

LAKE EDUCATION AND PLANNING SERVICES, LLC

# OSPREY LAKE SAWYER COUNTY

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2022 MANAGEMENT SUMMARY REPORT  
WBIC: 2395100

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OSPREY LAKES PROPERTY OWNERS ASSOCIATION

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## INTRODUCTION

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

- 2022 AEPP Grant Award
- 2022 EWM management
- 2022 Fall EWM mapping
- 2022 AIS monitoring and Education
- 2022 Water quality
- 2023 Preliminary EWM management planning
- 2023-24 ACEI Grant Application

Each of the bullet points above will be discussed in a following section.

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### 2022 AEPP GRANT AWARD

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The OLPOA applied and was awarded a 1-yr Aquatic Invasive Species (AIS) Education, Prevention, and Planning (AEPP) grant from the WDNR in later 2021. The grant was to support one year of EWM management planning including aquatic plant survey work, WDNR permit preparation, AIS monitoring, and adding a shoreland habitat assessment to the recently approved 2022-26 Osprey Lake Aquatic Plant Management (APM) Plan. The grant was awarded in early March 2023. A Professional Services Agreement and Schedule of Grant Activities were signed by the OLPOA and LEAPS.

The addition of a shoreland habitat assessment to the existing APM Plan was based on survey work completed by the WDNR through a Directed Studies program that started in 2019. Due to Covid 19, the shoreland habitat assessment was delayed. The data was collected, but it had not been written up by the WDNR for inclusion in the new APM Plan while it was being prepared in 2021.

The new grant was supposed to have an end date of December 31, 2022, but due to more delays on the part of the WDNR and getting the shoreland habitat assessment data and write up to the Consultant, before the end of 2022, a request was made to extent the 2022 AEPP grant through the end of 2023. That extension was request was approved by the WDNR.

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### 2022 EWM MANAGEMENT

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The OLPOA and their consultant prepared a preliminary EWM chemical treatment proposal in early 2022 based on EWM mapping results from the fall of 2021. During the fall 2021 survey, seven areas of moderate to dense EWM growth were mapped totaling 1.56 acres (Figure 1). In the northeast bay, three small beds remained in the fall after the spring 2021 chemical treatment. The largest bed was still in the north bay along the north shoreline of the lake.

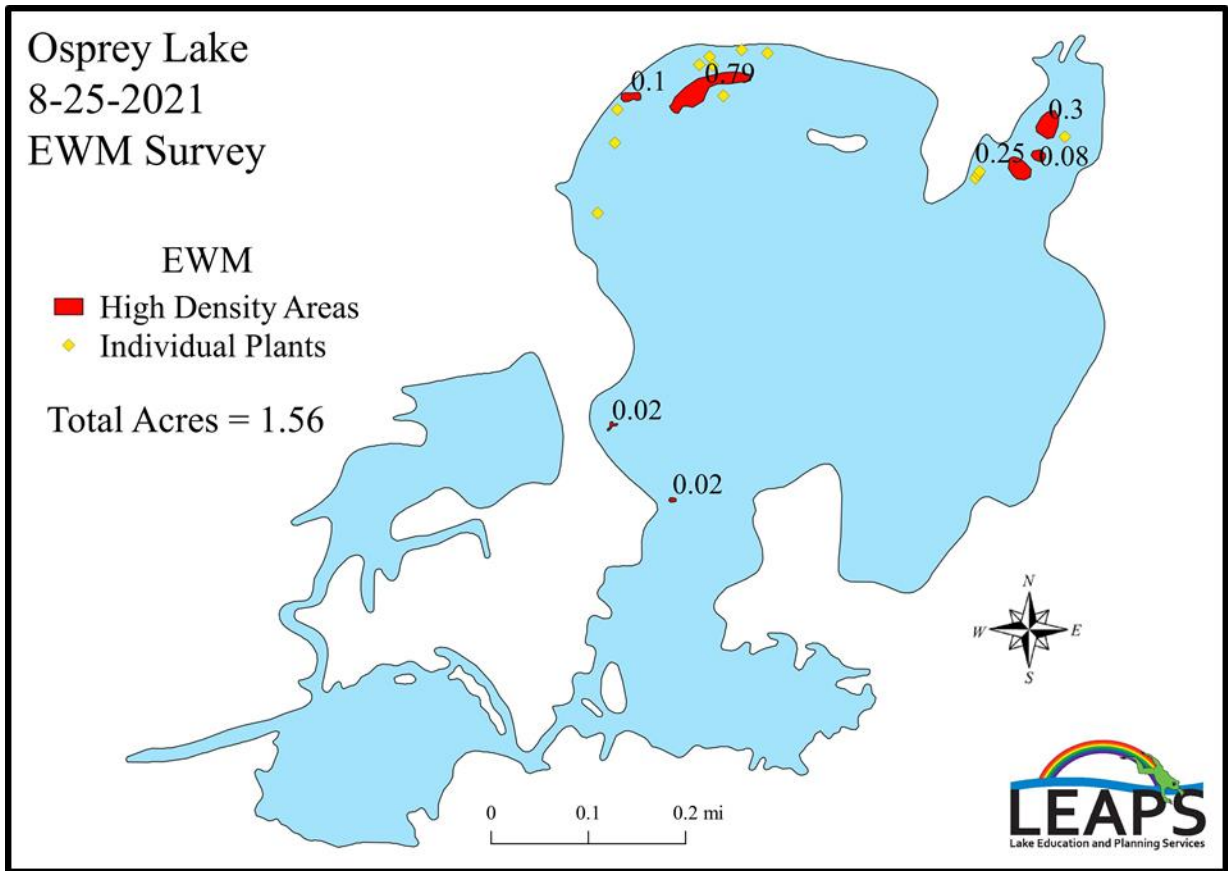
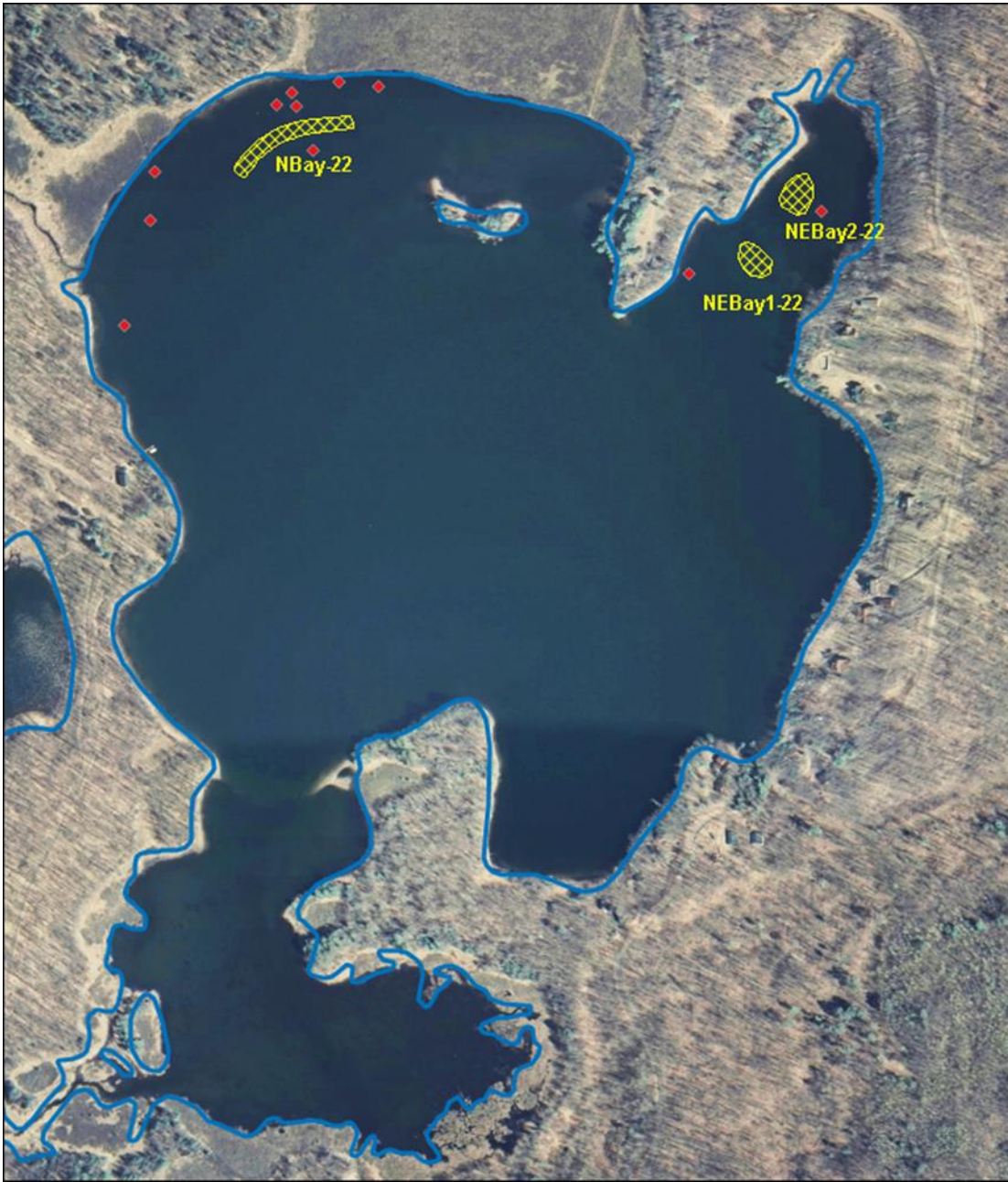


Figure 1: 2021 EWM bed mapping results – LEAPS

The preliminary treatment proposal included three areas totaling 1.12 acres; one along the north shore and two smaller beds in the northeast basin that had been treated in 2021. Although there was some overlap in the 2022 chemical treatment proposal with the 2021 treated area, a different herbicide was proposed for use (Table 1, Figure 2). ProcellaCOR had not been used in Osprey Lake, 2022 would have been the first year.

Table 1: 2022 EWM proposed chemical treatment - details

2022 Estimated ProcellaCOR Treatment Costs 11/07/2021						
New Name	Acres	Mean Depth (feet)	Acre-feet	Treatment PDU/acft	PDU Application	2022 Treatment Notes
NBay-22	0.57	7.00	3.99	5.00	19.95	Last chemically treated prior to 2020
NEBay2-22	0.30	7.00	2.10	5.00	10.50	Liquid 2,4D used in 2021
NEBay1-22	0.25	7.00	1.75	5.00	8.75	Liquid 2,4D used in 2021
<b>Total</b>	<b>1.12</b>		<b>7.84</b>		<b>39.20</b>	
			PDU NAS \$70		\$2,744.00	



**Figure 2: 2022 EWM proposed chemical treatment – map**

A WDNR chemical application permit was submitted to the WDNR on April 10, 2022. In early May 2022, the WDNR reviewed the permit application and determined that they would not support management in the northeast basin because it had already been chemically treated in the previous three years. They would approve chemically treating the EWM bed on the north shore. After a discussion with their consultant, the OLPOA decided not to complete any chemical treatment in 2022. They would attempt some snorkel/diver removal if contracted services could be found.

On two different dates, June 29, 2022 and July 14, 2022 LEAPS brought a snorkeler to the lake and completed EWM survey work along with physical removal of EWM. Individual EWM plants were removed from multiple areas of the lake. Complete snorkel removal was attempted on three small beds totaling 0.13 acres (Figures 3&4).



Figure 3: 2022 snorkel removal areas (small yellow polygons) in Osprey Lake



Figure 4: EWM removed from Osprey Lake during a July 14, 2022 survey and snorkeling

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## 2022 FALL EWM BED MAPPING

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On September 10, 2022 ERS completed a fall meandering survey to identify all areas of EWM that could be considered bed size. ERS identified 24 beds totaling 5.04 acres. The largest bed was 2.4 acres, the smallest <0.01 acres, and the mean bed size of 0.21 acres (Figure 5). EWM bed density ranged from <1 to 3 in rakehead density and the average depth of all of the EWM was 6.25ft ranging from 2 to 10 feet of water. A majority of the EWM was located along the north shore and in the northeast bay. Scattered, smaller EWM beds were located in many other locations, some coinciding with sunken fish cribs or other underwater debris.

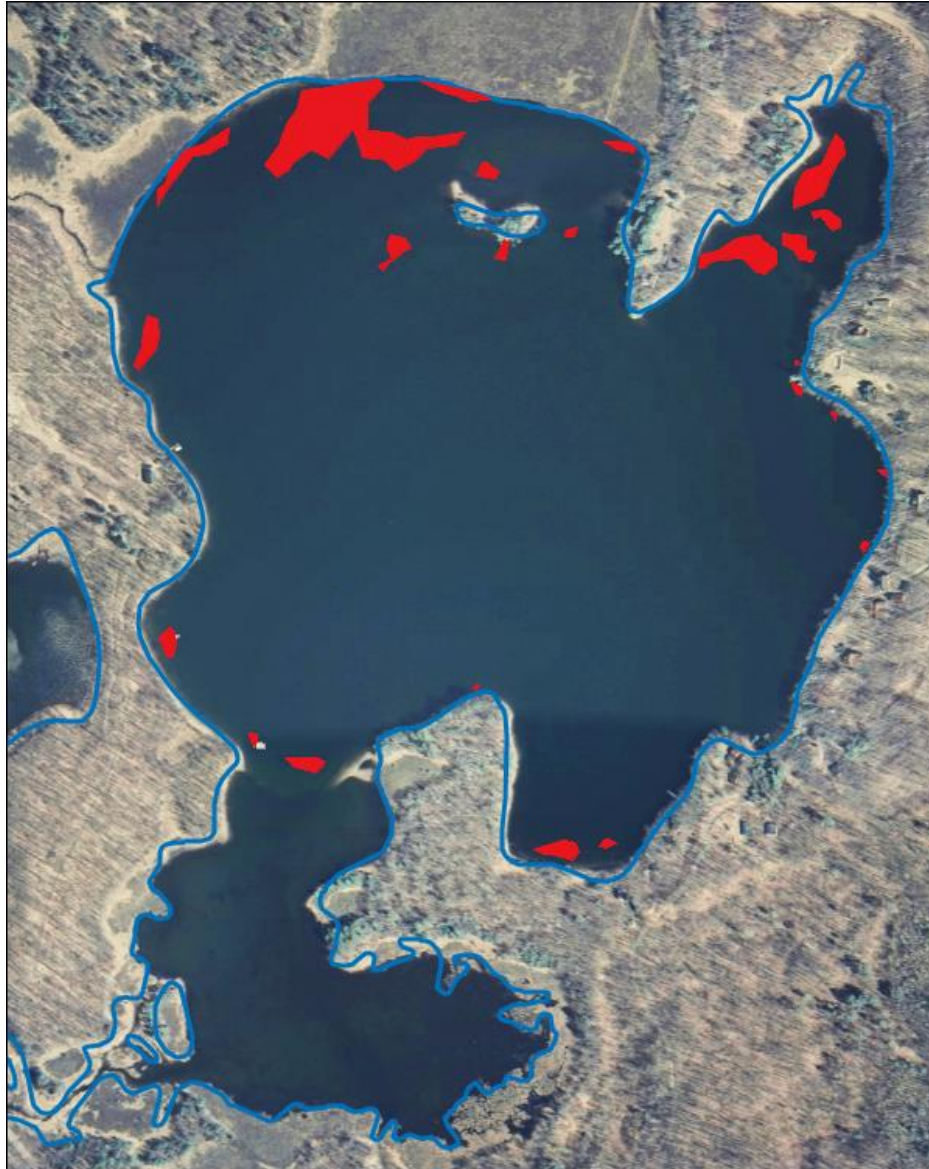


Figure 5: September 10, 2022 EWM bed mapping results - ERS

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## 2022 AIS MONITORING AND EDUCATION EVENT

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Watercraft inspection through the Clean Boats Clean Waters program is not implemented at the Osprey Lake boat landing due to its isolation and limited use. Several OLPOA volunteers monitoring for EWM and other AIS in the lake during the open water season on a regular basis. At least 2-3 times per season, resource professionals (and sometimes Lac Courte Oreilles (LCO) Tribal resource professionals) survey the lake for AIS. In 2022, LEAPS was

on the lake for two official surveys on June 29 and July 14. LEAPS and OLPOA volunteers were on the lake on July 16 during an AIS Education Survey and Removal Event as well. Endangered Resource Services (ERS) was on the lake on September 10, 2022 to map EWM beds in the entire lake.

On August 22, 2022, OLPOA volunteers identified purple loosestrife in the wetland area in the first bay adjacent to the boat landing. The population consisted of two small areas each with <100 plants. OLPOA volunteers contacted the Sawyer County AIS Coordinator, LCO Tribal Resources, and their consultant for advice as to what to do to control the plants. The recommendations for 2022 were to physically remove the flowering heads from the stems that were easily accessible to prevent additional seeding. Rearing and releasing *Galerucella* beetles that feed on purple loosestrife was a recommended action for future years, with a beetle rearing action built into a new AIS small-scale population control grant application.

OPLPO volunteers completed flower head removal on those plants they could easily reach.

The OLPOA held an on-the-lake EWM identification and physical removal event on July 16, 2022. The event was attended by several OLPOA volunteers. During the event, different AIS were discussed, as was the identification of EWM and several common native aquatic plants in the lake. A boat tour was taken around the lake to point out areas with EWM. A limited amount of rake removal was attempted, but due to most of the EWM being in deeper water, this was not a very effective management action.

The OLPOA distributed a newsletter in the fall of 2022. The newsletter updated AIS management actions on the lake, both for EWM and for purple loosestrife. The letter also discussed the updated APM Plan and the new grant application to support implementation of the APM Plan in 2023 and 2024.

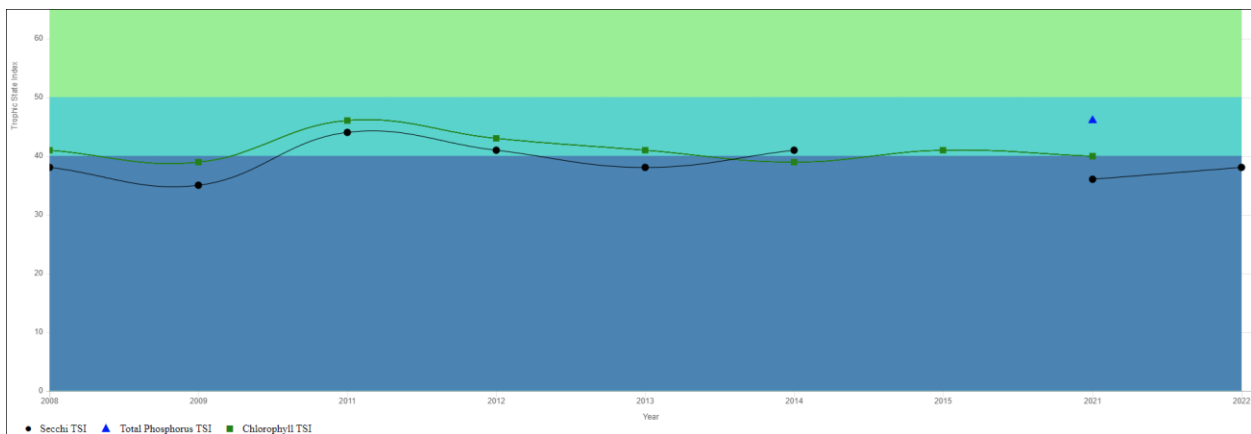
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## 2022 CITIZEN LAKE MONITORING NETWORK WATER QUALITY MONITORING

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Osprey Lake - Deepest Spot was sampled 6 different days during the 2022 season. The average summer (July-Aug) Secchi disk reading of water clarity for Osprey was 15.17 feet. This is more than 5-ft better than the average for the region of 10-ft. Typically the summer (July-Aug) water was reported as clear and green. 2022 marks the first time since 2014, that Secchi disk readings of water clarity have been collected on Osprey Lake with any consistency. The summer water clarity was outstanding, with a Trophic State Index value of 38 (Figure 6). The TSI suggests that Osprey Lake was oligotrophic in 2022. Oligotrophic lakes generally have really good water clarity and low levels of nutrients and algae production. These conditions likely describe Osprey Lake in 2022 very well. Unfortunately, the good water clarity also supports abundant EWM growth.

Additional water quality monitoring data for 2022 may be available from LCO Tribal Resources, but at the time of this report, they had not been shared.



**Figure 6: Historic TSI values for Osprey Lake, Sawyer County**



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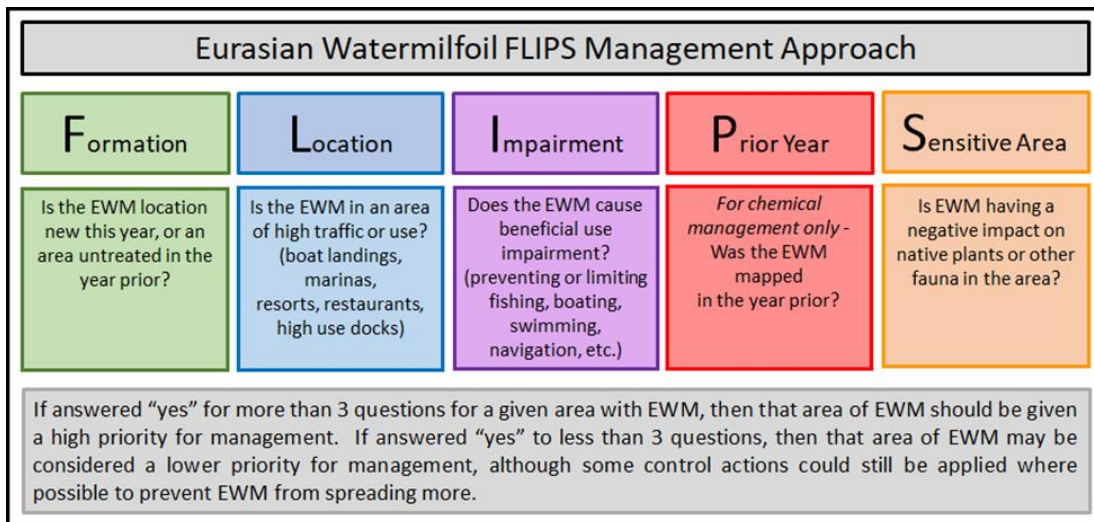
## UPDATE OF THE OSPREY LAKE AQUATIC PLANT MANAGEMENT (APM) PLAN

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The process of updating the old was begun in 2021. This process was completed in early 2022, with several versions of the new APM Plan being reviewed by the OLPOA and the WDNR. The final APM Plan covering the years 2023-2027 was approved by the WDNR on June 1, 2022.

Between 2023 and 2027, EWM management in Osprey Lake will be based on the following criteria.

- 1) Late summer or fall bed mapping will be completed every year.
- 2) Any amount of EWM in the lake can be managed at any time if chemical management is not used. Non-chemical management actions include hand pulling, rake removal, and snorkel/scuba diver removal, and/or DASH removal (still considered diver removal, but more expensive and requires a permit).
- 3) Chemical management of EWM may be considered if prior year mapping identifies any area of EWM that is  $\geq 0.25$  acres, and meets the criteria set forth in the FLIPS matrix (Figure 7).
  - a. On EWM beds that are candidates for chemical treatment **AND**  $\leq 3.0$  acres, ProcellaCOR® should be used.
  - b. On EWM beds  $> 3.0$  acres, ProcellaCOR, 2,4D-based, or triclopyr-based herbicides can be used based on the financial resources available.
- 4) Chemical management of EWM should not be completed on the same area in consecutive years.



**Figure 7: FLIPS EWM management matrix from the 2023-27 Osprey Lake APM Plan**

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### 2023 EWM PRELIMINARY MANAGEMENT PLANNING

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Based on the 2022 fall EWM bed mapping survey results, the OLPOA and LEAPS developed a preliminary EWM management plan combining the use of aquatic herbicides and physical removal via snorkel or divers/DASH (diver-aided suction harvest). The preliminary chemical treatment plan for Osprey Lake in 2023 includes six treatment areas totaling 6.07 acres (Table 2, Figure 8). Both the new 2023-27 APM Plan and the preliminary 2022 chemical treatment plan recommends the use of ProcellaCOR instead of a liquid 2,4D or triclopyr-based herbicide. ProcellaCOR is expected to be more effective and provide longer-term results, up to two or more years without retreatment.

Table 2: 2023 Osprey Lake preliminary EWM chemical treatment plan - details

2023 Estimated ProcellaCOR Treatment Costs 11/2/2022						
New Name	Acres	Mean Depth (feet)	Acre-feet	Treatment PDU/acft	PDU Application	2022 Treatment Notes
NBay-23 (TA-3)	3.15	7.00	22.05	4.00	88.20	Last chemically treated prior to 2020
NEBay1-23 (TA-4)	0.89	7.00	6.23	5.00	31.15	Liquid 2,4D used in 2021
NEBay2-23	0.82	7.00	5.74	5.00	28.70	
FC-WestBay-23 (TA-2)	0.39	7.00	2.73	6.00	16.38	
PJ'sBay-23 (TA-5)	0.42	7.00	2.94	6.00	17.64	
EntryBay-23 (TA-1)	0.40	9.00	3.60	6.00	21.60	
<b>Total</b>	<b>6.07</b>		<b>43.29</b>		<b>203.67</b>	
				PDU NAS \$75	\$15,275.25	
				Trip Fee	\$300.00	
				<b>TOTAL</b>	<b>\$15,575.25</b>	

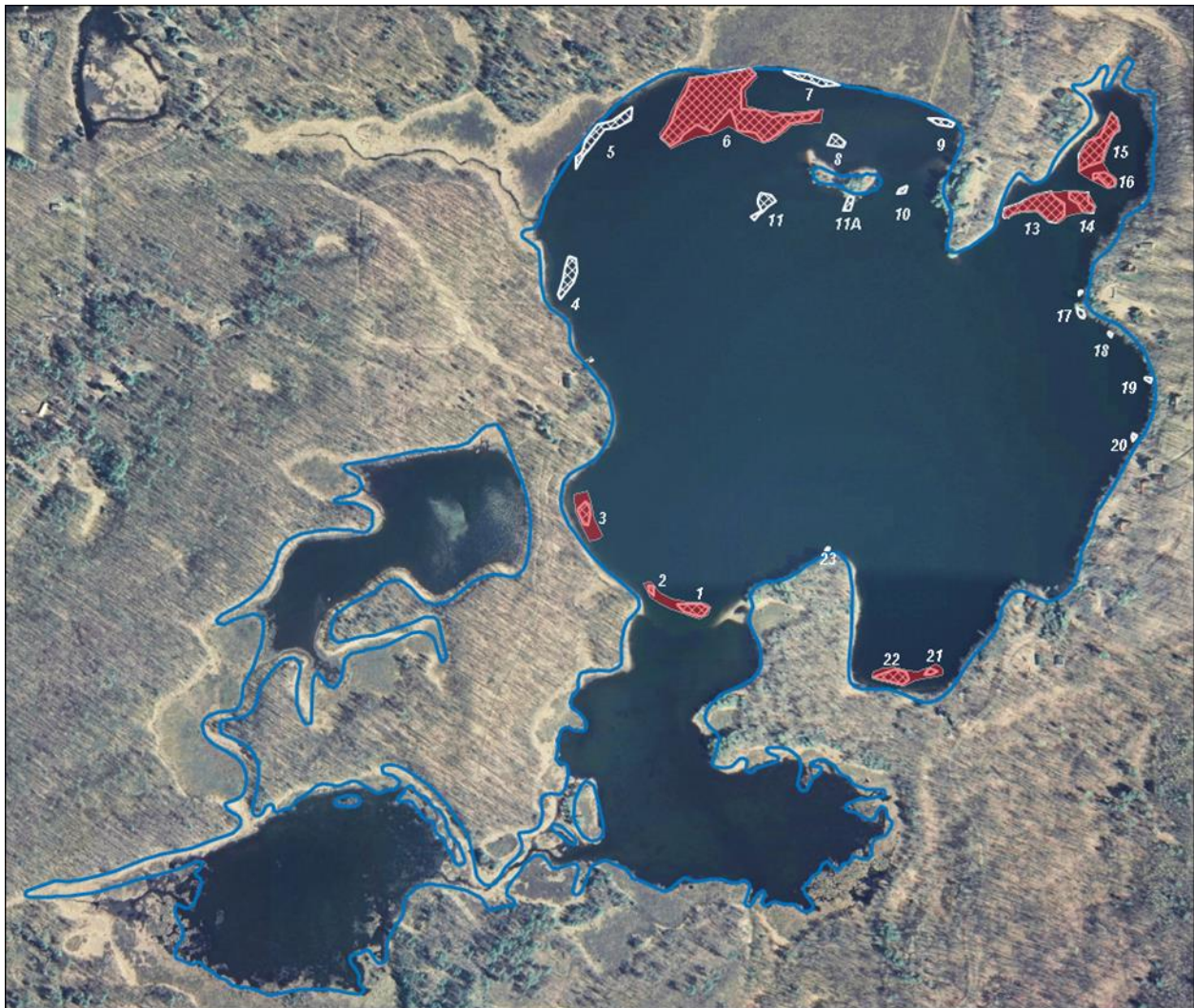


Figure 8: 2023 Osprey Lake preliminary EWM chemical treatment plan – map

It is expected that the remaining areas or small beds with EWM mapped in the fall of 2022 will either be physically removed by snorkel or diver, or be taken out with the ProcellaCOR treatment, even though they are not specifically targeted. The 2023 preliminary EWM chemical treatment for Osprey Lake follows recommendations in the WDNR-approved 2023-27 APM Plan.

The OLPOA has applied for grant funding to support the 2023 management of EWM in Osprey Lake and follow-up management and monitoring in 2024.

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## **2023-24 SURFACE WATER LAKE MANAGEMENT PLANNING GRANT APPLICATION**

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As mentioned in a previous section, a WDNR AIS small-scale, population control grant application has been prepared and submitted to the WDNR to support the implementation of the first two years of EWM management under the new 2023-27 Osprey Lake APM Plan. A pre-grant was submitted to the WDNR on September 15, 2022. Following a discussion of that grant application with WDNR representatives, a final grant application was submitted on November 15, 2022. Whether or not this particular grant application gets awarded will not be known until sometime in late February 2023.

The grant application includes the following activities for 2023 and 2024.

- EWM management planning and implementation
- Sharing of management information with stakeholders
- Consultant participation at OLPOA meetings
- AIS early detection surveys
- AIS education and training
- Biocontrol of purple loosestrife
- Physical removal of EWM through rake, snorkel, diver, and potentially DASH
- Management of EWM using aquatic herbicides (ProcellaCOR)
- Fall EWM bed mapping
- Water quality testing including water clarity, total phosphorus, and chlorophyll-a (a measurement of the amount of algae in the water)
- Project administration

**Respectfully prepared and submitted by Dave Blumer, LEAPS January 16, 2023**