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NYS DEC Updates

Hydrilla Management in Cayuga Lake: Updates & Panel

December 12th, 2024
Cayuga Lake Nature Center
1420 Taughannock Blvd, Ithaca

- Field Season Summary
- NYS Hydrilla Management Methods
- NYS Hydrilla Management Projects- 2024
  - Cayuga Lake Treatments
  - Hydrilla Detections

Region 7 AIS Strike Team 2024 Summary

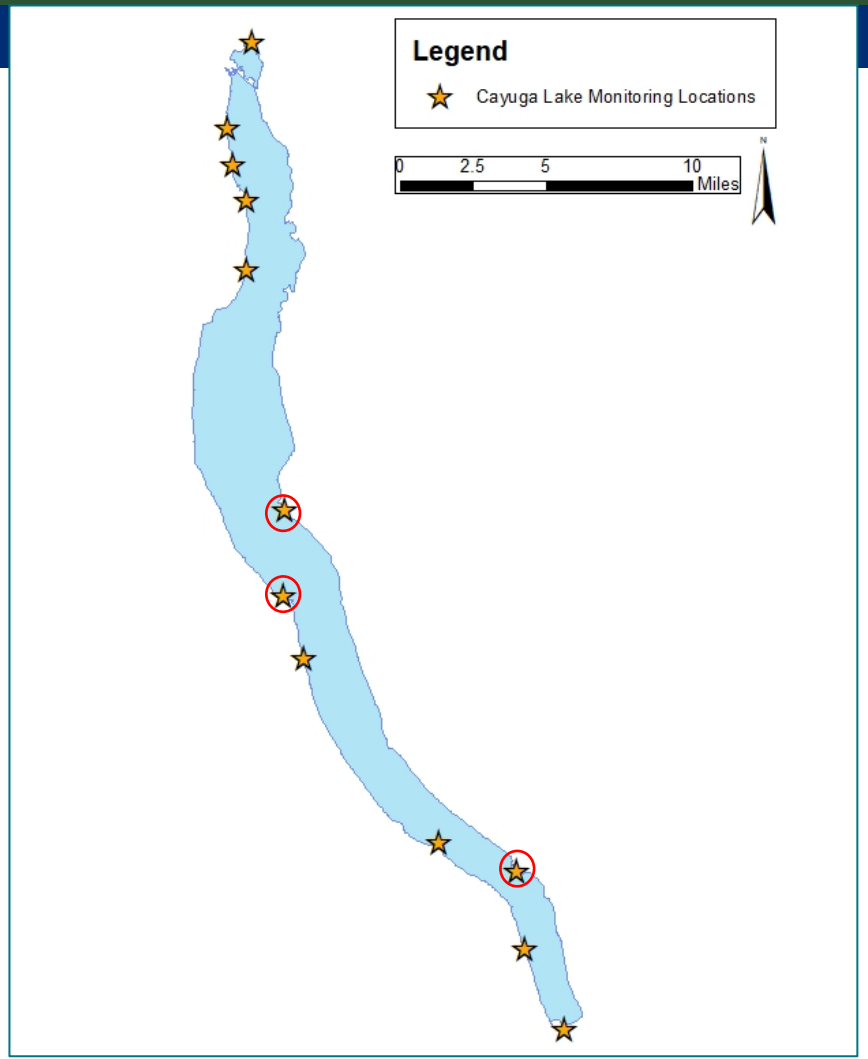
Region 7 AIS Strike Team 2024 Summary

- ~**6230** monitoring Points on Cayuga Lake
  - At least 2 rake tosses per point
- Monitored over **1070** acres of Cayuga Lake
  - ~ 980 acres were monitored twice
  - First round of monitoring occurred Late May – July
  - Second round of monitoring occurred August – October

Monitoring Locations

North to South (on map)

1. Mud Lock lake
2. Cayuga Lake State Park
3. Wolffys
4. Canoga Island
5. Red Jacket Yacht Club
6. Long Point State Park/ Aurora
7. Sheldrake Point
8. O'Malley's Cabin
9. Taughannock Sate Park
10. Lansing Harbor/ Myers Park/ Ladoga Bay
11. Ithaca Yacht Club
12. Treman Marine Park



How Do We Monitor?

- **Point Intercept Survey (PIS) for Submerged Aquatic Vegetation (SAV)**
- A grid is used to determine points
  - 50m Grid for early detection sites
  - 25m Grid for known hydrilla locations
- At least two rake tosses are performed at each point on either side of the vessel, with total vegetation density and individual species density collected.
- Density is recorded using the following scale:
  - Zero (0)
  - Trace (1)
  - Sparse (2)
  - Moderate (3)
  - Dense (4)
- **SONAR/ BioBase**

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Trace (1)

Sparse (2)

Moderate (3)

Dense (4)

Photo: Lindsay Yoder, R9 AIS Coordinator

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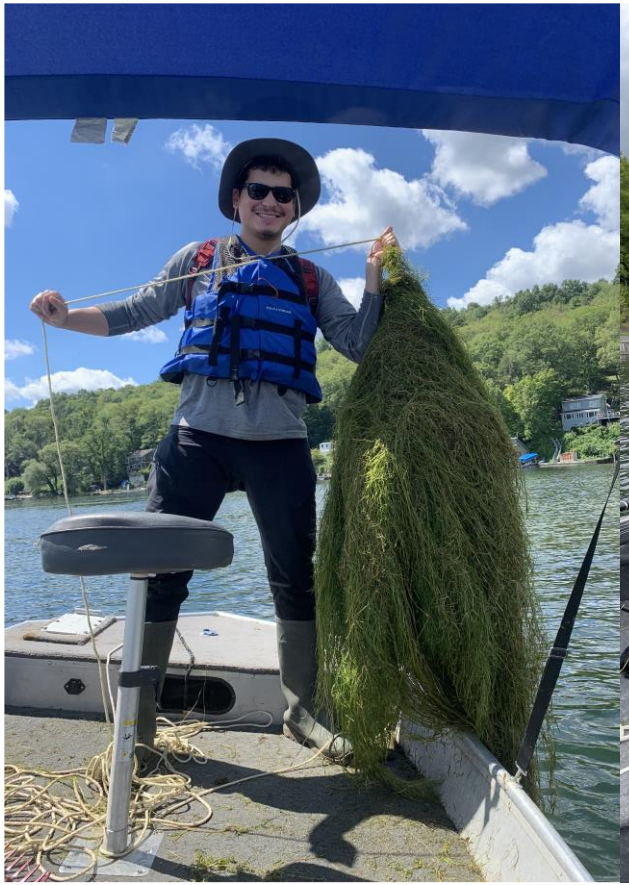
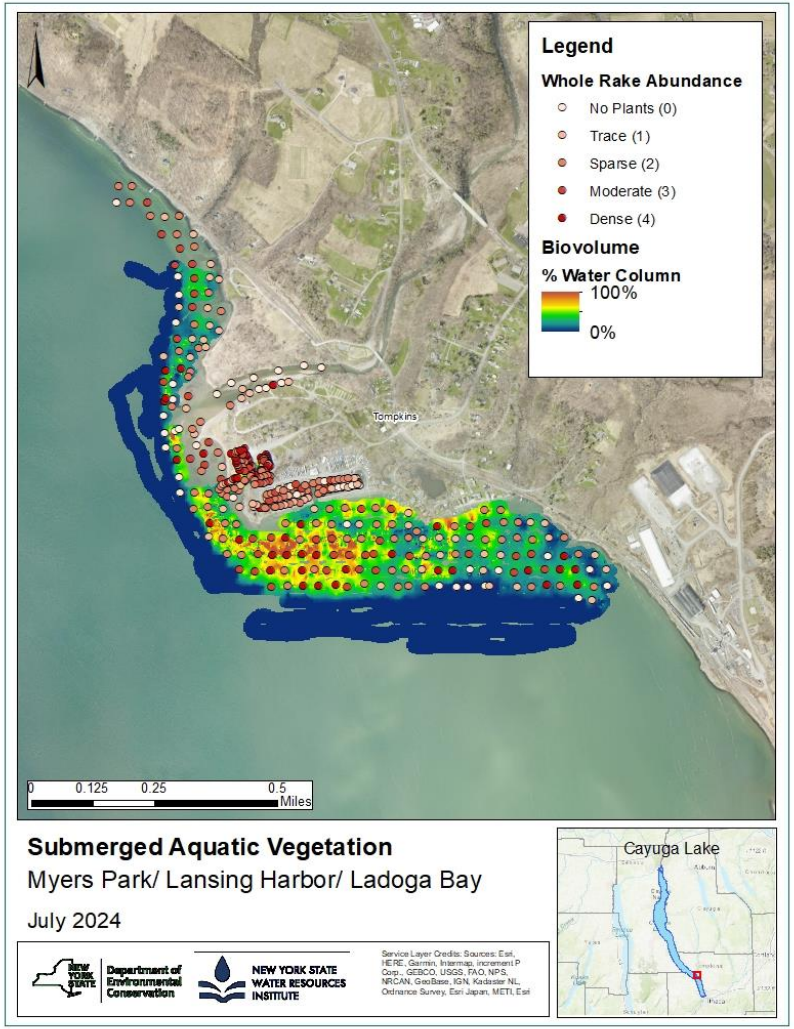


Photos: Michael Robinson, Emily Timkey

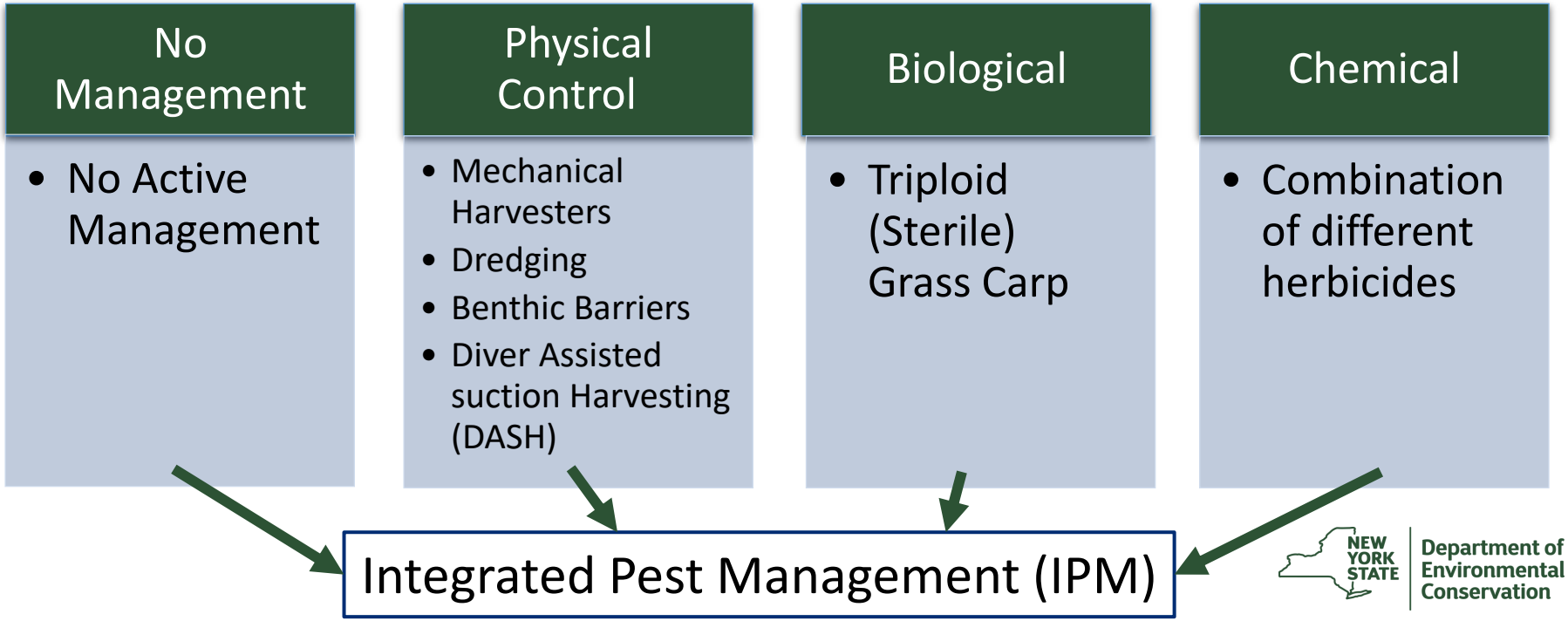
BioBase/ SONAR

- Record depth, Biovolume, Bottom Hardness
- Biovolume
  - The percent of the water column that contains vegetation
    - Ex.
      - Water depth is 10ft.
      - A submerged plant is 7 ft tall.
      - Biovolume would read as 0.70 or 70%
      - On map red = lots of plants. Blue = no plants



Hydrilla Management Methods

Management Options



No Management

- Existing populations will continue to grow and spread to new locations
- Surrounding waterbodies will be at risk of hydrilla spread

Mechanical Harvesting of Water Chestnut on the Seneca River

Physical Control

- Mechanical Harvesters
  - Hydrilla spreads by fragmentation.
- Benthic Barriers
- Diver Assisted suction Harvesting (DASH)/ hand pulling

Physical Control cont.

- Dredging
  - Can be very successful if done correctly

Biological

- Triploid Grass carp
- Control aquatic vegetation in small ponds or lakes where fish can be retained within the waterbody
  - No other biological control agents are currently available for hydrilla

Chemical

- Effective at low doses
- Selective
- Ideal for large scale infestations
- Permits are required
  - Article 15 (Aquatic Pesticide)
    - SEQR
    - SPDES/ NOI
  - Article 24 (wetlands)

Pictured: Application of Granular Herbicide to control Hydrilla at Spencer Pond (Owego NY)

NYS DEC Hydrilla Management

2024

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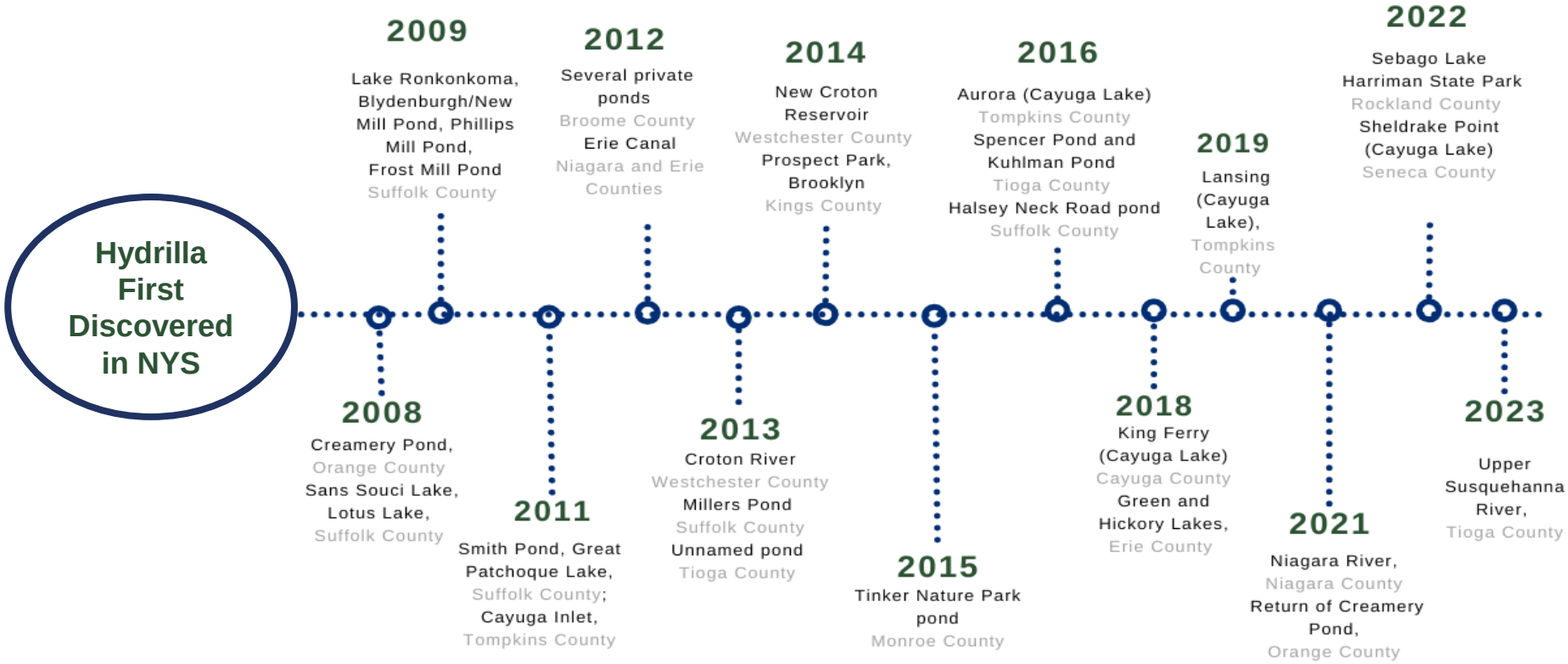
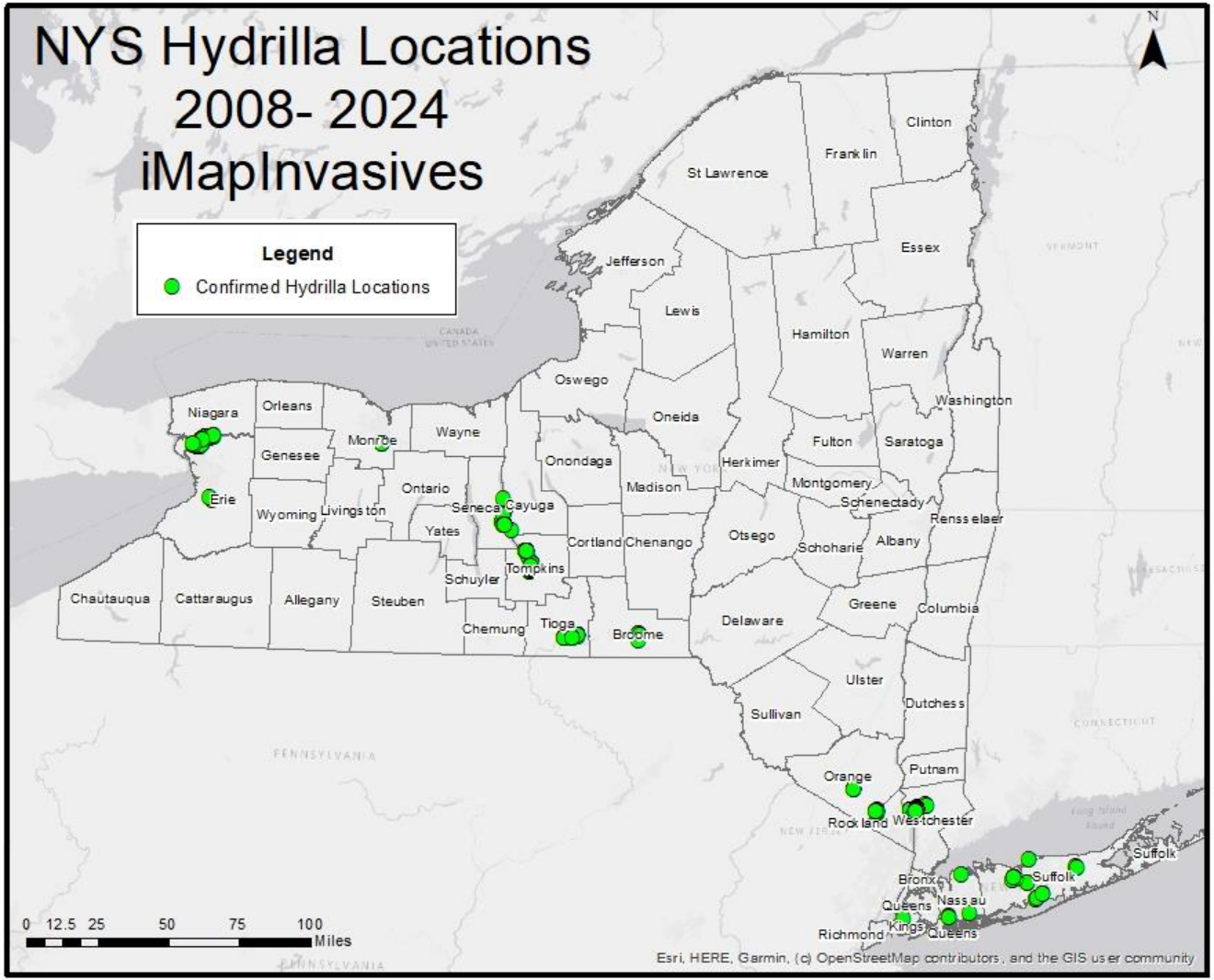
Hydrilla in NYS





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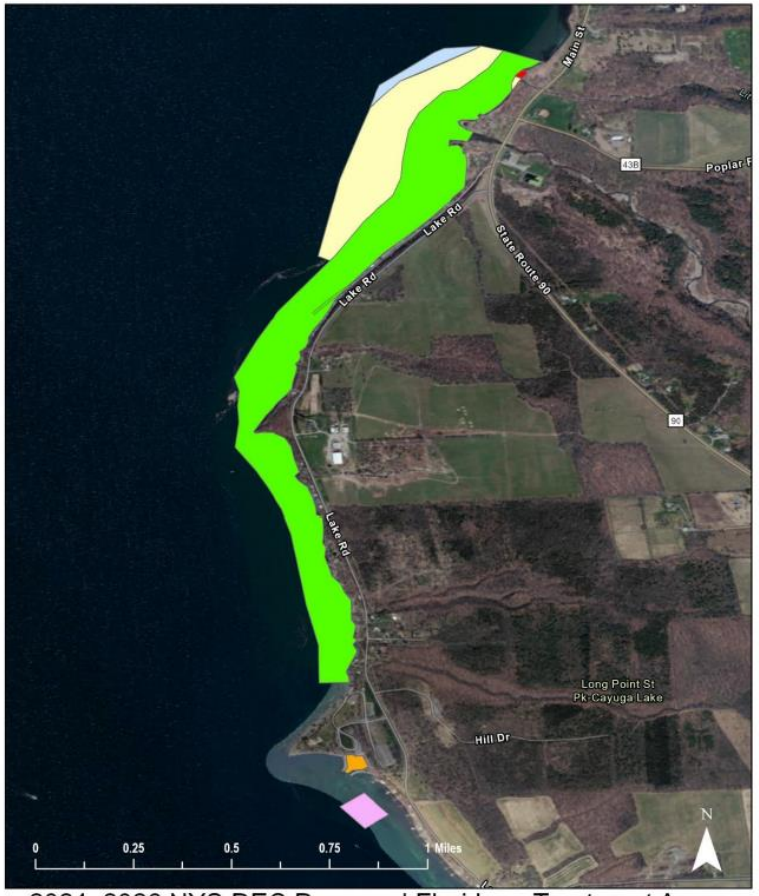
South Aurora

- 127.5 Surface Acres
- Management Method: Chemical
  - **Sonar H4C**
- Treatment performed by Contractor
- Began treatments on 7/9/24
  - Application once a week
  - Last application 9/10/24
- Water samples collected after treatment



2024–2026 NYS DEC Proposed Fluridone Treatment Areas
Cayuga Lake, Aurora, NY

- Little Creek (0.2 acre)
- Southern Shallow 2 (2.7 acres)
- Long Point Boat Launch (0.9 acres)
- South Deep Add Treatment Area (3.3 acres)
- South Deep Treatment Area (31.4 acres)
- Southern Shallow 1 (89.0 acres)

Treatment Week	Concentration (ppb)	Pounds per Southern Treatment Shallow Area 1 (89 acres, 6.4 ft avg. depth)	Pounds per treatment Southern Treatment Shallow Area 2 (2.7 acres, 9.5 ft avg. depth)	Pounds per Little Creek Wetland Area (0.20 acre, 1.0 ft deep)	Pounds per Southern Treatment Deep Area (31.4 acres, 7.5 ft deep)	Pounds per Southern Deep Additional Area (3.3 acres, 9.1 ft)	Pounds per Long Point Boat Launch (0.9 acres, 3.51 ft)	Totals
1	20	1139.2	51.3	0.40	471	60.6	6.32	
2	20	1139.2	51.3	0.40	471	60.6	6.32	
3	13.5	768.96	34.63	0.27	317.93	40.54	4.26	
4	13.5	768.96	34.63	0.27	317.93	40.54	4.26	
5	13.5	-768.96	34.63	0.27	317.93	40.54	4.26	
6	13.5	768.96	34.63	0.27	317.93	40.54	4.26	
7	13.5	768.96	34.63	0.27	317.93	40.54	4.26	
8	13.5	768.96	34.63	0.27	317.93	40.54	4.26	
9	13.5	768.96	34.63	0.27	317.93	40.54	4.26	
10	13.5	768.96	34.63	0.27	317.93	40.54	4.26	
Subtotals	148	8,430.08	379.6	2.96	3485.40	444.44	46.75	12789.23 lbs
Acres		89	2.7	0.2	31.4	3.3	0.9	127.5 ac.
Average Depth (ft)		6.4	9.5	1	7.5	9.1	3.51	
Acre-Feet		569.6	25.65	0.2	235.5	30.03	3.16	864.14

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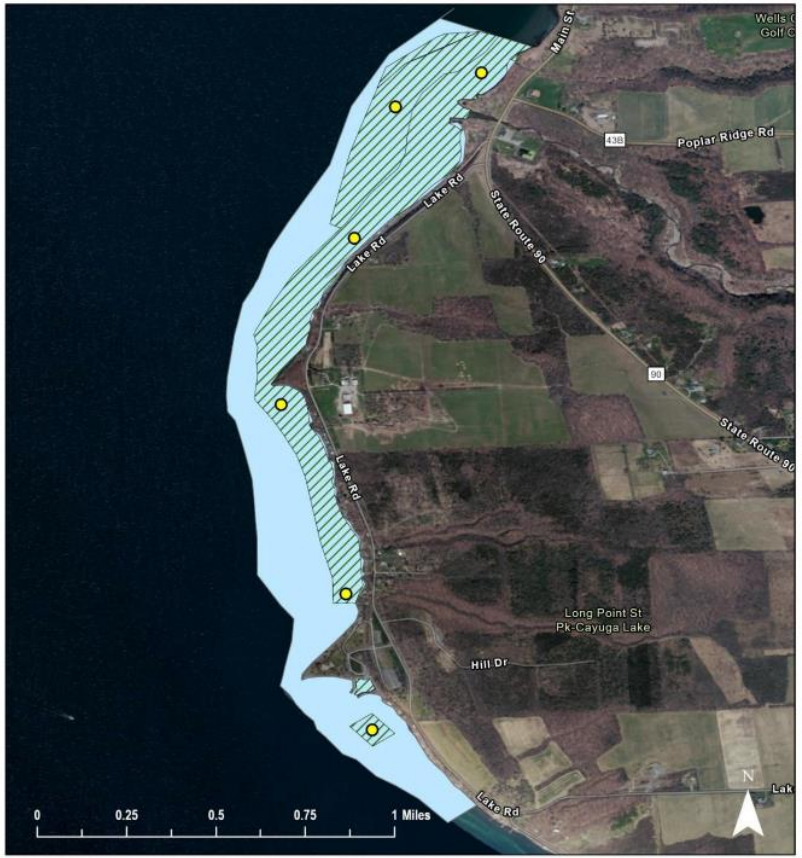
Sample Locations

- Additional samples 0.5 miles north and south of management area.



Sheldrake/ Weyers Point

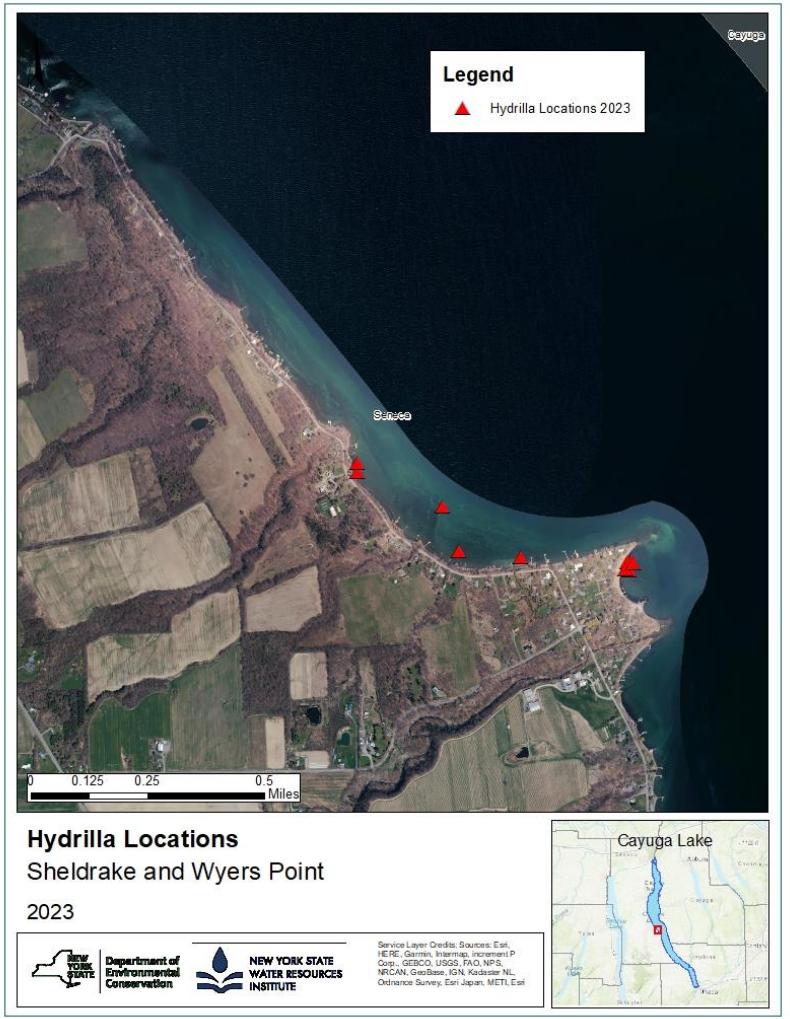
- 2024 Treatment was based on 2023 Hydrilla detections

Pre-Treatment Surveys

- June – July
- August

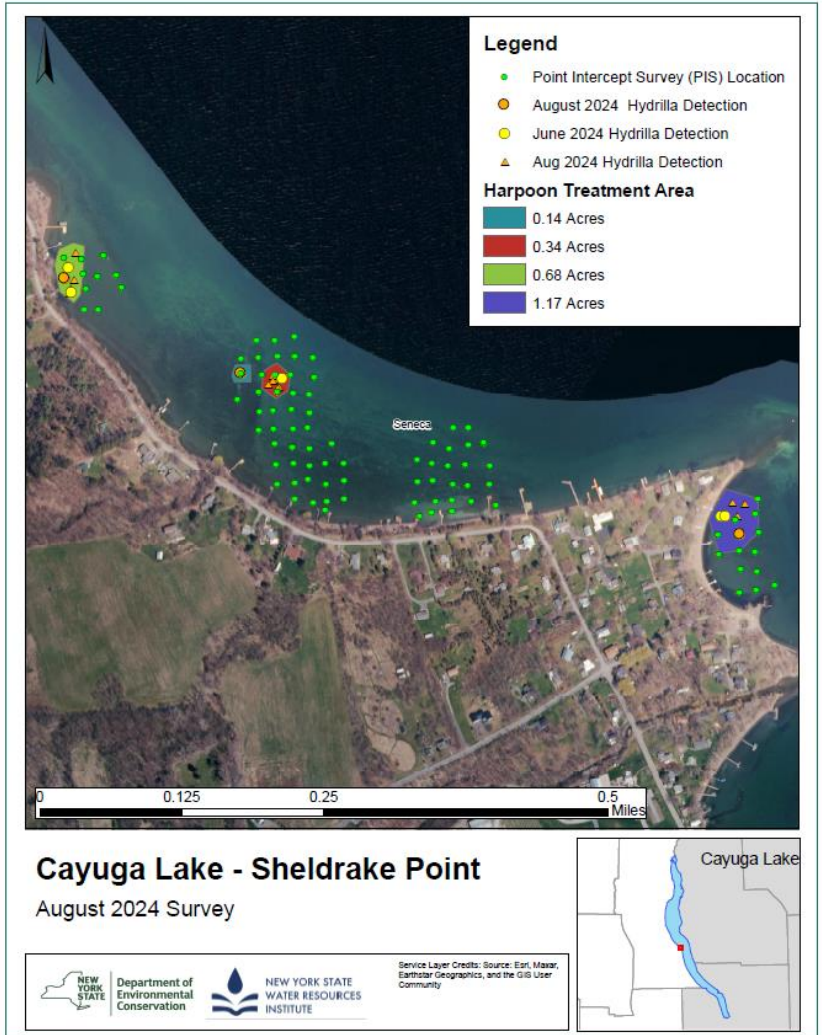
Post treatment

- September – October



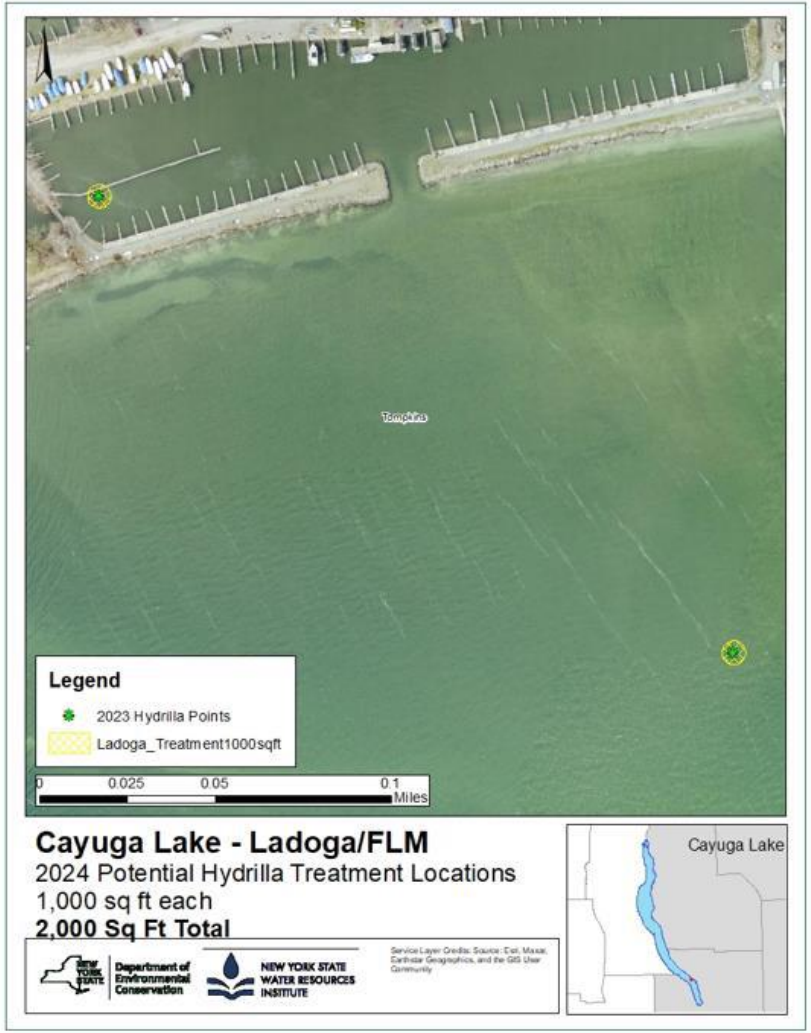
Sheldrake/ Weyers Point

- Management Method: Chemical
  - **Harpoon Granular**
- Date: August 21st
- **2.33 Acres**
- **186.4 lbs used**



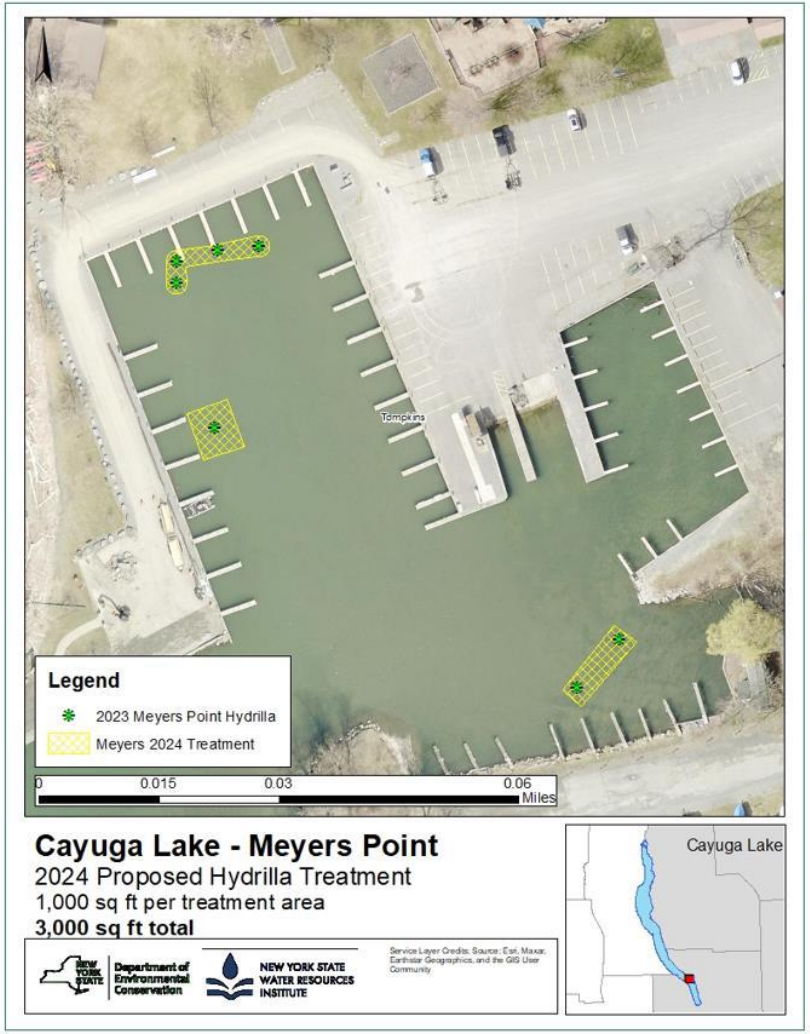
Finger Lakes Marine Service/ Ladoga

- Management Method: Chemical
  - **Harpoon Granular**
- Date: August 21st
- **2000 sq ft** total
  - 2 x 1000 sq ft per patch
  - **3.52 lbs**



Meyers Park Marina

- Management Method: Chemical
  - **Harpoon Granular**
- Date: August 21st
- **3,000 sq ft total**
  - 3 x 1,000 sq ft per patch
  - **5.28 lbs**



Other Current NYS Hydrilla Control

Chemical

- Erie Canal
  - (Erie and Niagara County)
- Niagara River
  - (Niagara County)
- New Croton Reservoir
  - (Westchester County)
- Spencer Pond/ LNC
  - (Tioga County)
- Croton on Hudson – Completed
  - (Westchester County)

Dredging

- Cayuga Lake – Dons Marina
  - Cayuga County

Biological Control

- Frost Mill Pond (private)
  - Nassau County

Combination (IPM)

- Monroe County
  - Benthic mats + grass carp
  - Now switching to only herbicide
- Orange County
  - Herbicide + grass carp
  - Now switching to only herbicide

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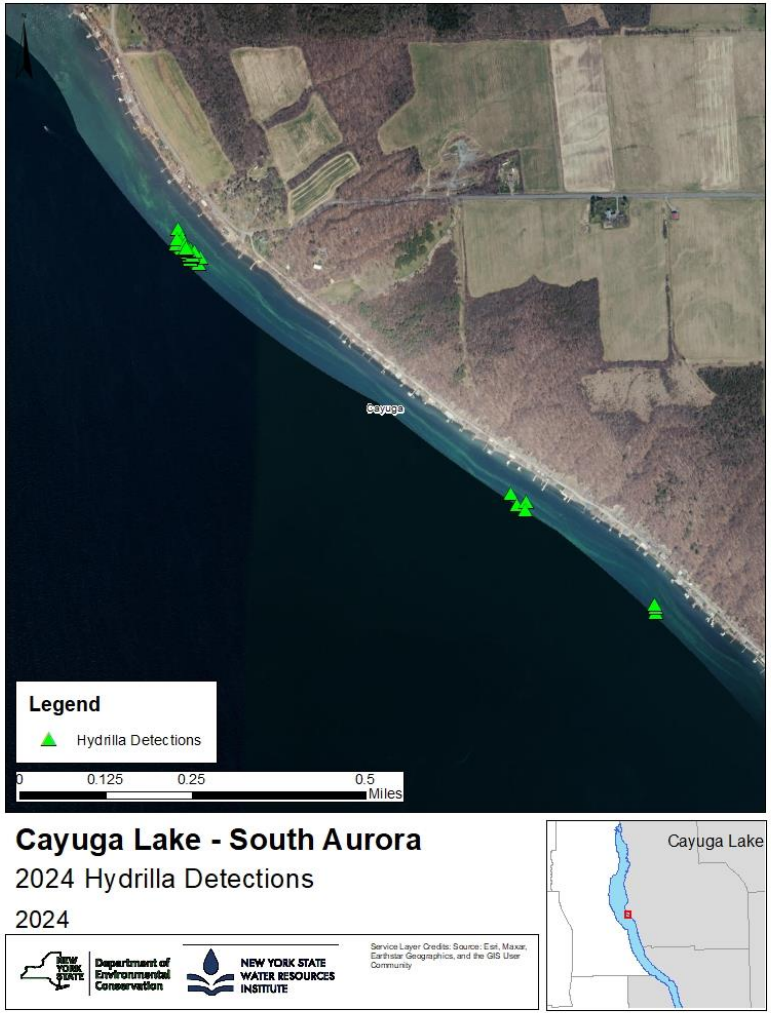
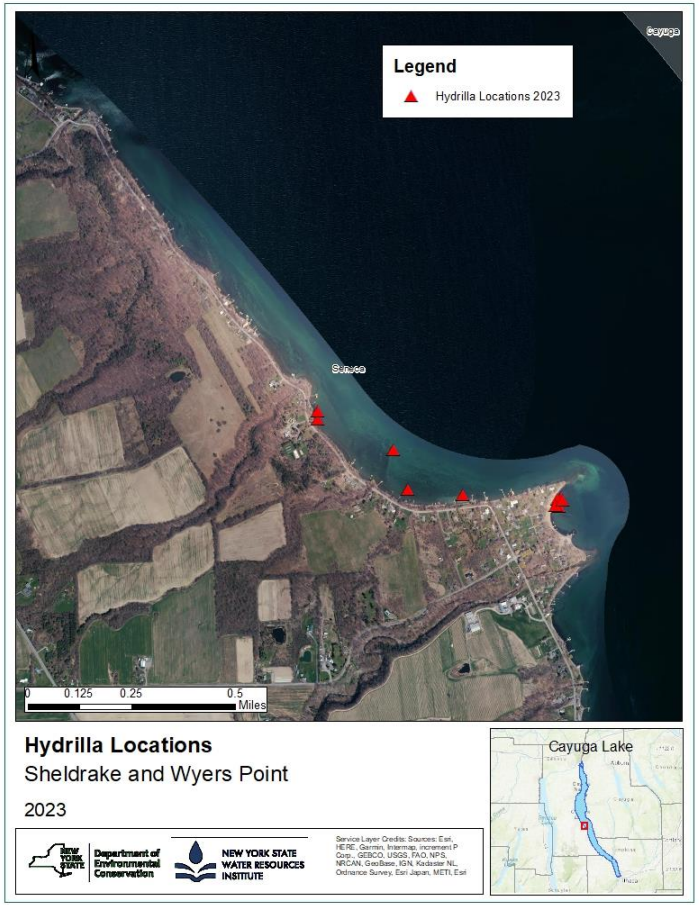
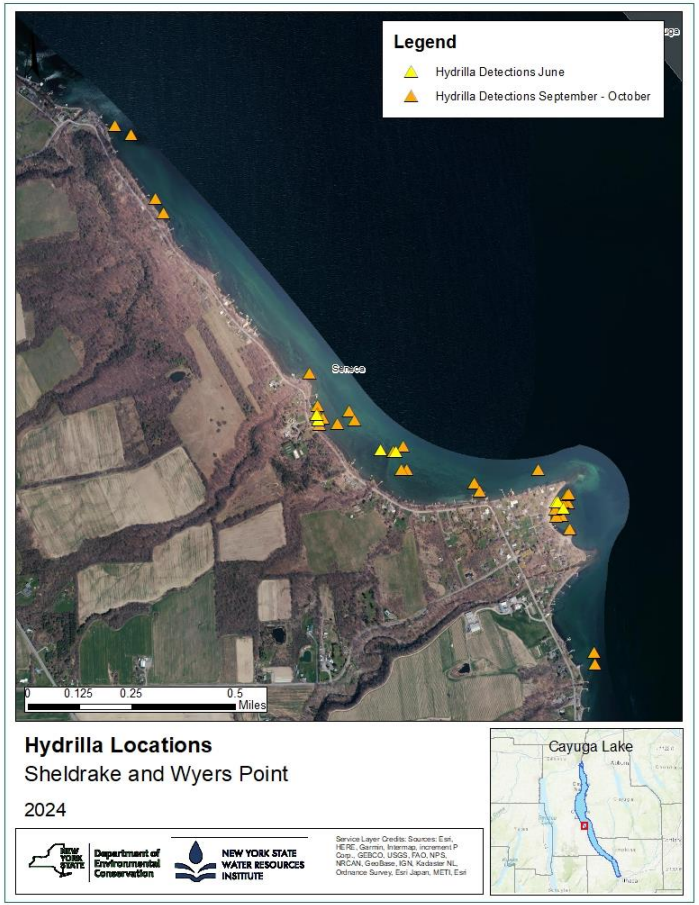
Post Treatment Monitoring

South Aurora / Long Point SP

- Monitored with USACE
- Hydrilla Population discovered south of Long Point State Park







Sheldrake

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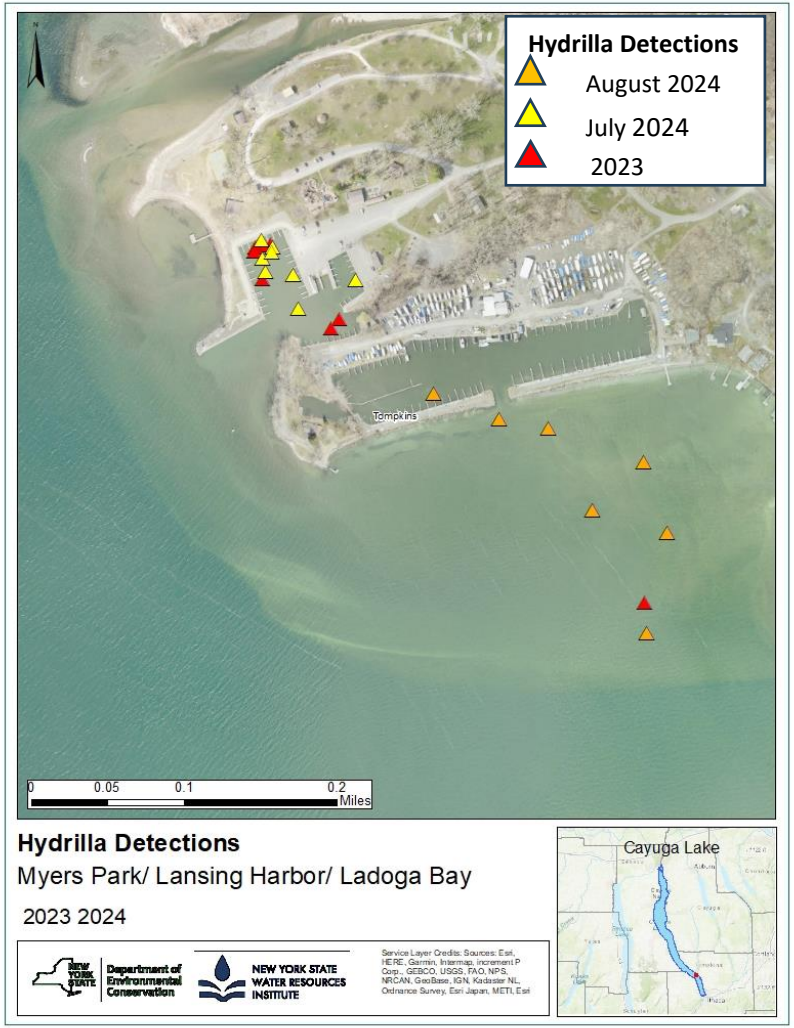

Lansing Harbor/ Myers Park/ Ladoga

- More Hydrilla discovered in Ladoga Bay in Late August

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Thank You

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(She/her)
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Bureau of Invasive Species and Ecosystem Health
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