

## **Report to Town of White Lake**

**December 2019**

By Diane Lauritsen, Ph.D.

LIMNOSCIENCES

### PROJECT MANAGEMENT

1. The Section 205(j) Water Quality Project, “Stormwater Education, Assessments and Planning for the Town of White Lake, NC”, a partnership with the Lumber River COG is underway. The Town voted to provide a match (in-kind and cash) for this grant. LRCOG personnel and I will be meeting in December to discuss grant administration and outline a schedule for presentation of a stormwater program proposal for the Board and Planning Commission.
2. Last December, my recommendation was for the Town to engage with engineers and scientists working for Tetra Tech, in Seattle, WA, to provide planning and design work related to potential future alum treatment. Additionally, I recommend that the Town engage with John Holz with HAB Aquatic Solutions to provide technical services related to the collection of sediment cores in the lake, and IEH Analytical Laboratories (Seattle, WA) to provide the analysis of the sediments collected (with the data then being provided to Tetra Tech personnel). This was approved, and the work was completed in April. Lake Waccamaw sediments were also sampled at this time, and a comparison between the two lakes proved to be very helpful in understanding phosphorus dynamics in these shallow lakes. The conclusion of the work indicated that no White Lake alum treatment of sediments (referred to as Phosphorus Inactivation) was needed. Any future alum treatment would be made if the phosphorus levels in the lake water column increased (as the result of an algae bloom, for example).
3. I attended the North American Lake Management Society meeting in Burlington, Vermont in November and gave two presentations on White Lake. Our science team (John Holz, Shannon Brattebo, Bill James and I) were able to discuss the data from the sediment analysis comparisons between White Lake and Lake Waccamaw, and the intent is to prepare a manuscript for publication in a scientific journal, as well as incorporating the information in a White Lake Management Plan (a draft manuscript is in preparation, and it will also be shared with NCDWR personnel).

### COMMUNICATIONS

1. In addition to presenting a paper at the NALMS conference, I have submitted an abstract on White Lake work for the NC Water Resources Research Institute (WRRRI) conference in Raleigh to be held in March of 2020. I made a presentation on White Lake at the 2019 meeting this past March.
2. The clear and consistent message to be communicated to the public and stakeholders is that we are all interested in collaboration and providing the resources needed to do quality science so we can develop the best possible management strategies and actions to protect White Lake.
3. A web site, whitelakewatch.com was created in September and has received a good bit of attention. Water quality monitoring data as well as information from the public workshops and

other planning efforts is being included on the site, and it is updated monthly. A communications team has also been created and several meetings of the group have taken place.

4. An outreach booth for White Lake Watch was set up at the Camp Clearwater Harvest Festival in October.
5. Feeding of waterfowl: Ed Wilkerson, NC State Parks Superintendent has put up signs at Camp Clearwater and other locations around the lake reminding residents and visitors to not feed waterfowl.

#### MONITORING

1. An annual report of 2019 water quality information, algae and aquatic vegetation will be assembled when all data analysis is completed. The algal taxonomist (Linda Ehrlich, Spirogyra Diversified Environmental Services) that was used in 2018 will be providing algae identification services for a smaller number of samples this year, so that we can confirm the trends that the other data indicate—it helps to provide a more complete story of what has happened in the lake this year. Overall, the lake conditions were less variable this year compared to last year—pH levels and nutrients in particular did not vary too much over the summer months. The clarity of the lake improved dramatically in November once again, and the Secchi disk can be seen at the lake bottom even in the deeper portion of the lake.
2. NCSU conducted a vegetation survey of the entire lake in October; their report is not yet completed. No Hydrilla was found during summer surveys of the lake.