

LAKE EDUCATION AND PLANNING SERVICES, LLC

CALLAHAN LAKE & MUD LAKE SAWYER COUNTY

2022 MANAGEMENT SUMMARY REPORT
WBIC: 2434700

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CALLAHAN (AND MUD) LAKES PROTECTIVE ASSOCIATION

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INTRODUCTION

This report discusses lake management activities completed by the Callahan Lake Protective Association (CLPA) and Lake Education and Planning Services (LEAPS) throughout 2022. The following actions were completed by LEAPS to assist the CLPA in aquatic plant management and lake stewardship education.

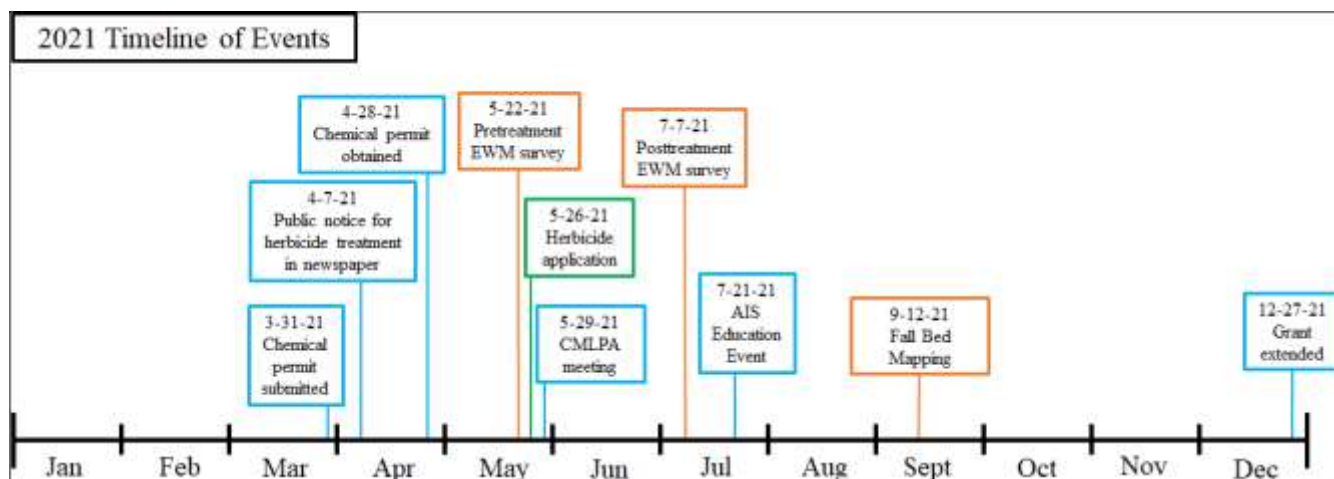


Figure 1: Timeline of 2021 management events involving LEAPS and other hired contractors in Callahan and Mud Lakes

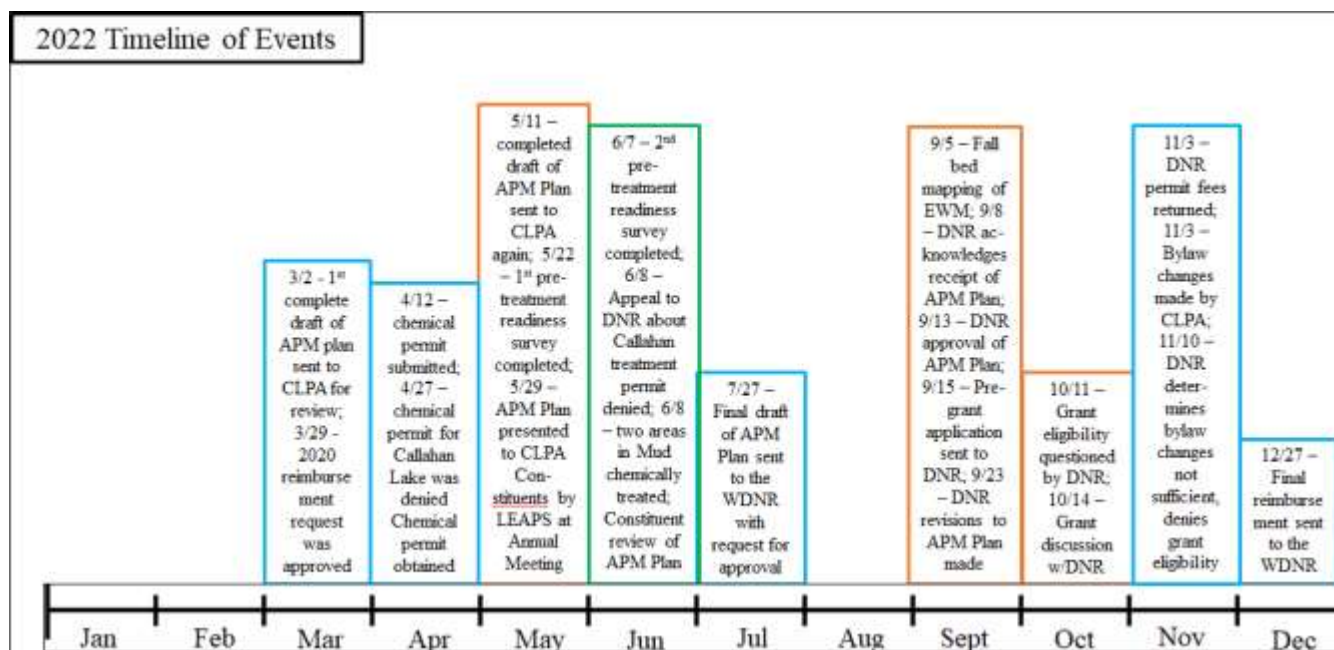


Figure 2: Timeline of 2022 management and planned events on and in Callahan and Mud Lakes

2022 EWM MANAGEMENT

The CLPA participated in EWM management in 2022 as approved by the Wisconsin Department of Natural Resources. The proposed areas for chemical treatment were delineated from Endangered Resource Services, LLC (ERS) 2021 late summer bed mapping survey (Figures 3&4). LEAPS and the CLPA determined that three beds on Callahan totaling 4.29 acres and three beds on Mud totaling 11.98 acres should be treated in spring of 2022. A chemical application permit was approved for all of the areas in Mud Lake, but only one of the three areas in Callahan Lake.

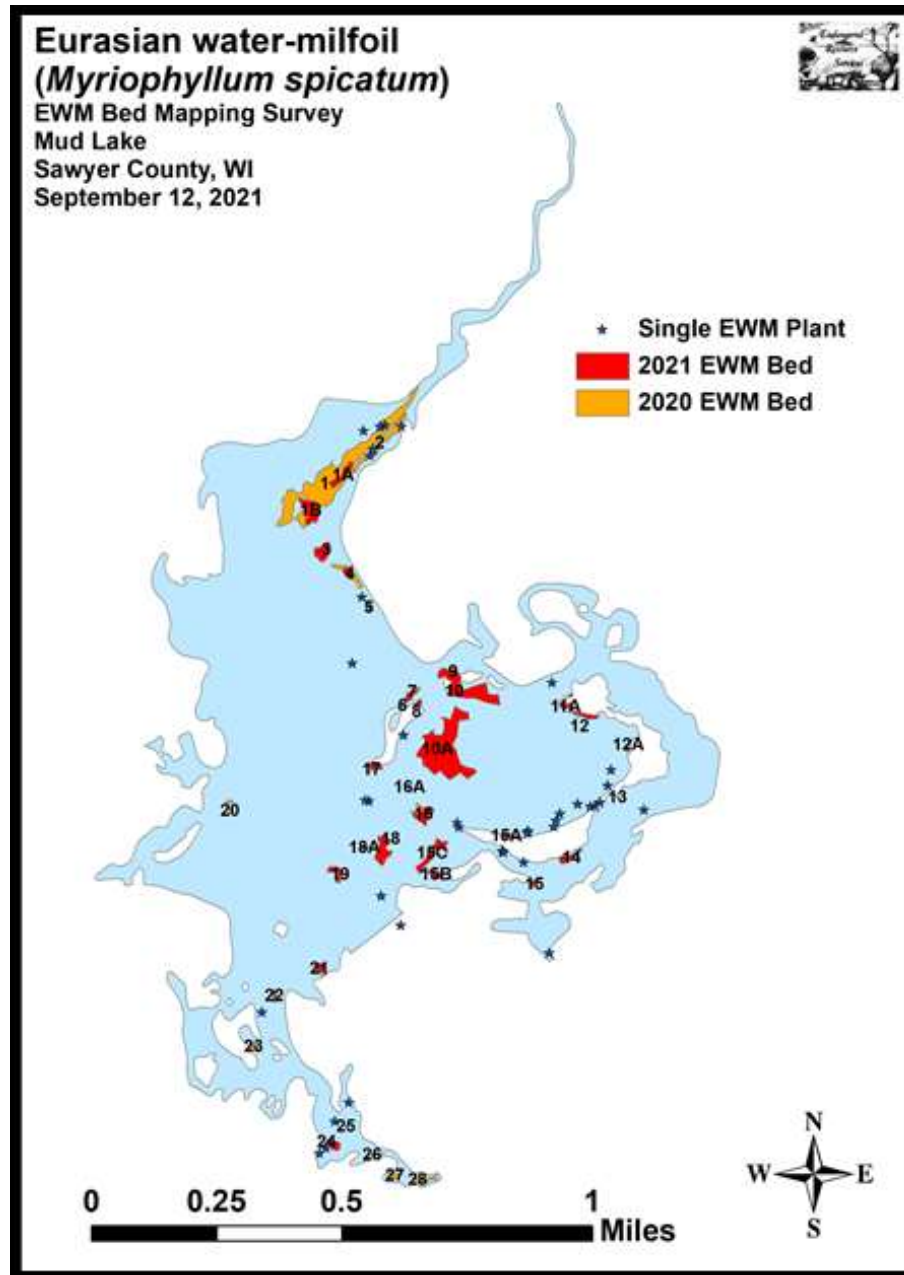


Figure 3: 2021 Mud Lake EWM bed mapping results

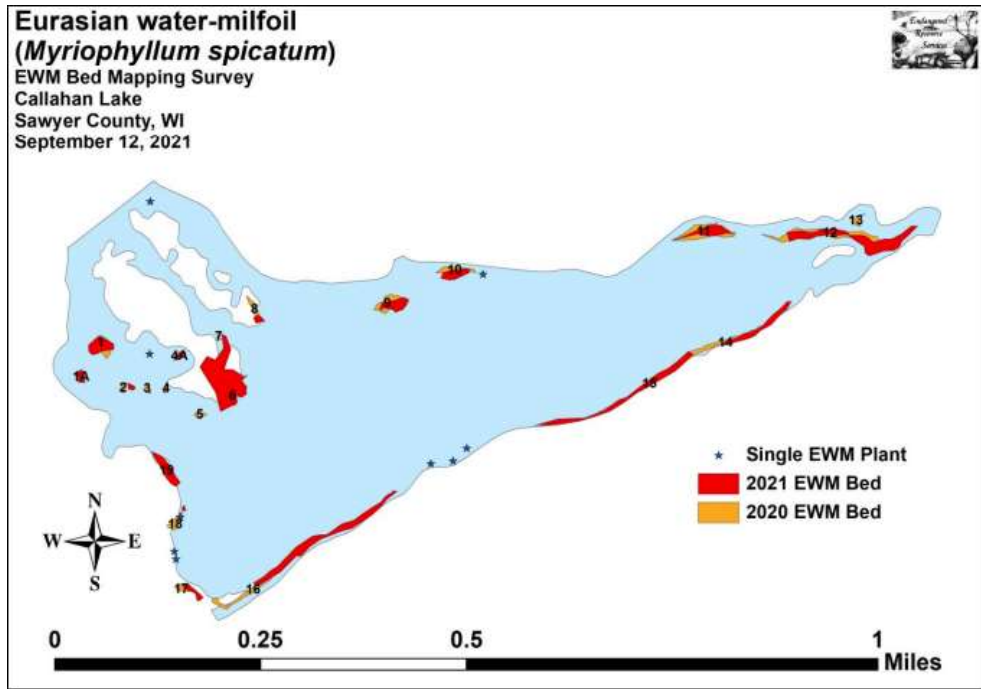


Figure 4: 2021 Callahan Lake EWM bed mapping results

After two separate pre-treatment readiness surveys completed by LEAPS, one on May 22 and the other on June 7, it was decided to reduce the treatment area on Mud Lake to two beds totaling 9.52 acres (Figure 5), and no EWM management would be completed on Callahan Lake.

On June 8, 2022, Dale Dressel of Northern Aquatic Services (NAS) applied 129.58 gallons of 2,4-D (Amine 4) at 2.5 and 3.0 parts per million to the two beds in Mud Lake (Table 1).



Figure 5. 2022 Mud Lake EWM chemical treatment areas (yellow hash)

Table 1. 2022 Mud Lake EWM chemical treatment

2022 Mud Lakes Preliminary Spring EWM Treatment Proposal (4/27/2022)							
New Name	Acres	Mean Depth (feet)	Acre-feet	Target 2,4-D (liquid) (ppm a.e.)	Application rate (gal/acre-feet)	Liquid (gal)	Treatment Notes
Bed10AM-22	6.23	8.0	49.84	3.00	106.16	2.13	*not treated in 2020 or 2021
Bed18A1819M-22	3.29	4.0	13.16	2.50	23.42	1.78	*not treated in 2020 or 2021
Total	9.52		63.00		129.58		

2022 EWM BED MAPPING RESULTS

On September 12, 2022, LEAPS completed a meandering survey to identify EWM in both lakes and to determine areas that could be considered for management using herbicides in 2023. During the survey, 17.7 miles of transects were covered between the two lakes (Figure 6). GPS points were taken where EWM was identified growing in the water. A total of 336 points were documented (Figure 6). Some of these points delineated beds of EWM, but most identified individual plants or small clumps or areas of plants. A majority of these areas were described as having a rake head density of 1 or less. However, three areas or beds with a rake head rating of 2 or more totaling 8.64 acres were delineated in Callahan Lake, and one area or bed with a rake head rating of 2 or more totaling 5.09 acres was delineated in Mud Lake (Figure 6).

The EWM bed in Mud Lake up near the inlet of the Chief River was loaded with many native aquatic plant species that would be negatively impacted by a chemical treatment to control EWM including Water marigold, Northern watermilfoil, other native milfoil species, White water crowfoot and others. A chemical treatment in this area is not recommended for 2023.



Figure 6: 2022 EWM bed mapping. purple lines: survey transects, blue dots: point w/EWM, and red polygons: EWM beds w/a rake head rating of 2 or more

2022 CITIZEN LAKE MONITORING

No water quality data was collected in 2022.

2023-27 AQUATIC PLANT MANAGEMENT PLAN

LEAPS updated the Aquatic Plant Management Plan (APMP) for Callahan and Mud Lakes as part of the Callahan-Mud Lakes APM Planning Project Grant (#AEPP61020.1). Unfortunate circumstances delayed the completion of the plan by the end of 2021 as originally intended. Thus, LEAPS assisted the CLPA in asking for an extension on the grant. The extension was approved, allowing the CLPA and LEAPS to finalize the plan in 2022.

A draft of the new Aquatic Plant Management Plan was completed and sent to the CLPA for review in has been completed and sent to the CLPA for initial review. The draft APM Plan was presented to the CLPA constituency at their Memorial Day Weekend 2022 Annual Meeting. At the meeting, a motion was made and seconded, and then passed unanimously for the CLPA to approve the APM Plan even with modifications that might be required in the WDNR Review.

The drat APM Plan was posted for public review on the LEAPS webpage in early June and emails and messages were sent to the constituency to take some time to review the draft APM Plan. Only a couple of people had comments. Those comments were incorporated into another draft that was sent to the WDNR with an official request for review and approval on July 29, 2022. The WDNR missed the email requesting review, and did not start its review until September 9, 2022.

WDNR comment on the draft APM Plan was received by the CLPA and LEAPS on September 13, 2022, two days before pre-grant applications were due. In their comments and acknowledgement, the WDNR stated that at least going into the pre-grant cycle, that a pre-grant application submitted by the CLPA would be considered if all other parts of it met the current requirements for a grant application.

Final modifications to the APM Plan were made by LEAPS and the CLPA prior to the final due date (November 15, 2022) for final grant applications. The new 2023-27 APM Plan for Callahan and Mud Lakes was approved by the WDNR in November 2022.

2022 AIS MONITORING AND EDUCATION

EWM was first discovered in the lakes in 2005. Since then, volunteers have performed aquatic invasive species (AIS) monitoring on a regular basis. No other AIS are verified on the lake, but purple loosestrife, Japanese knotweed, and several other species are known to be in the immediate area. To stay ahead of the current infestations, as well as any other future AIS concerns, monitoring and education will continue in the future to prevent new introductions and limit their spread should they occur. LEAPS promotes and provides AIS education through events geared towards education and by attending CLPA meetings.

In 2021, LEAPS assisted with AIS education through several events. Personnel attended CLPA meetings and presented information on AIS. Constituents were engaged and interested in the information and reported that they felt like they knew more about the lake and AIS and that they would be more likely to be able to identify AIS in the future. LEAPS also worked with the CLPA to put on an education event on 7/21/21. Around 40 people attended the event that featured a pontoon tour of the lakes with LEAPS personnel presenting information on the lakes and AIS. The event especially focused on milfoil – native and nonnative – identification and EWM removal methods.

AIS monitoring was not formally done in 2022, although LEAPS did complete a pre-treatment readiness survey on both lakes in May and June 2022, and a late season EWM bedmapping survey on both lakes in September 2022.

At the 2022 Memorial Day Annual Meeting, LEAPS brought in samples of the different AIS in the lakes and discuss how to identify them and handed out identification and information materials related to AIS.

2023 EWM MANAGEMENT PLANNING

Initial EWM management planning has been completed for Callahan and Mud Lakes based on 2022 late season bed mapping survey results. EWM in Mud Lake is widely distributed by very sparse in density except up in the channel where the Chief River enters. However in this area, there is a large amount of native aquatic plant diversity and density, so EWM management is not recommended for 2023. In fact, no area of EWM is recommended for management using aquatic herbicides in 2023. Management using aquatic herbicides will be revisited in 2024, but until then, only physical removal of EWM will be implemented.

In Callahan Lake, three areas were found that had large enough and dense enough EWM beds to consider management using aquatic herbicides in 2023. The three beds are located near the dam, along the south shore, and in an area along the north side of the lake where channels from Mud Lake are scattered. The large bed of EWM is located in the middle, on top of and around a sunken bog with a lot of trees sticking out. This same area was identified in the 2021 fall survey, and has increased in size since then. While not necessarily a navigation hazard, it does continue to spread a lot of fragments into Callahan Lake, and may be interfering with some level of native aquatic plant growth. Physical removal of EWM continues, and diver and/or DASH removal is being considered.

A WDNR AIS Small-scale Population Control pre-grant application was prepared and submitted to the WDNR on September 15, 2022 to support EWM management in 2023 and 2024. This application was completed and submitted by the CLPA. Unfortunately, due to issues with lake organization eligibility in the Fall 2022 grant cycle, the application was deemed ineligible and was not submitted as a final application in November 2022.

At the time of this writing, only the preliminary plan has been completed. A WDNR permit has not been applied for yet.