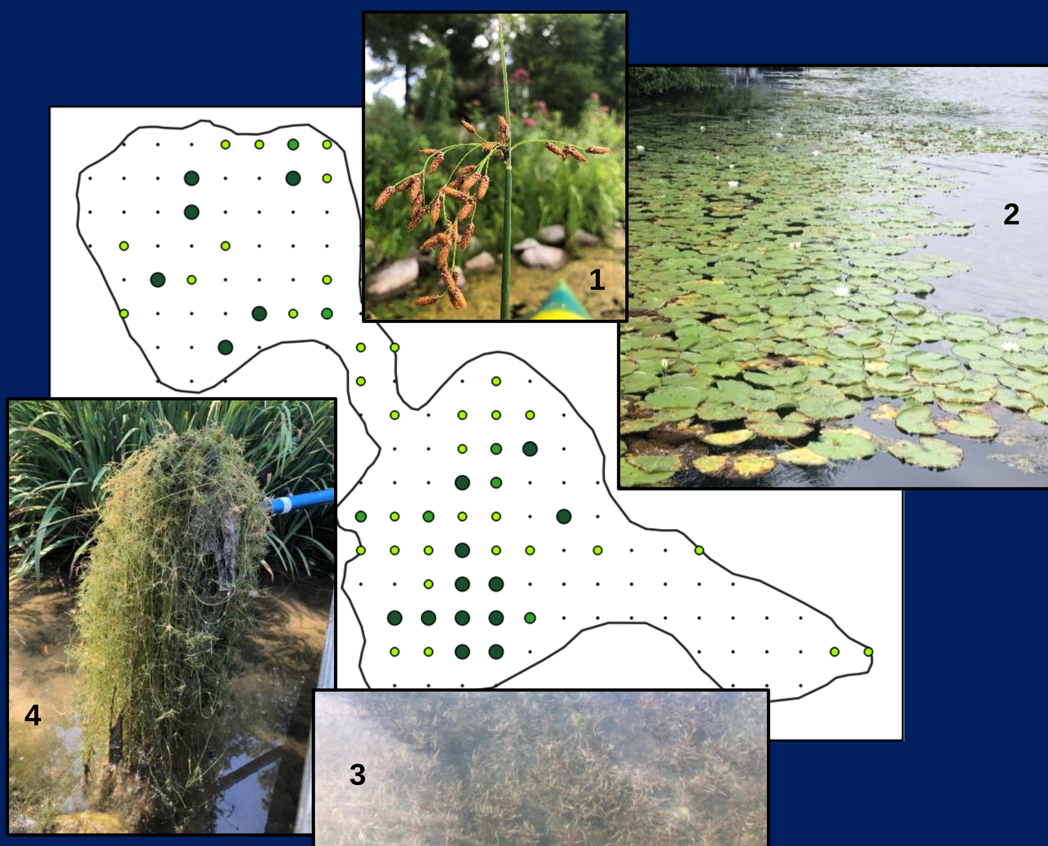
# Aquatic Plant, Eurasian Watermilfoil, & Curly-leaf Pondweed Surveys

of

# McGinnis Lake

## Adams County, Wisconsin

**Curly-leaf Pondweed Survey May 1, 2024**
**Point-intercept Aquatic Plant Survey August 8, 2024**
**Eurasian Watermilfoil Bed Survey May 1 & September 17, 2024**




**Project initiated & funded by the McGinnis Lake District**

**Survey and report completed by Aquatic Plant & Habitat Services, LLC**
**Sara Hatleli, 715-299-4604, Sarahatleli97@gmail.com**
**Survey assistance from AEM Aquatic Consulting**

***Photos from Cover Page:***
***1. Softstem bulrush from McGinnis Lake. 2. Bed of white water lilies from McGinnis Lake in August. 3. Bed of curly-leaf pondweed from McGinnis Lake in May. 4. Rake head full of bearded stonewort from McGinnis Lake in August. More about bearded stonewort on pages 7-8.***

## BACKGROUND

The McGinnis Lake District (MLD) partnered with Aquatic Plant and Habitat Services LLC (APHS) and AEM Aquatic Consulting to complete curly-leaf pondweed point-intercept & CLP bed surveys (May 1), aquatic plant point-intercept survey (August 8), and Eurasian watermilfoil bed surveys (September 17) surveys in 2024. EWM was not intended as a focus during the May 1st survey of CLP, but was found at greater than expected occurrence and therefore documented. This is further explained in the results section.

**Curly-leaf Pondweed (*Potamogeton crispus,* CLP)**

Curly-leaf pondweed is a non-native, invasive aquatic plant that can grow in shallow water or down to 15 feet deep. It can form dense mats that might hinder recreational activities, degrade fish habitat, and/or crowd out native aquatic plants. These impediments do not always occur where CLP is present, so lake-specific recommendations are important when deciding on management activities.

**Figure 1 - CLP and turions from McGinnis**


During the winter, CLP survives under ice and snow as an intact leafy plant. In spring the plant grows rapidly when water temperatures rise above 10°C (50°F). CLP flowers, fruits, and then produces buds called turions in spring. In mid-summer CLP begins to die back. Surveying CLP in spring (separate from other plants) is important because surveys of other plants occur in mid-late summer when CLP is senescing. In fall the CLP turions break dormancy and germinate when water temperatures drop. New plants sprout from the turions and overwinter.

**Eurasian Watermilfoil (*Myriophyllum spicatum,* EWM)**

Eurasian watermilfoil is a non-native, invasive aquatic plant that grows rapidly and can form dense mats that might hinder recreational activities, degrade fish habitat, and/or crowd out native aquatic plants. These impediments do not always occur where EWM is present, so lake-specific recommendations are important when deciding on management activities.

**Figure 2 - EWM and Adventitious Roots from McGinnis**


Eurasian watermilfoil has a complex life cycle involving both sexual and asexual reproduction. Asexual Reproduction occurs through fragmentation wherein the plant can break into fragments, each of which can sprout adventitious roots and develop into a new plant. This is the primary mode of reproduction for EWM. The plant can also spread through the growth of its root system and runners. Sexual Reproduction occurs when EWM produces separate male and female flower spikes above the water surface in summer and those flowers are pollinated by wind or insects. Pollination yields tiny seeds that sink to the lake bottom and can remain viable for several years and germinate under favorable conditions. EWM is a perennial plant with a root system that can survive the winter, allowing it to regrow in the spring.

**Past Management**
There have been herbicide treatments and mechanical harvest in the recent past. Table 1 lists the recent herbicide treatments in McGinnis Lake.

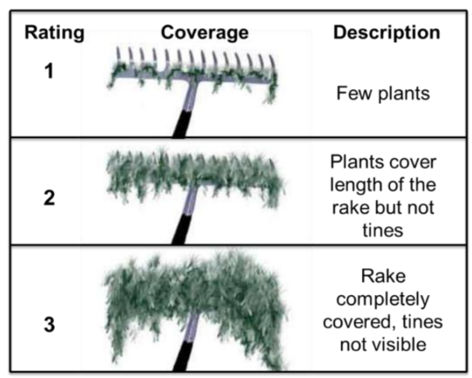
**Table 1 – Herbicide Treatment, Recent History**

| McGinnis Lake Recent Plant Management History | | | | | |
|---|---|---|---|---|---|
| Year | Date | Applicator | Area Treated (acres) | Herbicide ppm* | |
| 2019 | May 17 | Cason & Associates LLC | 10 | Aquathol K, 45 gal, 1.5ppm | CLP Control |
| 2020 | | | No Treatment | | |
| 2021 | May 18 | Cason & Associates LLC | 8.1 | Aquathol K, 139 gal, 1.0ppm<br>Weedar 64, 53.75 gal, 0.35ppm | Whole-lake treatment for EWM Control |
| 2022 | May 23 | Cason & Associates LLC | 4.61 | Aquathol K, 41.7 gal, ?ppm | |
| 2023 | May 4 | Cason Land & Water Mgmt | 7.54 total, 19 locations | ProcellaCOR, 102.5 PDU, 0.006-0.008ppm | EWM Control |
| 2024 | May 17 | Schmidts Aquatic | 10.99 | Aquathol K, 99.4 gal, 2.5ppm | CLP Control |
| | | | 7.10 | Agristar 2,4-D Amine, 33.3 2 gal, 1.5ppm | EWM Control |

## METHODS

**Field Methods for Point-Intercept Plant Surveys**
Field methods followed the standardized protocol developed by the Wisconsin Department of Natural Resources (WDNR) in Hauxwell et. al (2010). Sample coordinates[1] were uploaded to a hand held device, visited by boat, and a double-sided rake head on a telescopic pole was used to sample each point ≤15 feet deep for aquatic plants, depth, and dominant sediment type (muck, rock, or sand). Sonar was used to gauge depth at points that were greater than 15 feet deep and a weighted double-sided rake attached to a rope was used to sample aquatic plants >15 feet deep. The rake fullness rating for total coverage of plants on the rake and a separate rake fullness rating for each species present were recorded (Figure 3). Aquatic plants found within 6 feet of the sample point but not found on the rake were counted as visual observations. Occurrence of species greater than 6 feet from any survey point were recorded to note their presence as part of a boat survey, but were not counted in statistical calculations.

**Figure 3 - Rake Fullness Rating Illustration**




**Field Methods for CLP & EWM Bed Survey**
Beds of CLP and EWM were targeted and boundaries were visually determined from a boat and mapped while navigating along the bed perimeter. Each bed was assigned a letter identifier followed by the year (e.g., A24). Locations of single CLP or EWM plants or small clumps of plants were captured but not included in polygons. Average depth, overall density (highly scattered, scattered, dominant, or highly dominant), plant height (at, near, or below the lake surface), and whether the EWM was flowering were documented for each bed.

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[1] Point-intercept grid was updated by the WDNR in June 2024 after the CLP PI survey was completed per recommendations by APHS LLC. See Appendix A for more information.

## Map Development

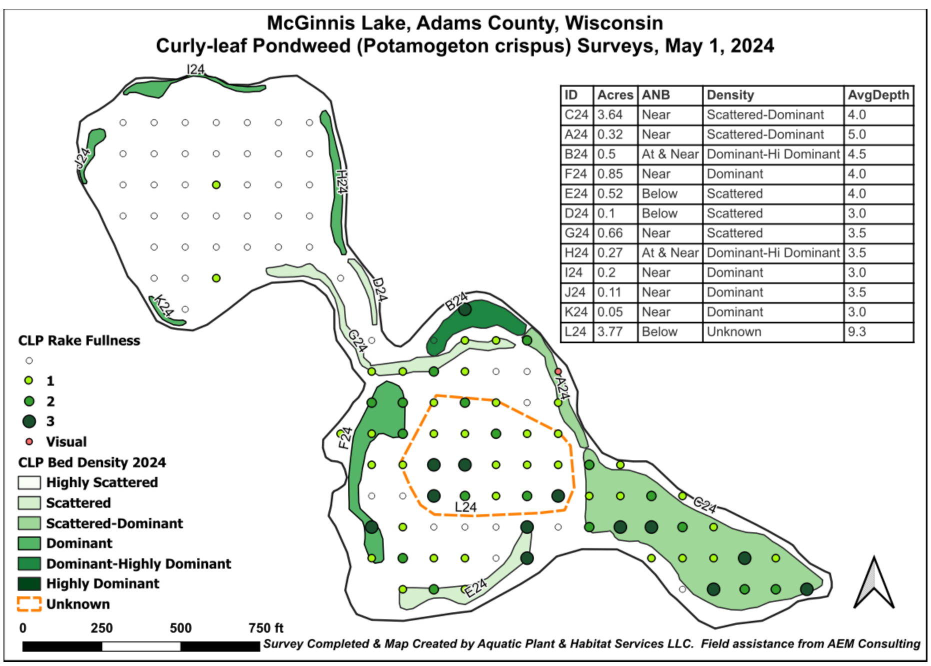
Aquatic plant survey data were uploaded to an open source geographic information systems (GIS) program known as QGIS (QGIS, 2024). Maps were created to illustrate depth ranges, total rake fullness for all species, and individual plant species distribution. EWM bed size was calculated in QGIS.

# RESULTS

### May 1, 2024 Curly-leaf Pondweed Results (Pre-treatment)

- CLP visible from lake surface = 7.22 acres.
- CLP in center of south basin, density unknown, not visible from surface (L24) = 3.77 acres.
- Total number of sample points with CLP in the whole lake = 67, most (65) in south basin.
- Littoral frequency of CLP in whole lake = 62%, south basin only was 83%.
- CLP occurrence in the south basin was high during the point-intercept survey & bed survey. The CLP located in the center of the basin was not visible from the lake surface, and therefore not included in the CLP bed acreage in accordance with survey protocols.
- The high occurrence of CLP in the center of the south basin was mapped as L24 and considered for herbicide treatment.
- Effectiveness of CLP control would be assessed during a post-treatment survey in spring 2025.

**Figure 4 – CLP Map, May 2024**

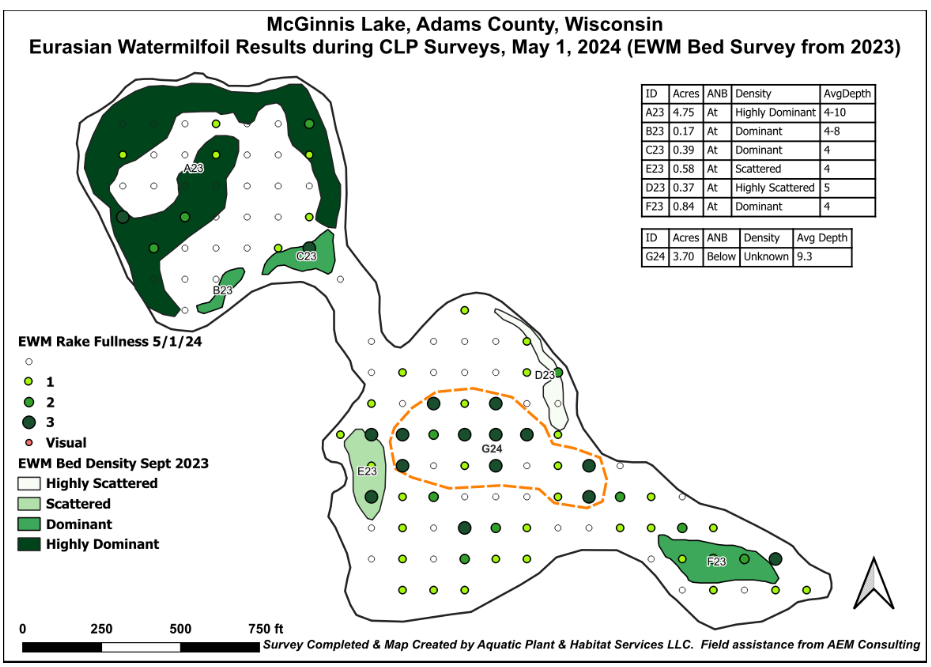



| ID | Acres | ANB | Density | AvgDepth |
|---|---|---|---|---|
| C24 | 3.64 | Near | Scattered-Dominant | 4.0 |
| A24 | 0.32 | Near | Scattered-Dominant | 5.0 |
| B24 | 0.5 | At & Near | Dominant-Hi Dominant | 4.5 |
| F24 | 0.85 | Near | Dominant | 4.0 |
| E24 | 0.52 | Below | Scattered | 4.0 |
| D24 | 0.1 | Below | Scattered | 3.0 |
| G24 | 0.66 | Near | Scattered | 3.5 |
| H24 | 0.27 | At & Near | Dominant-Hi Dominant | 3.5 |
| I24 | 0.2 | Near | Dominant | 3.0 |
| J24 | 0.11 | Near | Dominant | 3.5 |
| K24 | 0.05 | Near | Dominant | 3.0 |
| L24 | 3.77 | Below | Unknown | 9.3 |

**May 1, 2024 Eurasian Watermilfoil Results (Pre-treatment)**

- Total number of sample points with EWM in the whole lake = 63, most (52) in south basin.
- Littoral frequency of EWM in whole lake = 58%, south basin alone was 67%.
- Documenting EWM was not part of the survey objectives, but did not require additional time to document. Surprisingly, we observed a much greater occurrence of EWM at sample points in May 2024 (58%) compared to July 2023 (21%) (Generally, we conduct EWM surveys in summer because EWM is usually at its greatest occurrence at that time). These data were taken into consideration during herbicide treatment in 2024.
- The high occurrence of EWM in the center of the south basin was mapped as G24 and was considered during planning for herbicide treatment.
- In September 2023, 6 EWM beds were delineated totaling 7.1 acres (Figure 5).
- The majority of EWM was observed in the northwest basin in bed A23.
- EWM in all beds (except G24) was growing to the lake surface and flowering in Sept 2023.
- The increase in EWM in spring 2024 was partially due to "*the warmest winter (Dec-Feb) since record-keeping began in 1895. The statewide average temperature for the winter was 28.3 degrees, surpassing the previous record by a full 2 degrees. On Lakes Mendota and Monona in Madison ice cover only lasted about six weeks (January 15 to February 28), which is the second shortest period of ice coverage for Lake Mendota and the all-time shortest for Lake Monona*."[2]


**Figure 5 – EWM Bed Map Sept 2023 & PI May 2024**




| ID | Acres | ANB | Density | AvgDepth |
|---|---|---|---|---|
| A23 | 4.75 | At | Highly Dominant | 4-10 |
| B23 | 0.17 | At | Dominant | 4-8 |
| C23 | 0.39 | At | Dominant | 4 |
| E23 | 0.58 | At | Scattered | 4 |
| D23 | 0.37 | At | Highly Scattered | 5 |
| F23 | 0.84 | At | Dominant | 4 |

| ID | Acres | ANB | Density | Avg Depth |
|---|---|---|---|---|
| G24 | 3.70 | Below | Unknown | 9.3 |

[2] Wisconsin State Climatology Office https://climatology.nelson.wisc.edu/winter-2023-24-climate-summary/

**August 8, 2024 Point-Intercept Survey Results (post-treatment for EWM only)**

Survey results from 2022 (completed by Adams County and WDNR), 2023, and 2024 are listed in Table 2. It is important to note the point-intercept grid was updated in 2024, increasing the number of sample points from 118 to 146 (see Appendix A for more information). For this reason, ***comparisons of species richness, floristic quality, and conservatism values in 2024 to previous years cannot occur because more of the lake was sampled in 2024 thereby producing higher scores for these metrics.*** The Floristic Quality Index (FQI) value in 2024 was 13.9 and mean coefficient of conservatism was 4.2, which are lower the regional medians and statewide medians. This suggests the aquatic plant community in McGinnis Lake reflects human disturbance.

**Table 2 –Statistics Results 2022-24**

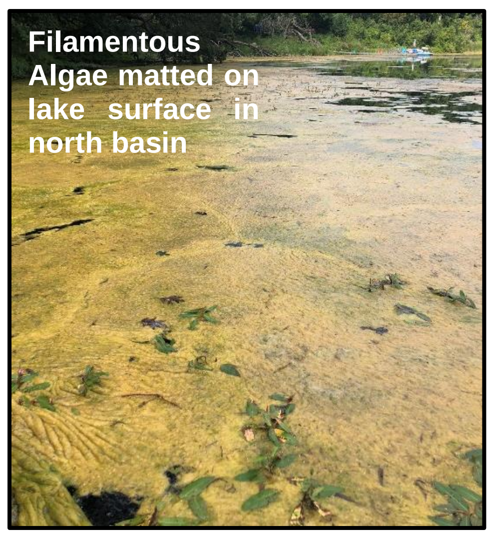
| | Summary Statistic | | July 2022 | July 2023 | Point-Intercept Sample Grid Updated. Increase from 118 sample points to 146 | Aug 2024 |
|---|---|---|---|---|---|---|
| 1 | Total # of sites visited | | 117 | 118 | | 146 |
| 2 | Total # of sites with vegetation | | 81 | 102 | | 108 |
| 3 | Max. depth of plants (feet) | | 22 | 19 | | 16.5 |
| 4 | Total # of sites shallower than max. depth of plants | | 116 | 111 | | 134 |
| 5 | Frequency of occurrence at sites shallower than max. depth of plants (Littoral FOO) | | 70% | 92% | | 81% |
| 6 | Avg # of species per site | a) Shallower than max. depth | 0.94 | 1.90 | | 1.53 |
| | | b) Vegetated sites only | 1.35 | 2.07 | | 1.90 |
| | | c) Native shallower than max. depth | 0.81 | 1.46 | | 1.19 |
| | | d) Native species at vegetated sites only | 1.22 | 1.67 | | 1.54 |
| 7 | Species Richness | a) Total # species on rake at all sites | 9 | 10 | | 15 |
| | | b) Including visuals | 10 | 11 | | 16 |
| 8 | Simpson's Diversity Index | | 0.72 | 0.83 | | 0.82 |
| 9 | Mean Coefficient of Conservatism* | | 5 | 3.3 | | 4.2 |
| 10 | Floristic Quality Index** | | 14.1 | 9.2 | | 13.9 |
| | EWM Littoral Frequency of Occur. | | 13% | 21% | | 25% |

**Median C of C Statewide = 6.0, Median C of C Regional = 5.6*
***FQI Statewide Median = 22.2, FQI Regional Median= 20.9*

There were 15 aquatic plant species found on the sampling rake. Coontail was the most commonly found plant in the lake with occurrence at 59 sites (Table 3). The next most common plant was Eurasian watermilfoil at 34 sites (Figure 8). Third most common species were muskgrasses at 29 sites. Filamentous algae are not aquatic plants, but included in the survey to track occurrence and were found at 65 sample points (Figure 6, Figure 7). Filamentous algae were matted at the surface in many locations in the north basin.

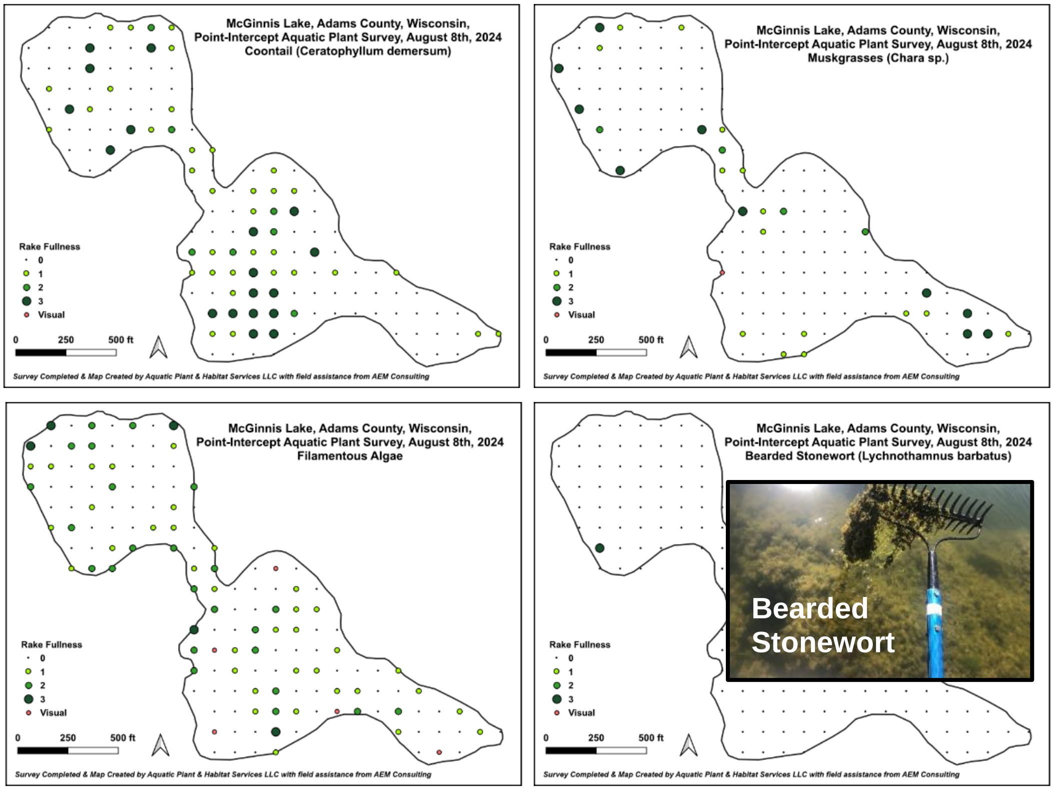
Interestingly, there was a significant amount of **bearded stonewort (*Lychnothamnus barbatus*)** found in the north basin. Bearded stonewort is a macroalgae not previously documented in McGinnis Lake, although it has likely been present for decades or more. It is not considered non-native nor invasive, but the rarity or commonness of this species is not yet understood[3]. Populations of bearded stonewort are only recently being documented, with 14 known locations in Wisconsin. See Figure 7 for a map and photo of bearded stonewort in McGinnis.

**Figure 6 – Filamentous Algae**




[3] Email correspondence with Paul Skawinski, UWEX Lakes Program. 8 Dec. 2016.

## Figure 7 – Maps of Coontail, Muskgrasses, Filamentous Algae, & Bearded Stonewort



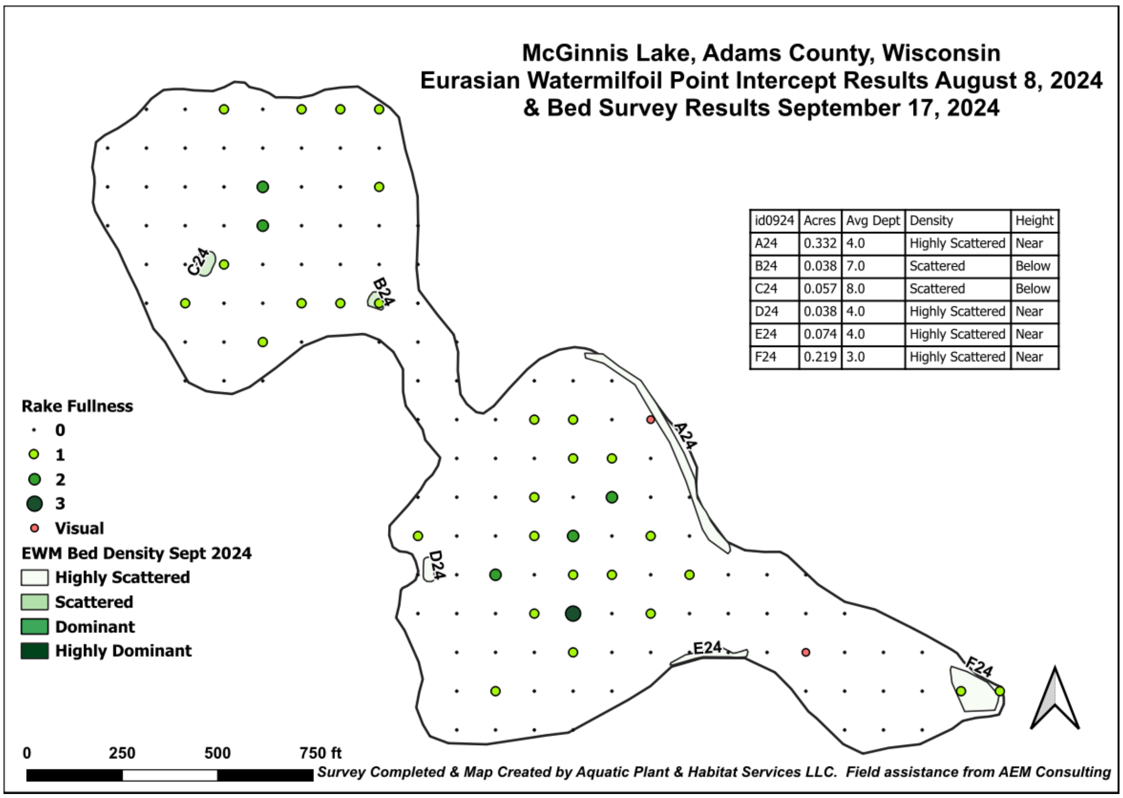

## Table 3 – Individual Plant Species Results, 2024

| Common Name | Scientific Name | FOO in Veg. Areas | Littoral Frequency (%) | Relative Frequency (%) | # Sites | Avg. Rake Fullness | # Visual |
|---|---|---|---|---|---|---|---|
| Filamentous algae | | 60.19 | 48.51 | | 65 | 1.52 | 5 |
| Coontail | *Ceratophyllum demersum* | 54.63 | 44.03 | 30.10 | 59 | 1.73 | 0 |
| Eurasian water milfoil | *Myriophyllum spicatum* | 31.48 | 25.37 | 17.35 | 34 | 1.21 | 2 |
| Muskgrasses | *Chara sp.* | 26.85 | 21.64 | 14.80 | 29 | 1.83 | 1 |
| White water lily | *Nymphaea odorata* | 25.93 | 20.90 | 14.29 | 28 | 2.50 | 11 |
| Richardson's pondweed | *Potamogeton richardsonii* | 13.89 | 11.19 | 7.65 | 15 | 1.80 | 4 |
| Sago pondweed | *Stuckenia pectinata* | 10.19 | 8.21 | 5.61 | 11 | 1.18 | 1 |
| Large duckweed | *Spirodela polyrrhiza* | 8.33 | 6.72 | 4.59 | 9 | 1.00 | 8 |
| Duckweed | *Lemna sp.* | 8.33 | 6.72 | 4.59 | 9 | 1.00 | 7 |
| Curly-leaf pondweed | *Potamogeton crispus* | 1.85 | 1.49 | 1.02 | 2 | 1.00 | 0 |
| Common waterweed | *Elodea canadensis* | 1.85 | 1.49 | 1.02 | 2 | 1.00 | 0 |
| Slender naiad | *Najas flexilis* | 1.85 | 1.49 | 1.02 | 2 | 1.00 | 0 |
| Nitella | *Nitella sp.* | 1.85 | 1.49 | 1.02 | 2 | 1.00 | 0 |
| Bearded stonewort | *Lychnothamnus barbatus* | 0.93 | 0.75 | 0.51 | 1 | 3.00 | 0 |
| Variable pondweed | *Potamogeton gramineus* | 0.93 | 0.75 | 0.51 | 1 | 1.00 | 0 |
| White water crowfoot | *Ranunculus aquatilis* | 0.93 | 0.75 | 0.51 | 1 | 1.00 | 0 |
| Water smartweed | *Persicaria amphibia* | - | - | - | - | - | 2 |
| Broad-leaved cattail | *Typha latifolia* | * | * | * | * | * | * |
| Iris | *Iris sp.* | * | * | * | * | * | * |
| Soft-stem bulrush | *Schoenoplectus tabernaemontani* | * | * | * | * | * | * |
| *Non-native invasive species* | | | | | | | |
| *Uncommon species in Wisconsin* | | | | | | | |
| **Not found at or near any sample points, but observed in the lake during the survey* | | | | | | | |

**September 17, 2024 EWM Bed Survey (post-treatment EWM)**

- Although EWM was found as the second-most common aquatic plant in August 2024, it was mainly found growing in low density not visible from the lake surface (i.e., only found because a rake sample was taken).
- The EWM reduction in August 2024 at 34 sample points compared to pre-treatment in May 2024 at 63 sample points was statistically significant.
- There was significant reduction in EWM beds in Sept 2024 compared to Sept 2023.

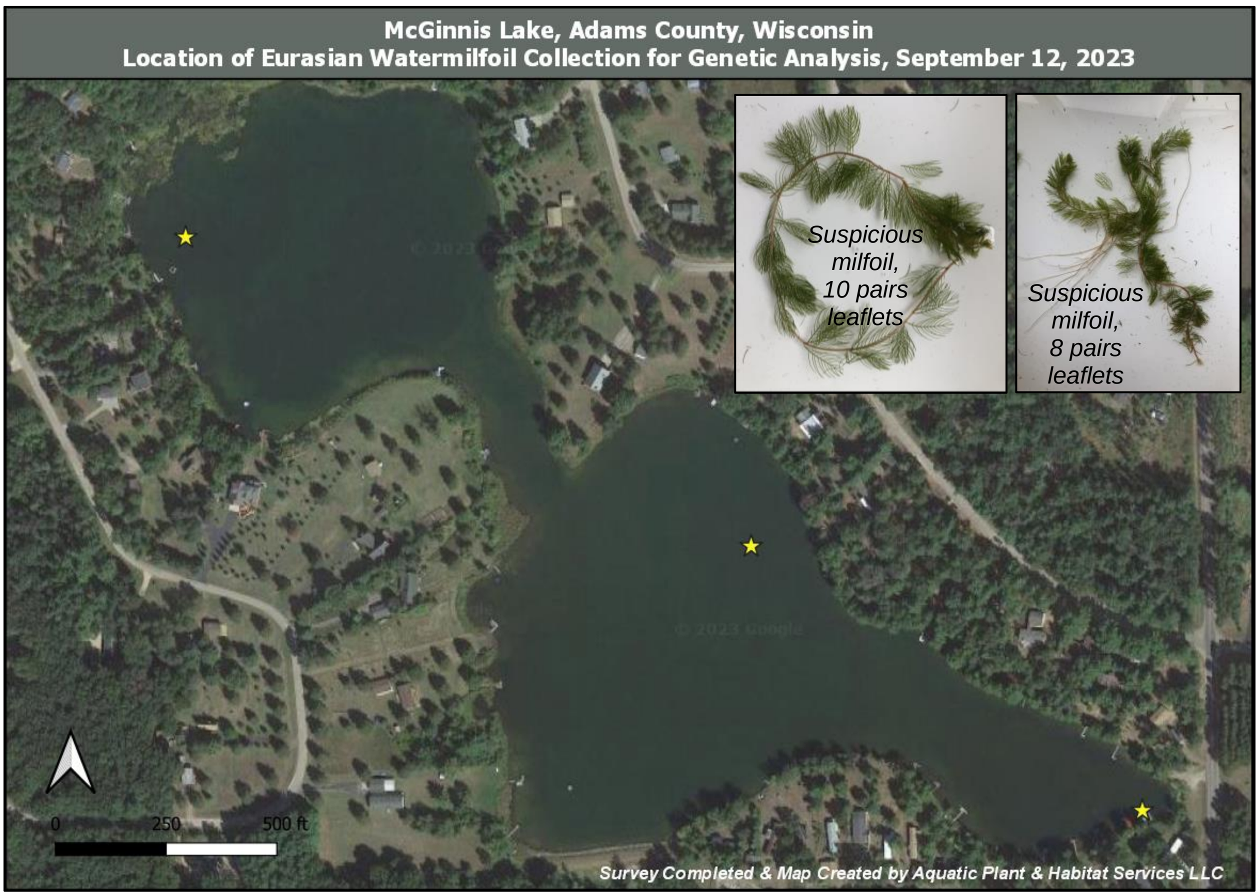
## Figure 8 - EWM Bed Map Sept 2024 & PI Aug 2024 (Post-treatment)



### Hybrid Watermilfoil Confirmed in McGinnis Lake Through Genetic Analysis

- Milfoil resembling EWM but with fewer than 12 pairs of leaflets was observed during the point-intercept survey in July 2023. Due to the occurrence of milfoil that possesses intermediate characteristics (some of the native northern watermilfoil and some of EWM), genetic analysis of the milfoil in McGinnis Lake was warranted. WDNR funded genetic analysis of three samples. Samples were collected as illustrated in Figure 10.
- All three samples were identified as a genetic strain of hybrid watermilfoil that is currently unique to McGinnis Lake and not yet found elsewhere.
- Existence of hybrid watermilfoils is a recent phenomenon in Wisconsin and evidence suggests that traditional herbicides used for EWM, including 2,4-D, may not be as effective in killing hybrid watermilfoils (Glomski & Netherland 2010, Poovey et al. 2007, Nault et al. 2018).
- Because HWM requires genetic analysis for firm identification, results of EWM in this report include HWM as well.

**Figure 10 – Map of EWM Sample Collection for Genetic Analysis**



# RECOMMENDATIONS FOR 2025

## Curly-leaf Pondweed

- Complete post-treatment CLP surveys in spring (May or early June). A CLP bed survey and PI survey would help determine effectiveness of the 2024 curly-leaf pondweed treatment.
- The effectiveness of the CLP herbicide treatment in 2024 will not be fully known until the survey is complete in spring 2025. Therefore, it is difficult to make a recommendation guided by 2024 data on whether herbicide treatment of CLP should occur again in 2025.
- Despite the lack of post-treatment data for CLP, current practice in some areas of the state recommends 5 consecutive years of CLP herbicide treatment to reduce annual turion production thereby controlling CLP growth more long-term. This concept should be discussed in greater detail over the winter of 2024-2025 among McGinnis Lake District, WDNR, and consultant to determine whether this approach would be appropriate.

## Eurasian Watermilfoil & Hybrid Watermilfoil

- The decrease in EWM was statistically significant in August 2024 compared to May 2024. A whole-lake point-intercept survey (similar to that completed in August 2024) allows tracking of EWM statistical occurrence and is recommended for 2025.
- Herbicide treatment of EWM is not recommended in 2025 based on data collected in 2024. However, if winter is exceptionally mild like it was in 2023-2024, this may allow EWM to grow back more aggressively than expected.
- The verification of hybrid watermilfoil in McGinnis Lake is important to consider for future control activities in the lake. Whether the genetic strain of HWM in McGinnis Lake is resistant to certain herbicides is not yet known. Continued surveys and monitoring are recommended to track the occurrence of EWM and HWM over time.
- An EWM/HWM bed survey in September 2025 is recommended to help track acreage and determine whether active control should take place the following year.

## Planning Meeting

- A planning meeting sometime in Jan-Mar 2025 among MLD representatives, WDNR, consultant, and herbicide applicator is recommended to promote communications and partnership. APHS can assist with planning and provide facilitation for this service if desired.

## References

Glomski, L.M. and M.D. Netherland. 2010. Response of Eurasian and hybrid watermilfoil to low use rates and extended exposures of 2,4-D and triclopyr. Journal of Aquatic Plant Management 48:12-14.

Hauxwell, J., S. Knight, K. Wagner, A. Mikulyuk, M. Nault, M. Porzky and S. Chase. 2010. Recommended baseline monitoring of aquatic plants in Wisconsin: sampling design, field and laboratory procedures, data entry and analysis, and applications. Wisconsin Department of Natural Resources Bureau of Science Services, PUB-SS-1068 2010. Madison, Wisconsin. 46pp.

Nault, M., M. Barton, J. Hauxwell, E. Heath, T. Hoyman, A. Mikulyuk, S. Provost, J. Skogerboe, S. Van Egeren. 2018. Evaluation of large-scale low-concentration 2,4-D treatments for Eurasian and hybrid watermilfoil control across multiple Wisconsin lakes. Lake and Reservoir Management 34 (2):115-129.

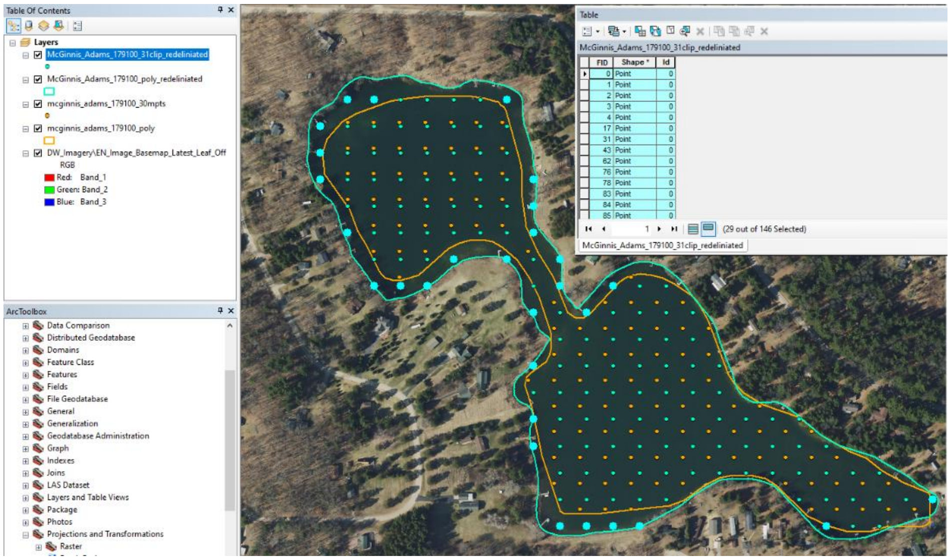
Poovey, A.G., J.G. Slade, M.D Netherland. 2007. Susceptibility of Eurasian watermilfoil (*Myriophyllum spicatum)* and a milfoil hybrid (*M. Spicatum x M. sibiricum)* to triclopyr and 2,4-D amine. Journal of Aquatic Plant Management 45:111-115.

QGIS Development Team, 2024. QGIS Geographic Information System. Open Source Geospatial Foundation Project. http://qgis.osgeo.o

## APPENDIX A – CORRESPONDENCE RE: PI GRID MODIFICATION

Sara Hatleli <sarahatleli97@gmail.com>
Wed, May 8, 3:22 PM
to Mica, Barry, Ken, Scott
Hi Mica,
The shapefile for McGinnis Lake in Adams County 179100 is inaccurate I believe. There is quite a bit of littoral area missed and when I made my own shapefile using aerial imagery, I found the lake to be 33 acres (DNr website lists 27 acres). Would you be the person to update/correct the shapefile and PI grid? I'm happy to discuss further or answer questions. Thanks!
Sara Hatleli
Aquatic Plant and Habitat Services LLC
sarahatleli97@gmail.com ~ 715-299-4604
N4888 Beck Road
Taylor, WI 54659

Kromrey, Mica A - DNR (Mica) <mica.kromrey@wisconsin.gov>
Thu, May 16, 10:27 AM
to me, Barry, Ken, Scott
Hey Sara,
took a look at the existing grid for McGinnis, it looks like the original grid was created in 2005 using the 24K hydro layer polygon. As far as I know the 'official' lake are is based on the 24K hydro layer and that does not change. So even if I re-delineate the polygon for the PI grid there would still be an area discrepancy. The satellite imagery is much better now compared to the historical imagery so some of the polygon layers on the 24K hydro layer do not accurately delineate the lake. During the PI grid process we look at the 24k layer and the satellite imagery. We try to use the 24k hydro polygon when we can because that is the 'official' lake. If the polygon is significantly off from the satellite imagery we will then re-delineate the lake and use a more accurate polygon to create the PI grid.
Once a grid is created and sampled we tend to not to create another grid because it makes comparing data more difficult. This waterbody was just surveyed in 2022, which would be a reason we would keep the original grid.
If we were to remake the grid we would capture 29 more littoral points (18-25 likely sampleable as several are possible terrestrial/dock). It doesn't look like there is a steep drop off based on the bathymetry so we are still getting some littoral points in the original grid. I do agree that we are missing some near shore points, but I don't think we need to remake the gird. I'm open to discuss though.
Thanks,
Mica
Mica.Kromrey@wisconsin.gov




Sara Hatleli <sarahatleli97@gmail.com>
Attachments
Thu, May 16, 1:44 PM
to Mica, Barry, Ken, Scott
Hello Mica,
Thank you for your review and thoughtful response regarding the PI survey grid for McGinnis Lake. I truly appreciate that you took the time to look at the map, re-delineate the lake, and make another PI for discussion. I understand the concern about making a new PI and the fact that we could no longer compare to previous surveys. I actually did a whole lake PI in July 2023 and May 1 2024 for CLP. I attached both spreadsheets for the statewide database. Here is a link to the preliminary results with map of CLP. You can see in the north basin the beds of CLP are outside the PI grid. The south basin isn't as bad and CLP was all over down there since the max depth was only 9 ft. Even with the existing PI grid using the 24k hydrolayer, there is a lot of vacant space with no sample points north of #1-34 and west of #1-4.
https://docs.google.com/document/d/1x687SQ2XuuoYWRxPWIANoZ8XFlnlPgMgKpryDPWK_X0/edit?usp=sharing. So, this is a tough call. I'm not sure if the existing PI captures the aquatic plant community, especially in the north basin. However, we have baseline data that will no longer be applicable if we change the PI grid and that would be a shame to lose all that past data. I am happy to discuss further if needed. Otherwise I will continue to use the existing PI grid.
Thanks again for your thoughtful review!
Sara

Kromrey, Mica A - DNR (Mica) <mica.kromrey@wisconsin.gov>
Attachments
Wed, Jun 5, 12:46 PM
to me, Barry, Ken, Scott
Hi all,
Due to lack of littoral nearshore points we have created a new grid to better capture the aquatic plant community. The 2005 grid with 30mpts and 118 points will be retired and no longer used. We can still use the 2022 and 2023 data, but it will have to be interpreted with the caveat that it is not a direct comparison.
Please let me know if you have questions or concerns.
Thanks,
Mica