

Ann Lake, Benzie County
Year End Evaluation Report
July 8, 2026

Lake Manager:
Casey Shoaff– Environmental Biologist

Ann Lake 2026 Survey Summary

Ann Lake was surveyed on July 8, 2026, to evaluate aquatic plant growth and look for any exotic species introductions. The vegetation assessment was conducted using the Aquatic Vegetation Assessment Site (AVAS) methodology, the survey standard approved by Michigan EGLE. This approach divides the lake into small survey sections where plant species presence and density are recorded using a standardized A–D density scale.

PLM scientists utilized rake toss sampling, visual observation, and sonar technology to ensure a thorough and accurate evaluation. Historical survey data allows PLM to compare long-term trends, helping identify new infestations, evaluate plant community health, and refine management goals over time. Surveys also assist in detecting ecological shifts, changes in species diversity, nuisance growth conditions, and potential impacts of invasive species on native vegetation.

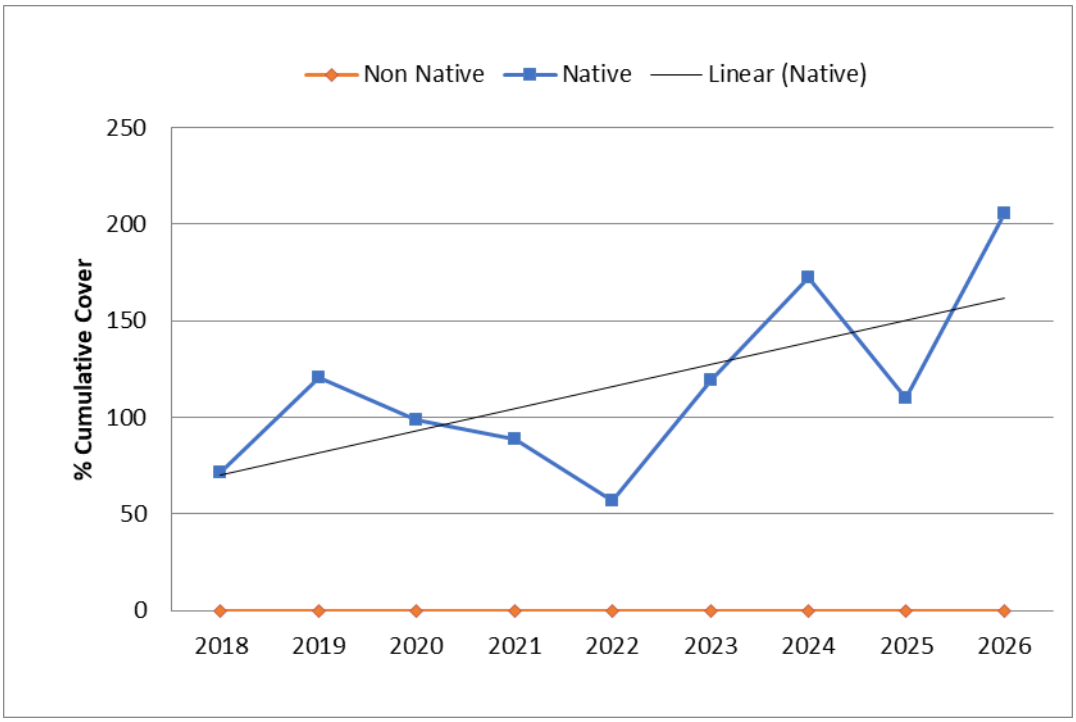
Key Findings

Native Aquatic Vegetation: Native plant communities were present and thriving throughout the lake, indicating overall ecological stability. No exotic species were found growing in the lake.



Lake Ann Plant Data Review

Reviewing aquatic plant trend data is a critical component of effective lake management, providing oversight of management efforts while identifying potential concerns such as new invasive species introductions and changes in overall plant health. This graph illustrates the cumulative coverage of native and non-native aquatic plants within Ann Lake . Overall native plant coverage in 2026 was consistent with the past few years. Seasonal fluctuations are common and may result from survey timing, natural plant growth cycles, weather patterns, treatment efforts, shoreline development, and other environmental influences.
The native plant community remains diverse and well established. Chara was notably abundant, along with a several pondweed species. Chara is particularly beneficial to lake health as it can contribute to water clarity by stabilizing bottom sediments and providing structure for aquatic life.



Final Review and Recommendations

It is strongly recommended that Ann Lake's management program prioritize the control of non-native and invasive plant species if they are found growing in the lake.

Phragmites and Purple Loosestrife Management: Phragmites and Purple Loosestrife should be monitored and incorporated into treatment plans as needed. Early intervention can prevent expansion and protect shoreline habitat.

Monitoring and Adaptive Management: Routine aquatic vegetation surveys and annual water quality monitoring are recommended to track ecological trends, evaluate treatment effectiveness, and identify changes in lake health. Continued data collection supports adaptive management decisions and ensures the program remains responsive to evolving lake conditions.

Management Priority Summary: Aggressive and consistent management of exotics, if and when found will provide the best opportunity to protect Lake Ann's ecological balance and recreational value.

Lake: Lake Ann County: Benzie Survey Date :7/8/2026

Standard Aquatic Vegetation Summary Sheet

		Total number of AVAS's for each Density Category				Calculations				Sum of Columns 5-8	Total No. of AVAS	Col 9 divided by Col 10
Code		A	B	C	D	A x 1	B x 10	C x 40	D x 80			
No	Plant Name	1	2	3	4	5	6	7	8	9	10	11
1	Eurasian watermilfoil	0	0	0	0	0	0	0	0		82	
2	Curly leaf pondweed	0	0	0	0	0	0	0	0			
3	Chara	0	10	67	2	0	100	2680	160	2940	82	35.85
4	Thinleaf pondweed	0	51	11	1	0	510	440	80	1030	82	12.56
5	Flatstem pondweed	0	35	17	5	0	350	680	400	1430	82	17.44
6	Robbins pondweed	0	13	0	6	0	130	0	480	610	82	7.44
7	Variable pondweed	0	23	37	1	0	230	1480	80	1790	82	21.83
8	White stem pondweed	0	9	0	0	0	90	0	0	90	82	1.10
9	Richardsons pondweed	0	15	13	0	0	150	520	0	670	82	8.17
10	Illinois pondweed	1	45	29	1	1	450	1160	80	1691	82	20.62
11	Large leaf pondweed	0	46	16	1	0	460	640	80	1180	82	14.39
12	American pondweed	0	22	1	0	0	220	40	0	260	82	3.17
13	Floating leaf pondweed	0	0	0	0	0	0	0	0			
14	Water stargrass	0	5	0	0	0	50	0	0	50	82	0.61
15	Wild celery	0	7	5	0	0	70	200	0	270	82	3.29
16	Sagittaria (submersed)	0	0	0	0	0	0	0	0			
17	Northern watermilfoil	17	18	5	0	17	180	200	0	397	82	4.84
18	Rush	0	0	0	0	0	0	0	0			
19	Variable leaf watermilfoil	0	0	0	0	0	0	0	0			
20	Coontail	0	1	1	0	0	10	40	0	50	82	0.61
21	Elodea	8	25	5	0	8	250	200	0	458	82	5.59
22	Bladderwort	2	53	5	0	2	530	200	0	732	82	8.93
23	Mini Bladderwort	0	0	0	0	0	0	0	0			
24	Buttercup	0	2	5	0	0	20	200	0	220	82	2.68
25	Naiad	0	53	1	0	0	530	40	0	570	82	6.95
26	Brittle naiad	0	0	0	0	0	0	0	0			
27	Sago Pondweed	0	48	20	1	0	480	800	80	1360	82	16.59
28	Starry Stonewort	0	0	0	0	0	0	0	0			
29	Cabomba	0	0	0	0	0	0	0	0			
30	Water Lily	3	28	5	0	3	280	200	0	483	82	5.89
31	Spatterdock	1	27	5	0	1	270	200	0	471	82	5.74
32	Water shield	0	0	0	0	0	0	0	0			
33	Common Duckweed	0	0	0	0	0	0	0	0			
34	Greater duckweed	0	0	0	0	0	0	0	0			
35	Watermeal	0	0	0	0	0	0	0	0			
36	Arrowhead	0	4	0	0	0	40	0	0	40	82	0.49
37	Pickerelweed	0	0	0	0	0	0	0	0			
38	Arrow arum	0	0	0	0	0	0	0	0			
39	Cattail	0	24	11	0	0	240	440	0	680	82	8.29
40	Bulrush	0	48	13	0	0	480	520	0	1000	82	12.20
41	Iris	0	0	0	0	0	0	0	0			
42	Swamp loosestrife	0	2	2	0	0	20	80	0	100	82	1.22
43	Purple loosestrife	0	0	0	0	0	0	0	0			
44	Phragmites	1	1	0	0	1	10	0	0	11	82	0.13
45	Frogbit	0	0	0	0	0	0	0	0			
46	Slender spikerush	0	6	0	0	0	60	0	0	60	82	0.73
47	Smartweed	0	0	0	0	0	0	0	0			
48	Water marigold	0	0	0	0	0	0	0	0			
49	American lotus	0	0	0	0	0	0	0	0			
50	Wild Rice	0	6	0	0		60	0	0	60	82	0.73
	Total cumulative cover											**228.09**