?
Management Action(s)	Not reported
Duration Management	?
Population 2011	?



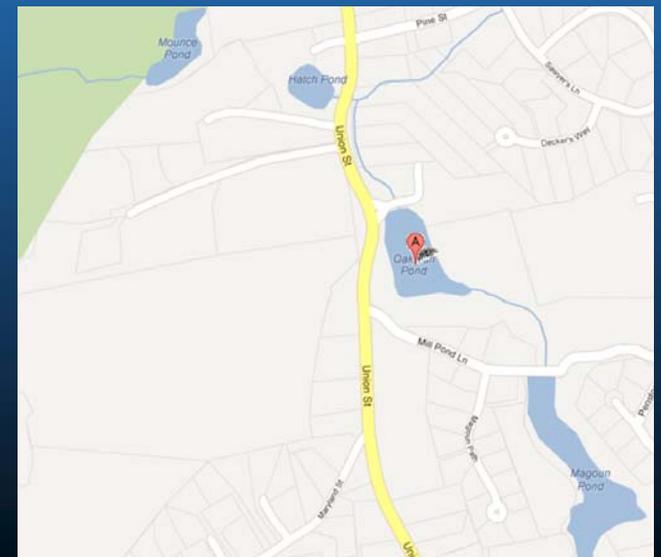
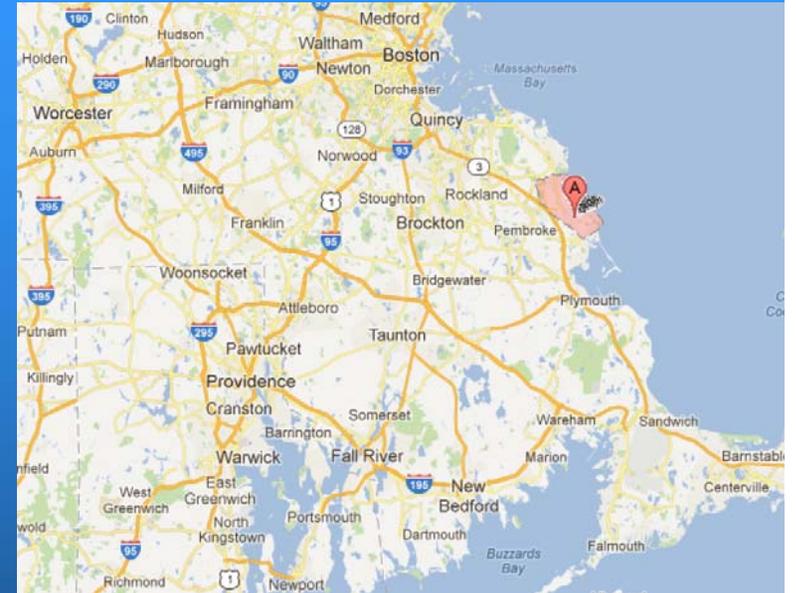
Marshfield MA

Waterbody Name	Magoun Pond
Size	9 acres
Public access?	none
Year of discovery	2011
Discovered by	Trained volunteer
Introduced by	?
Next closest hydrilla site	<5 miles (Duxbury MA)
Access next closest site	No public access
Extent Infestation	Dense throughout
Management Action(s)	None
Duration Management	None
Population 2011	Dense



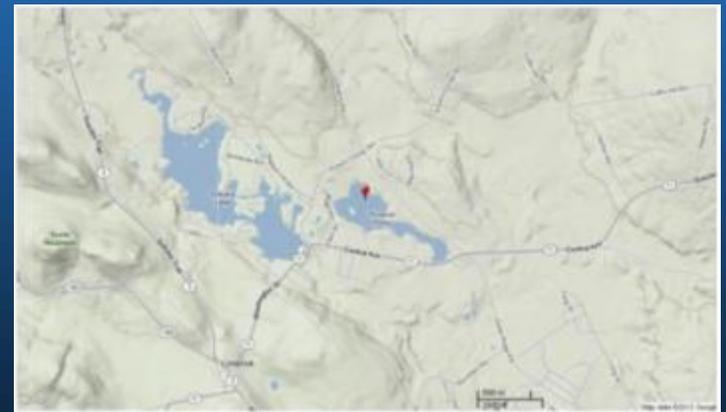
Marshfield MA

Waterbody Name	Oak(m/h)an Pond
Size	8 acres
Public access?	none
Year of discovery	2011
Discovered by	DCR Lakes and Ponds Program
Introduced by	?
Next closest hydrilla site	<5 miles (Duxbury MA)
Access next closest site	No public access
Extent Infestation	Dense throughout
Management Action(s)	None
Duration Management	None
Population 2011	Dense



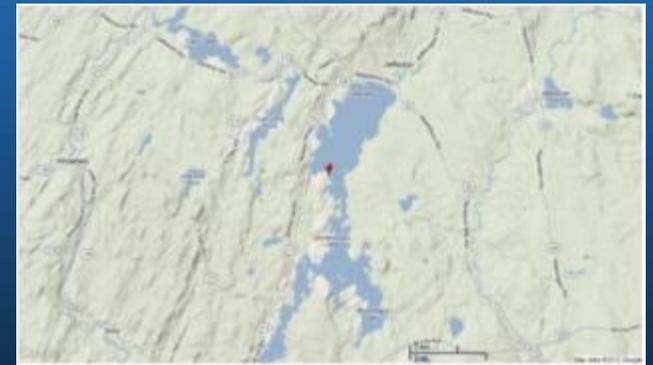
Limerick ME

Waterbody Name	Pickerel Pond
Size	46 acres
Public access?	Public boat access
Year of discovery	2002
Discovered by	Public observation
Introduced by	?
Next closest hydrilla site	180 miles (Barnstable MA)
Access next closest site	No public access
Extent Infestation	60-70% cover littoral zone
Management Action(s)	Fluridone, screening
Duration Management	Annual 2003-11
Population 2011	None found 2010-11



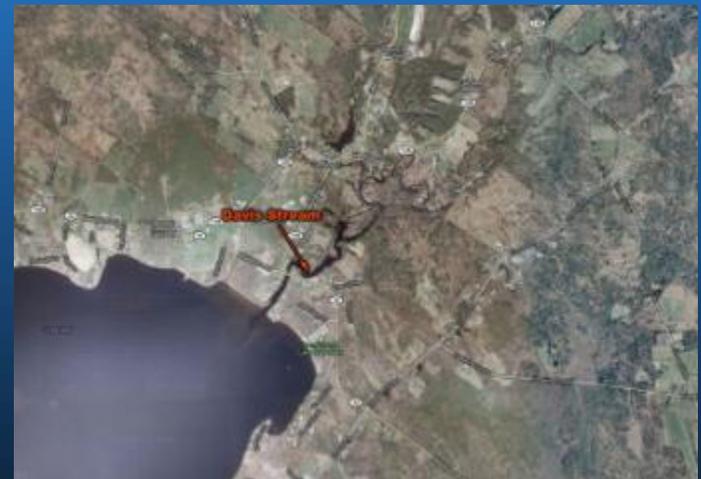
Lincoln, ME

Waterbody Name	Damariscotta Lake-lakeside lagoon
Size	4686 acres / 0.3 acres
Public access?	Access from lake
Year of discovery	2009
Discovered by	Trained volunteer
Introduced by	?
Extent Infestation	75% of cove
Next closest hydrilla site	200 miles (Limerick ME)
Access next closest site	Public boat access
Management Action(s)	DAHH, benthic barriers; screened off cove, herbicide
Duration Management	On-going
Population 2011	Good control?



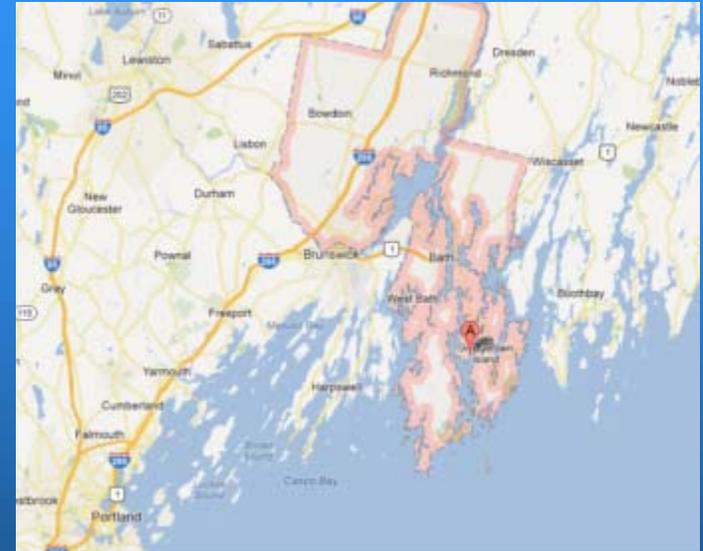
Lincoln, ME

Waterbody Name	Damariscotta Lake-Davis Stream
Size	4686 acres / NA
Public access?	Access from lake
Year of discovery	2011
Discovered by	Public observation
Introduced by	?
Next closest hydrilla site	< 5 miles (same lake)
Access next closest site	Waterway connected
Extent Infestation	Not reported
Management Action(s)	DAHh, boater restrictions
Duration Management	On-going
Population 2011	Good control?



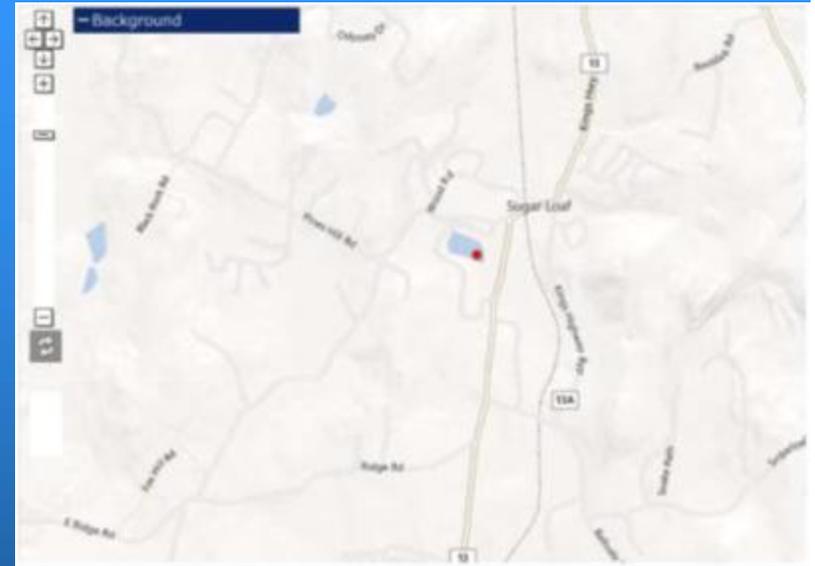
Sagadahoc County, ME

Waterbody Name	Unnamed ponds
Size	4 acres / 0.5 acres
Public access?	no
Year of discovery	2011, but may be up to 2 decades old
Discovered by	Maine DEP employee drive-by
Introduced by	?
Next closest hydrilla site	55 miles (Limerick ME)
Access next closest site	Waterway connected
Extent Infestation	Very dense
Management Action(s)	None yet- winter drawdown considered
Duration Management	Not yet determined
Population 2011	Very dense



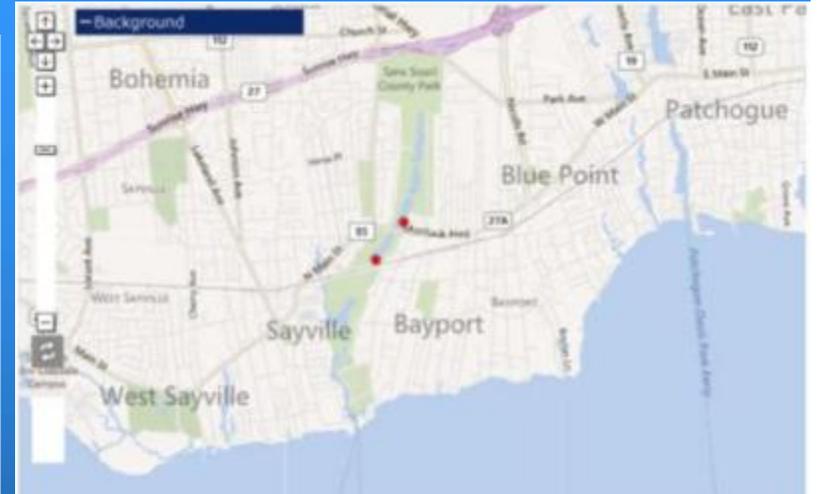
Sugar Loaf NY

Waterbody Name	Creamery Pond
Size	9 acres
Public access?	none
Year of discovery	2008
Discovered by	Public report
Introduced by	Aquaria?
Next closest hydrilla site	60 miles (Wilton CT)
Access next closest site	none
Extent Infestation	Moderate to dense throughout lake
Management Action(s)	Fluridone/Komeen, Grass carp
Duration Management	On-going
Population 2011	Biomass reduced 60-80%



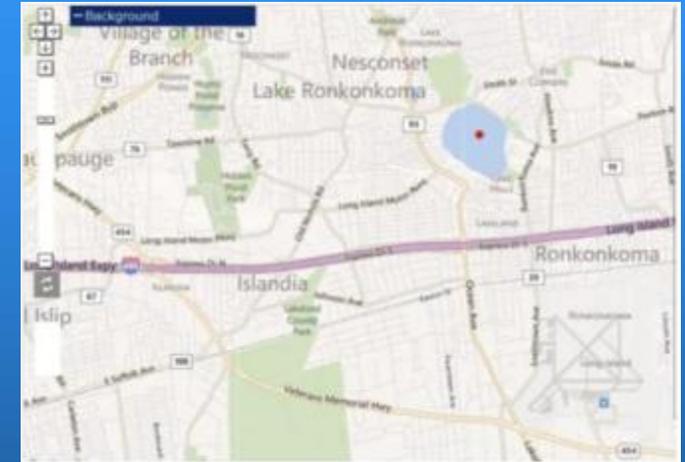
Sayville NY

Waterbody Name	Sans Souci-Lotus Lakes
Size	32 / 13 acres
Public access?	None (county park)
Year of discovery	2008
Discovered by	NYSDEC routine survey
Introduced by	Waterfowl?
Next closest hydrilla site	50-90 miles (Wilton CT)
Access next closest site	none
Extent Infestation	Sans Souci-moderate in downstream 5 acres Lotus- dense throughout
Management Action(s)	none
Duration Management	none
Population 2011	unknown



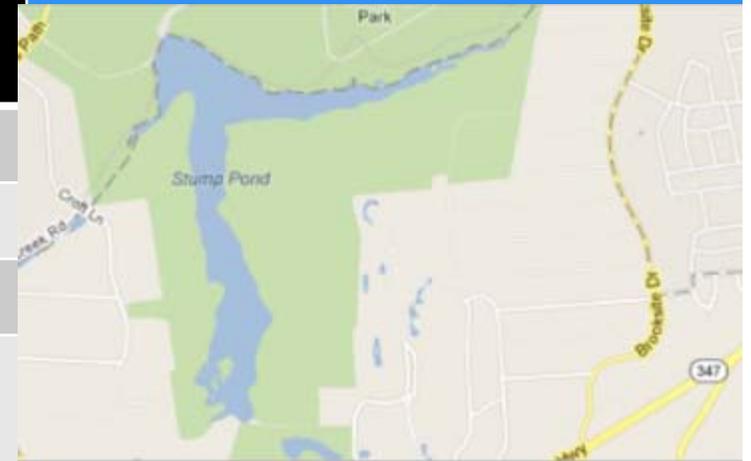
Ronkonkoma NY

Waterbody Name	Lake Ronkonkoma
Size	240 acres
Public access?	Public boat launch
Year of discovery	2009
Discovered by	NYSDEC routine survey
Introduced by	?
Next closest hydrilla site	5 miles (Sayville NY)
Access next closest site	none
Extent Infestation	Sparse to moderate in 5-10 acres; 70% of littoral zone
Management Action(s)	Grass carp stocking planned
Duration Management	?
Population 2011	Sparse to dense in 90% littoral zone



Smithtown NY

Waterbody Name	New Mill Pond aka Stump Pond
Size	110 acres
Public access?	County rowboat launch
Year of discovery	2009
Discovered by	TNC/NYSDEC R1 shoreline survey
Introduced by	?
Next closest hydrilla site	5 miles (Sayville NY)
Access next closest site	none
Extent Infestation	Not known- observed as dense along shoreline
Management Action(s)	Grass carp stocking proposed
Duration Management	?
Population 2011	?



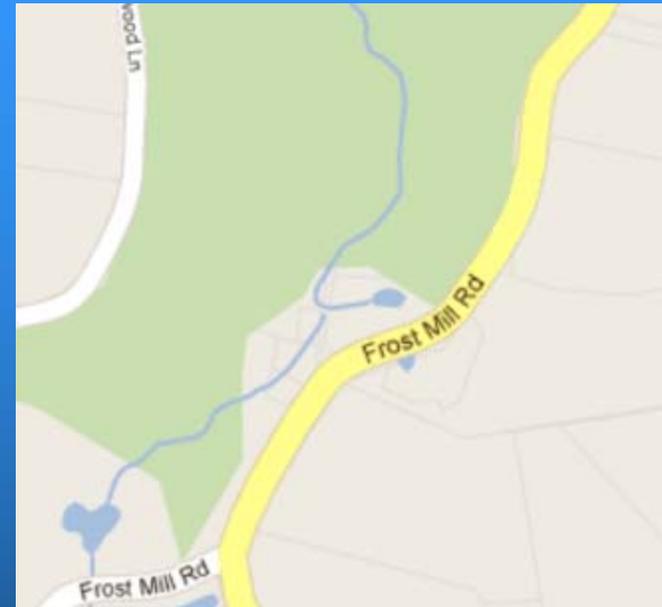
Smithtown NY

Waterbody Name	Phillips Mill Pond
Size	8 acres
Public access?	none- Caleb Smith SP
Year of discovery	2009
Discovered by	NYSDEC R1 shoreline survey
Introduced by	Waterfowl?
Next closest hydrilla site	<5 miles (Sayville NY)
Access next closest site	none
Extent Infestation	Dense at shoreline
Management Action(s)	Grass carp stocking proposed
Duration Management	?
Population 2012	2011- not found in other ponds in park



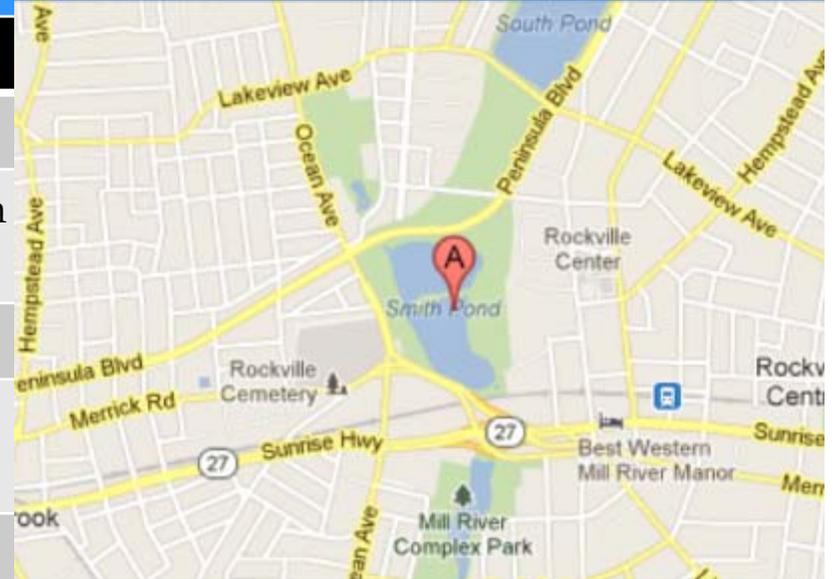
Mill Neck NY

Waterbody Name	Frost Mill Pond
Size	< 1 acre
Public access?	none
Year of discovery	2009
Discovered by	Pond owner after press reports for LI hydrilla
Introduced by	Intentional (accidental) planting
Next closest hydrilla site	35 miles (Sayville NY)
Access next closest site	none
Extent Infestation	Not surveyed
Management Action(s)	Hand removal, 4 grass carp
Duration Management	On-going
Population 2011	None observed in lake



Rockville Center NY

Waterbody Name	Smith Pond
Size	7 acres
Public access?	None- Morgan Days town park
Year of discovery	2011
Discovered by	NYSDEC R1 shoreline survey
Introduced by	Waterfowl?
Next closest hydrilla site	30 miles (Sayville NY)
Access next closest site	none
Extent Infestation	Not yet surveyed- very dense spatterdock
Management Action(s)	None yet
Duration Management	?
Population 2012	2009- not found in lake



Ithaca NY

Waterbody Name	Cayuga Inlet
Size	Appx 200 acres
Public access?	Multiple- state launch and private marinas
Year of discovery	2011
Discovered by	Cayuga Lake Floating Classroom
Introduced by	?
Next closest hydrilla site	50 miles (Warren PA)
Access next closest site	none
Extent Infestation	Sparse to dense
Management Action(s)	Endothal, DASH
Duration Management	On-going
Population 2012	Not yet determined



Summary of NE/NY Hydrilla Findings

- 25 lakes and ponds spread over four states
- Waterbody sizes: 0.1 acres-4486 acres (median = 8 acres)
- Public access at 9 sites
- Distance to closest known infestations: < 5 miles to > 120 miles
- Coastal to inland
- Range in water quality, substrate, depth not known

Why hast thou smote me? (Why here?)

- Nearly all appx. 25 infested sites throughout the northeastern US are isolated from each other
- Some sites with public access and heavy boat traffic
- Other sites private with no access or significant usage
- NO CLEAR REASON WHY ANY INFESTED SITE WAS “CHOSEN”
- Invasives don't spontaneously generate or just “show up”- they must be introduced
- This is only common factor among all infested lakes

