

The Invasive Threat



Photo credit: Ro



Photo: DEC



Hydrilla (Hydrilla verticillata)
Hydrilla discovered in Cayuga Inlet in August of 2011

Known Distribution in NY as of 2014

Isolated Ponds,
Broome County

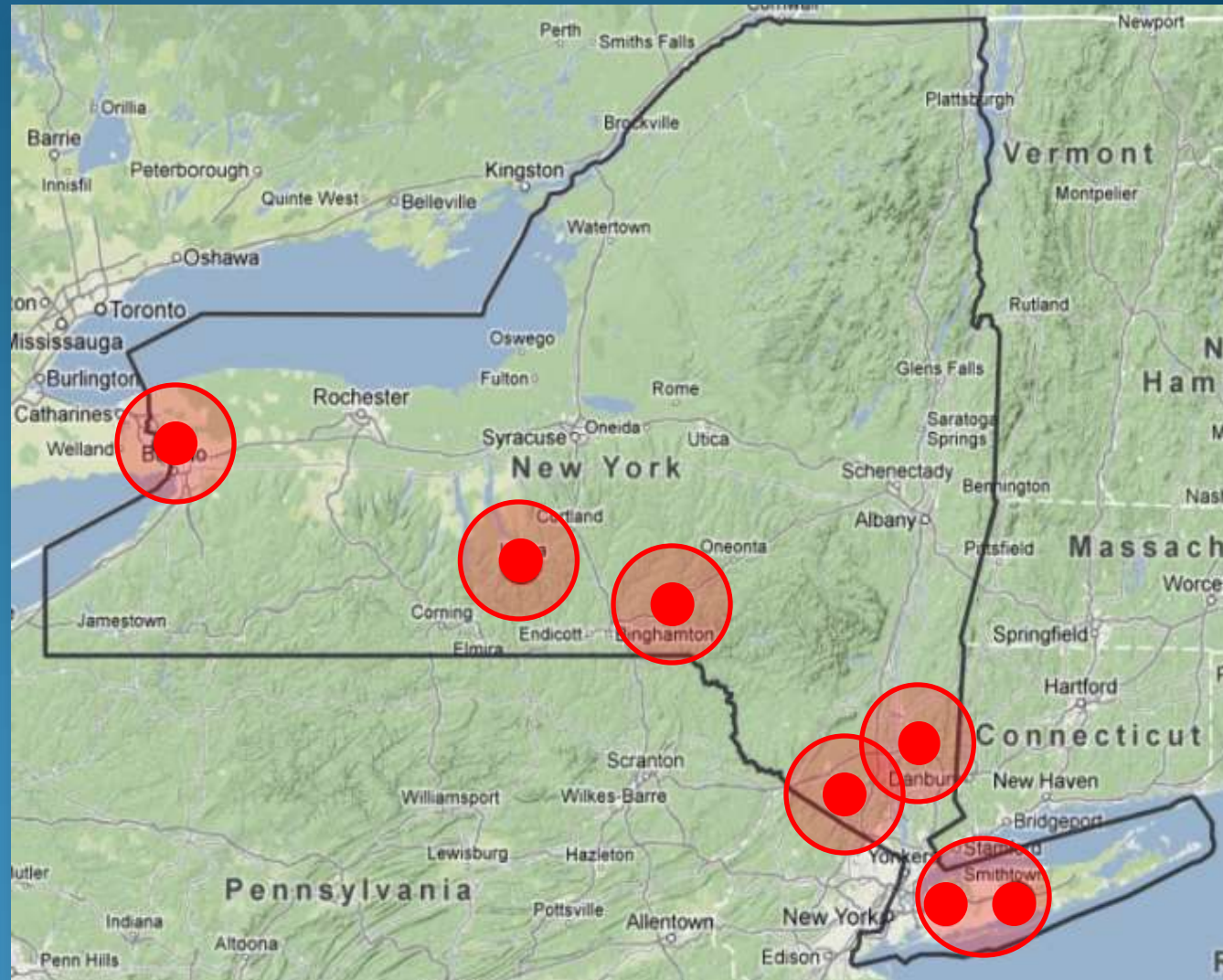
Creamery Pond,
Orange County

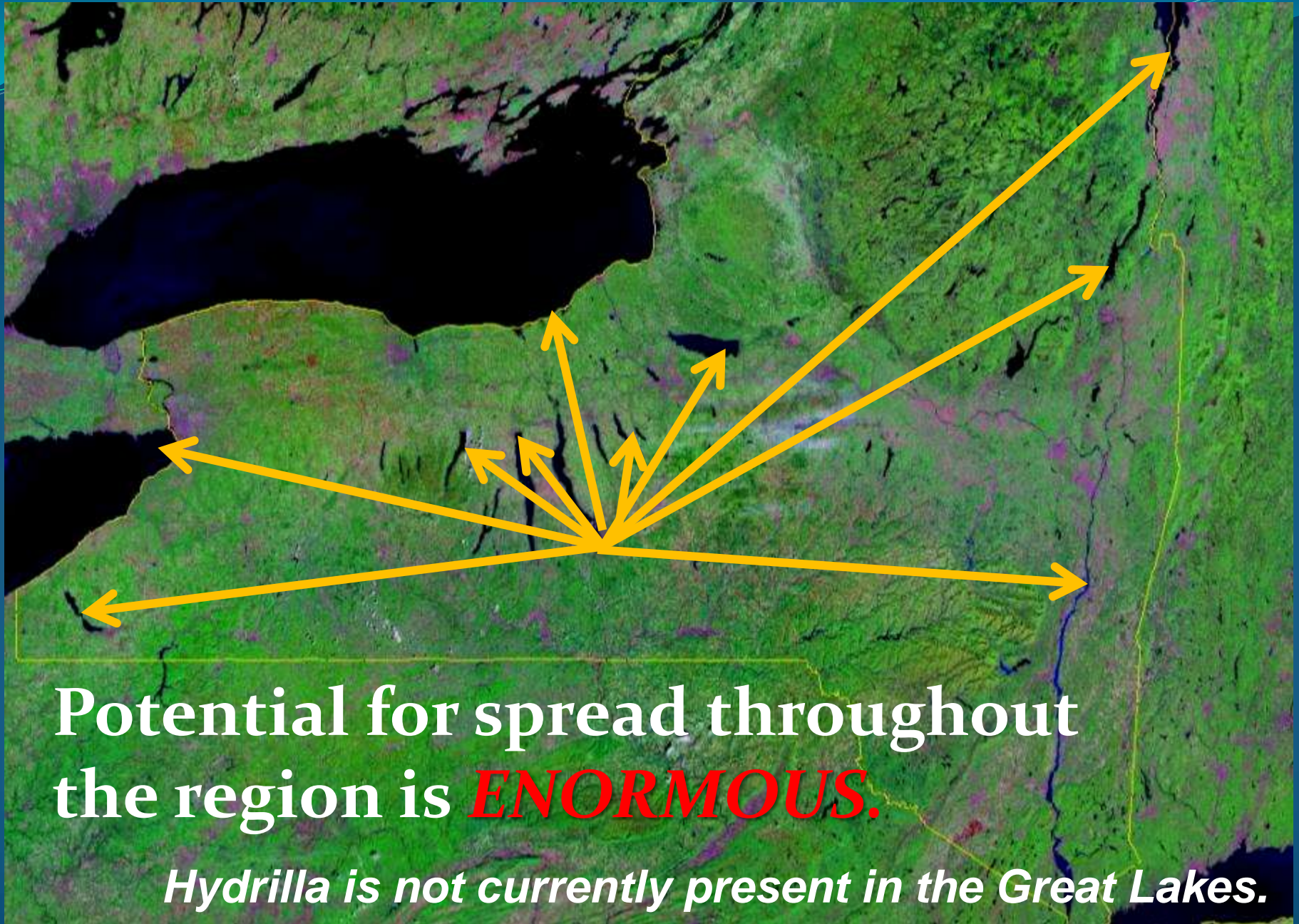
Croton River,
Westchester County

6 ponds & lakes on
Long Island, including
Lake Ronkonkoma

Tonawanda Creek

Cayuga Inlet

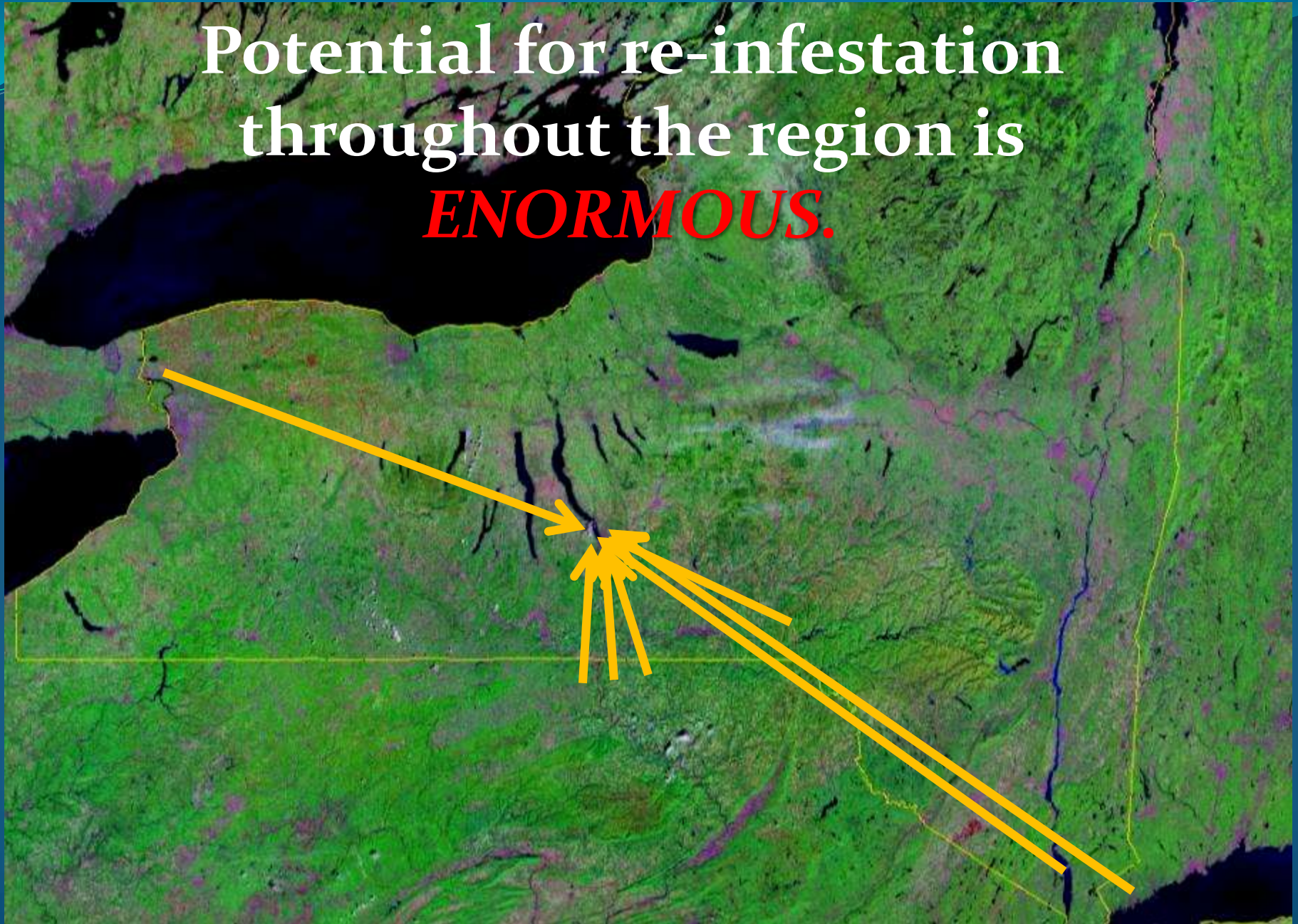




Potential for spread throughout
the region is **ENORMOUS**.

Hydrilla is not currently present in the Great Lakes.

Potential for re-infestation
throughout the region is
ENORMOUS.



The Impact of Aquatic Invasive Species

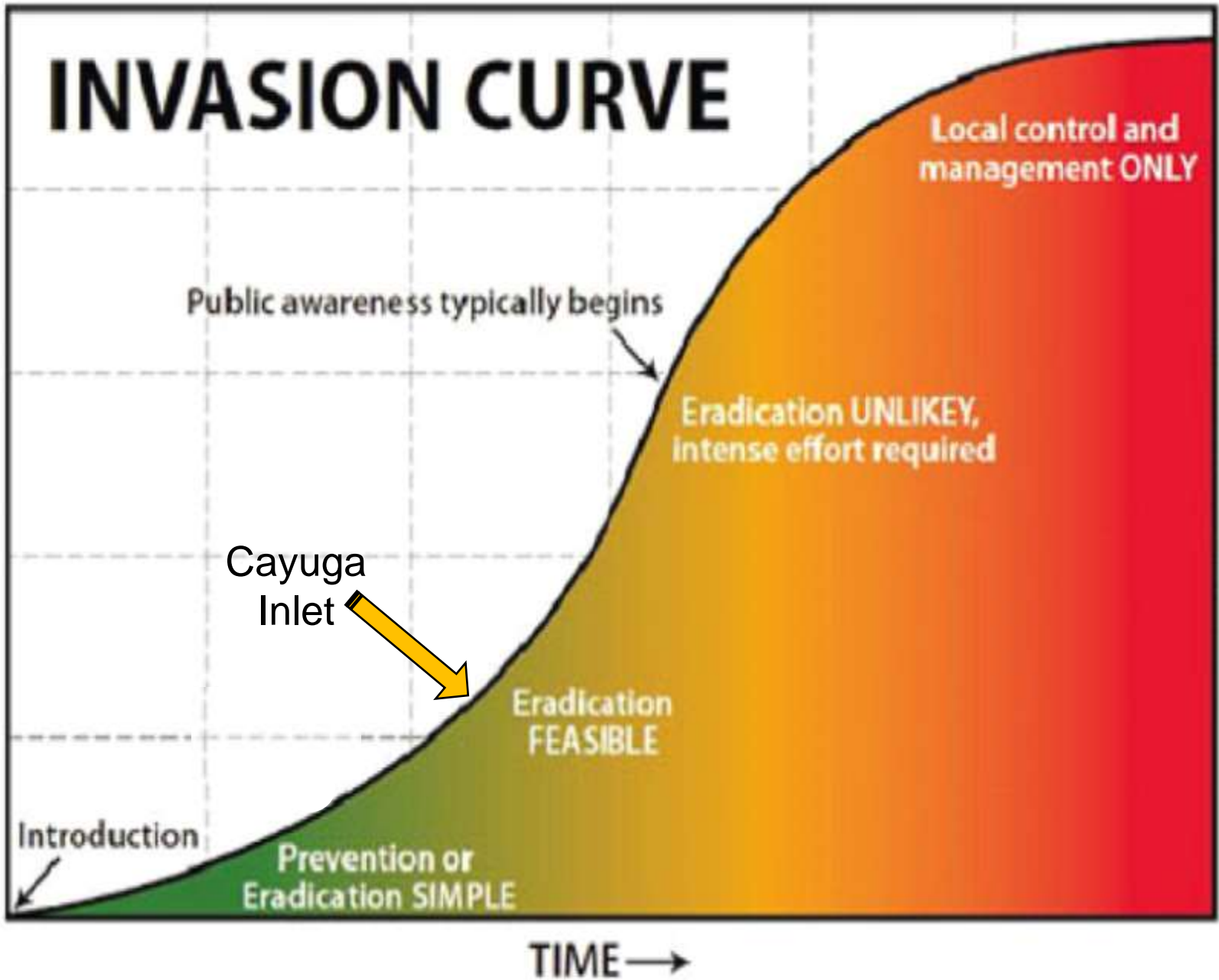
ADVERSE IMPACTS TO:

- **Native Habitats**: Native plant and animal species out-competed by invasives. Establishment of monoculture, displacement of native species, and degradation of native habitat.
- **Recreation**: Restricted access for boating, swimming, fishing, and other forms of recreation.
- **Municipal Water Sources**: Invasive infestations can degrade drinking water sources and impair municipal water intake and processing structures, often at great costs to taxpayers.
- **Tourism/Business**: Aesthetics and waterfront experience negatively impacted by the presence and proliferation of invasive species. Especially in areas depending directly on waterfront access.
- **Property Values**: Waterfront property values can be negatively impacted by the presence of invasive infestations.

INVASION CURVE

AREA INFESTED

CONTROL COSTS →



Hydrilla Task Force of the Cayuga Lake Watershed

STATEWIDE TASK FORCE

NYS DEC Invasive Species Coordination Unit

MANAGEMENT GROUP

NYS DEC

City of Ithaca

Tompkins Co. Health Dept

Tompkins Co. Soil & Water Conservation District (TCSWCD)

NYS Parks

Racine-Johnson Aquatic Ecologists

OUTREACH GROUP

Cornell Cooperative Ext. Tompkins Co.

Cayuga Lake Watershed Network (CLWN)

Cayuga Lake Floating Classroom (FC)

LOCAL TASK FORCE

James A. Balyszak (Hydrilla Program Manager)

Roxy Johnston (City of Ithaca)

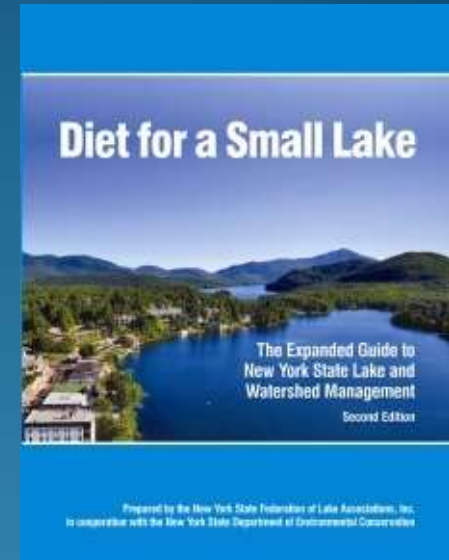
Bob Johnson (Racine-Johnson Aquatic Ecologists)

Angel Hinickle (TCSWCD)

Aquatic Plant Management Tools

Diet for a Small Lake: The Expanded Guide to New York State Lake and Watershed Management

(<http://www.dec.ny.gov/chemical/82123.html>)



- Summarizes **physical, mechanical, chemical, and biological** control options available in New York State.
- The governing principles, advantages & disadvantages, target plants, expected costs, and regulatory issues for each option.

Management Options

“No Action”

Dependent Upon:

- Plant species
- Exploitation
- Plant biology
- Size of infestation & location
- Managerial will
- Managerial experience



Raghavan Charudattan, University of Florida

Management Options

Physical (Local/Small Scale)

- Hand Harvesting
- Benthic Mats
- Diver Assisted
Suction Harvesting
Removal (D.A.S.H)



Physical Removal Attempt

Diver Assisted Suction Harvesting (DASH)– Attempted Fall 2011



Management Options

Physical/Mechanical (Wide Scale)

Larger infestations or control over a larger area

- Drawdown
- Shading
- Mechanical Harvesting
- Dredging



Management Options

Biological (Small-Wide Scale)

- Grass carp
- Herbivorous Insects
- Bacteria
- Fungal Controls



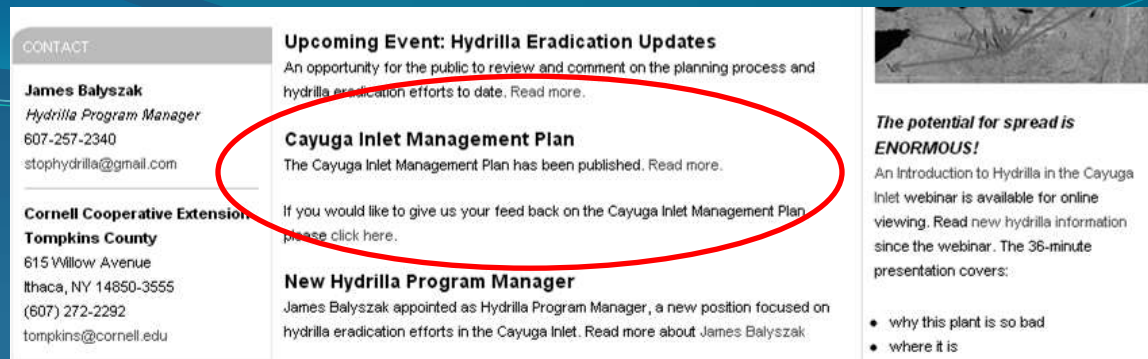
Management Options

Chemical Control (Small-Wide Scale)

- Endothall
- Fluridone
- Copper
- Diquat
- Glyphosate
- Triclopyr
- 2,4-D
- Imamizox



Cayuga Inlet



CONTACT

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tompkins@cornell.edu

Upcoming Event: Hydrilla Eradication Updates
An opportunity for the public to review and comment on the planning process and hydrilla eradication efforts to date. [Read more.](#)

Cayuga Inlet Management Plan
The Cayuga Inlet Management Plan has been published. [Read more.](#)

If you would like to give us your feed back on the Cayuga Inlet Management Plan, [please click here.](#)

New Hydrilla Program Manager
James Balyszak appointed as Hydrilla Program Manager, a new position focused on hydrilla eradication efforts in the Cayuga Inlet. [Read more about James Balyszak](#)

The potential for spread is ENORMOUS!
An Introduction to Hydrilla in the Cayuga Inlet webinar is available for online viewing. [Read new hydrilla information since the webinar.](#) The 36-minute presentation covers:

- why this plant is so bad
- where it is

Hydrilla Management Plan

Goal

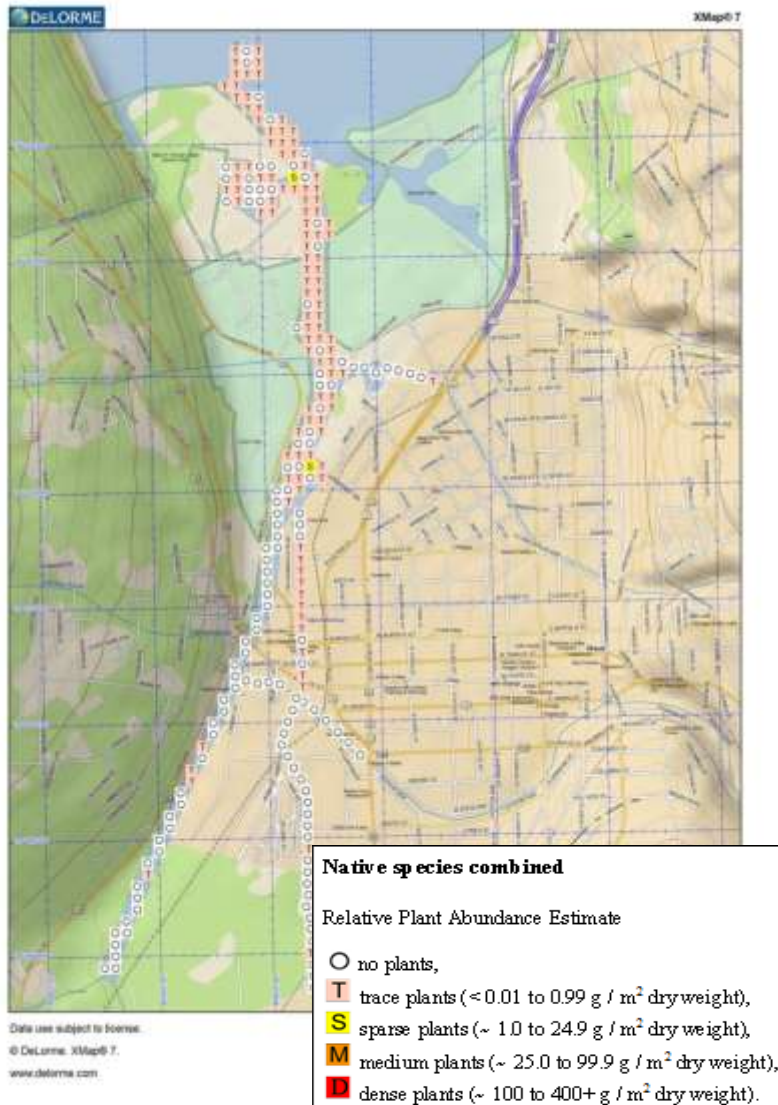
Eradicate hydrilla from Cayuga Inlet, Fall Creek, and adjacent tributaries AND prevent its spread to Cayuga Lake, the Finger Lakes & Great Lakes

Objectives (Season-to-Season)

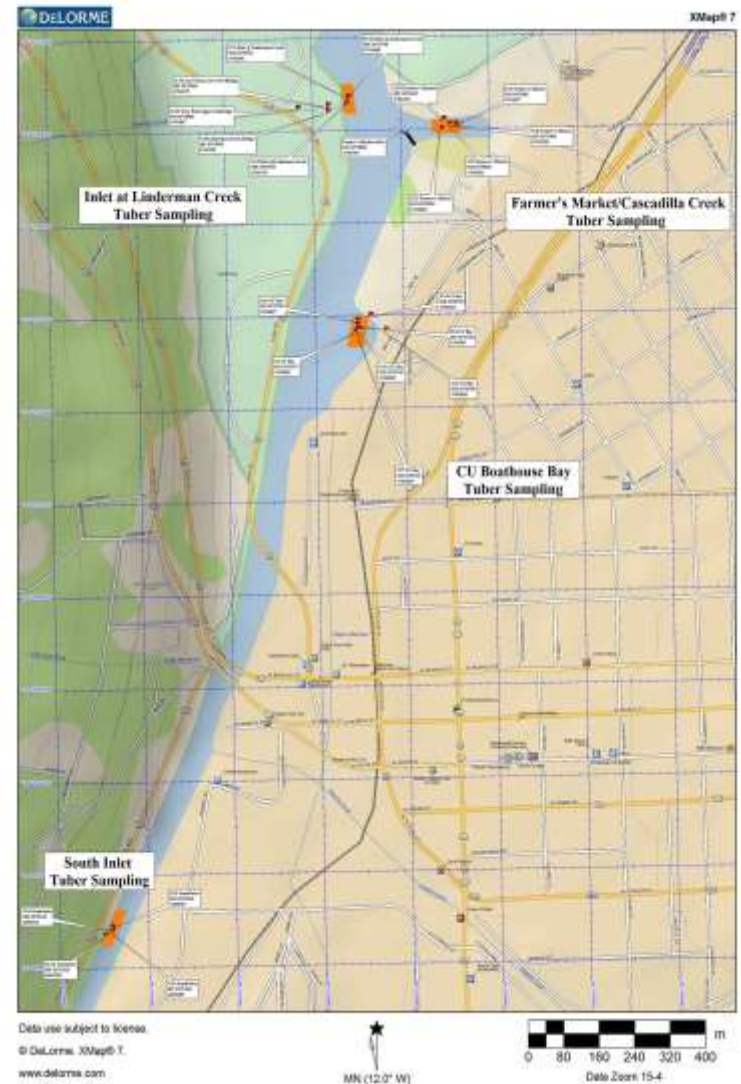
- Significantly Reduce hydrilla biomass and prevent tuber production in Approx. 160+ acres of the Cayuga Inlet, Fall Creek, and adjacent tributaries to Cayuga Lake
- Contain and prevent movement of the hydrilla out of the Inlet
- Monitor for growth, re-growth, treatment efficacy, and spread

Cayuga Lake & Inlet Monitoring

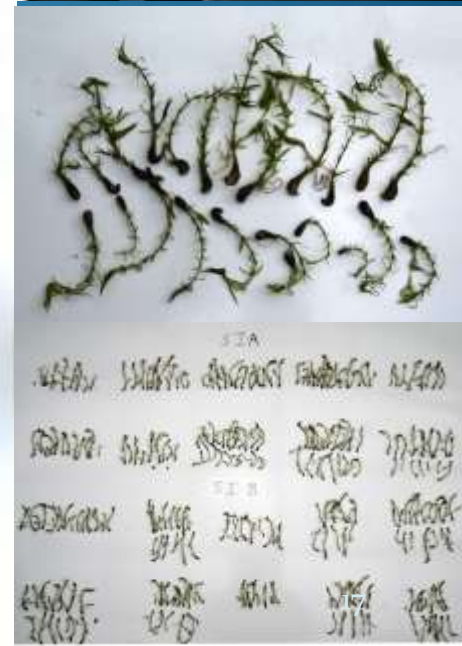
Plant Monitoring 50m X 50m grid



Tuber monitoring locations



Tuber Monitoring & Sampling



Outreach & Education Efforts



SEARCH OUR SITE

Go

- ▶ Emerald Ash Borer
- ▶ Giant Hogweed
- ▶ Hydrilla: An Aggressive Water

NOT WANTED!

Hydrilla verticillata



A screenshot of a Twitter profile for Stophydrilla.org. The profile banner features a "STOP HYDRILLA!" sign and a "No Hydrilla" symbol. The bio reads: "The Hydrilla Task Force of Tompkins County is spearheading the eradication of the highly invasive aquatic plant species Hydrilla from the Cayuga Inlet in NY. Ithaca, NY - stophydrilla.org". The profile shows 92 tweets, 85 following, and 37 followers. Recent tweets include reminders about a public meeting and news updates about Hydrilla in the local area.

UGA2122081

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ants
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HYDRILLA UPDATE: TREATMENT, MONITORING, AND

Hydrilla Hunters

[About](#) [Get Involved](#) [The Watershed](#)

[Resources](#) [Events & News](#) [Networking](#)



HYDRILLA HUNTERS

HYDRILLA HUNTERS

Autumn 2013



IN THIS SECTION

- [Internships](#)
- [Hydrilla Hunters](#)
- [Lend a Hand](#)
- [Contribute](#)

Lakefront Hydrilla Hunters Needed Around Cayuga Lake:

As we learned during August 2013, some hydrilla plants have become established in the lake outlet area of Fall Creek, and along the lakeshore to the east. While these infestations have been dealt with, this is a signal to us all for increased public awareness and training.

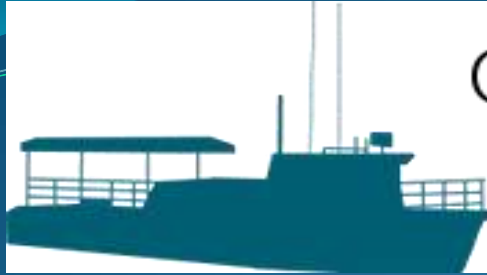
The professional monitoring teams need the assistance of Hydrilla Hunters: patrolling and reporting on lakefront properties and checking your boats and docks! YOU. Contact steward@cayugalake.org to learn how to identify hydrilla, and get ready for the summer 2014 "hydrilla season."

Who We Are, Where to Get Information & Report Possible Hydrilla Infestations:

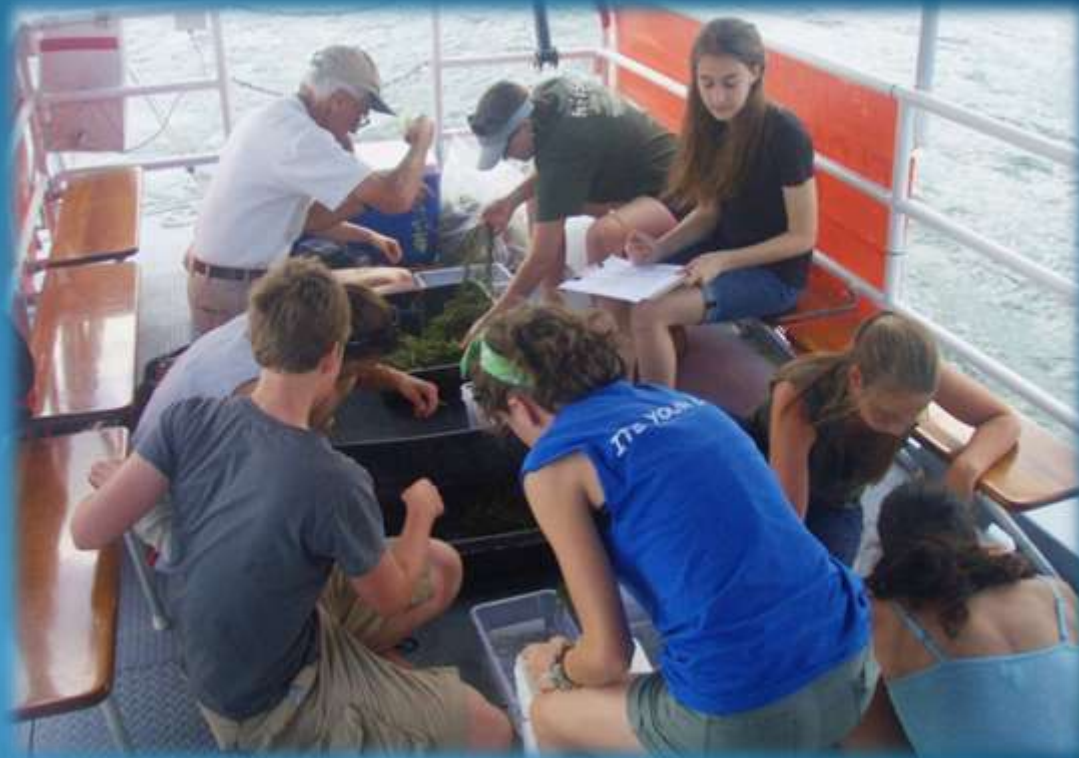
The Hydrilla Hunters is an informal, trained group of Cayuga Lake watershed residents working together to prevent takeover of our lake and creeks by the aquatic invasive plant, Hydrilla verticillata. We are affiliated with the Hydrilla Task Force of the Cayuga Lake Watershed. This newsletter provides information about hydrilla and its eradication on Cayuga Lake. Information & report forms: www.StopHydrilla.org. On Facebook at StopHydrilla.org; Twitter: @StopHydrilla.

Join the Hydrilla Hunters:

Contact Hilary Lambert steward@cayugalake.org



Cayuga Lake Floating **Classroom**



Problems Encountered

- Signage upkeep/maintenance and VANDALISM!
- Riparian Owner Notification:
 - i.e. Ensuring ALL waterfront property/business owners are notified regarding impending treatments.
- Closure of Inlet treatment zones in association with endothall treatments(s)
 - Impact to waterfront businesses and boat owners (potential community push-back)
- The need for multiple permits for separate treatments in same treatment zone

Long-Term Effort: Up to 10yrs

THE COSTS of ERADICATION:

- Herbicide Treatments
- Monitoring & Sampling
- Education & Outreach
- Permits
- Collaboration, Staff Hours, & In-Kind Services

Equates Locally

=

\$400,000

to

\$500,000 per year

(Federal, State, and Local grant funding
and In-kind/Match Contributions)



The Long-Term Costs of Doing Nothing

- States like Florida spend \$20,000,000 to \$30,000,000 ANNUALLY to manage hydrilla!

- If hydrilla is allowed to spread uncontrolled to Cayuga Lake, Finger Lakes & Great Lakes?

Equates Statewide in N

=

\$30,000,000+ per year in perpetuity



Long-Term Costs of Doing Nothing



Long-Term Costs of Doing Nothing



Central Florida Lake filled with Hydrilla
Photo by Jeff Schardt,
Copyright 2009 Univ. of Florida/FWC

Thank You



Questions?

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