



LPC – Weed Harvesting Program Report (2024-2025)

Terry Klaves, Tony Mainiero and David Lester

Lake Weed Harvesting Program Review:

The recreational value of our lake (fishing, swimming and boating) decreases with the excessive weed growth that comes with lake aging. The Association's Weed Harvesting Program is intended to slow the natural lake aging process (eutrophication) by removing more nutrients (plant biomass) from our lake than mother nature puts into it.

Over the coming decade, this program will result in less weeds, less muck, and improved recreational value. For 2024 and 2025 the Association hired Aquatic Plant Management (APM; Minocqua, WI) to perform three (3) 40-hour weed harvesting service campaigns, conducted in May-June, July-August, and September-October.

APM's priority for the first two (2) weed harvesting campaigns in 2024 and 2025 was to remove propeller-fouling weeds from the Navigation Lane, and then to harvest the larger weed beds and Chara algae bogs. Before each campaign, LPC Members mapped the larger weed beds (outside of the Navigation Lane) for APM to target.

The 3rd harvesting campaign in 2024 was conducted in October, after most of the piers and pump intakes had been removed. APM was directed focus their harvesting activity on the shallow areas, inside the Navigation Lane. It was concluded that working in the shallows did not remove a significant amount of biomass. The ILH-250 harvester is most effective in tall weeds and deeper water (4-6 Ft.)

Weed growth for the 1st harvest this year was more widespread and less dense than in 2024. This widespread weed growth was noted throughout Wisconsin. It is thought to be due to lack of snow on the ice this past winter, plus warm and sunny spring weather. The less dense weed growth noted in our Navigation Lane is also a likely result of our near shore weed harvesting focus in October of 2024.

After observing less than satisfying results for the 1st and 2nd harvesting campaigns this year, LPC members met with APM's owners, to discuss strategy. The LPC increased mapping activity and closely monitored APM's progress during the 3rd campaign, conducted during the 1st week of Oct 2025. APM was asked to deemphasize the Navigation Lane (because the boating season was over) and focus on harvesting the largest and thickest weed beds throughout the lake. The results were better.

APM 2024-2025 Weed Harvesting Program Analysis:

APM's ILH-250 operators remove weed and Chara algae biomass at roughly the rate of 1/3 acre per hour. This means that 13 acres of weeds can be harvested in a 40-hour harvesting campaign. Our (5 mile, 40 ft. wide) Navigation Lane alone covers 10 acres. After (and while) clearing the Navigation Lane, we expect APM to harvest an additional 3-4 acres of pre-mapped weed beds and Chara algae bogs.

To compensate for the low 1st harvest yield, the Lake Board and LPC increased APM's service period to 48 hours for the 2nd campaign and to 56 hours for the 3rd. The 24-hour total increase allowed APM to harvest eight (8) additional acres of lakebed.

2024/2025 APM Weed Harvest Data:

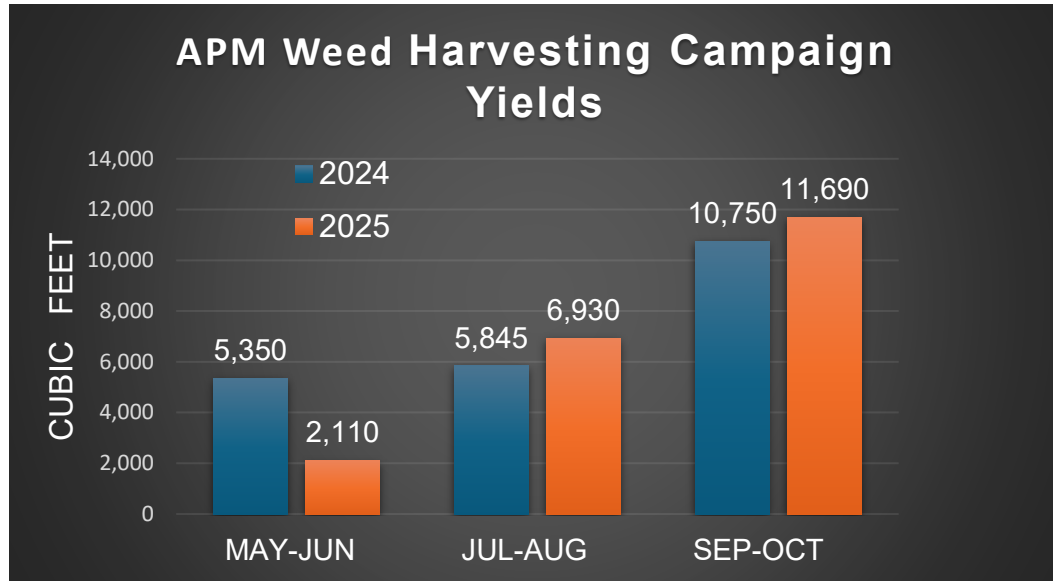
	<u>2024</u>	<u>2025</u>	<u>Change</u>		<u>2024</u>	<u>2025</u>
1 st Harvest: (Ft ³)	5,400	2,110	(61%)	Service Hours:	120	144
1 st Harvest Hours	33	40	+21%	Acres Harvested:	40	48
1 st Productivity (Ft ³ /Hr):	164	53	(67%)	Efficiency (Acres/Hr):	0.33	0.33
2 nd Harvest: (Ft ³)	5,845	6,930	+18%	Productivity (Ft ³ /Hr):	183	144
2 nd Harvest Hours	40	48	+19%			
2 nd Productivity (Ft ³ /Hr):	146	144	(1%)			
3 rd Harvest: (Ft ³)	10,750	11,690	+9%			
3 rd Harvest Hours	47	56	+19%			
3 rd Productivity (Ft ³ /Hr):	229	209	(9%)			
1 st Harvest: (Ft ³)	<u>5,350</u>	<u>2,110</u>				
2 nd Harvest: (Ft ³)	5,845	6,930				
3 rd Harvest: (Ft ³)	<u>10,750</u>	<u>11,690</u>				
Total Yield: (Ft ³)	<u>21,945</u>	<u>20,730</u>				
Total Program Cost:	\$40,500	\$47,000		Efficiency Change (Acres/Hr):	0%	
Total Cost per Yard ³ :	\$49.75	\$62.58		Productivity Change (Ft ³ /Hr):	(21%)	

Operator Efficiency is a set figure, which is 0.33 Acres per Hour. APM advises that ILH-250 harvesters cover one acre of lake surface area in three (3) hours of operation. The LPC agrees with this estimation. It takes approximately 24 hours of service time for APM to harvest our five (5) miles of Navigation Lane, which covers roughly 10 Acres.

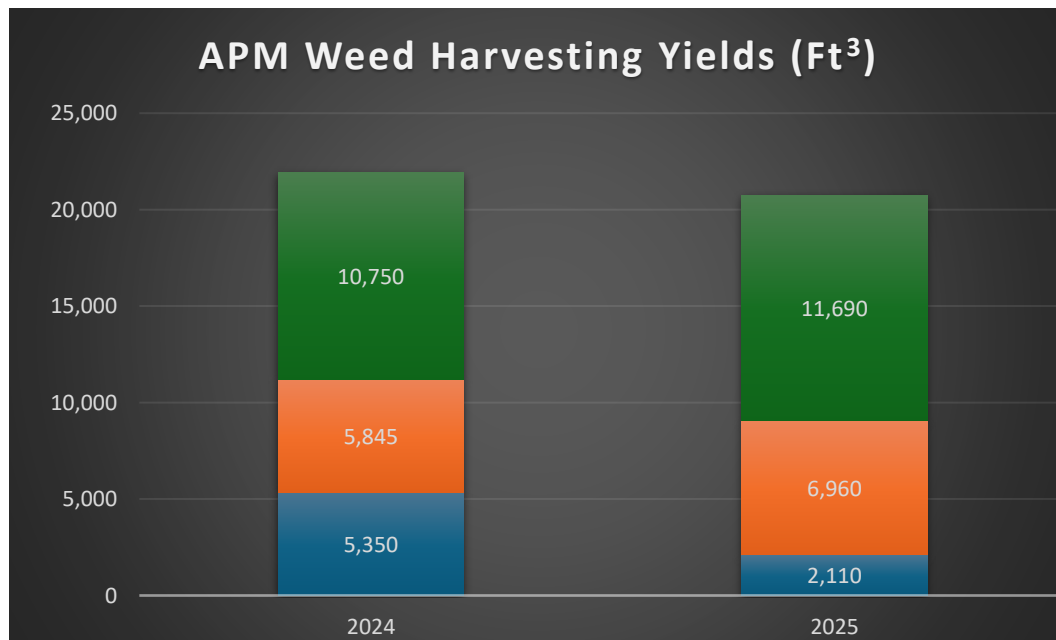
Weed growth (density) increases through the summer months. This is reflected by increases in the total harvest yields and the productivity (Cubic Feet per Hour).

2024-2025 Weed Harvesting Comparisons:

Weed harvesting productivity (Cubic Feet of biomass removed per Hour of harvesting) was down 21% in 2025 vs. 2024. After a disappointing 1st harvest yield, the duration of the 2nd 2025 harvest was increased from 40 to 48 hours and the duration of the 3rd harvest was increased from 40 to 56 Hours. More time > more acres harvested > more biomass removed.



Our program revisions (adding 24 hours of service time) worked. Roughly 30 truckloads of biomass were removed from the lake this year vs. 31 truckloads in 2024.



2024 was the first year for commercial weed harvesting on Silver Springs Lake. The previously unharvested weed beds were thicker/denser in 2024. Weed harvesting productivity is higher when the weed beds are thicker/more dense.

Weed growth was more spread out and thinner in 2025 than in 2024. More harvesting service time was needed to remove the same amount of biomass this year vs last year:

120 Hours/40 Acres in 2024 vs. 144 Hours/48 Acres in 2025

Conclusions, and Plan Adjustments for the 2026:

Weed harvesting does not cause widespread weed growth. This simply happens when you are harvesting the heaviest weed beds regularly. As we continue to harvest the larger existing weed beds, new weed beds will continue to take root and grow.

Plant growth patterns will also vary from year to year. Lacking snow cover on the lake may have contributed to more widespread weed growth this year. APM reported that this pattern was noted throughout central Wisconsin.

The proposed 2026 Weed Harvesting Budget includes funding for three (3) APM Weed Harvesting Campaigns, conducted in early-June, late-July, and mid-September.

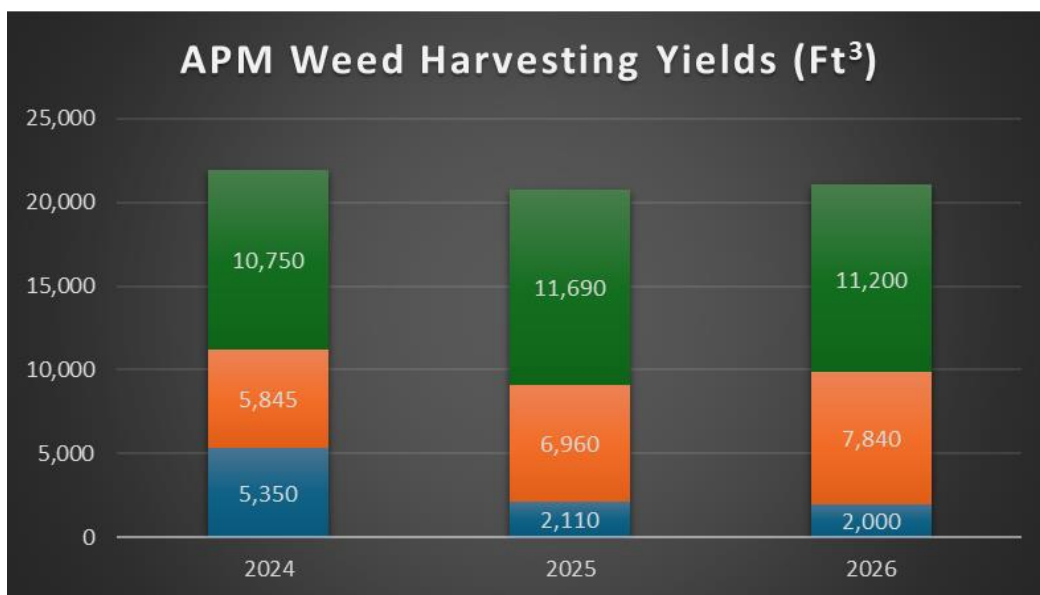
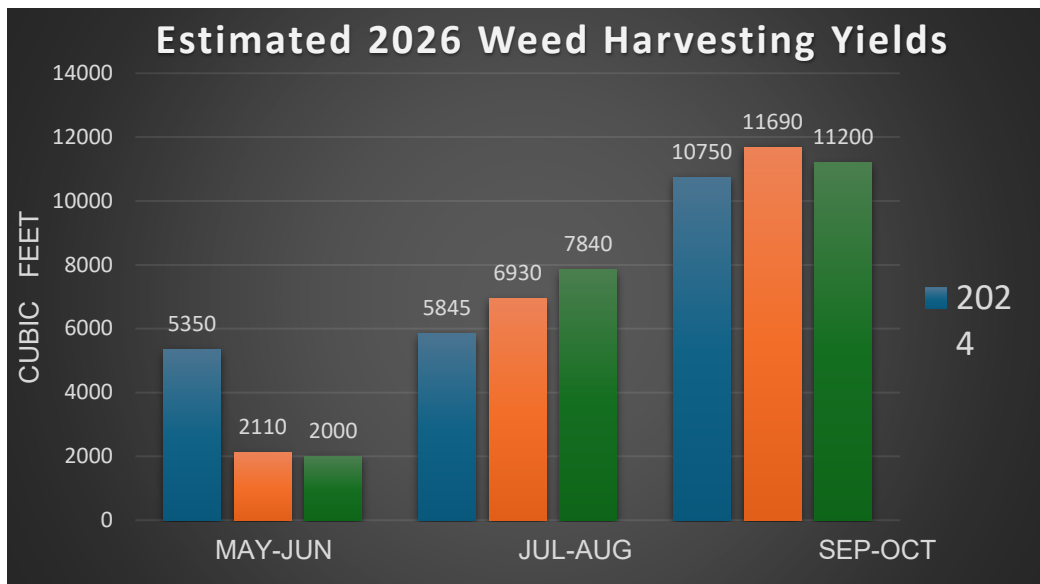
The primary focus for the 1st and 2nd harvest will again be to harvest the weeds in the Navigation Lane. This improves our boating recreational value by reducing the amount of prop fouling by weeds, and it allows our anglers to do some snag-free trolling.

Because more plant biomass is available to harvest as the season progresses, we will move the 1st harvesting campaign in 2026 back, into early-June.

The 2nd harvest in 2026 will remain in late-July. The campaign duration will be increased to 56 hours, which seems to be the right amount of time needed to harvest our heaviest weed growth areas.

LPC members have noted and APM has confirmed that weeds stop growing and start to fall down from the lake surface in Late September. This lowers the harvesting yield potential. We are moving the 3rd campaign up, from October into mid-September.

These charts show the predicted results for 2026:



Hours:	120	144	152
Acres:	40	48	51

Closing Statements for 2025:

The LPC thanks our Lake Association Members for continuing to support and fund the triannual Weed Harvesting and triennial DASH Invasive Weed Removal programs. We believe that by removing the aggressive invasive weeds and by harvesting 30 truckloads of (normal) weed biomass each year, we will reduce weed growth and stop muck accumulation.

Association funding for the Lake Preservation Program is increasing. More aggressive remediation programs will be proposed and budgeted to take place after 2027. Most notably we will look at targeted hydraulic dredging, to remove muck accumulation at the mouth of our lake inlet stream in Dome Bay. Several years of planning and permitting will be required.

The LPC and Lake Board will not initiate formal planning activities with service providers until our Association Members have approved a budget that includes funding for this program. In the interim, LPC and Board members are exploring equipment and service provider options, to find the best cost-benefit / return-on-investment ratio.

With Lake Board oversight, the LPC will continue to adjust the Weed Harvesting and DASH invasive weed removal programs, to follow our ever-changing lake weed growth patterns. We know that it will take time (maybe a decade) to see that weed harvesting / nutrient removal is reversing the lake aging process. If we have this right, one day we will have balanced weed growth and far less near-shore muck accumulation.

We are modifying the Weed Harvesting Program with the intention of continuing to remove roughly thirty truckloads of biomass per year. We believe this amount of nutrient rich biomass is significantly more (nutrients) than Mother Nature is putting into our lake on an ongoing basis.

As we continue, weed bed growth density will decrease and more harvesting time will be needed to remove the same amounts of biomass. Because of the 21% decrease in the 2025 harvesting productivity rate, the cost per cubic yard of harvested biomass increased 26%. The planned Weed Harvesting Program cost for 2026 will increase 4%, from \$47,000.00 to \$50,500.00.

Long term, the program cost (as planned) will continue to increase. To remove the same amount of biomass, with thinning weed growth, more harvesting time is needed to harvest more acres of lakebed. We expect the price per cubic yard of biomass removed in 2026 to increase 4%, from \$62.60 to \$65.00. We might be wrong. With the planned program adjustments, the yields and cost per cubic yard of harvested biomass could be lower next year.

We look forward to seeing many of you at the Association Christmas Party.

Sincerely,

The Lake Preservation Committee