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Skagit County Public Works

Lake Management District #2

Lake McMurray – 2022 Annual Report

Aquatic Plant Management

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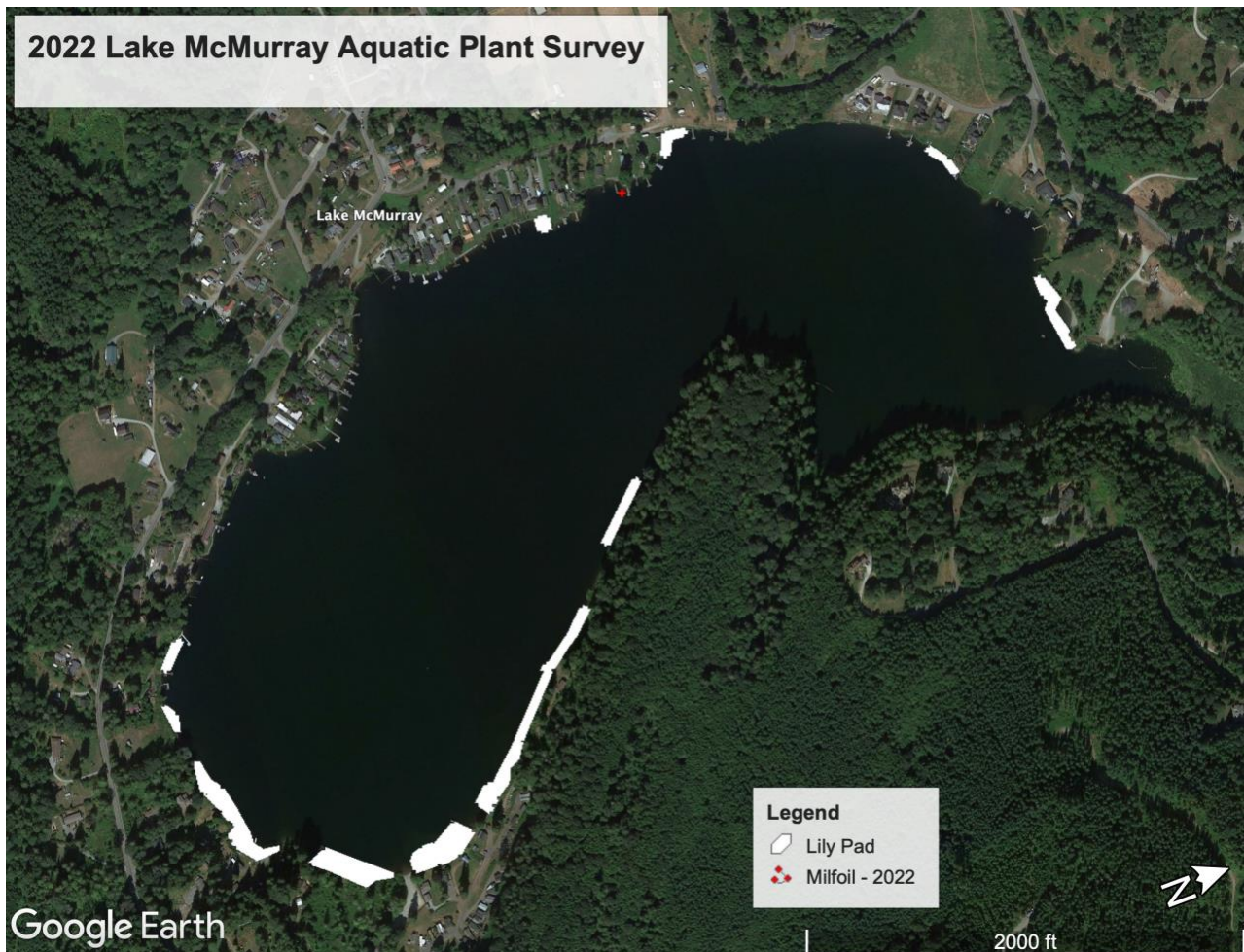
Project Overview

Northwest Aquatic Management LLC(NWAQUA) performed two sessions of mechanical harvesting in 2022. The dates were 27-29 July 2022 and then again 29-30 August 2022. The harvesting went really well considering the underwater obstructions and residents that requested no harvesting on their property. Lake McMurray is inundated with underwater debris including logs, stumps, sticks and branches that make a complete harvest of the treatment area nearly impossible. There were multiple residents along the North end of the lake that waved us off the property and did not want the area in front of their house to be harvested.

Pre-Treatment Survey

NWAQUA mobilized to Skagit County to perform the pre-treatment survey of Lake McMurray on 13 July 2022. The survey boat was equipped with Lowrance mapping equipment along with a rake-toss device. The crew travelled at a slow speed around the circumference of the lake observing, gathering and inputting data of all noxious aquatic plants present.

The noxious plants that were observed were White Water Lily Pad and Eurasian Milfoil (pictured below). There was no observation of Curly Leaf Pondweed. With that said there was a look alike, Richardson's Pondweed, that was in many areas around the lake. Our observation shows that the Richardson's Pondweed has increased its presence in many areas of the lake's shoreline.









County / LMD / Community Input

Skagit County staff and LMD board members chose not to perform an aquatic herbicide treatment in Lake McMurray in 2022. The decision was made to continue mechanical harvesting operations to try and reduce the footprint of the Fragrant Lily pad's.

Mechanical Harvesting Operations

As mentioned before, the community and the LMD board decided to perform mechanical harvesting of the noxious vegetation throughout Lake McMurray. The primary goal/majority of the harvesting was focused on the White-Water Lily because that was the only noxious plant on the lake and the focus was placed on the developed portions of the shoreline.

NWAQUA launched the harvester on 27 July 2022 for harvesting session #1. NWAQUA began harvesting at the McHaven property; for multiple reasons. NWAQUA made an agreement, on timing, with the management of McHaven to have the small boats and watercraft, moved/anchored elsewhere, and out of the way for ease of the harvesting operation which would then increase NWAQUA's capability to get as close as possible to the docks. The McHaven property is one of the shallowest shorelines on the lake, which makes it very susceptible to White-Water lily growth. The mechanical harvester traveled the perimeter on the lake and cut, collected and disposed of the lily pads that could be accessed. As mentioned previously there were multiple submerged pieces of debris that would not allow full harvesting

of the lily pads. McHaven management also confirmed with us multiple times that their water intake was a major concern of theirs. NWAQUA and McHaven once again agreed on an area that would be hand harvested by the community because of the water intake. The single harvester harvested the 27th and the 28th of July to complete the project. The harvester was demobilized on 29th July 2022.

Harvesting session #2 started 30th August 2022 and last for two full days. Demobilization occurred in the afternoon of 31st August 2022. The process was the same as the first session. The harvester started on the McHaven shoreline and then continued around the lake to complete a full harvesting of the White-Water lilies.

During both harvesting sessions the ground crew personnel was a very integral part to the operation. While working around the dock, the ground crew had a long pole that could control the harvester's cutter head and help guide the harvester near the docks for a very close cut. This operation is also beneficial during periods of time when the wind blows. The crew with the pole is able to push or pull the machine as needed to keep it on track. Once the main harvesting was completed at McHaven and the harvester was located at other portions of the lake, the ground crew were also able to hand cut the lily pads near or under the docks with a long handled underwater vegetation cutter. Residents of McHaven were very impressed and appreciative of this action.

Future Recommendations

Mechanical harvesting has its place in aquatic vegetation management. Harvesting is excellent at getting the biomass out of the water column and changing the visual appearance instantly, especially for vegetation like White-Water lilies. With that said, it is only one tool in the tool belt. NWAQUA recommends harvesting around the McHaven property because of their concerns about the water intake and holding capacity. The remainder of the Lake McMurray shoreline would benefit greatly from aquatic herbicide treatment for the White-Water lilies. Splitting the funds between the herbicide application and mechanical harvesting seems like a great option for the LMD Board and Community to look into.

The above recommendation would also prove beneficial to the Richardson's pondweed as it is a nuisance in certain shallow areas of the lake and could be treated with herbicide if it becomes too much of a nuisance.

The most problematic find in Lake McMurray was the Eurasian Milfoil. NWAQUA found a single plant that was hand pulled. Very precise and systematic surveys need to be performed in 2023 to confirm that the milfoil has or has not increased its footprint. Budgeting for additional surveys and potentially a small localized herbicide treatment should be discussed for the 2023 RFP.

Lastly, NWAQUA has come up with many innovative solutions that could potentially reduce the concerns of the McHaven community and the use of herbicides. We are willing to discuss the options we have in mind if the LMD Board and community are willing. NWAQUA also recommends the enforcement of treating all areas of noxious weeds if that action is taken. The lone residents that choose to forgo treatment when the rest of the shoreline community is trying their best to eradicate the noxious weed, seems to go against the good of the whole. The White-Water Lilies will continue to propagate and infest more shoreline area if only part of the area, with lilies, is treated. We look forward to collaborating and discussing the future of the lake management of Lake McMurray.