

2023 Becker County Aquatic Invasive Species Program Report

This document outlines Becker SWCD’s efforts to prevent the introduction and spread of aquatic invasive species using county AIS prevention funds per MN Statute 477A. 19. The Becker Soil and Water Conservation District implemented the plan elements below using 2021 and 2022 funds, combined with contributions from lake associations and townships.

Element	Activities	2023 Expense
1. Outreach and Education	Printed Materials, Display Booth Materials, Television Ads, Bar Coasters	\$1,914.00
2. Inspections	Watercraft Inspectors, Field Supplies, Unemployment, Work Comp	\$208,630.00*
3. Decontamination	Equipment, Fuel, Maintenance, Storage	\$20,436.00
4. Monitoring, Treatment, Response	Management Grants, SCUBA Monitoring	\$9,196.00
5. Professional and Technical	Office Space, Cell Data, Vehicle Maintenance, Fuel, Training	\$87,373.00
6. Operations and Liability	Insurance, Office Supplies	\$9,650.00
Total		\$347,757.00

**Based on estimates of Dec 2023 expenses*



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On September 28th and 29th, 5th grade students from 7 Becker County schools learned about AIS at the 5th Grade Conservation Tour.

1. Outreach and Education

Becker SWCD works to raise awareness of laws and best practices related to aquatic invasive species by offering presentations, age-appropriate youth activities, volunteer opportunities and professional media content. In 2023, presentations were provided at 2 lake association meetings. AIS prevention messages were also promoted via electronic billboards, bar coasters, bait bags and various websites. Other activities completed in 2023 include:

- An interactive map showing Zebra Mussel, Curly-leaf Pondweed and Flowering Rush infestations was updated on the Becker County website.
- A fun and engaging educational presentation was provided for 4th and 5th grade students from 6 Becker County schools
- A 30 second television commercial was updated and aired on the “Linder’s Angling Buzz” program on Fox Sports North. (May –August) 16 counties shared the cost of this sponsorship.
- 1,000 bait bags were distributed to local bait dealers in May 2023. St. Louis County worked with Wildlife Forever, an environmental nonprofit, and a group of around a dozen counties, to design a message that promotes proper disposal of live bait.
- Becker County partnered with Ottertail County Environmental Services to sponsor an electronic billboard near Detroit Lakes, featuring this design from Wildlife Forever:



2. Watercraft Inspection

Becker SWCD hired 29 watercraft inspectors in 2023. Three inspectors were hired and trained as Level 2 inspectors. Level 2 inspectors are trained to operate mobile decontamination equipment in addition to their watercraft inspection duties. Watercraft inspections in Becker County began on May 13 and were finished on October 22, 2023. Watercraft inspectors assisted boaters with cleaning and draining 857 watercraft that were found with water, plants, mud, or invasive species when exiting lakes.

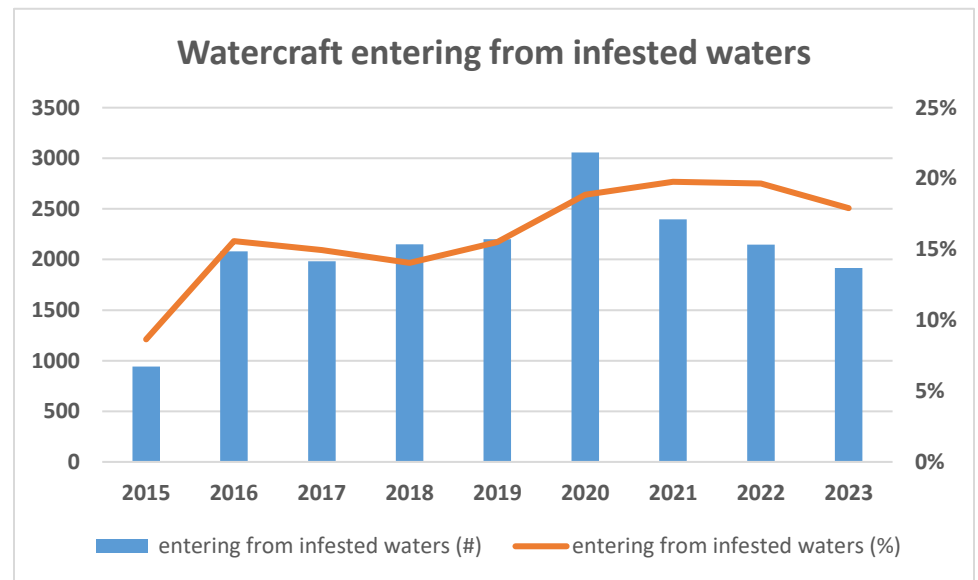
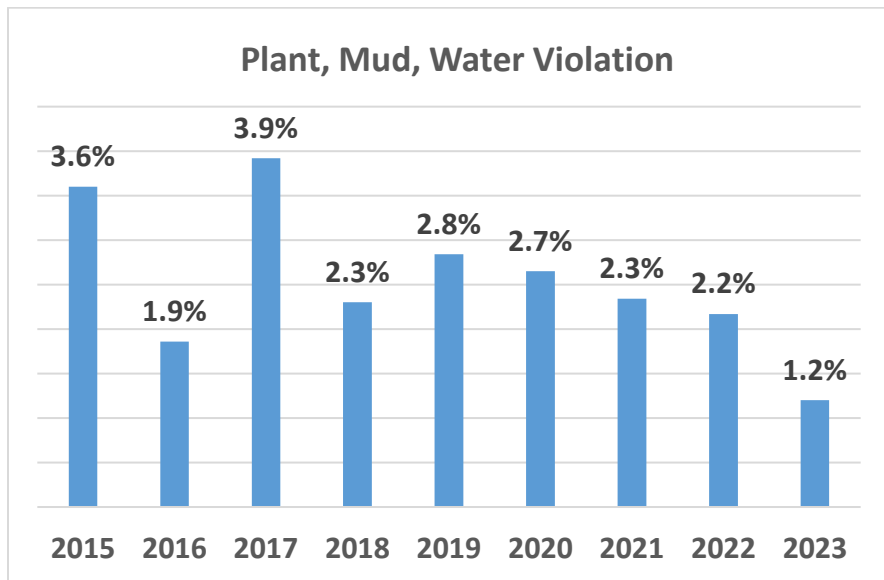
Inspection hours were allocated to individual lakes using a risk score based on the number of access ramps, resorts and the number of inspections per hour completed in 2022. Contributions from lake associations allowed for over 600 additional inspection hours at 3 lakes. See page 12 for proposed 2024 inspection hour allocations. The total number of inspections, inspection hours completed and the results of entering watercraft inspections are displayed on the spreadsheets found on pages 13-15. These include an analysis of the responses provided when boaters were asked where they last used their watercraft, just prior to the lake where the inspection is taking place.

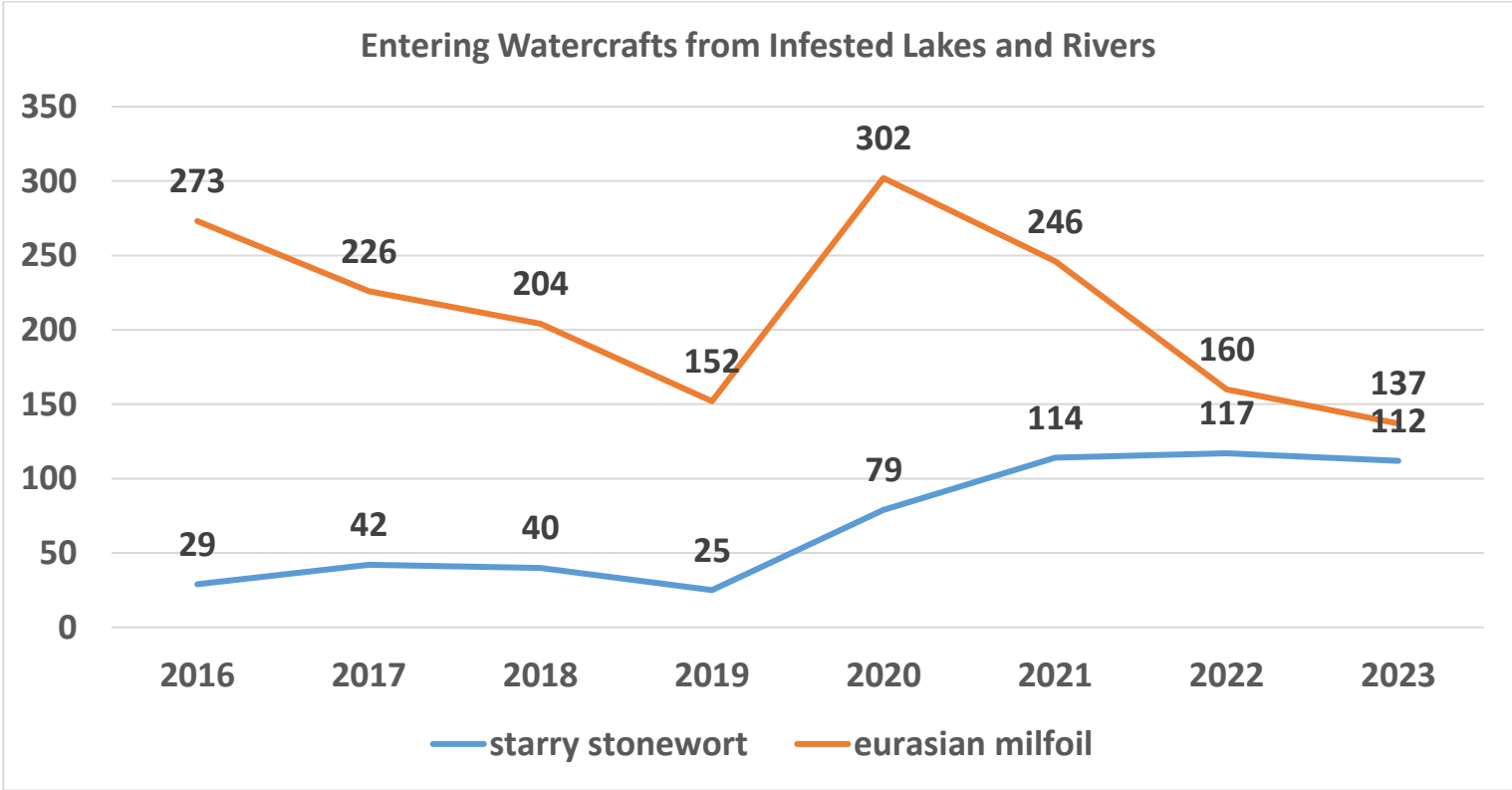


On 8/6/2021, a watercraft inspector removed this fragment of Eurasian Milfoil from a boat trailer arriving at Floyd Lake. The boater was arriving from Lake Minnewashta in Carver County

Watercraft Inspection continued

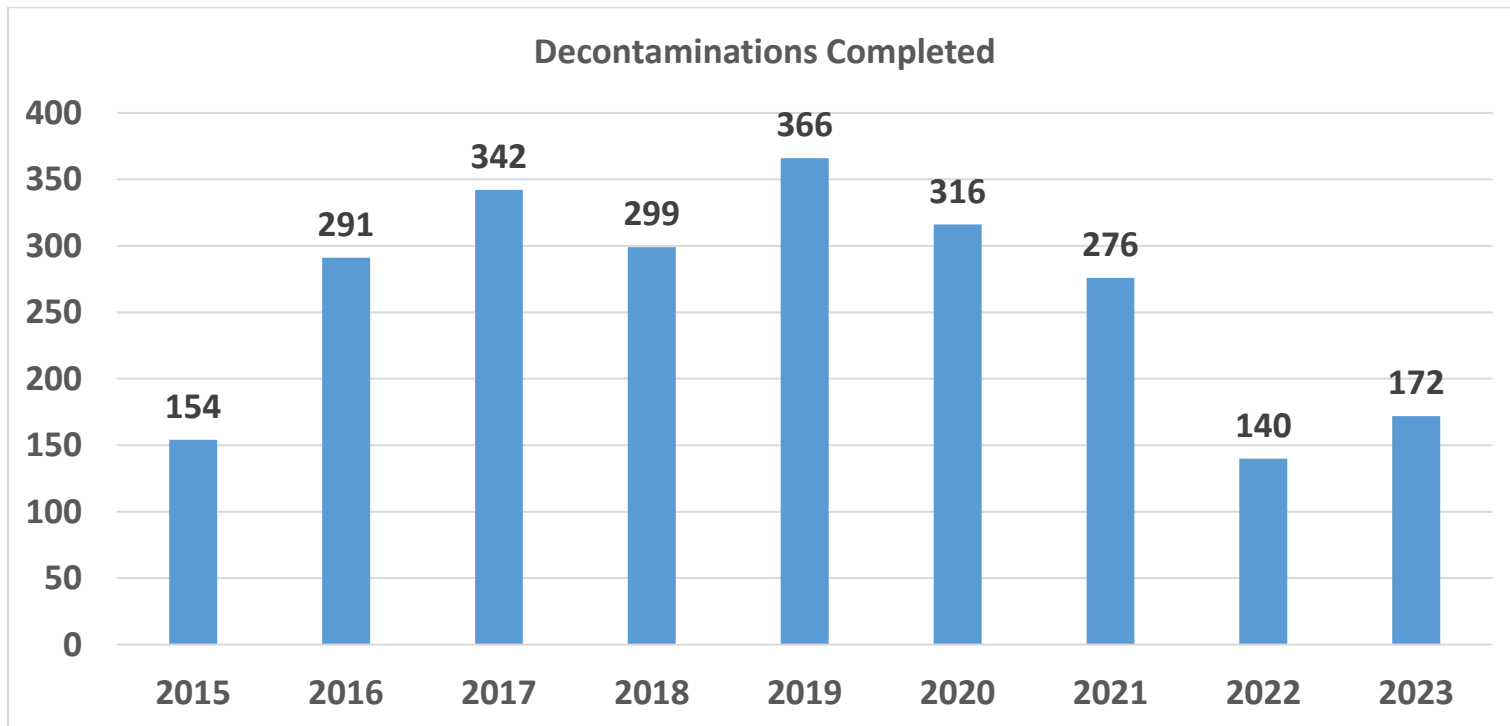
- 10,371 inspection hours were completed in 2023 at 26 public accesses in Becker County.
- 17,521 inspections were completed.
- Inspectors reported 130 watercraft arriving with plants, water or mud. (1.22% of entering watercraft)
- Inspectors reported 75 watercraft arriving with drain plugs installed. (.88)% of watercraft equipped with plugs)
- In 2023, 1,916 boaters reported that they had last used their watercraft at a lake or river on MN’s list of AIS-infested waters. (17.92% of entering watercraft)





3. Watercraft Decontamination

Becker County completed 172 hot-water decontaminations in 2023. Watercraft decontamination services were offered at Detroit South and Melissa from 13 May to September 17. Decontamination was available at Big Cormorant West in July and August when staff were available. In 2024, decontamination services will again be provided at the Becker SWCD shop location and these high-use public access sites.

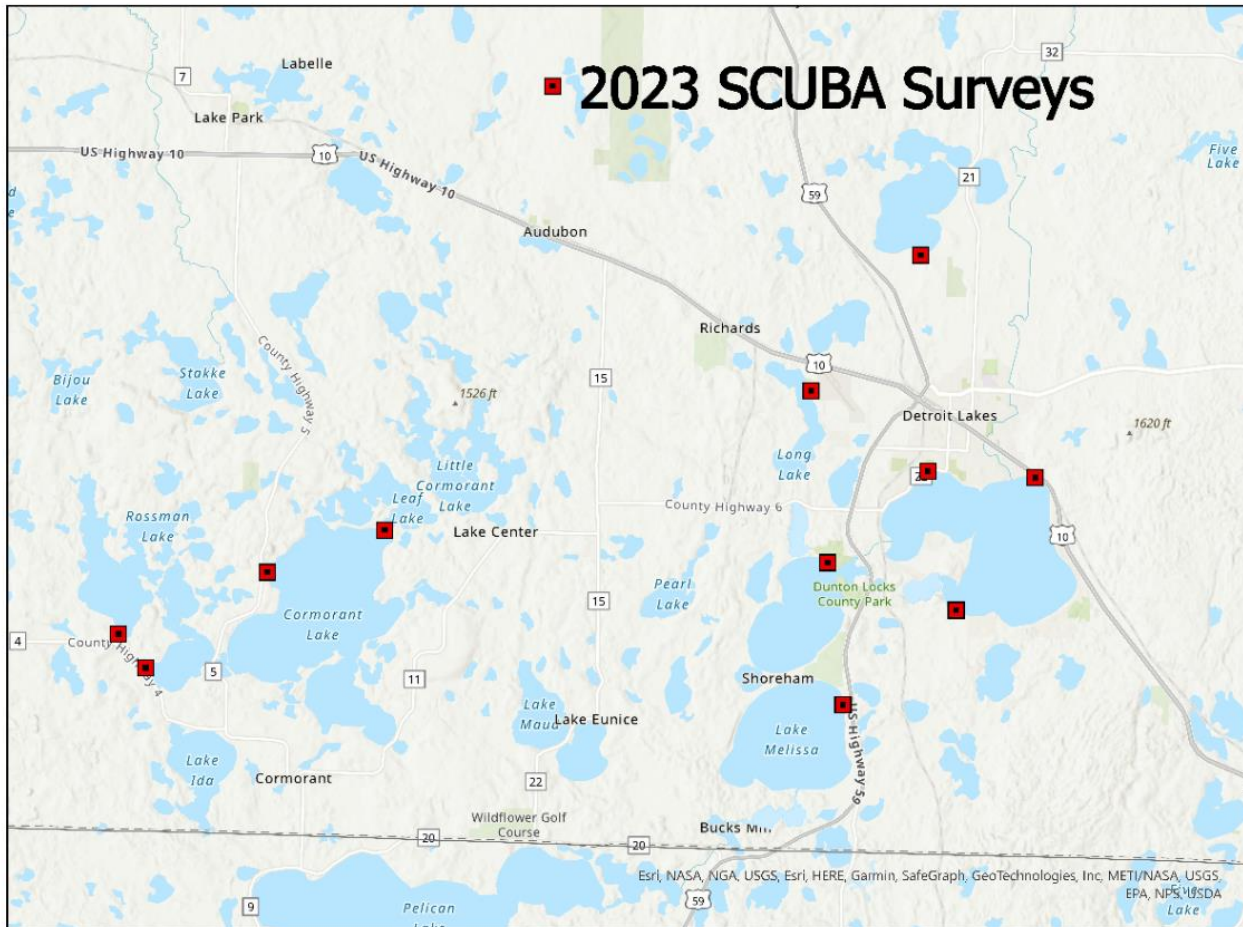


4. Monitoring and Management

Monitoring public access sites for new invasive species is an important part of Becker SWCD’s AIS prevention program. Locating recently established invasive plant populations allows for more effective management and prevention. Monitoring efforts were completed with assistance from volunteers and LimnoPro llc., a private company that specializes in lake management and planning. 34 Public access sites were surveyed by tossing a rake head and examining retrieved plants. Sites were selected using a risk model developed at The Minnesota AIS Research Center (MAISRC), and data collected by watercraft inspectors. The MAISRC model estimates the risk of Zebra Mussel and Starry Stonewort invasion of 25,000 waterbodies in Minnesota. In Becker County, the top 34 public-access lakes predicted for Starry Stonewort invasion were selected for monitoring. No Starry Stonewort or other invasive plants were observed in 2023 following approximately 59 combined hours of sampling. Access sites listed below were checked by this method in August and September 2023.



August and September Monitoring	Little Cormorant	Shell
Bad Medicine	Little Floyd	Straight
Big Sugarbush	Little Sugarbush	Strawberry
Boot	Little Toad	Tamarack
Buffalo	Long	Toad
Cotton	Many Point	Two Inlets
Elbow	Maud	Upper Cormorant
Eunice	Melissa	White Earth
Floyd	Middle Cormorant	Wolf
Height of Land	Pickerel	
Ida	Pearl	
Island	Rock	
Leif	Round	



MAISRC’s risk model ranks Big Detroit and Big Cormorant lakes as the seventh and second highest (respectively) risk lakes in the county for Starry Stonewort infestation. A more in-depth monitoring effort began at public access sites on these lakes in 2019, and additional lakes were added in 2022. On August 23-25, 2023, Dr. Dan McEwen from Limnopro Aquatic Sciences completed SCUBA transect surveys over 200’X100’ areas around the 5 primary public access sites at Detroit and Big Cormorant lakes, as well as access sites at Middle Cormorant, Upper Cormorant, Sallie, Melissa, Long and Big Floyd. Following the discovery of starry stonewort at Long Lake in Hubbard County, additional SCUBA surveys may be scheduled for access sites in eastern Becker County in 2024.

Public access docks are inspected in late fall as they are removed from lakes to identify new zebra mussel infestations. Dock equipment was inspected at the public accesses of the lakes listed below in November.

Acorn	Island	Meadow	Strawberry
Bad Medicine	Little Bemidji	Pearl	Toad
Big Sugarbush	Little Cormorant	Rock	Town
Boot	Little Sugarbush	Round	Two Inlets
Boyer	Little Toad	Sauer	Wolf
Buffalo	Many Point	Sieverson	
Cotton	Marshall	Straight	
Height of Land (South)			

On 8/9/23, 6 volunteers participated in the University of Minnesota AIS Research Center’s “Starry Trek” monitoring event. Volunteers searched 10 public access sites at Cotton, Tamarac, Perch, Height of Land, Pearl, Melissa, and Sallie. This event was attended by 187 volunteers across the state. These volunteers searched for starry stonewort and other AIS at 259 public access sites on 215 water bodies across Minnesota.

A shoreline survey was completed at Pickerel Lake on 6/13. This survey was meant to search for flowering rush, which has been managed there since 2017. A larger area of flowering rush, likely the original infestation, was located near the south end of the lake. This area had been missed by previous surveys completed by DNR and SWCD staff. The landowner was happy to allow herbicide treatment, which was completed by PLM lake management on 6/27 and 8/8/23. A follow-up visit showed good results and minimal impact to adjacent emergent vegetation. Treatments will continue at this location as needed.

6/13/23 Flowering Rush observed during survey:



8/2/23 Post-herbicide treatment:



In 2023, grants were offered to fund invasive plant management projects. These grants were offered to support herbicide management of invasive aquatic plants near public access sites. One application was received in 2023, from the Toad Lake Association. This organization continued their work to treat curly-leaf pondweed near the public access area, and throughout the lake. Two grants will be offered in 2024, with priority given to projects near public access areas.

Proposed inspection hour allocations for 2024

Actual hours completed are subject to change based on boater movement, weather, and staff availability. Contributions will be applied at a rate of 15.00 per hour. Hours will be applied as directed by the sponsor, and any unspent funds will be carried over to 2025.

Lake	PWA's (max 2)	# of resorts (max 3)**	2023 Insp. per Hour	2023 Risk Score***	Level	Base Hours 2024	Decon Hours	Adjustments/Carry over*	Total 2024	Notes	
Big Cormorant	2	2	2.38	6.38	5	1000	500	421 carry over	1921		
Detroit	2	3	2.23	7.23	5	1000	1000		2000		
Melissa	1	2	2.17	5.17	4	250	1000		1250		
Bad Medicine	1	3	1.54	5.54	4	500			500		
Cotton	1	0	2.28	3.28	3	250		add 250	500	High Use	
Sallie	1	0	2.44	3.44	3	250		add 250	500	High Use	
Floyd	1	0	2.50	3.5	3	250		add 250	500	High Use	
Ida	1	1	1.24	3.24	3	250			250		
Long	1	1	1.64	3.64	3	250		add 100	350		
Little Floyd	1	0	1.06	2.06	2				200		
Island	1	3	1.43	5.43	5	500			500		
Straight	1	3	0.81	4.81	3	250			250		
Height of Land	2	0	0.34	2.34	2	150			150		
Two Inlets	1	3	2.91	6.91	4	500			500		
Middle Cormorant	1	1	1.25	3.25	3	250			250		
Upper Cormorant	1	1	1.03	3.03	3	250			250		
Tamarac	2	0	0.11	2.11	2					2022 Winterkill has reduced traffic here, will resume inspections as anglers return	
Leif	1	2	2.53	5.53	4	500			500		
Many Point	1	1	0.95	2.95	2	150		add 200	350	Upper watershed priority	
Toad	1	2	2.3	5.3	4	500			500		
Boot	1	2	0.5	3.5	3	250			200		
Total							2,500		11,421		
*Unused inspection hours are carried over from 2022							Level 1 (0-2.2) Lake shares a pool of dedicated inspection hours				
** Based on data from Becker Co. Assessor's office							Level 2 (2.2-2.99) 150 dedicated inspection hours				
# of Public Accesses (max 2) + # of Resorts (max 3) + 2023 Inspections per hour = RISK SCORE							Level 3 (3-4.99) 250 dedicated inspection hours				
							Level 4 (5+) 500 dedicated inspection hours (1 access point)				
							Level 5 (5+) 1000 dedicated inspection hours (Must have 2 access points or more)				

2023 Inspection Results

Lake	Billed Hours**	Inspections Per Hour**	Total Inspections	Entering	Exiting	Courtesy	Plug In %*	Plug In #	Plants/Mud/Water on Arrival %	Plants/Mud/Water on Arrival #	Entering from Infested waters
Big Cormorant	1943.75	2.38	3776	2348	1428	0	0.21%	4	1.02%	24	509
Detroit	1871.75	2.23	3443	2317	1104	22	0.86%	14	2.11%	49	358
Melissa	1108.5	2.17	1337	801	536	0	1.00%	6	0.25%	2	134
Bad Medicine	919	1.54	1419	846	572	1	0.13%	1	1.77%	15	142
Cotton	338.25	2.28	774	495	279	0	3.41%	14	1.01%	5	69
Sallie	374.25	2.44	914	510	404	0	0.51%	2	0.39%	2	144
Floyd	446.5	2.50	1118	709	409	0	0.00%	0	0.99%	7	105
Ida	181.02	1.24	225	134	91	0	0.00%	0	0.00%	0	32
Long	374.75	1.64	616	349	267	0	6.35%	16	0.57%	2	54
Little Floyd	200	1.06	213	122	91	0	0%	0	0.00%	0	7
Island	613.5	1.43	879	466	412	1	0.99%	4	0.64%	3	80
Straight	140	0.81	114	57	57	0	0.00%	0	3.51%	2	11
Height of Land	217.42	0.34	74	49	25	0	5.00%	2	4.08%	2	8
Two Inlets	18.5	2.91	54	35	19	0	0.00%	0	0.00%	0	4
Middle Cormorant	68	1.25	85	50	35	0	0.00%	0	2.00%	1	17
Upper Cormorant	92.5	1.03	96	48	48	0	0.00%	0	0.00%	0	16
Tamarac	44.75	0.11	5	2	3	0	0.00%	0	0.00%	0	0
Lief	304	2.53	771	475	295	1	0.00%	0	0.00%	0	110
Many Point	431.5	0.95	410	222	188	0	0.47%	1	3.60%	8	39
Toad	450.25	2.3	1036	557	479	0	1.62%	8	1.08%	6	56
Pickereel	202.5	0.73	147	92	55	0	3.70%	3	2.17%	2	19
Boot	30	0.5	15	10	5	0	0.00%	0	0.00%	0	2
Totals	10,371**	1.68	17,521	10,694	6,802	25	0.88%	75	1.22%	130 (1.22%)	1916 (17.92%)

*.88% of entering watercraft equipped with drain plugs arrived with the plug installed (2,154 lifts, docks, pontoons, and canoes/kayaks excluded)

** To calculate the number of inspections per hour, total hours are corrected for occasions when 2 inspectors are working together.

2023 Entering Inspection Results- Continued

	ZM	ZM, SWF	ZM, EWM	ZM, EWM, SWF	EWM	SWF	SSW	ZM, SSW	ZM, EWM, SSW	ZM, EWM, Bighead and Silver Carp
Big Cormorant	471	2	9	8	2	0	2	9	6	0
Detroit	301	11	20	0	16	0	0	4	5	1
Melissa	126	2	1	1	1	1	0	0	2	0
Bad Medicine	100	6	3	1	6	1	7	18	0	0
Cotton	59	1	0	1	2	0	1	4	1	0
Sallie	134	2	2	0	0	1	0	3	1	1
Floyd	99	2	2	0	0	0	1	1	0	0
Ida	32	0	0	0	0	0	0	0	0	0
Long	49	1	1	0	1	1	1	0	0	0
Little Floyd	7	0	0	0	0	0	0	0	0	0
Island	54	1	4	0	4	4	0	11	2	0
Straight	8	0	0	0	1	1	0	1	0	0
Height of Land	8	0	0	0	0	0	0	0	0	0
Two Inlets	3	0	0	0	0	0	0	1	0	0
Middle Cormorant	16	0	0	0	0	0	0	0	0	1
Upper Cormorant	16	0	0	0	0	0	0	0	0	0
Tamarac	0	0	0	0	0	0	0	0	0	0
Lief	96	2	0	0	4	0	0	8	0	0
Many Point	14	4	4	0	3	0	3	5	6	0
Toad	37	0	5	0	5	1	0	5	3	0
Pickrel	15	2	0	0	1	0	0	1	0	0
Boot	2	0	0	0	0	0	0	0	0	0
Totals	1,647	36	51	11	46	10	15	71	26	3

2022 Entering Inspection Results- Continued

	Out of State	Same Lake	Not on Survey List	Lake Service Provider	Not on infested waters list	Dock/Lift	Unknown	Storage	Prefers not to answer
Big Cormorant	75	1185	0	1	122	8	244	167	37
Detroit	74	1178	6	27	143	28	130	349	24
Melissa	11	469	0	0	38	8	23	118	0
Bad Medicine	1	340	14	4	222	3	120	0	0
Cotton	7	185	0	0	72	4	13	145	0
Sallie	10	203	0	0	37	8	23	84	1
Floyd	18	203	0	0	36	6	17	324	0
Ida	0	53	0	0	9	0	8	32	0
Long	7	211	1	0	19	0	12	45	0
Little Floyd	0	112	0	0	3	0	0	0	0
Island	23	131	0	2	106	4	11	109	0
Straight	0	30	0	0	10	0	3	3	0
Height of Land	0	22	0	0	14	0	4	1	0
Two Inlets	1	9	0	0	10	0	3	8	0
Middle Cormorant	2	17	0	0	6	0	8	0	0
Upper Cormorant	2	20	0	0	3	1	6	0	0
Tamarac	0	0	0	0	1	0	0	1	0
Lief	1	174	0	0	43	2	14	131	0
Many Point	3	77	7	0	78	0	2	16	0
Toad	6	218	0	0	117	0	45	115	0
Pickerel	0	36	0	0	20	1	1	15	0
Boot	0	7	0	0	1	0	0	0	0
Totals	241	4,880	28	34	1,110	73	687	1,663	62

Element	Activities	2023 Budget	2023 Actual and Notes
1. Outreach and Education	Newspaper Ads, Print Materials, Media Projects, Indoor Ads, Billboard	\$2,450.00	\$1,914.00
2. Inspections	Watercraft Inspectors, Field Supplies	\$232,144.00	\$208,630.00 Did not work the total number of hours budgeted for the year
3. Decontamination	Equipment, Fuel, Truck, Maintenance, Field Supplies, Storage	\$17,600.00	\$20,436.00 Storage fee increase
4. Monitoring/Treatment/Response	Contracted AIS Monitoring, Management Grants, Flowering Rush Pickerel Lake	\$13,000.00	\$9,196.00 Did not award 2 grants in 2023
5. Professional and Technical Services	Coordinator, Office Space, Cell Data, Vehicle Maintenance, Fuel, Trainings	\$85,250.00	\$87,373.00 Wage increase, rent increase
6. Operations, Liability, Administration	Insurance, Office Supplies, Program Administration	\$7,150.00	\$9,107.00
Total		\$357,594.00	\$347,757.00

Income	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
AIS Prevention Aid							170,624					170,624	341,248
Lake Association Match							5000					7,987	12,987
DNR Inspection Grant													0
DNR Public Awareness Grant													0
Fund Balance	130,104												130,104
Misc. Income					11,100				4,935				16,035
Total Income	130,104	0	0	0	11,100	0	175,624	0	4,935	0	0	178,611	500,374
Expense													Total
Education/Outreach**				6,000	6,000	378	636						13,014
Inspections and Supplies*				280	97	404	380				196,469	11000	208,630
Decontamination	1,222	1,238	1,236	1,232	1,629	2,712	2,133	2,664	1,697	1,618	1,805	1,251	20,436
Monitoring, Treatment							4,111	111	4,974				9,196
Professional and Technical	7,223	7,298	7,223	7,223	7,223	7,359	7,273	7,266	7,224	7,616	7,223	7,223	87,373
Administration	3,769											5,338	9,107
Total Expense	12,214	8,536	8,459	14,734	14,949	10,853	14,533	10,041	13,896	9,234	205,497	24,812	347,757

152,617

** \$11,100 in 2023 Education/Outreach expenses represents funds from 16 counties that passed through for the Linder's Angling Buzz Media Project. \$1,914 of Becker County's AIS Prevention funds were used for Education/Outreach in 2023.

*DEC 2023 expenses estimated

Proposed 2024 Budget

Revenue	2024 Proposed	2024 Totals			
MN State AIS Prevention Aid		\$339,887.00	DECONTAMINATION		
MN DNR Inspection Grant			Field Supplies	\$1,000.00	
MN DNR Public Awareness			Fuel (Gas/Oil)	\$2,000.00	
From fund balance		\$52,473.00	Maintenance	\$3,500.00	
Total Revenue			Shop / Storage Fees	\$13,992.00	
Expense			Unit Purchase		
OUTREACH			Utilities	\$1,500.00	
Education & Training	\$500.00		Vehicle Purchase		
Media Collaboration	\$1,200.00		Sub Total		\$21,992.00
Newspaper / Radio			MONITORING & RAPID RESPONSE		
Printed Materials	\$250.00		Management Grants	\$8,000.00	
Signage / Updates	\$500.00		Technical Services	\$6,000.00	
Sub Total		\$2,450.00	Sub Total		\$14,000.00
INSPECTIONS			PROFESSIONAL & TECHNICIAL		
Field Supplies	\$2,500.00		AIS Coordinator	\$70,000.00	
Level 1&2 Inspectors	\$230,018.00		Fuel (Gas/Oil)	\$500.00	
Mahnomen SWCD			Furnishings/Signage		
Recruitment	\$250.00		Office Space	\$5,400.00	
Staff Training Materials	\$250.00		Tech-Phone-Cell Data	\$1,100.00	
Worker's Comp	\$5,000.00		Training & Certification	\$250.00	
Unemployment	\$9,000.00		Vehicle Maintenance/Replacement	\$20,000.00	
Sub Total		\$247,018.00	Sub Total		\$97,250.00
			ADMINISTRATION		
			Program Admin	\$5,000.00	
			Liability Insurance	\$4,500.00	
			Office Supplies	\$150.00	
			Sub Total		\$9,650.00
			Total Expense		\$392,360.00