Our Lake Conditions as of June 2022 and Expectations of Our Restoration Efforts

Several residents have reported algae blooms in a couple of our lakes. A few have noted that these blooms hadn't been occurring in the early years of this community. Our lakes are over 25 years old and are aging quickly. They have become chemically dependent and require a frequent dose of one herbicide or another to control the algae and invasive plants. Over the past 25 years, the lakes have received nutrient and other chemical runoff without any barrier to ameliorate the input of fertilizers intended for our landscapes, particularly as our banks erode; the lakes have been used to collect cut grass, leaf litter and other organics that result in excessive nitrogen. Our lakes are algae dominant meaning that algae is the only plant material assimilating nitrogen and phosphorus and resulting in blooms. This situation is not unique to Heritage Oaks. All older associations are facing the same issues. Our aim here at Heritage Oaks is to transition from an algae-dominated system to an aquatic plant or macrophyte-dominated system.

Briefly, here is where we are in 2022 having initiated the "Healthy Lakes Initiative" only during the past year. We had just introduced aquatic plants to 6 lakes - #3 (alongside Fairway 4), #6 (alongside Fairway 5), #12 (along Mahogany Ave), #16 (alongside Fairways 10 and 11), #20, and #21 (both surrounding Fairway 14). These plantings will help us control excess nitrogen and other chemicals and provide a foundation for our lakes to attain ecological sustainability by reducing chemical input over time. However, we shouldn't expect immediate results. The plants need to acclimate and become better anchored through root growth. They will do little for us this year and will likely take about 18 months before seeing substantial changes (this is based on another association where it took 18 months to see a 22% reduction in nitrogen, a 30% reduction in phosphorus, a 51% reduction in chlorophyl which measures algal growth, and a 50% increase in water clarity). Improvement is actually an exponential curve, starting out slowly and expanding rapidly over the next 2-3 years. Typically, we need to reach at least a 60% coverage of the littoral zone before significant improvements are realized. Hence, we had to put additional plants in Lake #12 to meet the expectation of Sarasota County. In the meantime, as we inspect our newly planted vegetation, we will need to replace plants that are not doing well. We also will work with our Lake Management firm on their chemical control measures and will not eliminate that aspect of their maintenance, but hopefully reduce it in the years to come.

Note that we are monitoring water quality in Lake #6 on a monthly basis, compliments of the grant we received. While the conditions in lakes will vary, these monthly measurements will provide an indication of conditions that help us determine if we are on target with our efforts. In our first two samplings in 2021, both the Nitrogen and Chlorophyll exceeded the threshold for healthy lakes. Nitrogen was above 3.00 mg/L and the healthy condition should be below 1.65; Chlorophyll was above 100 mg/L and it should be no more than 20 mg/L. While these values are only a two-time sampling, we will watch these trends as the project progresses.

As for the buffer or no mow zone (our second activity), if we can get it right and expanded across all associations having waterfront, we will see results much quicker. By the end of the rainy season, we should see less fertilizer input to the lakes and the banks stabilized to a greater extent. Our goal is to create buffer zones that are functional for their purpose but are balanced for a better aesthetic outlook. However, to date, (1) we have some areas that are not adhering to this recommendation, and (2) we are also seeing the landscaping crews being conservative in how they approach this buffer zone concept. The buffer zones are too narrow, that is, 1-2 feet instead of 3 feet (slightly less in some cases). They have not figured out how to manage the "weediness" to improve the aesthetics and belay any concerns from our residents. This is surprising because several of these firms are already implementing the buffer (no mow) zone in other communities. It should be noted that with a well-balanced buffer zone we should likely be able to cut back on the extent of bank stabilization projects using geotextile tubing; however, there are some areas where the bank failure is so severe, or irrigation heads exposed in the water that we will still have to implement the geotextile bank restoration work where we have received contract estimates.

Lakes & Wetlands Subcommittee of the Common Properties Committee

The "Healthy Lakes Initiative" is being coordinated through the Lakes & Wetlands Subcommittee. The purpose of this Initiative is to obtain ecologically stable ecosystems that are sustainable with minimal maintenance and reduction in chemical dependence, and to maintain aesthetically pleasing lakes that attract a diversity of shorebirds and flowering vegetation. Subcommittee members are (*revised October 26, 2023*):

Michael Barbour
Ron Kohut
Kirsten Dewberry
George Stiefelmeyer
Harvey Scribner
Christopher Bale
Ted Blute
Mary Callahan
Mark Kamphaus

Any questions or comments should be directed to one of these individuals. All responses will be posted on the website under the "Healthy Lakes Initiative" webpage.