

# CAYUGA LAKE, AURORA AND ITHACA, NY HYDRILLA CONTROL DEMONSTRATION PROJECT

AQUATIC PLANT CONTROL RESEARCH  
PROGRAM, RIVERS AND HARBORS ACT OF  
1958 (P.L. 85-500), AS AMENDED

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Buffalo District

18 December 2023



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Photo: Ithaca CVB



# AGENDA



- Thank you to our many partners!
- Project goals
- Overview of herbicides used
- Overview of treatment and water monitoring
- Point intercept results
- Next steps
- Questions and comments



# GOAL: PROTECT WHAT'S IMPORTANT



1. Public safety – responsible use of a well understood herbicides
2. Protect and restore the Great Lakes/Finger Lakes and the associated ecological and economic benefits
3. Significantly reduce the risk of hydrilla spreading and potentially eradicate it in the project area



# SELECTED HERBICIDES AND USE RESTRICTIONS



Product	Irrigation – Row crops, turf, trees or plants	Irrigation – Newly seeded areas, including overseeded golf course greens	Irrigation – Nursery, Greenhouse, Hydroponics	Drinking, culinary or food processing purposes
<b>Harpoon (chelated copper)</b>	None	None	None	< 200 ppb
<b>Sonar H4C (fluridone pellet)</b>	7 days	Fastest required	< 1ppb	< 50 ppb*
<b>Sonar Genesis (fluridone liquid)</b>	7 days	Fastest required	< 1ppb	< 50 ppb*

\* Applications of these products will be below the listed thresholds.



# Aurora





# Treatment

## North Treatment Areas (95.9 acre)

Sonar H4C

2 applications @ 20 ppb

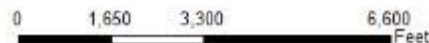
8 applications @ 13.75 ppb

Weekly on Wednesdays;

Jun 28 – Aug 30



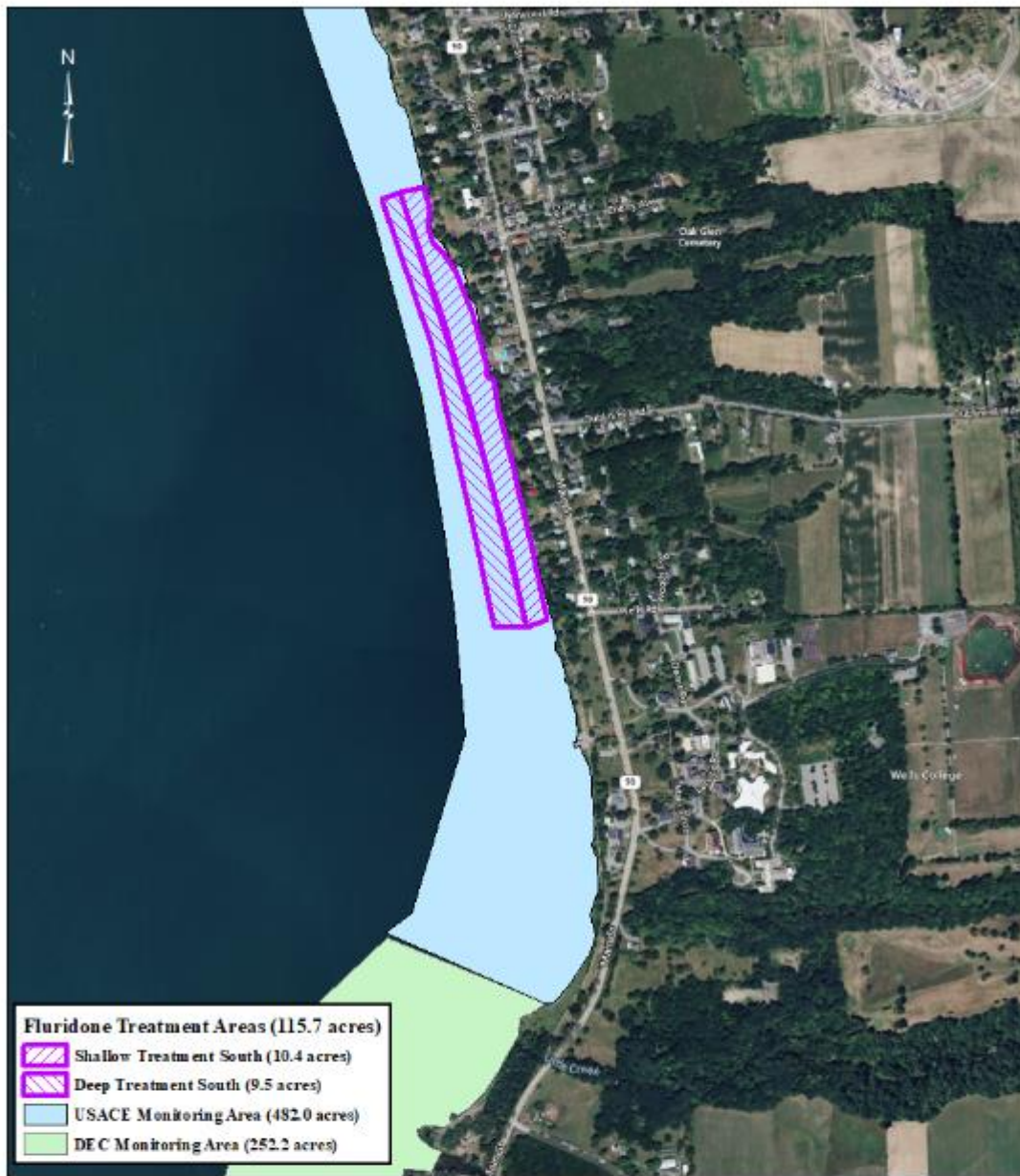
2023 Northern Treatment Areas  
Cayuga Lake at Aurora, NY



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# Treatment



## Shallow South Treatment Area (10.4 acres):

Sonar H4C

4 applications @ 20 ppb

4 applications @ 10 ppb

Weekly on Wednesdays;

Jun 28 – Aug 16

## Deep South Treatment Area (9.5 acres):

Sonar H4C

4 applications @ 10 ppb

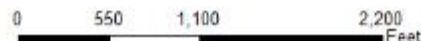
4 applications @ 8.75 ppb

Weekly on Wednesdays;

Jun 28 – Aug 16



2023 Southern Treatment Areas  
Cayuga Lake at Aurora, NY



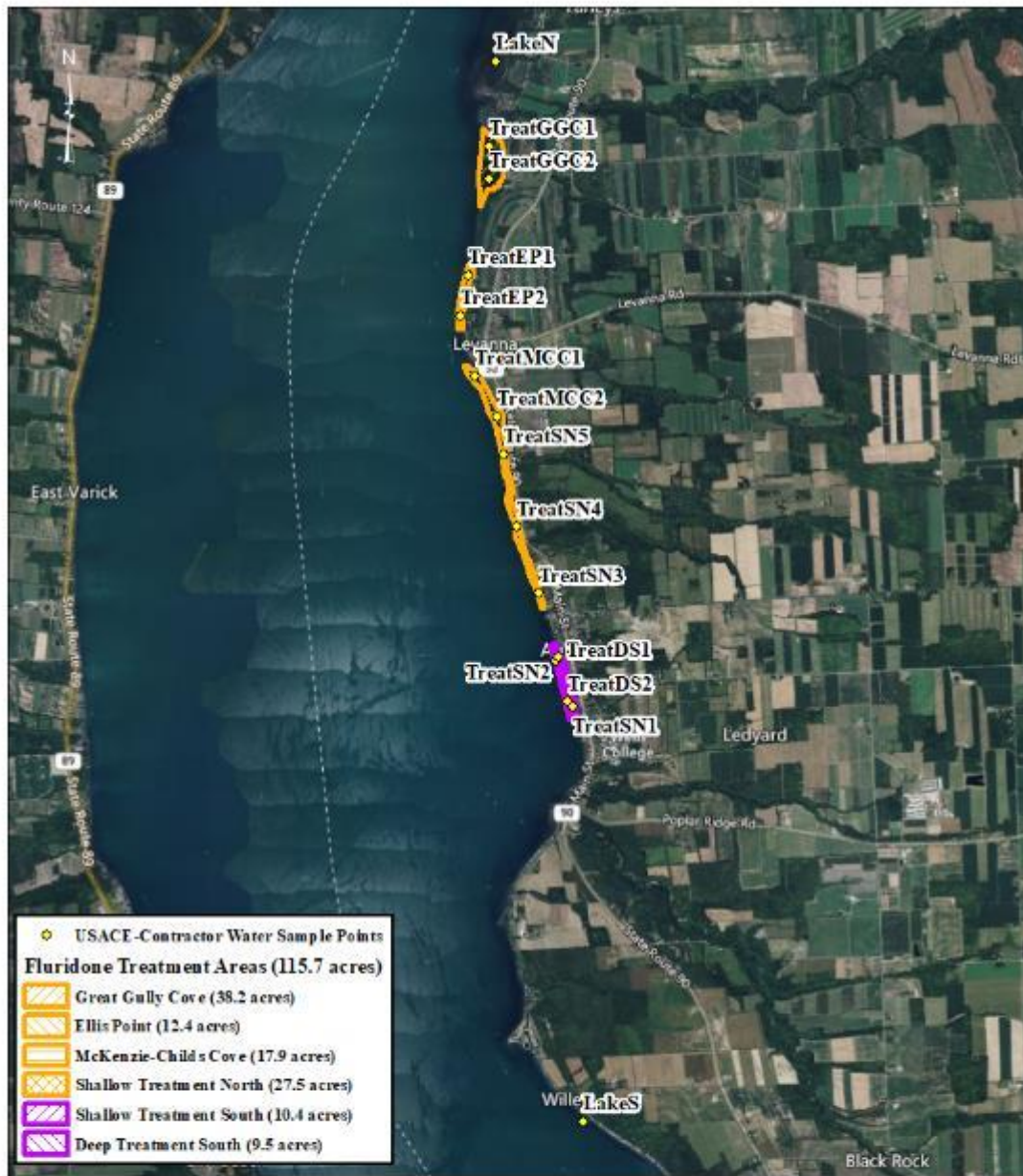
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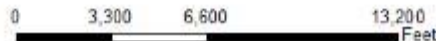
# Water Monitoring

Water samples were collected weekly during the treatment period, including finished drinking water

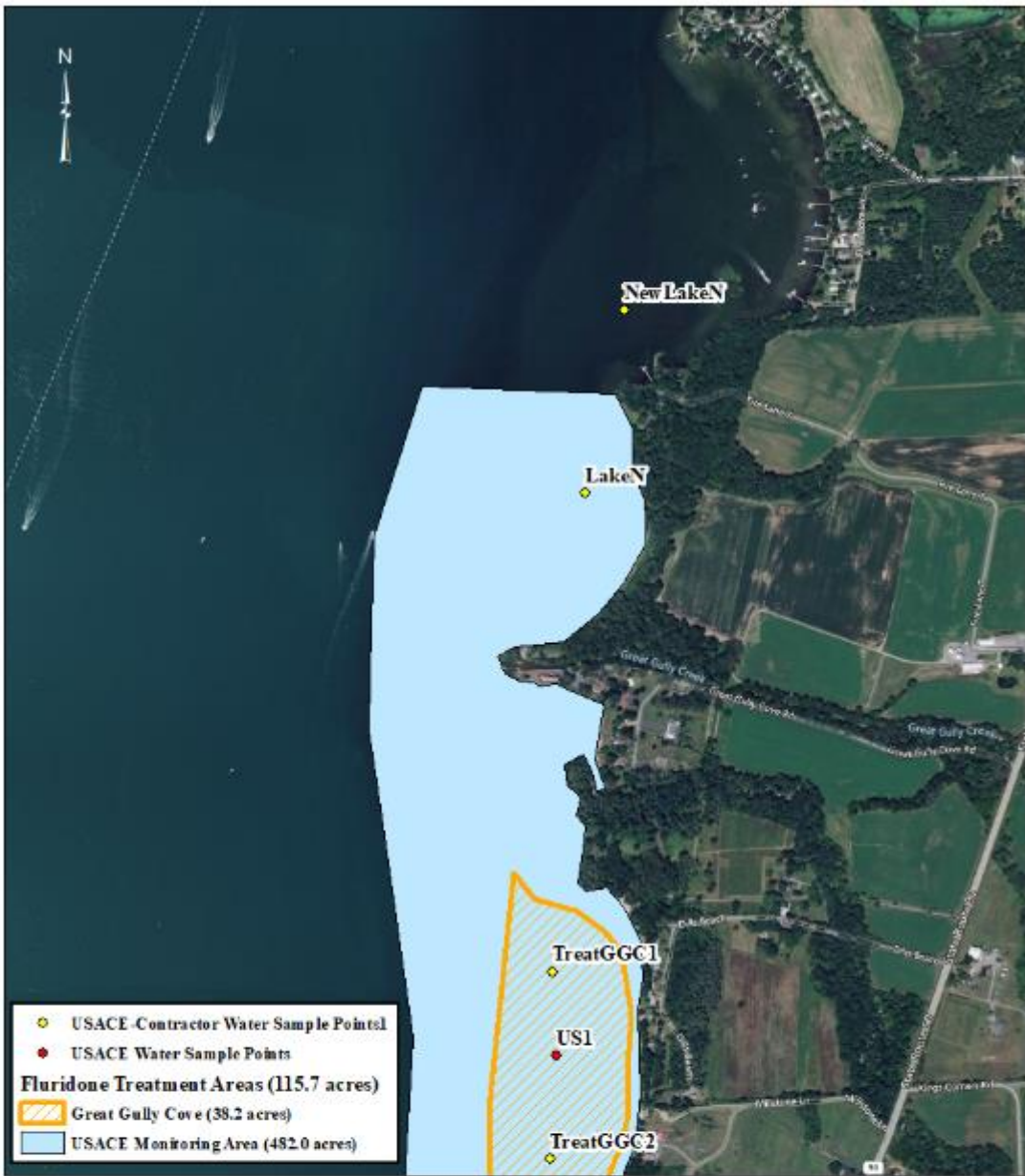
All finished drinking water samples < 0.5 ppb



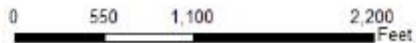
2023 Contractor Water Sample Sites  
Cayuga Lake at Aurora, NY



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2023 Adjusted Lake N Water Sampling Point  
Cayuga Lake at Aurora, NY



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2023 Adjusted Lake N Water Sampling Point 8/8/23  
Cayuga Lake at Aurora, NY



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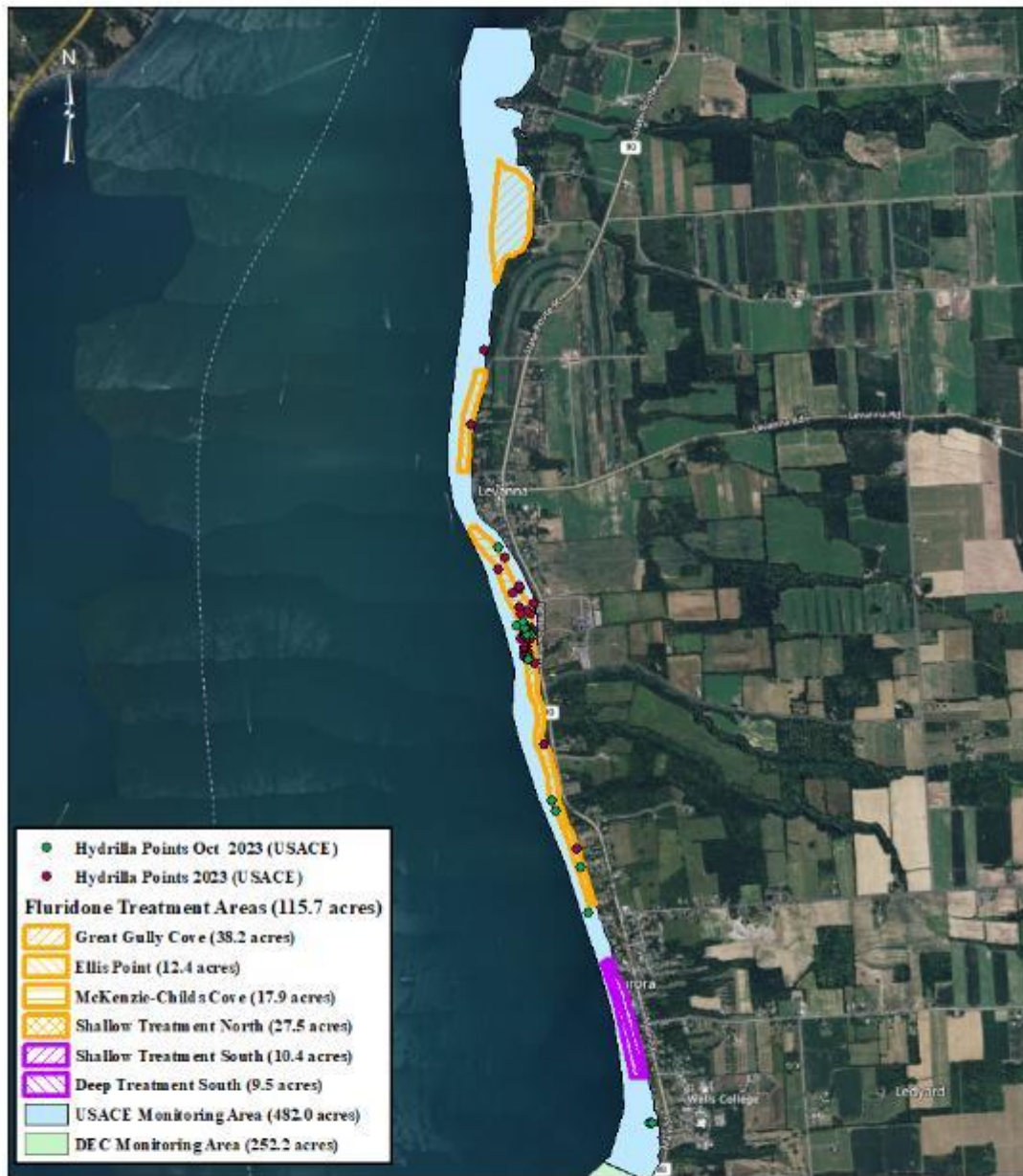


# Cumulative Point Intercept Sampling

The percent occurrence of hydrilla was <math><1.2\%</math> throughout the year

Had effective control within treatment areas

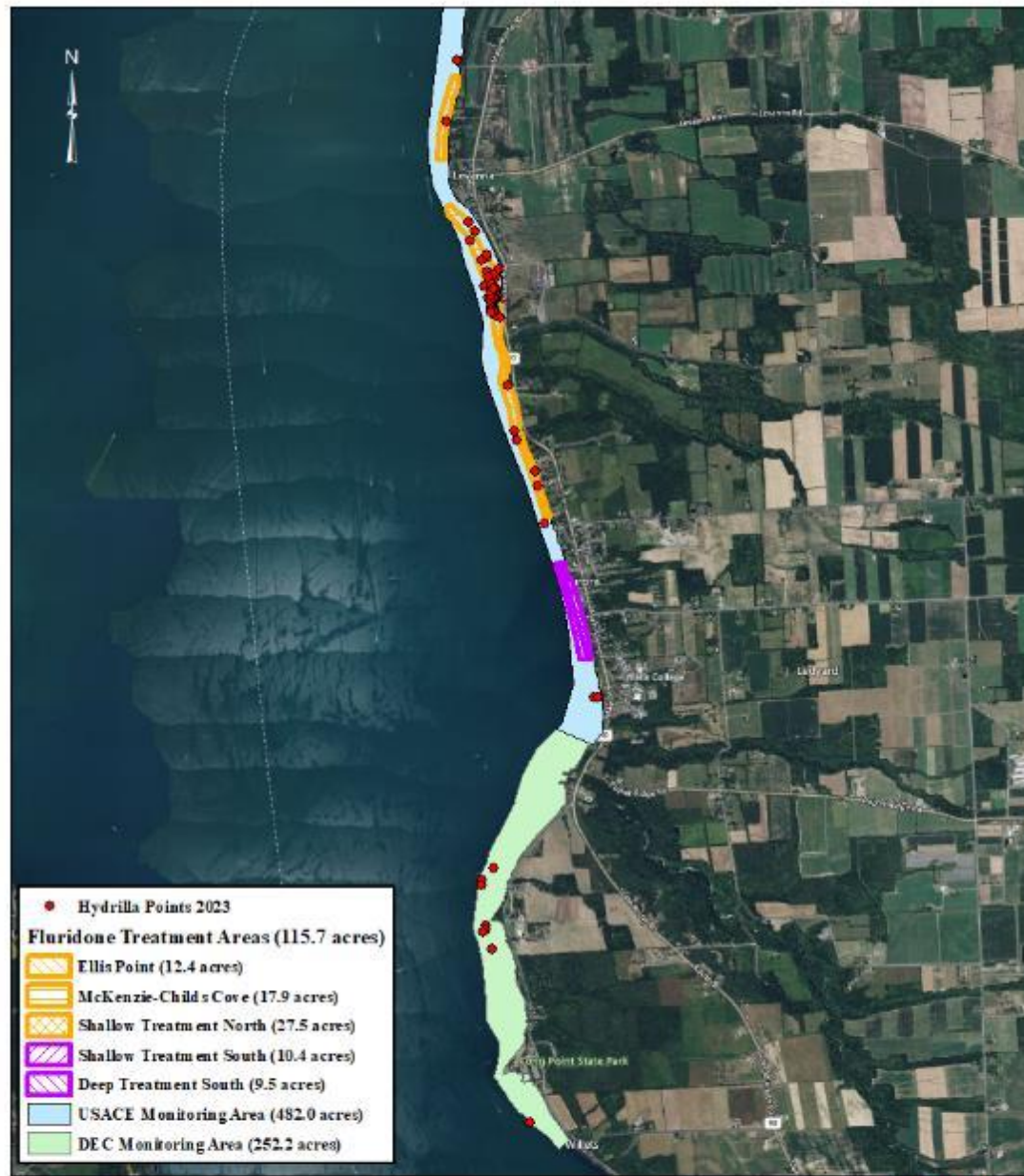
Still have good frequency of occurrence of other SAV



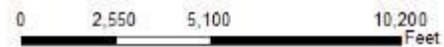
2023 USACE Hydrilla Points  
Cayuga Lake at Aurora, NY



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### 2023 Hydrilla Points Cayuga Lake at Aurora, NY



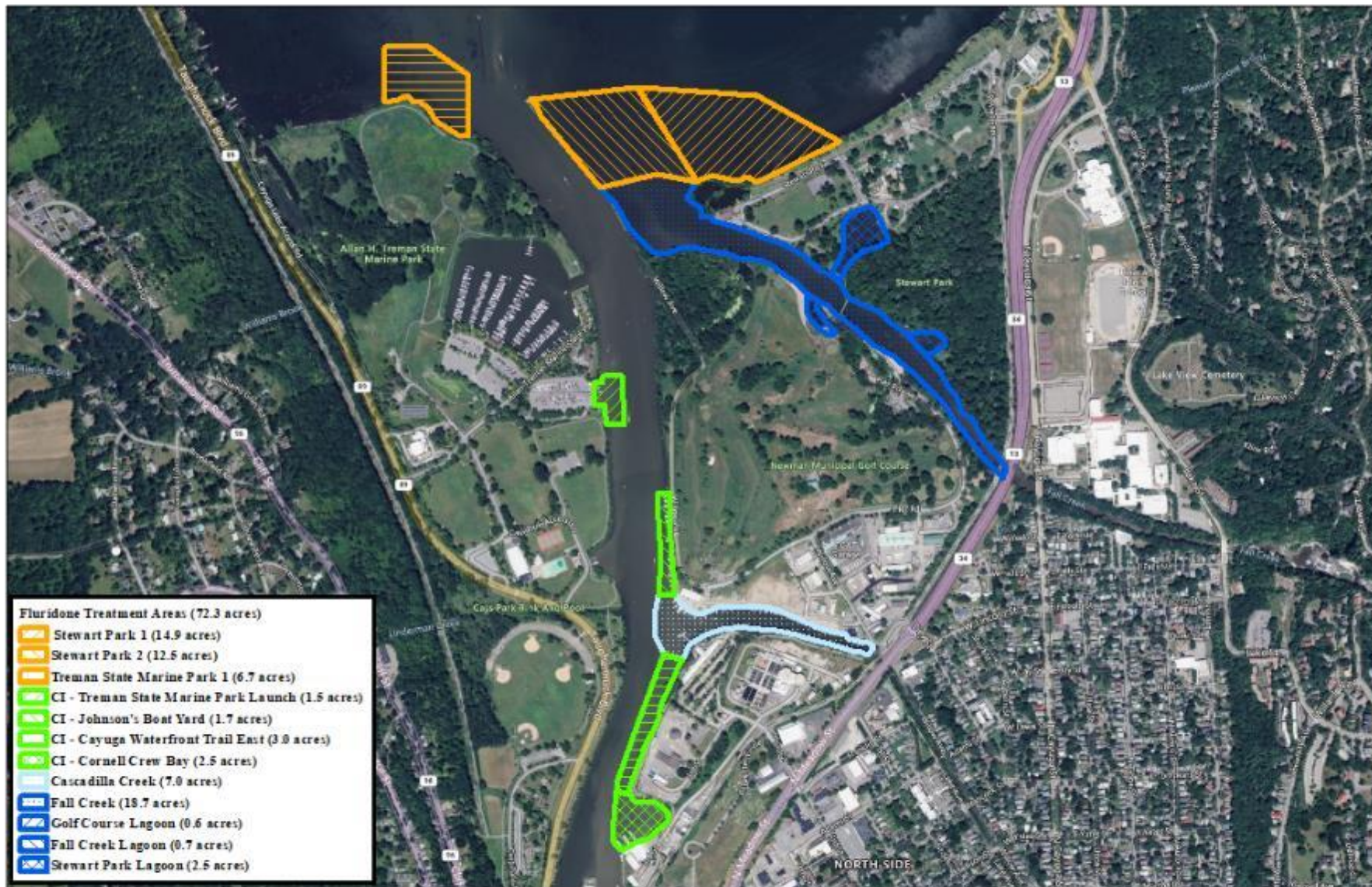
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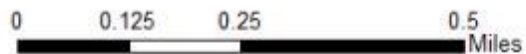
# ITHACA



Photo: Ithaca CVB



### 2023 Fluridone Treatment Areas Cayuga Lake at Ithaca, NY



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# FALL CREEK



Florida Treatment Areas (72.3 acres)

- 000 Stewart Park 1 (14.3 acres)
- 001 Stewart Park 2 (11.2 acres)
- 002 03 - Tomon State Marine Park Launch (1.2 acres)
- 003 03 - Johnson's Boat Yard (1.7 acres)
- 004 Fall Creek (18.7 acres)
- 005 Fall Creek Lagoon (8.6 acres)
- 006 Fall Creek Lagoon (8.7 acres)
- 007 Stewart Park Lagoon (2.3 acres)

2023 Fall Creek Treatment Areas  
Cayuga Lake at Ithaca, NY

0 0.05 0.1 0.2 Miles



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## Sonar H4C, 8.6 acres

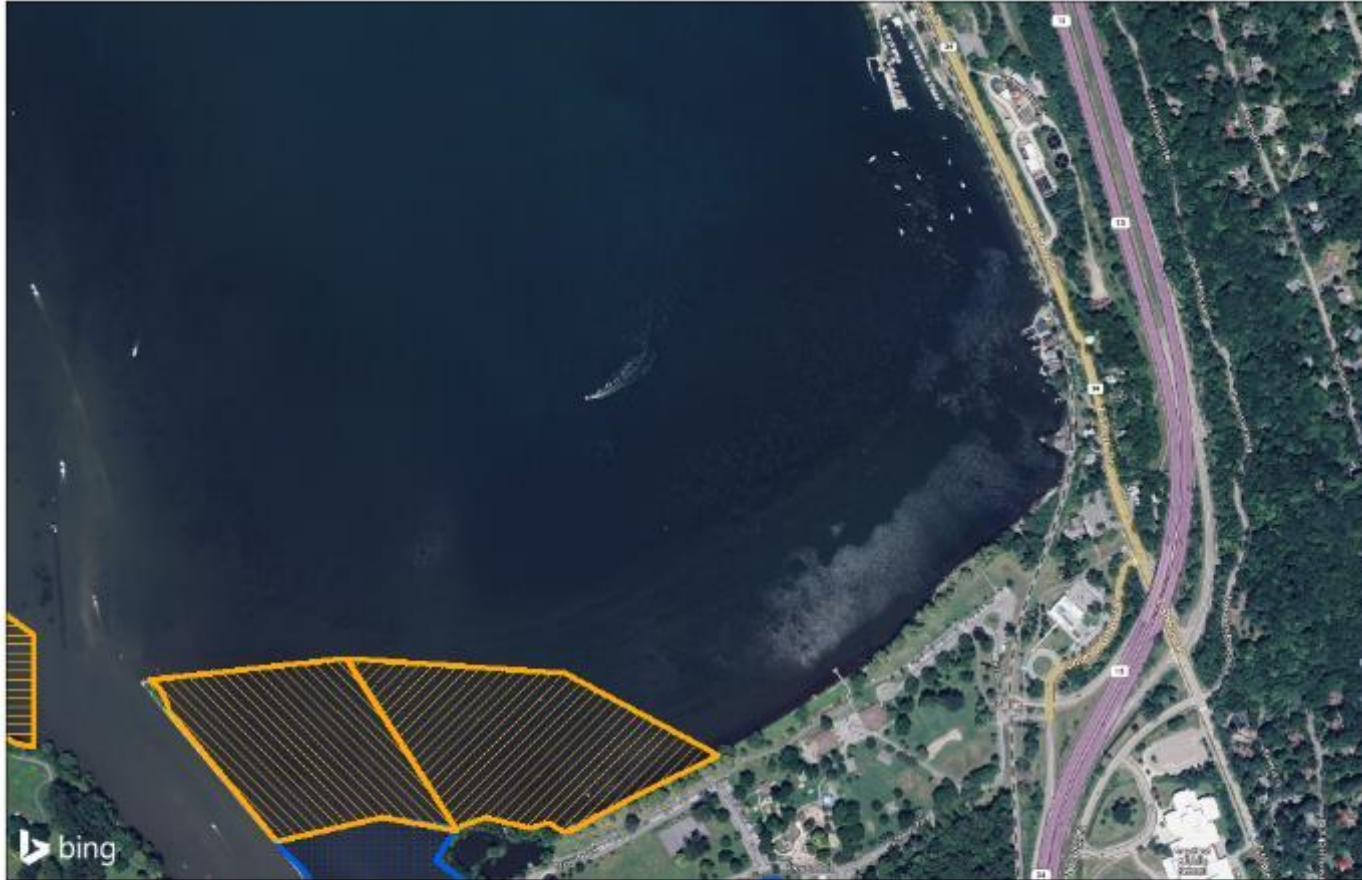
- 2 applications @ 20 ppb
- 8 applications @ 9 ppb
- Weekly on Thursdays
- Jun 29 – Aug 31

## Sonar Genesis, 18.7 acres (main channel)

- Injection system treatments at 2.5 ppm daily rate based on creek flow
- Operation pulsed 5 days on between 80 cfs and 160 cfs
- Operation suspended if flow >160 cfs
- Jun 29 – Sep 8



# CAYUGA LAKE EAST



- Fluridone Treatment Areas (72.3 acres)**
- Stewart Park 1 (14.9 acres)
  - Stewart Park 2 (12.5 acres)
  - Treman State Marine Park 1 (6.7 acres)
  - Fall Creek (18.7 acres)
  - Stewart Park Lagoon (2.5 acres)

**2023 Cayuga Lake East Treatment Areas**  
Cayuga Lake at Ithaca, NY



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## Sonar H4C, 27.4 acres

- 2 applications @ 20 ppb
- 8 applications @ 9 ppb
- Weekly on Thursdays
- Jun 29 – Aug 31



# CAYUGA LAKE WEST



## Sonar H4C, 11.6 acres

- 2 applications @ 20 ppb
- 8 applications @ 13.75 ppb
- Weekly on Thursdays
- Jun 29 – Aug 31

### Fluridone Treatment Areas (72.3 acres)

- Stewart Park 1 (14.9 acres)
- Stewart Park 2 (12.5 acres)
- Treman State Marine Park 1 (6.7 acres)
- Fall Creek (18.7 acres)

### 2023 Cayuga Lake West Treatment Area Cayuga Lake at Ithaca, NY



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# CAYUGA LAKE INLET



Sonar H4C, 15.7 acres

- 2 applications @ 20 ppb
- 8 applications @ 13.75 ppb
- Weekly on Thursdays
- Jun 29 – Aug 31

- Florida Treatment Areas (72.3 acres)**
- CI - Truman Scott Marine Park Launch (1.5 acres)
  - CI - Johnson's Boat Yard (1.7 acres)
  - CI - Cayuga Municipal Boat Basin (1.8 acres)
  - CI - Cayuga Creek Bay (2.4 acres)
  - Cayuga Creek (2.8 acres)
  - Fall Creek (0.7 acres)
  - Cell Creek Lagoon (0.6 acres)
  - Fall Creek Lagoon (0.7 acres)

2023 Cayuga Inlet Treatment Areas  
Cayuga Lake at Ithaca, NY



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# POINT INTERCEPT SAMPLING



- No Hydrilla found for three of the four sample dates. Found two locations in October which was 0.4%.
- Frequency of other aquatic plants in the project area is high.
- Fall Creek and portions of the Cayuga Lake Inlet are areas of concern.



2023 Hydrilla Locations  
Cayuga Lake at Ithaca, NY

0 0.125 0.25 0.5  
Miles



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# PATH FORWARD



- Complete data processing and analysis
- Prepare post-treatment summary reports, end of January 2024
- Confer with experts and stakeholders to draft plans for 2023
  - Aurora – address hydrilla in northernmost areas including Ellis Point and McKenzie Childs Bay
  - Ithaca – address hydrilla in Inlet



# ADDITIONAL RESOURCES



- New York Invasive Species Information: <http://www.nyis.info/>, select hydrilla from the aquatic plants tab
- Cornell Cooperative Extension/Tompkins County: [www.stophydrilla.org](http://www.stophydrilla.org), includes FAQs regarding fluridone
- Finger Lakes PRISM: <http://fingerlakesinvasives.org/>
- Cayuga Lake Watershed Network: <http://www.cayugalake.org/>
- Center for Aquatic and Invasive Plants: <http://plants.ifas.ufl.edu/node/183>
- SOLitude Lake Management:  
<http://www.solitudelakemanagement.com/product-labels-new-york-2017>
- Great Lakes Hydrilla Collaborative: <http://hydrillacollaborative.com/>