

# Aquatic Invasive Species Efforts Across New York



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**NYSFOLA Meeting**  
**April 29, 2022**



**Department of  
Environmental  
Conservation**

**Parks, Recreation  
and Historic  
Preservation**

# NYS DEC and NYS Parks (OPRHP)

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- Both DEC and Parks work on preventing introductions, surveying, monitoring, detecting, managing, and controlling aquatic invasive species







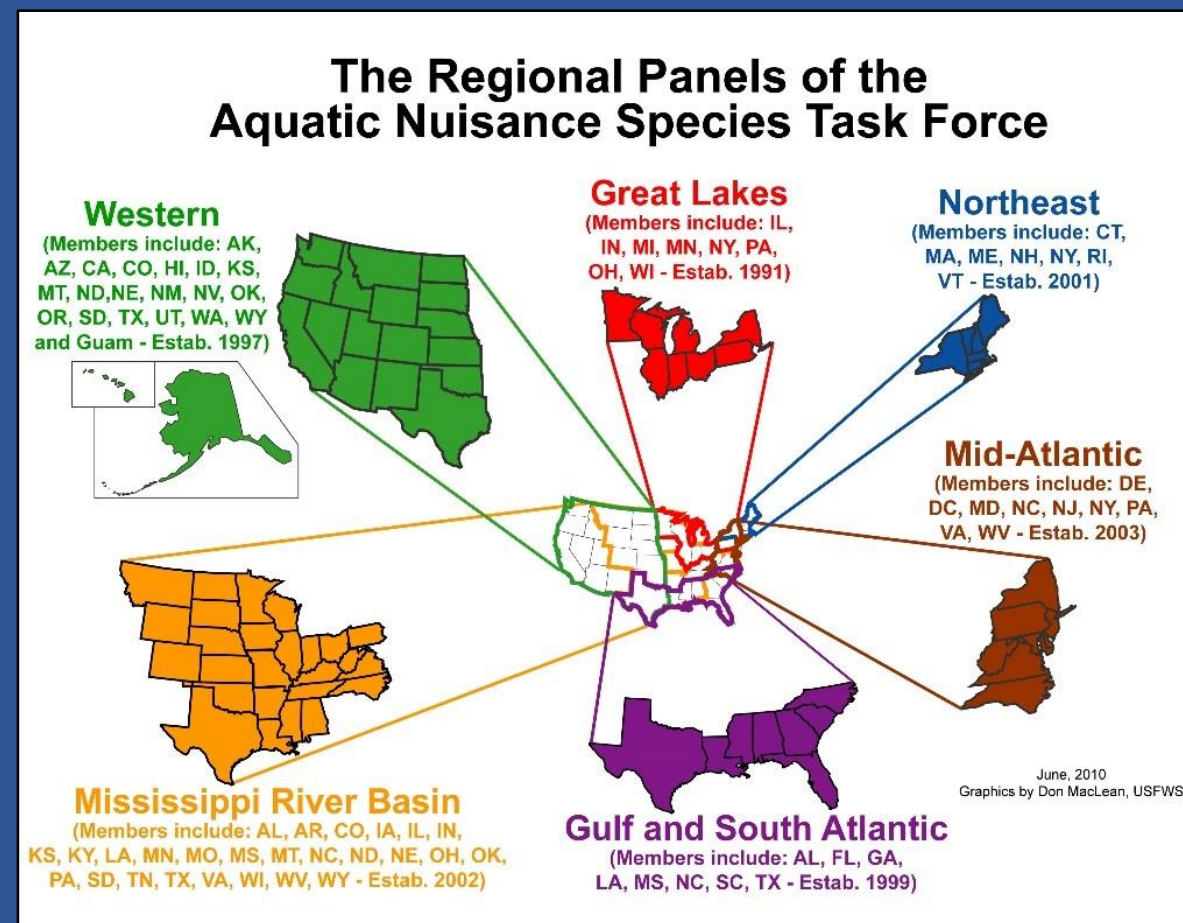
## Overview of Some NYSDEC Efforts

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- Early detection
- Large scale control projects to protect watersheds
- Regional AIS Coordination
- eDNA capacity

# Regional AIS Efforts

- Federal Aquatic Nuisance Species Task Force
- Northeast Aquatic Nuisance Species Panel (ME, NH, VT, MA, CT, RI, NY)
- Great Lakes ANS Panel (MI, IL, IN, MN, WI, NY, OH, Ontario)
- Mid-Atlantic AIS Panel (DE, DC, MD, NC, NJ, NY, PA, VA, WV)



# Regional AIS Efforts: NEANS Panel

- Northeast Landing Blitz
- Marine Rapid Assessment Surveys for Invasive Species
- Hydrilla in the CT River
  - Delineation
  - Containment
  - Education and outreach
  - Genetic testing –new biotype
  - Control





# Regional AIS Efforts: Great Lakes ANS Panel

- Regional Landing Blitz at boat launches during July 4<sup>th</sup> holiday
- Early Detection Surveillance at Buffalo Harbor, Irondequoit Bay, and Oswego River
- Organisms in Trade
- European Frogbit Collaborative



# Regional AIS Efforts: Mid-Atlantic Panel for AIS

- Small Grants Program
- Early Detection Survey/Technique Development
  - eDNA
  - Airborne LIDAR
  - Ballast water
- Ecological Impacts
  - Community/Ecosystem scales
- Rapid Assessment of Marine Environment
- Education and Outreach
  - AIS field guide
  - Marine Invasives



# Early Detection

- Aquatic plant monitoring:
  - Hudson River (2017-2023)
  - Mohawk River (2020-2022)
  - Finger Lakes (2018-2022)
- NYNHP Chestnut Chasers
- PRISM AIS Programs





# Control & Management

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- **Hydrilla Projects**
  - **Cayuga & Tompkins Counties** (Cayuga Lake/Finger Lakes)
  - **Erie & Niagara Counties**
    - (Lake Erie/Niagara River)
    - (Green/Hickory Lakes)
  - **Tioga County**
    - (Upper Susquehanna River)
  - **Westchester County**
    - (Croton and Hudson Rivers)





# Control & Management

- European frogbit- Catskill and Capital Region PRISMs
- Water chestnut- Lower Hudson PRISM, Finger Lakes PRISM, DEC Region 1, Mohawk River
- Water hyacinth/water lettuce- Western NY PRISM
- *Ludwigia* – Peconic River, DEC Region 1



June Summers, Finger Lakes PRISM



Hilary Mosher, Finger Lakes PRISM

# Regional AIS Coordination

- Region 1 (Long Island)
  - boat stewards at marine launches
  - research on interactions between Eurasian watermilfoil and hydrilla
  - control of water chestnut, phragmites, *Ludwigia*, and purple loosestrife in local waterbodies





# Regional AIS Coordination

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- Region 7 (Finger Lakes East)
- surveying/monitoring at state parks
- co-lead of Aurora hydrilla control effort (Cayuga Lake)
- assist with surveys in South Cayuga
- water chestnut control





# Regional AIS Coordination

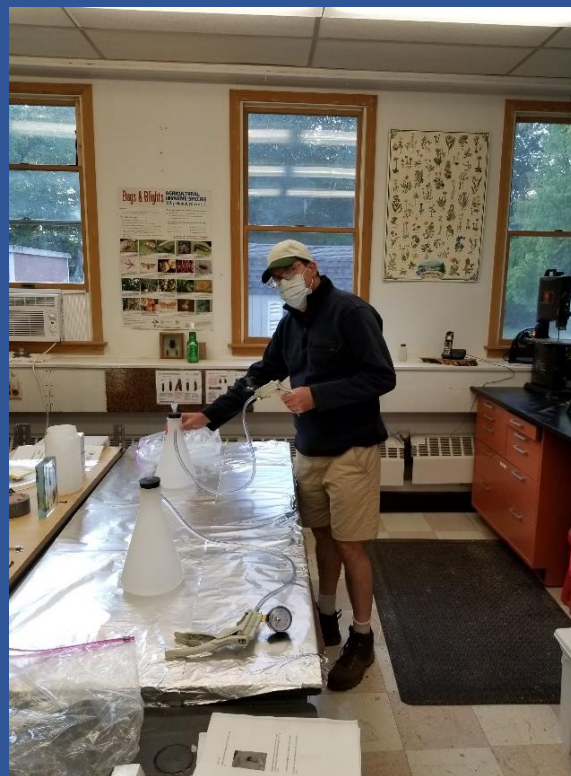
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- Region 9 (Western New York)
  - pilot restoration program
  - hydrilla control at Green and Hickory Lakes
  - research about water hyacinth and water lettuce overwintering
  - regionwide waterbody surveys



# Environmental DNA (eDNA)

- Tracking
- Detecting
- Monitoring
  - Northern Snakehead distribution in Delaware River and Bashakill WMA
  - Round Goby movement in the Hudson River
  - Hydrilla detection distance
  - Asian clam and zebra mussel survey tool development with NE states





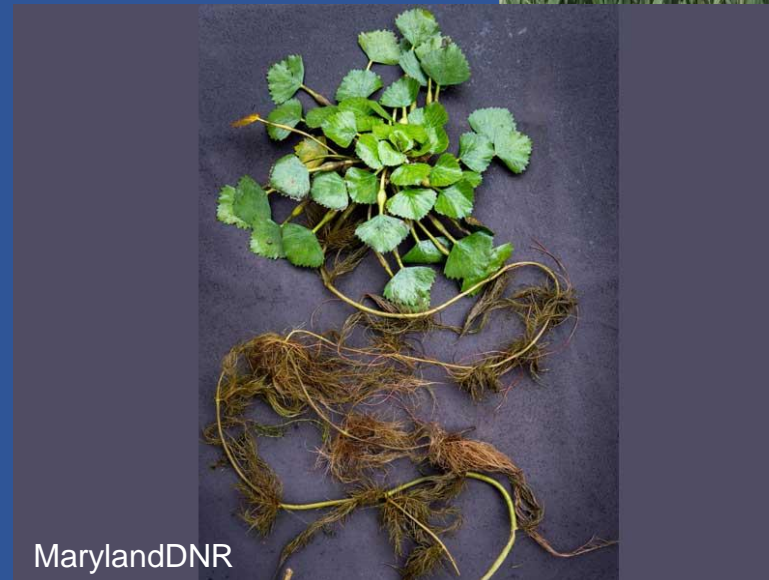
# Research

- Standardized biomass measures for water chestnut removal
- Genetics of variable leaf milfoil
- Grass Carp Stocking Permit database and vegetation assessments



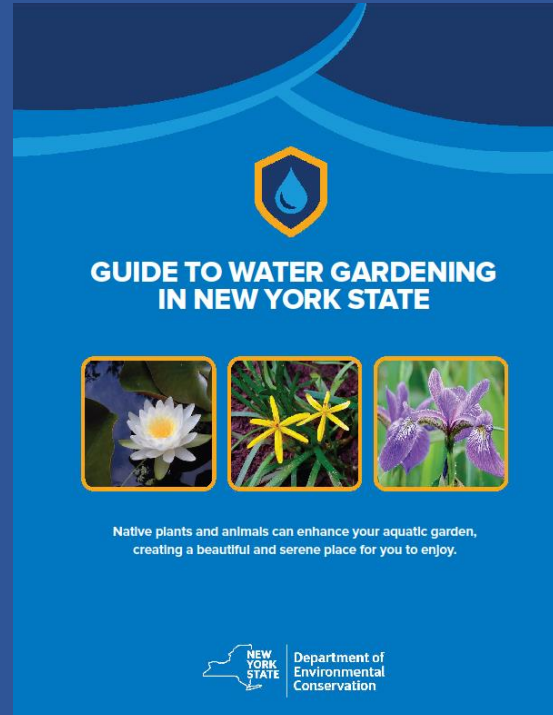
# Research

- Genetics of hydrilla (USACE)
- Tests for hydrilla cyanobacteria (University of Georgia)
- Off label uses of select herbicides (SePRO and University of Hartford)
- Biocontrol (Cornell)
  - Water chestnut
  - Phragmites



# Education and Outreach

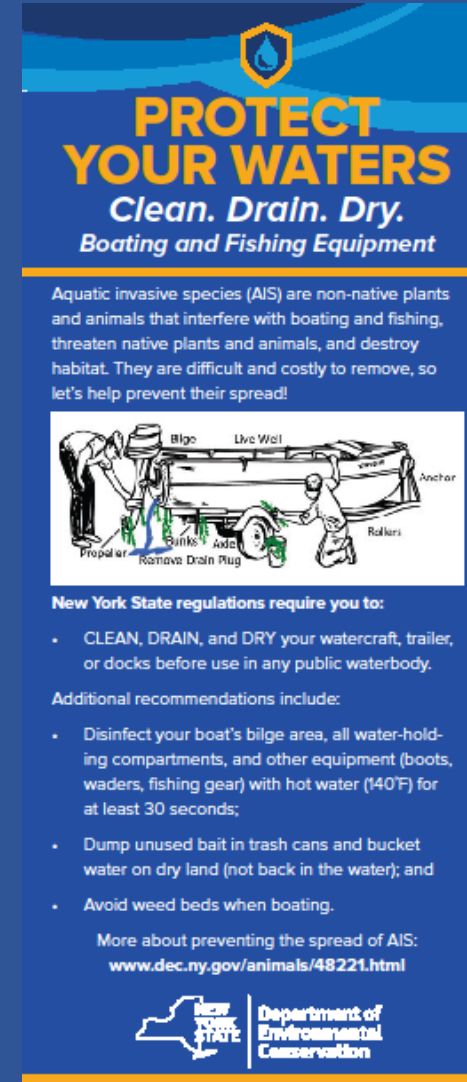
- Aquatic recreationists
- Aquaria and pet owners
- Aquatic gardeners
- Life releases



## GUIDE TO WATER GARDENING IN NEW YORK STATE

Native plants and animals can enhance your aquatic garden, creating a beautiful and serene place for you to enjoy.

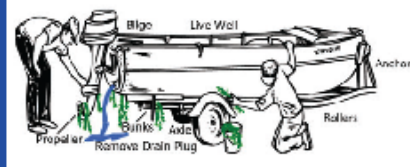
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## PROTECT YOUR WATERS

### Clean. Drain. Dry. Boating and Fishing Equipment

Aquatic invasive species (AIS) are non-native plants and animals that interfere with boating and fishing, threaten native plants and animals, and destroy habitat. They are difficult and costly to remove, so let's help prevent their spread!



**New York State regulations require you to:**

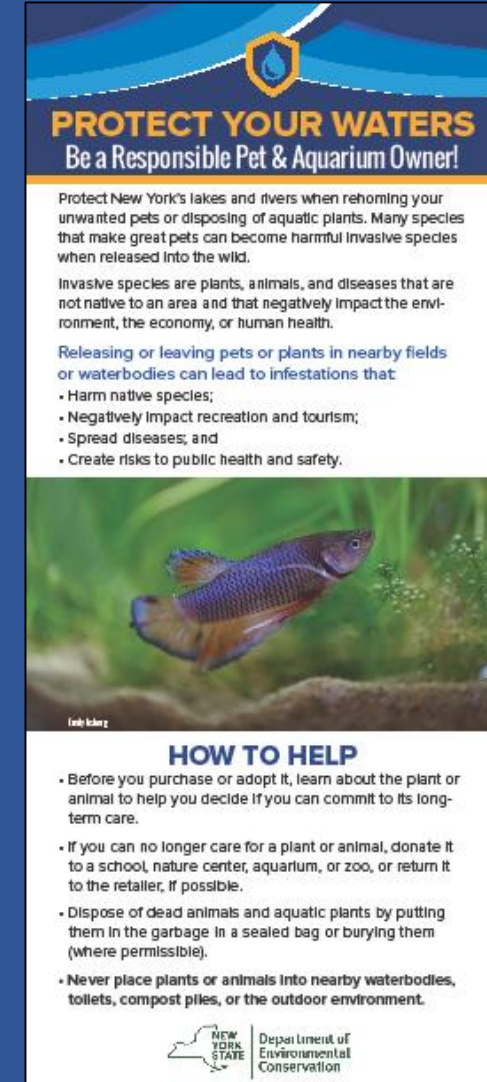
- CLEAN, DRAIN, and DRY your watercraft, trailer, or docks before use in any public waterbody.

Additional recommendations include:

- Disinfect your boat's bilge area, all water-holding compartments, and other equipment (boots, waders, fishing gear) with hot water (140°F) for at least 30 seconds;
- Dump unused bait in trash cans and bucket water on dry land (not back in the water); and
- Avoid weed beds when boating.

More about preventing the spread of AIS:  
[www.dec.ny.gov/animals/48221.html](http://www.dec.ny.gov/animals/48221.html)

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## PROTECT YOUR WATERS


### Be a Responsible Pet & Aquarium Owner!

Protect New York's lakes and rivers when rehoming your unwanted pets or disposing of aquatic plants. Many species that make great pets can become harmful invasive species when released into the wild.

Invasive species are plants, animals, and diseases that are not native to an area and that negatively impact the environment, the economy, or human health.

Releasing or leaving pets or plants in nearby fields or waterbodies can lead to infestations that

- Harm native species;
- Negatively impact recreation and tourism;
- Spread diseases; and
- Create risks to public health and safety.

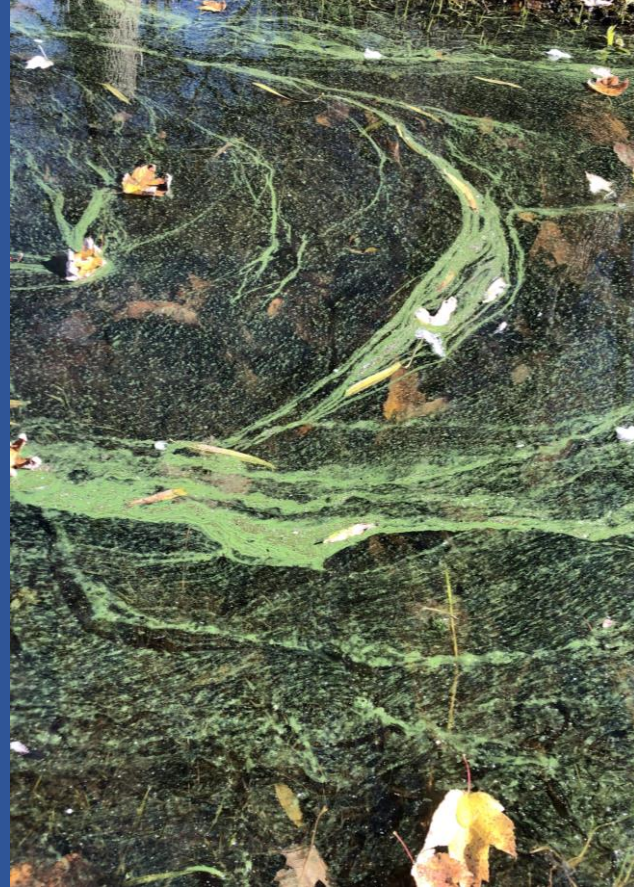


**HOW TO HELP**

- Before you purchase or adopt it, learn about the plant or animal to help you decide if you can commit to its long-term care.
- If you can no longer care for a plant or animal, donate it to a school, nature center, aquarium, or zoo, or return it to the retailer, if possible.
- Dispose of dead animals and aquatic plants by putting them in the garbage in a sealed bag or burying them (where permissible).
- Never place plants or animals into nearby waterbodies, toilets, compost piles, or the outdoor environment.

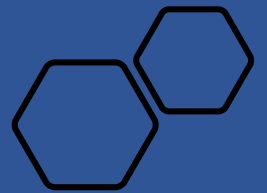
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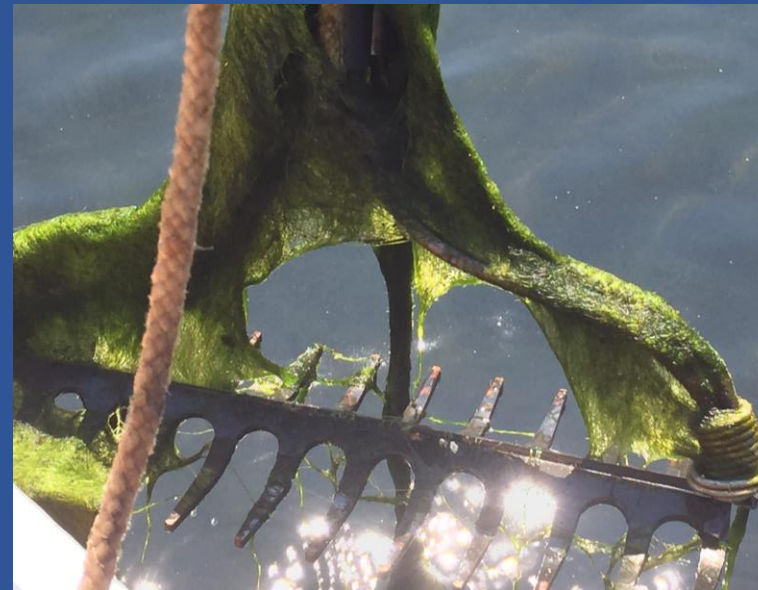


# Water Quality Unit

- Drinking Water Program
- Harmful Algal Blooms (HABs)
- Beaches Program
- Waterbody Monitoring



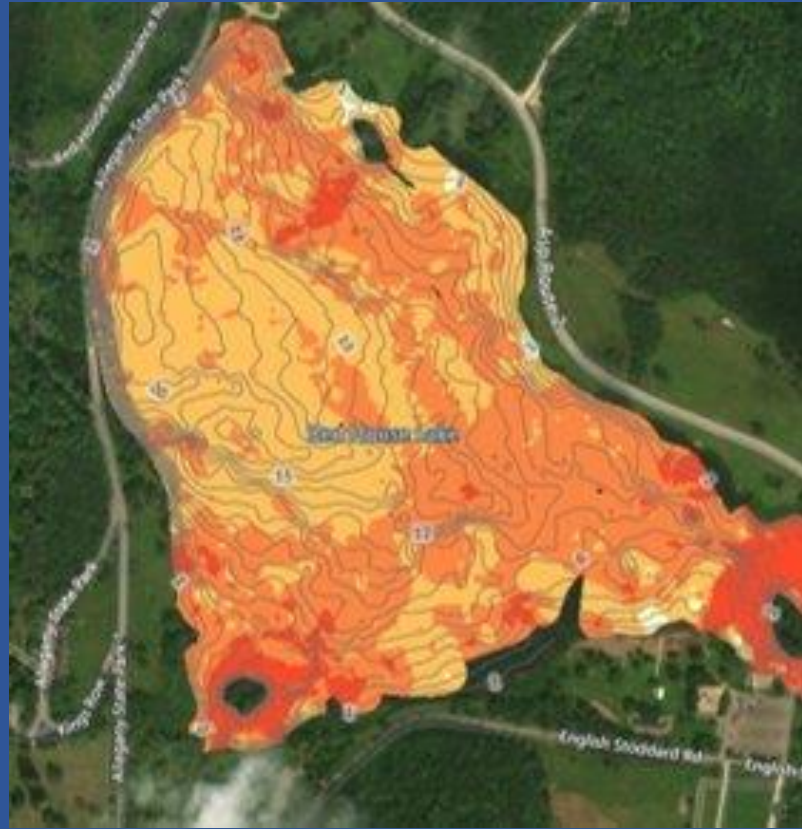
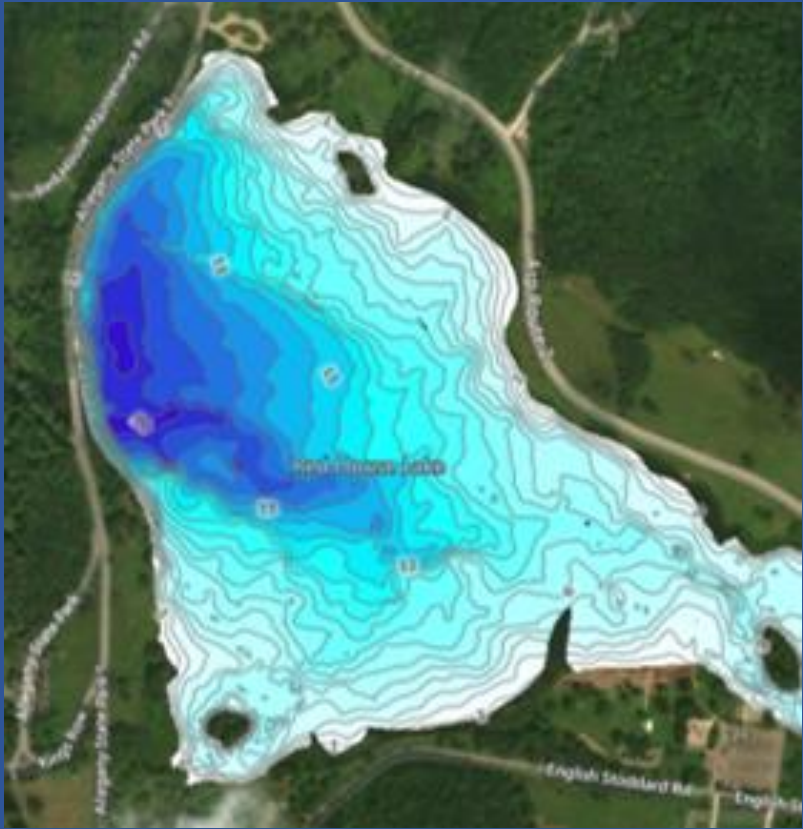




# Waterbody Monitoring Program

- Aquatic Plant Surveying and Management
- Field Parameters
  - temperature, secchi depth, dissolved oxygen, chlorophyll, pH, conductivity
- Lab Parameters
  - Phosphorus, Nitrogen, phytoplankton ID, alkalinity





# BioBase





# Projects and Partnership

- Hydrilla monitoring at Caleb Smith State Park
- Water chestnut management at Lake Taghkanic State Park
- Floating wetland installation at Moreau Lake State Park

# Task Forces/Working Groups

- NYS Hydrilla Task Force
- Cayuga Lake Hydrilla Task Force
- Watercraft Inspection Steward Program working group
- Water Chestnut working groups
  - Mohawk/Hudson Rivers
  - Statewide action sites
- Long Island/NYC Metro Area AIS Task Force
  - 2019 to Present
- Hudson River Estuary AIS Task Force
  - Kickoff Meeting November 12, 2021





# Watercraft Inspection Steward Program (WISP)

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Twenty organizations with more than 250 stewards covering 238 locations:

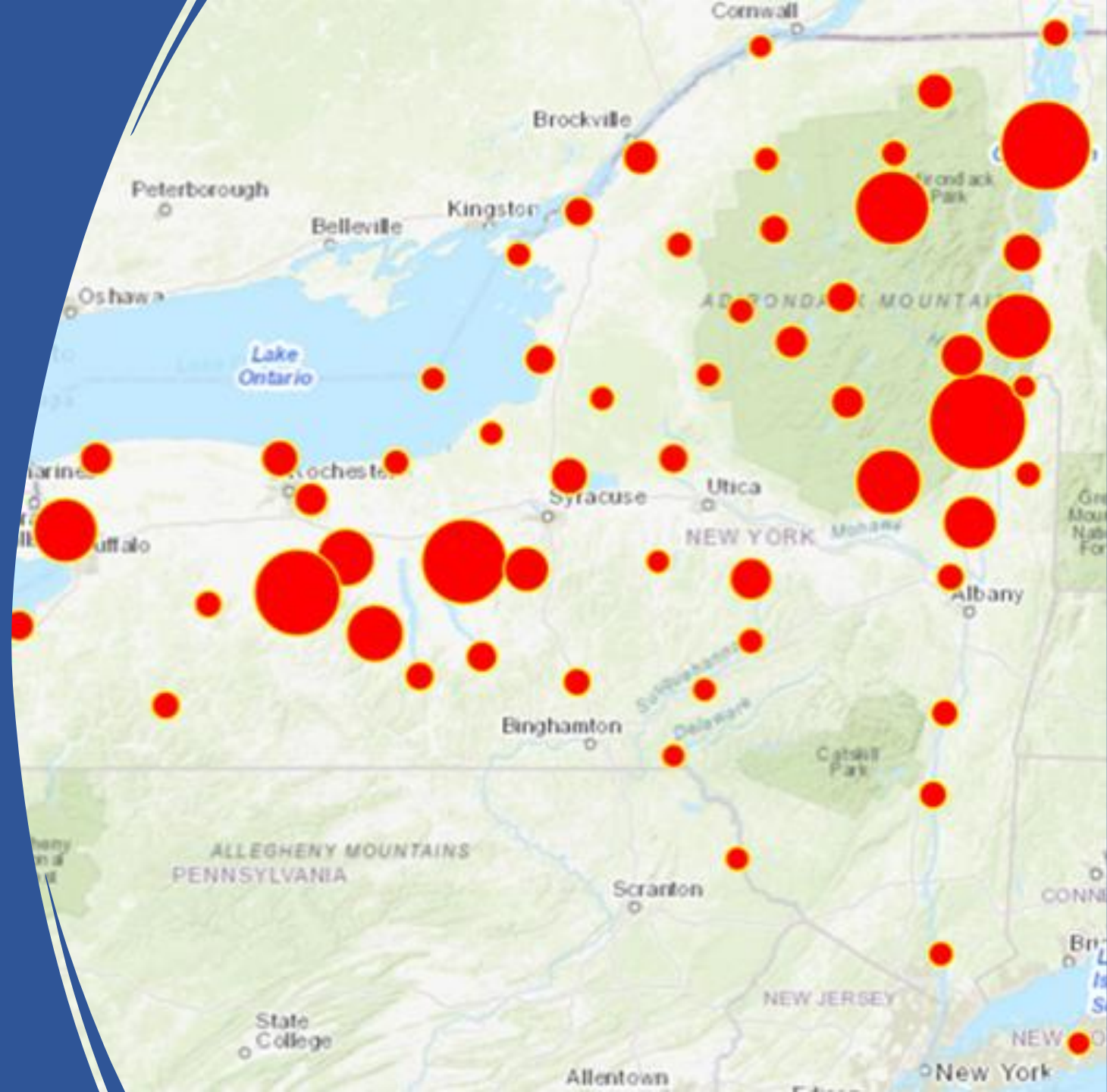
- Parks
- PRISMs
- Lake Champlain Basin Program
- Lake George Park Commission
- Paul Smiths (Adirondack Watershed Institute)
- Onondaga Environmental Institute





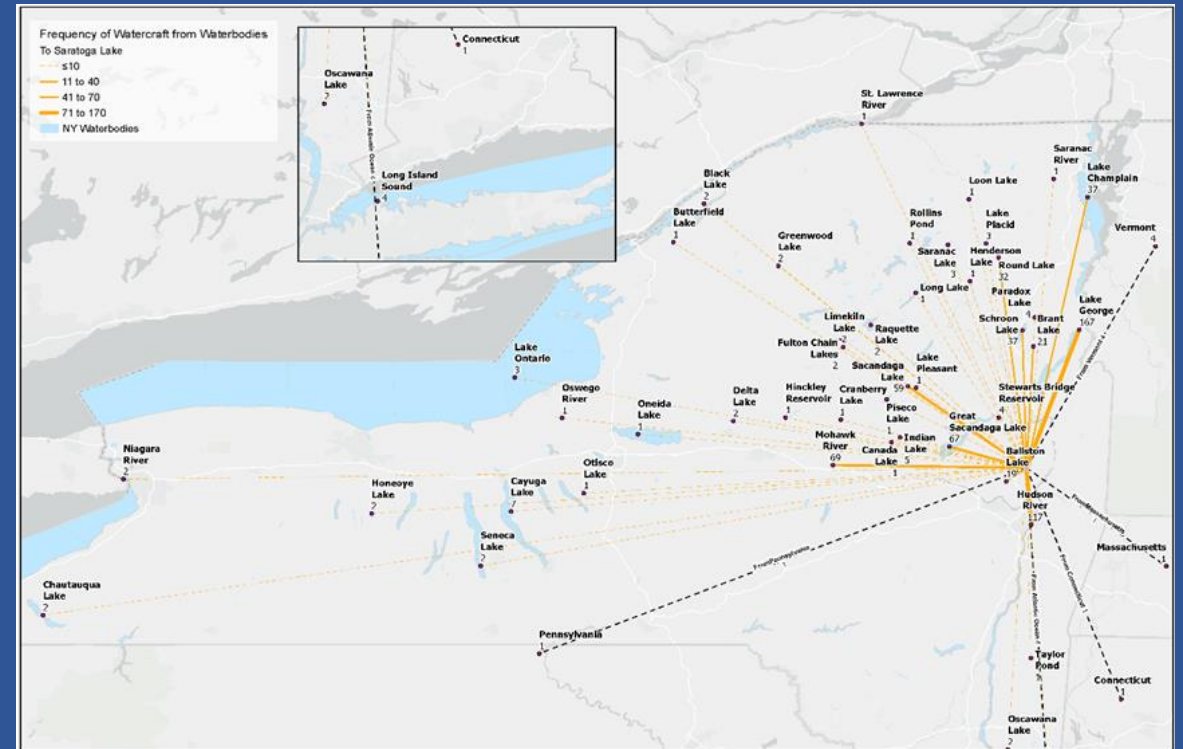
# 2021 WISP Season

- Total number of survey records: 241,477
- Total number of watercraft: 271,679
- Motorized watercraft: 207,441 (76.4% of total watercraft)
- Non-motorized watercraft: 64,238 (23.6% of total watercraft)
- Average watercraft per survey: 1.13
- Number of reported invasive species detections: 14,395



# WISP application data

- Tracks progress toward behavior change goals
- Follows boater movement and allows us to assess risk
- Provides guidance for additional survey work
- Allows us to choose sites that will reach the greatest number of recreationists





# Future Plans

## DEC

- Statewide: Bureau of Invasive Species and Division of Law Enforcement Collaboration
- Northeast/Great Lakes/Mid-Atlantic Law Enforcement AIS Task Force

## Parks

- Expand partnership network and welcome research in parks- universities, community science groups



# Thank you!



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