



Big Silver Lake EWM Removal Report 2023

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Big Silver Harvest Background 2023

- Big Silver Lake is a 328 acre lake in Waushara County that has an extensive Eurasian Watermilfoil population that impairs beneficial use of the lake
- The Silver Lake Management District (SLMD) has partnered with Aquatic Plant Management LLC (APM) since 2018 to manually remove EWM after conducting a full lake treatment in 2016
- After 5 years of keeping the infestation at manageable levels through solely Diver Assisted Suction Harvesting (DASH), the EWM population reached levels where methods beyond DASH were required to maintain access to the lake
- To address the EWM population in 2023, the SMLD partnered with APM to conduct mechanical harvesting and DASH
- APM mechanically harvested and removed 45,930 cubic feet of EWM over the course of 23 days, and removed 842.5 cubic feet through DASH over 10 days
- The SLMD should continue to use an Integrated Pest Management (IPM) approach when evaluating different tools to actively manage its aquatic vegetation population

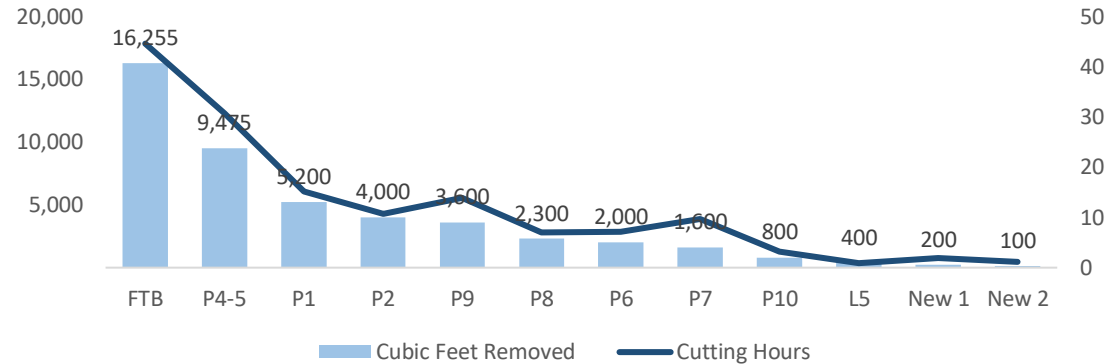


Big Silver Lake Harvest Details

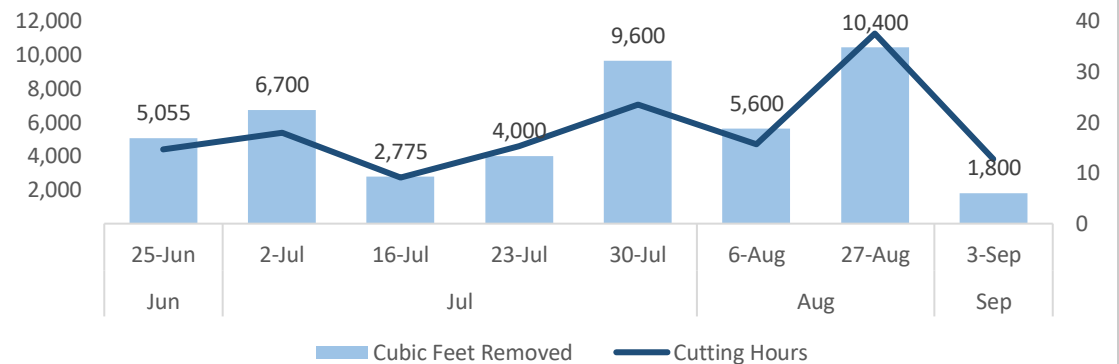
Harvest Highlights

- The harvest strategy on Big Silver Lake was to target large polygons and lanes that were primarily in the northeast section of the lake, along with cutting riparian access lanes in Foxtail Bay
- The harvest started in Foxtail Bay to create access, before shifting to polygons/lanes in the northeast
- The harvester cut in a continuous line at adjacent sites P4 and P5
- The harvester returned to re-cut the Foxtail Bay access lanes at the end of July and briefly in August
- In total, the harvester removed 45,930 cubic feet of EWM

Harvest by Site



Harvest by Week





Big Silver Lake DASH Details

DASH Highlights

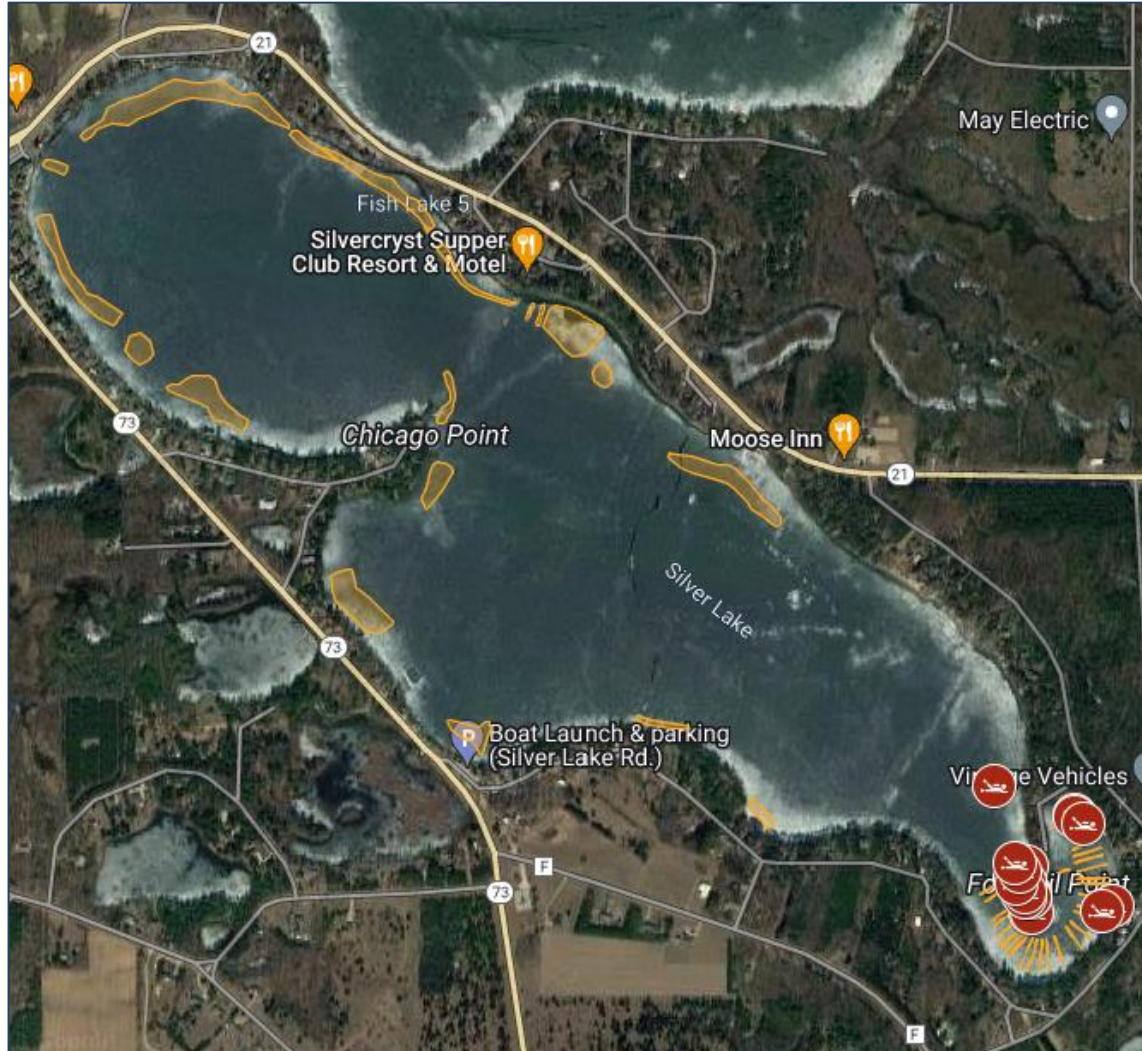
- The DASH strategy on Big Silver Lake was to remove as much EWM as possible from Foxtail Bay (A-23) over the course of 15 days
- The DASH team conducted two weeks of DASH operations, primarily targeting the dominant colony on the north end of Foxtail Bay (outside of the planned mechanical harvest lanes)
- Due to the significant native and EWM growth in Foxtail Bay, the decision was made by the SLMD to discontinue DASH and focus on solely mechanical harvesting in 2023



Daily DASH Results

Date	Weather Conditions	Water Temp (F)	Underwater Dive Time (hrs)	AIS Removed (cubic ft)
6/12/2023	Partly Cloudy	66	4.3	166.0
6/14/2023	Cloudy	62	3.4	69.0
6/15/2023	Partly Cloudy	68	2.9	74.0
6/21/2023	Sunny	71	2.0	33.0
6/22/2023	Sunny	71	4.9	152.0
7/10/2023	Sunny	74	5.3	48.0
7/11/2023	Sunny	72	6.9	72.0
7/12/2023	Cloudy	70	3.3	45.0
7/13/2023	Partly Cloudy	79	6.4	88.5
7/14/2023	Sunny	79	6.7	95.0
Grand Total			46.1	842.5

Map of Big Silver Lake Removal Sites (1/4)



Map of Big Silver Lake Removal Sites (2/4)



Map of Big Silver Lake Removal Sites (3/4)



Map of Big Silver Lake Removal Sites (4/4)





Detailed Diving Activities

Date	Dive Location	Latitude	Longitude	Underwater Dive Time (hrs)	AIS Removed (cubic ft)	AIS Density	Avg Water Depth (ft)	Native Species	Native By-Catch	Substrate Type
6/12/2023	A-23	44.04898	-89.22031	1.08	45.0	Surface Matting	5.0	Pondweeds	8.0	Organic/Sand
6/12/2023	A-23	44.04894	-89.22031	1.58	65.0	Surface Matting	5.0	Pondweeds	9.0	Organic/Sand
6/12/2023	A-23	44.04884	-89.22010	1.67	56.0	Surface Matting	5.0	Pondweeds	8.0	Organic/Sand
6/14/2023	A-23	44.04734	-89.21936	0.92	18.0	Highly Dominant	7.0	Pondweeds	2.5	Organic/Sand
6/14/2023	A-23	44.04726	-89.21964	1.50	21.0	Highly Dominant	7.0	Pondweeds	4.5	Organic/Sand
6/14/2023	A-23	44.04755	-89.22143	1.00	30.0	Small Plant Colony	17.0	Pondweeds	4.0	Organic/Sand
6/15/2023	A-23	44.04760	-89.22166	1.75	33.0	Small Plant Colony	20.0	Pondweeds	7.0	Organic/Sand
6/15/2023	A-23	44.04760	-89.22166	1.17	41.0	Small Plant Colony	20.0	Pondweeds	5.0	Organic/Sand
6/21/2023	A-23	44.04950	-89.22234	1.00	9.0	Dominant	15.0	Grasses	0.5	Organic/Sand
6/21/2023	A-23	44.04784	-89.22182	1.00	24.0	Surface Matting	15.0	Grasses	0.5	Organic/Sand
6/22/2023	A-23	44.04791	-89.22167	1.92	67.0	Surface Matting	15.0	Grasses	0.5	Organic/Sand
6/22/2023	A-23	44.04805	-89.22152	3.00	85.0	Surface Matting	15.0	Grasses	0.5	Organic/Sand
7/10/2023	A-23	44.04723	-89.22145	2.83	27.0	Surface Matting	14.0	Pondweeds	2.0	Organic/Sand
7/10/2023	A-23	44.04723	-89.22140	2.42	21.0	Surface Matting	11.0	Grasses	0.5	Organic/Sand
7/11/2023	A-23	44.04750	-89.22143	3.42	36.0	Surface Matting	16.0	Pondweeds	1.0	Organic/Sand
7/11/2023	A-23	44.04750	-89.22143	3.50	36.0	Surface Matting	11.5	Pondweeds	0.5	Organic/Sand
7/12/2023	A-23	44.04777	-89.22156	3.25	45.0	Surface Matting	10.0	Grasses	1.0	Organic/Sand
7/13/2023	A-23	44.04750	-89.22156	3.25	57.0	Highly Dominant	10.0	Grasses	0.5	Organic/Sand
7/13/2023	A-23	44.04759	-89.22158	3.17	31.5	Dominant	10.0	Grasses	0.5	Organic/Sand
7/14/2023	A-23	44.04776	-89.22177	3.33	56.0	Dominant	11.0	Grasses	1.0	Organic
7/14/2023	A-23	44.04795	-89.22168	2.33	26.0	Dominant	11.0	Coontail	1.0	Organic/Sand
7/14/2023	A-23	44.04813	-89.22183	1.00	13.0	Dominant	10.0	Coontail	1.0	Organic/Sand
Total	22			46.09	842.5					