



# AIS Ambassador Education Program to Observe Watercraft Operators and AIS Control Behaviors at Public Accesses

## AIS Prevention, Hennepin County – 2024 Season Report

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## Executive Summary

The third season of the Aquatic Invasive Species (AIS) Ambassador project was geared towards building upon observations and statistical findings from the 2022 and 2023 seasons. The engagement was designed to be educational contact with boaters at launches rather than the currently required inspection with boaters at launches only when an inspector is present. The goal was to positively change boat owners' behaviors to increase self-inspection thoroughness and AIS compliance by boaters when an inspector is not present at the access holding them accountable. Consistent with 2023 observations, 89% of all boaters in 2024 took the initiative on their own to self-inspect their watercraft and water-related equipment. Another target of the project was to positively influence the remaining 11% of boaters to consistently perform self-inspections.

Minnesota mandates the public to complete a visual inspection of their watercraft and all water-related equipment at public launches via DNR-authorized Level 1 and/or Level 2 watercraft inspectors. The current process provides statutory authority to a watercraft inspector as boaters enter and/or exit a public launch to engage boaters in a visual inspection and survey questions.

Alternatively, this project utilized a model like that of a DNR AIS Ambassador. Their role was to be an educator. The ambassadors observed first and then engaged boaters in conversation rather than approaching them as a watercraft inspector. Also, instead of asking survey questions, ambassadors only documented and logged observable boater details, such as self-inspection of the watercraft was completed, the watercraft type, drain plug in or out upon arrival, any plant or animal found, water or mud, and towing vehicle license plate state. These recorded observations allowed the project to better understand and analyze the trends and opportunities at each launch site.

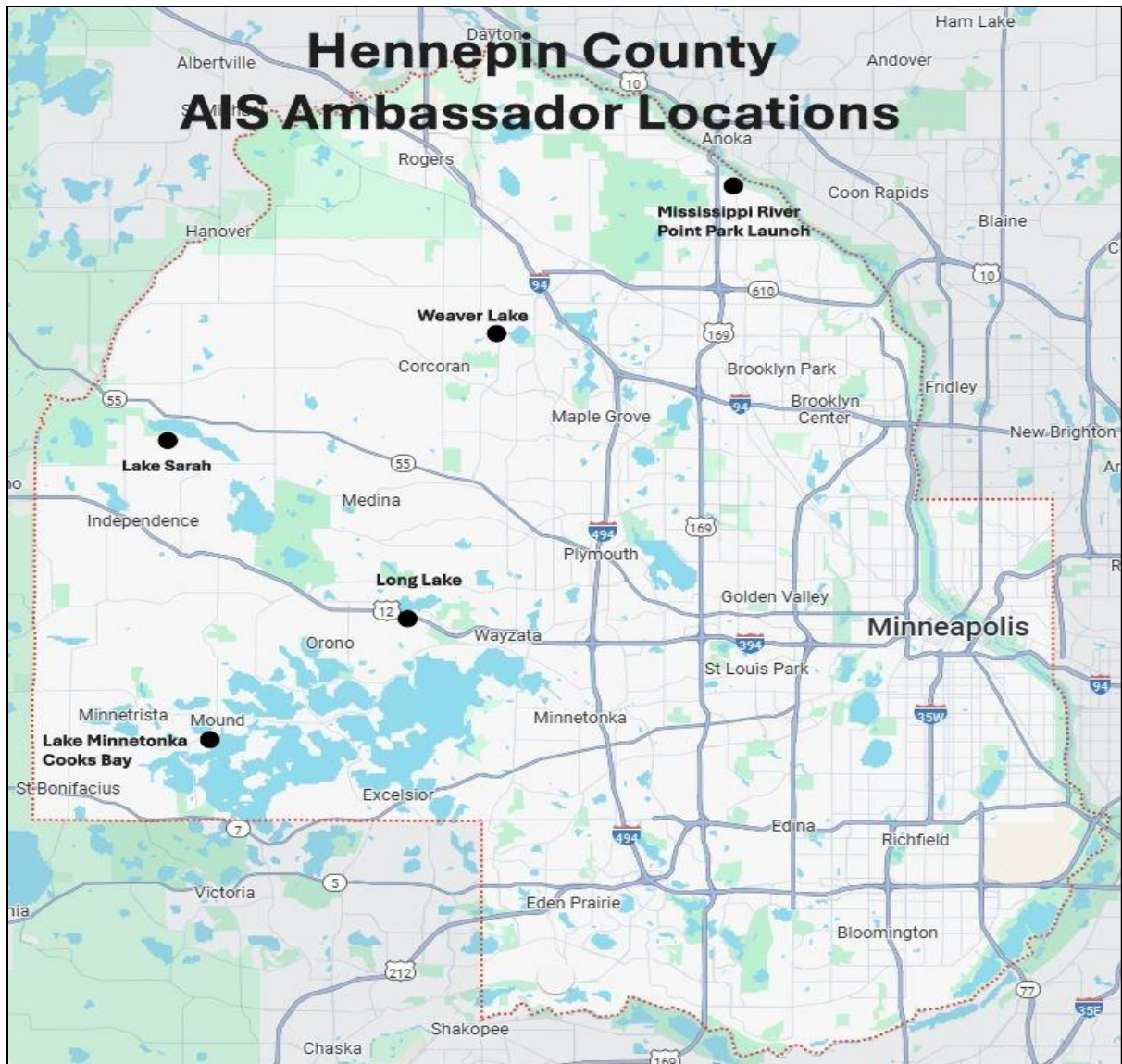
The project was accomplished via inspection education materials, AIS prevention messaging, training through the DNR ambassador program, and providing education during the early half of the boating season, where it is shown that AIS violation rates are the highest. The inspectors also provide education on other Hennepin County AIS initiatives such as waterless cleaning stations (CD3), the Lake Pledge app, and launch signage.

Five public access sites were selected to be staffed by AIS Ambassadors in Hennepin County based on location, traffic volumes, presence of watercraft inspectors in the past, or current seasons, and AIS risks. From those factors, the five launches that AIS Ambassadors were staffed at were the following:

**Surfside Park (Cooks Bay, Lake Minnetonka) in Mound, MN**  
**Long Lake, Nelson Lakeside Park in Long Lake, MN**  
**Weaver Lake, Public Water Access Site in Maple Grove, MN**  
**Lake Sarah, Boat Launch in Independence, MN**  
**Mississippi River, Point Park Public Water Access Site in Champlin, MN**

The observations made by ambassadors were recorded in a form from their mobile devices. The form can be viewed here: [AIS Ambassador Survey](#)

The remainder of this program report will summarize the full season results while going into greater detail about the observations, behaviors, aquatic invasive species found, feedback, and data points collected through the form by the AIS Ambassadors.



AIS Ambassador Vivienne is set up at the Long Lake launch. The table holds AIS informational brochures, stickers, buttons, native and invasive species comparison diagrams, and posters to help educate all boaters.

Each ambassador was supplied with this material and a "Protect Our Lakes" uniform.



## Scope of Season Impacts

The third season of the AIS Ambassador Program was another success. With over 4,100 boaters interacting with our ambassadors, the impact of public engagement and education was widespread. Many conversations were had about AIS violations and educational efforts were made to improve behaviors in the future. Most interactions were positive encounters with boaters willing to learn more to protect our lakes.

As the third year of our program, there were again many questions answered as the season progressed. We learned more about the best ways to educate and interact with the public. We stabilized a crucial trend from 2022 to 2023 that saw an increase in boater compliance and AIS awareness as the season progressed, showing the direct impact of our ambassador program. Scheduling tactics and data analysis allowed us to adapt to changing needs as the summer unfolded to maximize effectiveness. We look forward to continuing our work with Hennepin County in the years to come as we build the program and expand the impact even further.

Overall, 89% of all boaters interacted with were knowledgeable about AIS and completed a self-inspection of their watercraft and/or water related equipment without needing a prompt from the AIS Ambassador. 5% of all boaters would have forgotten or skipped a self-inspection if not for a reminder from the AIS Ambassador. Lastly, 6% of boaters refused or made no attempt to conduct a self-inspection of their watercraft. Part of the AIS Ambassador program objective is to successfully influence this 11% of boaters who are at a higher risk of transporting AIS.

AIS Ambassadors interacted with approximately 50 boaters who were previously uninformed, had never been inspected before, or did not know about their responsibilities in preventing the spread of AIS. Highlights from the Ambassadors about these successful interactions include:

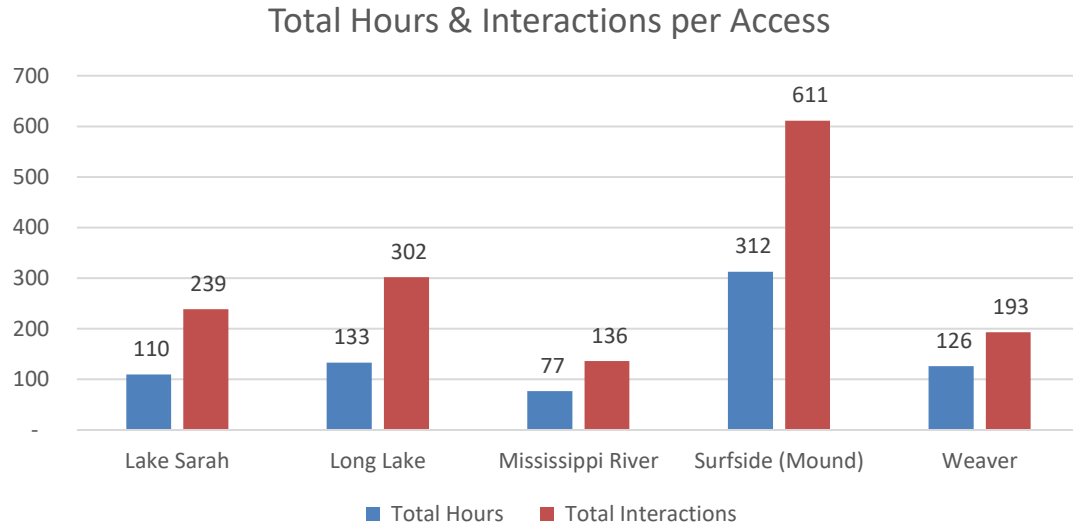
- The boater was really curious and happy to learn! Took a pamphlet with more information, also looked at pictures of different native and invasive plants with me, super great people!
- The boaters had never been inspected before, so I showed them how to inspect better. They were really friendly, super nice, but were a bit uninformed. They were more than happy to become informed and improve their self-inspection routine!
- There was a slight language barrier, but we made it work! The boaters seemed genuinely interested in doing better. By the end of the interaction the boater completed their own thorough self-inspection.
- I informed the boaters more about AIS laws. They are newer to boating, and their boat only ever comes to Long Lake. They were not sure if they needed the plug out and plants off and such if they only came here.
- There were at least 25 interactions during which the AIS Ambassador taught the boaters how to conduct a detailed self-inspection. These were boaters who did not know the best practices, were learning about boats, or had never been inspected previously and were not aware of its importance to preventing the spread of AIS.

Commercial boat activity and Lake Service Providers (LSPs) were observed at a higher rate of AIS ignorance. The Ambassadors made efforts to explain to these LSPs that they must still abide by most of the AIS state statutes and are only allowed to one-way transport watercraft and water-related equipment with plants, water, etc. on them for proper cleaning. There were a few interactions during which the messaging seemed impactful, but most often it was ignored as they were focused on conducting their business.

The results of the AIS Ambassador Program are detailed in the report pages below.

## AIS Ambassador Interaction Results

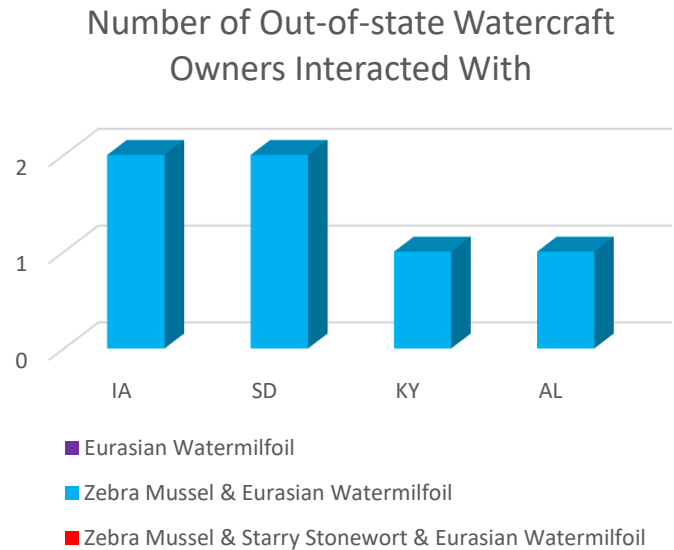
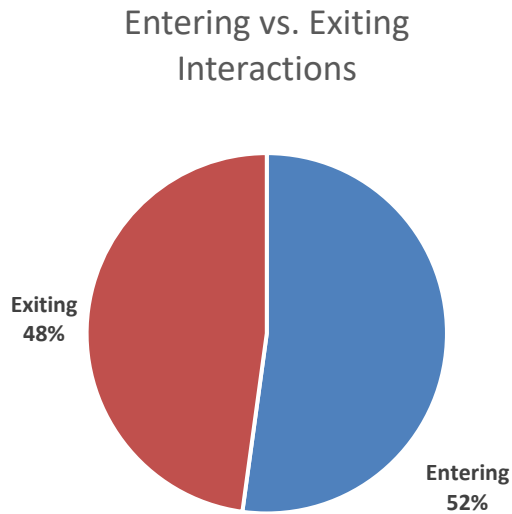
### Total Interactions and Hours at Each Access



The graph above demonstrates the importance of using data to staff the busiest launches to maximize interactions. As trends were identified during the season, we adjusted staffing accordingly. The table below shows the rate of interactions, hours of staffing, and the average interactions per hour for each access.

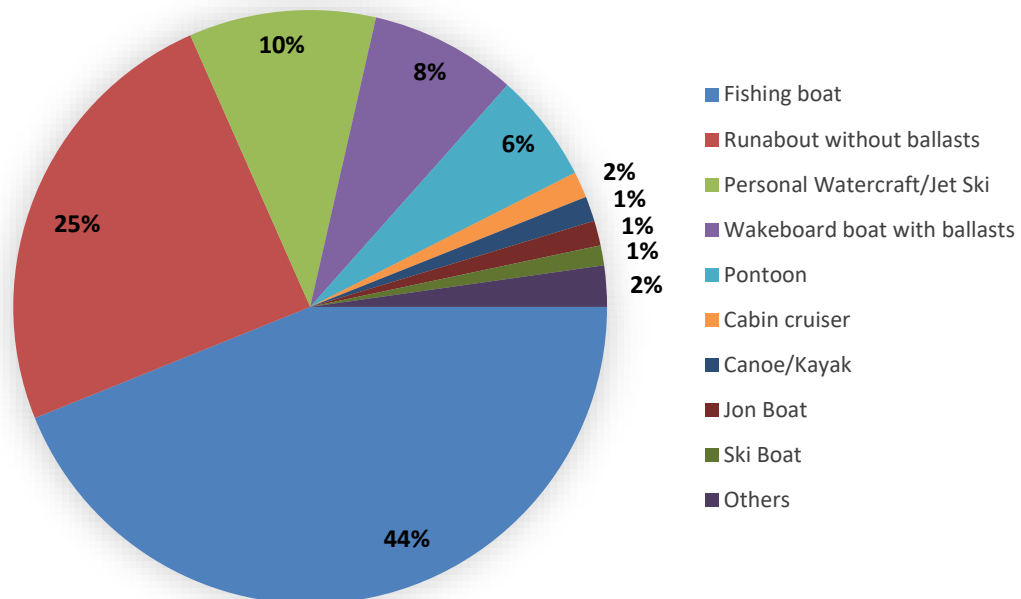
Access Name	Total Interactions	Total Hours	Avg. Interaction per Hour
Lake Sarah	239	110	2.2
Long Lake	302	133	2.3
Mississippi River – Point Park Launch	136	77	1.8
Lake Minnetonka - Cooks Bay launch at Surfside Park (Mound)	611	312	2.0
Weaver Lake	193	126	1.5
<b>Total</b>	<b>1,481</b>	<b>759</b>	<b>2.0</b>

## Boater Demographics



Our ambassadors encountered more boaters entering the water than exiting. Most boaters had Minnesota license plates, but six out-of-state boaters had the opportunity to engage with the ambassadors about Minnesota's unique AIS laws and their importance. The Ambassadors who interacted with the boaters going out fishing from Kentucky and Alabama reported that both were previously uninformed about AIS but will begin to self-inspect their watercraft from now on. In the graphs above, each state is color-coded to indicate certain AIS that has been reported in each state.

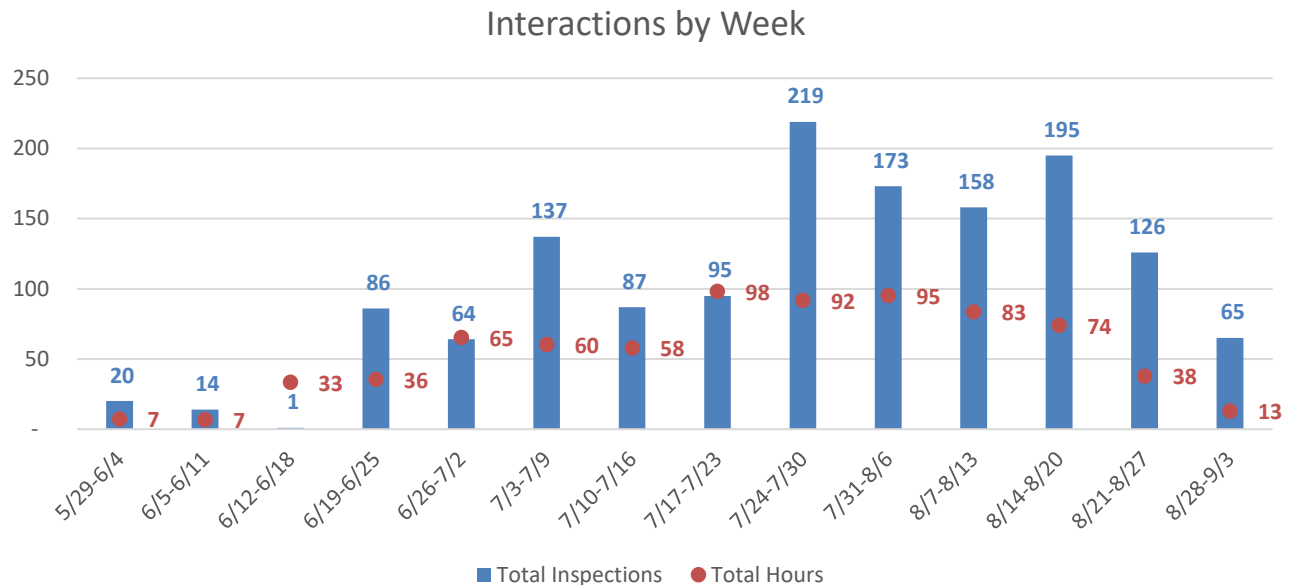
## Type of Watercraft



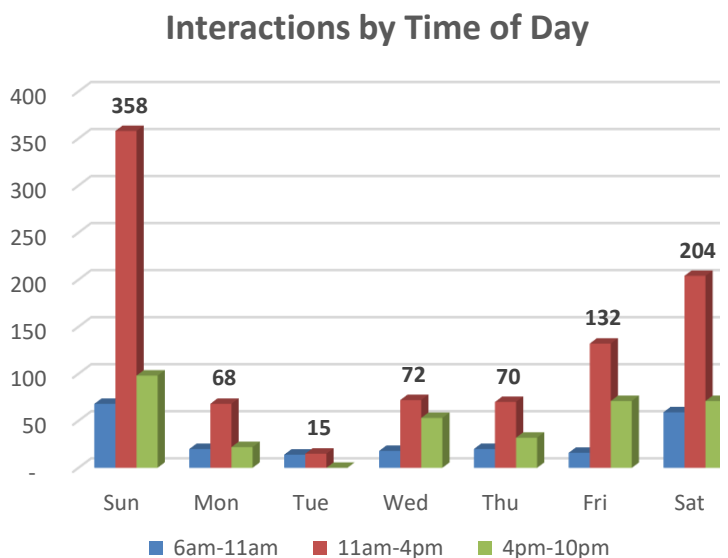
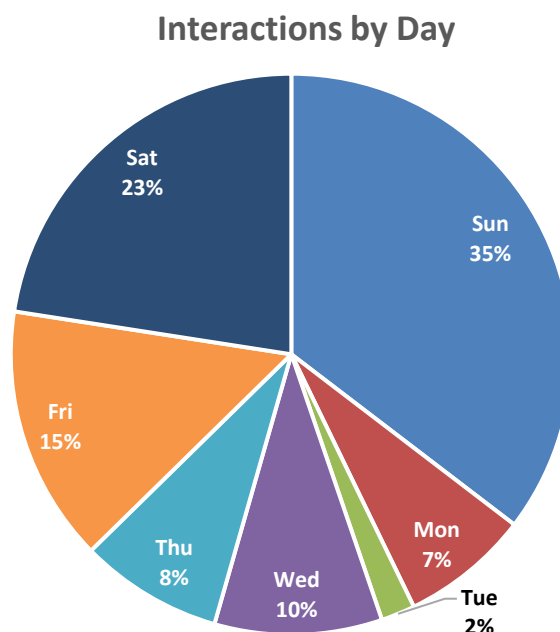
The above chart shows the type of watercraft used by each boater. The large majority of fishing boats provided a terrific opportunity to engage anglers in the many locations on their watercraft capable of transporting AIS.



Expanded detail of all location interactions by week can be found in the chart below, which shows that the last week of July has the highest count of interactions at 219. Staffing was challenging this spring, but ideally Ambassadors would have been in place at the launches at the beginning of May rather than by Memorial Day weekend. These early season interactions can have a positive impact on boaters' season long routines of conducting self-inspections.

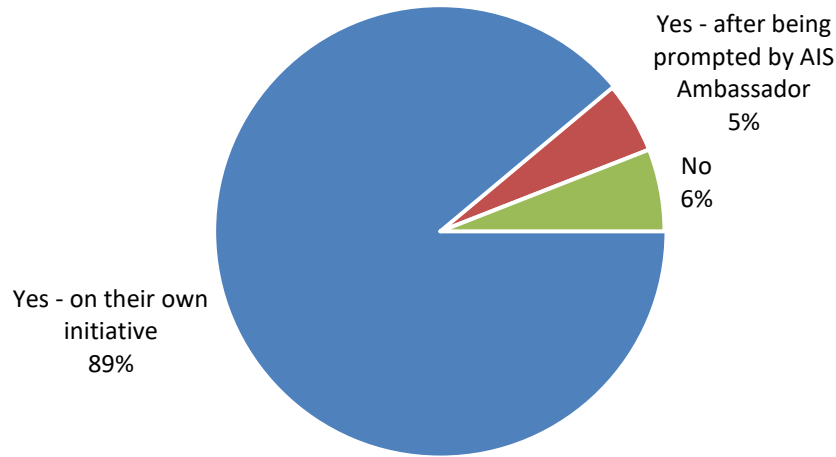


The data shows that the busiest days for interactions were Sunday, which accounted for 35% of interactions. Saturday and Friday followed with 23% and 15% of the total interactions, respectively. On Fridays, Saturdays, and Sundays alike, the data shows that the busiest time of day for inspections is between 11 A.M. to 4 P.M.



## Participation of Boaters in Self-Inspections

Did the boater conduct a self-inspection of their watercraft and any water related equipment?



Ambassadors were trained to watch and see if the boater performed a self-inspection before the ambassador approached them. In the chart above we can see that 1,317 (89%) of all boaters participated in a self-inspection without needing a prompt from the Ambassador. 76 (5%) boaters would have forgotten if not for the ambassador's reminder but complied after being prompted. 88 (6%) boaters refused or made no attempt to conduct a self-inspection. Of those who refused, or did not conduct a self-inspection, the observed reason is as follows:

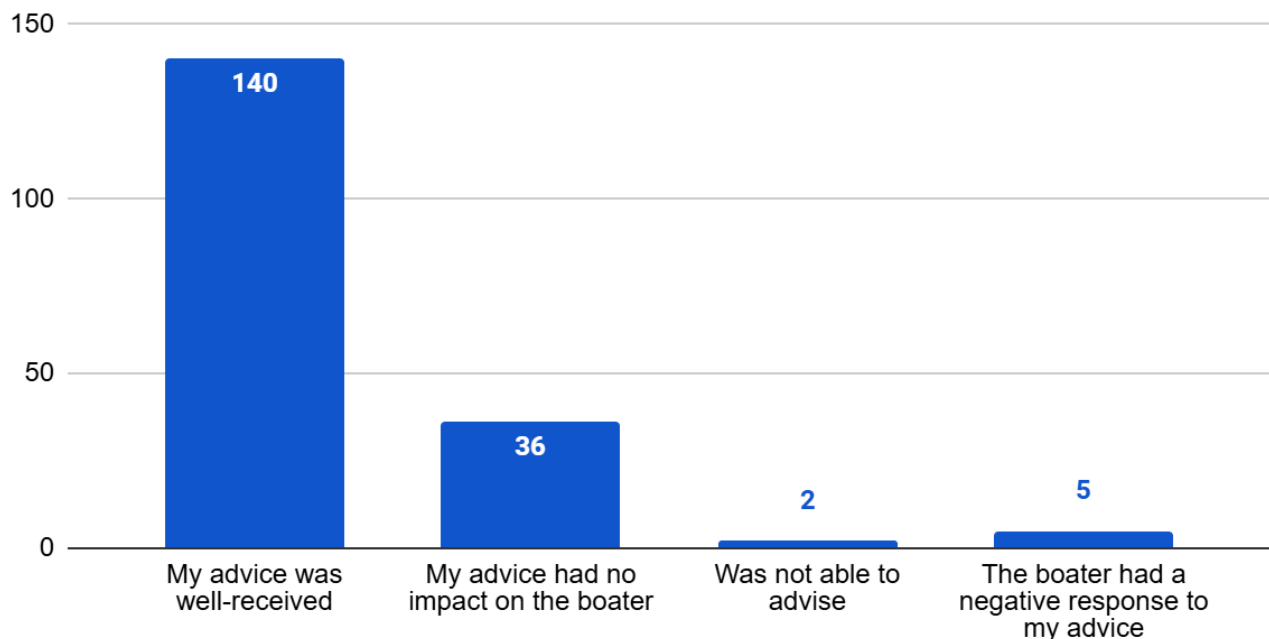
Lake Minnetonka – Cooks Bay (40 interactions)	Long Lake (39 interactions)	Lake Sarah (9 interactions)
They did not seem interested, or they did not care (16 times)	They did not seem interested, or they did not care (14 times)	They did not seem to care, the boat looked clean though
Commercial/Lake Service Provider that did not care and claimed they did not have to inspect their watercraft (11 times)	They did not know they were supposed to (6 times)	Said he was going to wash it off at home instead of at the launch (3 times)
Left immediately from water (9 times)	Felt rushed by the other boater waiting to come out (5 times)	They did not seem to know, showed them how and they kind of followed the instructions
They kind of just brushed what I said off because they were in a rush	The boater has never been taught how to self-inspect (4 times)	Boaters did not want to interact with me much (3 times)
Said he had already cleaned off the boat, but the fishing boat had the plug in upon arrival	Inspects boat every time he exits does not feel like it is necessary then before entering (4 times)	They did a brief peak, but not as in-depth as it should have been.
They live 3 minutes away and did so then	No apparent reason (4 times)	
The boater had a nice clean boat, was not sure if it needed to be inspected again entering	Claimed to have inspected at home (2 times)	



Self-Inspection?	2022	2023	2024
<b>Yes – on their own initiative</b>	1223 (60% of total)	1450 (89% of total)	1,317 (89% of total)
<b>Yes – after being prompted</b>	730 (35% of total)	162 (10% of total)	76 (5% of total)
<b>No</b>	91 (4.5% of total)	12 (1% of total)	88 (6% of total)

The chart below reflects all boaters who did not self-inspect without a reminder. In 41 cases was the ambassador's advice ill-received.

### If the boater did NOT self-inspect, what was their reaction to you after you encouraged them to do so?



There were a few themes from the 36 interactions whose advice from the AIS Ambassador had no impact on the boater. In these situations, the Ambassadors attempt to communicate the risks of AIS and potential consequences in regard to the environment, maintaining free and unrestricted access, and even legal ramifications.

- The boaters were in a rush and prioritized all other tasks at the launch besides inspecting for AIS.
- The boater did not seem to care and would only do the bare minimum inspection if someone with perceived authority was present at the launch.
- The boaters' complete self-inspections upon exiting, so they do not think they need to again before entering.
- The boater has been inspected many times before, and "knows the drill," so will let someone else complete an inspection, but refuse to put a self-inspection into practice

themselves.

- Plants were observed stuck or attached to the trailer or watercraft during seven of these interactions. Four boaters had only a few small plants, one boater had a handful of plants, and two boaters had a lot of plants to remove. In each of these interactions, the Ambassador's advice was not immediately impactful to the boater's self-inspection behavior. Four of the boaters ultimately complied and performed a basic self-inspection. This group of boaters was asked to do their part to prevent the spread of AIS but gave the impression that it is a compliance effort, rather than a commitment to their environmental responsibility.

The theme from the five interactions during which the boater had a negative response to the Ambassador's advice was as follows:

- The boater completely ignored AIS laws, the Ambassador, and any risk of transporting AIS.
- The boater thought AIS was already everywhere.
- The boater claimed to clean their boat later at home and was rude to the Ambassador.

### Observed Violation and Self-inspection Rates Over Time

Percentage of boaters with AIS violations					
	Lake Sarah	Long Lake	Weaver Lake	Surfside	Point Park Mississippi
2017		20.3%	20.4%	21.8%	
2018		9.9%			
2022		14%	17%	32%	1%
2023		8.3%	10.8%	5.4%	5.1%
2024	5.5%	18.2%	1.1%	16.5%	0%

Percentage of boaters who self-inspect without a reminder from the ambassador					
	Lake Sarah	Long Lake	Weaver Lake	Surfside	Point Park Mississippi
2017		48%	57%	64%	
2018		63%			
2022		55%	90%	52%	94%
2023		82.1%	79.9%	94.6%	82.9%
2024	93.3%	73.5%	97.9%	89.5%	100%

(Data from 2017 and 2018 thanks to Tony Brough and Hennepin County)

### Potential AIS Identified

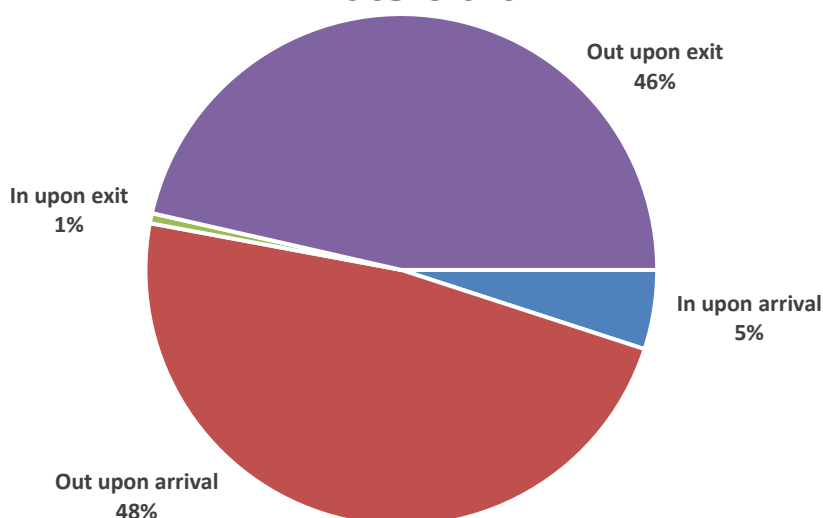
	On Trailer	On Watercraft Exterior	In Watercraft Interior	Total
Plants	136	68	12	216
Zebra Mussels	6	10	1	17
Spiny Water Flea			1	1
Water		2	6	8
Total	142	80	20	242

16% of all the interactions had AIS violations which the ambassador was able to resolve with the boat owner while using the violation as an opportunity to educate the boater. The most common contaminant was plants, and the most likely area to find contamination was on the trailer. All 17 zebra mussel findings were at the Surfside Park Launch on Cooks Bay – Lake Minnetonka. 15 of the 17 zebra mussel interactions were on exiting watercraft, and the animals were most commonly found attached to plant stems or the hulls/motors of the boat. Hopefully, educational positive impacts were made on these boaters about the seriousness of preventing the spread of zebra mussels, and that they will complete thorough self-inspections every time in the future.

The one potential Spiny Water Flea finding was on an entering fishing boat on Lake Sarah in June. The boat owner conducted a self-inspection of the exterior on their initiative, but the Ambassador helped educate the three people present on the boat about also inspecting the interior or the watercraft and water-related equipment which is where the potential AIS was found and prevented from being introduced.

### Drain Plug Status

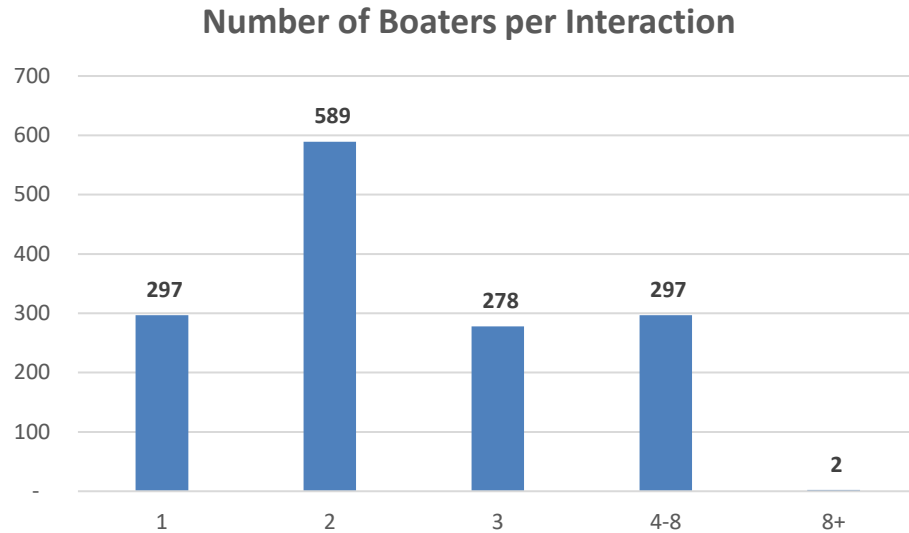
#### Drain Plug Status of Arriving and Departing Watercraft



AIS Ambassadors observed 80 (6%) of all boaters having drain plug violations, which included arriving at the launch with the drain plug still in or leaving the launch without removing the plug.

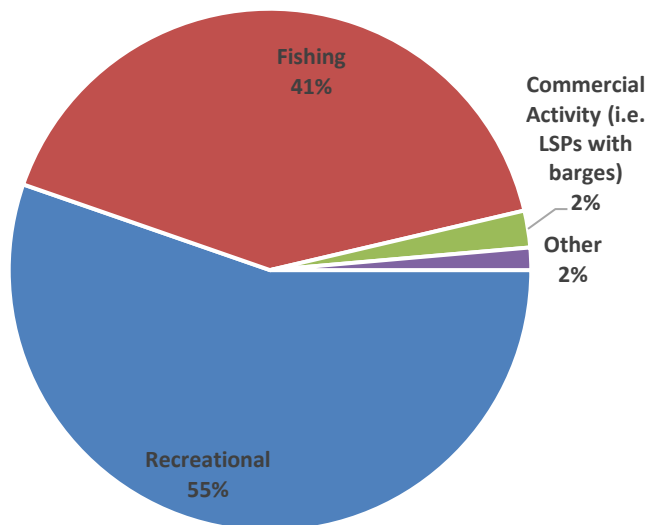
## Boater Engagement Analysis

### Number of Boaters



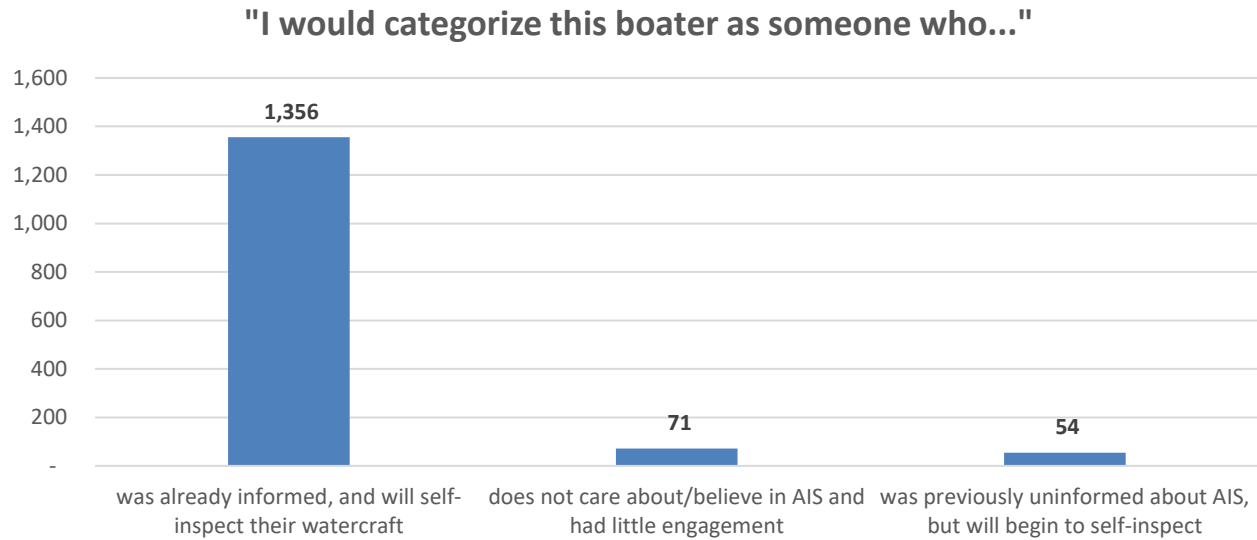
The total number of boaters who had an interaction with an ambassador was 4,107 across 1,481 interactions. An interaction was counted as a single boat/trailer/vehicle at the launch site. Boaters were counted as the number of people involved in each interaction. On average there were 2.8 people (boaters) that engaged with our ambassadors during each interaction.

### Activity of Boaters



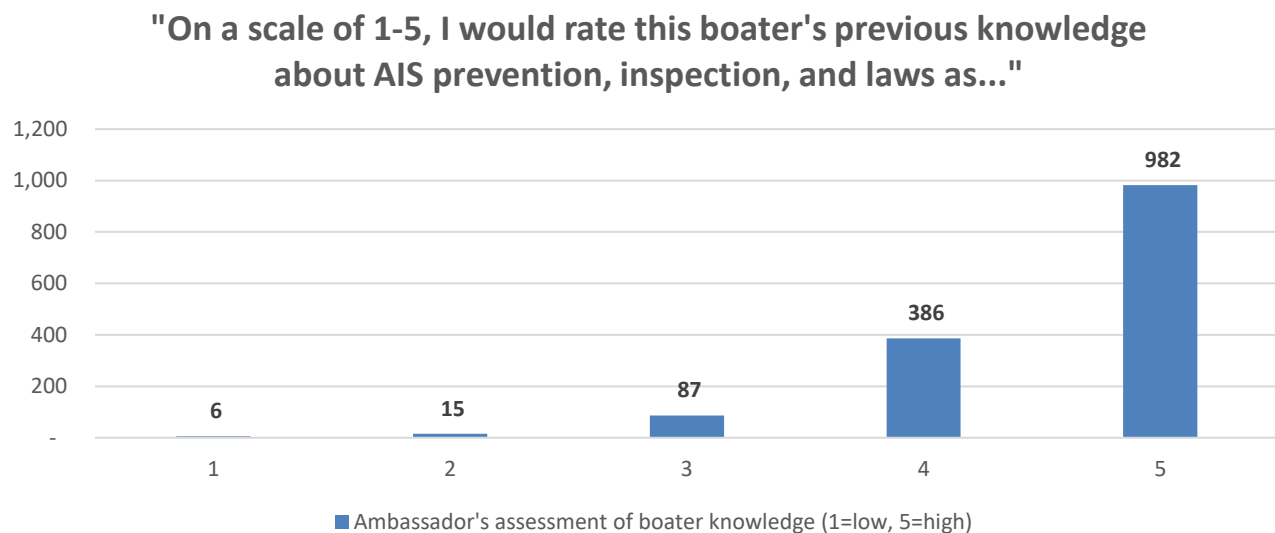
(Left) Most boaters were utilizing the water for fishing and recreational purposes. It is critical for these recreational boaters to understand the importance of keeping our lakes natural to support recreation. Ambassadors found that most anglers knew the laws well and abided by them. LSPs were most likely to give ambassadors trouble or grief.

## Categorization of Boater



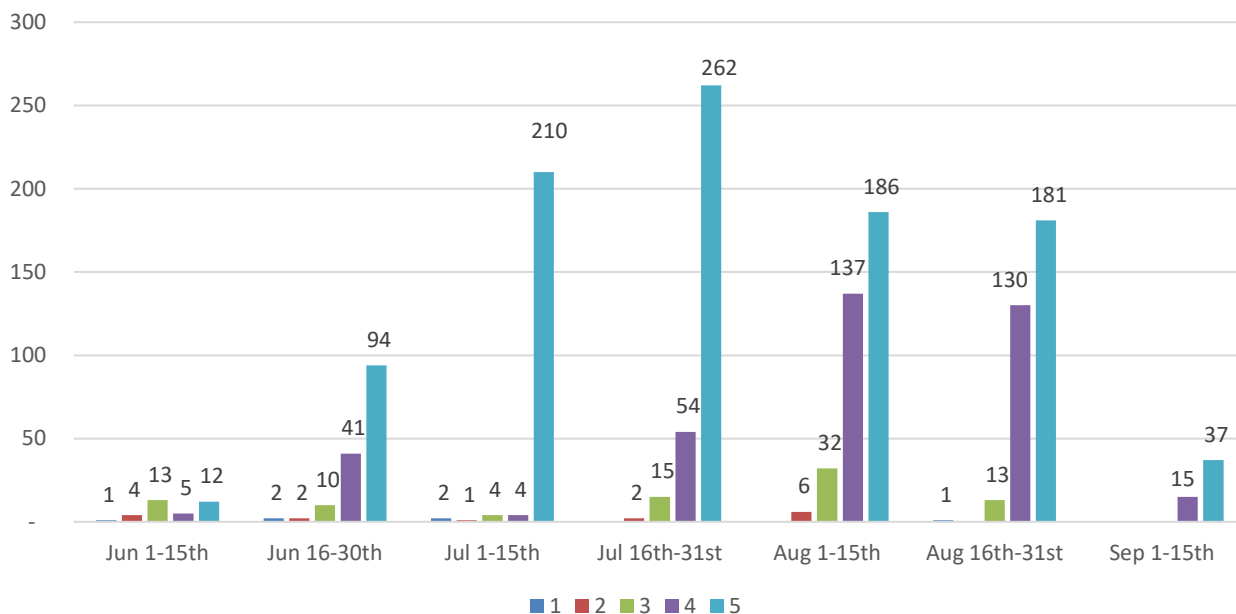
As the season progressed, we saw the frequency increase of already informed boaters who proactively self-inspected their watercraft. This can be attributed to the presence of an ambassador/inspector on previous trips out with the watercraft. Another reason is the educational efforts may have started positively impacting them. Lastly, the fear of a citation for not following state AIS statutes became more of a concern for them.

## Rating of Previous AIS Knowledge



*This graph shows the ratings across the entire 2024 season.*

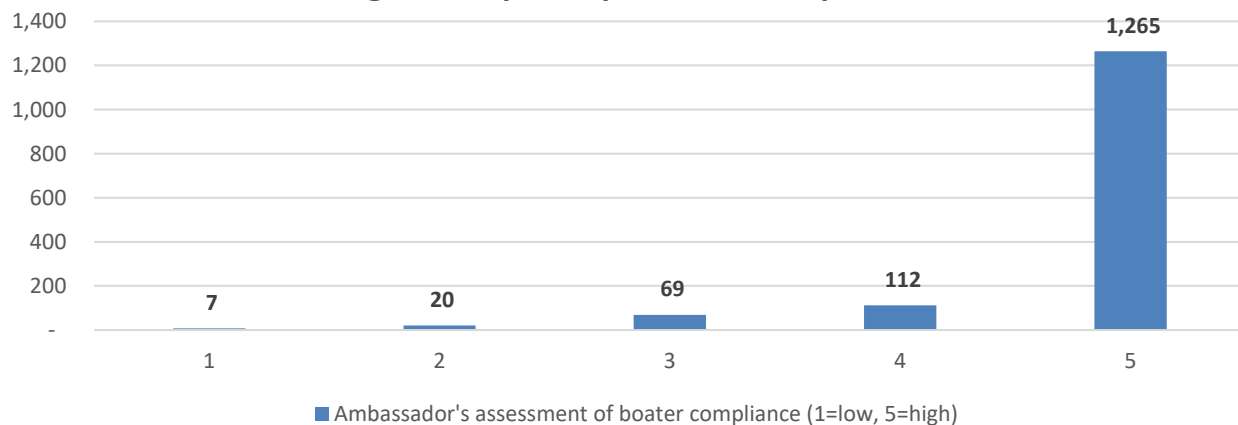
### Rating of AIS Knowledge Over Time



*This graph shows the AIS knowledge rating mixture for each 2-week period throughout the season. We can see here that scores of either 4 or 5 increase significantly throughout the season. In the last period, there were no knowledge ratings of 1, 2 or 3.*

### Rating of Compliance

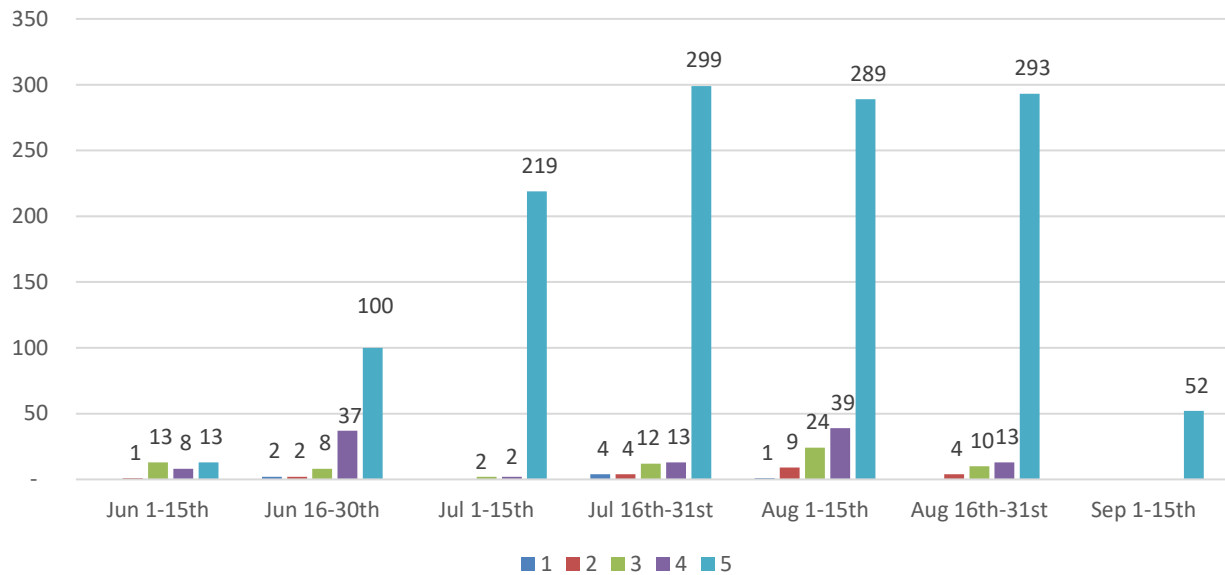
**"On a scale of 1-5, I would rate this boater's compliance and willingness to participate in the inspection as..."**



*This chart shows the compliance rating from the entire 2024 season.*



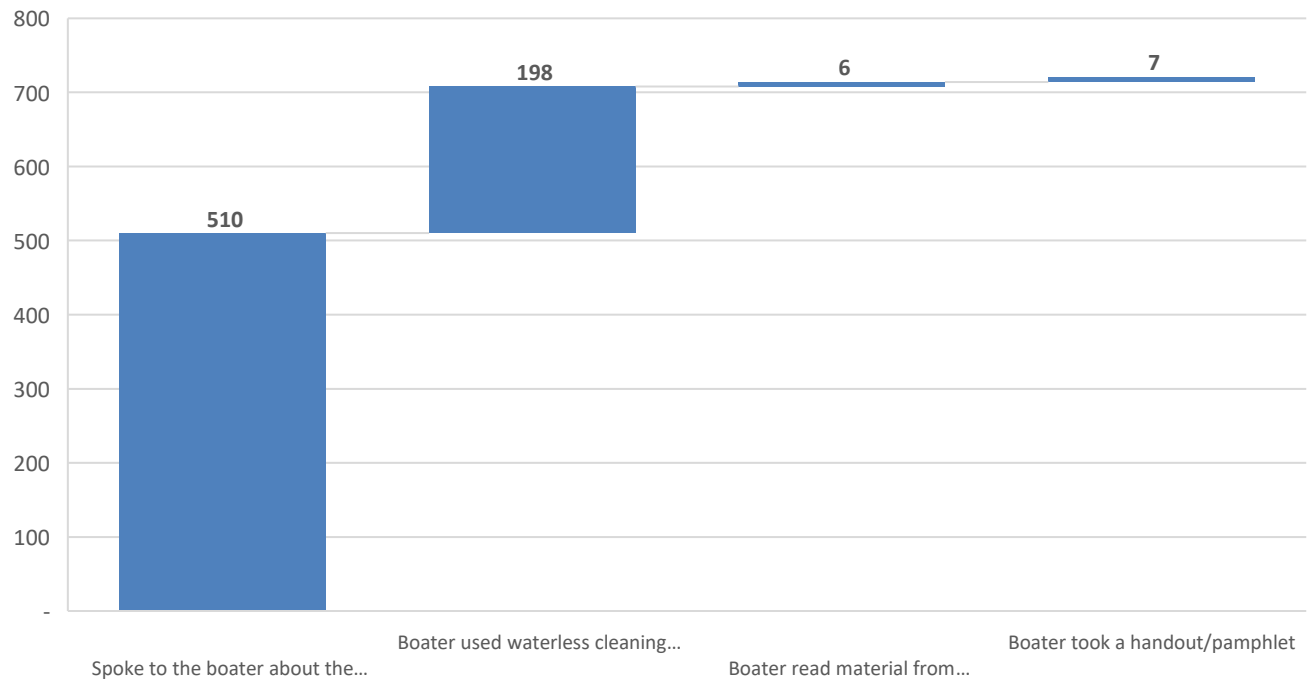
## Rating of Boater Compliance Over Time



*This graph shows the rating of boater compliance for each two-week time period. Here, we can see a trend of ratings of '4' and '5' increasing as the season progresses.*

## Educational Interaction

### Educational Interaction Between Ambassador and Public



The chart above shows that Ambassadors engaged 510 boaters, and “Spoke to the boater about the damages caused by AIS: environmental implications, fishing issues, boat damage, water infrastructure damage, etc.”

An additional 198 interactions were observed with the boater using a waterless cleaning station (CD3 unit).

An additional 6 boaters read material from the Ambassador’s education table.

An additional 7 boaters took a handout/pamphlet about AIS.

Ambassadors were able to engage the public with their educational tables and materials. Pin buttons, stickers, pamphlets, and posters all helped to draw attention to their displays and start conversations.

Ambassadors also engaged the public in unique interactions. Below is a summary of a few of them:

### **Boater who expected the Ambassador to Clean the Boat**

At the Cooks Bay launch - Zebra mussels were connected to plants on the boat’s stern. The boater did end up removing most of the plants but first asked if I was “going to remove all the weeds” before he did. Once I explained that it is not really our job to remove them, he removed them. There were still a few plants left on his boat it seemed. The boater was cold again and did not want to talk to me.

### **New Waterless Cleaning Station User**

At the Long Lake launch - two people were testing out their new watercraft. The Ambassador taught them how to use all the tools on the CD3 unit. They were impressed and excited to use it on future trips out on the lake.

### **Young Boater Learns about AIS**

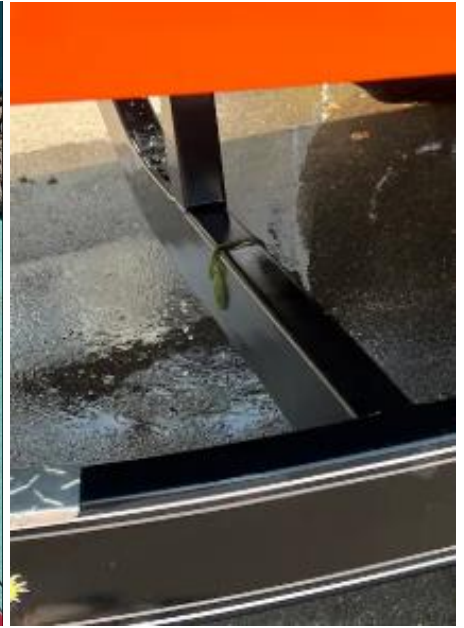
At the Cooks Bay launch - the boaters removed all the plants and zebra mussels (they were on plants) from the boat. One of the boaters was a little girl who I taught a lot about zebra mussels and how they affect fishing. She was extremely interested and very enthusiastic about them. She helped me get rid of all of them. It was nice to see a young person learning how to take care of our environment and caring about what happens to it.

### **Aquarium Fish Gets Released**

At the Cooks Bay launch – while the Ambassador was at the launch a grandma brought her Grandson to Surfside Park Beach and released a pet goldfish into the water. The Ambassador was made aware of this and with a few other people searched the shallows of the beach for the goldfish with no luck finding it. The Ambassador used the situation to educate everyone present that aquarium pets/fish should never be released back into the wild and they should be treated as AIS because they can cause significant negative impacts on the environment.

### **LSP Complains About Being Denied a Launch**

At the Cooks Bay launch – the vehicle driver towing an entering boat complained about a watercraft inspector previously not letting him launch because of attached Zebra Mussels. The driver spoke very belittling of the watercraft inspector, arrived with plants on the boat that looked like they may also have mussels on them, and did not make any effort to remove them. The driver and passenger did not care about their role in preventing the spread of AIS, and did not believe it was their problem as a commercial lake service provider.



#### Ambassador Pictures:

Top Row (Left to Right)

- Adult Zebra Mussel found attached to a single strand of Eel Grass at Cooks Bay – Lake Minnetonka
- Plants found inside fishing boat at Long Lake
- Plants found stuck on the center hull trailer beam of a wake sport boat at Long Lake

Middle – commercial trailer with plants with zebra mussels attached that are stuck on rollers/bunks at Cooks Bay

Bottom – fishing boat with plants stuck on transom area of outboard motor at Long Lake



## AIS Ambassador Presence at Surfside Park Launch, Cooks Bay, Lake Minnetonka

Continuing a regular presence and improving the AIS compliance at the Surfside Park Launch at Cooks Bay on Lake Minnetonka in Mound, MN was again a focus of the 2024 program.

Until the inception of this AIS Ambassador program in 2022, the City of Mound had not allowed any watercraft inspectors to be staffed at the Surfside Park public water access for the previous 5+ boating seasons. The City of Mound reasoned that the model of having individuals at the launch as part of a poorly integrated inspection program did not have proven efficacy as a model of control or prevention of AIS. There were concerns about what can be done, by what authorities, and who pays for the traditional inspection program.

The Surfside Park launch is one of the busiest launches on Lake Minnetonka, so not having any AIS prevention there for many years was a significant issue. As part of this program, Waterfront Restoration obtained approval from the Mound City Council to re-establish an education and data-driven program that attempts to change boater behaviors regarding AIS.

Overall, the AIS Ambassador program has been a success at Surfside Park. However, during our third season, the ambassador hours were increased, but 36% fewer interactions were documented. The decrease in interactions in 2024 is potentially due to inclement boating weather on what should have been busy boating weekends. Additionally, the AIS Ambassadors were scheduled for a mixture of weekend and weekday shifts. The weekday shifts were intended to put Ambassadors in a position to observe and interact with boaters who do not typically boat on the weekends and get inspected by watercraft inspectors but also experienced less boat traffic. Almost 90% of boaters were observed proactively self-inspecting their watercraft and water-related equipment. Unfortunately, 16.5% of boaters had AIS violations that needed correcting, and most boaters successfully resolved the issue before entering or driving out of the parking lot.

Surfside Park Launch Statistics:

	<b>2022</b>	<b>2023</b>	<b>2024</b>	<b>% Change</b>
<b>Ambassador Hours</b>	164	206	312	51%
<b>Interactions</b>	836	957	611	-36%
<b>Avg Interactions Per Hour</b>	5.1	4.6	2.0	-57%
<b>% of Boaters with AIS Violations</b>	32%	5.4%	16.5%	206%
<b>% of Boaters Who Self-Inspected</b>	52%	94%	89.5%	-5%

There were a couple of common boater misconceptions of AIS at the Surfside Park launch. One misconception was that Lake Minnetonka was already infested with all the invasive species. This was an opportunity for ambassadors to educate the public about the threat of Starry Stonewort and Spiny Water Fleas which have not yet been identified in the lake. Another was that my boat only goes in and out of Lake Minnetonka, so it does not matter if I clean it off every time or not. Again, this was an opportunity for ambassadors to educate the public that the state AIS statutes do not differentiate which lake(s) they boat on and that if any form of plants, animals, mud, or water is transported on the roadways it could lead to a citation and fine. Lastly, at a busy launch site like Surfside Park people would state that they do not have time, or do not want to hold up traffic to self-inspect. In these situations, ambassadors would inform the boater of the negative impact if they did not make time to conduct a self-inspection and direct them to the pull-off lane where they would not impede other traffic.

The Surfside Park launch experiences a substantial volume of entering and exiting boats from a nearby personal watercraft (PWC) rental company. This business operates exclusively on Lake Minnetonka, so the Ambassadors would frequently observe the PWCs quickly entering and exiting the lake on trailers and being towed about 500 feet away. The staff trailering the PWCs made little to no attempts to inspect for AIS or remove plants, water, etc. The AIS risk is lower since the PWCs enter and exit the same body of water, but the activities and lack of any self-inspection from the rental company give the impression that they do not care about AIS.

Even though some of the boaters using the Surfside Park launch were impatient and unwilling to self-inspect, ambassadors experienced many positive interactions and gratitude for their efforts at the launch.

## Recommendations and Improvements for Future Seasons

- 1. Lake-wide AIS effort on Lake Minnetonka:** With how many boaters made comments about Lake Minnetonka already being infested with every AIS, and thinking it is a lost cause there could be value in a larger scale lake-wide effort to educate the public on what AIS is not yet in the lake such as Starry Stonewort, or AIS that is contained to certain locations on the lake such as Flowering Rush. Additionally, with Lake Minnetonka being one of the most trafficked lakes in the state of Minnesota, everyone who uses the lake should be made aware of the threat they pose from transporting the known AIS in Minnetonka to any of the other thousands of clean lakes across the state and beyond.
- 2. Maintaining a presence at the busiest launches during the busiest times of day:** having ambassadors at the Surfside Park launch in Mound had significant benefits. More ambassadors, or even traditional inspectors with the right approach, at these busy launches across the county, and early in the boating season will pay dividends throughout the entire boating season.
- 3. Early season presence at the launches:** staffing was challenging in May this season, so re-tooling on recruiting to have ambassadors ready to make their educational impact at the launches soon after ice-off is a strategy that could have a positive impact to season long self-inspection behavior improvements.

*Thank you for trusting Waterfront Restoration to develop this AIS prevention program in Hennepin County! It is our sincere hope that the efforts of this program are rewarded with more informed, educated, and responsible boaters that help preserve our natural water bodies long into the future.*