

# *Re-vegetation Efforts on Lake Gaston*



**NORTH CAROLINA**  
Wildlife Resources Commission

Mark Fowlkes  
David Belkoski

# 5-Year Management Plan

## 2022-2026

### 5-Year Management Plan Goal

- To improve physical habitat for sport fishes by diversifying and establishing **self-sustaining native aquatic macrophyte communities** while helping to prevent the spread of nuisance exotic plants.



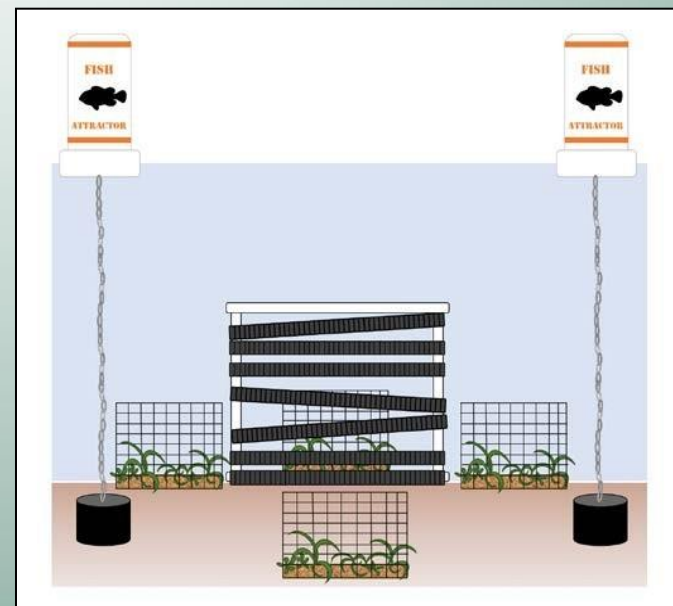
# 5-Year Management Plan 2022-2026

- Defining success criteria (diverse and self-sustaining)
  - Planted area vs overall site success (drone survey)
  - Currently don't have a quantitative measure to define **site success**
- Maintain existing exclosures and planted areas
- When to remove exclosures
- Managing Hydrilla in exclosures



# 5-Year Management Plan 2022-2026

- Explore new techniques for establishing vegetation
  - NCSU integrated fish attractor (2 / yr.)
- Monitoring
  - Spring assessment to make workplan
  - Quantifying spread outside exclosures using drones every 4-5 years (2022, 2026)
- Map of all sites



# Partners

- LGWCC
  - \$3,820 annually for materials and supplies
  - \$10,000 Drone survey in 2022 and 2026
- Dominion Power
  - A onetime \$2,500 contribution for vegetative fish attractor design
- LGA
  - Technical guidance, volunteers
- NCWRC
  - Technical guidance, assist with planting, fish attractor buoys
- NCSU Lake Gaston Coordinator
  - Coordinates volunteers, technical guidance, planting
- VDWR, NC and VA B.A.S.S. Conservation



# Volunteer Hours

|              | 2015       | 2016       | 2017       | 2018       | 2019       | 2020     | 2021       | 2022       | 2023       |
|--------------|------------|------------|------------|------------|------------|----------|------------|------------|------------|
| LGA          | 250        | 266        | 255        | 136        | 194        | 0        | 271        | 238        | 203        |
| NCSU         | 174        | 199        | 202        | 168        | 134        | 0        | 128        | 130        | 141        |
| NCWRC        | 163        | 220        | 306        | 132        | 149        | 0        | 141        | 154        | 142        |
| VDWR         | 16         | 24         | 16         | 11         | 16         | 0        | 16         | 9          | 0          |
| <b>TOTAL</b> | <b>603</b> | <b>709</b> | <b>779</b> | <b>447</b> | <b>493</b> | <b>0</b> | <b>568</b> | <b>531</b> | <b>486</b> |



# Re-vegetation Work

14 Sites



# 2023 Summary

- Maintained and planted existing cages
- Worked at 10 of 14 sites + Pinnacle Shores
- Built 1 enclosure, established new planted area
- Repaired 11 enclosures
- Opened 2 enclosures
- Removed 12 enclosures
- Planted vegetation at 9 sites
- Significant spread at Beachwood Flats, I-85, Flats, Deep Creek, Lower Poplar, Upper Poplar West, and Big Stonehouse
- Did not install integrated fish attractors





# 2024 Recommendations

- 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.



# 2024 Recommendations

- 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.
- Vegetation work scheduled for June 17<sup>th</sup> - 20<sup>th</sup>



# Questions?



Upper Poplar - West

