

AIS Data Collection at Higgins Lake Boat Accesses 2024

HLPOA and HLF work with the DNR to combat the aquatic invasive species (AIS) that already exist in Higgins Lake and to reduce the risk of additional AIS entering the lake. The existing AIS are Eurasian Water Milfoil (EWM), starry stonewort (SSW) and zebra and quagga mussels. The DNR treat their three boat accesses with chemicals where needed to combat EWM and with DASH boat harvesting to control SSW. (There is no known treatment for zebra and quagga mussels.) In addition, they use signs and advertising programs such as "Clean, Drain and Dry" to make the public aware of AIS risks. They also provide cleaning stations at the accesses for the use of boat operators. The DNR makes only a limited effort to inspect boats for AIS at its thousand plus accesses around the state. Typically, their two conservation officers in Roscommon County allocate two hours a week to AIS inspections during the summer.

Higgins Lake Foundation takes on the extensive (and expensive) role of combatting EWM and SSW in the open waters of Higgins Lake with their DASH boat harvesting, now in its twelfth year. So far, this effort has proven adequate to keep EWM and SSW in check based on their annual harvest reports. In addition, this year their consultant, Dr. Luttenton, added monthly inspections for new AIS at the three DNR accesses as well as the other four most active boat access around the lake (Maplehurst Avenue, Kelly Beach, Townline Road and Gerrish Marina). Early detection of new AIS will help with control and possible eradication.

Since 2022, HLF and HLPOA worked together on interviews of boat operators at the DNR accesses and data collection involving the other four accesses mentioned above. The primary purpose of the interviews was to determine the relative risk of new AIS entry at the accesses based on the number of non-Higgins Lake boats arriving with visible weeds. From this work in 2023 we determined that 84% of the Higgins Lake risk is at the South State Park. As a result, the 2024 focus has been on the South State Park with interviews by HLF student workers. Collection of data on visible weeds on trailers after launch has also continued. This provides a comparison of relative usage between the accesses and a check of data consistency from previous years. Summaries of both data sets are attached.

The interviews of operators and inspection of boats for visible aquatic weeds at the South State Park by the HLF students proved to be very effective this summer. The DNR provided a small work station at the entry to the boat washes where the interviews and inspections took place. During the months of June and July, 394 boat operators were interviewed. About one of eight boats arrive with visible weeds, 12.9%. An additional 457 boat operators were interviewed in August through Labor Day weekend, and only 4.2% arrived with visible weeds, a three-fold reduction. Many of the boats that use the South State Park access are repeat users. The persistent weekly interviews and inspections by the HLF students seems to have improved the focus of operators on cleaning their boats.

In addition to the interviews, the HLF students asked boat operators with weeds to wash or to allow the HLF students to wash their boats before using the access. 87% of the Higgins Lake boat operators complied as did 90% of the Visiting boat operators. This resulted in a very significant reduction in the 84% risk of new AIS entry at the South State Park access while the HLF students were present.

The HLF students worked 9:30 AM to 12:30 PM shifts on most of the busy Saturday and Sunday mornings. HLF plans to do even more next year by adding hours and possibly some additional shifts on holiday weekends. Let's hope that the improved focus on boat washing continues in 2025!

South State Park Access Interviews

	<u>All Boats</u>			<u>Higgins Lake Boats</u>			<u>Visiting Boats</u>			<u>Drive Throughs</u>	
<u>Dates</u>	<u>#</u>	<u>Weeds</u>	<u>%</u>	<u>#</u>	<u>Weeds</u>	<u>%</u>	<u>#</u>	<u>Weeds</u>	<u>%</u>	<u>#</u>	<u>%</u>
6/13-7/14	116	16	13.7	91	12	13.2	25	4	16.0	16	12.1
7/20-7/28	278	35	12.5	204	30	14.7	74	5	6.8	39	12.3
8/4-8/25	303	10	3.3	211	10	4.7	92	0	0.0	11	3.5
8/31-9/2	<u>154</u>	<u>9</u>	5.8	108	<u>8</u>	7.4	<u>46</u>	<u>1</u>	2.2	<u>11</u>	7.2
2024 Totals	851*	70	8.2%	614	60	9.8%	237	10	4.2%	61	6.7%
2024 Totals	100%			72.2%			27.8%				
2023 Totals	100%	8.3%		75.0%	8.3%		25.0%	9.5%			

Notes: * Unwashed boats carry their AIS risk for a week after use. 50% of visiting boats were in another water body less than a week before; 50% more than a week. 55% of arriving Higgins Lake boats were used in Higgins Lake less than a week before; 45% greater than a week. (Half of the less than a week Higgins Lake boats were in Higgins Lake the previous day.)

9 of the 10 visiting boats that arrived with visible weeds were washed or pulled; 90%.

52 of the 60 Higgins Lake boats that arrived with visible weeds were washed or pulled; 87%.

Parked Boat Trailer Survey, 2024

<u>Date</u>	<u>South State Park</u>			<u>North State Park</u>			<u>West Access</u>			<u>Other Accesses</u>		
	<u>Boats</u>	<u>Weeds</u>	<u>%</u>	<u>Boats</u>	<u>Weeds</u>	<u>%</u>	<u>Boats</u>	<u>Weeds</u>	<u>%</u>	<u>Boats</u>	<u>Weeds</u>	<u>%</u>
7/6	105	16	15.2	37	1	2.7	58	2	3.4	23	0	0.0
7/13	166	68	41.0	50	1	2.0	118	8	6.7	65	0	0.0
7/19	52	15	28.8	19	0	0.0	50	3	6.0	34	0	0.0
7/27	147	40	25.4	52	0	0.0	142	14	9.9	74	0	0.0
8/3	165	54	32.7	51	0	0.0	57	12	7.6	83	0	0.0
8/24	169	24	24.9	43	0	0.0	72	9	12.5	43	0	0.0
9/1	<u>180</u>	<u>42</u>	23.5	<u>54</u>	<u>1</u>	1.9	<u>171</u>	<u>8</u>	4.7	<u>122</u>	<u>1*</u>	0.8
Total	1149	120	23.3%	357	4	1.1%	793	63	7.9%	499	1	0.2%
<u>%</u>	41.1%			12.8%			28.3%			17.8%**		
<u>% Weeds 2023</u>	25.0%			1.5%			7.0%			0.2%		

Notes: (*) Of the 499 parked trailers inspected at the "Other", non-DNR accesses, only one trailer at the Gerrish Marina had visible weeds. (These are the boat trailers for users that park on a daily or annual fee basis; not boats with slips.)

(**) The trailer count and percentage of total trailers inspected at the "other"1 assesses follow:

Maplehurst Avenue	176	6.3%
Gerrish Marina	126	4.5%
Townline Road	117	4.2%
Kelly Beach	<u>80</u>	<u>2.8%</u>
	499	17.8%

South State Park Visiting Boats, 2024

Most Frequent Visitors

<u># of Visiting Boats</u>	<u>Lake</u>	<u># with Weeds</u>
26	Houghton lake	1
19	Saginaw Bay	1
15	Lake Huron	0
13	Torch Lake	0
12	Lake Michigan	0
8	Mullet Lake	0
6	Burt Lake	0
6	Lake St. Claire	0
5	Gull Lake	1

(Others With Weeds)

4	Traverse Bay	1
4	Spring Lake	1
3	Lake St. Helen	1
3	James Lake	1
1	Bear Lake	1
1	Lake Bellaire	1
1	Lake Lansing	1

Notes: Total visiting boats 237 of which 10 arrived with visible weeds. All but one agreed to cleaning before accessing the lake. Data base on 225 of the visitors with legible lake name from 81 different lakes. 25% of the 225 boats were from the Great Lakes or with direct access.

Recommendations to DNR

South State Park: Recommendations base on AIS risk assessment in 2023 which showed that 84% of the risk of new AIS entry to be at the South State Park and also the experience with HLF students interviewing and inspecting arriving access users at the boat wash location. In addition, a check on boats and trailers departing the tie down area on September 1 showed 66% departed with visible weeds slightly lower than the 77% on the same weekend in 2023.

1. Continue the annual use of treatment and DASH harvesting as needed at the three DNR accesses. As an experiment, consider two DASH harvesting periods including one early in the summer and the other at the usual time to reduce weeds on arriving boats and trailers after launch.
2. Request funding to move forward a project to close the lagoon and replace it with direct access launching.
3. Allow HLF to continue the student interview and inspection program at the boat wash as in 2024.
4. Allow HLF and HLSIO to expand the student interview and inspection program for the full month of July 2025 from 8 AM to 4 PM to better understand the new AIS risks of access users outside of the busiest user periods.

West Access: Recommendations are based on 2023 and 2024 parked trailer inspections that indicated that the West access is the second most active DNR access with 28.5% of Saturday launch activity in those two summer periods. Also, the trailer inspections showed significant AIS risk with an average of 7.5% of parked trailers with visible weeds. The 2024 parked trailer survey showed a peak day usage of 171 parked trailers with 51 of those and additional vehicles parked on both sides of Old 27. This is a very busy access operated with little DNR supervision.

1. Because of the heavy use the access needs to be supervised at least on busy weekends with DNR uniformed staff to control launch and recovery traffic. Also, any extra time available should be used to inspect for visible weeds on arriving boats and help boat operators use the boat wash station. The station seems to get little or no use without supervision.
2. The access should be closed when the existing parking lots are full to prevent traffic risks on Old 27.
3. Because of the busy use the access should be modernized with flush toilets, water fountains and flood lighting.

North State Park: This access appears to be adequately staffed and has the fewest parked trailers with visible weeds with 1.5% in 2023 and 1.1% in 2024. We have no recommendations for significant changes.