



**Department of
Environmental
Conservation**

Cayuga Lake Hydrilla: 2023 Treatment and Survey Plans



Michael Robinson

AIS Coordinator, Region 7

NYS Department of Environmental Conservation

In coordination with the NYS Water Resources Institute at Cornell University

2022: DEC Joins the Field Effort

- DEC adds new capacity at Cayuga
 - Regional AIS Coordinator
 - 4-person strike team
 - Point-intercept surveys
 - Tuber and snorkel surveys
- DEC contractors
 - SOLitude Lake Management
 - Treatment and water samples
 - Northeast Aquatic Research, LLC
 - Point-intercept and tuber surveys





2023: DEC Field Plan Overview

- DEC Treatment Areas
 - Southern Aurora (Long Point SP)
 - Sheldrake and Wyer's points
 - Water sampling
- DEC Survey and Monitoring efforts
 - Point-intercept surveys
 - Tuber bank monitoring
 - SCUBA/Snorkel and Drone surveys



2022: Southern Aurora/Long Point SP Monitoring Results

- Hydrilla found <1% of tosses
- Majority found within treatment areas
- New finds on North and South edges of treatment area
 - Long Point State Park launch
 - Northeastern edge



2022 DEC Hydrilla Locations Relative to Monitoring Area
Cayuga Lake, Aurora, NY

- DEC Monitoring Area 2022
- DEC Fluridone Treatment Areas 2022
- DEC Harpoon Copper Treatment Area (9/7/22)
- Hydrilla found through September
- Hydrilla found October or Later



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2022: Southern Aurora/Long Point SP Treatment and Water Sampling

- 10 week low-dose Sonar H4C treatment (late June–early Sept)
 - 2 applications @ 20 ppb
 - 8 applications @ 13.75 ppb
- Spot treatment with Harpoon
 - 3.3 acre-feet treated
- Water Sampling following treatment (within 24–48 hrs)



2022 DEC Hydrilla Treatment and Monitoring Areas
Cayuga Lake, Aurora, NY

- DEC Monitoring Area 2022
- DEC Fluridone Treatment Areas 2022
- DEC Harpoon Copper Treatment Area (9/7/22)
- SOLitude Water Sample Sites (Fluridone)
- SOLitude Water Sample Sites (Harpoon)

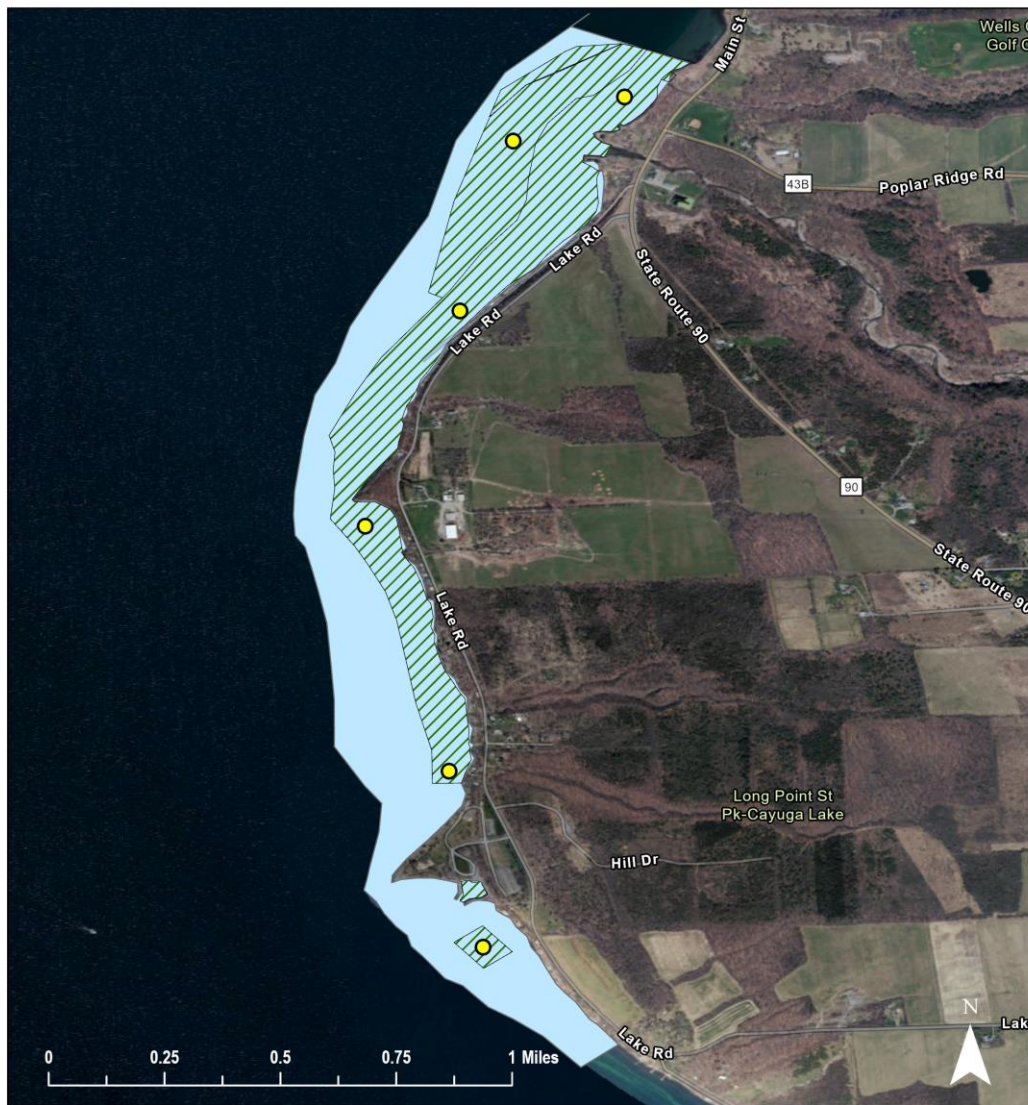


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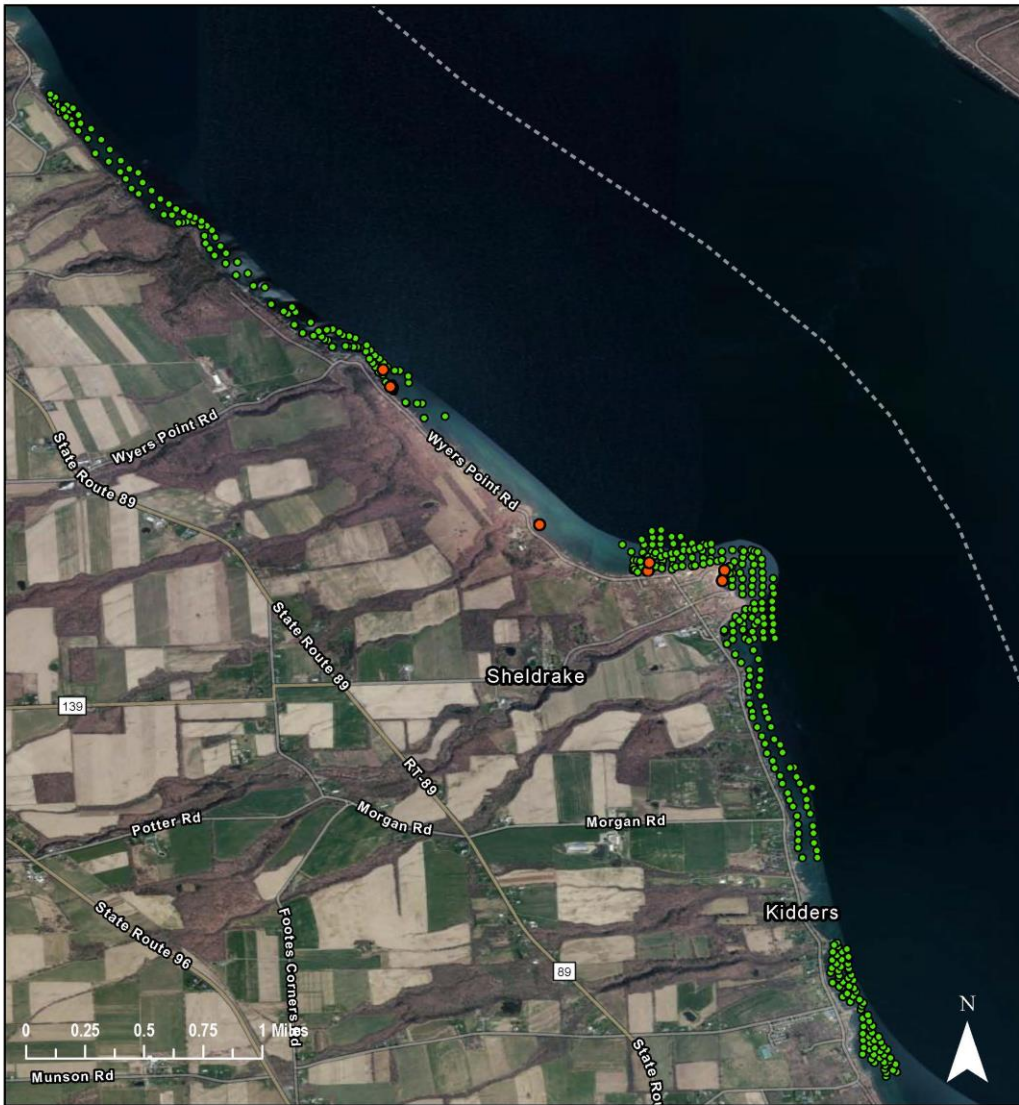


2023 NYS DEC Treatment and Monitoring Areas
Cayuga Lake, Aurora, NY

- DEC Water Sample Sites (Fluridone)
- ▨ DEC Fluridone Treatment Areas 2023
- DEC Monitoring Area 2023

2022: Sheldrake and Wyer's Points Monitoring Results

- Hydrilla discovered at Sheldrake in late October through SCUBA
- Confirmed by DEC and FLPRISM in early November
 - Additional points found using rake toss surveys
 - Delineation surveys conducted ~1 mile North and South

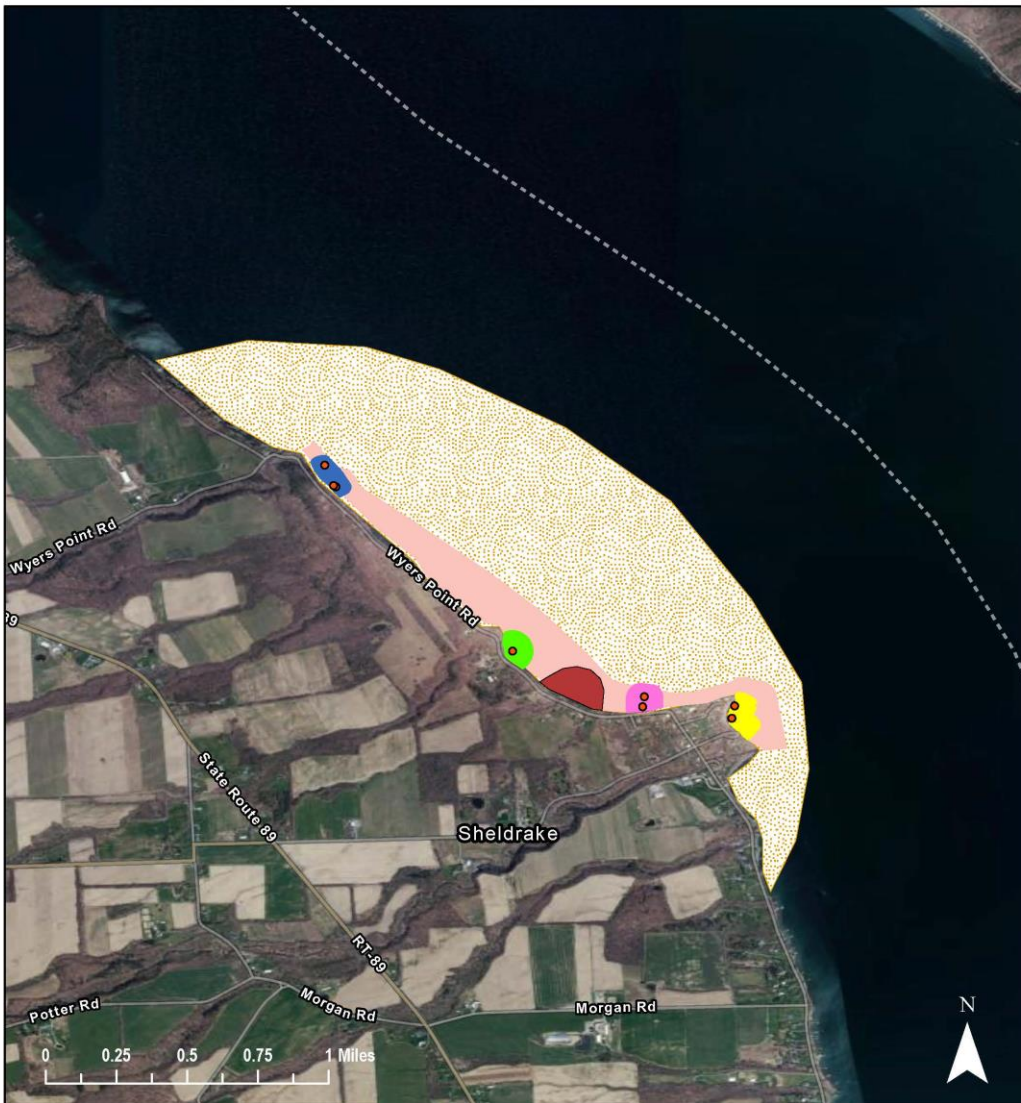


2022 NYS DEC Surveys and Results, Cayuga Lake, Sheldrake, NY (Seneca County, DEC Region 8)

- 2022 Hydrilla
- 2022 NYS DEC Rake Toss Survey

2023: Sheldrake and Wyer's Points DEC Treatment Plan

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 - 8 applications @ 13.75 ppb
- Spot treatment with Harpoon
- Water Sampling following treatment (within 24–48 hrs)

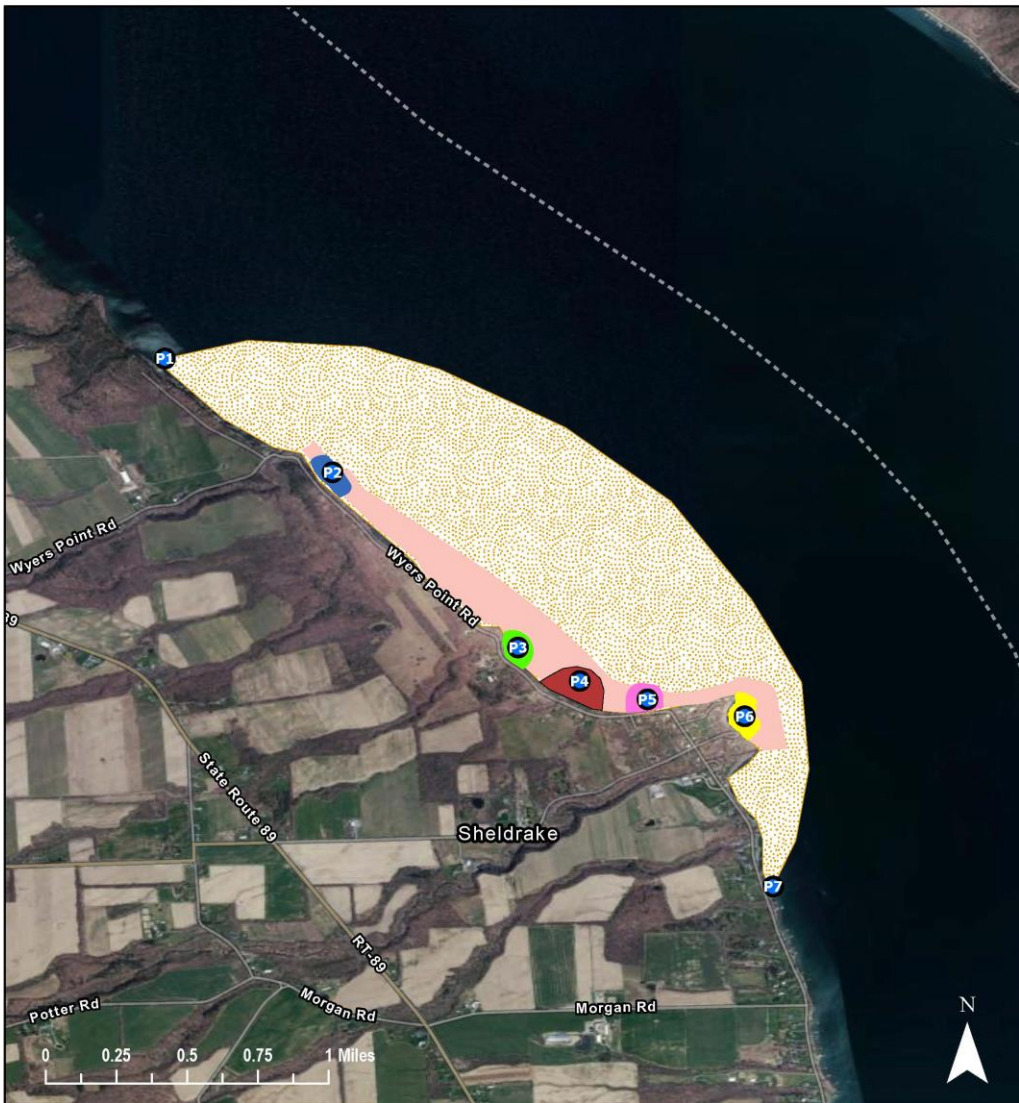


2023 NYS DEC Treatment Areas, Cayuga Lake, Sheldrake, NY
(Seneca County, DEC Region 8)



2023: Sheldrake and Wyer's Points DEC Water Sampling

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 - 8 applications @ 13.75 ppb
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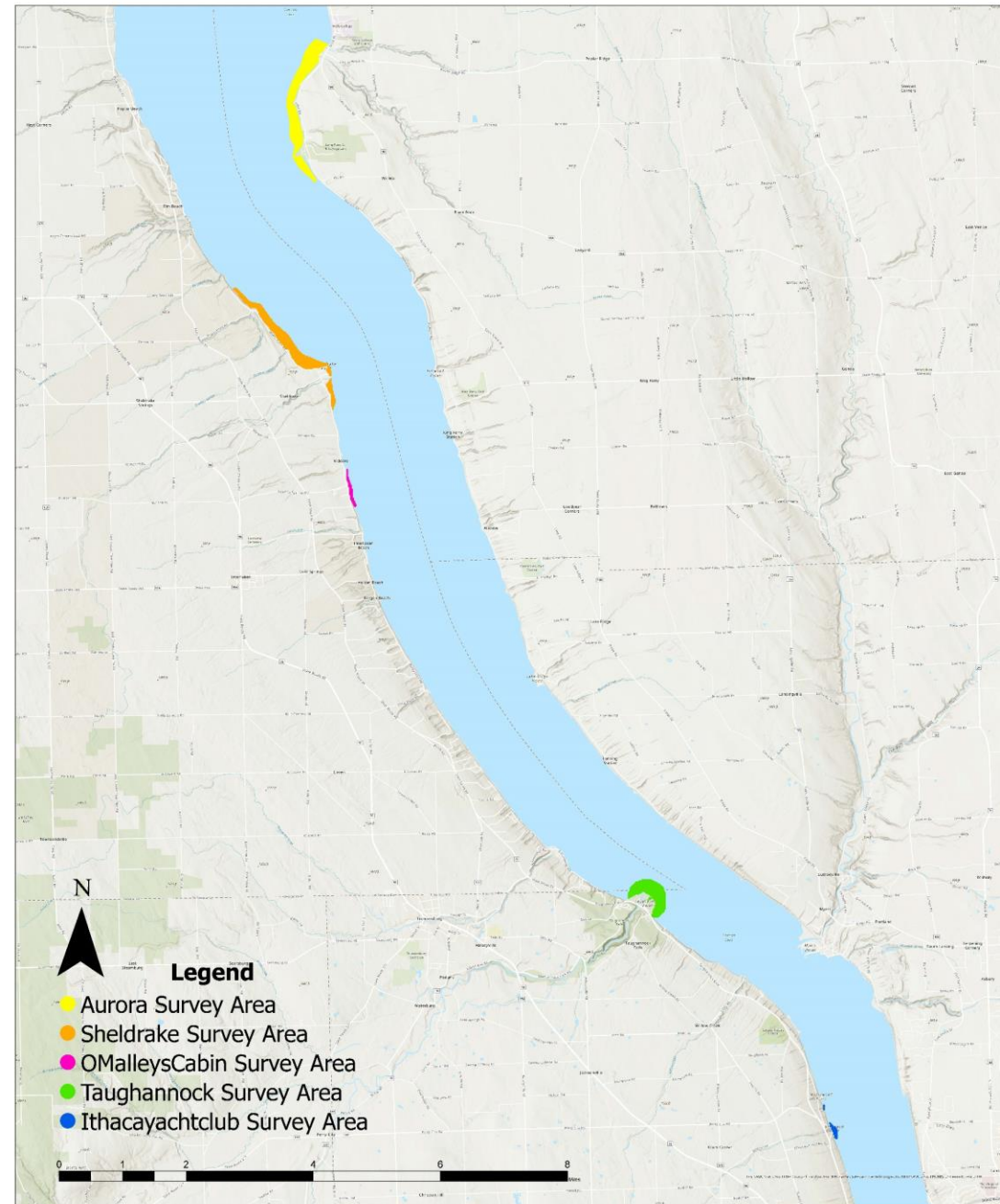
2023 NYS DEC Herbicide Sampling Locations, Cayuga Lake, Sheldrake, NY (Seneca County, DEC Region 8)



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2023: Additional DEC Survey Areas

- Identified launches and high-traffic areas (FLPRISM)
- Survey mid and late-season
- Pilot test underwater drone at same sites to supplement point-intercept surveys
 - Subset of full survey area at finer scale



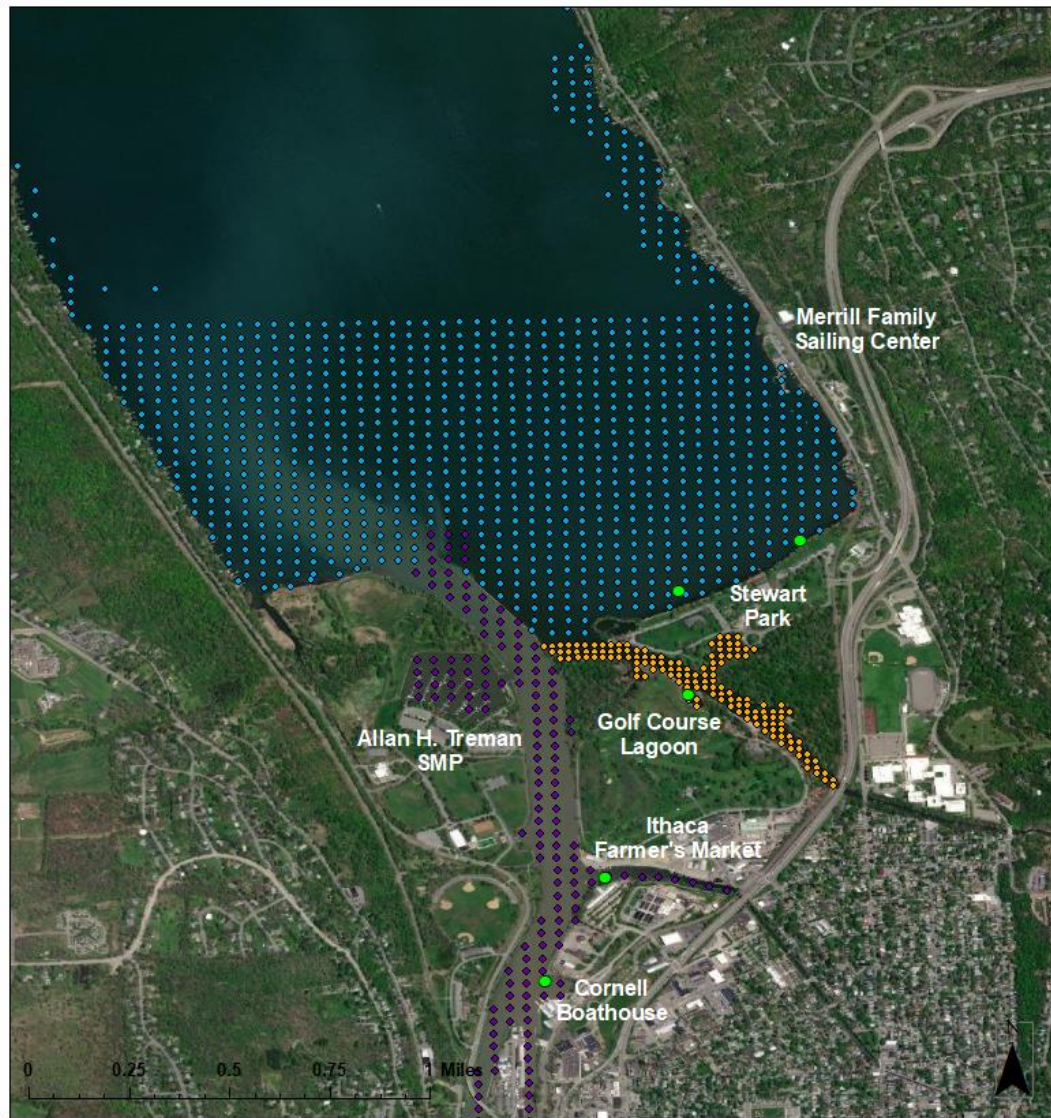
2023: South Cayuga Lake Monitoring

- South Cayuga Lake point-intercept survey
 - Assess plant health and herbicide efficacy
- Hydrilla tuber sampling
 - Select sites



2023: South Cayuga Lake Survey Efforts

- Continuation of work performed by Racine-Johnson Aquatic Ecologists
- South Lake Cayuga survey (October timeframe)
- Tuber sampling at 5 historic hydrilla locations (October timeframe)



2022 DEC Hydrilla Point Intercept Surveys
Cayuga Lake, Ithaca, NY

- ◆ Northeast Aquatic Research, LLC Survey Area
- ◆ Fall Creek Survey Area
- ◆ Cayuga Lake Inlet Survey Area
- Hydrilla Tuber Sampling Locations



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Aquatic Plant Surveys: SCUBA (2023)

- Expanding the search for hydrilla through additional sub-surface surveys
- Focus on northern section of lake due to flow and observed trends



2023 NYS DEC Planned SCUBA Areas
Cayuga Lake, NY

 2023 DEC SCUBA Areas

Aquatic Plant Surveys: ROV



2023:

- Test capabilities
- Survey Design
- Target smaller/focused areas (docks, launches, etc.)
- Standardize search time/area for quantitative data collection



Looking to the Future

- The Finger Lakes are a precious freshwater resource
- Hydrilla threatens ecosystems, recreational and economic values
- Prevention is the best method and takes a community effort



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