

Appendix A – Lake Mendota Plant Statistics 2023

Table 1: 2023 Aquatic Plant Community Statistics, Lake Mendota, Dane County, WI

Total number of sites visited	776
Total number of sites with vegetation	559
Total number of sites shallower than maximum depth of plants	763
Frequency of occurrence at sites shallower than maximum depth of plants	73.26
Simpson Diversity Index	0.86
Maximum depth of plants (ft)**	18
Average number of all species per site (shallower than max depth)	1.64
Average number of all species per site (veg. sites only)	2.25
Average number of native species per site (shallower than max depth)	1.27
Average number of native species per site (veg. sites only)	1.73
Species Richness	15*
Species Richness (including visuals)	15*
*Filamentous algae is no longer included in species richness by WI DNR	

Table 2: Historical Aquatic Plant Community Statistics, Lake Mendota, Dane County, Wisconsin.

	1990	1991	2006	2011	2017	2023
F.o.o. at sites shallower than maximum depth of plants	---	---	67.04	51.36	68.29	73.26
Most Dominant Species	Coontail	Eurasian Water-milfoil	Coontail	Wild Celery	Coontail	Eurasian Water-milfoil
	Eurasian Water-milfoil	Coontail	Eurasian Water-milfoil	Eurasian Water-milfoil	Wild Celery	Wild Celery
	Sago Pondweed	Sago Pondweed	Common Waterweed	Coontail	Eurasian Water-milfoil	Coontail
	Wild Celery	Water Star-grass	Wild Celery	Horned Pondweed	Filamentous algae	Common Waterweed
	Water Star-grass	Common Waterweed	Water Star-grass	Flat-stem Pondweed	Sago pondweed	Sago pondweed
Maximum Depth of Plants	13	13	16	16	15	18
Species Richness	11	11	16	16	18	15
Community FQI	15	15	19.14	20.58	21.5	19.14
Average Coefficient of Conservatism	5	5	5.31	5.5	5.38	5.31

Table 3: 2023 Aquatic Plant Taxa-Specific Statistics, Lake Mendota, Dane County, WI

Species	Frequency of occurrence within vegetated areas (%)	Frequency of occurrence at sites shallower than maximum depth of plants	Relative Frequency (%)	Number of sites where species found	Average Rake Fullness
Eurasian water milfoil	50.09	36.70	22.3	280	1.06
Coontail	33.63	24.64	15	188	1.14
Muskgrasses	8.94	6.55	4	50	1.02
Elodea, Common waterweed	32.56	23.85	15	182	1.05
Water star-grass	1.25	.92	.6	7	1.00
Small duckweed	2.33	0.16	1	13	1.00
Curly-leaf pondweed	1.07	.79	.5	6	1.00
Slender naiad	7.51	5.5	3.3	42	1.02
American lotus	0.36	0.26	0.2	2	1.00
Leafy pondweed	27.91	20.45	12.4	156	1.00
Long-leaf pondweed	.54	.39	0.2	3	1.00
Clasping-leaf pondweed	8.41	6.16	3.7	47	1.00
Flat-stem pondweed	.36	.26	.2	2	1.00
Sago pondweed	15.21	11.14	6.8	85	1.04
Wild celery	34.35	25.16	15.3	192	1.03
Filamentous algae	28.26	20.71	*	158	1.01
*Relative frequency of Filamentous algae is no longer calculated by WI DNR					

Table 4: Historical Floristic Quality Index, Lake Mendota, Dane County, WI

Year	Total Species	Mean C	Floristic Quality Index (FQI)
1991	11	5	15
2006	13	5.31	19.14
2011	14	5.50	20.58
2017	16	5.38	21.5
2023	15	5.30	19.1

Please note: There is no Coefficient of Conservatism for exotic species such as Eurasian Watermilfoil or for species not identified to the species level (*Sagittaria sp.*).

Coefficient of Conservatism C

0-3 taxa found in wide variety of plant communities and very tolerant of disturbance.

4-6 taxa typically associated with specific plant communities and tolerate moderate disturbance.

7-8 taxa found in narrow range of plant communities and tolerate minor disturbance.

9-10 taxa restricted to a narrow range of synecological conditions, with low tolerance of disturbance.

Table 5: Historical Aquatic Plant Occurrences, Lake Mendota, Dane County, Wisconsin.

Genus	Species	Common Name	% Relative Frequency of Occurrence						
			1989	1990	1991	2006	2011	2017	2023
<i>Algae</i>	<i>sp.</i>	Filamentous algae	--	---	---	14.9	2.4	**	---
<i>Ceratophyllum</i>	<i>demersum</i>	Coontail	42.5	42.4	40.9	19.6	14.1	25.7	15
<i>Chara</i>	<i>sp.</i>	Muskgrass	---	---	--	0.2	0.2	0.1	4
<i>Elodea</i>	<i>canadensis</i>	Common waterweed	3.6	3.3	7.0	9.7	3.2	6.6	14.5
<i>Heteranthera</i>	<i>dubia</i>	Water star-grass	5.8	5.5	7.7	6.2	1.4	1.1	.6
<i>Lemna</i>	<i>minor</i>	Small duckweed	---	---	---	0.8	0.2	0.1	1
<i>Lythrum</i>	<i>salicaria</i>	Purple loosestrife	---	---	---	---	---	0*	---
<i>Myriophyllum</i>	<i>spicatum</i>	Eurasian watermilfoil	34.1	32.0	40.9	19.6	28.2	21.2	22.3
<i>Najas</i>	<i>flexilis</i>	Slender Naiad	---	---	---	---	0.3	0.8	3.3
<i>Nelumbo</i>	<i>lutea</i>	American lotus	0.3	1.1	0.2	0.1	0.5	0.2	.2
<i>Nymphaea</i>	<i>odorata</i>	White water lily	0.3	0.3	0.8	0.2	0.3	0.1	---
<i>Nuphar</i>	<i>Variagate</i>	Spatterdock	---	---	---	---	---	0*	---
<i>Potamogeton</i>	<i>crispus</i>	Curly-leaf pondweed	0.7	0.5	0.9	2.5	---	---	.5
<i>Potamogeton</i>	<i>foliosus</i>	Leafy pondweed	---	0.1	1.5	3.7	---	0.1	12.4
<i>Potamogeton</i>	<i>illinoensis</i>	Illinois pondweed	---	---	---	---	0.2	---	---
<i>Potamogeton</i>	<i>nodosus</i>	Long-leaf pondweed	---	---	---	---	---	0.1	.2
<i>Potamogeton</i>	<i>richardsonii</i>	Clasping-leaf pondweed	0.5	0.4	0.6	1.6	4.1	1.8	3.7
<i>Potamogeton</i>	<i>zosteriformis</i>	Flat-stem pondweed	0.1	---	---	0.4	4.3	6.9	.2
<i>Schoenoplectus</i>	<i>tabernaemontani</i>	Softstem bulrush	---	---	---	---	---	0*	---
<i>Spirodela</i>	<i>polyrhiza</i>	Large duckweed	---	---	---	---	---	0.1	---
<i>Stuckenia</i>	<i>pectinata</i>	Sago pondweed	6.8	8.5	8.3	5.5	---	6.9	6.8
<i>Typha</i>	<i>sp.</i>	Cattail	---	---	---	---	---	0*	---
<i>Vallisneria</i>	<i>americana</i>	Wild celery	5.4	5.8	6.3	9.0	29.6	24.7	15.3
<i>Wolffia</i>	<i>columbiana</i>	Common watermeal	---	---	---	---	0.2	---	---
<i>Zannichellia</i>	<i>palustris</i>	Horned pondweed	---	---	--	1.3	10.9	---	---
<i>0*</i> - Species was sampled visually only, statistical data was not produced.									
<i>** F.O.O.</i> no longer calculated by WI DNR									

Appendix B- Aquatic Invasive Species

Wisconsin Invasive Species Laws

Inspect your boat, trailer and equipment.

Remove any attached aquatic plants or animals (before launching, after loading & before transporting on a public highway)

Never Move live fish away from a waterbody.* Fish out of water are not considered live. Transport on ice is legal and recommended.

Buy minnows from a Wisconsin bait dealer and use leftover minnows only under certain conditions. *

*You may take leftover minnows purchased from a Wisconsin bait dealer away from any state water and use them again on that same water. You may use leftover minnows on other waters only if no lake or river water, or other fish were added to their container. See fishingwisconsin.org for more information.

Minnows

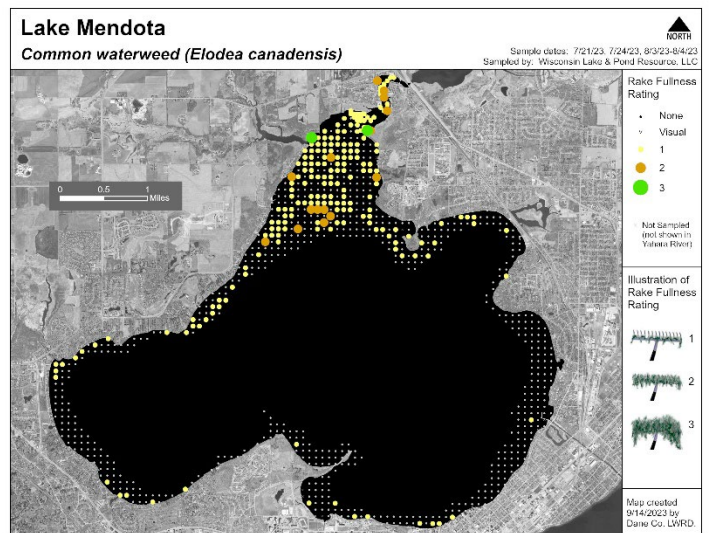
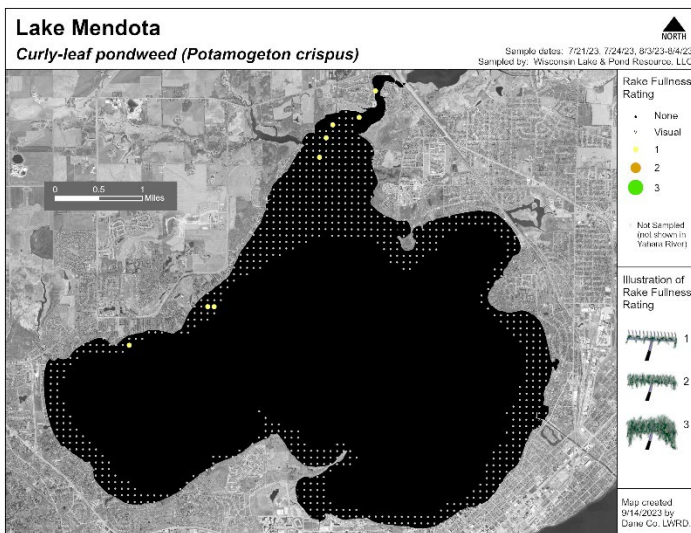
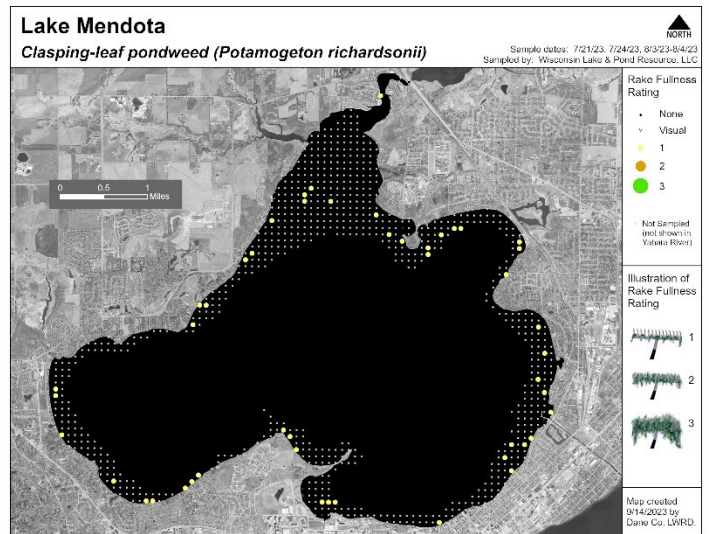
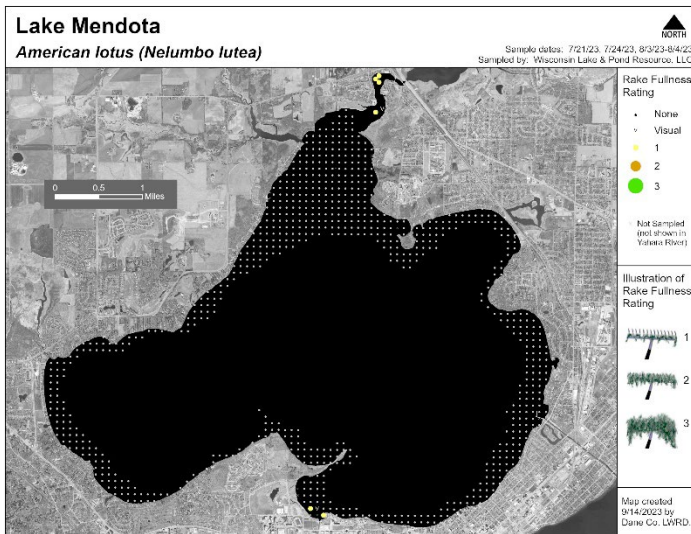
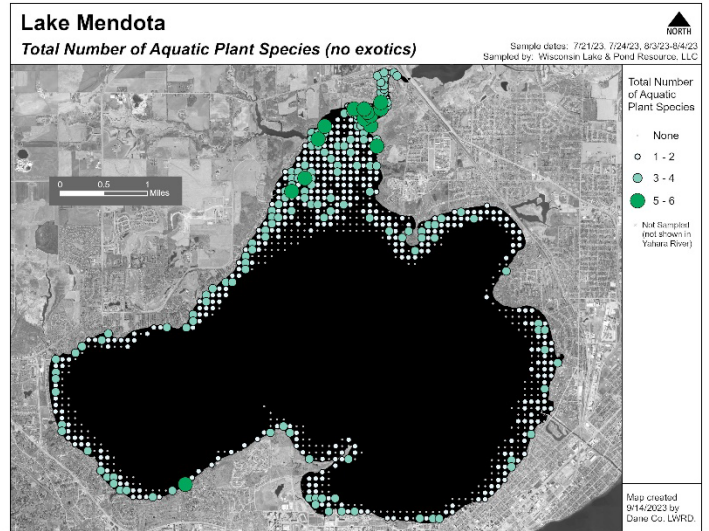
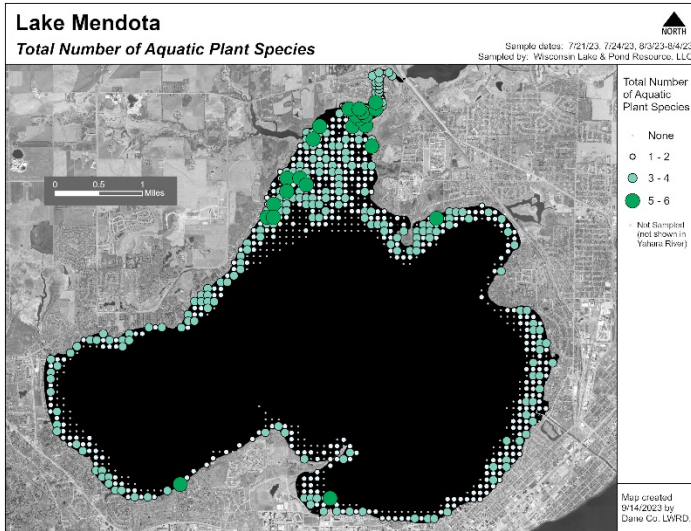
You may take live minnows purchased from a Wisconsin bait dealer (which includes Wisconsin registered fish farms) away from a waterbody if any of the following three conditions are met:

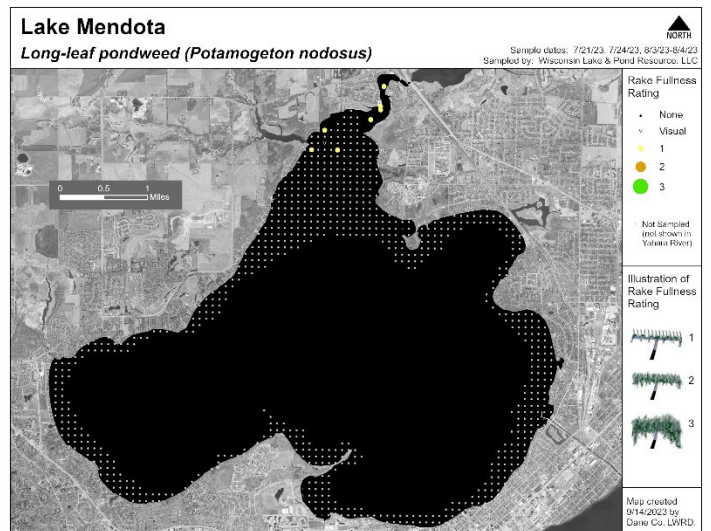
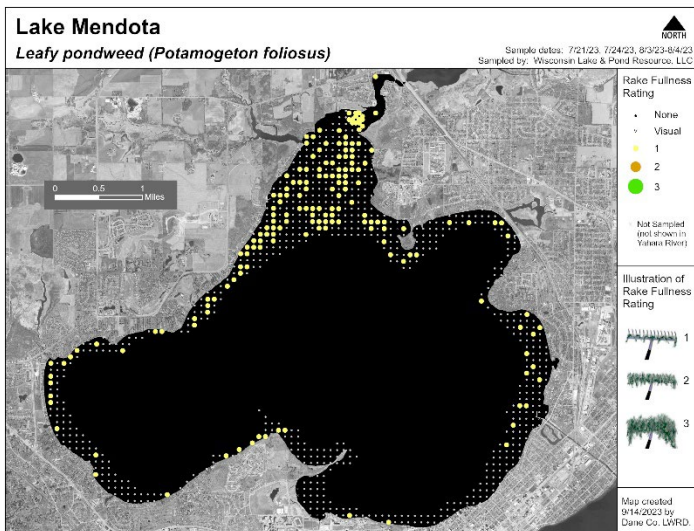
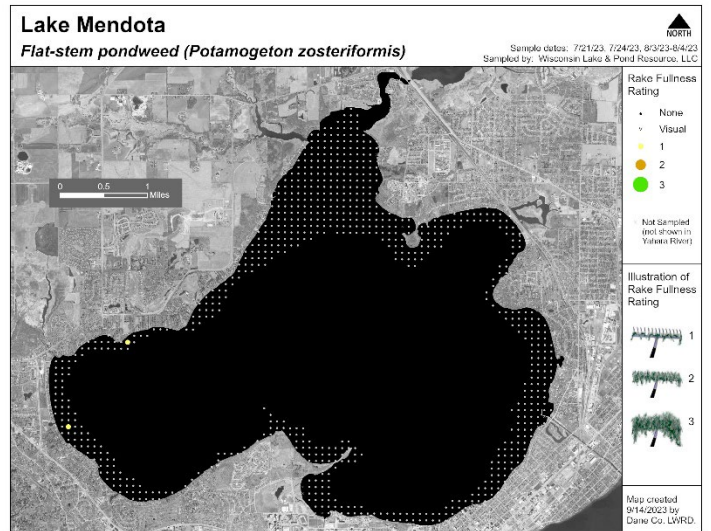
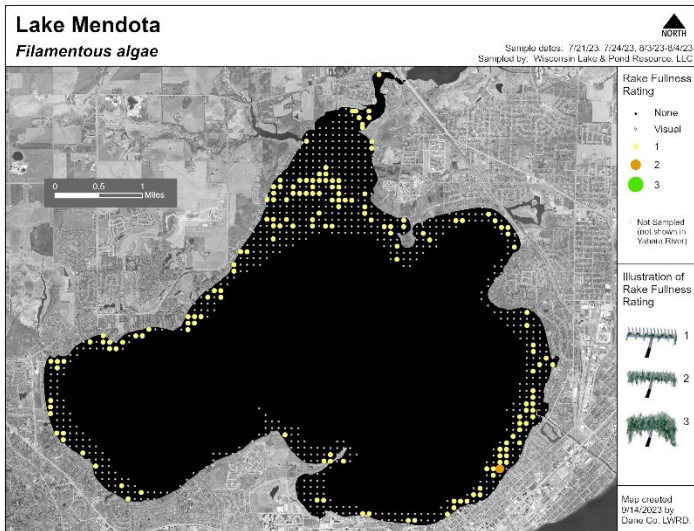
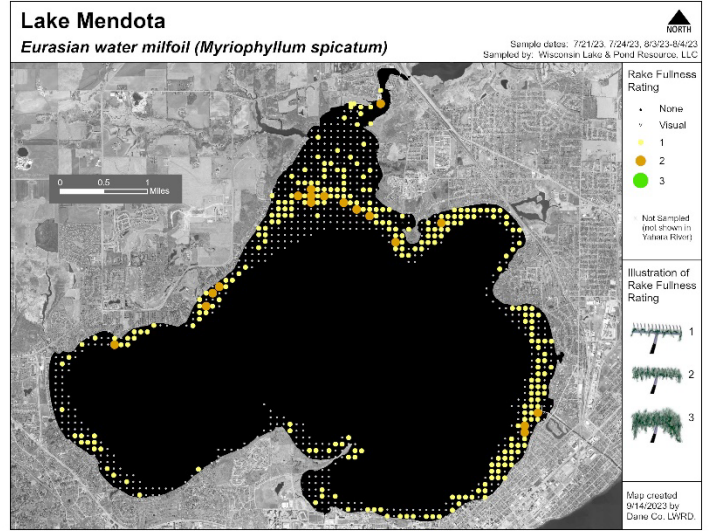
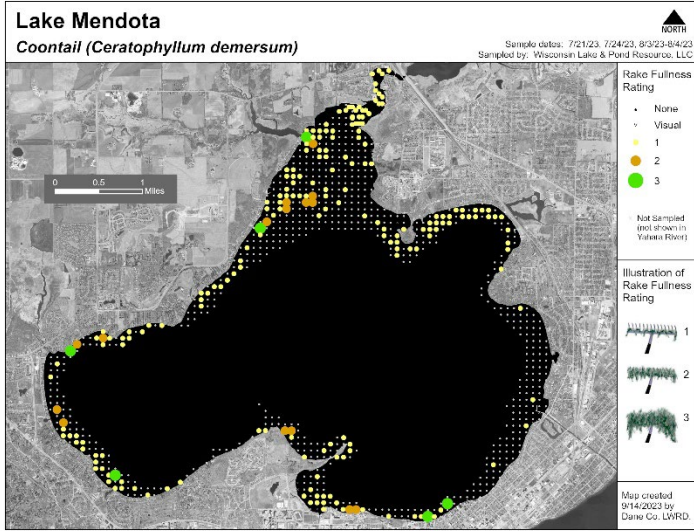
- Anglers can take purchased minnows away from a lake and use them again on that same waterbody.
- Anglers can also take purchased minnows away from a waterbody and use them elsewhere if no lake or river water or other fish were added to the bait container.
- Anglers can also take purchased minnows away from a waterbody for use elsewhere if they intend to preserve them as dead bait using approved methods.

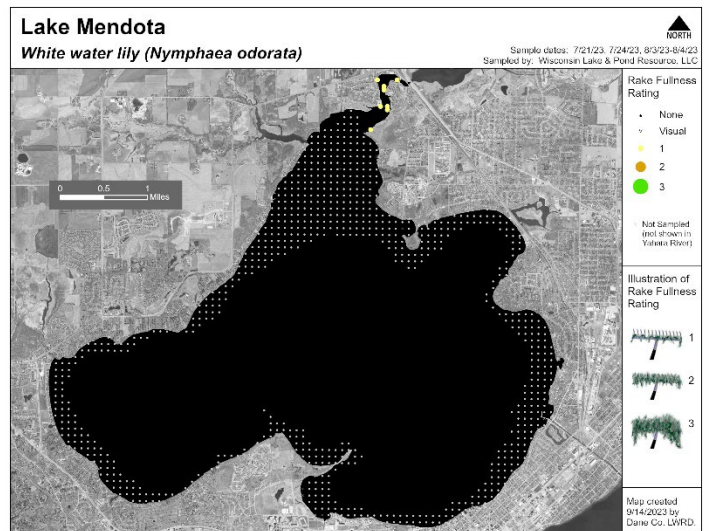
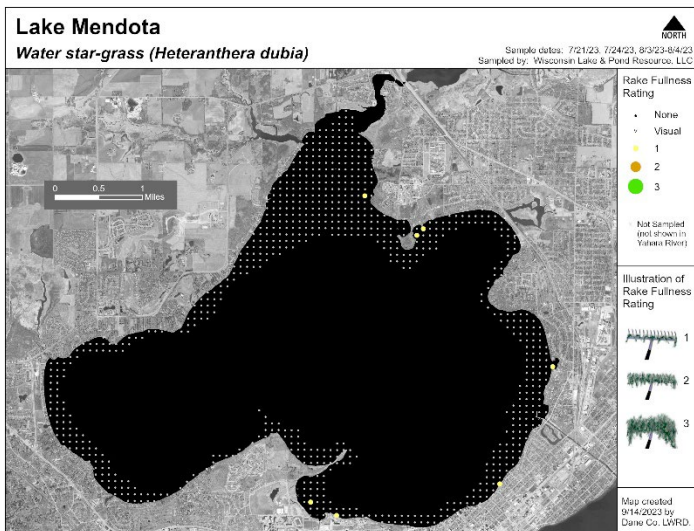
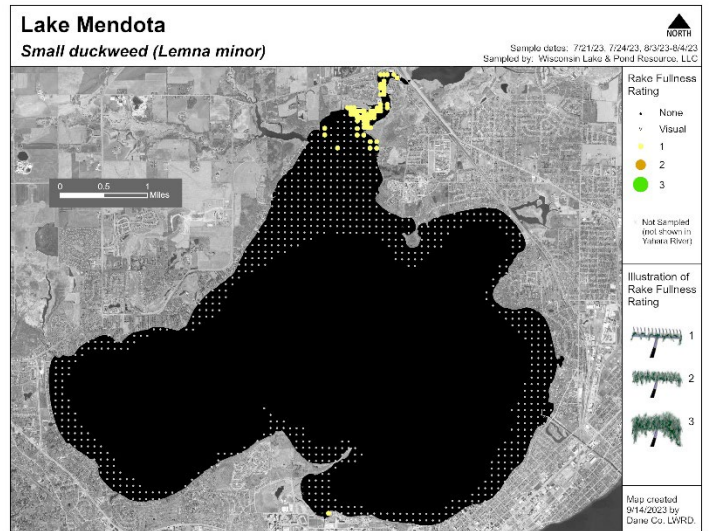
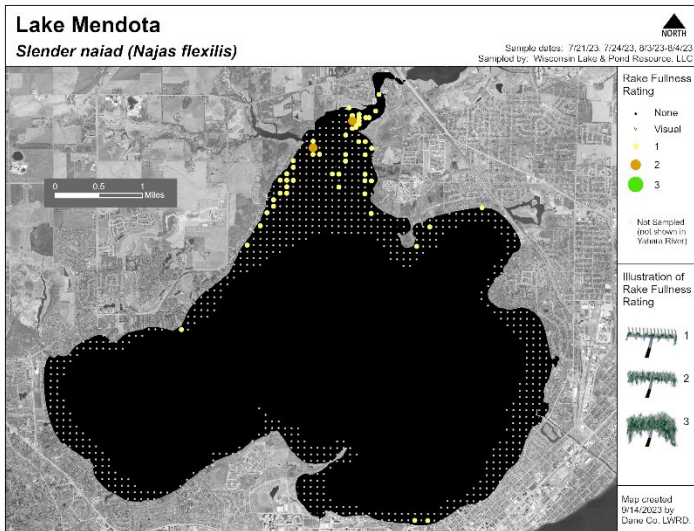
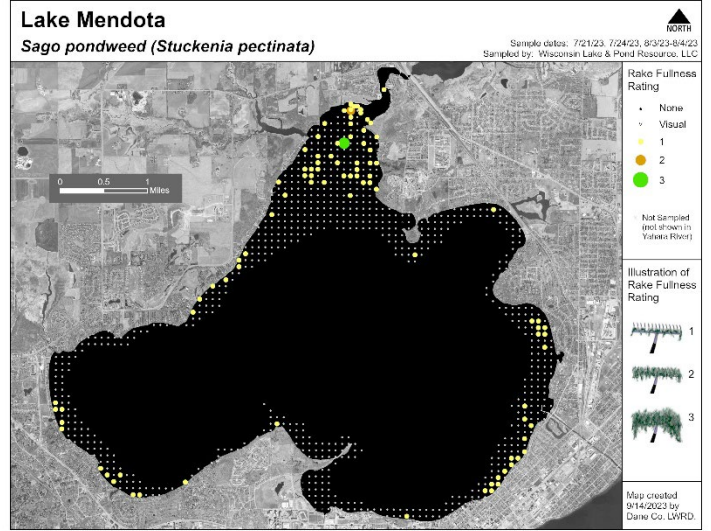
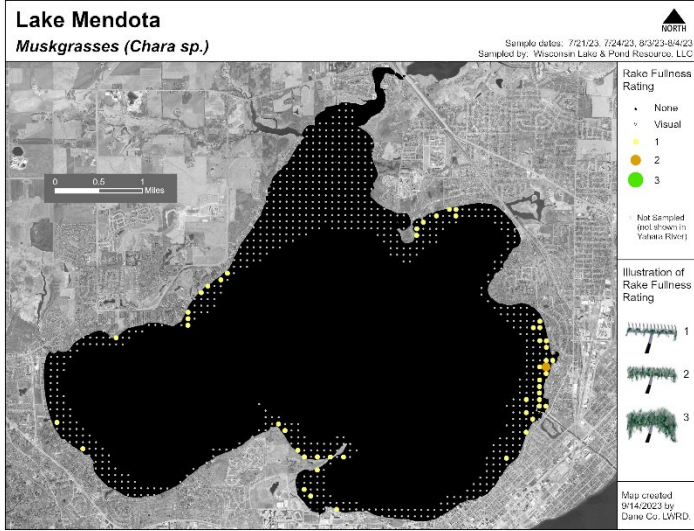
In each of these cases minnows may be transported in the amount of water needed to keep the minnows alive, up to 2 gallons. Additional Dane County Prevention Steps

- Dane County staff will remove all vegetation, mud, and other debris that is accessible from the machines before moving them away from any waterbody. (Machines include boats, harvesters, barges, and elevators)
- Dane County staff will remove the machines from a waterbody for a minimum of five dry days before moving them to another waterbody.
- When it is not possible to wait for 5 days Dane County staff will use a 2% Virkon solution mixed no more than seven days prior to application and allowing 10 minutes of contact time before rinsing with hot water to disinfect the machines before moving to another waterbody.
- Dane County staff will try to plan to move only downstream when working in the Yahara river chain as an added layer of protection
- Per Wisconsin DNR protocol found here: <http://dnr.wi.gov/topic/Invasives/disinfection.html>

Appendix C – Mapped Plant Distributions for Lake Mendota







Lake Mendota

Wild celery (*Vallisneria americana*)

Sample dates: 7/21/23, 7/24/23, 8/3/23-8/4/23
Sampled by: Wisconsin Lake & Pond Resource, LLC

