Wright County Aquatic Invasive Species Report 2023

Report Prepared by:
Alicia O'Hare
Wright Soil and Water Conservation District
November 2023

Wright County Inspection Team for 2023

Inspection Program

In 2022 we observed and increase in inspections per hour and number of license plates by having weekday shifts occur in the evening. We continued this strategy in 2023, additionally we expanded priority hours to include these evening shifts. In 2022 the priority times were all on Friday, Saturday and Sunday. We also required that 50% of the shifts in 2022 occur on these days. In 2023 we required 65% of hours to occur during priority hours and we changed the priority hours to the following:

Sunday: dawn to dusk
Monday-: 12pm to dusk
Tuesday-Thursday: 4pm to dusk
Friday: 9am to dusk
Saturday: dawn to dusk

The majority of state-funded inspector time (88%) to only 15 accesses. At the same time the remaining 12% of state funded hours was spent on 29 other accesses (Figure 2).. The goal was to visit as many accesses that allow motorized traffic as possible but to concentrate the majority of hours on accesses of lakes with known invasive species. Lake associations also contributed funds for inspections at particular accesses (Table 2)

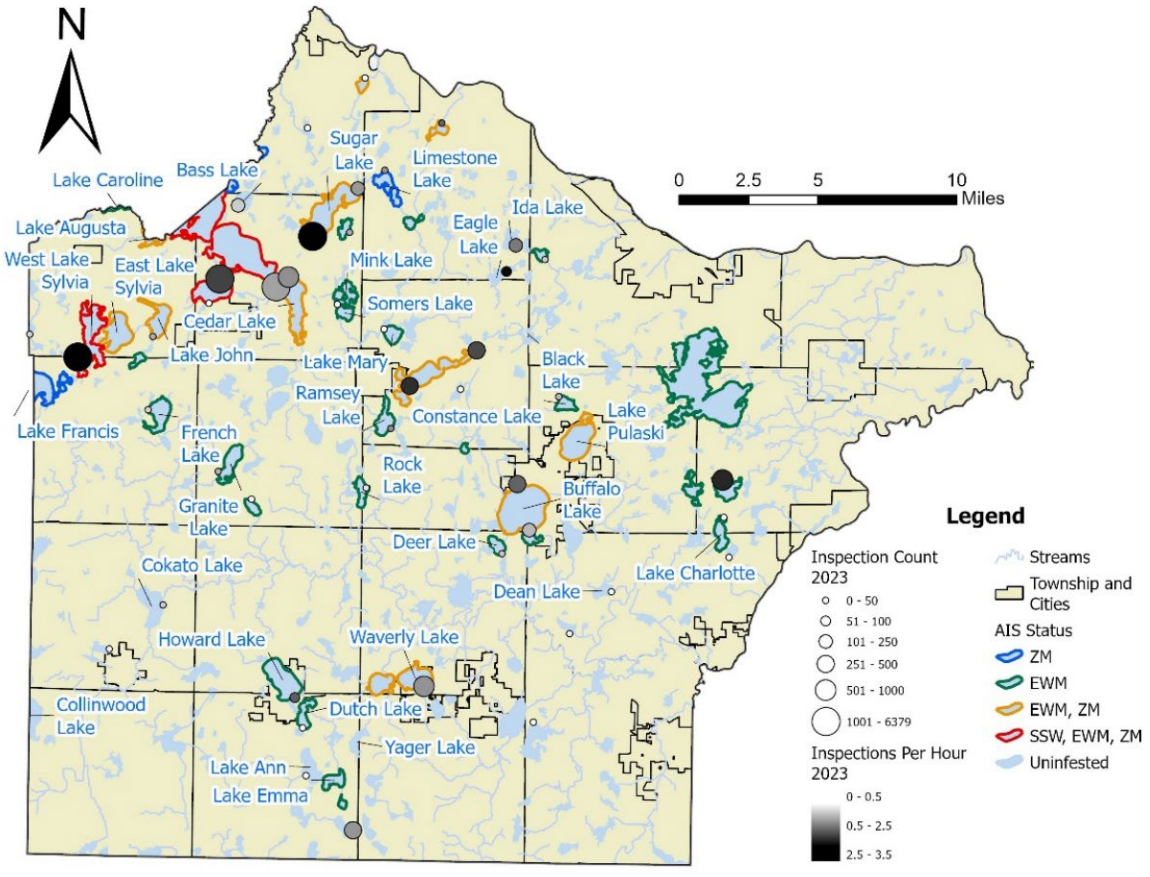

Figure 1. Locations of inspections by Wright SWCD in 2023. A large circle indicates more inspections were done; a darker circle indicates a higher number of inspections per hour. ZM = zebra mussels, EWM= Eurasian watermilfoil, SSW=starry stonewort

*Table 1. Inspections, hours and inspections per hour (IPH) by ramp in 2023. *Ramps that were partially funded by lake association dollars*

Ramp	Inspections	Hours	IPH	License Plates
Ann	6	20	0.3	5
Bass	203	230	0.9	134
Beebe	645	295.5	2.2	467
Birch	9	10	0.9	8
Brooks	6	10	0.6	6
Buffalo E	4	5	0.8	4
Buffalo N	287	168	1.7	220
Buffalo S	161	155	1.0	110
Camp	2	10	0.2	2
Cedar DNR	1024	840	1.2	576
Cedar Schroeder	954	698.5	1.4	555
Charlotte	5	10	0.5	5
Cokato	26	30	0.9	22
Constance	11	11	1.0	9
Crawford	3	5	0.6	2
Dean	1	5	0.2	1
Deer	9	10	0.9	8
Dutch	0	10	0.0	0
Eagle	72	30	2.4	53
Fish	1	10	0.1	1
Fountain	0	10	0.0	0
French	13	16	0.8	12
Granite	36	33	1.1	30
Howard	52	30	1.7	44
Ida	178	116.25	1.5	131
Indian	28	25.25	1.1	28
John	26	23.5	1.1	20
Limestone	38	29	1.3	31
Locke	17	10	1.7	13
Maple E	387	203	1.9	253
Maple W	419	197	2.1	317
Mary (Howard Lake)	462	350.25	1.3	280
Mary (Ney)	12	25.25	0.5	10
Moose	0	10	0.0	0
Nixon	1	5	0.1	1
Pleasant N	1208	612.75	2.0	611
Pleasant S	48	98.5	0.5	30
Ramsey	41	30	1.4	29
Rock	7	10	0.7	4
Sugar N	135	105.25	1.3	104
Sugar S	3048	1047.75	2.9	1678
Sullian	1	5	0.0	1
Sylvia	6379	1846.75	3.5	2314
Sylvia-Chi Rho	80			
Union	5	6	0.8	3
Waverly	534	399.5	1.3	354
Total	**16,584.00**	**7808**	**2.1**	**7442**

Inspection Budget

The Wright County Inspection Program is funded through the state Local AIS Aid Fund and contributions from individual lake associations. Lake associations pay for inspections on accesses for their respective lakes as well as a proportional amount to training and coaching. The remaining funds are from the state fund.

Table 2. Inspection program spending by category

Category	Cost
Contractor Admin	$2,000.00
Coach	$7,711.31
Training	$5,910.97
Lake Association Funded Inspections	$96,624.00
State Funded Inspections	$96,921.00
Decon Labor	$30,947.00
Other Agency Inspections	$3,000.00
Equipment	$1,634.39
Consumables/Maintenance	$1,248.68
Utilities	$2,990.10
Total	$248,984.45

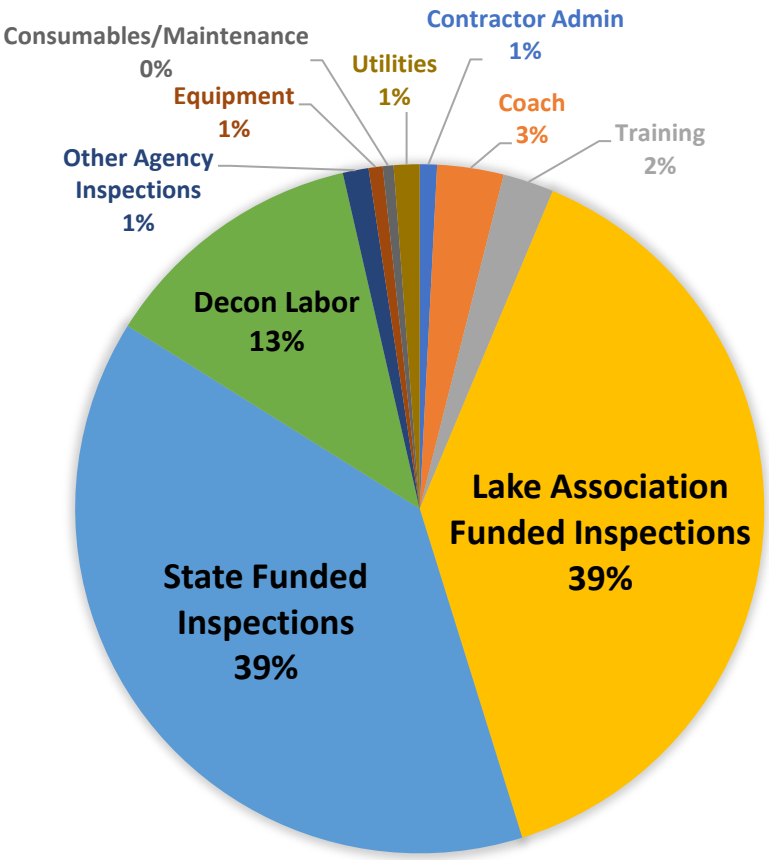

Figure 2. Inspection program spending by category in 2023

Inspection Count

Wright County's inspection season runs from early May to late September. The majority of inspections take place between Memorial Day and mid-August (Figure 3). Inspections in 2023 peaked in early July as is typical with the most inspections (414) occurring on July 1, 2022. Traffic tends to decrease later in the summer but staffing also gets more difficult as students return to school. The only accesses monitored after Labor Day are those that are funded by lake associations.

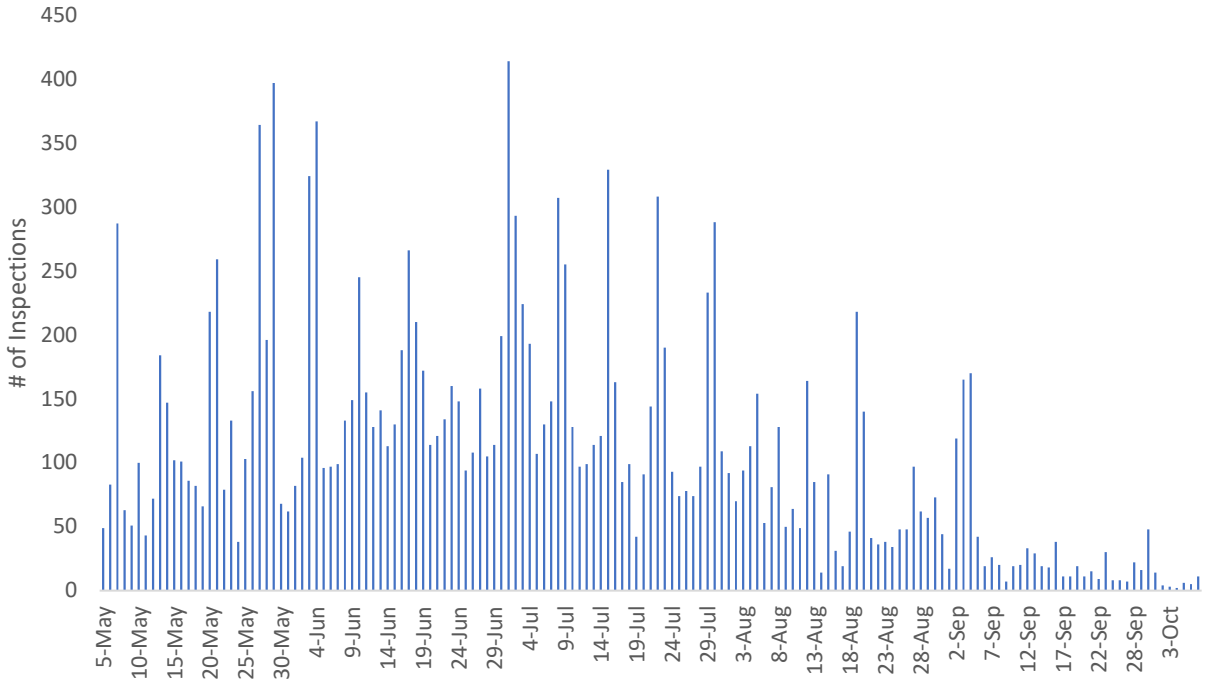

Figure 3. Inspections by date in 2022

The total number of inspections vary from year to year (Table 3 and Figure 4) based on a variety of reasons. Everything from weather, staffing levels, or the economy can affect inspections numbers. Staffing certainly affected the numbers in 2021. For 2023, we were not able to fund quite as many hours due to price increases. Despite the decrease in hours, we recorded a 4% increase in inspections.

Table 3. Inspection count, hours, and inspections per hour (IPH) each year from 2016-2022

Year	Inspections	Hours	IPH
2016	13,157	n/a	n/a
2017	17,332	8971.00	1.9
2018	16,864	10,274.75	1.6
2019	20,576	12,333.50	1.7
2020	16,570	9,205.75	1.8
2021	12,539	8,216.25	1.5
2022	15,990	8,063.25	2.0
2023	16,584	7,808.00	2.1

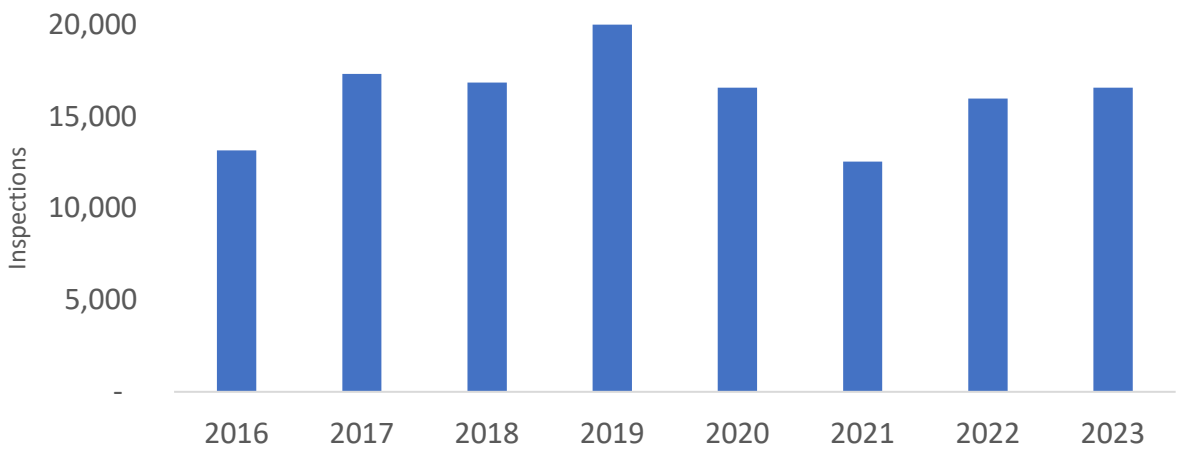

Figure 4. Inspection counts each year from 2017-2023

Inspector Placement

Placement of inspectors is an important aspect of this program. Certain accesses are very busy while others may not have any traffic depending on the day and the weather. Part of our strategy of concentrating the inspection time to just 15 accesses was to improve inspections per hour (IPH). The accesses chosen had a high degree of risk from either incoming boats and/or outgoing boats. These changes resulted in a 5% increase in IPH from 2022 to 2023 (Figure 5).

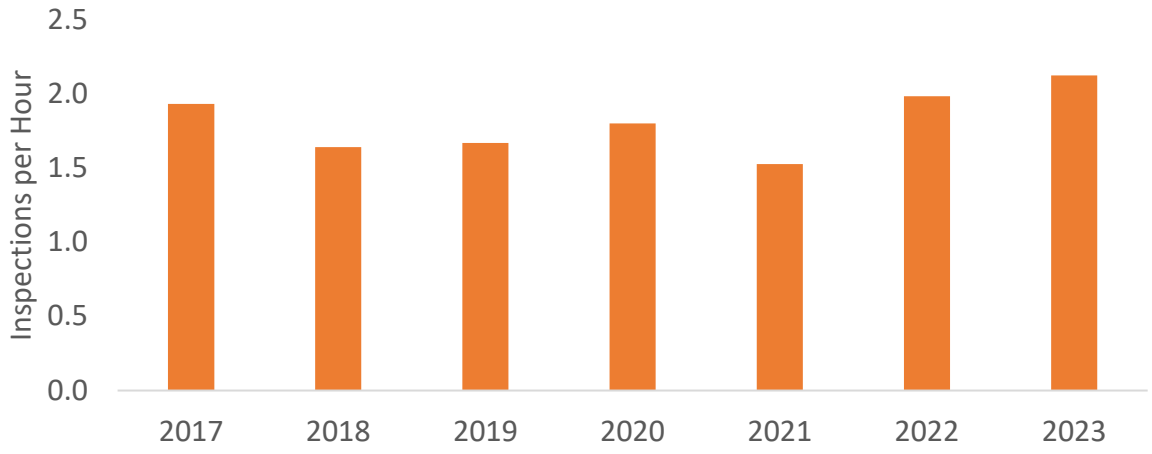

Figure 5. Inspections per hour each year from 2017-2023

In 2022, changed the time of day that our inspectors were scheduled expanding hours to the early morning to until dusk. In 2023, we decreased the hours in the morning and increased the hours in the evening especially during the week. This resulted in the highest inspections per hour in the history of the Wright County inspection program (Table 4).

Table 4. Inspections per hour by the hour of the day for each day of the week.

Inspections	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
5 AM							2.4	4.0
6 AM	1.6	0.9	0.7	0.3	0.4	0.5	3.5	1.5
7 AM	1.4	1.2	1.3	0.6	0.6	2.0	1.9	1.3
8 AM	1.8	1.0	1.3	0.8	0.9	1.5	2.0	1.4
9 AM	2.1	1.7	1.5	1.1	1.2	1.5	2.3	1.7
10 AM	2.8	1.8	1.5	1.3	1.0	1.9	3.3	2.1
11 AM	3.4	2.4	1.6	1.1	1.3	1.7	3.7	2.3
12 PM	3.5	2.2	1.6	1.2	1.3	2.0	3.8	2.3
1 PM	3.6	2.0	1.7	1.1	1.2	1.9	4.0	2.3
2 PM	3.4	1.7	1.5	1.4	1.4	1.9	3.4	2.2
3 PM	3.2	2.2	1.6	1.0	1.4	2.0	3.4	2.2
4 PM	3.4	2.2	1.7	1.4	1.7	2.0	3.4	2.3
5 PM	3.8	2.8	2.5	2.1	3.5	2.0	3.3	2.8
6 PM	3.5	2.0	1.6	1.6	2.0	2.0	3.0	2.1
7 PM	2.4	1.6	1.5	1.3	1.5	2.3	3.4	1.9
8 PM	2.0	1.2	1.7	1.3	1.6	1.8	2.5	1.6
Grand Total	3.1	2.0	1.6	1.3	1.5	1.9	3.2	2.1

Encounters

The number of unique license plates is used as a proxy for the number of individuals encountered by the inspectors (Table 4 and Figure 6). Our goal is to maximize the number of license plates encountered so we are reaching as many boaters as possible during each season. In 2023, we observed 8% more plates compared to 2022.

Table 5. License plates encountered by year from 2016-2023

Year	License Plates	Plates per Hour
2016	7,471	N/A
2017	8,404	0.93
2018	7,433	0.72
2019	10,688	0.87
2020	7,957	0.86
2021	6,445	0.78
2022	7,089	0.88
2023	7,442	0.95

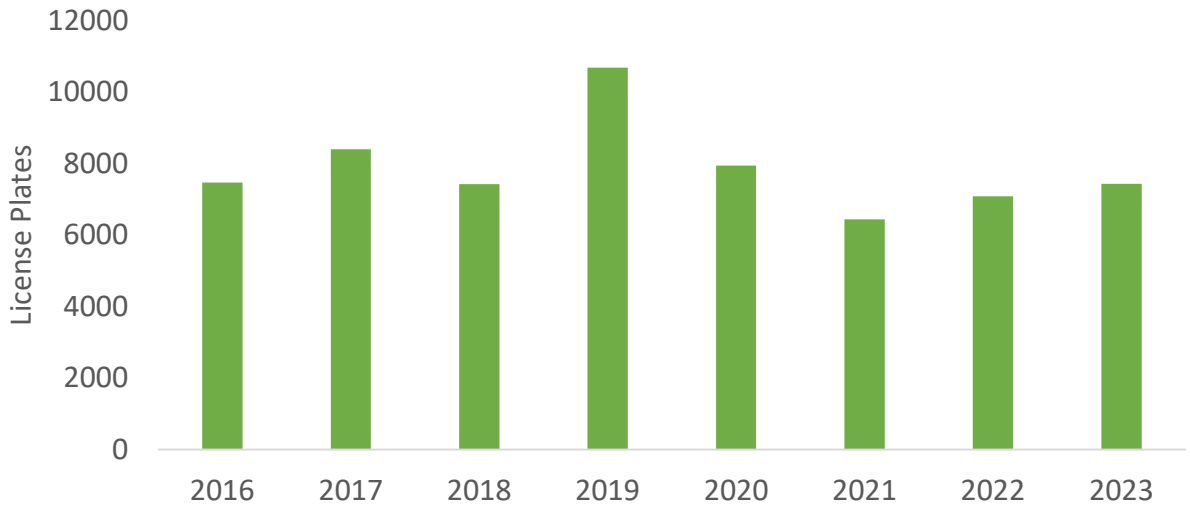

Figure 6. License plates encountered by year from 2016-2023

Each boater has different habits. We want to make sure inspectors are available in all cases to maximize the number of license plates encountered. Some take their boat out on weekends, others go out weekdays after work, lake service providers sometime operate six or seven days a week. Out of the total 7,442 license plates we encountered, 3,180 (43%) were weekend only boaters, 3,184 (43%) were weekday boaters and 1,078 (14%) were encountered both during the weekdays and weekends (Figure 7).

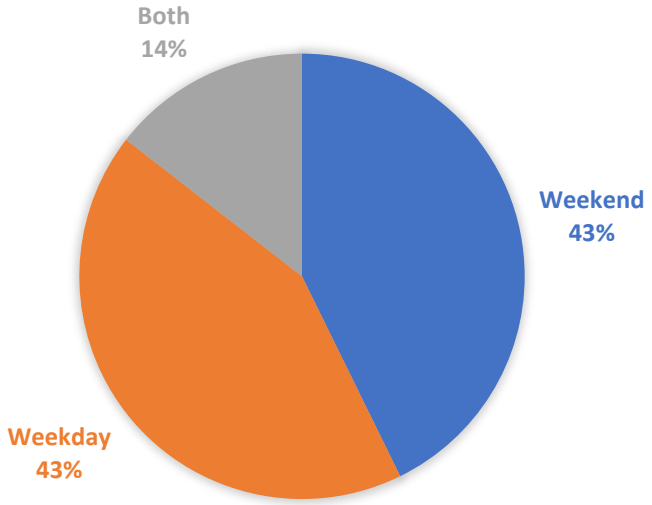

Figure 7. Timeframes of boater encounters in 2023 based on license plates.

Repetition is important to help reinforce the educational aspect of the inspection program. Inspectors are not only trying to find AIS on water-related equipment, but also to teach boaters what actions to take and some of the common places that AIS hide on equipment. In some cases, one person is inspected twice in the same day both upon entering and exiting a lake. Other times they are encountered during several trips throughout the boating season.

However, if we are only encountering the same boater over and over again, the message may lose value. One plate was encountered 145 times, likely belonging to a lake service provider vehicle who is constantly moving equipment around. Therefore, we consider how many license plates we continuingly interact with and how many of our inspections those interactions account for (Table 5).

Table 6. License plates encountered multiple times and the percent of inspections they account for in 2023.

Number of Encounters	Total Plates	Percent of Plates	Percent of Inspections
>25	18	0.2%	5.6%
>10	122	1.6%	14.4%
>5	430	5.8%	27.9%
>2	1,564	21.0%	53.0%
>1	3,587	48.2%	77.4%
Total	**7,442**		

Entering vs Exiting

There are several different inspection types. An entering or exiting inspection occurs when the boat is coming or going from the water. Lifts are inspected slightly differently so they are given a different category. A courtesy inspection occurs when the equipment will not enter or exit the water. The majority of courtesy inspections occur at the decontamination site.

Table 7. Inspections by type in 2023

Inspection Type	Count
Courtesy	135
Entering	9,141
Exiting	7,386
Lift	63
Total	16,725

Violations

During an entering inspection the equipment is checked for water, mud, plants, animal, etc. Inspectors also check if the drain plug is in. Table 8 has the percentage of equipment that didn't comply with regulations. It is worth noting that lake users often put the drain plug in during staging but prior to the inspection, these instances are recorded as the drain plug being in. Zebra mussels (zm) were found on equipment a few times, usually on equipment from an infested lake returning to the same lake following storage. There were no instances of zebra mussels being found on equipment attempting to enter an uninfested lake.

Table 8. Findings during entering inspections

Entering n	Drain plug In	Species Found	ZM Found
9141	7.0%	5.29%	0.3%

Lake Connections

During entering inspections, lake users reported they came from 569 different Minnesota lakes and 14different states (and Canada) in addition to Minnesota and 51 lakes in Wright County. Just over 3% of inspections came from lakes they did not know or preferred not the answer the last lake the equipment was used.

Decontaminations

There were relatively few decontaminations completed in 2023 compared to previous years (Table 9). Especially compared to the best year 2017 when the unit was visible from Hwy 55. Users reported coming from 41 different lakes (including 13 different Wright County lakes). Prior to decontamination 51% of equipment had visible water, plants, animals, etc.

Table 9. Decontaminations by years in Wright County

Year	Decons
2016	155
2017	340
2018	242
2019	221
2020	140
2021	176
2022	190
2023	141

Figure 8. A level 2 inspector decontaminating a barge with high pressure

CD3-Waterless Cleaning Stations

CD3 waterless cleaning stations are self-service tools for boaters to remove water, plants, and mud from their equipment at the access. The units are solar powered and equipped with lights, so they are available 24/7 during the boating season. Other tools available include a wet/dry vacuum, compressed air, brush, drain plug wrench, and a reach grabber. There are five CD3 units in Wright County including two new units installed in May 2023 at Sugar South and Cedar-DNR. The other units are at Pleasant North, Pleasant South and Cedar Schroeder.

The tools are connected to the internet and track which tools are used and when. Overwhelmingly the air compressor tool was the most commonly used accounting for nearly half of all tool uses. The brush was the least commonly used tool (Figure 9). Tool use also peaked in July and tapered off through the remainder of the boating season.

The units also track sessions. That is once the first tool is used and if another tool is used within 3 minutes the algorithm assumes it is the same user and therefore one session. Throughout the year users used 1.7 tools per session (Table 10). Tools were used at every hour of the day (Figure 9). The most

common time of day was in the evening from about 6pm to 8pm. This supports the earlier inference based on inspections per hour that access traffic is most common in the evening.

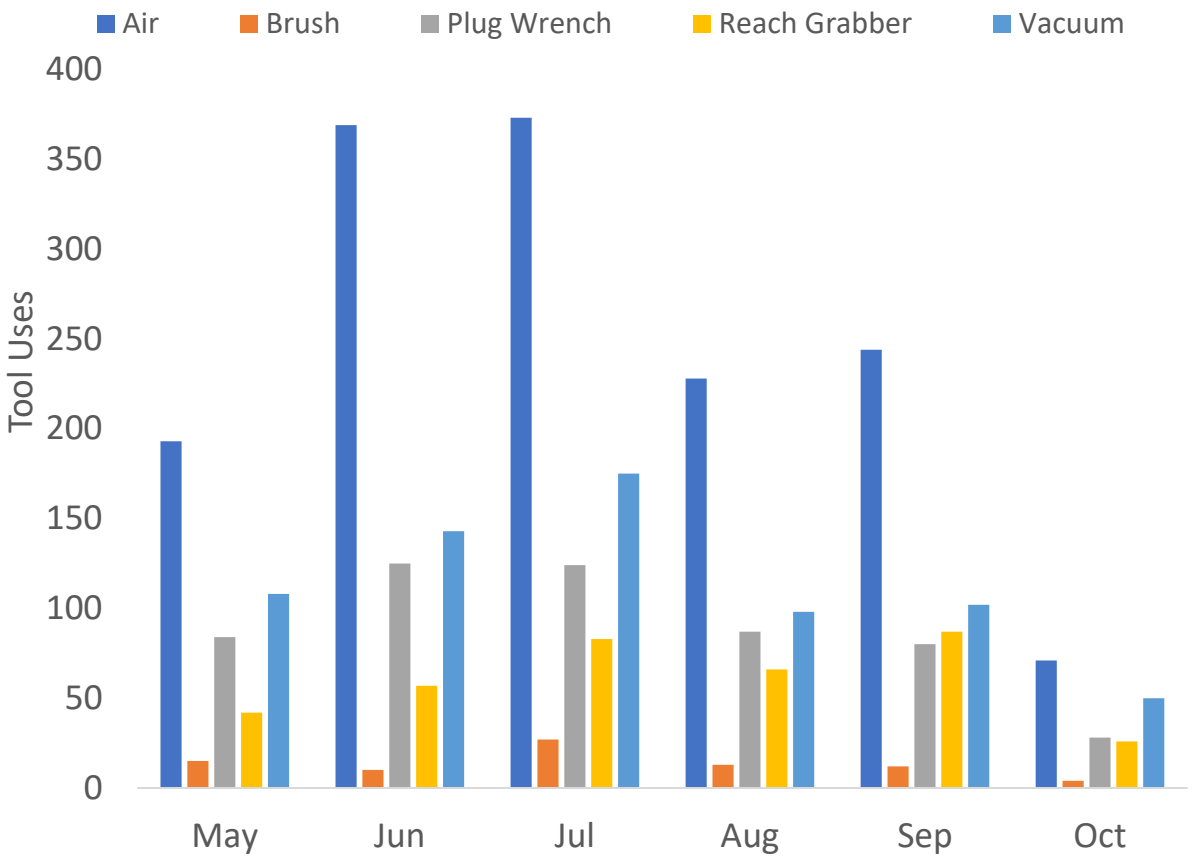

Figure 9. Tool uses across all CD3 stations by month in 2023.

Table 10. Sessions and average number of tools used per session

Month	Light Uses	Sessions	Average Tools per session
May	47	231	1.9
Jun	38	410	1.7
Jul	73	461	1.7
Aug	49	302	1.6
Sep	31	299	1.8
Oct	12	91	2.0
Grand Total	**250**	**1794**	**1.7**

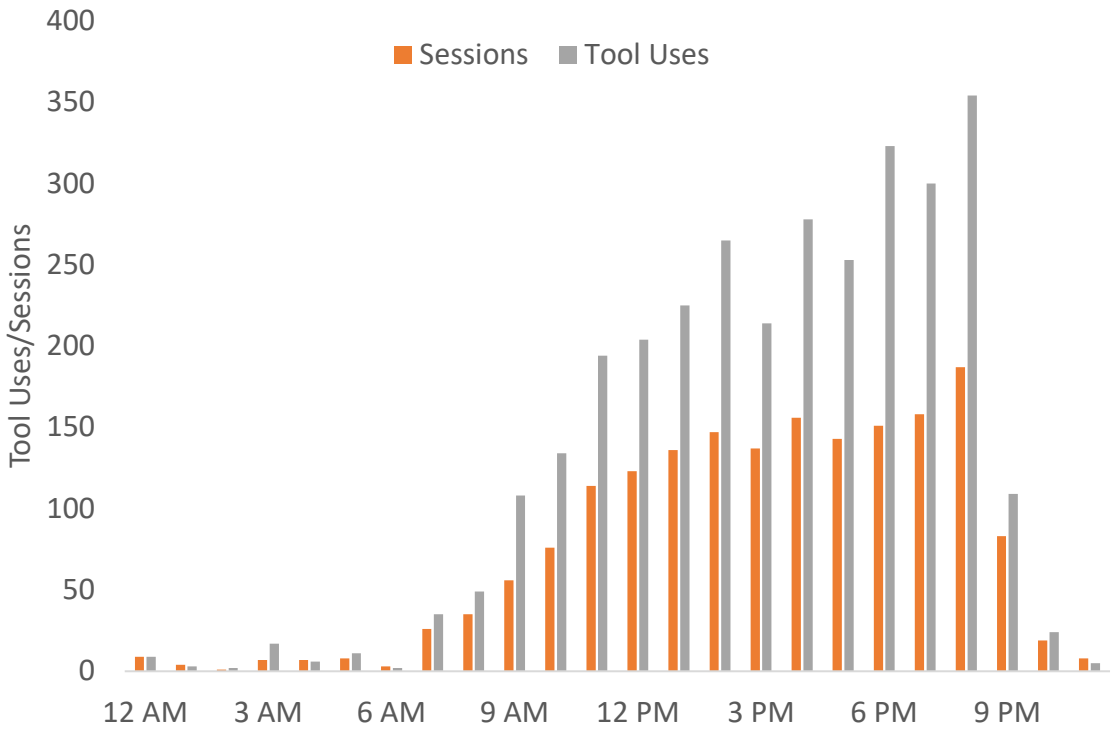

Figure 10. Tool use based on time of day across all Wright County Units in 2023

Bait Compost Stations

In 2020, Wright SWCD began a bait compost program. The program was funded by a DNR grant to encourage behavior change. In this case to prevent bait and bait water from being dumped into Minnesota waterbodies. In 2023, there were 12 bait bins throughout the county: Ann, Bass, Beebe, Buffalo North, Eagle, Indian, John, Limestone, Maple East, Moose, Sugar South and West Sylvia. However, the Ann Lake bin was removed in May because carp were disposed of in the bin. The bins were monitored about every 2 weeks by volunteers. They recorded what was in the bin (trash, food scraps, bait fish), removed trash, and turned the pile to encourage decomposition. They also recorded the impact of the bin by smell and if everything remained contained.

Overall, the impact of the bins was minimal. Out of 94 recorded visits material was only widely outside the bin once and 76% of the time everything was completely contained in the bin. Smell was also minimal, only 3% of visits was the smell noticeable anywhere in the access and 75% of visits there was no smell at all. Anecdotally, smell was most often associated with trash or oversize fish being placed in the bin.

Trash continues to be the primary struggle with the bins (Figure 11). If the bins are not routinely checked trash accumulates. It is also taxing on the volunteers, nearly all of them are lake association members, to clean up someone else's trash on a regular basis. Examples of trash in the bins included cans, wrappers, bait containers, and on one occasion even car brakes.

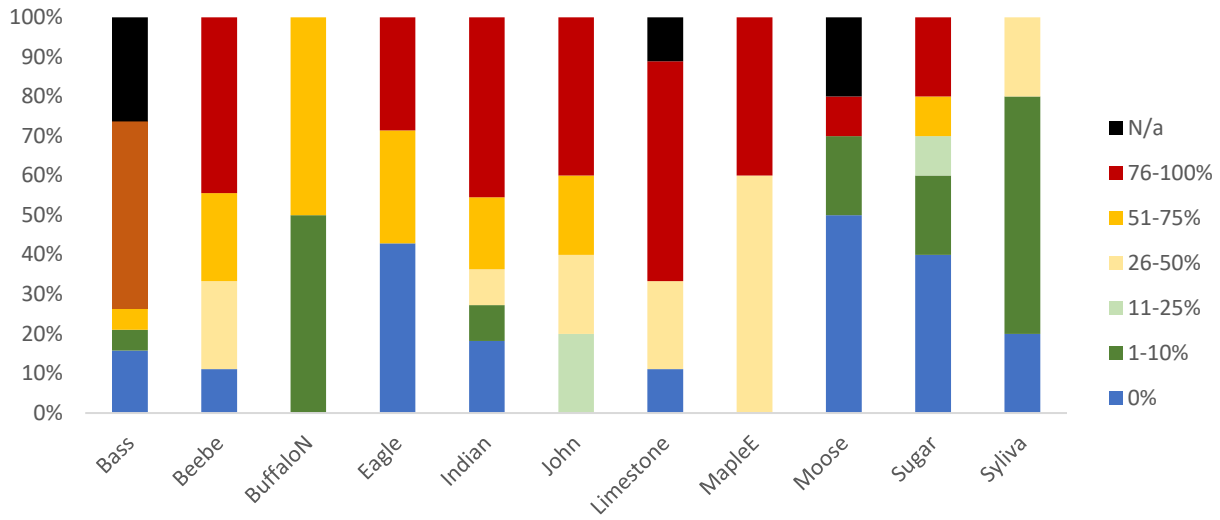

Figure 11. Percentage of new material that was trash in bait bins in 2023

The usage of the bins for bait disposal was also poor this year. For most accesses the majority of visits recorded little or no new bait (Figure 12). The continuation of this program is evaluated on an annual basis.

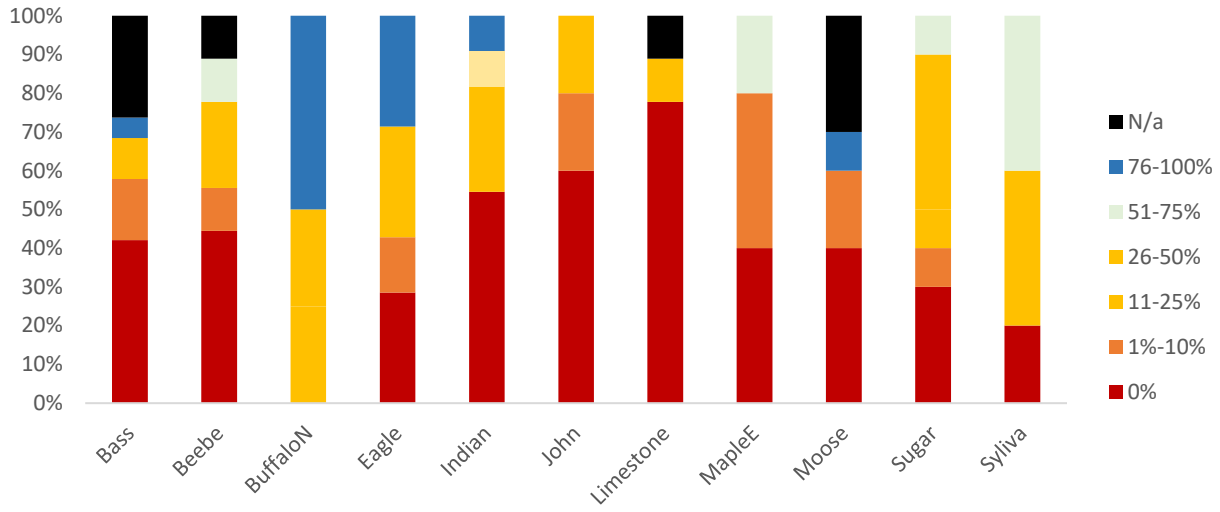

Figure 12. Percentage of new material that was bait in 2023