

Lake Gaston

Pete Deschenes Stakeholders Board Meeting
2026

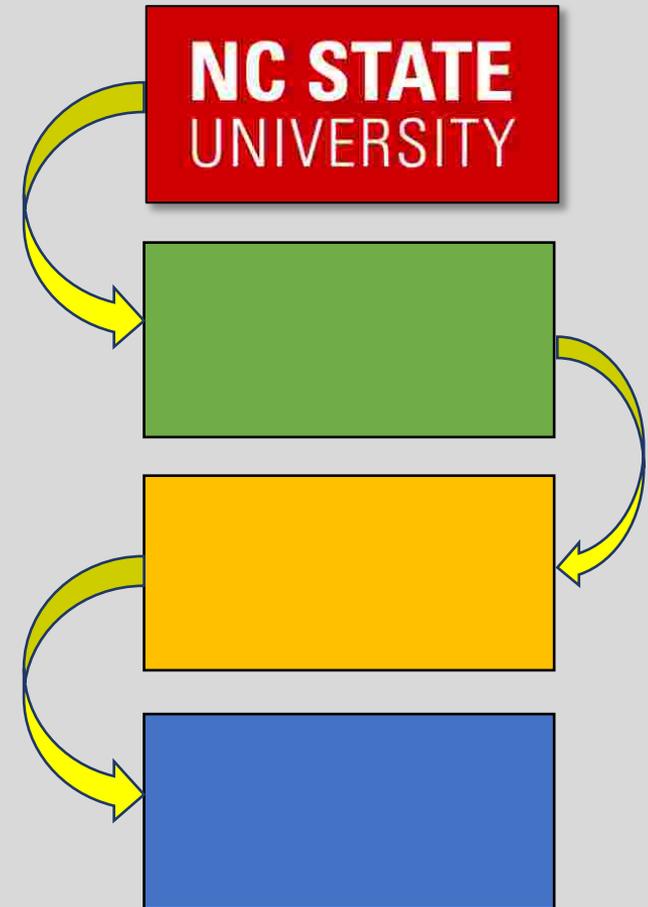


Jessica R. Baumann and Dr. Rob J. Richardson
Aquatic Plant Management Program
North Carolina State University

Management Decisions:

1) North Carolina State University

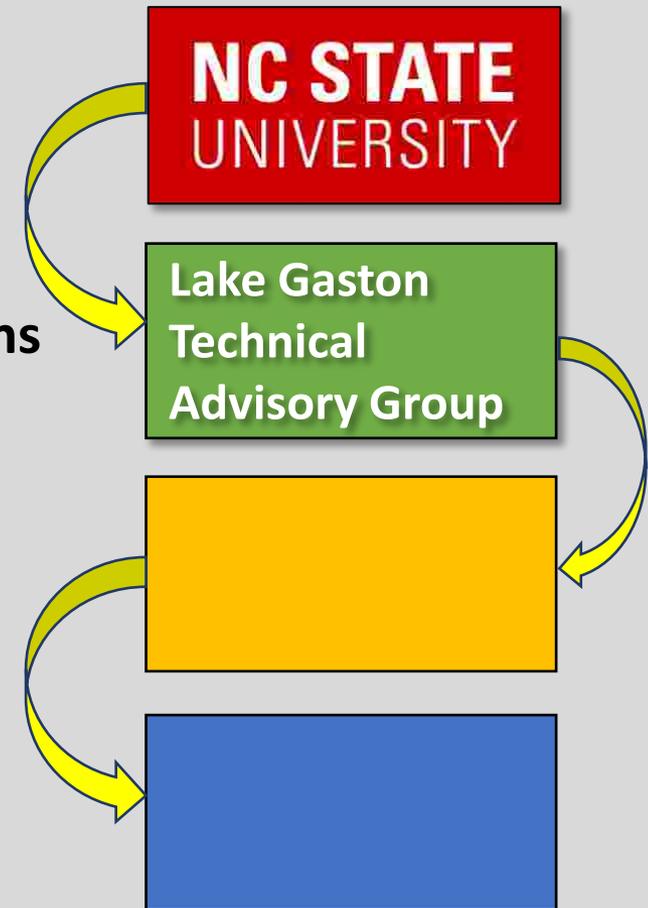
- Develops potential management plan



Management Decisions:

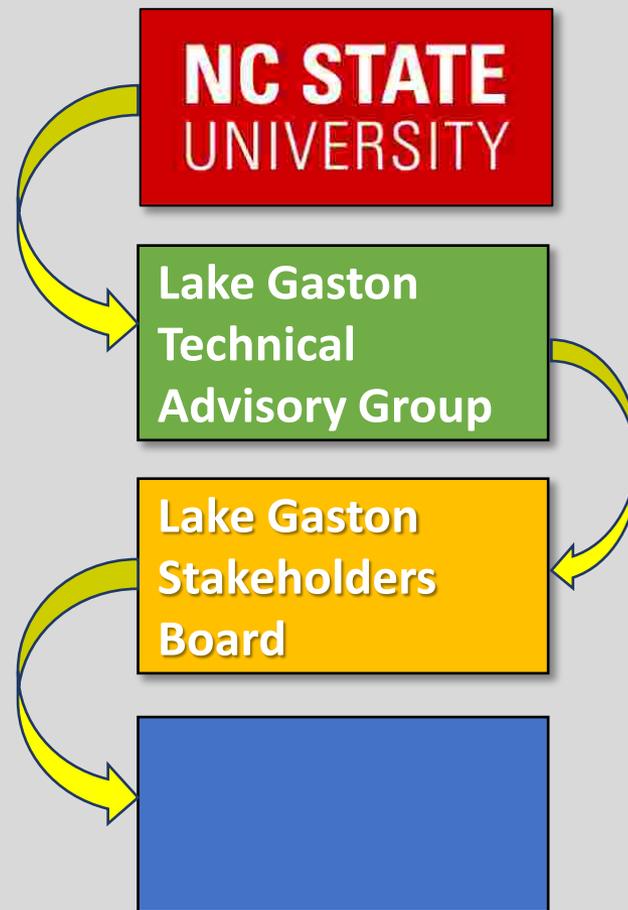
2) Lake Gaston Technical Advisory Group

- Provides management recommendations
 - TAG
 - Panel of subject matter experts
 - University, Agencies, Dominion



Management Decisions:

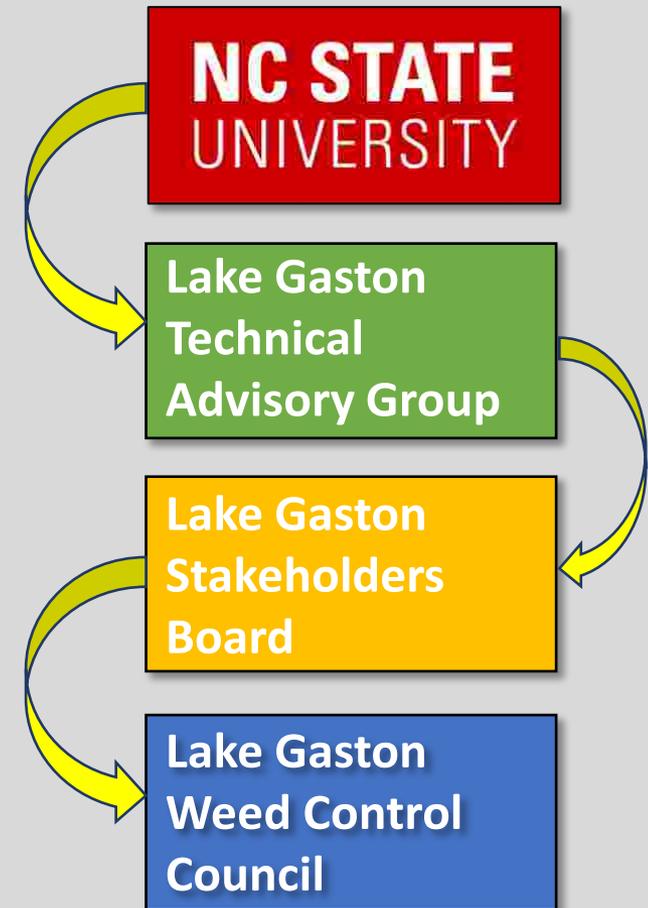
- ### 3) Lake Gaston Stakeholders
- Recommendation Approval



Management Decisions:

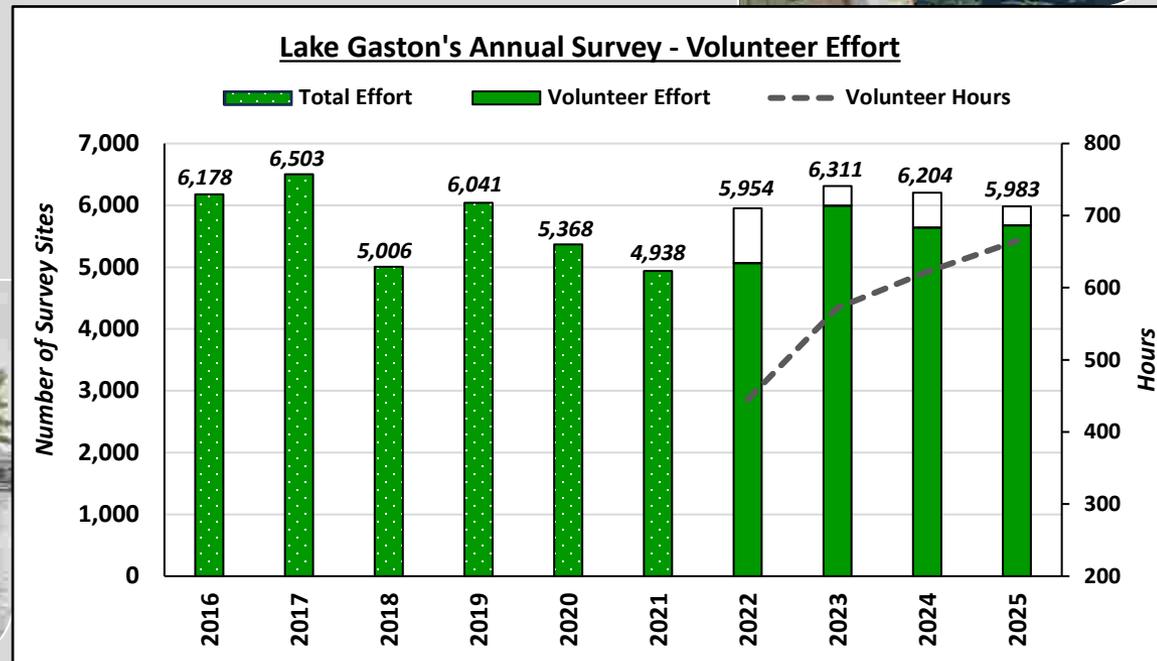
4) Lake Gaston Weed Control Council

- Provides Funding for:
 - Surveys and Monitoring Efforts
 - Treatments
 - Research

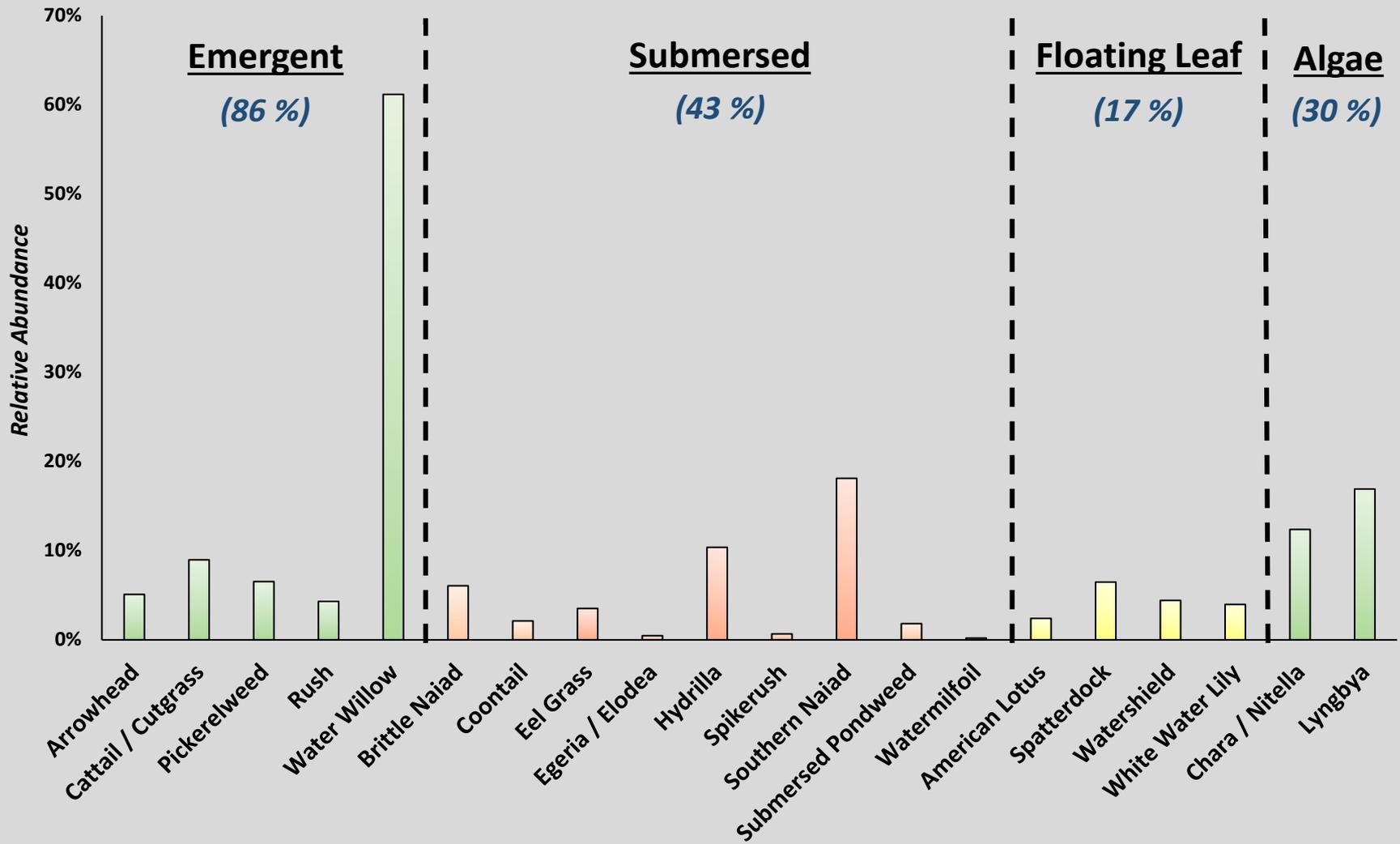


2025 Vegetation Survey

- Almost 200 Individual Volunteers
 - 556 Active Survey Volunteer Hours
- Conducted from August 16th to October 29th
- 5,938 Points Collected
 - Goal Every 200 ft
- 86% of sites contained vegetation

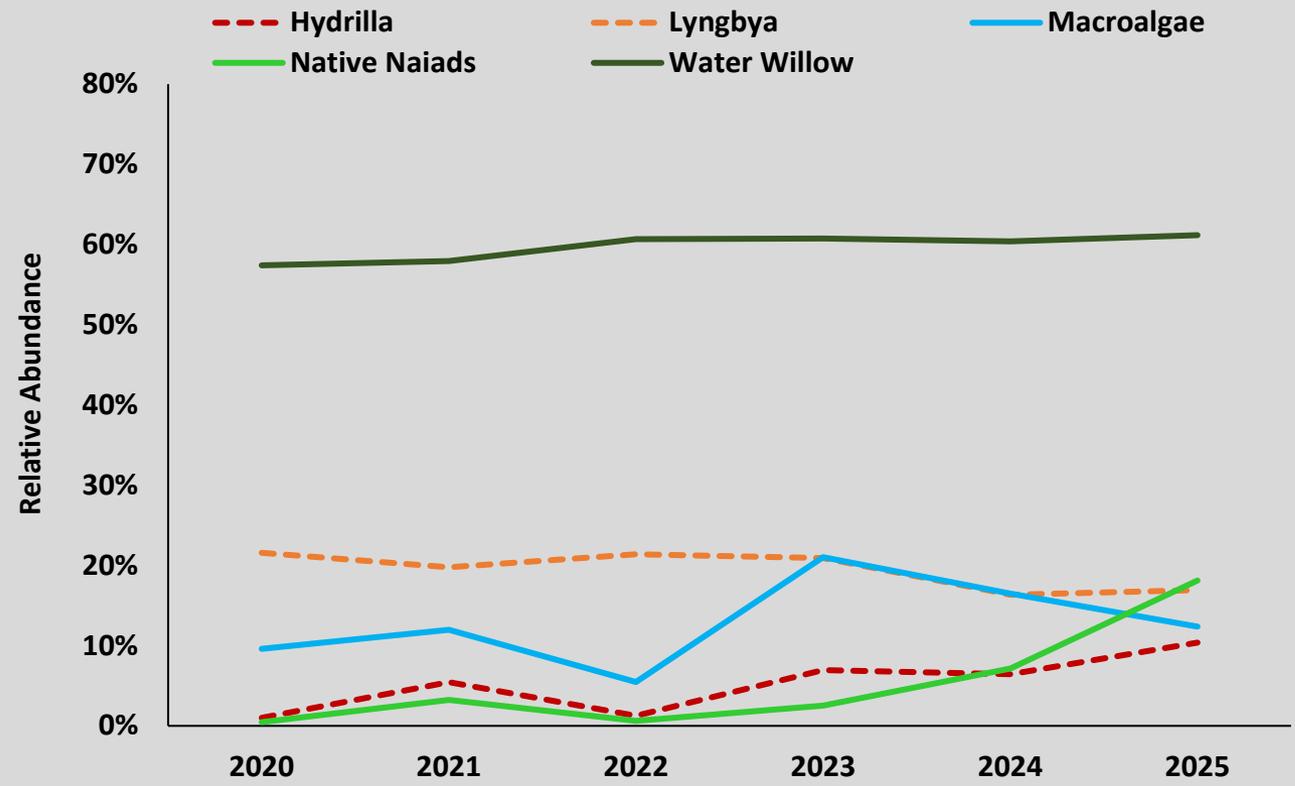


Aquatic Plant Community - 2025



Aquatic Plant Community

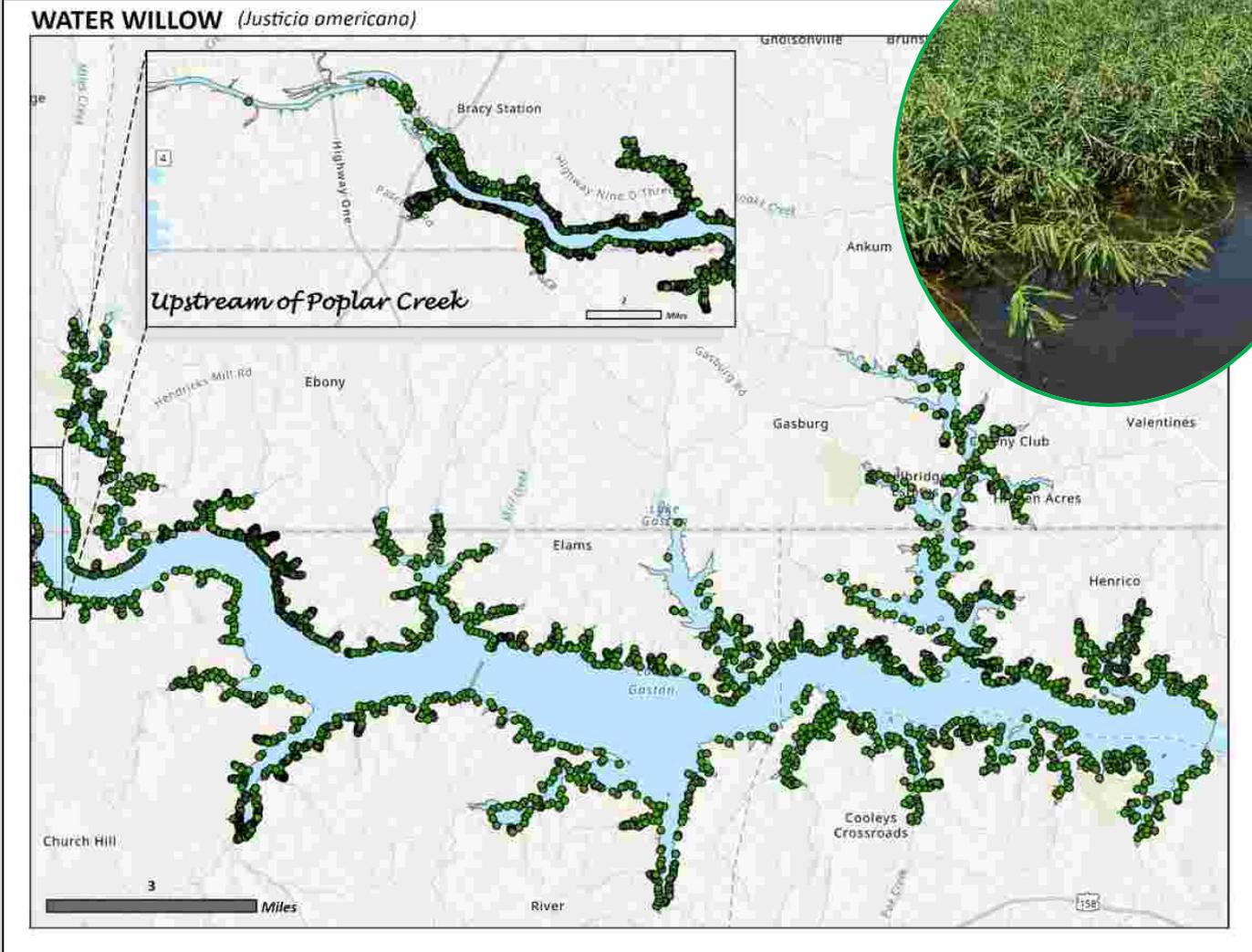
5 Most Abundant Species - 2025



Aquatic Plant Community

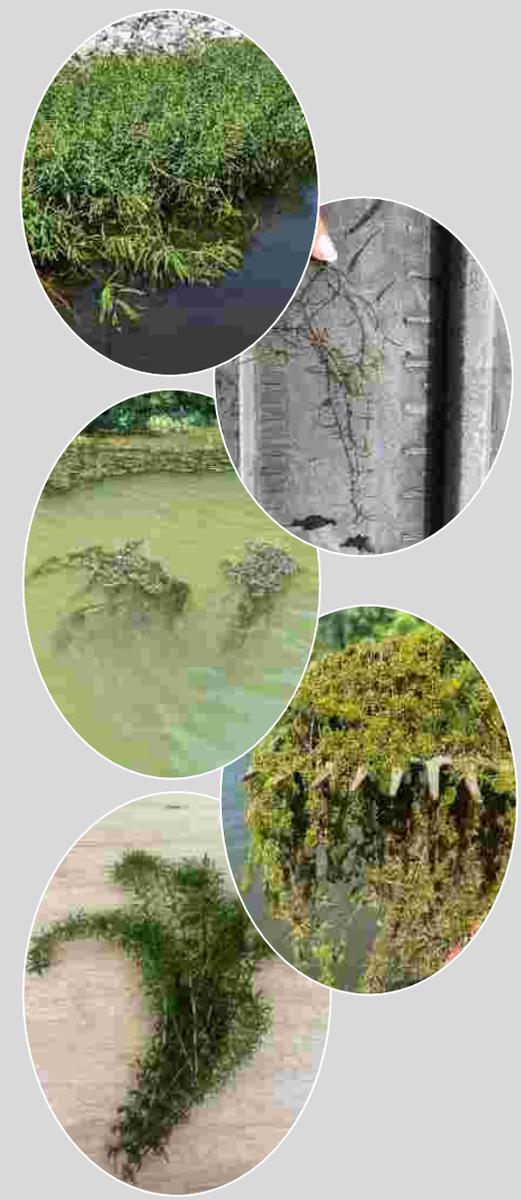
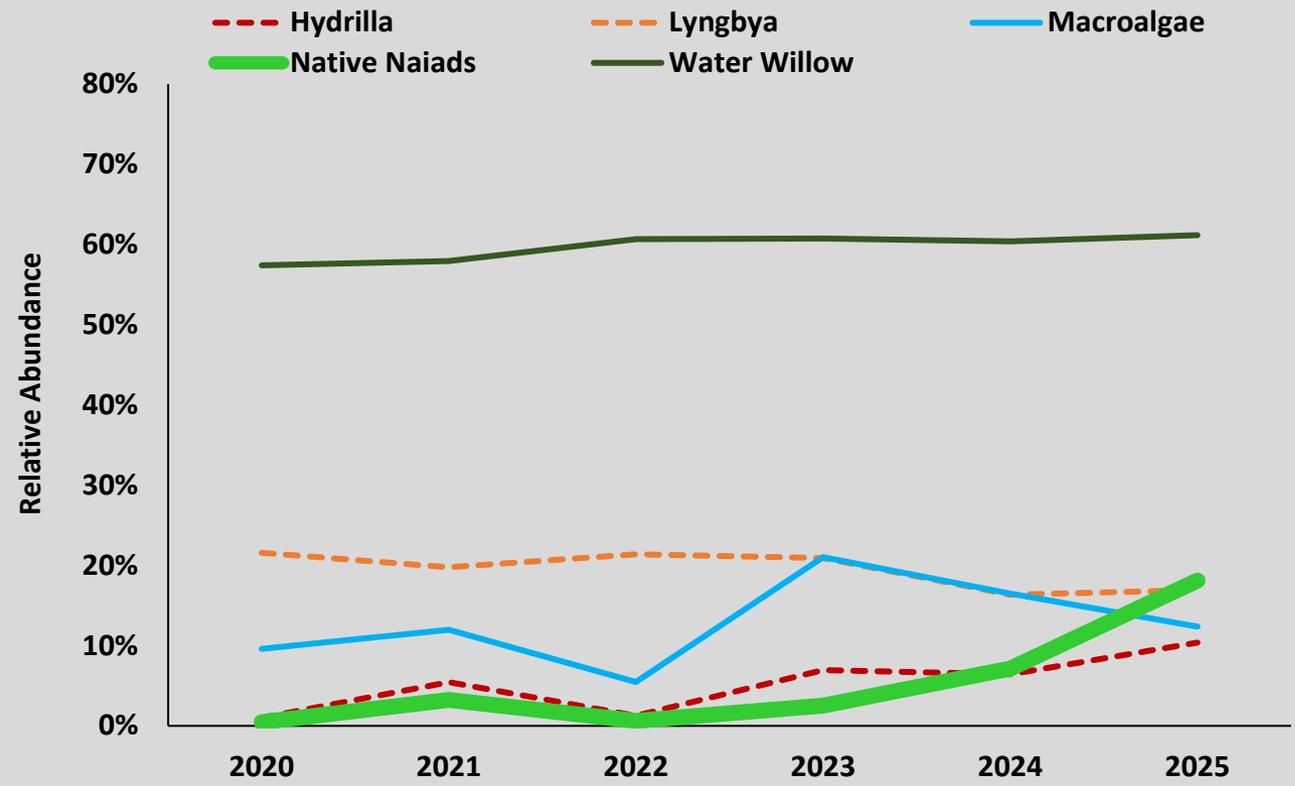
5 Most Abundant Species - 2025

1



Aquatic Plant Community

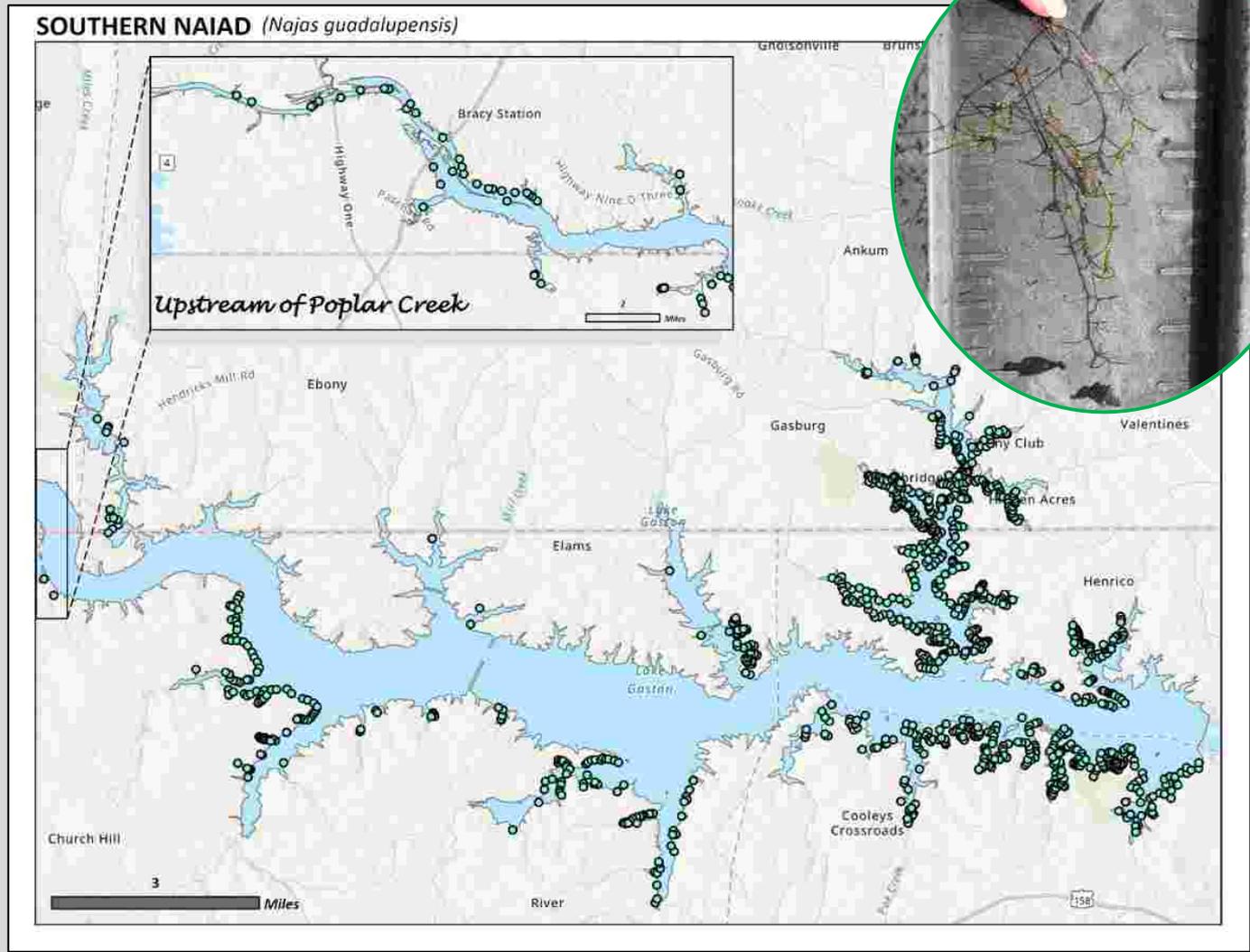
5 Most Abundant Species - 2025



Aquatic Plant Community

5 Most Abundant Species - 2025

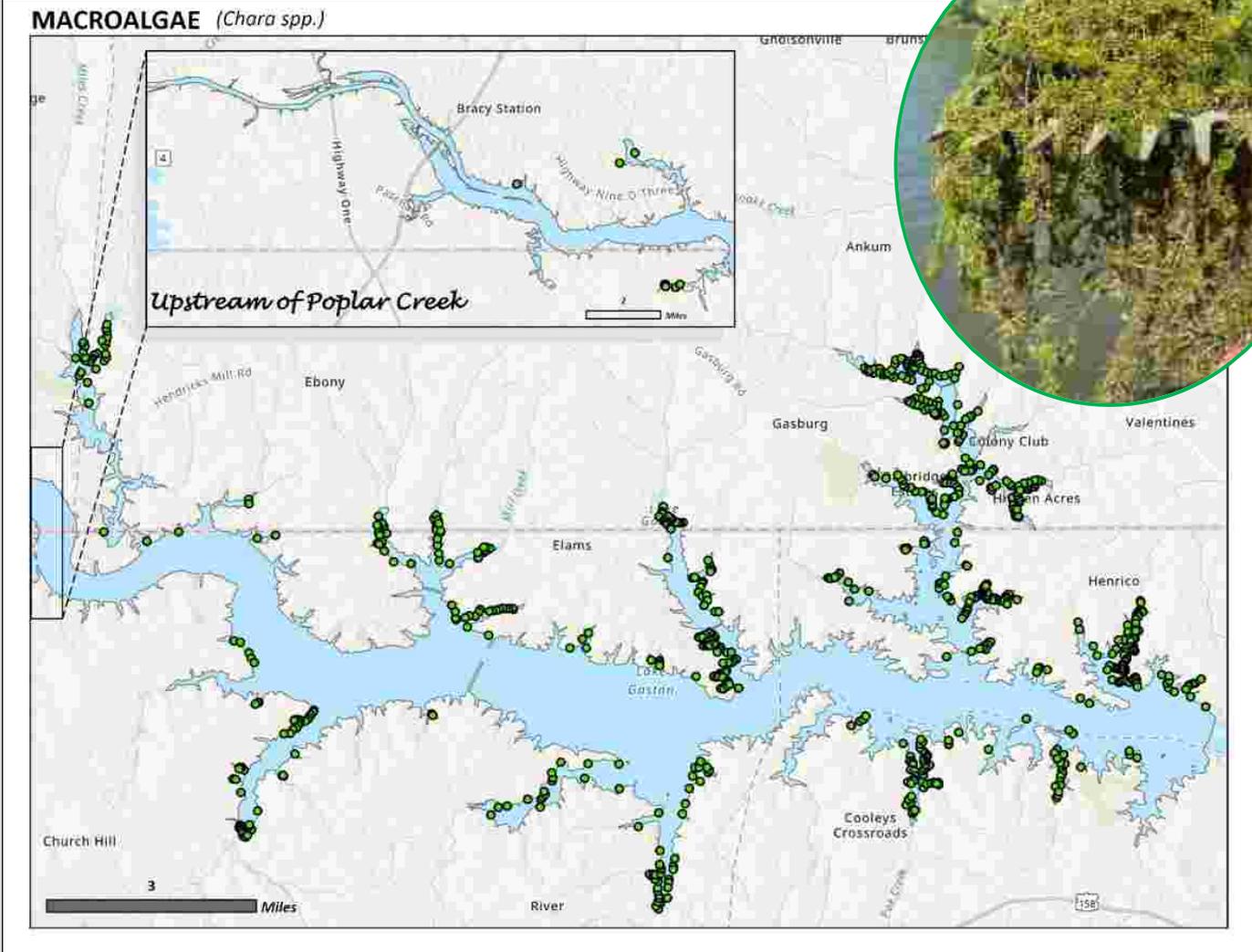
#2



Aquatic Plant Community

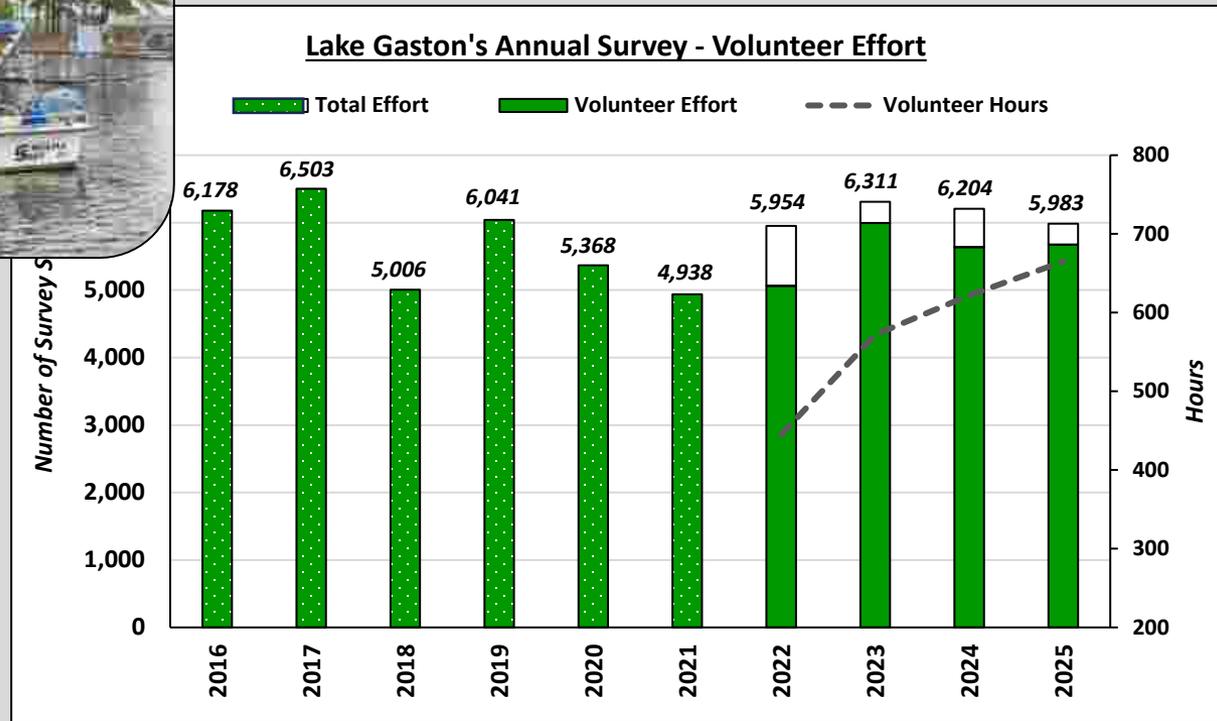
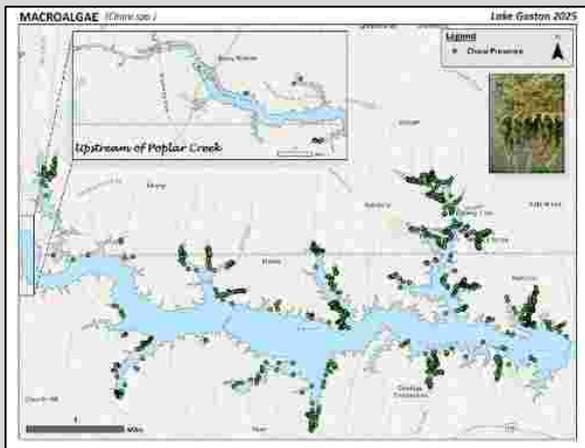
5 Most Abundant Species - 2025

#4



2026 TAG Recommendation

Continue funding and supporting volunteer/ NCSU survey



Hydrilla Management



Hydrilla Management

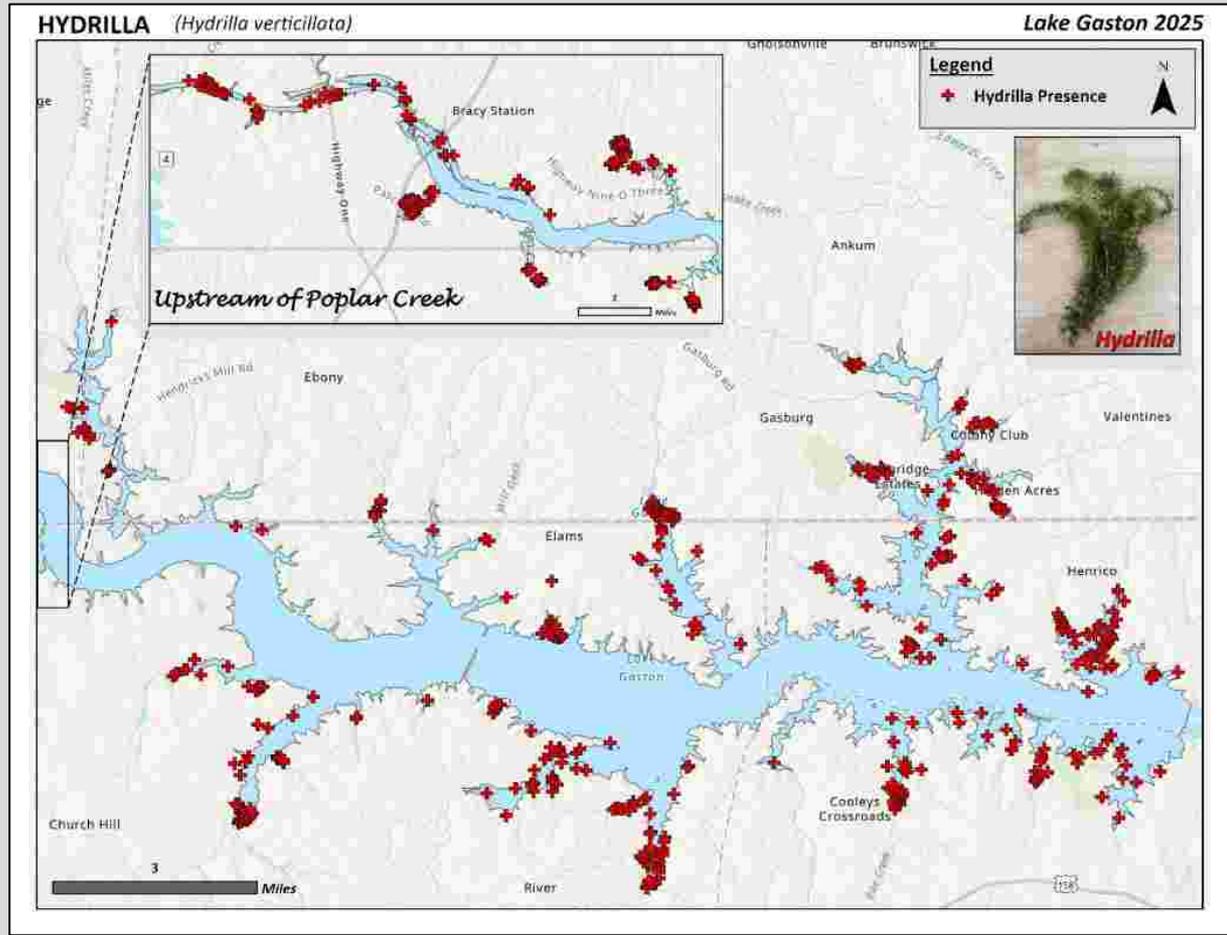
2025 Sonar / Vegetation Survey Results



Current Hydrilla Situation

Hydrilla Management

2025 Season Survey Results



5th most abundant species

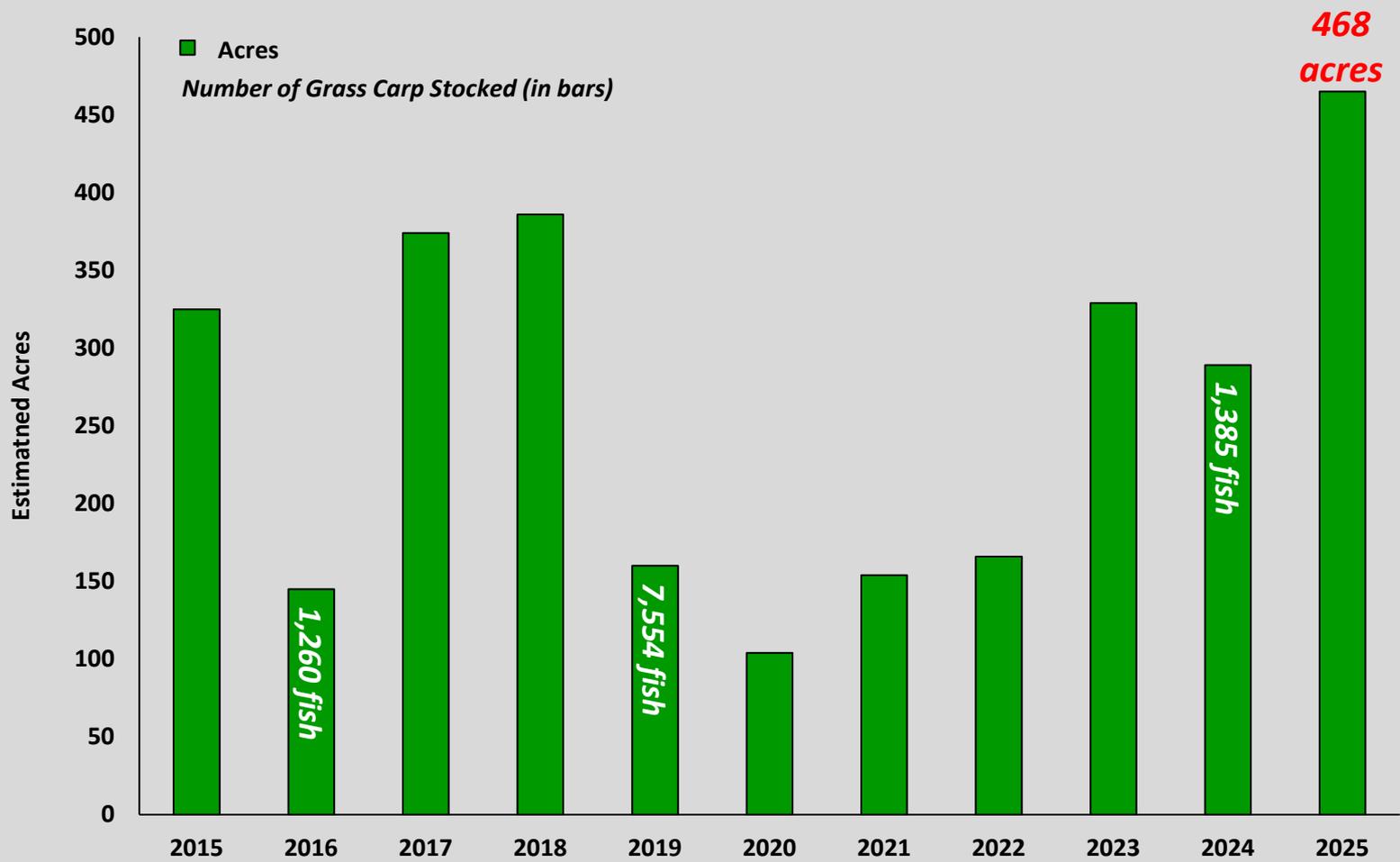


Total Vegetation: 10 %

Estimated Hydrilla Acreage: 468 acres

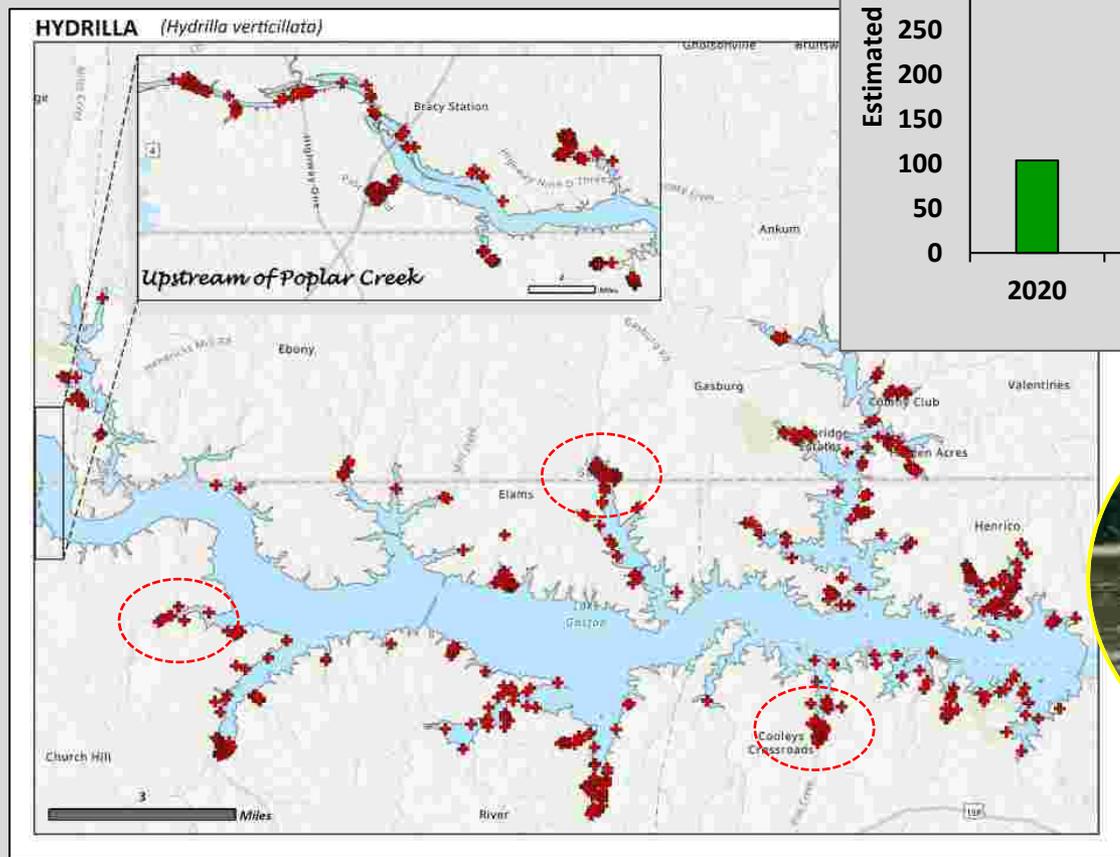
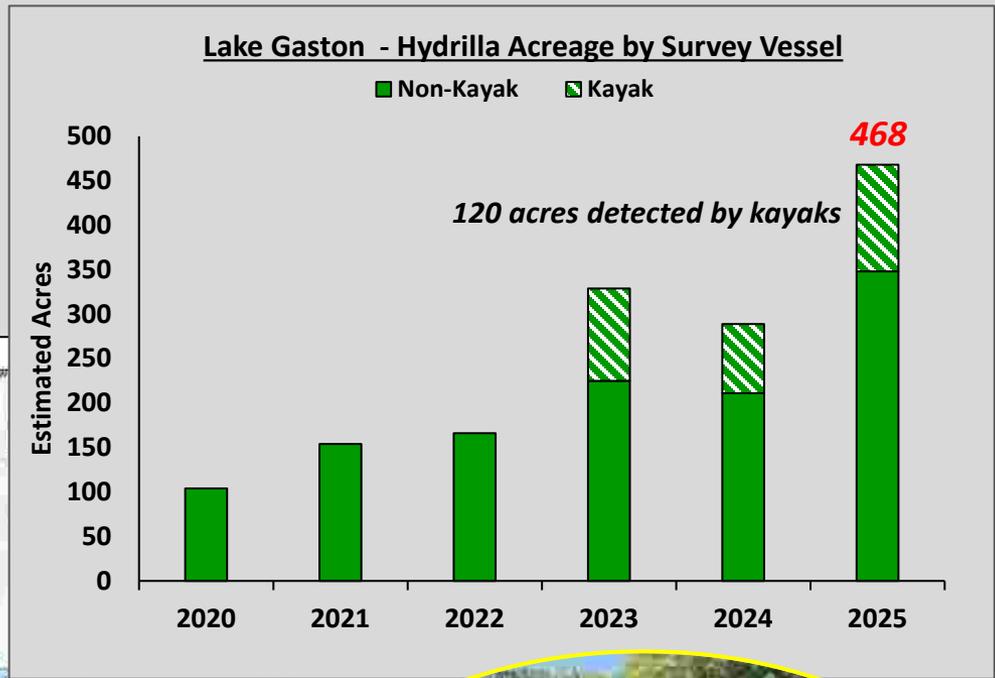
Hydrilla Management

Yearly Trends



Hydrilla Management

Yearly Trends



Hydrilla Management

2025 Tuber Bank Survey



Future Hydrilla Situation

Hydrilla Management

2025 Tuber Bank Survey



Creeks

Jimmys Creek

Timberline Shores

Cold Springs Branch

Lakeview

Lizard Creek

Big Stone House

Pretty Creek

Poe Creek

Woodland Hurst

Sledge Creek

Hamlin

Hubquarter

Lyons Creek

Poplar Creek

Hawtree

Smith Creek

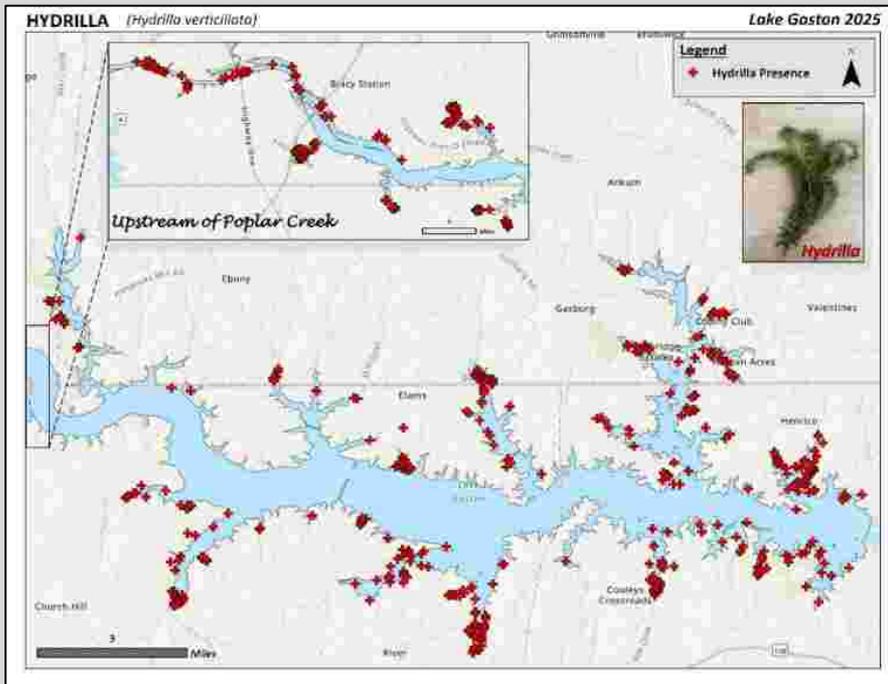
Flats

Cottons Creek

No Major Increases
in the Tuber Bank

Hydrilla Management

2026 Proposed Treatment



2026 TAG Recommendation

Maximum Treatment Acres: **408 acres**

Grass Carp Stocking Number: **1,341**

Recommendations Based On:

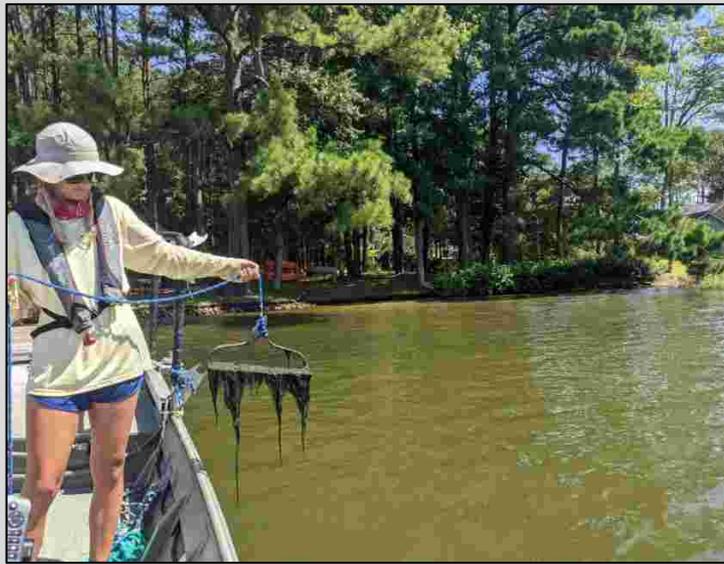
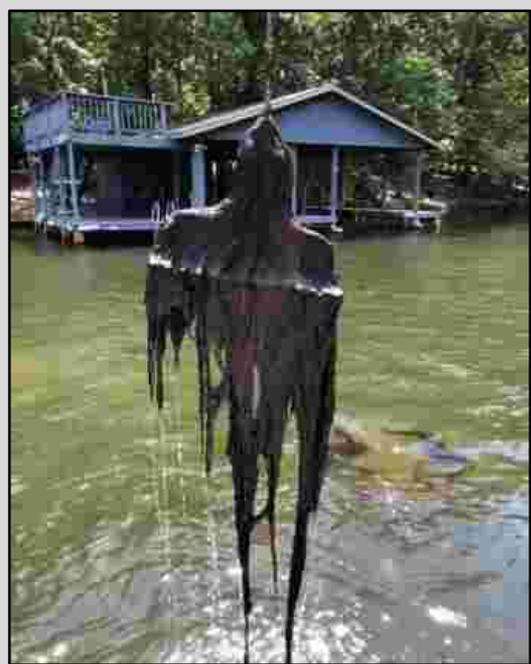
Treatment Acres = Total Manageable Acres

Grass Carp Numbers are modeled based on:

- Hydrilla Biomass Estimates
- Grass Carp Mortality
- Estimated Grass Carp Population

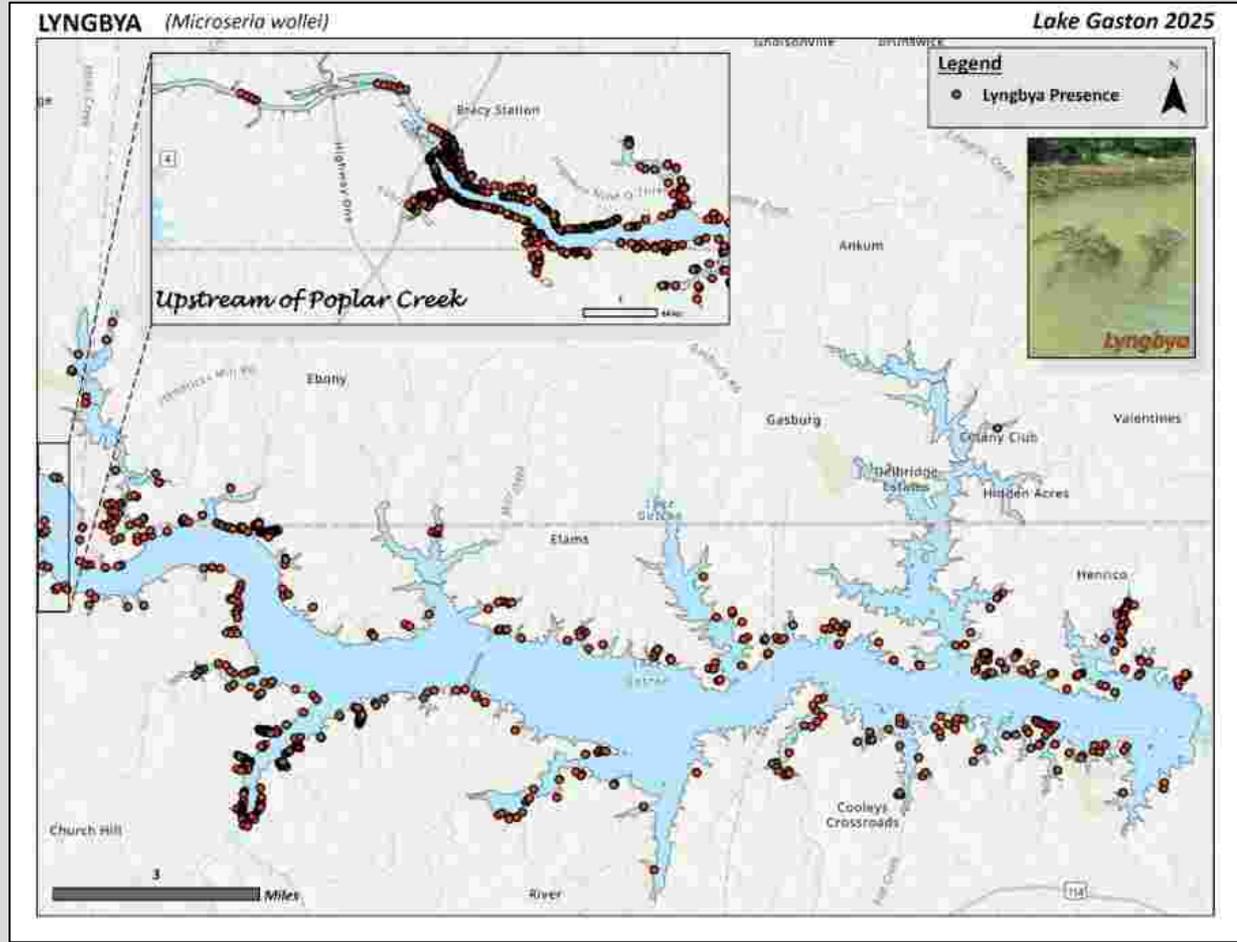


Lyngbya Management



Lyngbya Management

2025 Season Survey Results



5th most abundant species



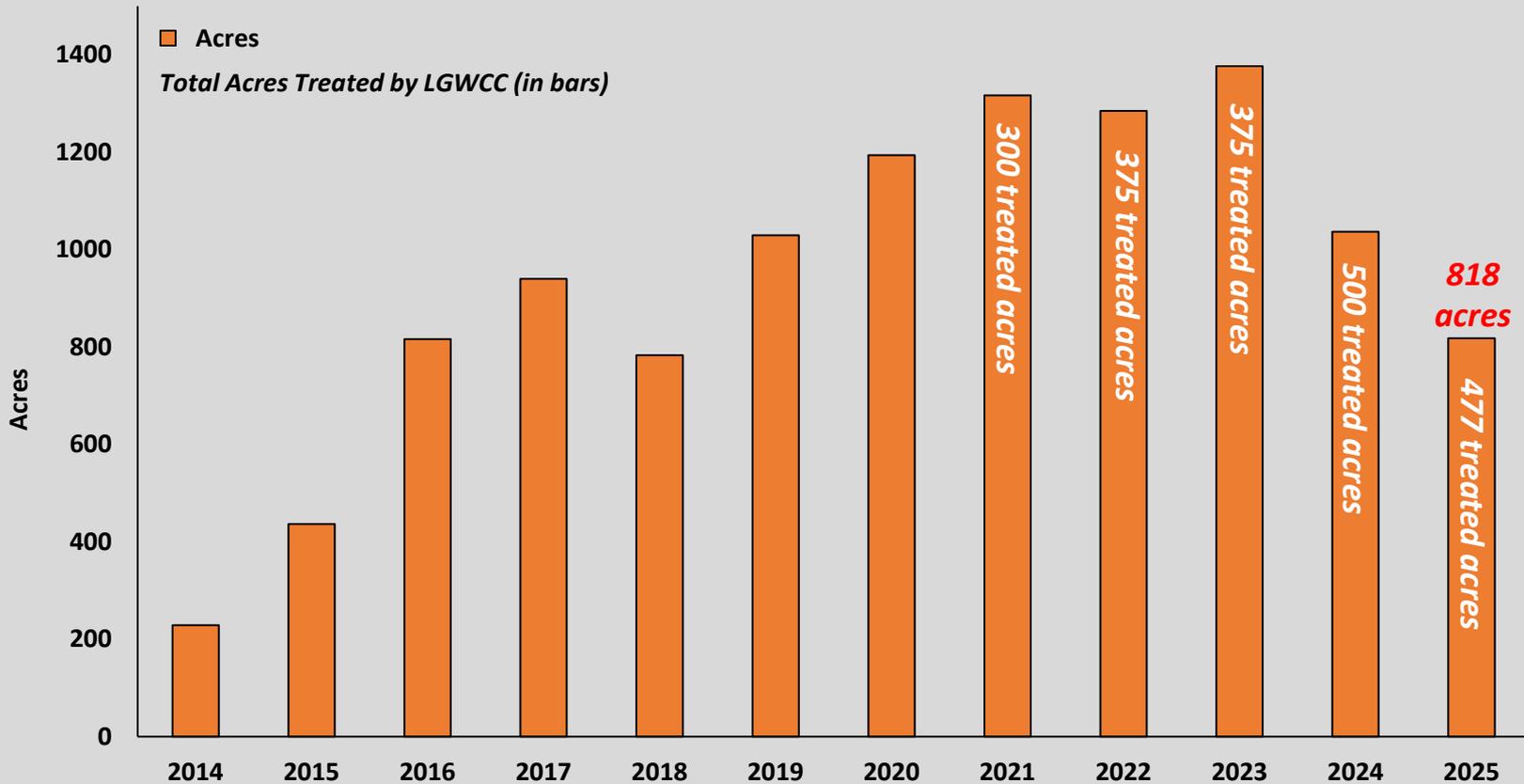
Total Vegetation: 17 %

Estimated Lyngbya Acreage: **818 acres**

Lyngbya Management

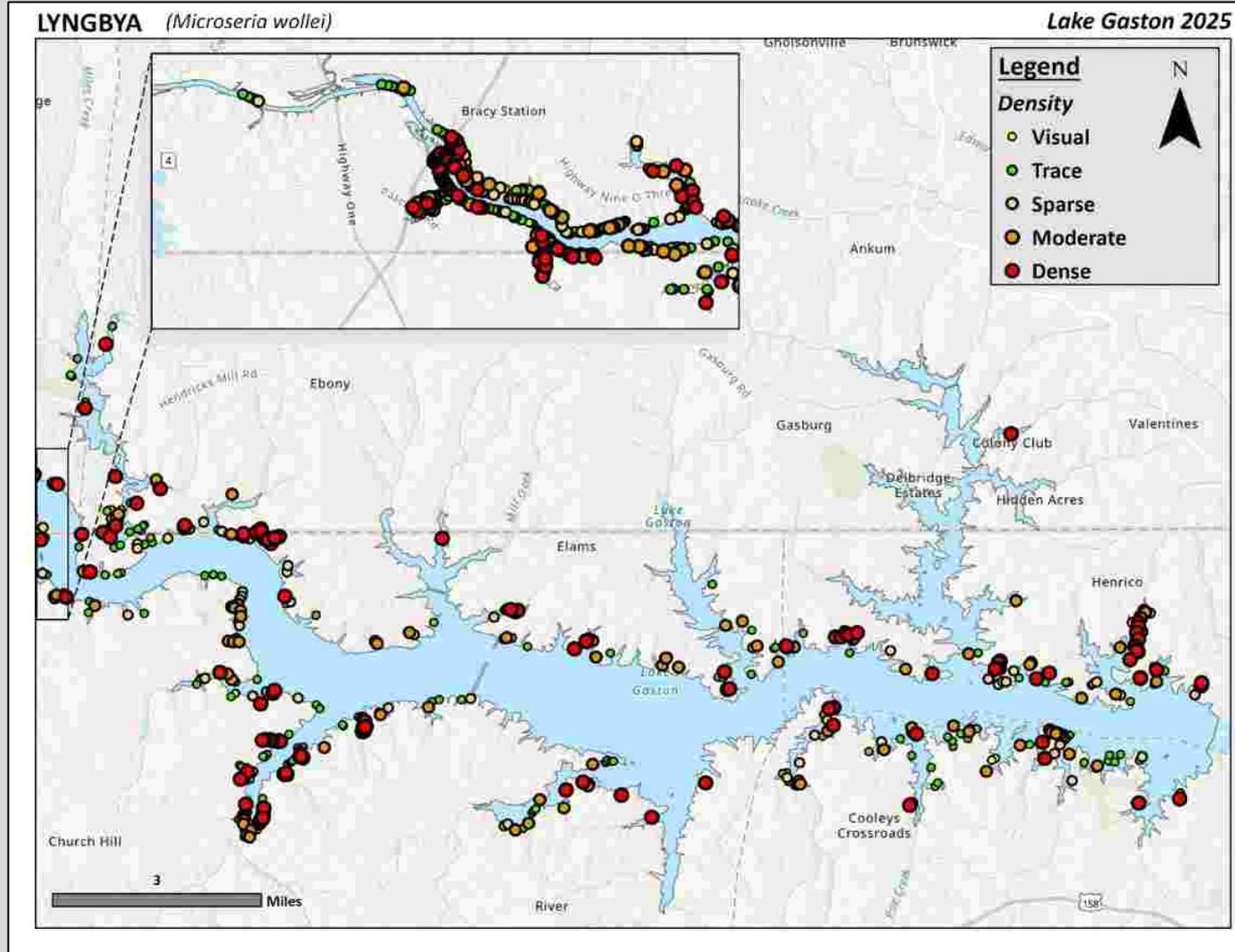
Yearly Trends

- Decrease in acreage (2023 – 2024): **340 acres**
- Decrease in acreage (2024 – 2025): **219 acres**



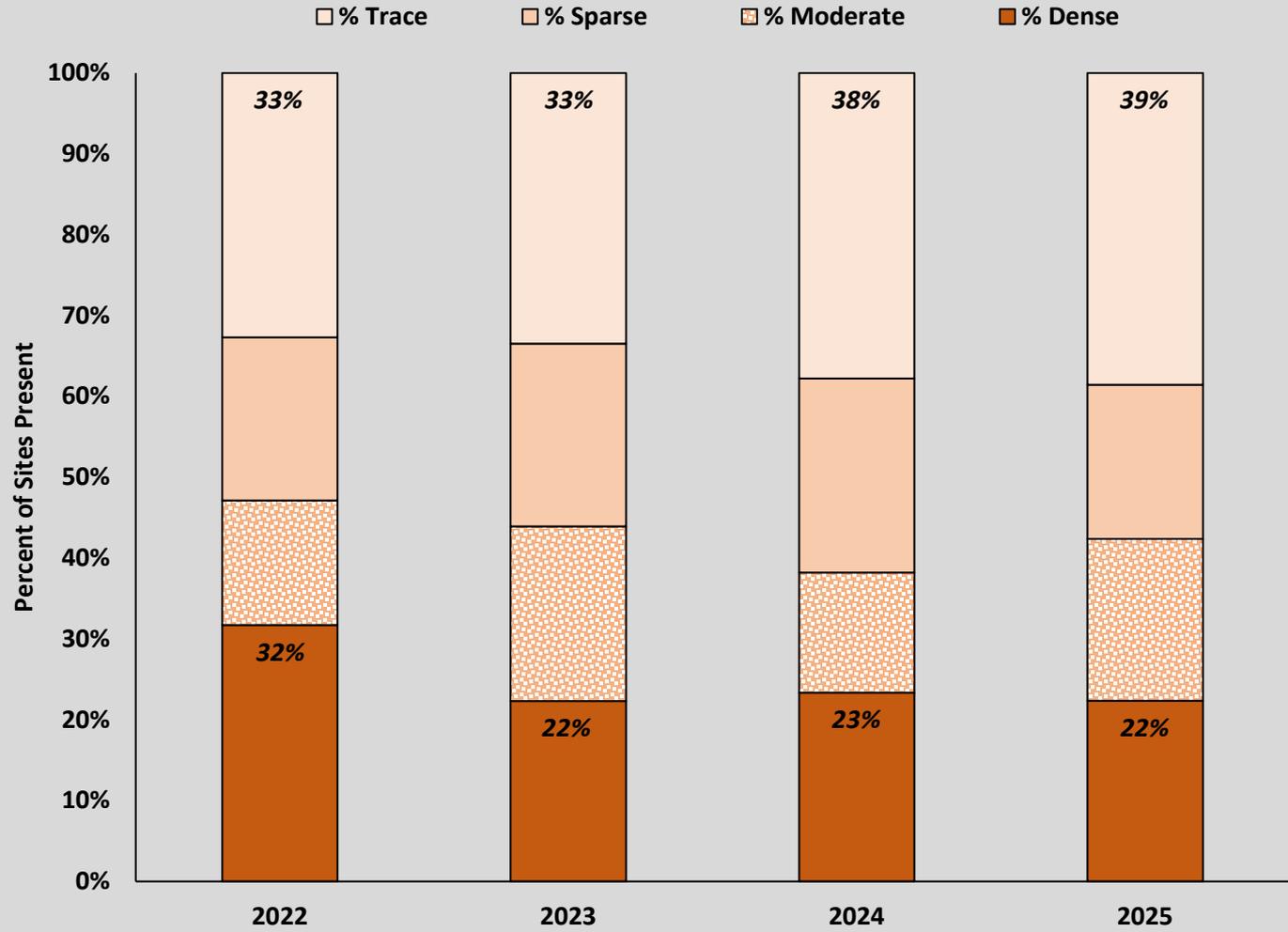
Lyngbya Management

Benthic Mat Densities



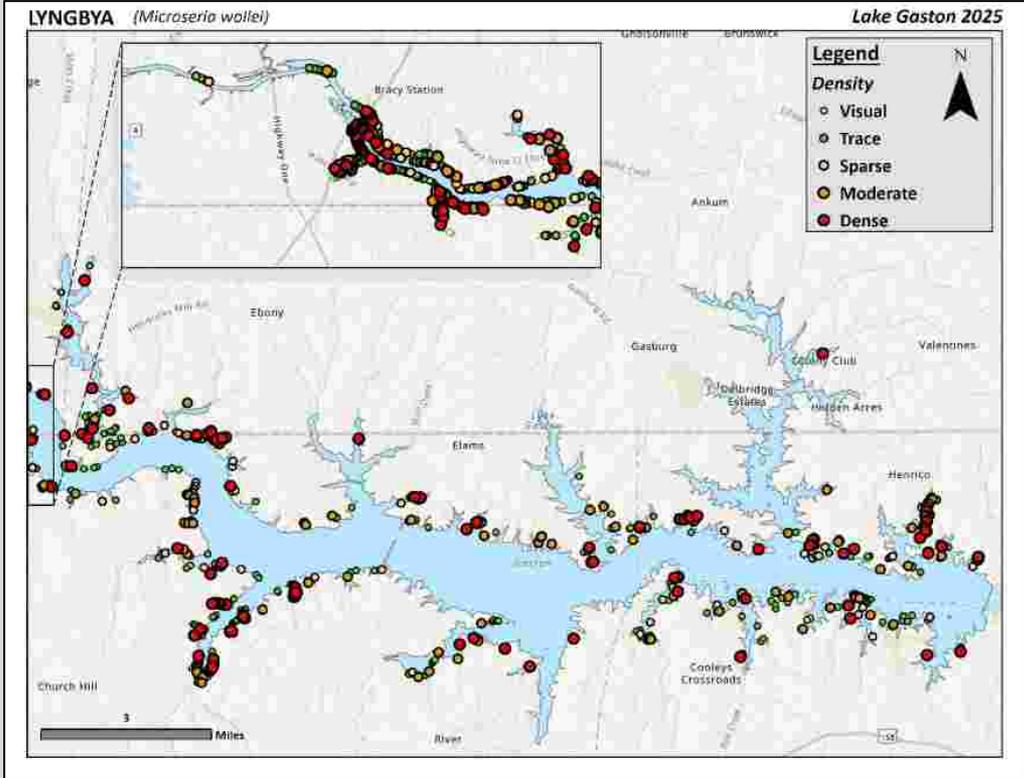
Lyngbya Management

Trends in Benthic Mat Densities



Lyngbya Management

2026 Proposed Treatment



2026 TAG Recommendations

Maximum Treatment Acres: **500 acres**
 &
 Continue to Monitor Efficacy of
 Treatment Sites



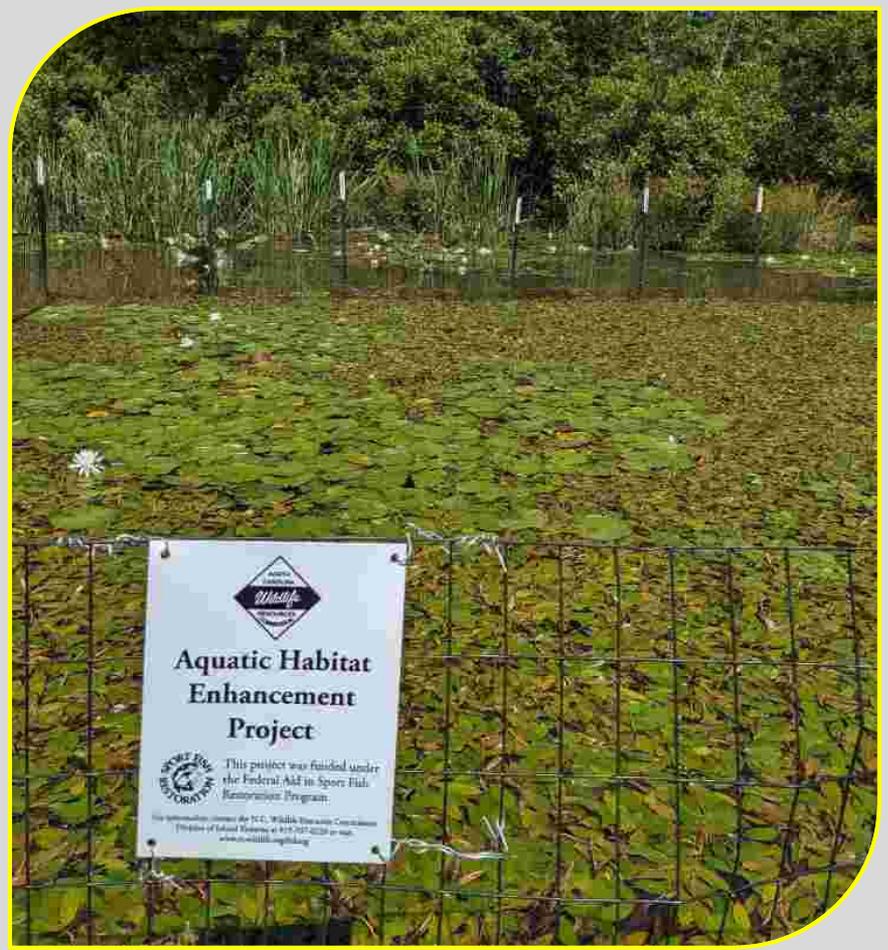
Revegetation Efforts



Mark Fowlkes / NCWRC

2026 TAG Recommendation

Continue to encourage partnerships and collaborations



Potential Research Topics

2026 TAG Recommendation

Continue funding research related to:

- Native Vegetation Expansion*
- Hydrilla Management*
- Lyngbya Management*



2026 TAG Recommendations

Overall Monitoring Efforts

- Continue funding and supporting volunteer survey

Hydrilla Management

- Treat no more than 408 acres
- Stock 1,341 grass carp

Lyngbya Management

- Treat no more than 500 acres
- Continue monitoring efficacy of treatment sites

Revegetation Efforts

- Continue to encourage partnerships and collaborations

Research Needs

- Continue funding research related to:
 - Native Vegetation Expansion
 - Hydrilla Management
 - Lyngbya Management

Future Research Needs

Potential Project Ideas

Native Vegetation Expansion

1. Southern Naiad Growth Factors
 - a) Is sprouting timing influenced by environmental factors?
 - Temperature, sunlight exposure, soil type, etc.
2. Addressing Mixed Stands of Southern Naiad / Hydrilla / Eel Grass
 - a) Growth competition among all three species
 - b) Management of mixed stands (Herbicide Efficacy)

Hydrilla Management

3. Shallow Water Feeding Habits for Grass Carp
 - a) Are they feeding in those shallow waters identified by the kayak survey?
 - How to address these areas in the stocking model.

Lyngbya Management

4. Continue Current Toxin Project (TBD on based on ongoing data analysis)
5. Efficacy of Algaecide Rates Currently Being Used in Treatment Program
6. Evaluate Potential Ecological Impacts Related to Copper Accumulation in Hydrosol

Future Research Needs

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Native Vegetation Expansion

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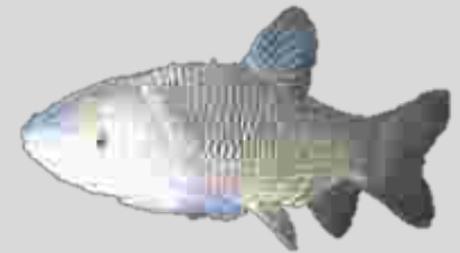
Future Research Needs

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Hydrilla Management

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Future Research Needs

Potential Project Ideas

Lyngbya Management

4. **Continue Current Toxin Project (TBD on based on ongoing data analysis)**
5. **Efficacy of Algaecide Rates Currently Being Used in Treatment Program**
 - Evaluate lyngbya response to varying algaecide rates
6. **Evaluate Potential Ecological Impacts Related to Copper Accumulation in Hydrosols**
 - Evaluate concentration of copper in hydrosol collected within treatment areas

