



# Mapping of Eurasian Watermilfoil Beds in Lake McGregor

Fall 2024

## Executive Summary

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### Introduction

McGregor Lake is affected by the presence of Eurasian Watermilfoil (*Myriophyllum spicatum*), an exotic and invasive aquatic plant that takes root and spreads quickly. This plant harms nautical and recreational tourism activities as well as the health of the lake.

The ecological and environmental impacts of Eurasian watermilfoil are numerous:

- **Loss of biodiversity:** The plant gradually eliminates native species through competition.
- **Decrease in water quality:** The decomposition of dense seagrass beds causes anoxia (lack of oxygen), accelerating eutrophication.
- **Disturbance for aquatic fauna:** Spawning grounds are destroyed, threatening fish populations.
- **Consequences on human activities:** Seagrass hinders navigation, fishing and water sports.

In the summer of 2024, the McGregor Lake Association asked the *Agence de bassin versant des 7 (ABV des 7)* to update the mapping of Eurasian watermilfoil beds and native seagrass beds undertaken in 2015 and 2019. This data is essential for a possible watermilfoil management plan and for authorization requests from the Ministère de l'Environnement, de la lutte contre les Changements Climatiques, de la Faune et des Parcs (MELCCFP). A detailed report was submitted to the Board of Directors of the Association which can be found on the Association's website.

### Results

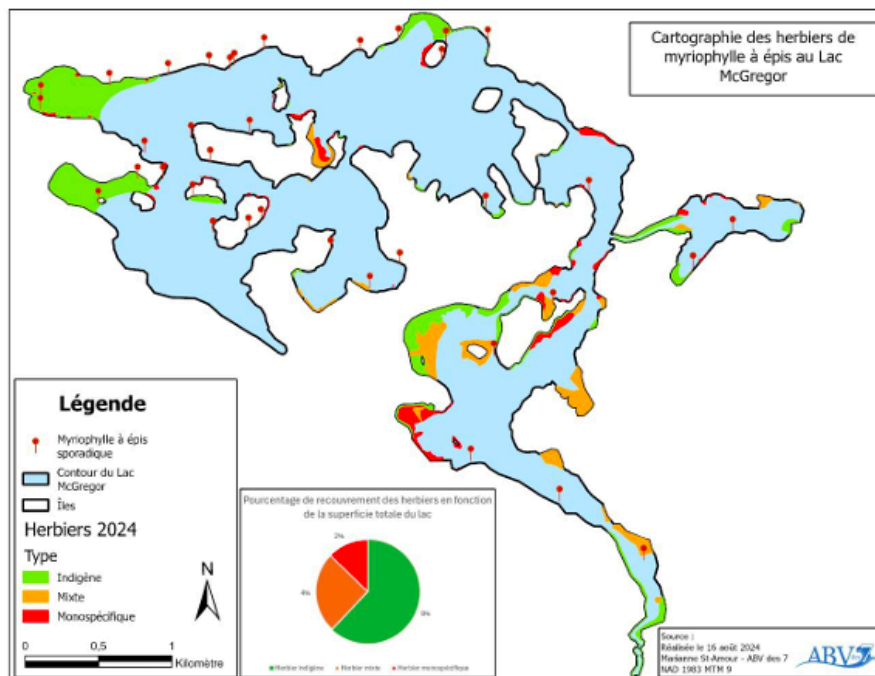
Although Eurasian watermilfoil beds are not represented in an alarming proportion on the lake, their presence demonstrates that the lake must now be subject to increased monitoring where control measures are necessary. As in 2019, the Eurasian watermilfoil beds are mainly located in shallow areas (0.5 to 4.5 m) with a greater concentration in the southern portion of the lake, a shallow sector and probably one of the busiest with nautical activities which favor the fragmentation and propagation of Eurasian milfoil.

The seagrass beds were classified into three categories: **native**; **mixed** and **monospecific**. In addition, **sporadic records** were identified because the presence of strands of Eurasian watermilfoil in an area could potentially indicate the presence of seagrass if dispersal intensifies.

***Table of Data Collected in 2019 and 2024***

TYPE OF BEDS	2024	2019
Native beds (Milfoil present less than 5%)	34 beds 8,8% of lake	N/A
Mixed beds (Milfoil present between 6% and 79%)	29 beds 3,6% of lake	3 beds (only beds 50% to 80% were recorded)
Monospecific beds (Milfoil present + 80%)	41 beds 1,8% of lake	33 beds
Sporadic records (1 to 3 isolated strands of milfoil)	35 records identified	N/A

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## Conclusion and recommendations

- Eurasian watermilfoil is present throughout the lake, primarily in shallow littoral areas.
- A notable increase in the area of monospecific and mixed meadows has been observed since 2019.
- Mixed beds are more numerous than previously reported, which could be due to better classification or a real expansion.
- Mixed and monospecific areas are growing rapidly, requiring priority attention, particularly in the most frequented areas.
- The spread of Eurasian watermilfoil requires increased monitoring and control measures.
- It has been observed that some of the meadows are moving and or relocating.

The differences between the 2015, 2019 and 2024 inventories highlight the importance of regular monitoring and a standardized methodology to better understand the evolution of seagrass beds. We must pay particular attention to this increase in the number, surface area and location of monospecific and mixed watermilfoil meadows since 2019.

The recommendations fall into the following categories:

- **Boat Cleaning:** Collaboration with the Municipality of Val-des-Monts to increase boat monitoring and cleaning efforts. It is strongly recommended to clean all floating recreational equipment before launching it to prevent aquatic plants from being transported from one body of water to another.
- **Milfoil Monitoring:** Inventory of aquatic plant density every three years and annual monitoring to specifically ensure that invasive plants do not spread further.
- **Awareness:**
  - Efforts to raise awareness among local residents and lake users must continue.
  - Temporary, more extensive containment measures may be implemented with more yellow buoys than those already in place by the Association, and signs to limit motorized boat traffic are strongly suggested while more concrete control measures are being implemented.
  - The municipality should implement awareness campaigns for boaters and AirB&B vacationers.
  - Some boats access the lake from private land, which can sometimes bypass the preventive measures implemented at the municipal landing stage. To strengthen collective efforts to protect the lake, an annual awareness campaign would serve as a reminder of the importance of limiting the risk of introducing invasive alien species.
- **Eurasian watermilfoil control method:** Possibly, more targeted control measures, such as placing burlap over single-species seagrass beds in areas most likely to cause their fragmentation, should be explored.