



2024 Aquatic Invasive Species Program Report

October 25, 2024

Contents

.....	1
Aquatic Invasive Species Prevention Program:.....	3
Activities and Budget:	3
Staffing:	3
Watercraft Inspection Season Summary:.....	4
Allocated and Expanded Coverage:.....	7
Insights from Inspection Surveys	10
Inspection Findings and Violations:	12
Decontaminations:	13
Landing Hours and Inspections:.....	15
Trends:.....	16
Summary and Comments:	17

Aquatic Invasive Species Prevention Program:

Crow Wing County's Land Services Department plans and administers the county's Aquatic Invasive Species Prevention Plan. They work in partnership with a network of public, private, state, and local stakeholders to combat the spread of Aquatic Invasive Species (AIS) in the county. The mission of this program is to provide leadership in preventing the introduction and limiting the spread of Aquatic Invasive Species in Crow Wing County (CWC) by coordinating inspections, decontamination, targeted treatment, and education efforts.

Activities and Budget:

The aquatic invasive species prevention program encompasses the following activities: Education and Awareness, Milfoil Treatment, Early AIS Detection, Decontaminations, and Watercraft Inspections.

In 2024, Crow Wing County was allocated \$472,580 of State Grant AIS Funds and managed a rollover of \$109,000 funds from the 2023 program budget. The funds allocated from the available budget for those activities as well as the actual funds used in 2024 are shown in Table 1. Rollover funding and additional available funds are utilized in various other capacities.

Table 1: Funding Allocations by Planned Activity

Activity	Planned Funds	Estimate Used Funds
Education and Awareness	\$6,800	\$6,900
Milfoil Treatment	\$38,500	\$31,128
Early AIS Detection	\$3,000	\$1,872
Decontaminations	\$20,733	\$20,895
Watercraft Inspections	\$507,530	\$471,668

Early AIS detection funding predominantly is used for Zebra mussel veliger and Spiny waterflea sampling. Milfoil treatment funding is made available to lakes in the county that are already infested with Eurasian watermilfoil. Education and awareness activities include but are not limited to the starry search program and the production and distribution of education and outreach materials. Decontamination and watercraft inspection activities are allocated most of the planned funds from the annual budget. Both activities are carried out by a seasonal staff hired by Crow Wing County Land Services, overseen by full-time Land Services employees.

Staffing:

A total of 48 seasonal watercraft inspectors were hired throughout the watercraft inspection season, though the total number of active staff varied throughout the season.

Crow Wing County also hired a seasonal lead inspector to assist the Environmental Services Coordinators with the County's AIS watercraft inspection program. The lead inspector's

responsibilities included: spot checks, training, addressing inspectors' needs, assisting with fishing tournaments, checking data, and operating the mobile decontamination unit.

Watercraft Inspection Season Summary:

The 2024 AIS Watercraft Inspection Season began on May 11th and concluded on September 1st. Crow Wing County allocated 15,246 staffed watercraft inspection hours on 43 public access landings across the County. A total of 13,080.5 hours were fulfilled throughout the season by DNR Trained Level 1 Inspectors hired by the county. For information on how those landings were identified and hours were allocated, please see the 2024 CWC AIS Prevention Plan. In addition to allocated hours funded by county allocated funds, Crow Wing County also fielded requests for 5,697 hours of expanded coverage outside of planned hours and days in the county AIS prevention plan for several lakes. Of the requested expanded coverage hours, 3,711.5 hours were fulfilled.

According to inspector survey data, 43,755 level 1 inspection surveys were completed during the 2024 season during both planned and expanded coverage hours. Of that total 24,891 entering inspections and 18,775 were exiting inspections. Courtesy and lift inspections account for the remaining surveys.

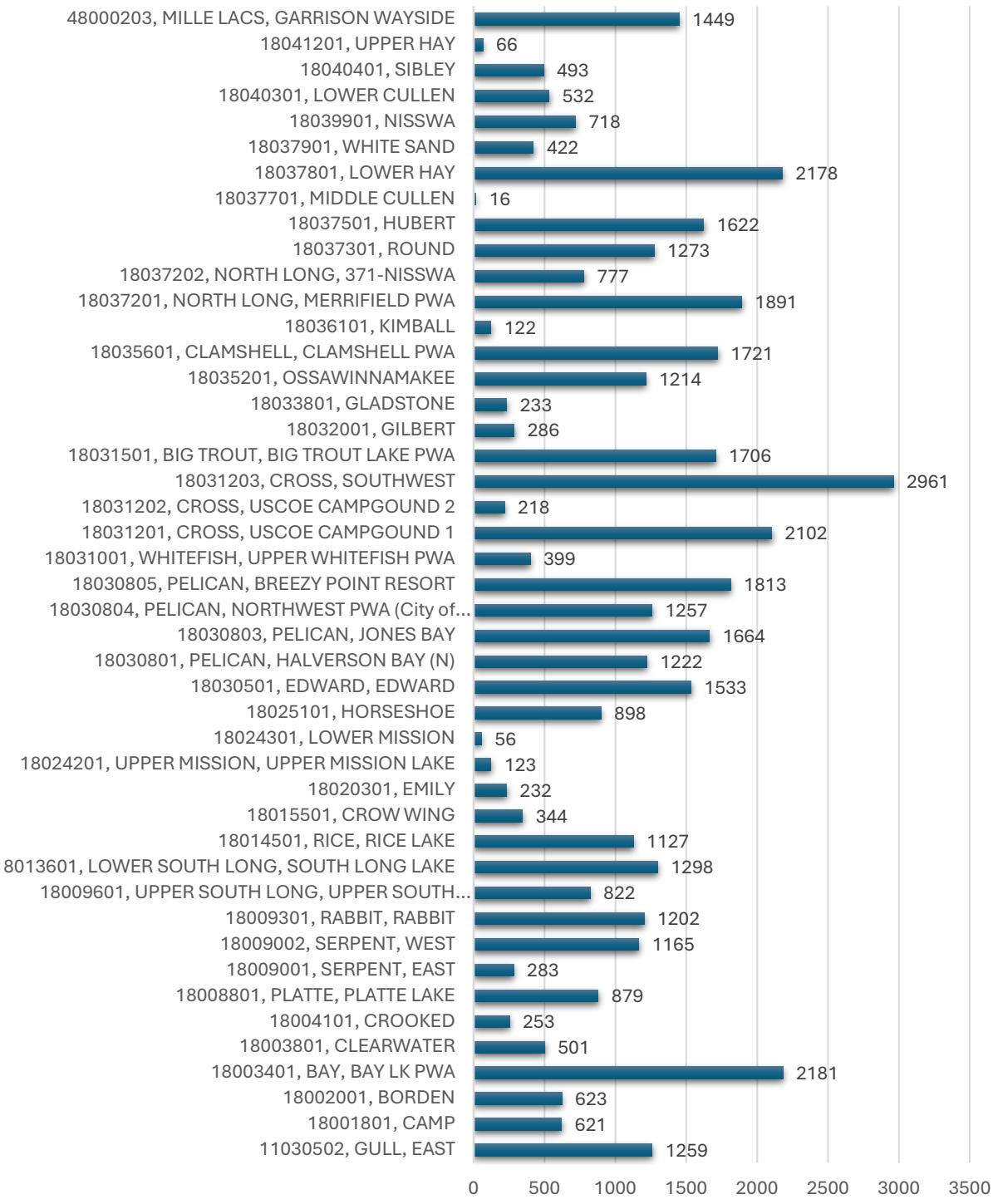
Landing/Public Access:	Total Staffed Hours	Inspections Completed
Bay	1,029	2,181
Big Trout	686	1,706
Borden	319	623
Camp	300	621
Clamshell	882	1,721
Clearwater	260	501
Crooked	223.5	253
Crosslake - USCOE Campground	822.5	2,320
Crosslake SW	725.5	2,961
Crow Wing	169	344
Edward	440.5	1,533
Emily	135	232
Gilbert	161.5	286
Gladstone	161	233
Gull East	342	1,259
Horseshoe	412	898
Hubert	894.5	1,622
Kimball	167	122
Middle Cullen	27	532
Lower Cullen	351	2,178
Lower Hay	740	16
Mille Lacs Garrison Wayside (Pike Point)	330	1,449
Nisswa	210	718
North Long - 371	318.5	777
North Long - Merrifield	363	1,891
Ossawinnamakee	439.5	1,214
Pelican City Ramp	386	1,813
Pelican Breezy Point Resort	431.5	1,257
Pelican Halverson Bay	439.5	1,222
Pelican Jones Bay	405	1,664

Platte	290	879
Rabbit	449	1,202
Rice	449	1,127
Round	425.5	1,273
Serpent East	314.5	283
Serpent West	450	1,165
Sibley	296.5	493
South Long (Lower)	458	1,298
Upper Hay	54	66
Upper/ Lower Mission	126	822
Upper South Long	468	399
Upper Whitefish	252.5	179
White Sand	188	422
Totals:	16,792	43,755
Lakes with Multiple Landings:	Total Hours Fulfilled	Inspections Completed
Pelican	1,662	5,956
Serpent	764.5	1,448
Whitefish Chain	4,108.5	9,378
North Long	681.5	2,668

Of the 43 staffed landings, the largest quantity of inspections was performed at the Cross Lake, Southwest Public Water Access (2,961), however that is only 7% of all inspections in the county in 2024. When aggregated, the Whitefish Chain of Lakes has 6 landings and accounted for 26% of all level one inspections performed in the county as well as 24% of all staffed hours across the season. Pelican Lake as an aggregate also accounted for 14% of all inspection surveys performed in 2024.

Please note that the survey data analyzed herein does not account for additional hours, coverage, and inspections performed by Minnesota DNR Watercraft Inspectors hired by that organization or other local government units and associates who hire and staff landings with inspectors throughout the county.

NUMBER OF INSPECTIONS/LANDING



The landings with the lowest reported surveys during the 2024 season were Middle Cullen, Lower Mission, and Upper Hay altogether accounting for less than 0.5% of inspection surveys performed. These landings were strategically allocated staff hours based on their AIS risk assessment and the 2024 CWC AIS Prevention Plan.

Allocated and Expanded Coverage:

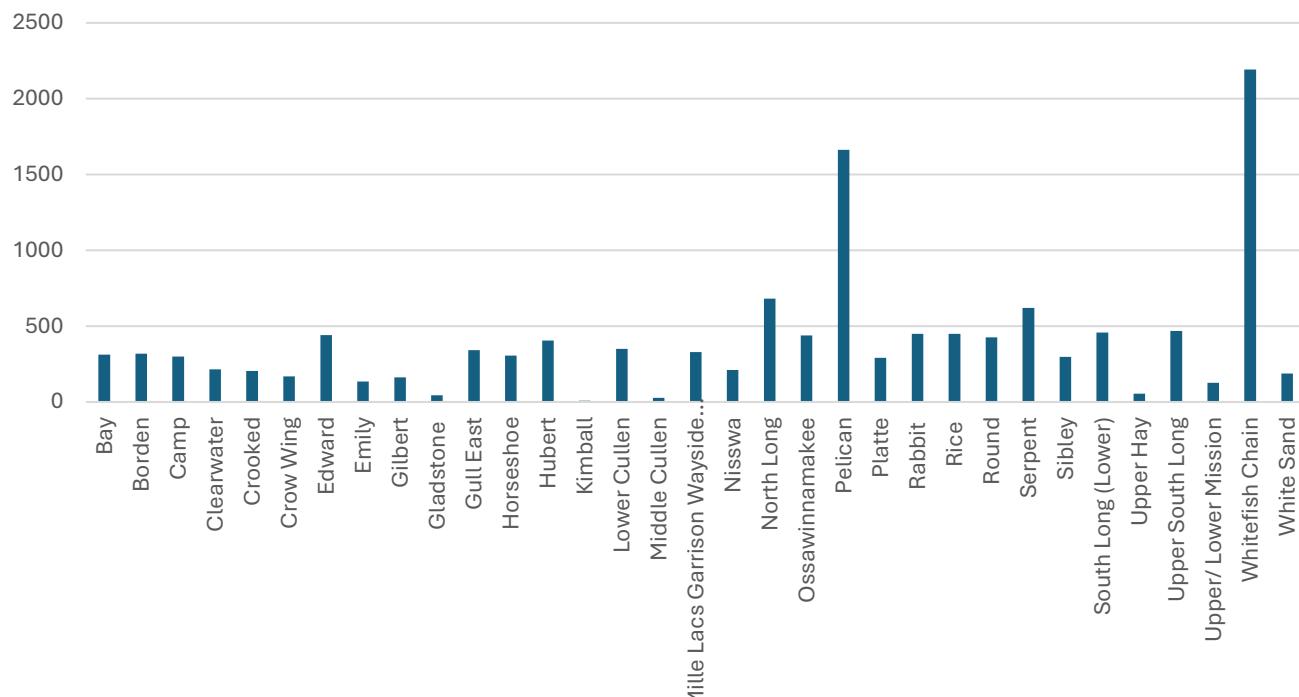
Crow Wing County allocated 15,246 hours coverage during the 2024 season. Lake Associations, Local Government Units such as Lake Improvement Districts, and other stakeholders can request expanded coverage hours which are hours staffed on requested lakes/landings on days outside of allocated coverage by CWC part-time watercraft inspectors but are billed to the requesting party after the fact. The county received requests for 5,697 hours of expanded coverage in the 2024 season. In ideal circumstances with full staffing and resources, the county would have theoretically staffed up to 20,943 inspection hours in 2024.

With the available staff and resources, CWC was able to fulfill 13,080.5 (86%) of the allocated planned coverage hours. 3,711.5 hours of expanded coverage were also staffed on days not included in the CWC 2024 AIS Prevention Plan;

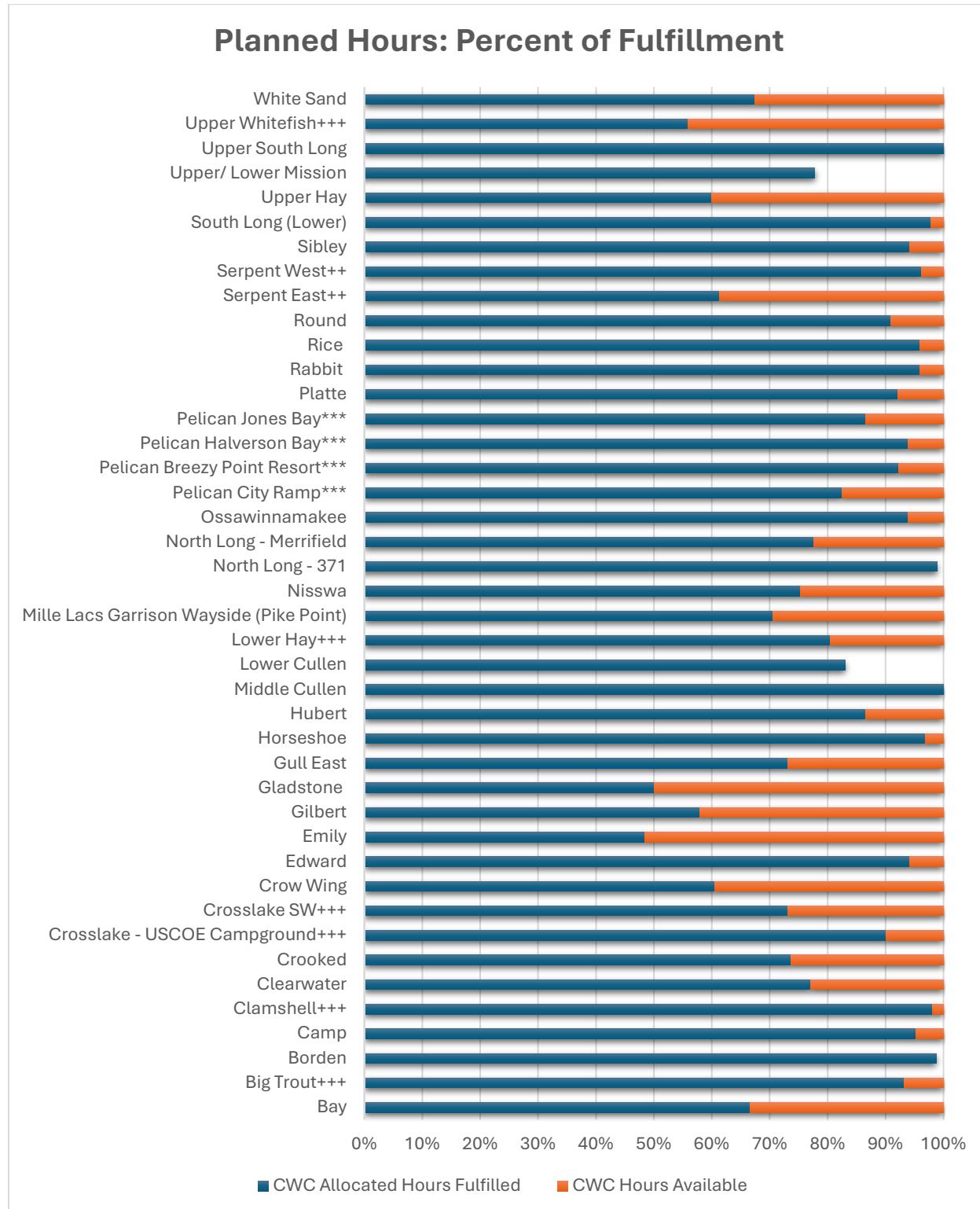
65% of requested expanded coverage hours were fulfilled. In total, 16,792 inspection hours were performed by CWC Watercraft Inspectors in 2024. It should be noted that the Minnesota DNR also fields a staff of seasonal watercraft inspectors that also staff landings in Crow Wing County during a concurrent season. The best available information to the county reports that 1,332 inspection hours were staffed by the Minnesota DNR in 2024, though that number has not been confirmed or verified by their office.

	Fulfilled Hours	Level I Surveys	Average Surveys/Hour
Planned	13,080.5	36,748	3
Expanded Coverage	3,711.5	7,007	2

CWC Allocated Hours Fulfilled/Lake

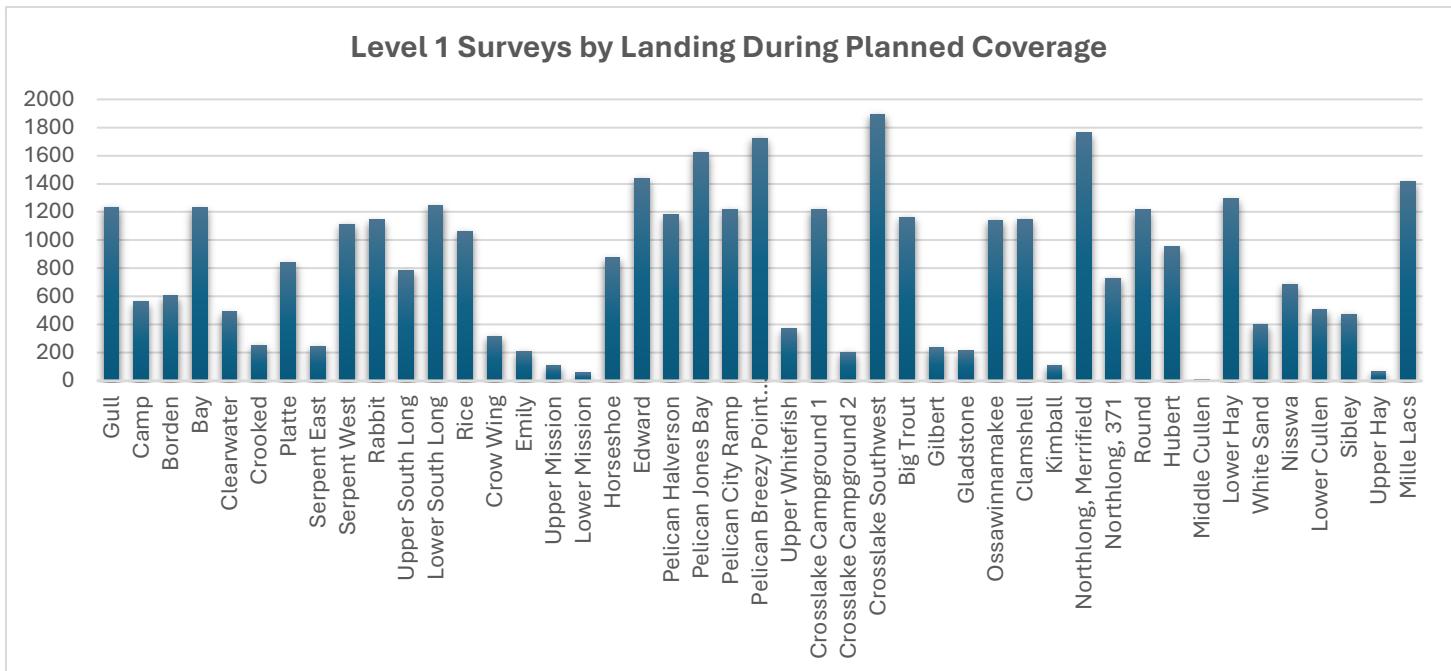


When aggregated, the sum of fulfilled hours on the Whitefish Chain of Lakes and Pelican Lake surpasses the number of fulfilled hours on other lakes across the county. Both lakes are designated as high priority in the 2024 CWC AIS Prevention Plan, though not every staffed landing on both of those lakes are classified high priority.



Upper South Long Lake had 100% fulfillment on their 2024 planned hours. Due to a new infestation of Starry stonewort, Middle Cullen Lake was staffed mid-season since no coverage was initially planned nor is Middle Cullen lake part of the county's AIS prevention plan. Of the planned hours, 86% were successfully staffed during the 2024 season in the entire county despite staffing and retention challenges that were encountered.

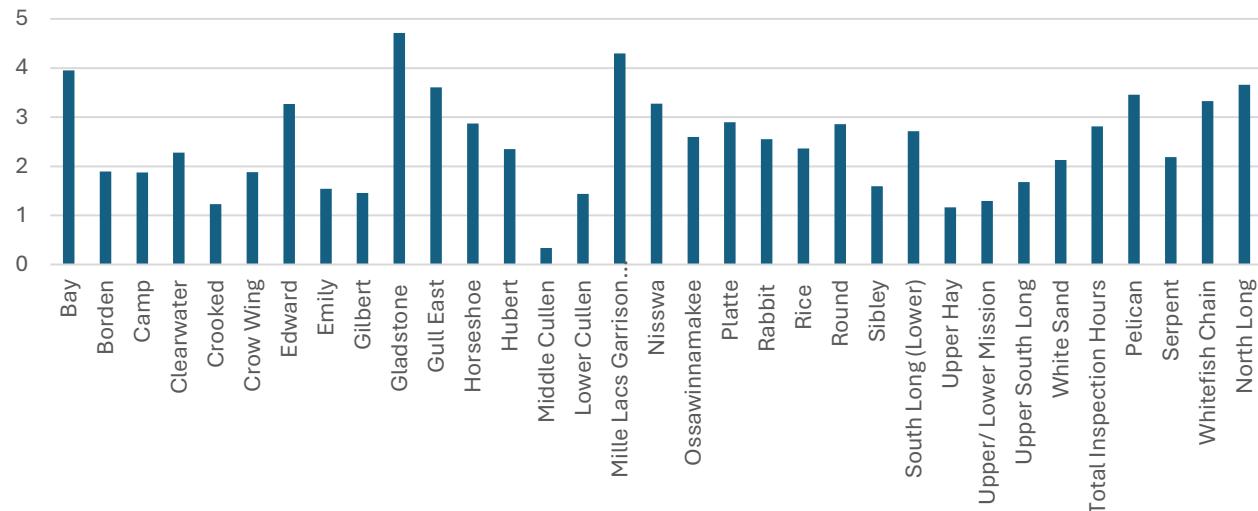
In 2024, 83% of Level 1 Inspections were performed during planned coverage hours. The remaining 17% were performed during expanded coverage hours. All Decontamination Level 2 Inspections were completed during planned hours.



Similar to the overall season summary, Cross Lake's Southwest landing reported the highest number of Level 1 inspection surveys (1,895) during planned coverage hours in 2024. North Long Lake's Merrifield landing (1,763), Pelican Lake's Breezy Point Resort landing (1,724), and Pelican Lake's Jones Bay (1,624) landing reported the next highest survey numbers during planned coverage hours in 2024, respectively.

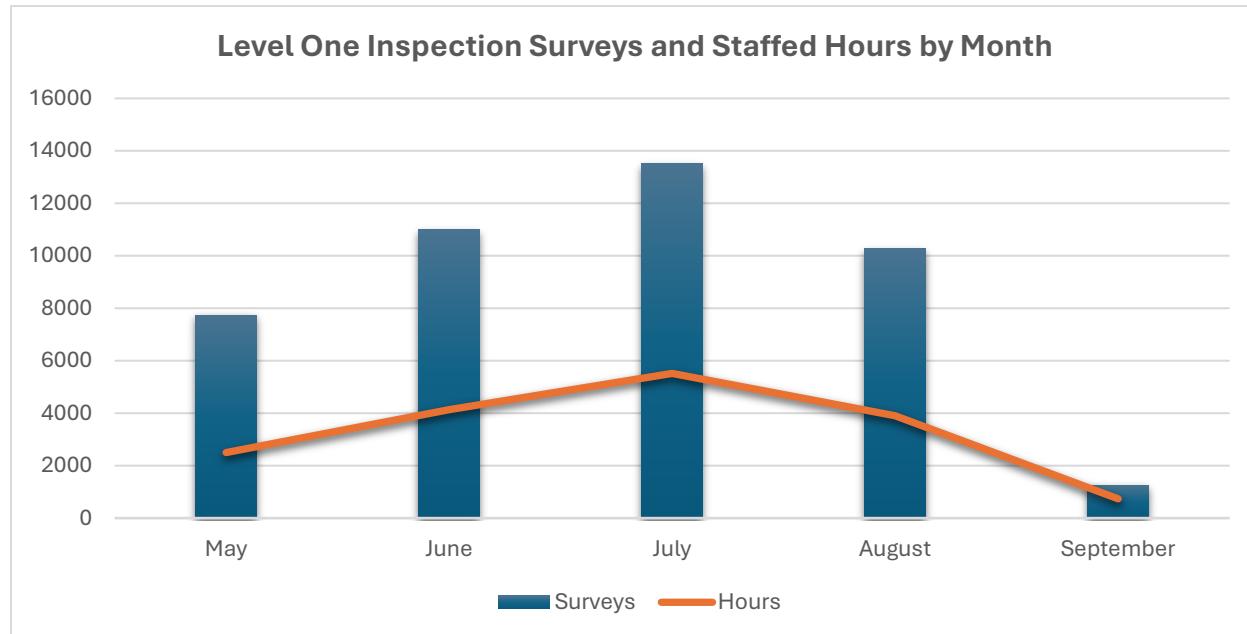
Since not every landing is not allocated the same amount of coverage and inspection hours during the season, the average number of Level 1 inspection surveys performed per hour during planned hours were calculated. Lakes with multiple landings were aggregated to normalize the results.

Surveys per Hour/Lake During Planned Coverage



Gladstone lake was identified as having a high number of inspection surveys performed per hour (>4). It should be noted that Gladstone lake was only staffed for the 4th of July holiday weekends, 45 planned hours, during the 2024 season. The Garrison Wayside landing on Mille Lacs lake also averaged over four inspection surveys per hour. Bay Lake reported nearly 4 surveys per hour as well during regular planned coverage.

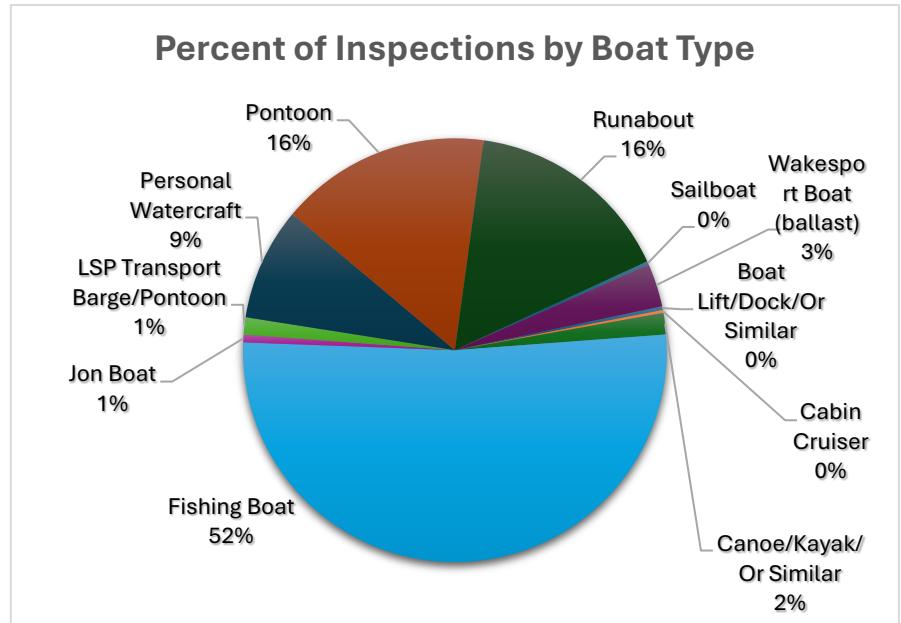
Insights from Inspection Surveys



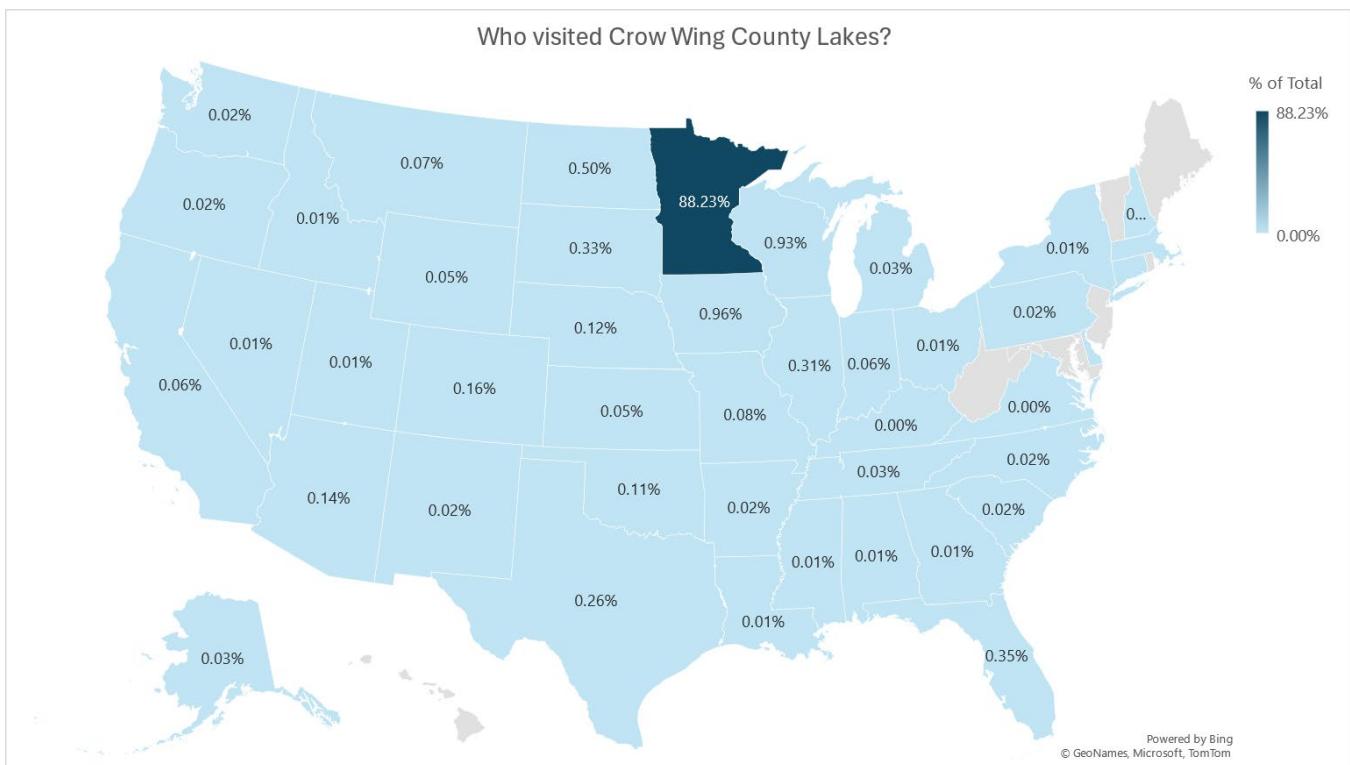
As expected, the trends of inspection surveys collected, and hours staffed per month align and corroborate that mid-summer is the peak of inspection season while both are lower at the beginning and end of the season. These trends may also be related to number of active staff

during the middle of the season. Additionally, the date of specific holidays like Memorial and Labor Day falling in one month or another may also affect these trends.

Inspection survey data revealed that over half of all inspections (22,655) were conducted on fishing boats, while pontoons (7,028) and runabouts (6,975) accounted for another third of total inspections. The remaining 16% of inspected watercraft included wakesport boats with ballasts (1,436), personal watercrafts (3,774), canoes (715), jon boats (259), lifts (129), sailboats (117), and cabin cruisers (95).



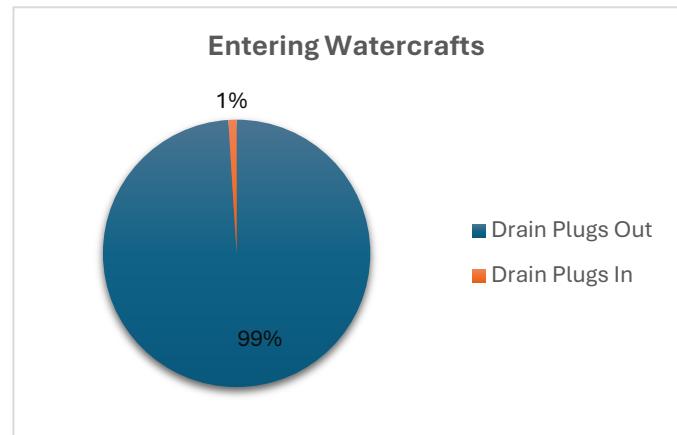
While most inspected watercrafts were surveyed as being from Minnesota (88%), the remaining watercrafts being brought in by out-of-state vehicles were primarily from Iowa, Wisconsin, North Dakota, Florida, and South Dakota, respectively. Note that only the license plate of the vehicle putting in or pulling out the watercraft was used to determine state of origin.



Inspection Findings and Violations:

During inspections, watercraft inspectors ask a series of questions as well as physically inspect the watercraft and trailer or lift to determine if the watercraft is in violation of Minnesota AIS Laws. There were 488 entering inspections that were in violation of Minnesota AIS Laws. Drain plug violations were also reported on 247 or 1% watercrafts during entrance inspections.

The 488 entering watercrafts that were identified as being in violation of Minnesota AIS Laws account for only 2% of all entering watercraft inspected in the county meaning that 98% of entering watercraft had no detected violation during Level 1 inspections performed by watercraft inspectors.



Species Found on Entry	Occurrences	% of Total
Mud	31	6%
Plants	290	59%
Snails	4	1%
Water	145	30%
Zebra mussels	18	4%
Total	488	

Of the detected violations, inspectors categorized their findings by species as defined by the Minnesota DNR survey. Plants (59%) and water (30%) were the most common species found during entrance inspections. Mud, snails, and zebra mussels accounted for the remaining 11% of findings.

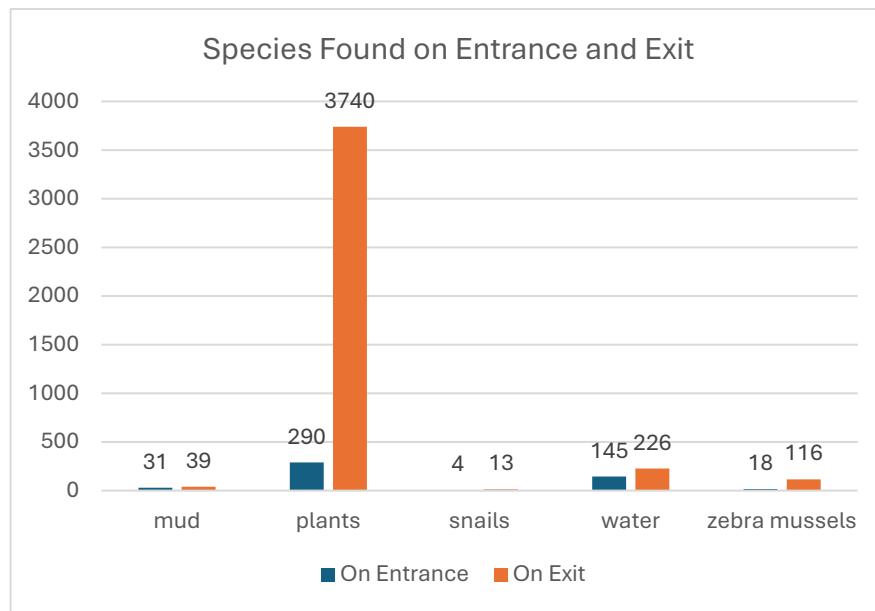
Zebra mussels were detected on less than 0.08% (18) of entering watercraft and on 0.6 % (116) of exiting watercraft the entire 2024 watercraft inspection season.

On the 18,775 exiting watercrafts inspected in the 2024 season, 4,134 surveys indicated that species as defined by the Minnesota DNR were present on exiting watercrafts. 22% of exiting watercrafts surveyed in the 2024 season had one of the defined species present upon exit.

Species Found on Exit	Occurrences	% of Total
Mud	39	1%
Plants	3740	90%
Snails	13	0%
Water	226	5%
Zebra mussels	116	3%
Total	4134	

Plants were the detected most often accounting for 90% of species found on exit. Only 3% of the surveys where species were detected upon exit inspection identified Zebra mussels as the contaminant.

Exit inspections detected higher occurrences of contaminant species, however, exit findings are not considered violations since they are addressed and resolved prior to the watercraft leaving the landing. Inspectors provide education to the public on AIS prevention practices and when necessary, require decontamination to be performed before a watercraft may enter a new waterbody.



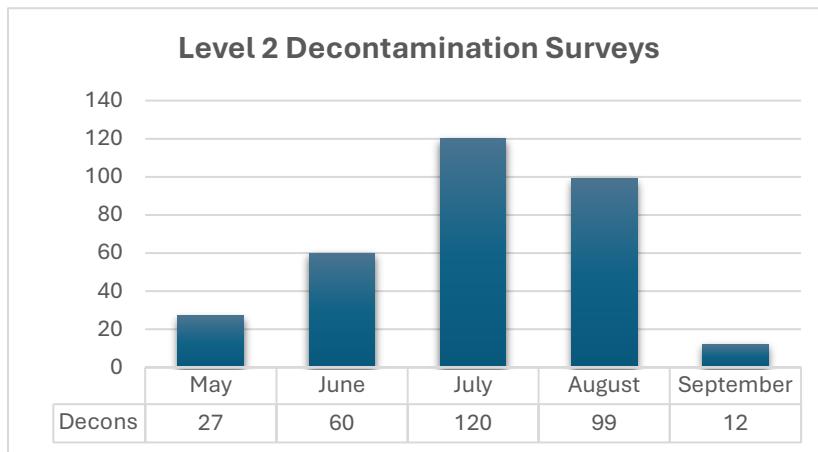
Decontaminations:

In addition to the watercraft inspection program Crow Wing County also has a decontamination program staffed by DNR Trained Level II inspectors to remove AIS from contaminated watercraft. The county offers one permanent decontamination station, and two mobile stations fully staffed starting Memorial Day weekend through Labor Day weekend, Friday through Sunday, 9:00AM-6:00PM. The decontamination program was allocated staffed 473 hours at the permanent location and 936 staffed hours between the two mobile decontamination stations over the length of the season which were all fulfilled in 2024.

In total 310 decontaminations were performed on watercrafts by Crow Wing County

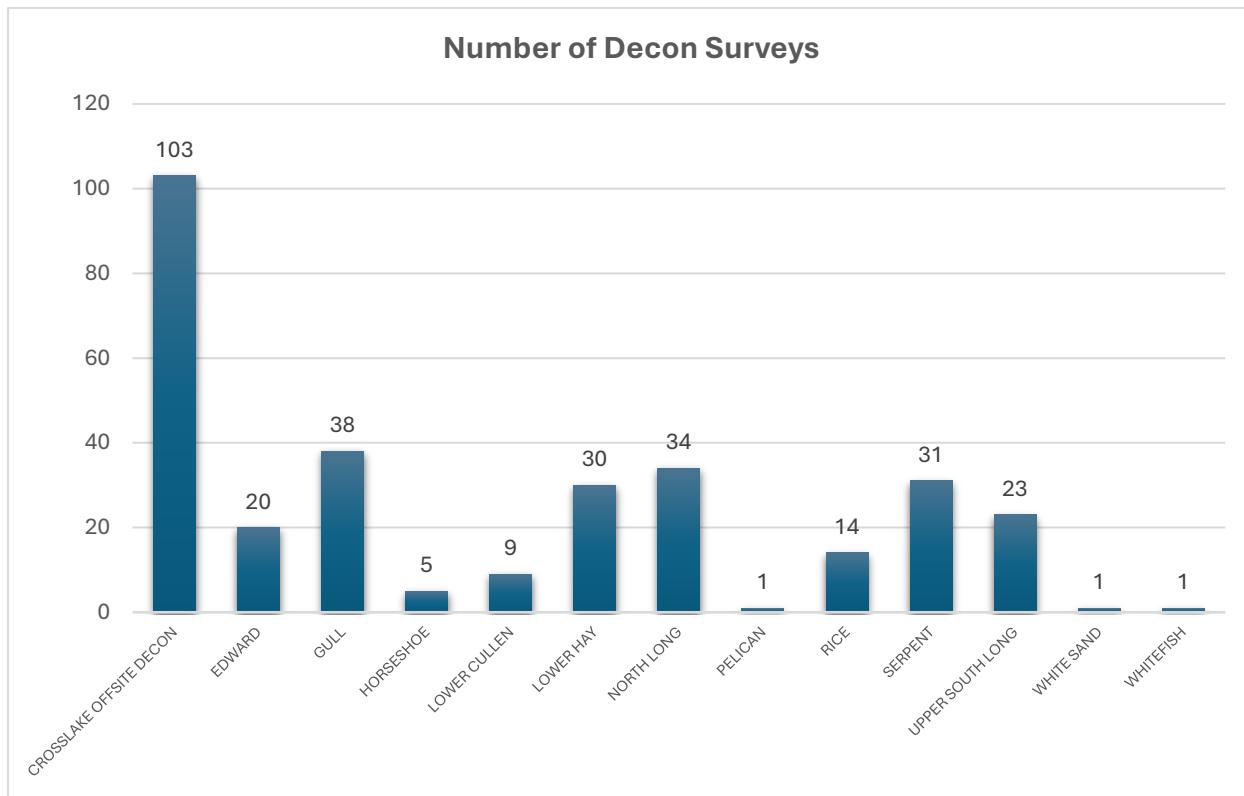
	Number of Surveys	% of Total
Crosslake Offsite Decon	103	33%
Mobile Decon	207	67%
Total Surveys	310	

Inspectors. A proportionate distribution of decontaminations was performed across the three decontamination stations.



Decontamination surveys increased from the start of the season to the middle of the season then rapidly declined after Labor Day. The majority of decontaminations were performed in July and August. These trends align with Level 1 Inspection temporal distribution as well.

The two mobile decontamination stations were strategically placed at 12 different locations during the season. Some landings hosted the mobile decontamination stations multiple times throughout the season such as Gull Lake East and North Long Lake.



Watercraft may require decontamination depending on a myriad of circumstances such as the detection of a species on entrance or exit, time between launches and exits, and other information collected during level 1 inspections and surveys. Crow Wing County DNR Trained Level 2 Watercraft Inspectors perform both partial and full decontaminations depending on the required intervention.

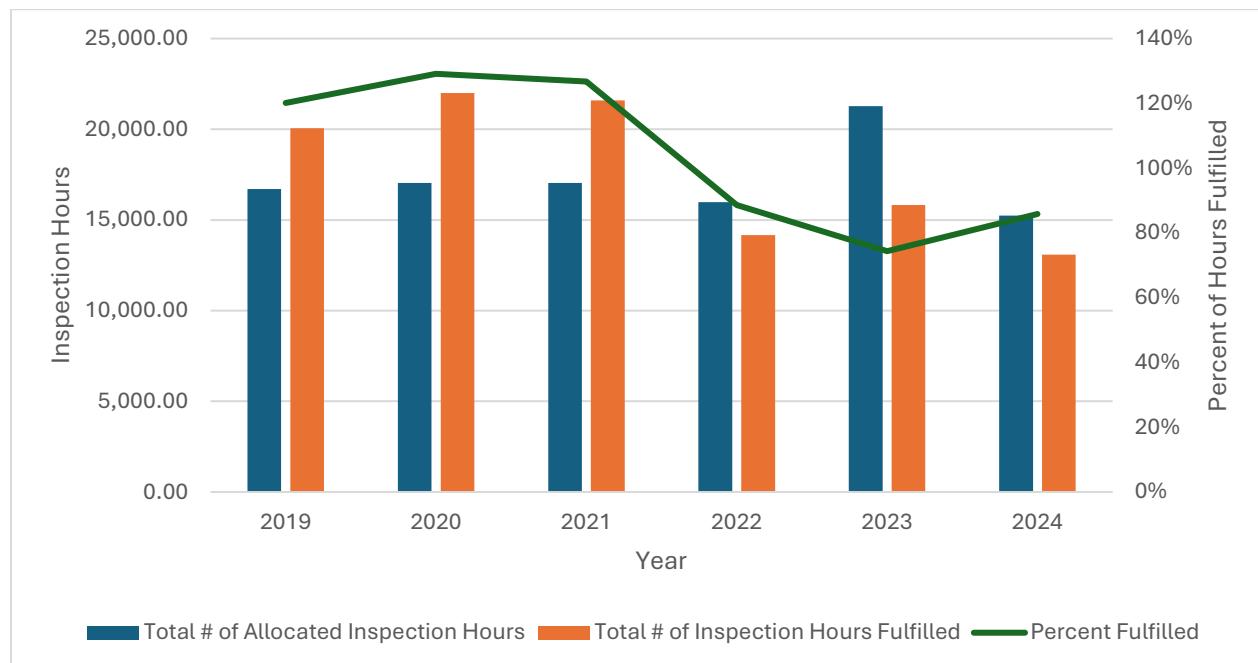
Landing Hours and Inspections:

Lake / Public Access	CWC Hours Allocated	CWC Allocated Hours Fulfilled	Percent CWC Allocated Hours Fulfilled	CWC Hours Remaining	Expanded Hours Requested	Expanded Hours Fulfilled	Percent Expanded Hours Fulfilled	Total Planned Hours	Total Hours Fulfilled by CWC	Percent Fulfilled by CWC	Total Hours Inspections Completed	Estimated DNR Hours	Hours Unfulfilled After DNR	Estimate total Coverage in 2024
Bay	468	311.5	67%	156.5	693	717.5	104%	1161	1079.0	89%	1230	126	6.0	99%
Big Trout++	468	465	93%	31.5	486	249.5	51%	954	686.0	72%	1162	99	169.0	82%
Borden	315	319.0	101%	-4	144	0.0	0%	459	319.0	69%	603	0	140.0	69%
Camp	300.0	95%	15	0	0.0	0%	0%	315	300.0	95%	562	0	15.0	95%
Clamshell++	468	490.0	98%	9	486	423.0	87%	954	882.0	92%	1148	36	36.0	98%
Clearwater	279	215.0	77%	64	144	45.0	31%	423	260.0	61%	490	18	145.0	66%
Crooked	279	205.5	74%	73.5	252	18.0	7%	531	223.5	42%	253	27	280.5	47%
Crosslake - USCOE Campground++	468	421.5	90%	465	486	401.0	83%	954	822.5	86%	1422	90	41.5	98%
Crosslake SW++	468	342.0	73%	126	486	383.5	79%	954	725.0	76%	1895	135	93.5	90%
Crow Wing	279	169.0	61%	110	0	0.0	0%	279	169.0	61%	318	0	110.0	61%
Edward	468	404.5	94%	27.5	0	0.0	0%	468	440.5	94%	1438	9	18.5	98%
Emily	279	155.0	48%	144	0	0.0	0%	279	135.0	48%	208	9	135.0	52%
Gilbert	279	161.5	58%	117.5	0	0.0	0%	279	161.5	58%	235	0	117.5	58%
Glazebone	90	45.0	50%	45	216	116.0	54%	306	161.0	53%	212	9	126.0	58%
Gull East	342.0	73%	126	0	0.0	0%	0%	468	342.0	73%	1233	81	45.0	90%
Horseshoe	315	305.0	97%	10	144	107.0	74%	459	412.0	90%	875	27	20.0	98%
Hubert	468	405.0	87%	63	558	489.5	88%	1026	894.5	87%	951	81	50.5	95%
Kimball	0	9.0	0%	-9	351	158.0	45%	351	167.0	48%	106	0	184.0	48%
Lower Cullen	279	351.0	126%	-72	0	0.0	0%	279	351.0	126%	505	27	-99.0	135%
Lower Hay++	468	376.5	80%	91.5	486	363.5	75%	954	740.0	78%	1296	126	88.0	91%
Middle Cullen	0	27.0	0%	-27	0	0.0	0%	0	27.0	100%	9			100%
Mille Lacs Garrison Wayside (Pike Point)	468	330.0	71%	138	0	0.0	0%	468	330.0	71%	1417	90	48.0	90%
Nisswa	279	210.0	75%	69	297	0.0	0%	576	210.0	36%	687	27	339.0	41%
North Long - 371**	315	318.5	101%	-3.5	0	0.0	0%	315	318.5	101%	730	9	-12.5	104%
North Long - Merrifield**	468	363.0	105%	0	0.0	0%	0%	468	363.0	78%	1763	63	42.0	91%
Ossawinnanakee	468	439.5	94%	28.5	0	0.0	0%	468	439.5	94%	1141	0	28.5	94%
Pelican Breezy Point Resort***	468	451.5	92%	36.5	0	0.0	0%	468	431.5	92%	1724	0	36.5	92%
Pelican City Ramp***	468	366.0	82%	82	0	0.0	0%	468	386.0	82%	1218	54	28.0	94%
Pelican Halverson Bay**	468	439.5	94%	28.5	0	0.0	0%	468	439.5	94%	1179	18	10.5	98%
Pelican Jones Bay***	468	405.0	87%	63	0	0.0	0%	468	405.0	87%	1624	54	9.0	98%
Plate	315	290.0	92%	25	0	0.0	0%	315	290.0	92%	839	0	25.0	92%
Rabbit	468	449.0	98%	19	0	0.0	0%	468	449.0	96%	1145	18	1.0	100%
Rice	468	449.0	96%	19	0	0.0	0%	468	449.0	96%	1061	18	1.0	100%
Round	468	425.5	91%	42.5	0	0.0	0%	468	425.5	91%	1215	36	6.5	99%
Serpent East++	279	171.0	61%	108	126	143.5	114%	405	314.5	78%	246	0	90.5	78%
Serpent West++	468	450.0	98%	18	0	0.0	0%	468	450.0	96%	1112	0	18.0	98%
Sibley	315	296.5	94%	18.5	0	0.0	0%	315	296.5	94%	473	0	18.5	94%
South Long (Lower)	468	458.0	98%	10	162	0.0	0%	630	458.0	73%	1244	0	172.0	73%
Upper / Lower Mission	90	126.0	140%	-36	0	0.0	0%	90	126.0	140%	163	0	-36.0	140%
Upper Hay	90	54.0	60%	36	0	0.0	0%	90	54.0	60%	63	0	36.0	60%
Upper South Long	468	468.0	100%	0	0	0.0	0%	468	468.0	100%	784	0	0.0	100%
Upper Whitefish++	279	156.0	56%	123	180	96.5	54%	459	252.5	55%	369	27	179.5	61%
White Sand	279	188.0	67%	91	0	0.0	0%	279	188.0	67%	400	18	73.0	74%
Total Inspection Hours	15,246	13080.5	88%	2165.5	5697	3711.5	65%	20,943	16792.0	80%	36,748	1332	2819.0	87%
** North Long	783	682	87%	102	0	0.0	0%	783	681.5	87%	2493	72	29.5	96%
*** Pelican Lake	1872	1662	88%	210	0	0.0	0%	1,872	1662.0	89%	5745	126	84.0	96%
+ Serpent Lake	747	621	83%	126	143.5	114%	873	764.5	88%	1358	0	108.5	88%	
++ Whitefish Chain	2619	2192	84%	428	2610	1917	73%	5,229	4109	79%	7292	513	607.5	88%

Trends:

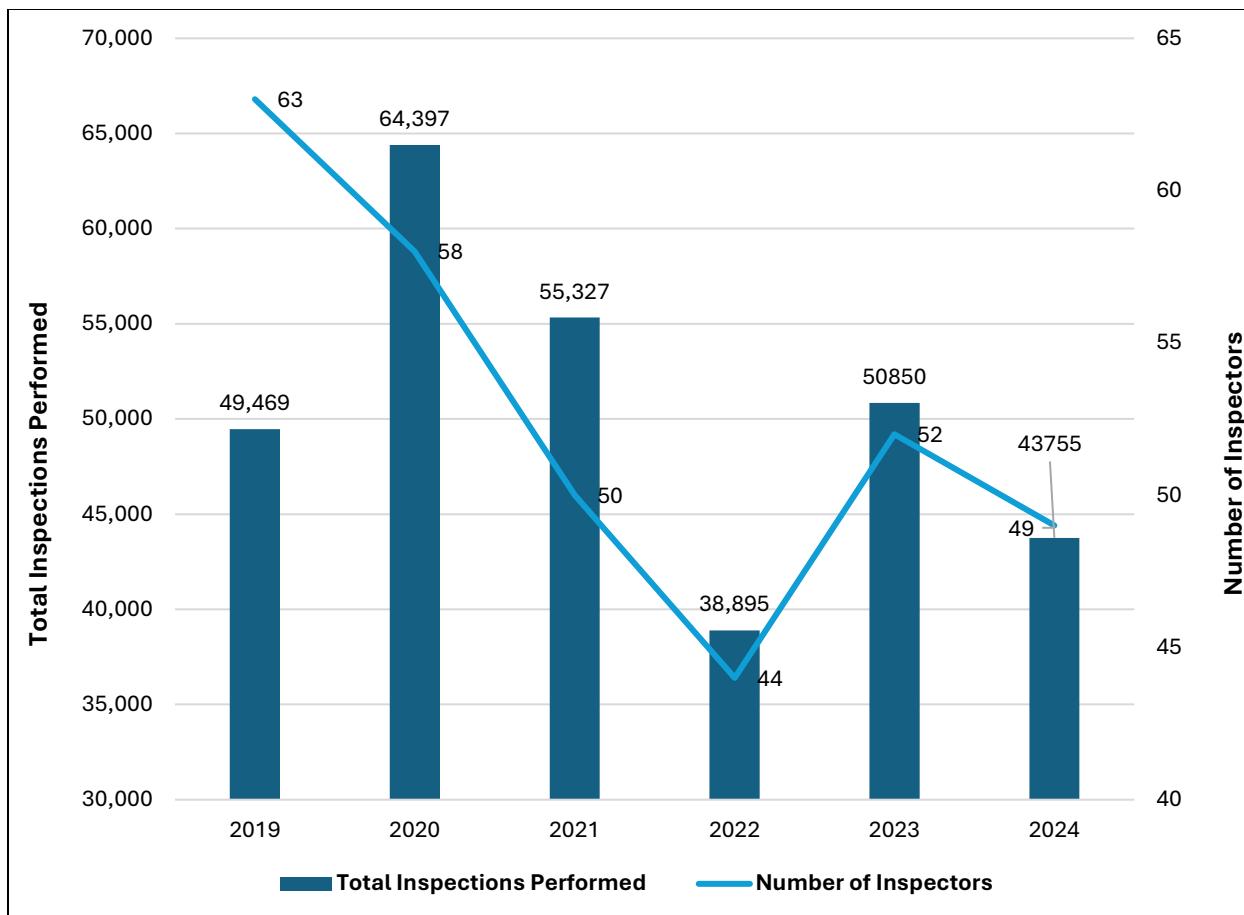
Examining the year after year data for the AIS Prevention Program highlights trends in the watercraft inspection program that can lend insight into planning future years of programming and interventions.

From 2019 to 2024, the average annual allocated hours for the watercraft inspection program were 16,213. The allocated hours for 2024 are below average by 11%, however the percent of fulfill hours in the last three years is trending over 80% so despite the reduction in overall planned hours, fulfillment remained high. This differs from 2023 when the highest number of allocated hours was set at 21,267, but fulfillment of that allocation was 74%.



Crow Wing County has achieved a high level of fulfillment of allocated hours over the years; when averaged over that span of time, 17,785 hours or 104% fulfillment has been attained throughout the program's recent history.

Inspection data from the same span of years, 2019 to 2024, reveals different trends in activities executed within the watercraft inspection program. Annual inspection surveys have risen and fallen not seemingly in trend with the number of staffed hours, but more so in relationship to the actual size of staff fielded by the program each season in the last three years.



Staff retention is a high-level concern of the Crow Wing County AIS Prevention Program. Early years of high staffing lent itself to a high execution, and some years over execution, of allocated hours. Recent years, 2022 to 2024, the seasonal staff size has hovered around 49 inspectors. Inspections performed appears to be coming into trend with staff size in recent years where the rise and fall of staff size matches the rise and fall in inspections performed.

Summary and Comments:

The Crow Wing County AIS Watercraft Inspection season began on Minnesota's official fishing opener, May 11th, and concluded on Sunday, September 1st, spanning 17 weeks. The county fielded a staff of 49 seasonal watercraft inspectors who completed 43,755 watercraft inspections and 310 watercraft decontaminations. The county maintains a high level of execution of the watercraft inspection and decontamination activities of their annual Aquatic Invasive Species Prevention Plan and continues to look for opportunities to improve the program with input from stakeholders and partners for years to come. The county wishes to thank the seasonal staff members, partnering lake associations, local government units, state agencies, and private organizations who make these activities possible through their time, resources, volunteer efforts, and expertise to prevent and limit the spread of aquatic invasive species in Crow Wing County.