June 23rd, 2019 Meeting: Summary of Lake Management Plan

The main goal of this report is to assist stakeholders with managing the current and future state of Big Bowman Pond to meet their recreational goals and to maintain the aesthetic beauty of the lake. This report will identify the current ecological and recreational problems perceived by the stakeholders and will discuss desired outcomes. The objective of this shorter report is to provide scientifically supported management strategies that will address the concerns of the stakeholders and protect the quality of recreational activities in Big Bowman Pond as related to the more detailed State of the Lake Report and the Comprehensive Management Plan.

While Big Bowman Pond is currently "healthy", management strategies can be used as precursory tools to maintain the status of the lake. It is important to note that the Management Plan for Big Bowman Pond has not been created with restoration in mind as it appears to be "healthy". Rather, these suggestions should be considered to prevent future deterioration of the lake. Protocols to monitor the status of the lake should be continued and expanded upon in the future to address all aspects of the lake, including, but not limited to continuous vegetation and fisheries surveys. Setting up an agreed upon standard for monitoring protocols is pertinent as it can aid in the detection of trends and anomalies in the lake's "health".

The primary issue mentioned by stakeholders was excessive plant growth, specifically regarding an abundance of bladderwort and lily species. Surveys conducted during the summer of 2017 showed that the plant community was dominated by three species of bladderwort. The ability of bladderwort to thrive in the lake may come from its ability to survive in nutrient poor, acidic waters via predation using "bladders" with which the plant consumes zooplankton to obtain nutrients. Other species recorded in the lake, including the lilies and pondweed, were also quite prevalent and may thrive due to their ability to grow long stems up through the water

column. This allows these species to remain tethered to the lake bottom and obtain their nutrients through the sediment while also growing to the surface to obtain light for photosynthesis.

If the Lake Association and stakeholders agree to proceed with plant management, it must be done carefully. The current state of vegetation in the lake, while frustrating, does not indicate an issue or invasive trend. Furthermore, the removal of large portions of some or all these plant species could tip the scale and result in deterioration of the lake. The loss of large portions of the vegetative community in the lake could result in an increase of algal blooms which are potentially toxic to humans and fish. Various management options have been included in the Comprehensive Management Plan which may address issues discovered during surveys and meetings conducted with landowners on Big Bowman Pond.

The secondary issues included invasive species, stormwater runoff, and wastewater treatment regulations. These issues were not directly affecting the "health" of the lake; however, management strategies to deal with any problems related to these concerns have also been suggested in the Comprehensive Management Plan. Additionally, the historical and most current data and information regarding the status of Big Bowman Pond can be found in the State of the Lake Report. The State of the Lake Report describes each parameter studied and the current status of those parameters relative to the New York State standard or historical reference conditions if available. Lastly, any questions or concerns can be emailed to George Smith directly at geosmith1016@gmail.com; however, response time may be limited.