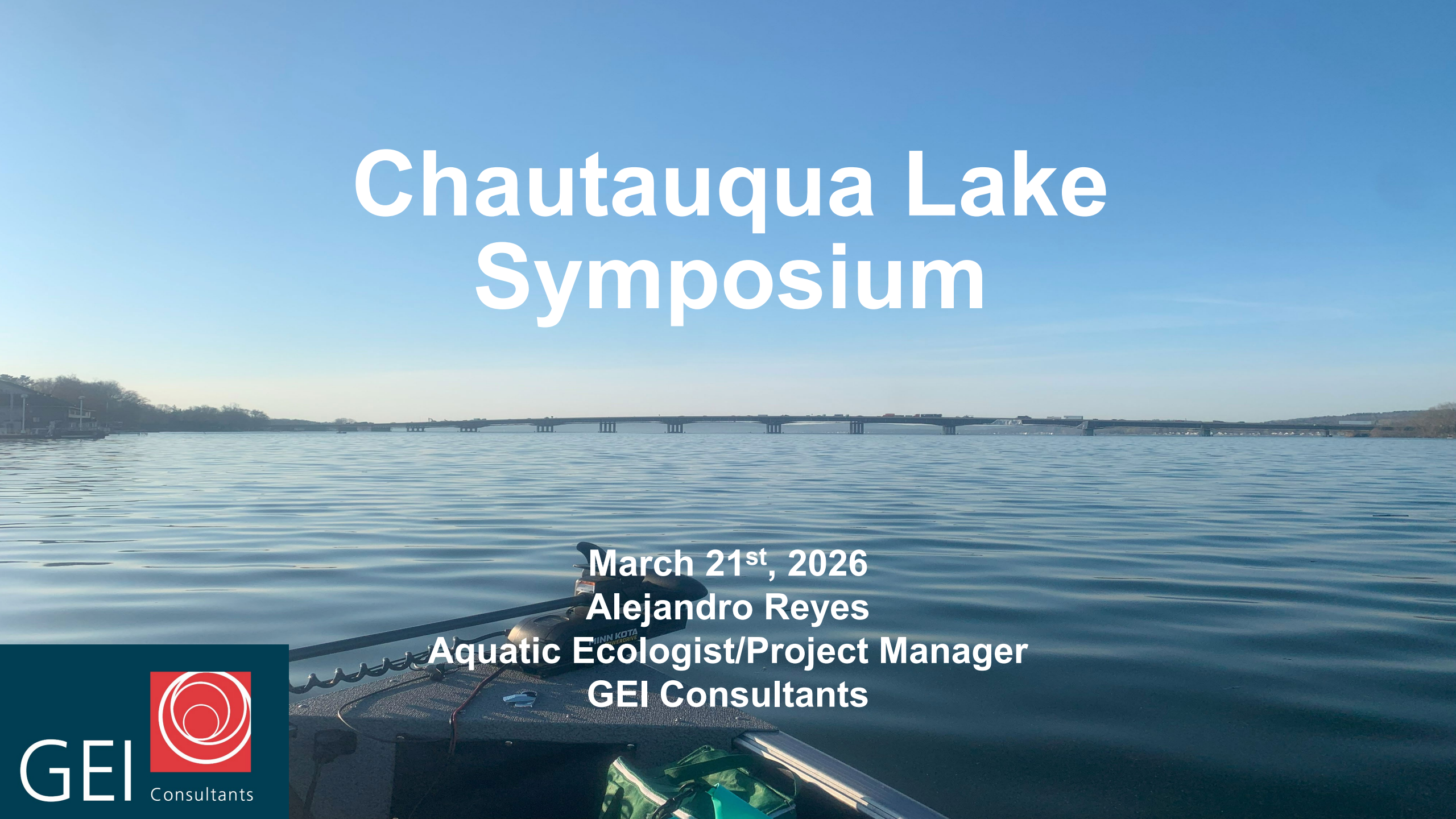
Chautauqua Lake Symposium



March 21st, 2026

Alejandro Reyes
Aquatic Ecologist/Project Manager
GEI Consultants

GEI Consultants

Alejandro Reyes

- Certified Lake Manager, NALMS
- Decade of lake management experience.
- Previously employed at University, Federal, Private, Non-for Profit.
- Worked on over 70 lakes in the US, mostly in the northeast.

CLWMA Direct Team



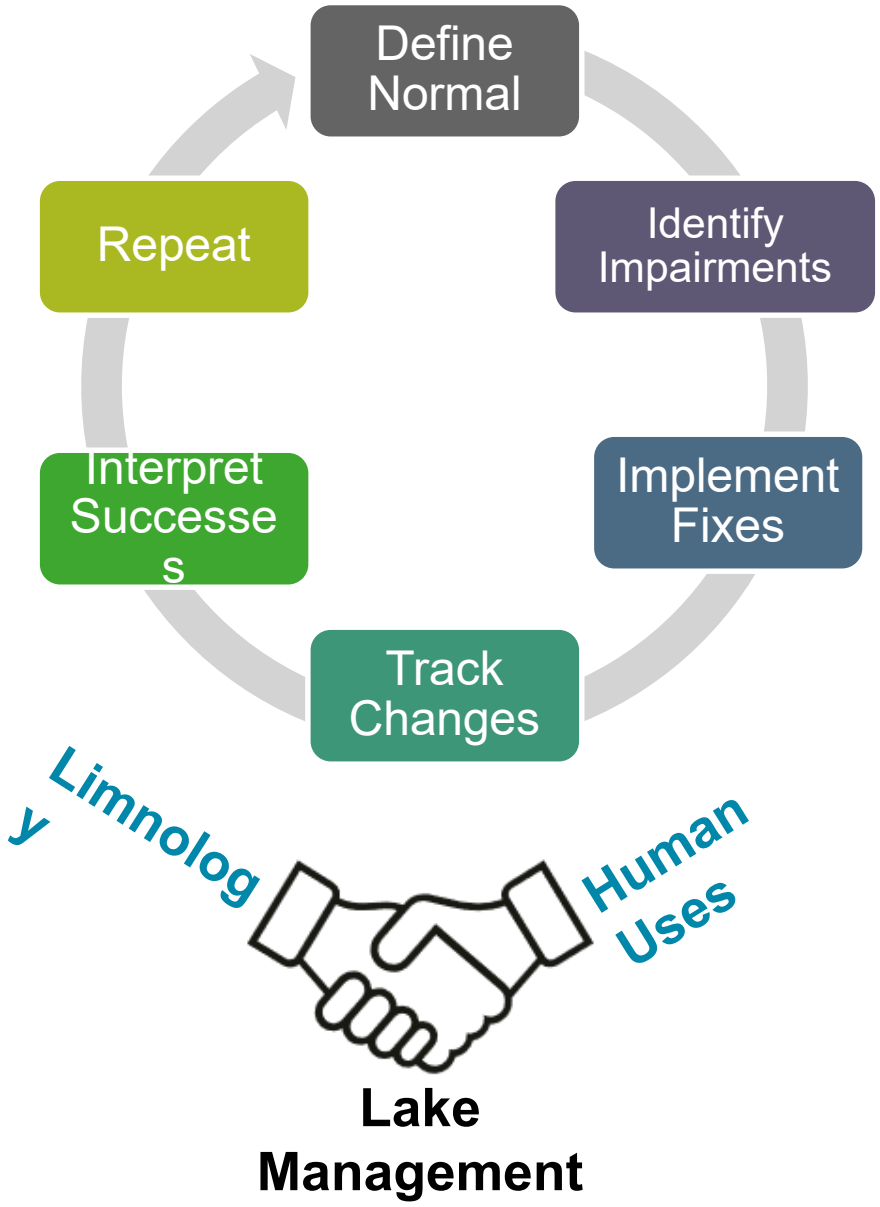

Lake Management Support Team






Scientific Advisor Role

- Advise the Alliance's Board of Directors on a variety of matters related to the health and management of Chautauqua Lake.
- Independent, third-party advisement.
- Focused on lake maintenance activities with additional focus on nutrients and HAB's.



Key 2025 Tasks

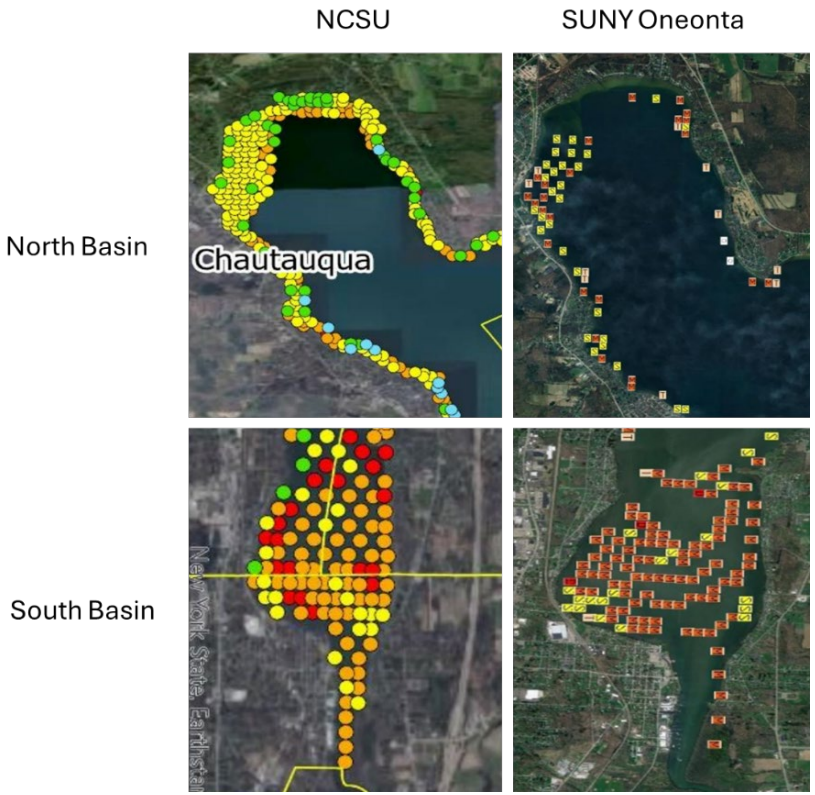
Year 1 Goal: Become familiar with Chautauqua Lake, provide preliminary recommendations for improved management, and assist in ongoing lake management where needed.

Year 1 Tasks:

- Lake Reconnaissance Visits
- Partner Conversations
- Background Research
- Funding Allocation Support
- **South Basin Elodea Support*

Key 2025 Conclusions – Aquatic Plant Surveys

- Two types of surveys on lake for aquatic plants
  - NCSU and SUNY Oneonta (Formerly Racine-Johnson)
- **Conclusion: Survey methodology is largely comparable.**
  - Small differences do not significantly change broad interpretations.
- **Conclusion: Lack of management-relevant surveys and information.**
  - Reproductive structure surveys.



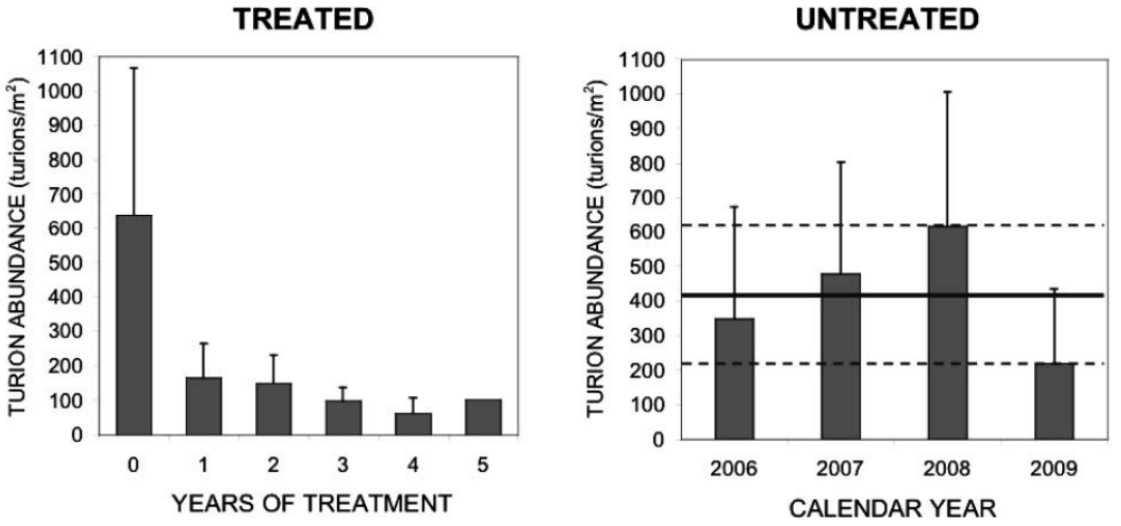
EVALUATION OF SURVEY DATA TO INFORM AQUATIC PLANT MANAGEMENT EFFECTIVENESS AND IMPACTS.

- How well are the management actions that are employed working?
- DEC has directly mentioned the need for effectiveness monitoring.
- Lots of previous data, but no direct answers to those questions.
- Continue independent review and analysis of past and present data to inform management approach.

Credit: CLA Website

CONSIDERATION OF ADDITIONAL SURVEY METHODOLOGIES

- NCSU and SUNY Oneonta surveys answer specific sets of questions, but not all that are relevant for management.
- Reproductive structure surveys
- Targeted biovolume surveys to assess harvesting effectiveness.
- Consider shifting CLA survey to support management outcomes.



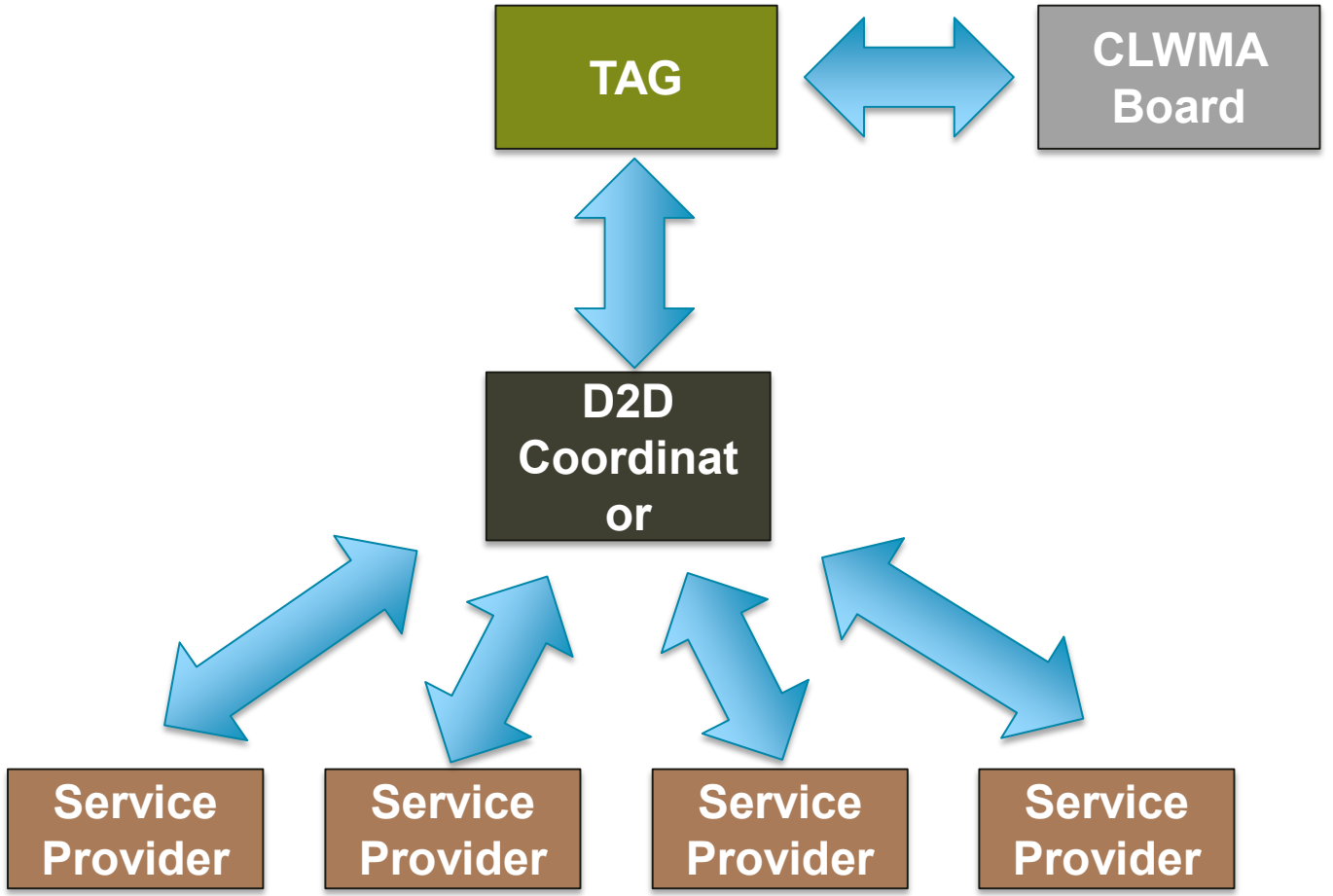
Johnson et al. 2012

Key 2025 Conclusions – Management Plan and Techniques

- **Conclusion: NCSU Management Plan is a strong, operational framework document that should be supported by the Alliance.**
  - Smaller additions and frameworks can be added over time to assist.
- **Conclusion: Focus on optimization, not replacement of techniques.**
  - Focus for lake management is not whether these tools should exist, but how they can be improved and applied as effectively as possible.

DEVELOP AN OVERALL STRATEGY FOR STARRY STONEWORT MANAGEMENT ON CHAUTAUQUA LAKE

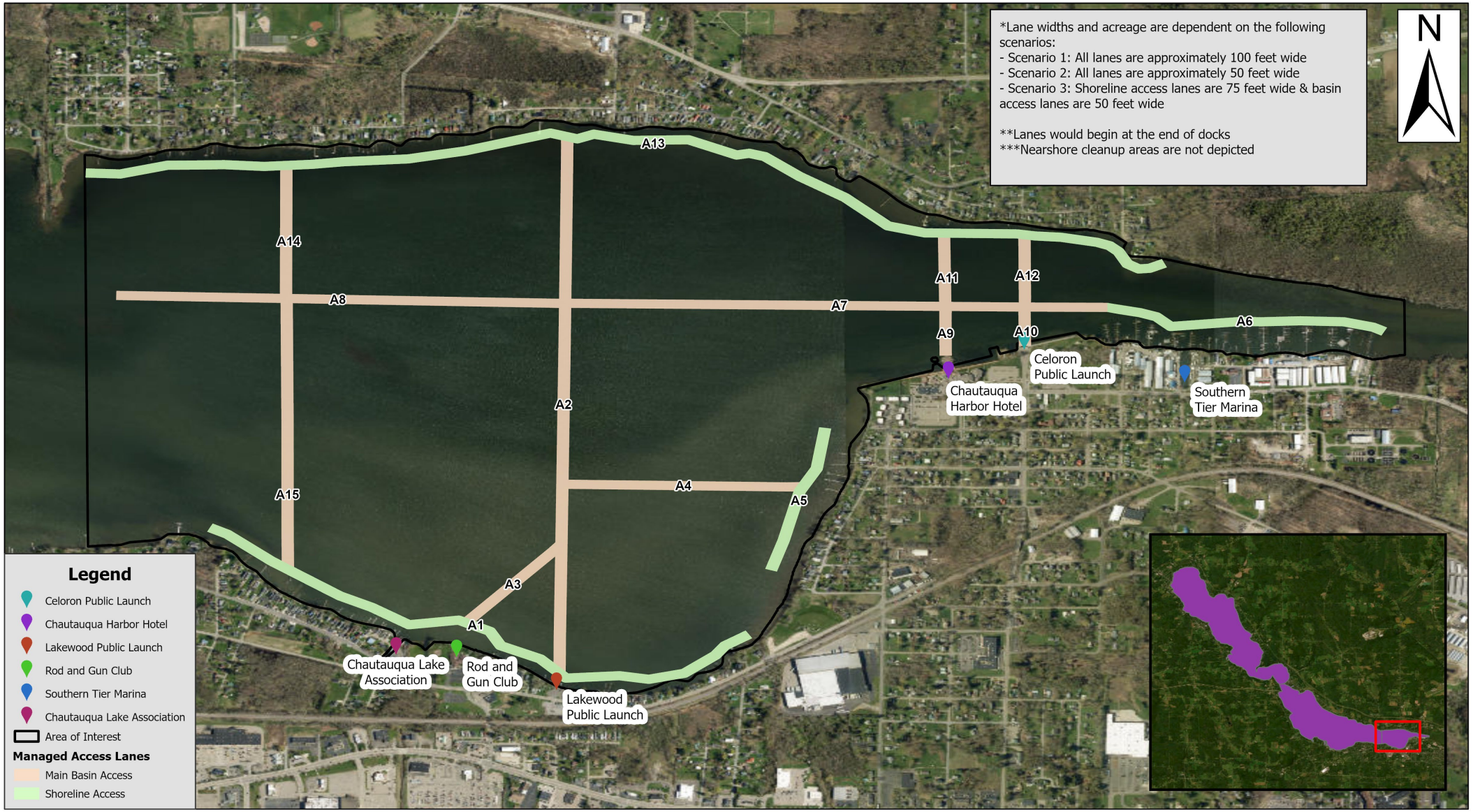
- Strategy should include
  - Achievable goals, thresholds, and milestones.
  - Formation of Technical Advisory Group (TAG) made up of experts/CLMs.
  - Feedback loop between service providers, day to day coordinator, TAG and CLWMA Board.



IMPROVE SOUTH BASIN ACCESS FOR ALL LAKE USERS

- Goal is to have a flexible plan to respond to changing lake conditions.
- All lake users should have access to all areas of the south basin.
- Multiple management strategies.
- Collaboration between all stakeholders.

Credit: NCSU



Chautauqua Lake
Towns of Ellicott, Ellery, and Busti
Chautauqua County, New York

0 500 1,000 2,000
Feet

GEI Consultants

Proposed South Basin Access Lanes Map

Project 2502248

December 2025

SOURCE:
1.2022 WORLD IMAGERY ACCESSED VIA NEARMAP

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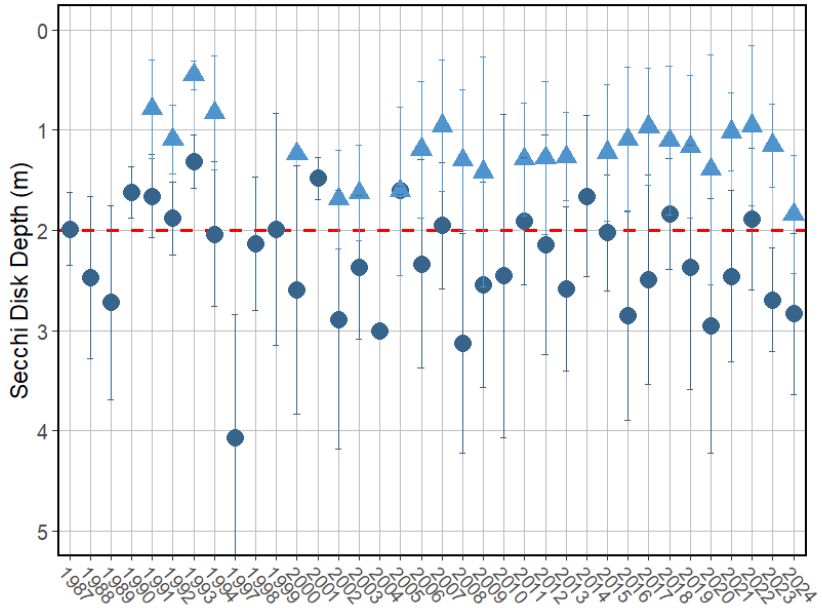
DEVELOP METHOD FOR PUBLIC COMMUNICATION OF ANNUAL WATER QUALITY RESULTS.

- Lots of different water quality data sources on Chautauqua.
  - CSLAP
  - Jefferson Project
  - DEC
  - University Partners
- Lack of annual presentation of data for lay audience.
- Form of newsletter, short scorecard, and/or online dashboard.



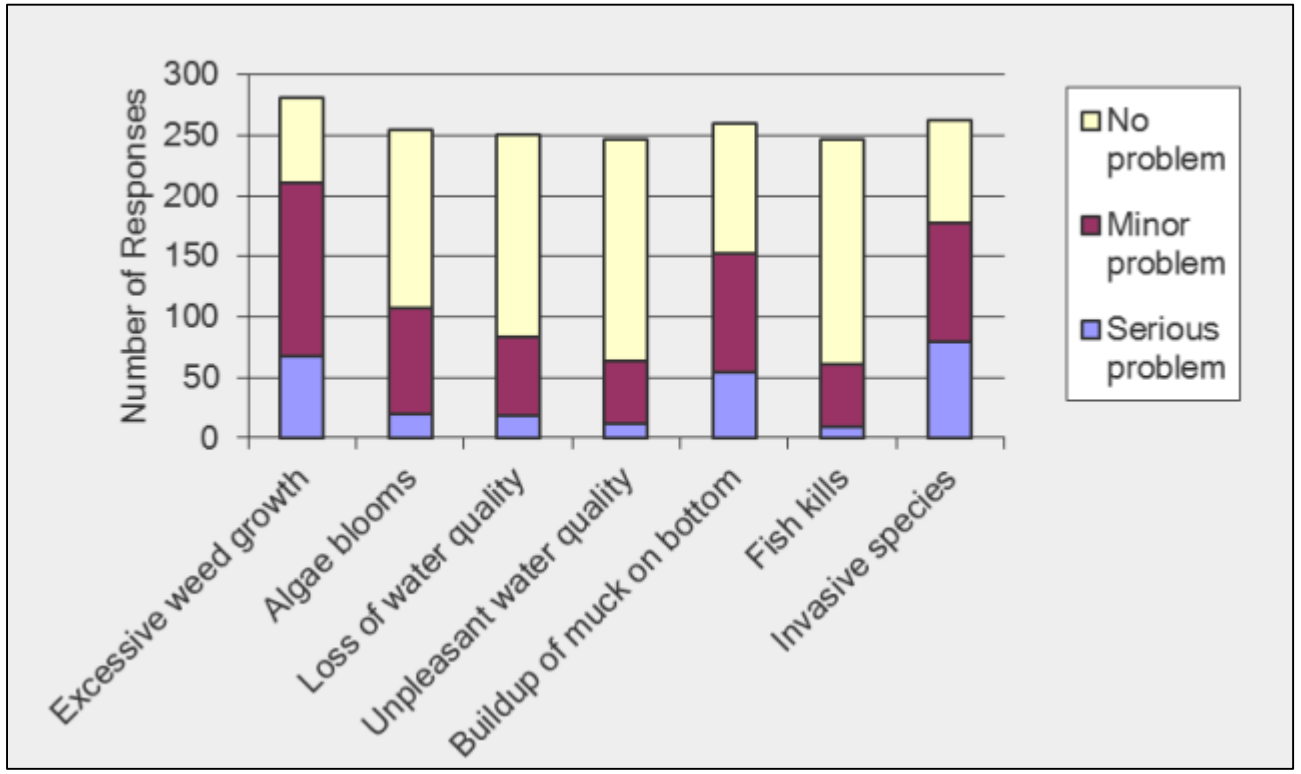
Poor Water Quality

Good Water Quality

Excellent Water Quality

DEVELOP A LAKE-WIDE USEABILITY SURVEY

- Lake Management = Lake + People
- CLWMA should have an understanding of and consider the public sentiment concerning the lake outside of competing interests.
- Contracting with independent PR firm to design a lake wide survey that is useable and easy to complete.

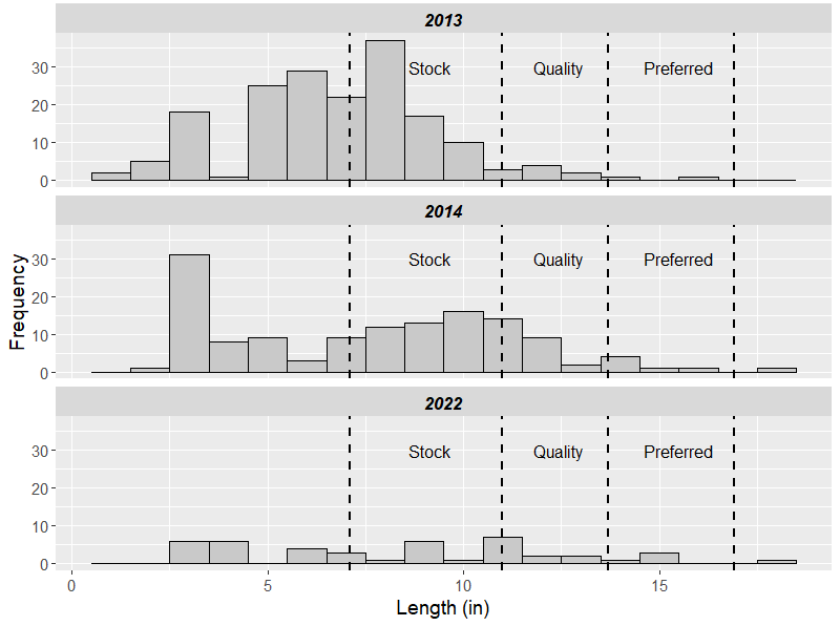


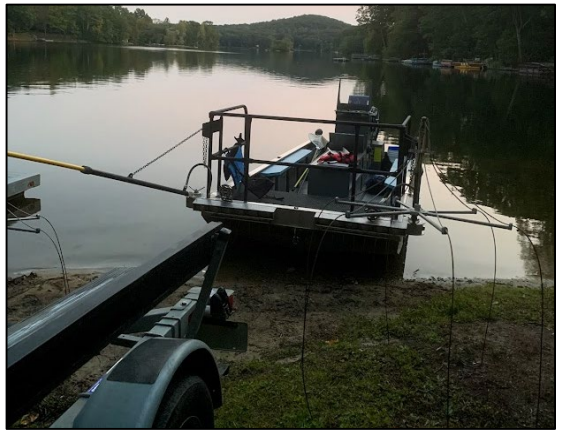
CATALOGING OF WATERSHED WORK COMPLETED/ONGOING

- Consistent watershed work taking place across Chautauqua Lake, both current and ongoing.
- No centralized database for completed and ongoing projects.
- Difficult to track progress and identify areas for prioritization.
- Likely a web-based tool or dashboard for public consumption

EXPLORE SUPPLEMENTAL FISHERIES DATA COLLECTION/INVESTIC

- Fisheries are a key component of Chautauqua Lake economy and ecosystem.
- Focus on questions relating to fisheries and vegetation dynamics.
- Challenges with assessing population dynamics and fisheries related questions of each species on lake in sufficient detail.
- Discuss with DEC to establish key priorities for data collection.





Looking Ahead to 2026

Year 2 Goal: Continue to support lake management activities, provide review of management action, develop science-based approaches.

Year 2 Tasks:

- Long Term Lake Management Strategies Analysis
- Starry Stonewort Management Strategy
- Partner Conversations and Ongoing Support
- Funding Allocation Support

Questions?