



Loch Lomond End of Season Report

McCloud Aquatics Pond and Lake Management for 2023 is in the books. While it wasn't the hottest season this year, we had streaks of hot weather that brought along large temperature swings in the waterbodies. The overall season was a drought in comparison to the previous seasons of record-breaking rainfall. Many ponds and lakes experienced a significant decrease in depth, some losing all of their water completely for a brief time. Shallow waters will hinder how we manage your pond. Not to mention, the increased chance for vegetation growth. This is because with hotter temperatures, nutrient release from pond sediments is increased; with increased rates of nutrient release, the pond will experience higher rates of nuisance growth. This paired with shallow conditions will allow for UV light to quickly penetrate through the water column and accelerate the process of photosynthesis. When the rain finally did come, it created runoff and in combination with shallow depths, many ponds experienced Duckweed/Watermeal issues and planktonic algae blooms this season - some of them containing cyanotoxins. Blooms like these are why we always stress the importance of nutrient management. Reducing nutrients helps reduce unwanted vegetation growth. Please help us manage nutrients in your pond or lake. Below are some of the ways that nutrient runoff can be minimized.

- Remove landscaping debris – Plant matter like grass clippings, fallen leaves, and downed sticks can create algae blooms as they decompose, and sticks and logs act as an anchor point for algae.
- Plant a buffer zone or create a “no mow” zone – Buffer zones around the water create a natural filter for your pond or lake. These areas consume nutrients before they reach your water. These can be native plants like tall grasses or wildflowers.

McCloud Aquatics will continue to work hard for you because we genuinely care for the health and beauty of your water body. Please stay vigilant with your duties as lake and pond owners too. Please fertilize responsibly, utilize natural buffers, and be open to proactive recommendations from your LMS. Our goal is to help you create a more sustainable lake/pond. Therefore, we look to have a balanced ecosystem containing the RIGHT weeds and a small amount of additional vegetation. We have started to use a new nutrient management tool and we are proud to say that we are having impressive results! Please reach out to us with any questions regarding aeration equipment, nutrient management, bathymetry mapping, boat ramps, dredging, cattail/phragmite work, fish habitats and fish stocking. These services are scheduled on a first come-first serve basis and we tend to fill up fast in the off season.

Below, you will see some personalized recommendations from your Lake Management Specialist. Thank you for your continued trust in McCloud Aquatics.



Loch Lomond had a relatively successful 2023 season in my opinion. There were definitely a few difficulties, but I do believe that we saw some good progress amid intense drought conditions through the summer. To quickly summarize the year: We started in mid-April to make an application targeting the invasive curlyleaf pondweed growth which had infested the lake utilizing a systemic herbicide which remained present in the lake for around a month's time. In this time, we saw the invasive curlyleaf slowly wilt and decay out of the lake; by the middle/end of May there was no sign of invasive curlyleaf remaining. As we approached June, the lake started to see some new native vegetation such as coontail, horned/sago pondweeds, and a few spots of American pondweed. As temperatures continued to warm through the summer, the planktonic algae began to arrive with a bit more frequency. While we were in the "peak" planktonic season, I will say that I think this year has been one of the better ones thus far in terms of quantity of planktonic algae present. I think that having the increased quantities of native vegetation helped play a role in the reduction in quantity/frequency of the nuisance planktonic growth. As August/September rolled around the coontail growth experienced a few blooms that increased overall plant quantity throughout the lake.

I also want to point out a few different observations from the 2023 season as well. The first being that we saw areas of excessive mucky sediments, particularly near inflow areas of the lake. These mucky areas can be overly abundant with nutrients, particularly phosphorus which is a driving force behind nuisance algae growth. While doing some research and consulting with distributors I did come across some old water and sediment test results from the last few years which did indicate nutrient pollution in both the water column and the sediment. This nutrient pollution is the main force that is likely driving the unwanted planktonic algae blooms throughout the summer months. Having a good establishment of native vegetation, buffer zone, etc. can be helpful in reducing the likelihood of unwanted growth, however if the nutrient source is available, the nuisance growth is bound to grow.

My main recommendations for the lake are all things that have been discussed before; there are a few things that I think can play a large role in cleaning up the lake, and a few additional services that will also help with the improvements. I think that the two priorities to address would be the nutrient abundance present within the water column and within the sediments, and dredging in a few of the areas with the most severe mucky accumulation. Below is a quick run through of the recommended services; please let me know if you would like further information regarding anything discussed!

Dredging

- Dredging will be very beneficial in a few different locations on Loch Lomond where sediment build up is becoming very dense. Areas specifically in front of inflows and particularly in firth channel have a large accumulation of the sediment and also happen to correlate with the “hotspot” areas of planktonic algae growth. Removing the mucky sediment will help remove some of the excess nutrient load present while also gaining back some depth in shallow areas.

Nutrient Management

- A nutrient management program will directly address the nutrient pollution within the lake. The primary nutrient targeted is phosphorus, as it is the nutrient primarily driving nuisance vegetative growth. A nutrient management program can be set up to target nutrient load in the water column, the sediments, or both paired together for the maximum effect. Nutrient management doses can be applied as a general dosage or with information from water and sediment testing, we are able to prescribe exact doses to “zero out” the phosphorus content in the water/sediment. We did have some numbers from 2021/2022 that we can base numbers off of, or re-test to get up to date numbers.

Full lake service

- Our 2023 contract has the lake set up for one full lake application targeting the invasive weed growth which is present in the spring. From there, our routine standard services are used only around the shoreline of the lake; this allows for a lot of planktonic growth to go untouched throughout the summer, where it can spill/drift back towards the shoreline. Additionally, with the coontail population growing and the generally more shallow conditions of the lake, a full lake contract may be helpful in containing the coontail growth in healthy quantities.

• Aeration

- This is an option which has been discussed in the past; this summer I was able to get one of our aeration distributors to come out on the lake with me to do some analysis to figure out what the best aeration solution would be. Our distributor noted that diffused air is likely not the best solution as the lake is relatively shallow across the board and thus a diffused air system here would require an excessive number of heads to evenly mix throughout the lake. His thoughts for an aeration system would be to utilize surface aeration, primarily through the middle of North Bay and along pockets of the Southwestern shoreline.