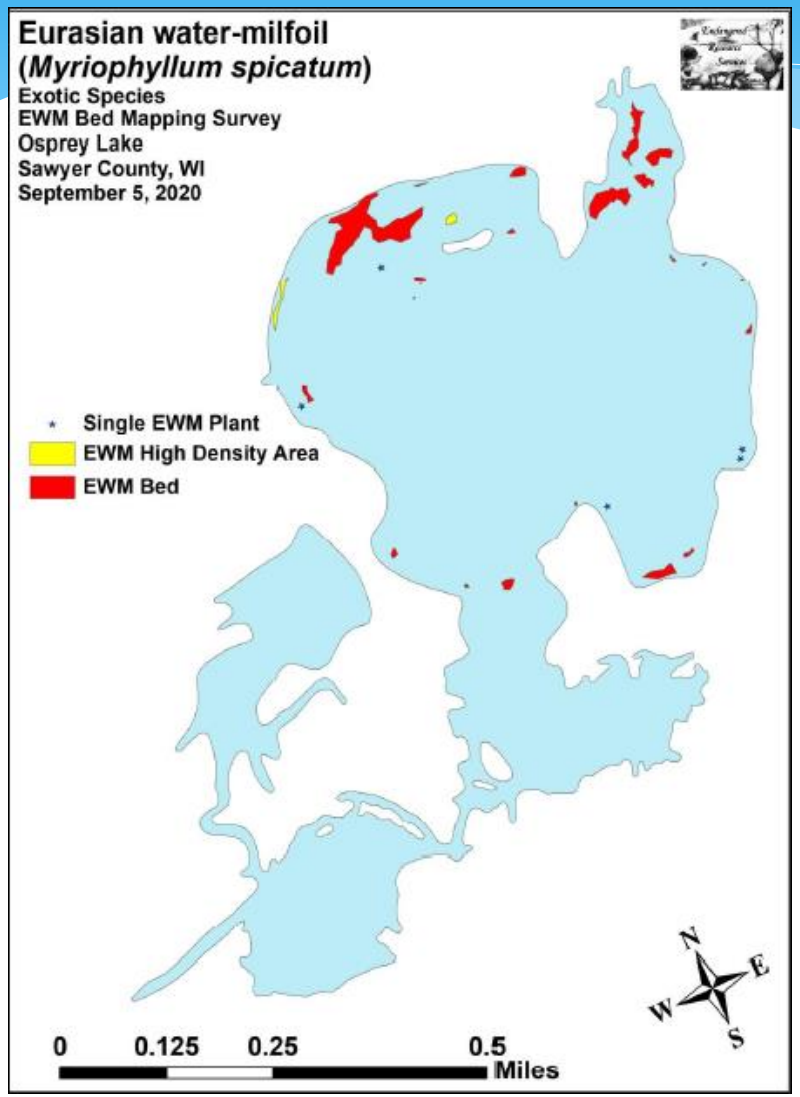
Osprey Lake, Sawyer County Aquatic Plant Management Planning Project

Presentation of the Osprey Lake Aquatic Plant Management Plan

September 4, 2021

Eurasian Watermilfoil (EWM)



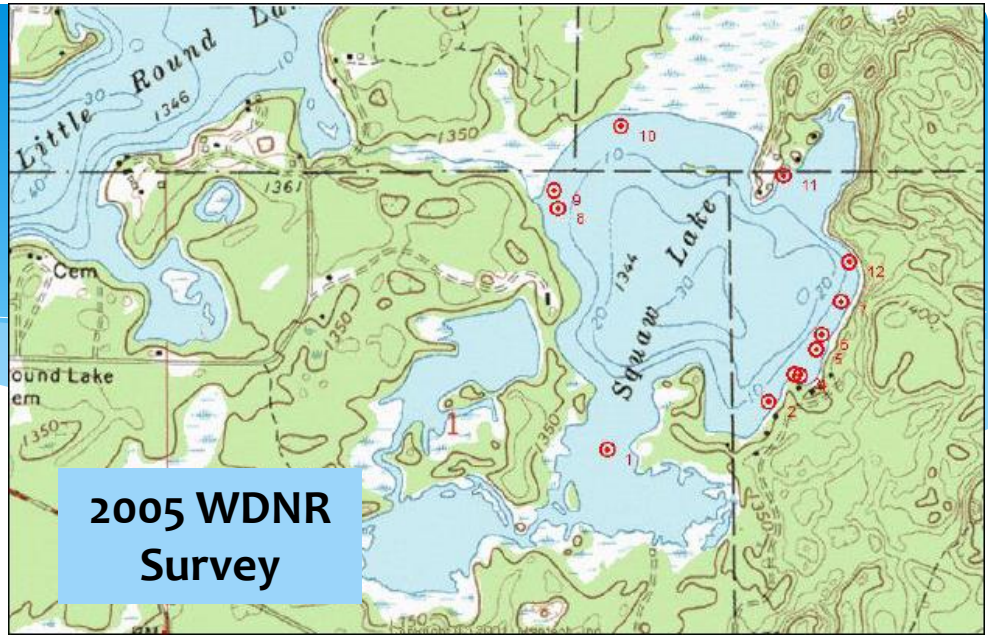
2020 and 2021 Late-season EWM Bedmapping

Green - 2020
ERS
23 areas
0.01 to 2.1-ac
4.26-ac
5 isolated plants

Red - 2021
LEAPS
7 areas
0.02 to 0.79-ac
1.56-ac
13 isolated plants

Past EWM Management

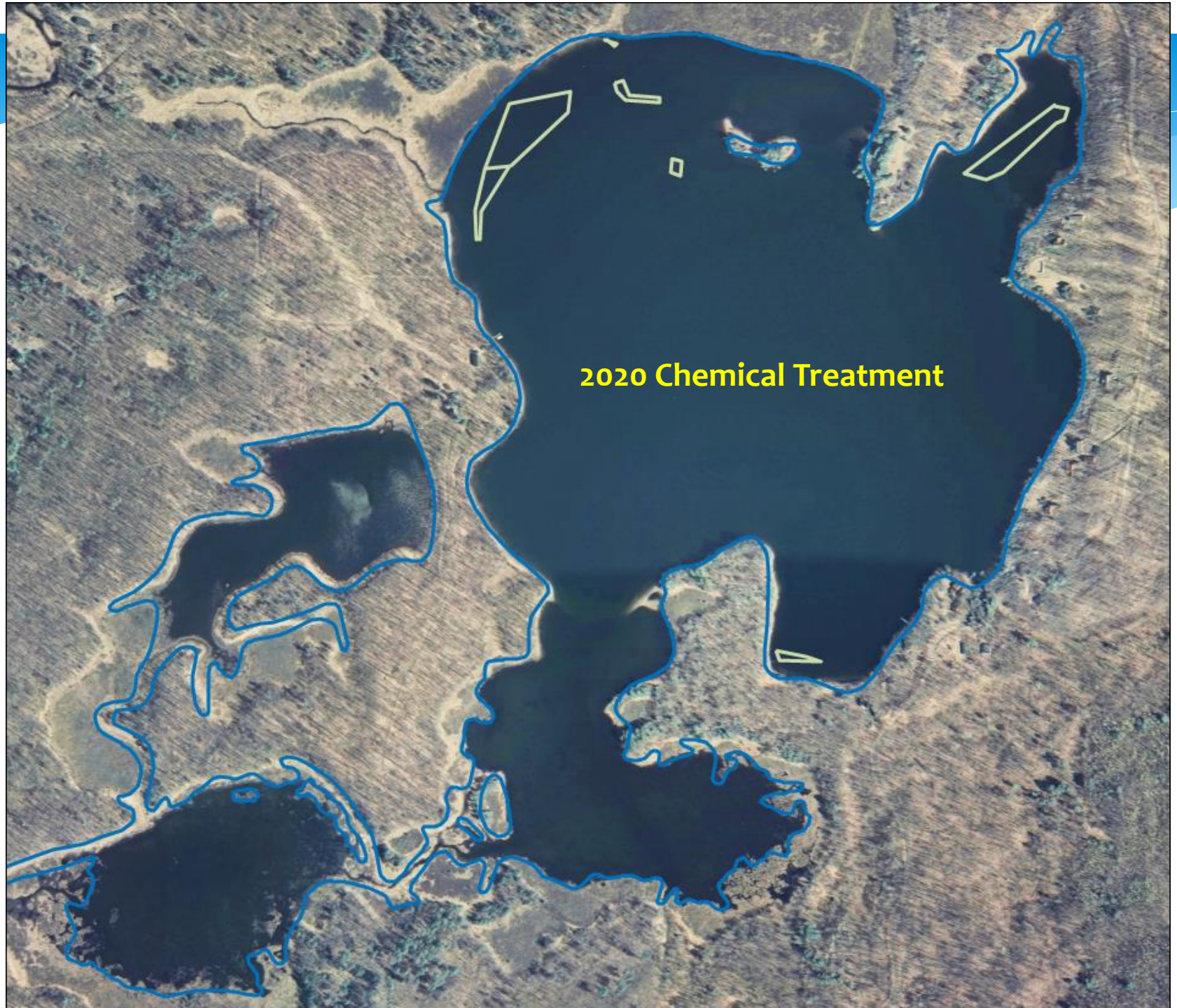
- LCO- by the boat landing
- WDNR 2005 Survey at several other locations
- OLPOA applied for and received a WDNR AIS Rapid Response Grant
- 3-yrs (2006-08)of EWM management w/grant
- 2-yrs w/OLPOA funds
- Physical removal throughout this time.
- Applied for a WDNR AIS Control Grant in 2012
- Covered management until 2015
- 2016-2021 – EWM management paid for entirely by the OLPOA



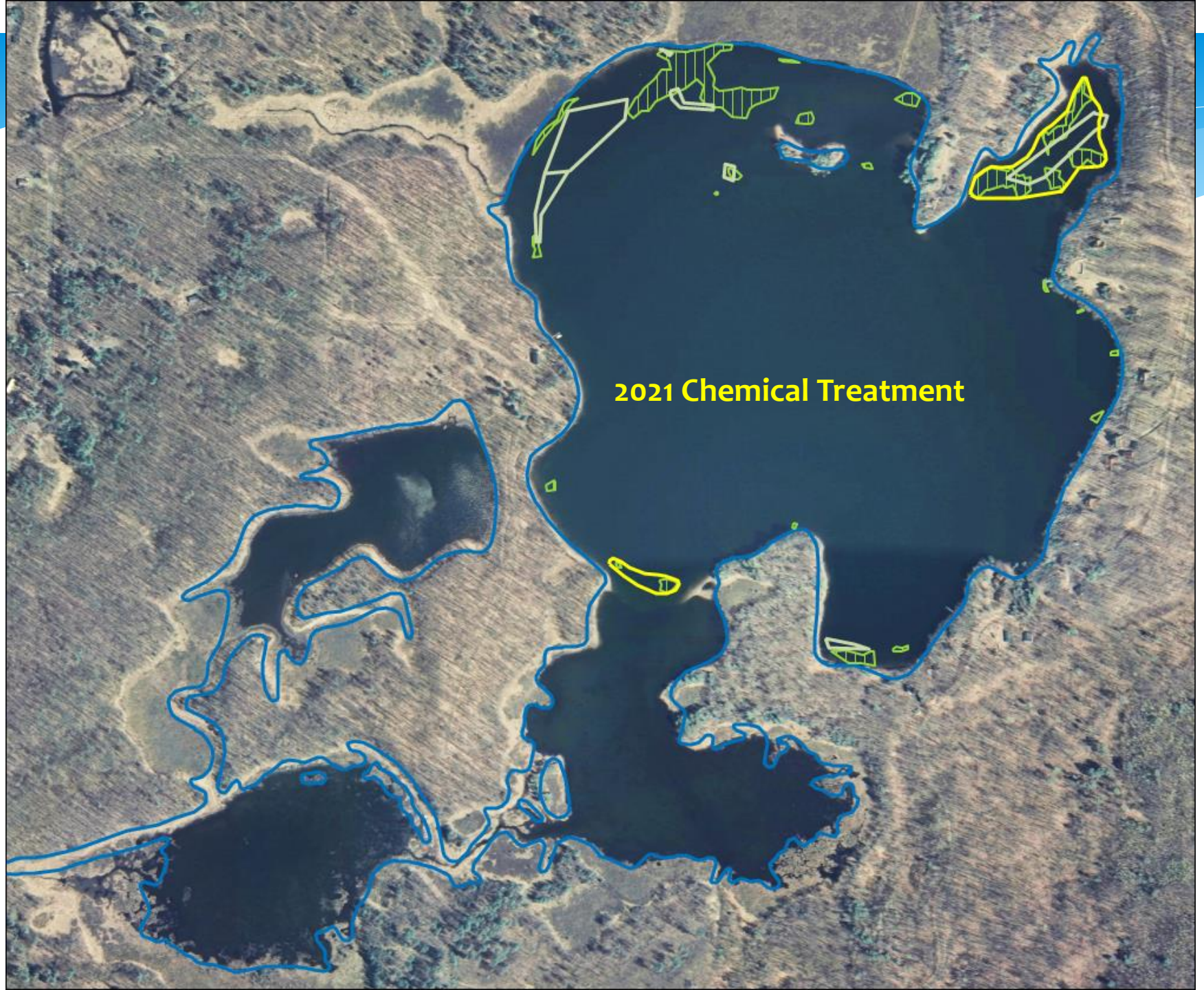
2005 WDNR Survey

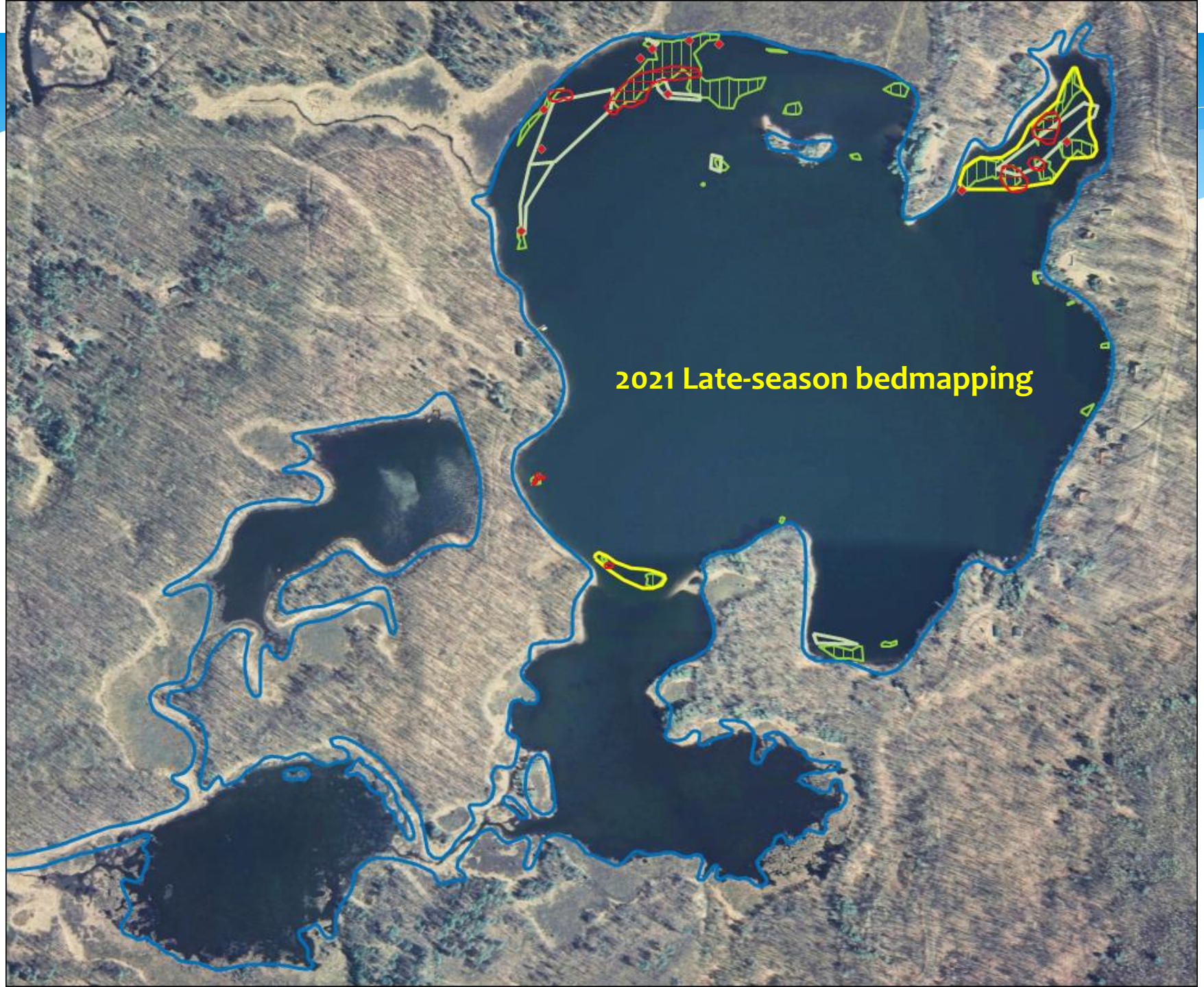
Year	Acres Treated	Herbicide	Rate (lbs/acre)	Rate (gal/acre)
2006	8	2,4-D	125	-
2007	6	2,4-D	100-125	-
2008	5	2,4-D	150	-
2009	1	2,4-D	150	
2010	5	2,4-D	150	-
2011	2.5	2,4-D	200	-
	3.5	Renovate Max G	300	
2012	12	2,4-D	??	
2013	9	2,4-D	262	-
2015	6	Renovate Max G	300	-
2019	~~3.5~~4.24	Renovate Max G	300	
2020	~~3.5~~3.24	Renovate Max G	330	-
2021	3.5	2,4-D Amine 4	-	12.0

!!EWM treatment history is a combined analysis of data from LCO and Northern Aquatic Services!!


2020 Chemical Treatment


2020 Late-season Bedmapping


2021 Chemical Treatment


2021 Late-season bedmapping

Aquatic Herbicides

Granular 2,4D product

27.6% 2,4D
72.4% other ingredients

- Swimming: 0 days
- Drinking Water: 21 days
- Domestic Uses: 0 days
- Fish Consumption: 0 days
- Irrigation, Food/Crop: 21 days
- Irrigation, Turf/Ornamental: 0 days
- Livestock Watering: 0 days

Granular 2,4D & triclopyr product

4% triclopyr
14% 2,4D
82% other ingredients

- Swimming: O days
- Fishing: O days
- Domestic uses: O days
- Animals drinking: O days
- Irrigation: Test to below I ppb (or 120 days)

Liquid 2,4D product (formerly Shredder Amine 4)

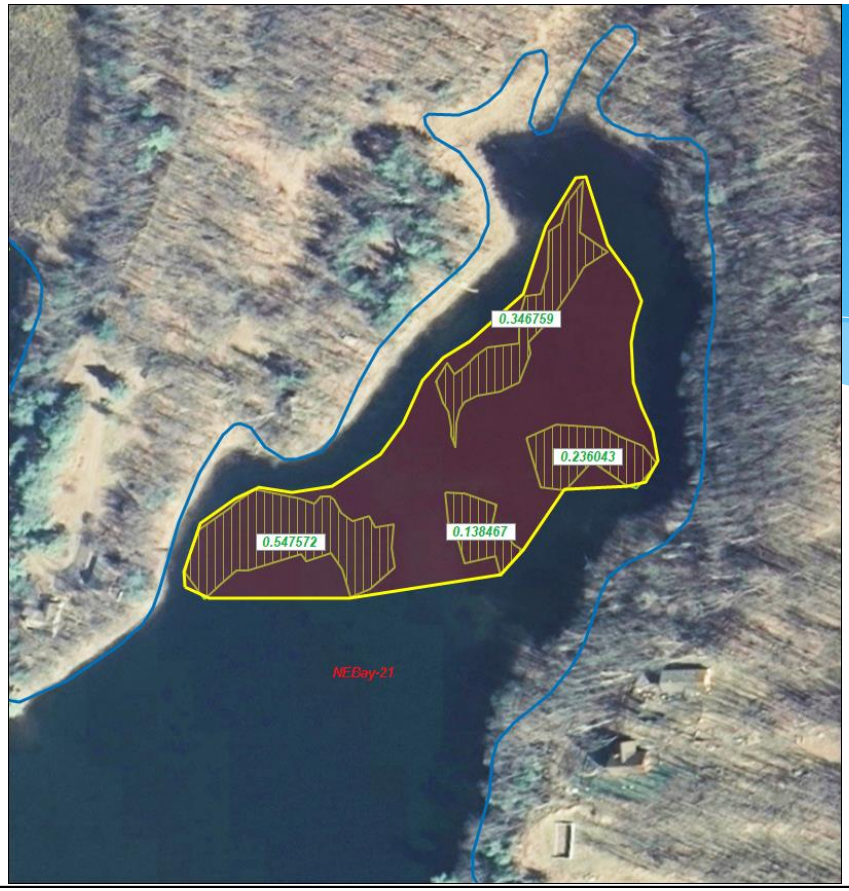
46.8% 2,4D
53.2% other ingredients

- Swimming: O days
- Fishing: O days
- Domestic uses: O days
- Animals drinking: O days
- Irrigation: Test to below 100 ppb or 21 days
- Drinking Water: Test to below 70ppb or 21 days

Liquid Florpyrauxifen-benzyl product

2.7% Florpyrauxifen
97.3% other ingredients

- Swimming: O days
- Fishing: O days
- Domestic uses: O days
- Animals drinking: O days
- Irrigation: Test to below 2 ppb



Hypothetical Chemical Treatment using different herbicides (Based on 2021 treatment area)

When using ProcellaCOR there is no need to combine smaller areas into one larger area!

Hypothetical EWM Treatment Comparison - four different herbicides

Locattion	Trade Name Herbicide	Liquid or Granular	Acres	Mean Depth (feet)	Acre-feet	Treatment a.i. ppm or PDU	Application rate (lbs or gal/acre-feet)	Total Gallons or lbs applied	Price	Total Cost for Treatment
NE Bay	Navigate	granular (lbs)	**3.50**	**6.75**	**23.63**	3.0	42.6	1006.43	$4.50/lb	$4,528.94
NE Bay	2,4D Amine 4	liquid (gallons)	**3.50**	**6.75**	**23.63**	3.0	2.13 gallons	50.32	$40/gallon	$2,012.80
NE Bay	Renovate Max G	granular (lbs)	**3.50**	**6.75**	**23.63**	3.0	56.3 lbs	1330.09	$3.72/lb	$4,915.35
NE Bay	ProcellaCOR	liquid (1 PDU = 3.2 oz)	**3.50**	**6.75**	**23.63**	5 PDUs	0.125 gallons	2.95	$2800/gallon	$8,260.00

NE Bay	ProcellaCOR	liquid (1 PDU = 3.2 oz)	**1.28**	**6.75**	**8.64**	5 PDUs	0.125 gallons	1.08	$2800/gallon	$3,024.00

Other EWM Management Actions

* Hand pulling
* Rake removal
* Snorkeling and hand removal
* Scuba diving and hand removal
* Diver Aided Suction Harvest
* Mechanical harvesting
* Bottom mats
* Biological control

Other EWM Management Actions

- Hand pulling
- Rake removal
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- Scuba diving and hand removal
- ~~Diver Aided Suction Harvest~~
- ~~Mechanical harvesting~~
- ~~Bottom mats~~
- ~~Biological control~~

Aquatic Plant Management Planning Process

* Setting Goals – Why are we doing this?
* Inventory – Gathering Information
* Analysis – Synthesis of the Information
* Alternatives – Providing Choices
* Recommendations – Completing the Plan
* Implementation – Taking Action
* Monitor and Modify – How are we doing?

Public Input is still needed

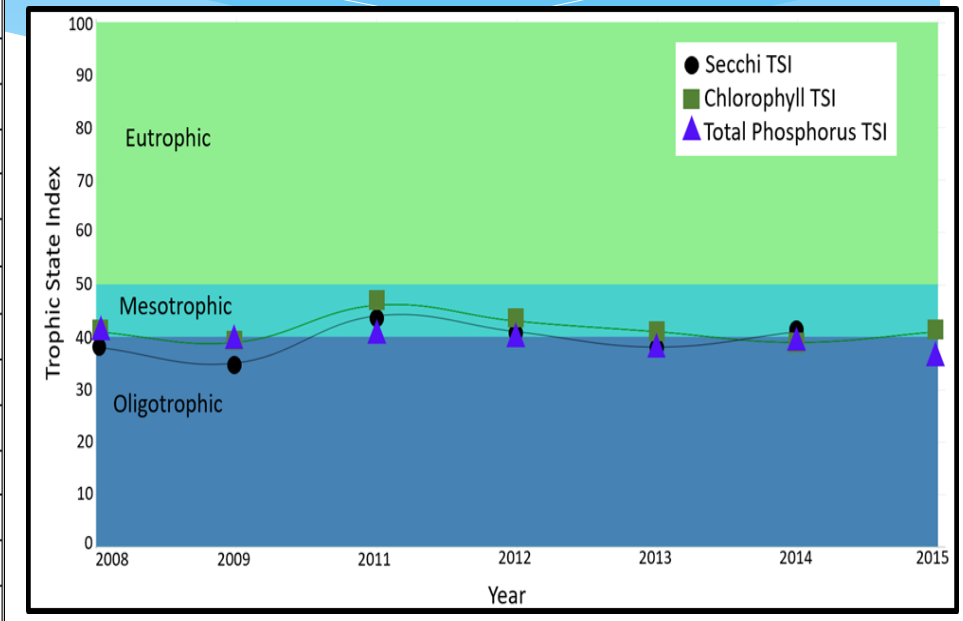
Gathering Information

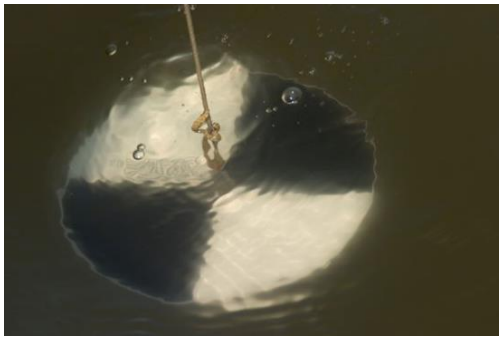
Aquatic Plants

SUMMARY STATS:	2006	2015	2019
Total number of points sampled	319	267	210
Total number of sites with vegetation	208	237	173
Total number of sites shallower than maximum depth of plants	292	260	206
Frequency of occurrence at sites shallower than maximum depth of plants	71.2	91.15	83.98
Simpson Diversity Index	0.93	0.93	0.91
Maximum depth of plants (ft)	25.0	23.0	21.0
Number of sites sampled using rake on Rope (R)	88	124	33
Number of sites sampled using rake on Pole (P)	191	142	172
Average number of all species per site (shallower than max depth)	2	2.87	2.18
Average number of all species per site (veg. sites only)	1.48	3.15	2.60
Average number of native species per site (shallower than max depth)	1.8	2.71	2.16
Average number of native species per site (veg. sites only)	1.48	3.15	2.58
Species Richness	35	33	33
Species Richness (including visuals)	37	37	33

	2006	2015	2019
Species Richness	35	33	33
Simpson Diversity Index	0.93	0.93	0.91
Mean C	6.5	6.5	7.2
FQI	37.6	36.8	39.44

Water Quality





Gathering Public Input

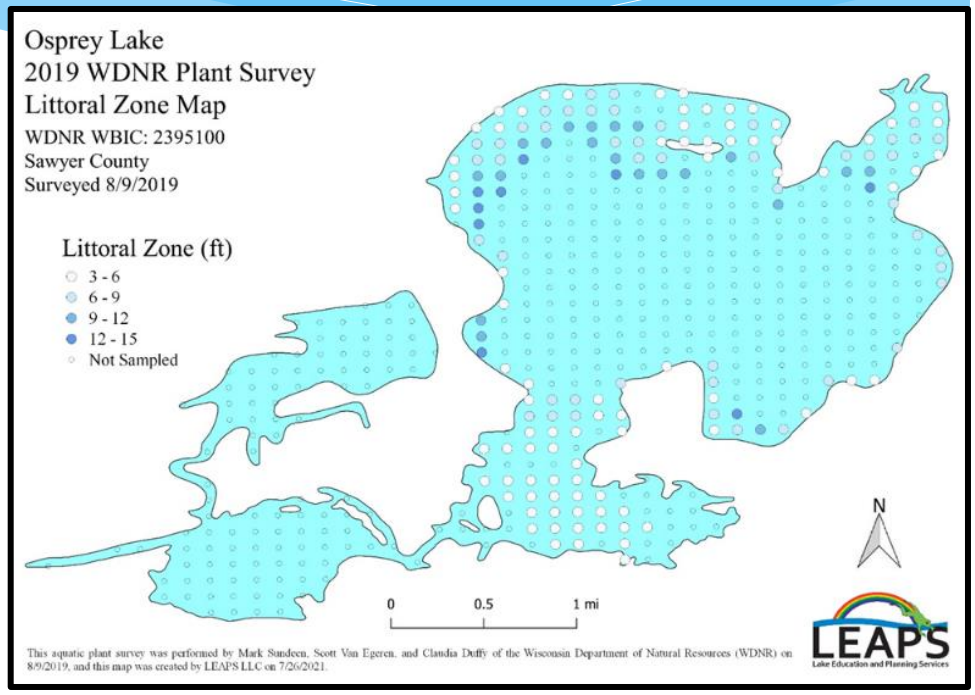
* December 21, 2020 - 1st Meeting/Discussion w/OLPOA, WI-DNR, Sawyer County, LCO (invited), and LEAPS
* April 2021 Newsletter
* April 20, 2021 - ZOOM meeting w/OLPOA to discuss aquatic plant management project
* August 2021 - Draft version of the Aquatic Plant Management (APM) Plan sent to OLPOA Board for review
* August 30, 2021 - Public Input Survey sent to constituents (responses due back by September 17, 2021)
* September 4, 2021 – OLPOA In-person Annual Meeting and presentation of the APM Plan
* September 6, 2021 – APM Plan to be placed on OLPOA and LEAPS webpages for a 21 day public comment period

APM Plan Goals and Objectives

* **EWM Management**
  * Limit the spread of EWM through environmentally responsible methods to benefit the native plant community while maintaining EWM at manageable levels.
* **Education and Awareness**
  * Continue to educate property owners and lake users on aquatic invasive species through public outreach and education programs.
* **Research and Monitoring**
  * Develop a better understanding of the lake and the factors affecting lake water quality through continued and expanded monitoring efforts.
* **Adaptive Management (Integrated Pest Management)**
  * Follow an adaptive management approach that measures and analyzes the effectiveness of control activities and modify the management plan as necessary to meet goals and objectives.

Management Actions

* **EWM – Keep levels in the lake at <5% (4.0 acres) of the littoral zone based on annual late-season bedmapping surveys**
  * Physical removal (hand-pulling and rake removal)
  * Snorkel or scuba diver removal
  * Small-scale (<2.0 acres) application of ProcellaCOR
  * Small-scale (between 2.0 and 4.0 acres) application of ProcellaCOR or 2,4D/triclopyr based herbicides
  * Small-scale (>4.0 acres) application of 2,4D/triclopyr based herbicides



Littoral Zone covers about 81 acres (47%) of the main basin of the lake (171 acres)

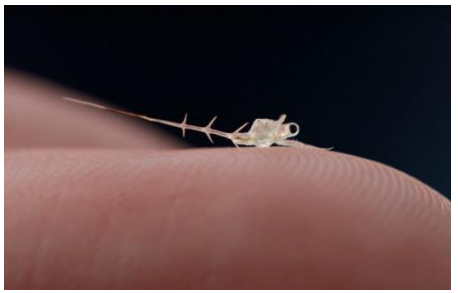
Other Actions

- **Aquatic Invasive Species (AIS) Education and Awareness**
  - Distribute AIS education and information materials to the constituency
  - AIS monitoring in the lake for other AIS (purple loosestrife, curly-leaf pondweed, zebra mussels, non-native snails, yellow iris, Japanese knotweed, spiny waterflea, and others).
  - Identification and Removal Training for the Constituency









More Actions

* Citizen Lake Monitoring Network (CLMN) Secchi disk monitoring of water clarity
* Partner with LCO Natural Resources to collect additional parameters for water quality (total phosphorus, chlorophyll, temperature and dissolved oxygen profiles
* Wild rice monitoring
* Pre and post-treatment aquatic plant surveying
* Herbicide concentration testing
* Late-season EWM bedmapping
* Repeat the whole-lake, point-intercept survey in 5 yrs
* Lake stewardship – shore lighting, maintaining healthy shorelands, following fishing and lake use rules, etc.
* Clean Boats, Clean Waters (CBCW) – IS NOT RECOMMENDED

What's Next?
APM Plan Implementation

- **OLPOA approval to send the draft APM Plan to the WI-DNR**
  - **We need a motion made to approve sending of the APM Plan to the WI-DNR**
- **Application for Small-scale AIS Population Control grant funding to help cover EWM management costs**
  - Already submitted in pre-application form – is not final
    - **WE NEED A RESOLUTION PASSED TODAY TO SUBMIT A FINAL GRANT IN NOVEMBER**
  - Meet with the WI-DNR to discuss grant funding for 2022
  - WI-DNR could determine the OLPOA is ineligible for grant funding in 2022
- **Collect and incorporate public comment into the final draft of the APM Plan**
  - Last big piece of the APM Plan
  - Prior to November 1, 2021
- **Modify APM Plan based on WI-DNR input**
  - Also part of the final draft
  - Prior to November 1, 2021
- **Final EWM management planning for 2022**
  - Already started, to be finalized by early 2022
  - WDNR chemical application permit application

QUESTIONS?