

Overview of *Hydrilla verticillata* in Cayuga Lake

Cayuga Lake Public Info Session
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What's an Invasive Species?

An invasive species is one that is **non-native** to the ecosystem under consideration and whose introduction causes, or is likely to cause, **economic** or **environmental** harm or harm to **human health**.

Economic:

Impacts on agriculture, recreation, wood/forest products, trade/shipping, tourism, utilities (power plants) and management costs.

Environmental:

Impacts on biodiversity, structural diversity, natural processes, aesthetics, ecosystem function and services.

Human Health:

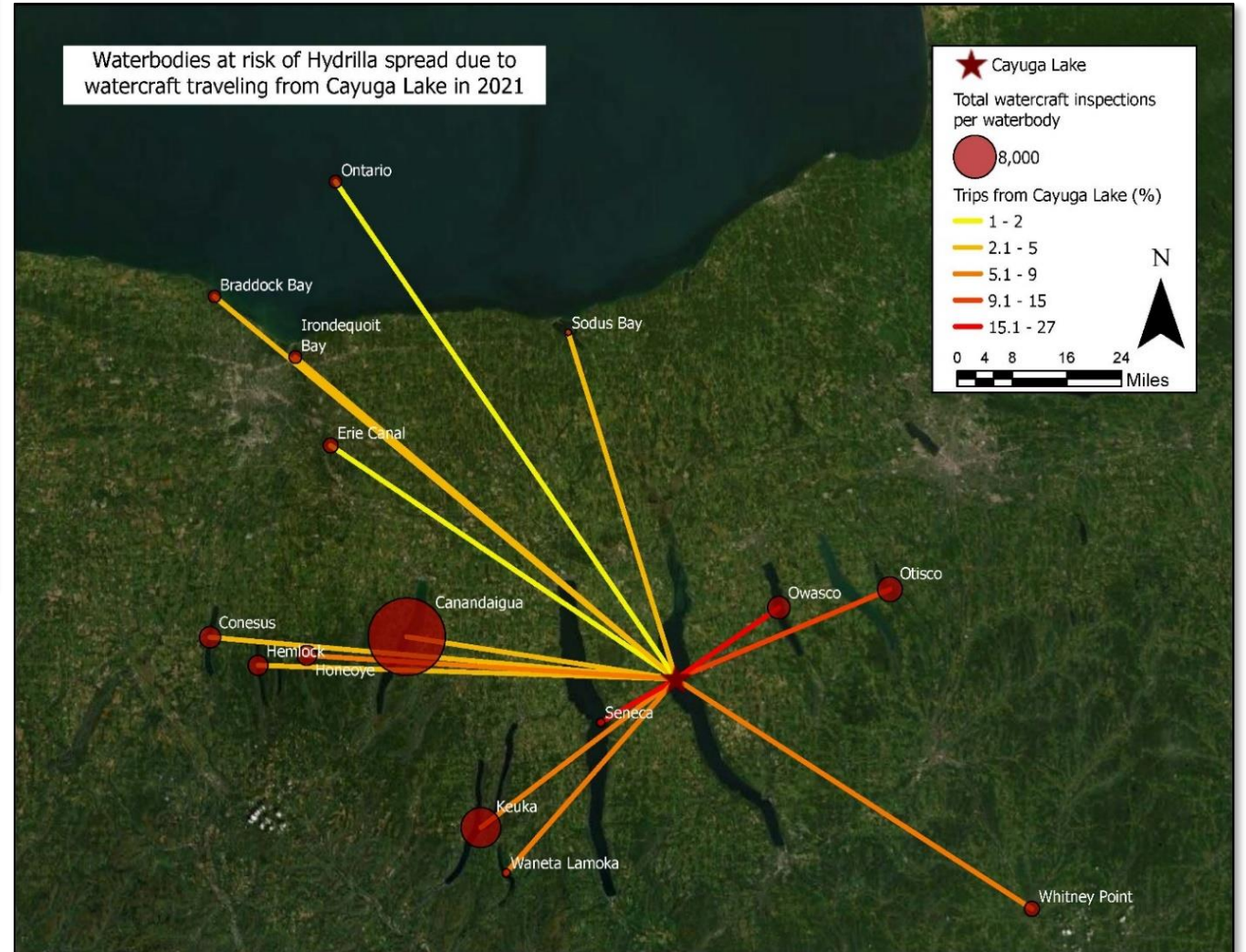
Impacts on soil, water and air quality, flooding, injury, and disease/illness.

Regional Context

Top lures at Cayuga Lake

August 28, 2019

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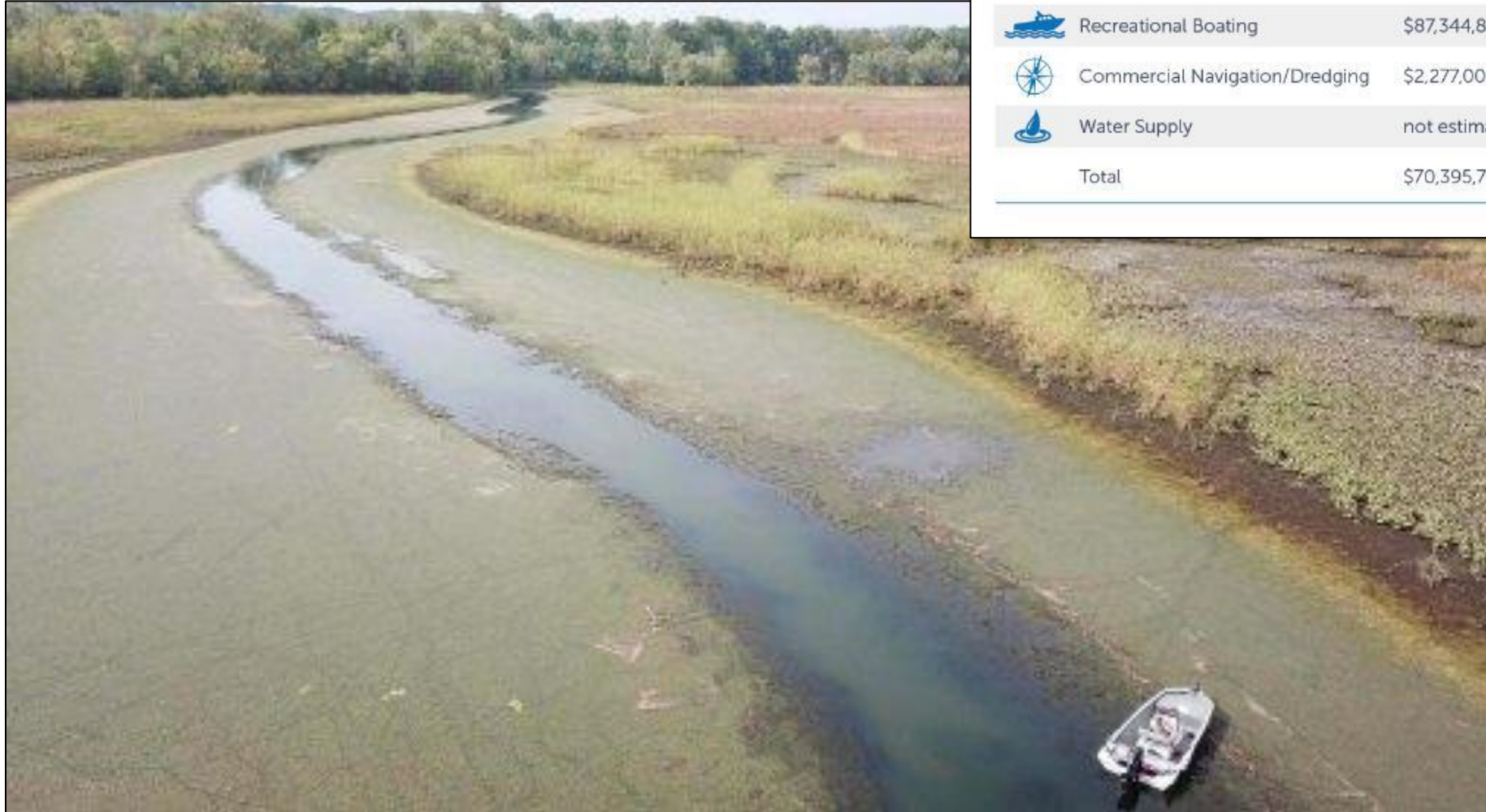


Hydrilla, Water Thyme (*Hydrilla verticillata*)






- Broad habitat range
- Monoecious vs. dioecious
- Visibly serrated leaves in whorls of 3-8 (usually 5)
- Spreads by fragments, seeds, tubers, and turions



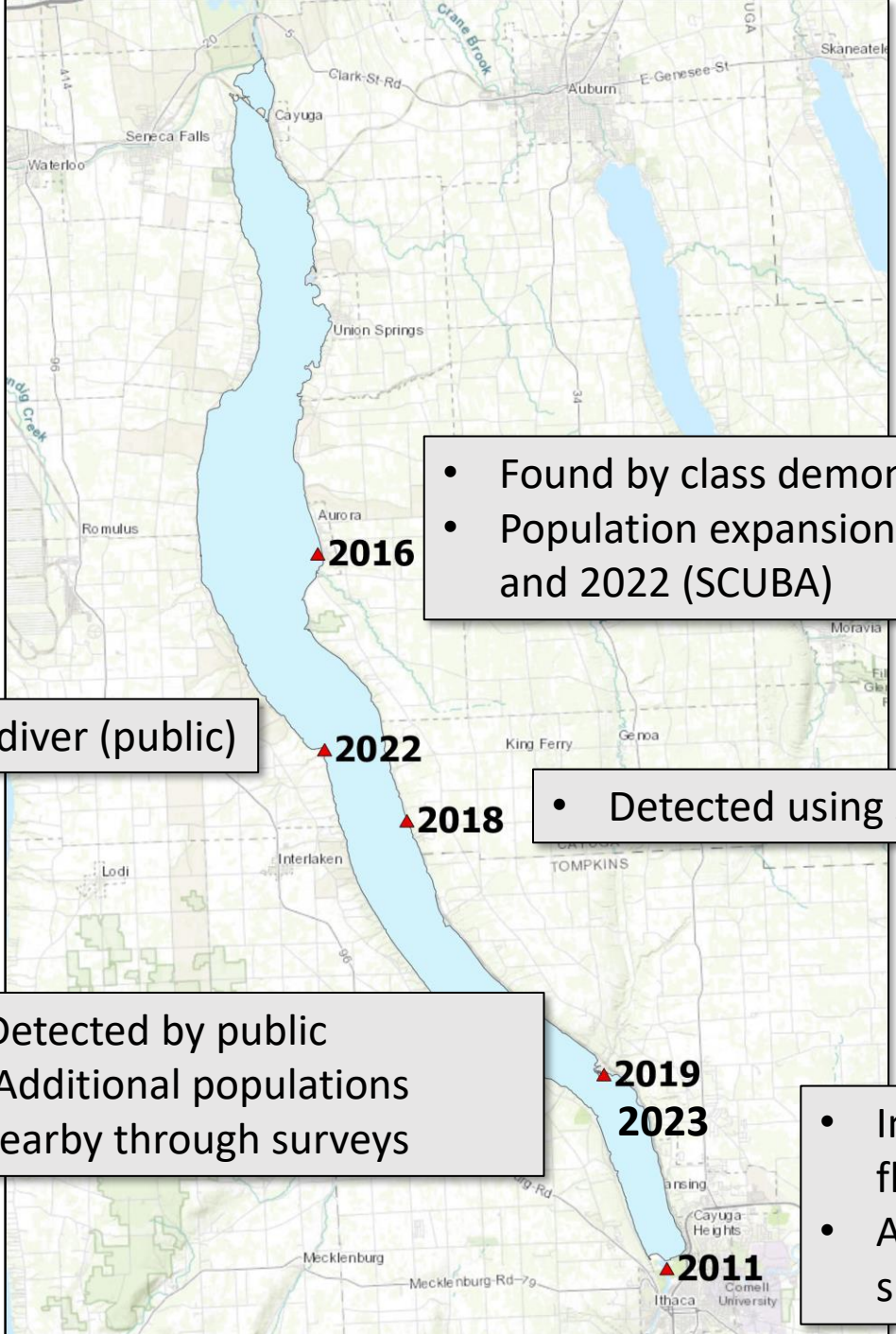
Threats and Impacts



Minimum and Maximum Estimated Annual Economic Loss Associated with the Establishment of Hydrilla in the Great Lakes

Resource Affected	Minimum Estimated Annual Economic Loss	Maximum Estimated Annual Economic Loss
 Recreational Fishing/Angling	\$(29,574,008) ¹	\$34,814,477
 Beach Use	\$10,348,000	\$31,206,000
 Recreational Boating	\$87,344,800	\$422,887,200
 Commercial Navigation/Dredging	\$2,277,000	\$9,776,250
 Water Supply	not estimated	not estimated
Total	\$70,395,792	\$498,683,927

Notes: ¹This value is positive.



- Found by class demonstrating plant surveys (public)
- Population expansion observed in 2021 (rake tosses) and 2022 (SCUBA)

- Detected by SCUBA diver (public)

- Detected using single-transect 100 m perimeter survey

- 2019 - Detected by public
- 2023 – Additional populations found nearby through surveys

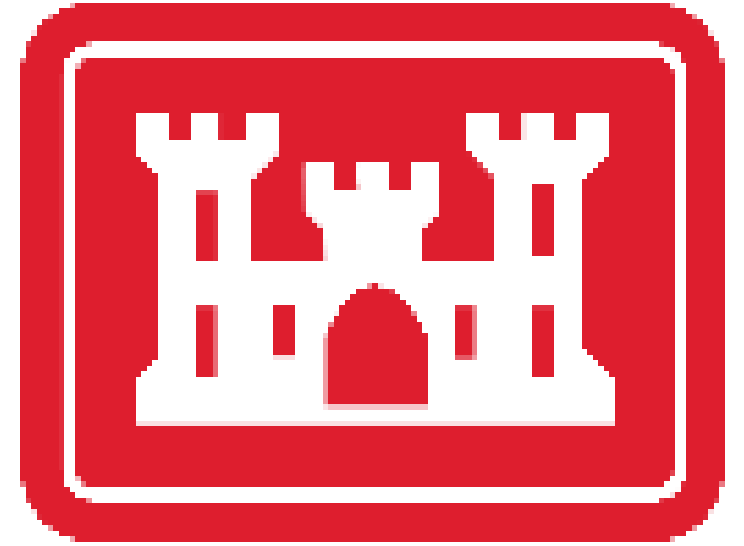
- Initial population found by the public – floating classroom
- Additional populations found through surveys

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Ithaca Inlet	S, CT, MT	S, CT, MT	S, CT	S, CT	S, CT	S, CT	S	S	S	S, CT	S, CT	S, CT	S, CT	S, CT
Ithaca SE Lake/Stewart Park		S	S, MT, CT	S, MT	S, CT	S	S, MT	S, CT, MT	S, CT	S, CT	S, CT	S, CT	S, CT	S, CT
Ithaca Lighthouse, SW Lake		S	S	S	S, CT	S	S, MT	S	S, CT, MT	S, CT	S, CT	S, CT	S, CT	S, CT
Ithaca Fall Creek		S	S, CT	S, CT	S, CT	S, CT	S, CT	S	S	S, CT	S, CT	S, CT	S, CT	S, CT
Aurora						S	S, CT	S, CT	S, CT	S, CT	S, CT	S, CT	S, CT	S, CT
King Ferry								S	S, MT, CT	S	S	S	S	S
Lansing									S	S, CT	S, CT	S, CT	S, CT	S, CT
Sheldrake Point								S	S	S	S	S	S, CT	S, CT



S = Sampled
 CT = Chemical Treatment
 MT = Mechanical Treatment

Stakeholders



HOBART AND WILLIAM SMITH COLLEGES

FINGER LAKES
INSTITUTE



Cayuga Lake Hydrilla Management Plan

- Developed by Cayuga Lake Hydrilla Task Force in 2021
- Includes comprehensive project history – stakeholders, regional context, management methods
- Adaptive management approach to Hydrilla for 2021-2026
- Helpful resources for outreach & education, coordination



Cayuga Lake Hydrilla Management Plan
2021-2026

Cayuga Lake Hydrilla Task Force

March 2021

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Massachusetts Wildlife Climate Action Tool

Finger Lakes Institute, Finger Lakes PRISM



Translating knowledge and research about the Finger Lakes watershed into collaborative action

Program areas

- Contaminants
- Nutrients
- Watershed management
- **Invasive species**

2024 AIS Field Season Summary

- 4-person field crew conducted EDRR rake tosses on Cayuga Lake
- Monitored current hydrilla treatment areas and surveyed for hydrilla and other AIS
- Focus on early detection of hydrilla in Cayuga Lake and assessing plant community dynamics at 6 sites
- Over 3,600 rake tosses on Cayuga Lake
- No new populations of hydrilla were discovered in 2024
- **THREE** hydrilla detections by stewards

