



**Skagit County Public Works
Lake Management District #2**

**Lake McMurray –
2023 Annual Report
Aquatic Plant Management**

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December 2023

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PROJECT OVERVIEW

Northwest Aquatic Management LLC(NWAQUA) performed one session of mechanical harvesting along with one herbicide treatment of the noxious fragrant waterlily. The date for both treatments was 09 July 2023. The harvesting was performed within the ¼ no-treatment zone of the McHaven Community along with Norway Park. The community decided against a second harvest this season due to the small area of harvesting that was proposed in 2023. The harvesting session went well considering the multiple underwater obstructions. Lake McMurray is inundated with underwater debris including logs, stumps, sticks and branches that make a complete harvest of the treatment area nearly impossible. Treatment also went very well. The ability to get in and around all the submerged obstacles with a small boat and to be able to reach the shoreline with the reach of the sprayer handgun made treatment successful from our perspective. All lily pads that were not within the “¼ mile no-treatment zone” of McHaven were treated.

Pre-Treatment Survey

NWAQUA mobilized to Skagit County to perform the pre-treatment survey of Lake McMurray on 21 June 2023. 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.

Again in 2023 there were **NO** observations of Curly Leaf Pondweed. The look alike, Illinois Pondweed, was found in many areas around the lake. Our observation shows that the Illinois Pondweed has increased its presence in many areas of the lake’s shoreline.

Illinois Pondweed 2023

Previously reported as Curlyleaf Pondweed in 2021



Illinois Pondweed 2023

*Previously reported as
Curlyleaf Pondweed in
2021*



The noxious plants that were observed were White Water Lily Pad and Eurasian Milfoil (pictured below). *The pictures below are to confirm that the plants mentioned in this report were found in Lake McMurray; please observe the houses/properties in the background.*

Eurasian Watermilfoil 2023

Lake McMurray – Skagit County



Eurasian Milfoil has spread rapidly and has increased its footprint exponentially (see map). In 2022, our observation was one single plant and now it has spread to multiple colonies (following pictures). Additional herbicide treatments are needed to get/keep the milfoil under control.

Eurasian Watermilfoil 2023

Lake McMurray – Skagit County



Eurasian Watermilfoil 2023 Map

Lake McMurray – Skagit County



Eurasian Watermilfoil – 2022

Lake McMurray – Skagit County



Fragrant Waterlily 2023 Map

Lake McMurray – Skagit County



Fragrant Waterlily – 2022

Lake McMurray – Skagit County



County / LMD / Community Input

Skagit County staff and LMD board members chose to perform a dual treatment approach, mechanical harvesting and aquatic herbicide treatment on Lake McMurray in 2023. The decision was made to continue mechanical harvesting operations in and around Norway Park and the ¼ mile no treatment zone imposed on themselves by the McHaven community. The second approach was to perform a directed foliar herbicide application to all other Fragrant Waterlily pads throughout the perimeter of Lake McMurray.

Mechanical Harvesting Operations

As mentioned before, the community and the LMD board decided to perform mechanical harvesting of the noxious vegetation throughout certain areas of Lake McMurray.

NWAQUA launched the harvester on 09 July 2023 for the only harvesting session of the season. NWAQUA began harvesting at the McHaven property; for multiple reasons. NWAQUA and McHaven management agreed on timing so the community could have the small boats and other watercraft moved/anchored elsewhere on the property. This was to ease 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. 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 throughout the day of 09 July to complete the project. The harvester was demobilized late in the evening on 09 July 2023.

During the harvesting session the ground crew personnel was an 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 can 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.

Harvesting Session #2: Not performed in 2023

Directed Foliar Application – Herbicide Treatment

While the harvester was performing its duties at the two locations on Lake McMurray, another crew was posting shoreline notifications in preparation for the foliar herbicide application. This was done with a two-person crew on a 16' aluminum boat. The crew moved from property to property within 400' of any designated treatment zone and posted signs on the shoreline of resident's property or on the dock if the resident had one. **NOTIFICATIONS WERE NOT STAPLED TO DOCKS OR TREES ON SHORELINE.** The notifications were visible and securely posted on docks and along shoreline and boat launch before applying herbicide.

The two-person crew then started to apply the herbicide to the areas of treatment throughout Lake McMurray (see map below). The captain of the treatment boat maneuvered in and around docks, downed logs, and debris to get the bow of the boat in the best position to apply the herbicide. Once in position the herbicide was applied to the affected area. Communication is crucial throughout this whole process and is accomplished through an onboard communication system and headsets. Once the application is completed the herbicide will translocate to the root of the lily pad and will kill the plant at the root. Multiple treatments may be required but over time this will greatly reduce the footprint of the Fragrant Lily pad's around Lake McMurray.

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 of the tools in the tool belt. NWAQUA recommends continuing harvesting around the McHaven property until another strategy is implemented to lessen their concerns about the water intake and holding capacity.

A treatment plan to mitigate the increase of Illinois Pondweed would prove beneficial for the community around Lake McMurray before it becomes more of a nuisance in certain shallow areas of the lake.

As in 2022, the most problematic find in Lake McMurray was the Eurasian Milfoil. The milfoil has spread, and action **IS** needed to control it before it gets out of hand and spreads lake wide. Very precise and systematic surveys need to be performed again in 2024 to confirm size of the milfoil footprint. Budgeting for additional surveys and potentially a localized herbicide treatment should be discussed for the 2024 RFP. Ultimately, the LMD can save money by acting now while the infestation is relatively small; 3-5-acre treatments now versus 20-30 acres or whole lake treatments in the future. More specific or additional information is available upon request.

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 available to discuss the options we have in mind if the LMD Board and community are willing to do so. 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.

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