2021 Annual Summary Report
Aquatic Management Program
Witches Woods Lake
Woodstock, CT

Report Prepared by: Paul Conti
SŌLitude Lake Management
590 Lake Street
Shrewsbury, MA 01545

Report Prepared for: Mr. John Barber

Solitude Lake Management was contracted in 2021 to perform a comprehensive management plan for Withces Woods Lake. Solitude has been involved in the management of this waterbody for numerous years. A pretreatment survey of Witches Woods Lake was performed on June 4, 2021. The survey found a diverse assemblage of native plants. The most common plants found were: Bladderwort (*Utricularia spp.*), Coontail (*Ceratophyllum demersum*), Naiad (*Najas sp.*), and Thinleaf pondweed (*Potamogeton spp.*), white waterlilies (*Nymphaea odorata*), and yellow waterlilies (*Nuphar lutea*). All plants were found growing in reasonable densities. The most dense areas were the southern shorelines, and the northern cove.

To assure plant growth did not increase to nuisance levels, a treatment was performed on 7/21/21 using the herbicide Nautique. The treatment focused on the areas with the most plant growth at the southern shoreline, and northern cove. The diluted herbicide was injected into the treatment areas from a motorboat, equipped with a calibrated pump system.

A late season survey was performed on October 6th to assess the situation of the lake post treatment. From the assessment, the treatment was deemed successful. The southern shoreline and the northern cove were again the areas with the most plant growth, but the plant distribution was within acceptable range. The southern shoreline was mainly composed of Naiad (*Najas sp.*), and the northern cove was mainly comprised of Coontail (*Ceratophyllum demersum*). The plant distribution was on par for a healthy ecosystem, and below nuisance levels for recreational lake users. Some globs of blue-green algae aka cyanobacteria were seen floating throughout the water column, especially on the wind-blown side of the lake. At high concentrations, blue-green algae poresence can be harmful to the health of the lake and it's users, but these colonies were found well below the harmful concentrations. The same species of algae was observed in numerous lakes across CT around the same time and is quite common in the fall. The cooling fall weather, and wind often causes lakes to "mix", which allows nutrient rich water in the bottom of the lake to be brought to the top. This often causes small algae blooms. Being that the algae was in low density and severe blooms are uncommon in the fall due to shorter and cooler days, action was not taken. However, if similar conditions are noticed in the summer when the days are warm and hot, an algae treatment would be recommended to assure the matter did not get worse.

Witches Woods Lake continues to be in good health, and the management strategy continues to be successful. In 2022, the management and monitoring program is recommended to assure a healthy plant composition is present, and algae concentration doesn't meet harmful levels. If you have any questions about the lake or management plan, please do not hesitate to reach out.