Lake Gaston Technical Advisory Group Meeting
February 4th, 2025
10 – 11:30am

Attendance (6 voting members)
Rob Richardson (NCSU), Rob Emens (NC DEQ), Kirk Rundle (NC WRC), Mark Fowlkes (NC WRC), Dan Michaelson (VA DGIF), Corwin Chamberlain (Dominion Energy)
Also Present:
Jessica Baumann (NCSU), Kara Foley (NCSU), Logan Wilson (NCSU), Michael Fisk (NC WRC), Rory Roten (SePRO Corporation), Jeff Zimmer (LGA / LGWCC), John Franz (LGA / LGWCC), Wally Sayko (LGA / LGWCC), Troy Goldsby (AquaServices)

The annual meeting of the Lake Gaston Technical Advisory Group was held on February 4, 2025 via Zoom.

Jessica Baumann, extension associate for North Carolina State University's Aquatic Plant Management Program (NCSU APM), presented the 2024 aquatic vegetation survey results, 2024 treatment protocols directed at hydrilla and lyngbya, and the 2025 proposed treatment protocols for hydrilla and lyngbya management.

Overall Monitoring Efforts

Jessica highlighted the efforts put forth by volunteers of the Lake Gaston Association's Environmental Committee (LGA EC) and researchers from NCSU APM. Overall, there were 530 active survey hours provided by over 100 volunteers between the dates of August 16th and October 29th 2024. LGA and NCSU efforts resulted in data collected at 6,204 individual survey points and is comparable to previous survey years.

Vegetation was present at 81% of sites surveyed and species identified were representative of the expected aquatic plant community at Lake Gaston. Emergent species represented the greatest present of the community (64%), followed by algal species (22%), submerged species (10%), and floating leaves (5%). These trends are similar to previous survey years. The high stocking rate for grass carp utilized by the integrated hydrilla management plan is likely responsible for the suppressed floating leaves and submergent populations. Water willow represented the largest percentage of the aquatic plant community, followed by chara and lyngbya. The distribution and abundance of the native submersed species, eel grass, has increased from the 2023 survey results. Invasive and hybridized species of eel

grass have become problematic in other southeastern reservoirs; therefore, this population will be closely monitored.

Monitoring and Treatment Efforts

Hydrilla Management Efforts – Overview

Following TAG recommendations, 197 acres of hydrilla were targeted for management utilizing chemical control methods in 2024. Treatment areas were located in Great, Poplar, Hubquarter, Songbird, Big Stonehouse, and Lizard creeks. In addition to herbicide treatments, 1,385 grass carp were stocked into upper Poplar Creek per the recommendation of the North Carolina Wildlife Resources Commission (NCWRC) grass carp stocking model.

Results of the 2024 vegetation survey indicated that 8% of the total vegetation at Lake Gaston was represented by hydrilla and it occupied an estimated 289 acres of the shoreline littoral zone. This acreage estimate is comparable to the last 5 years and indicates that hydrilla remains at relatively low density levels. The tuber bank survey data supported this estimated level, by remaining at almost undetectable levels throughout the system.

Lyngbya Management Efforts – Overview

Following the TAG recommendations, 500 acres of lyngbya were targeted for management utilizing algaecides in 2024. Treatment sites were distributed throughout Lake Gaston.

Results of the 2024 vegetation survey indicated that 11% of the total vegetation at Lake Gaston was represented by lyngbya and it occupied an estimated 1,037 acres of the shoreline littoral zone. Lyngbya was distributed throughout the entire system and areas contained varied density levels of infestation. A decrease in overall acreage was reported for the first time since 2018, but Baumann noted that decreased growth potential was displayed for lyngbya lake wide in 2024. Therefore, to fully understand this trend it must be monitored for several consecutive years.

Research Updates

Baumann highlighted ongoing efforts directed at two research projects focused on Lake Gaston lyngbya in 2024.

The first project focused on the interactions between lyngbya and a native, listed mollusk species, the Tidewater Mucket. Researchers from NCSU and the North Carolina Wildlife Resources Commission are in the process of examining impacts of lyngbya encroachment and benthic mat density levels on Tidewater Muckets, as well as the impacts of current lyngbya treatment protocols.

The second project focused on determining the possibility of early season algaecide control for lyngbya. A mesocosm trial aimed at targeting lyngbya collected monthly from February (water temperature: 55 °F) to May (water temperature: 75 °F). Treatment protocols mimicked those utilized for the lyngbya treatment program at Lake Gaston.

Native Vegetation – Overview

Mark Fowlkes with the North Carolina Wildlife Resources Commission highlighted efforts directed at the establishment of native aquatic vegetation in 2024. Due to the success of already established exclosures (cages) and lack of appropriate areas to build new ones, 2024 efforts were focused on cage removal. Cages that were deemed successful and suitable for removal in 2024 were located in the upper Poplar Creek area.

Status of the Pete Deschenes Lake Gaston Stakeholders Group

Jeff Zimmer, President of the Lake Gaston Association, updated the group on planned discussions to be held regarding the future of the Pete Deschenes Lake Gaston Stakeholders Group. Historically, this group reviewed recommendations from the Lake Gaston technical advisory group prior to them being presented to the Lake Gaston Weed Control Council. However, over the last few years participation within this group has been low and therefore the upcoming LKG Stakeholders' Forum, to be held March 11th, 2025 will focus on the future of this group.

2025 TAG Recommendations Discussion

- Continue funding and supporting volunteer and NCSU shoreline vegetation survey efforts.
    - Approved, no comments.

- Hydrilla Management: Treat a maximum of 140 acres and stock 1,057 grass carp.
    - Not Approved. Revised (see below for revised version)
    - Discussion ensued regarding the recommended number of grass carp to be stocked in 2025. This rate was produced by the North Carolina Wildlife Resources Commission's stocking model, but there was concern among the group that the logistics involved with stocking grass carp would outweigh the benefits of stocking such a low number of fish. In the end, the group decided it would be more appropriate to not stock grass carp in 2025, but to increase the recommended acreage targeted for chemical control from 140 to 200 acres.

- Hydrilla Management: Treat a maximum of 200 acres and stock 0 grass carp.
    - Approved, no further comments.

- Lyngbya Management: Treat a maximum of 500 acres and continue monitoring the efficacy of the current treatment program.
    - Approved, no comments.

- Continue to encourage partnerships and collaborations directed at habitat enhancement at Lake Gaston.
    - Approved, no comments.