

Lake Gaston Stakeholders Group Meeting February 14th, 2024



Jessica R. Baumann

**Extension Associate, Lake Gaston
Aquatic Plant Management Program**

AQUATIC PLANT MANAGEMENT

Outline

1. Overall Monitoring Efforts

- Vegetation Survey

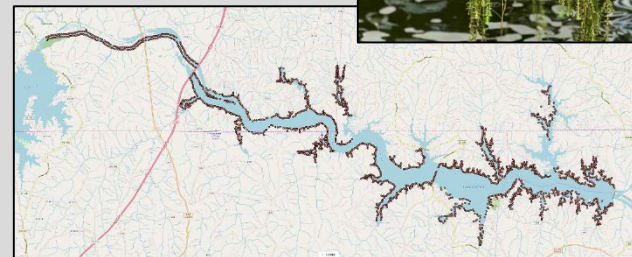
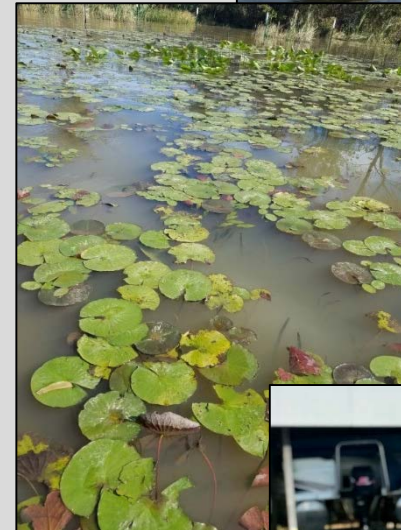
2. Monitoring & Treatment Efforts

- Hydrilla
 - Survey and Treatments
- Lyngbya
 - Survey and Treatments

3. Revegetation Efforts

- Native Vegetation Cages

4. 2024 TAG Recommendations



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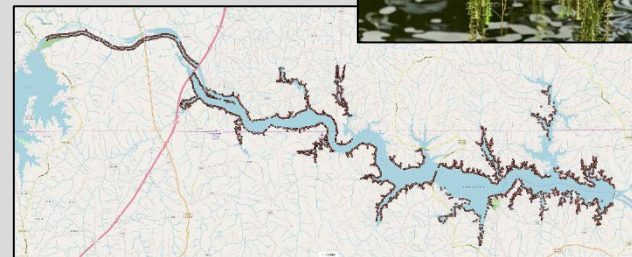
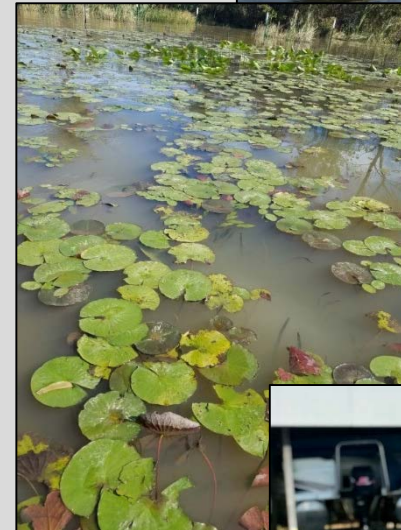
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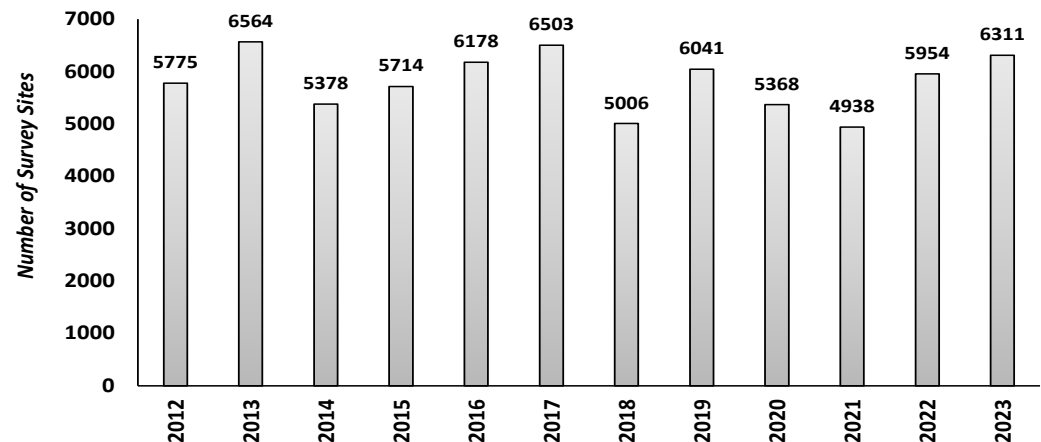


Fall Volunteer Survey

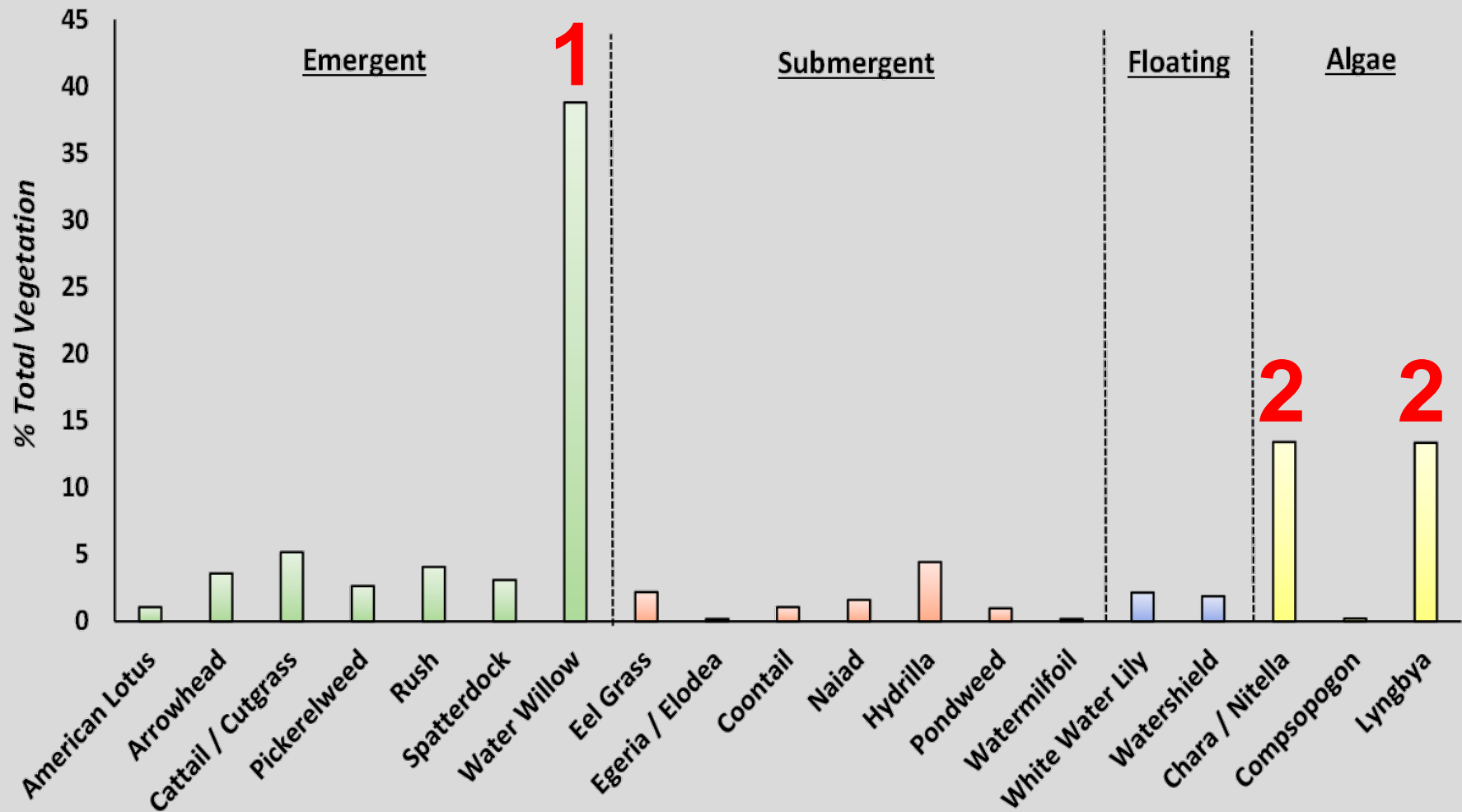
- 150+ Volunteers
- Conducted from August 19th to Nov. 3rd
- 6,311 Points Collected
 - Goal Every 200 ft
- 82% of sites contained vegetation



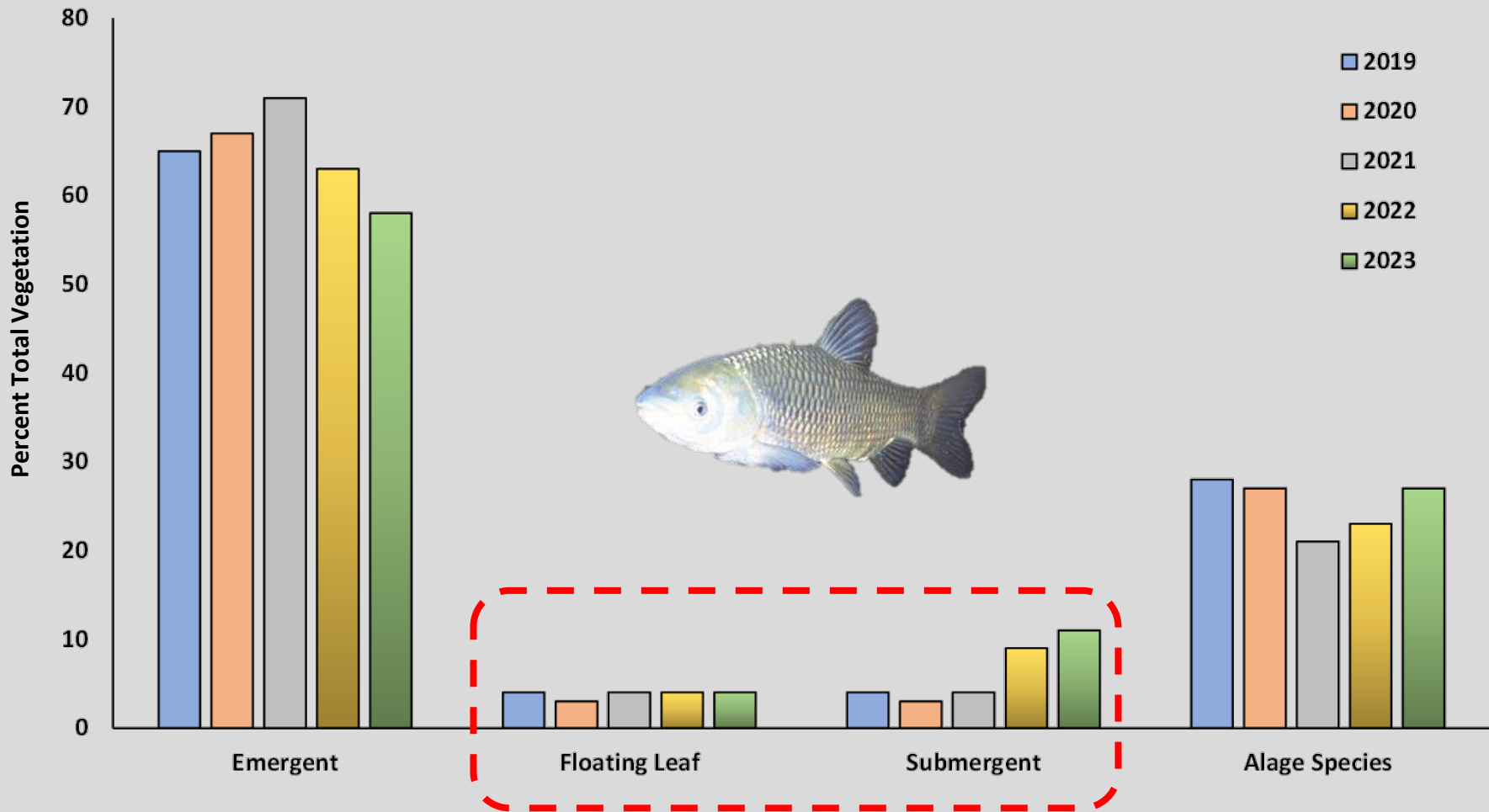
Total Number of Survey Sites - By Year



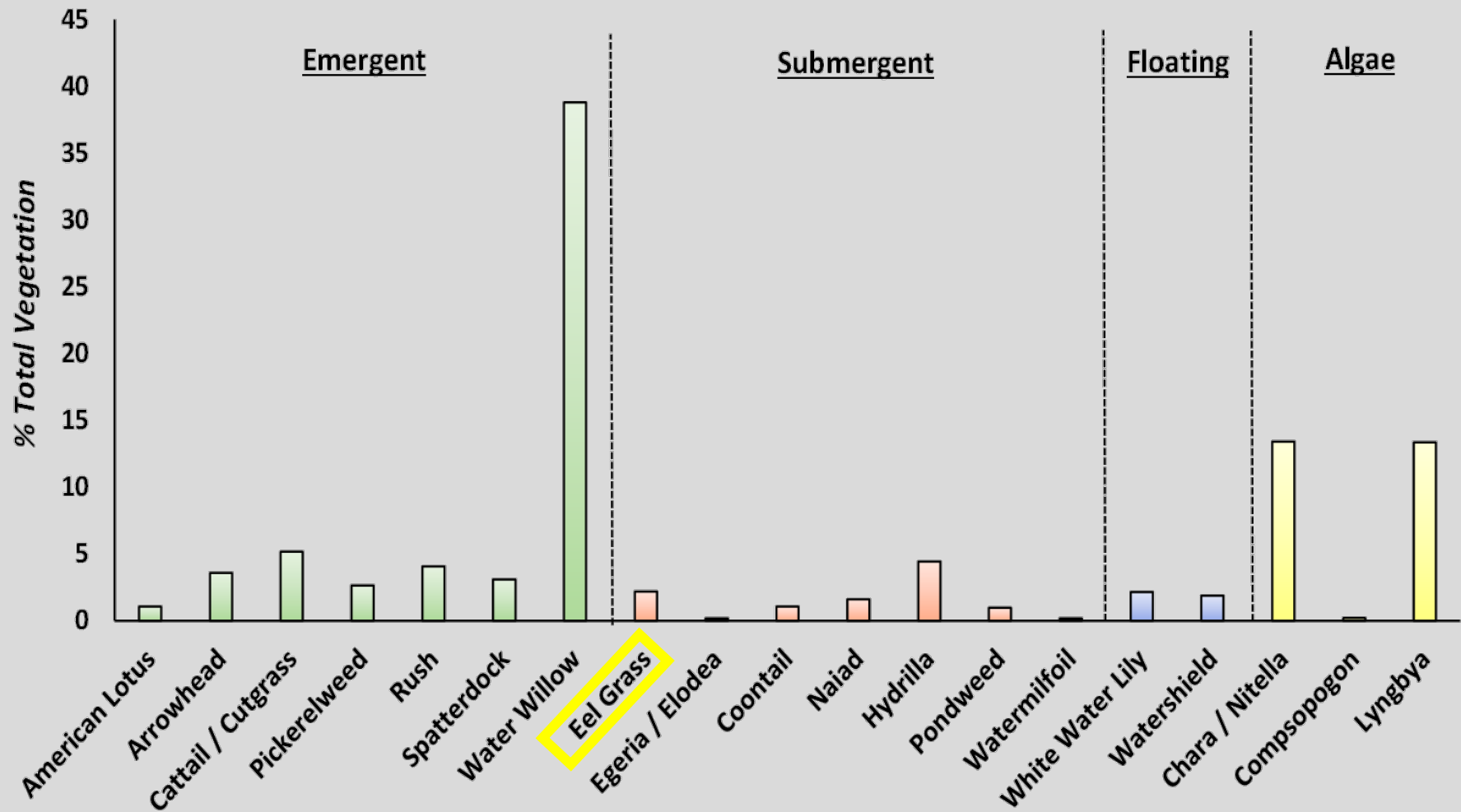
2023 Aquatic Plant Community



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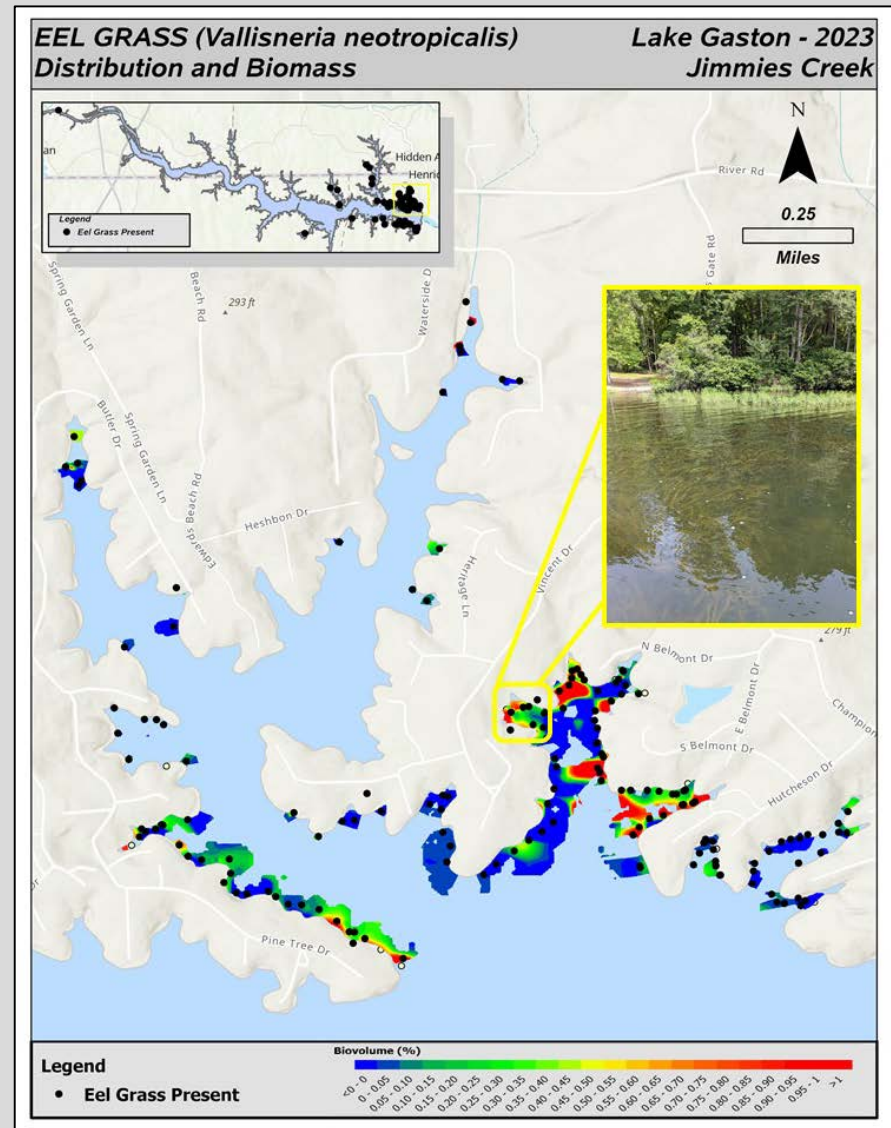
2023 Aquatic Plant Community



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Eel Grass

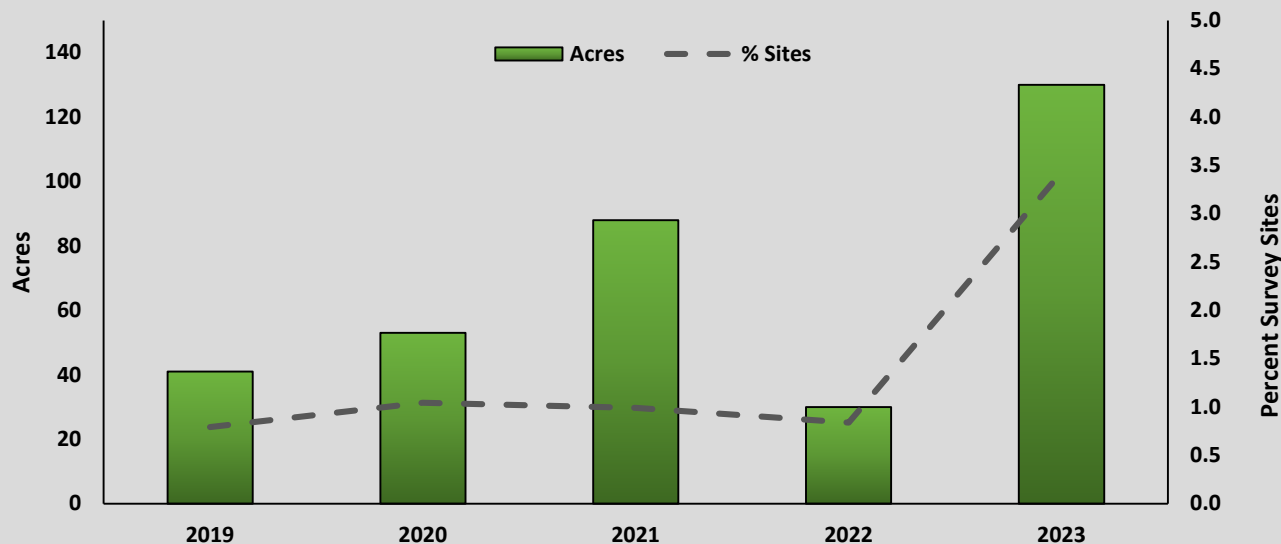
- Increased complaints from the Jimmie Creek area
- Protected by Dominion's Shoreline Management Plan
- Genetic testing confirmed it's *V. neotropalis* (native)



2023 Aquatic Plant Community

Eel Grass

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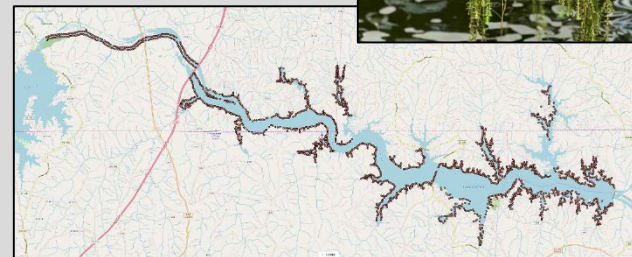
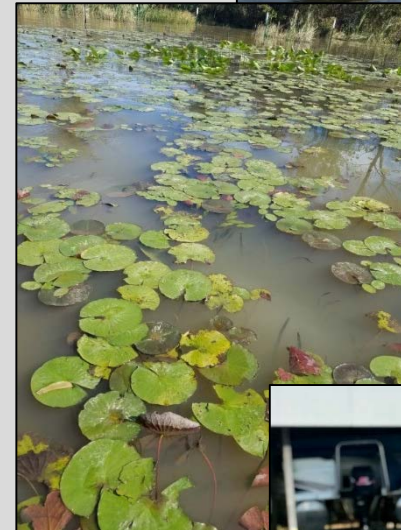
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Hydrilla Management

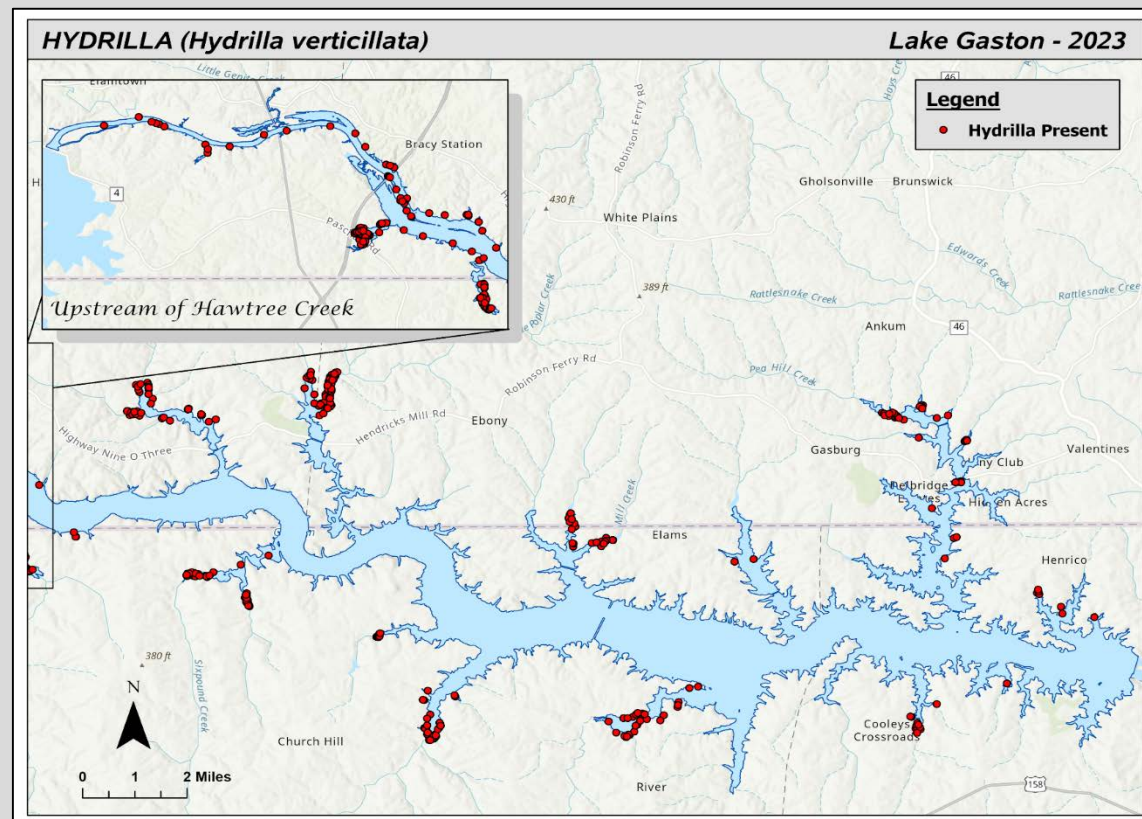


Hydrilla Survey

2023 Survey Results

Total Vegetation: 4 %

Estimated Hydrilla Acreage: **329 acres**

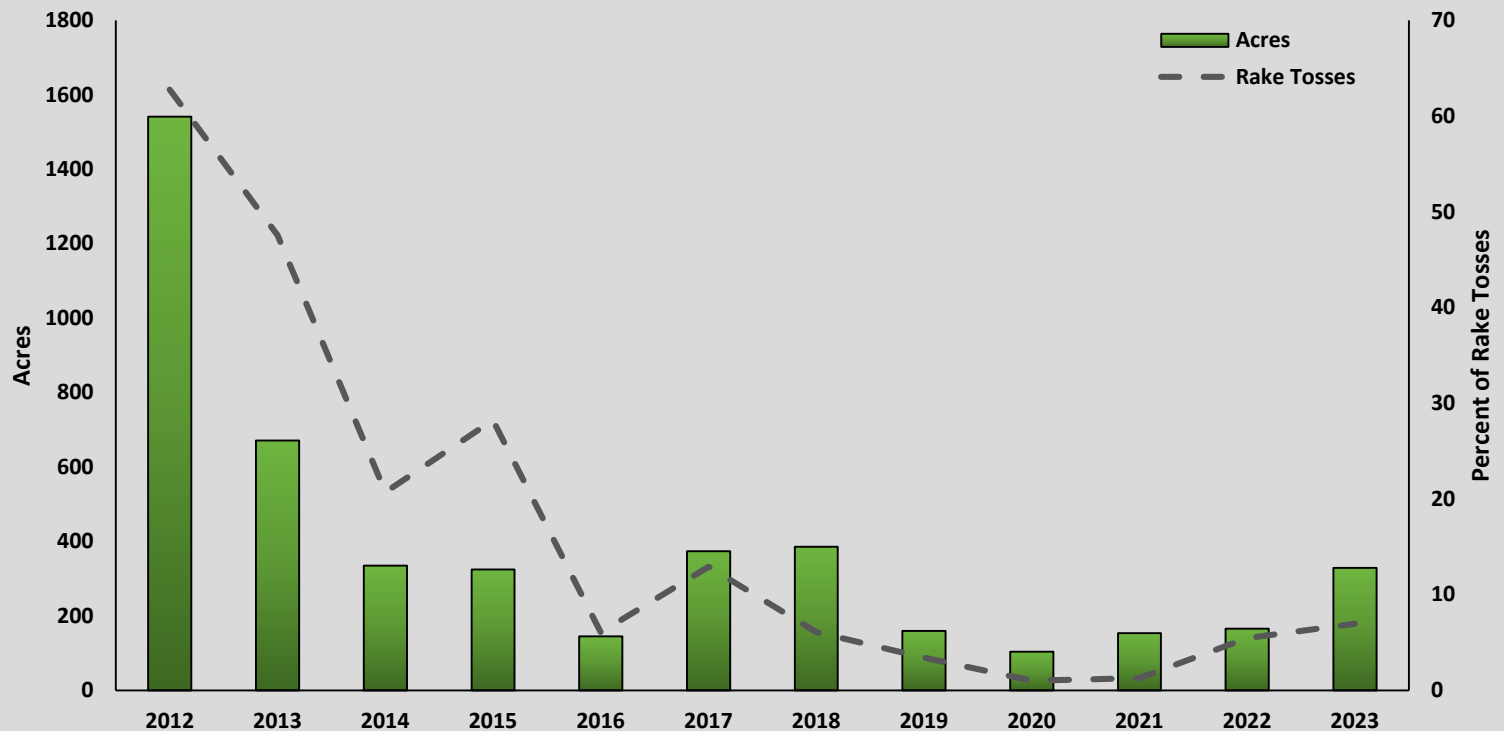


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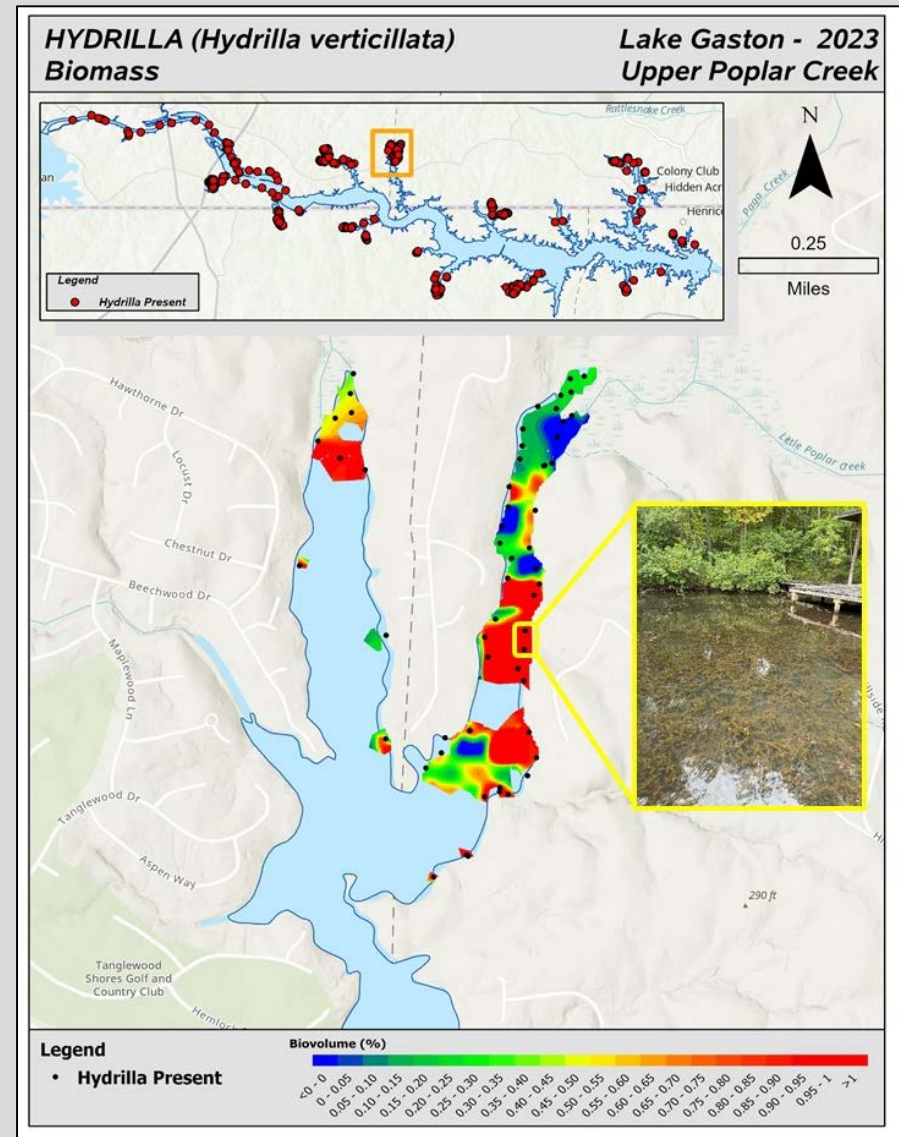


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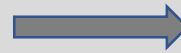
Hydrilla Treatments

2023 Survey Results

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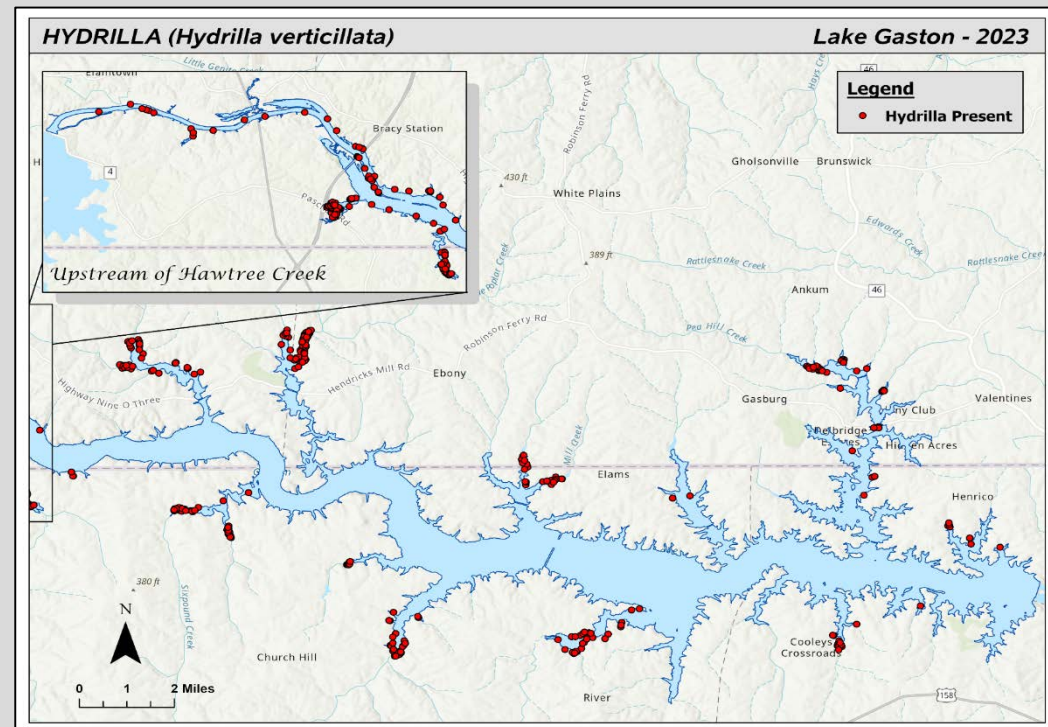
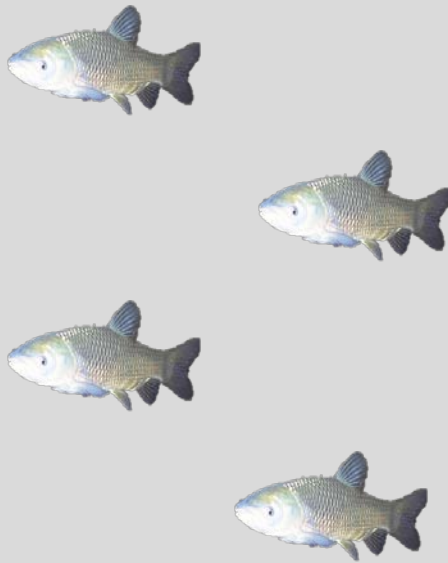
Overall Low Tuber Density in 2023



2024 Recommendation

Maximum Treatment Acres: **198 acres**

Grass Carp Stocking Number: **1,385**



Lyngbya Management

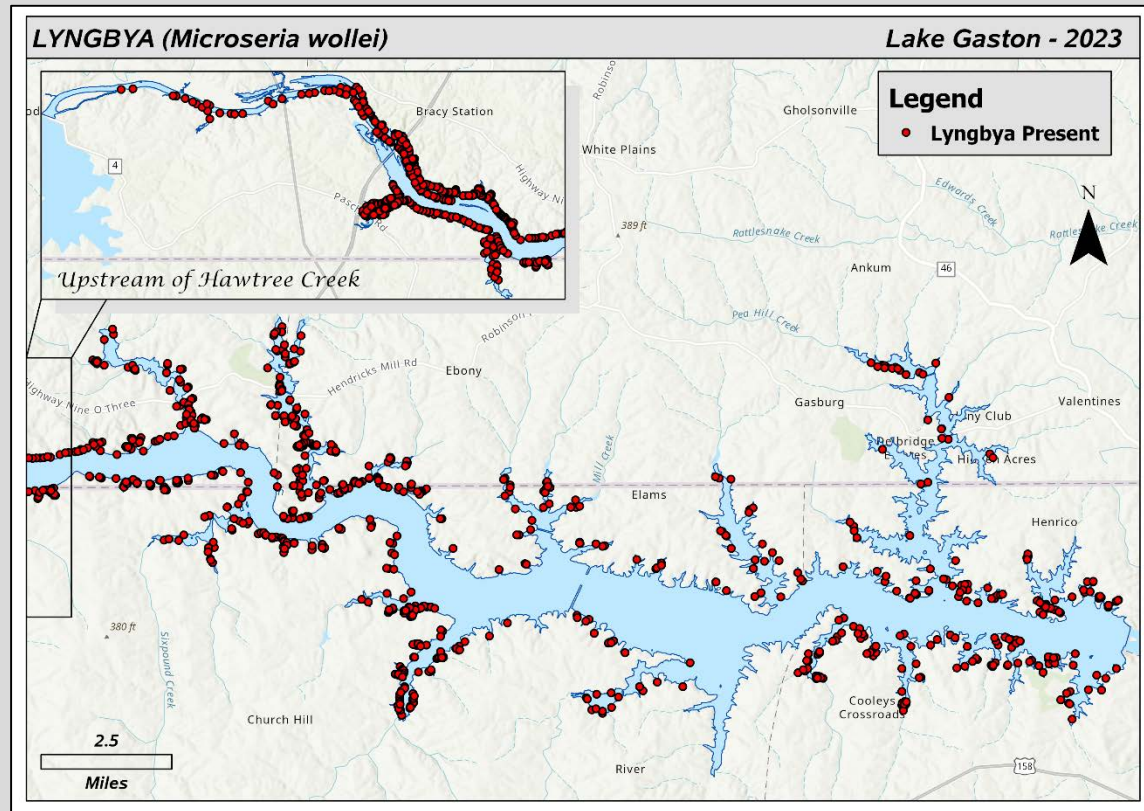


Lyngbya Survey

2023 Survey Results

Total Vegetation: 10 - 13 %

Estimated Lyngbya Acreage: **1,134 – 1,377 acres**

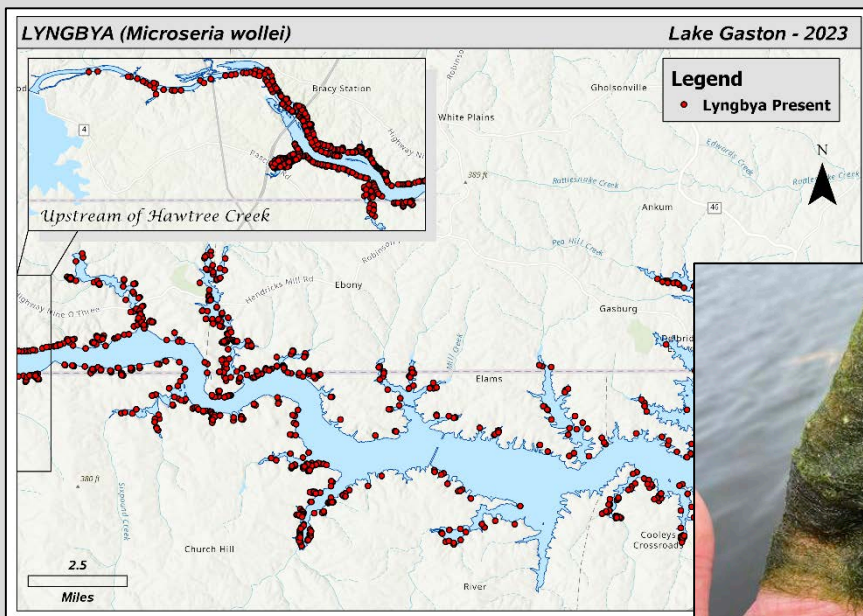


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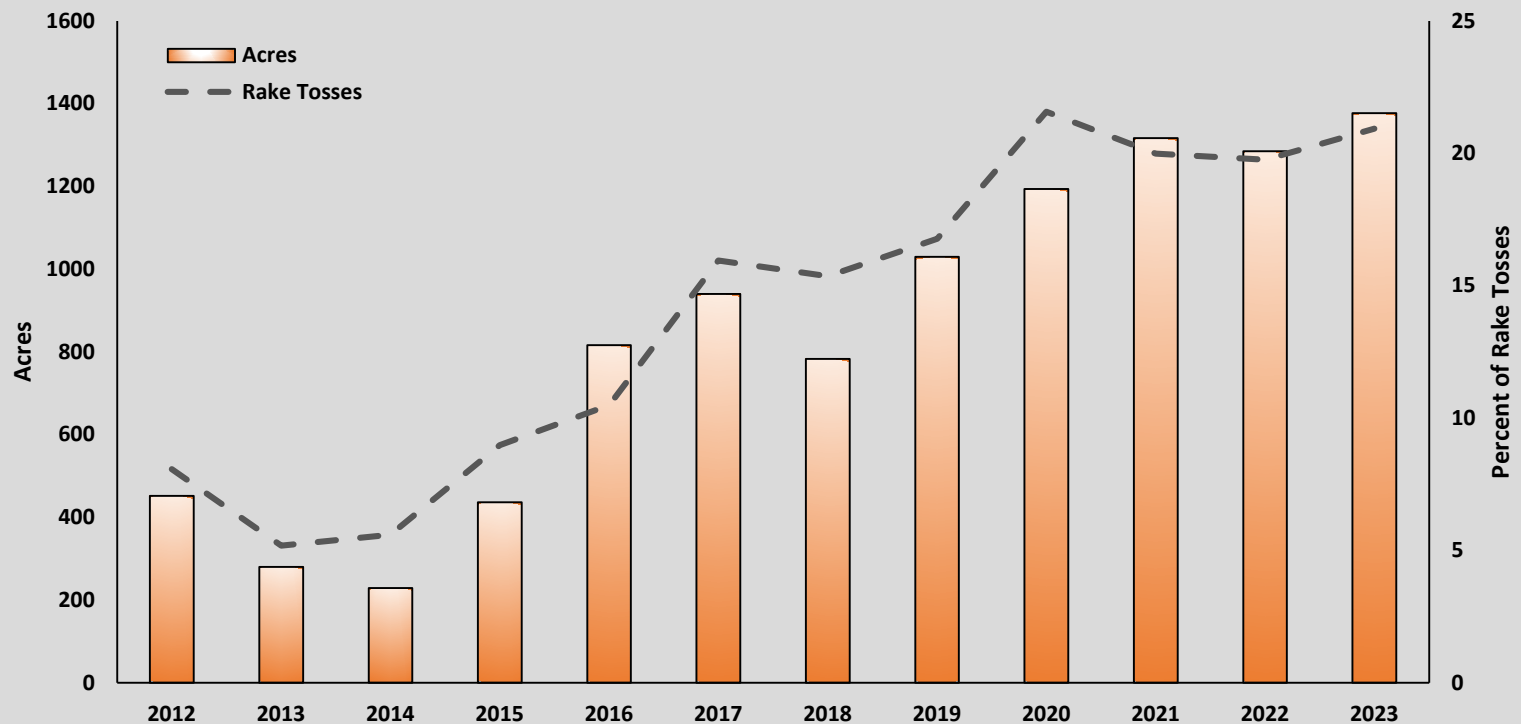
- Range this year because of increased detection of Cladophra
 - Native filamentous algae
 - Difficult to visually distinguish from lyngbya
 - Doesn't form dense benthic mats
- Higher acreage estimate
 - All sites
- Lower acreage estimate
 - Removed sites with trace lyngbya growth

Lyngbya Survey

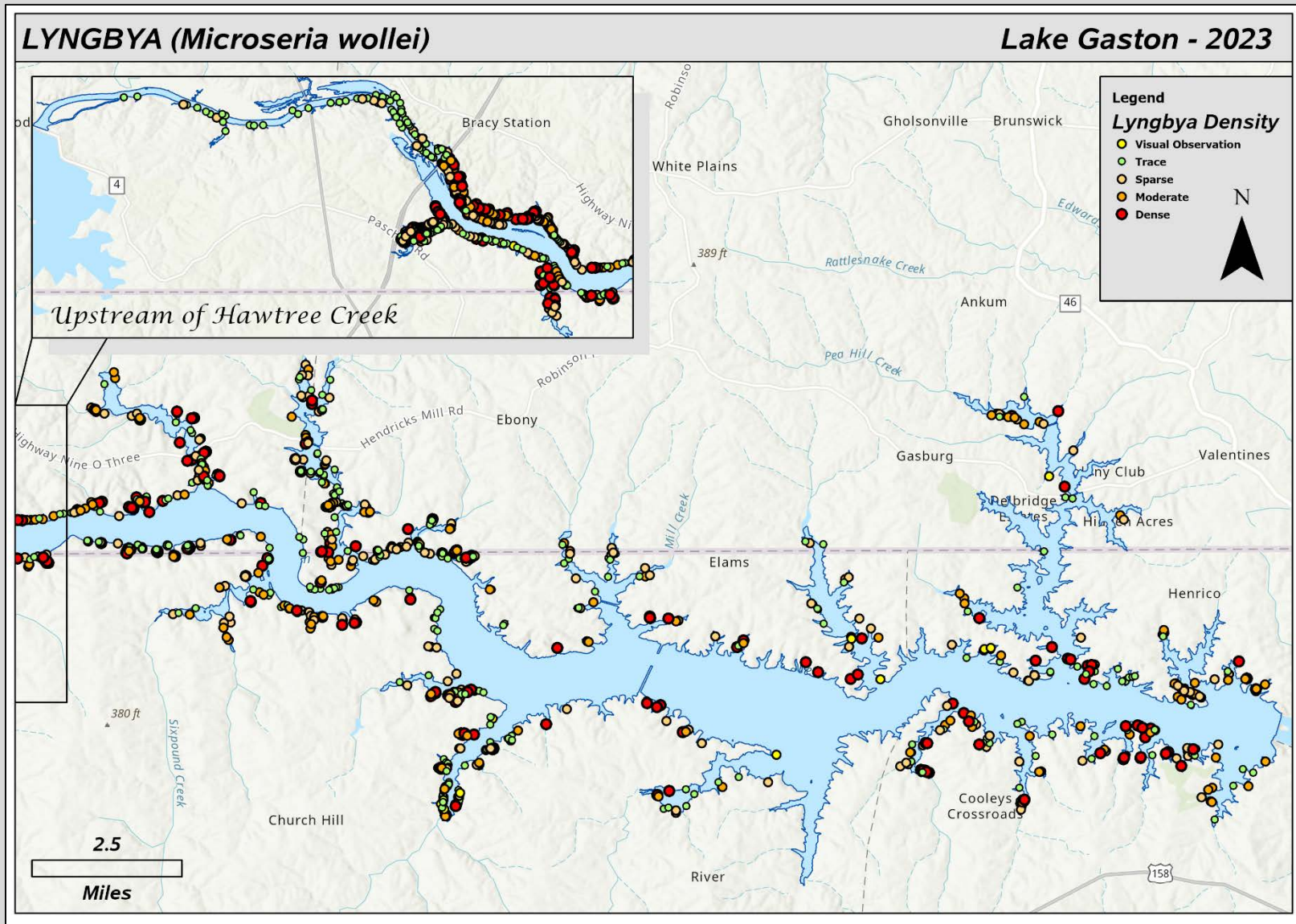
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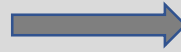


Lyngbya Management



Lyngbya Management

2023 Survey Results



2024 Recommendations

Total Vegetation: 10 - 13 %

Maximum Treatment Acres: 500 acres

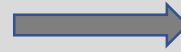
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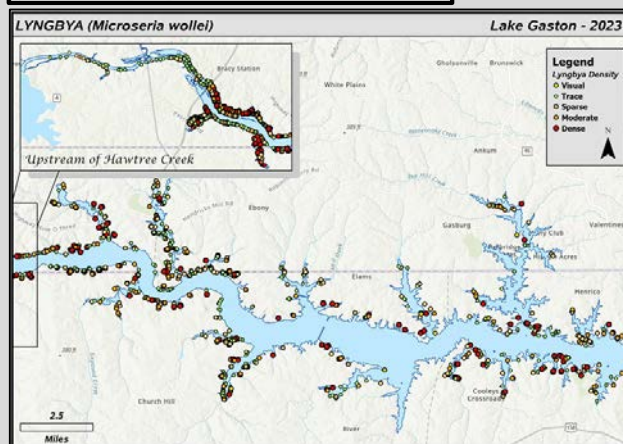
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Estimated Lyngbya Acreage: **1,134 – 1,377 acres**



2024 Recommendations

Maximum Treatment Acres: 500 acres



2024 Additional Recommendations

- Note that treatment areas are identified based solely on detection of lyngbya.
- Continue to minimize impacts to Tidewater Mussels.
- Expand Understanding of Interactions between Lyngbya and Tidewater Mussels.

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4. Round Table Discussion

- 2023 Recommendations



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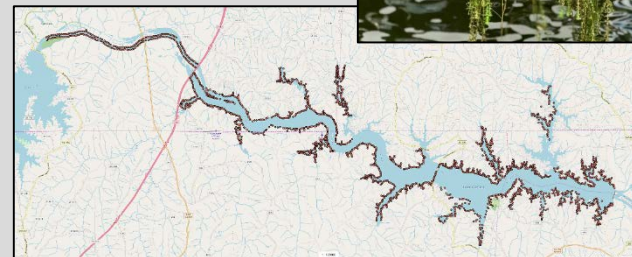
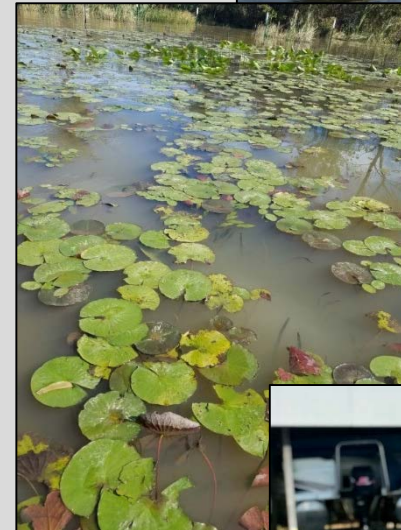
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2024 Recommendation

1. Overall Monitoring Efforts

- Continue funding and supporting volunteer survey

2. Monitoring & Treatment Efforts

- Hydrilla
 - Treat no more than 198 acres
 - Stock 1,385 Grass Carp
- Lyngbya
 - Treat no more than 500 acres
 - Note that treatment areas are identified based solely on detection of lyngbya
 - Continue to minimized Impacts to Tidewater Mucklets
 - Expand Understanding of Interactions between Lyngbya and Tidewater Mucklets

2024 Recommendation

3. Revegetation Efforts

- No direct control efforts will be made by collaborators towards native species that have expanded outside the planted areas. Develop educational material (brochure) that promotes the benefits of native aquatic plants and spells out Dominion's policy on managing shoreline vegetation.
- Continue effort towards development of metrics that measure the effectiveness and success of native vegetation enhancement efforts.
- Identify areas in which native vegetation enhancement efforts have the increased potential of plant encroachment on developed lakefront properties. Additional efforts to promote expansion of native aquatic plants should be restricted in these areas.
- Suspend enhancement efforts that utilize fish attractors and native eelgrass. This is due to the increased growth displayed by Lake Gaston's eelgrass population and concerns over invasive and hybrid forms of eelgrass.
- Continue to encourage partnerships and collaborations directed at habitat enhancement at Lake Gaston.