

2022 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	2022 Expense
1. Outreach and Education	Printed Materials, Display Booth Materials, Television Ads, Bar Coasters	\$2,328.00
2. Inspections	Watercraft Inspectors, Field Supplies, Unemployment, Work Comp	\$239,396.00
3. Decontamination	Equipment, Fuel, Maintenance, Storage	\$17,870.00
4. Monitoring, Treatment, Response	Management Grants, SCUBA Monitoring	\$11,907.00
5. Professional and Technical	Office Space, Cell Data, Vehicle Maintenance, Fuel, Training	\$82,646.00
6. Operations and Liability	Insurance, Office Supplies	\$5,716.00
Total		\$359,863.00

**Based on estimates of Dec 2022 expenses*



Contents

Outreach and Education.....	3
Watercraft Inspection.....	4-6
Watercraft Decontamination.....	7
Monitoring and Management.....	8-10
Proposed 2023 Inspection Hour Allocations.....	11
2022 Inspection Results.....	12
Breakdown of AIS found in waters reported as the last place an entering watercraft was used....	13-14
2022 Budget vs. Actual Expense.....	15
2022 Monthly Income and Expense Report.....	16
Proposed 2023 Budget.....	17



Dr. Nick Phelps presented new information from the Minnesota AIS Research Center at M-State on 6/9/2022

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 2022, presentations were provided at 4 lake association meetings. AIS prevention messages were also promoted via electronic billboard, bar coasters, bait bags and various websites. Other activities completed in 2022 include:

- An interactive map showing Zebra Mussel, Curly-leaf Pondweed and Flowering Rush infestations was updated on the Becker County website.
- 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.
- 2,000 bait bags were distributed to local bait dealers in May 2022. 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 Becker, Hubbard and Ottertail County COLA and other organizations to bring the University of Minnesota AIS research center to Detroit Lakes for a showcase of current projects.
- 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 2022. Five 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 14 and were finished on October 15, 2022. Watercraft inspectors assisted boaters with cleaning and draining 1,904 watercraft that were found with water, plants, mud, or invasive species when exiting Becker County lakes.

There were 2 zebra mussel violations reported to law enforcement in 2022.

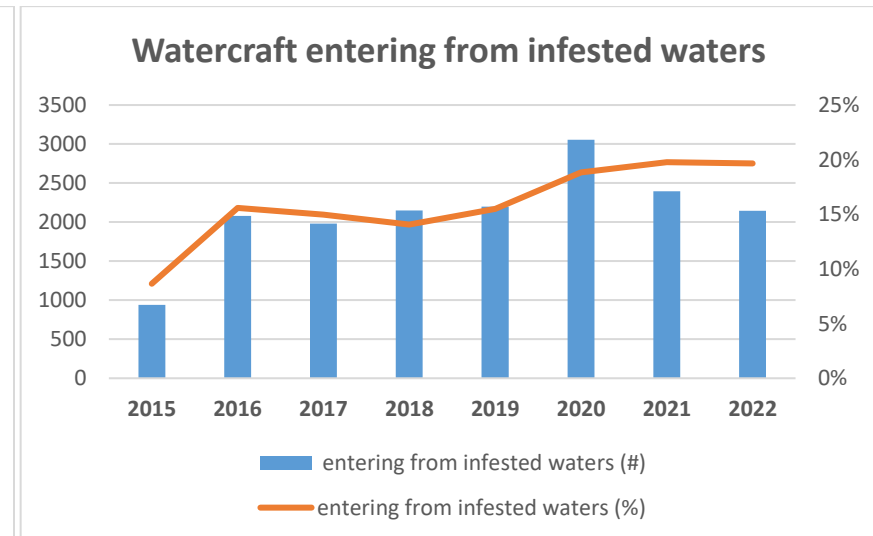
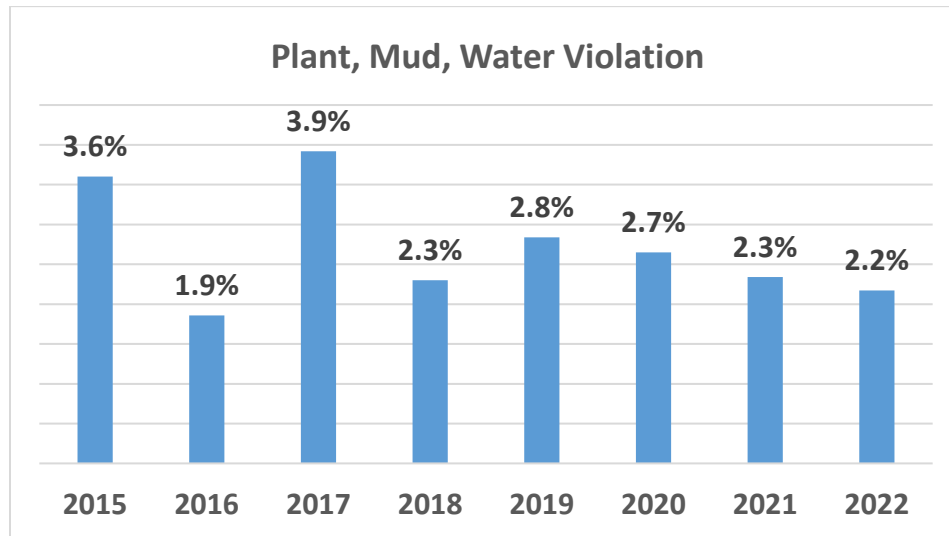
Inspection hours were allocated to individual lakes using a risk score based on the number of access ramps, resorts and the number of inspections per hour completed in 2021. Contributions from lake associations allowed for over 600 additional inspection hours at 2 lakes. See page 11 for proposed 2023 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 12-14. These include a breakdown of the responses provided to inspectors when boaters were asked where they last used their watercraft, just prior to the lake where the inspection is taking place.

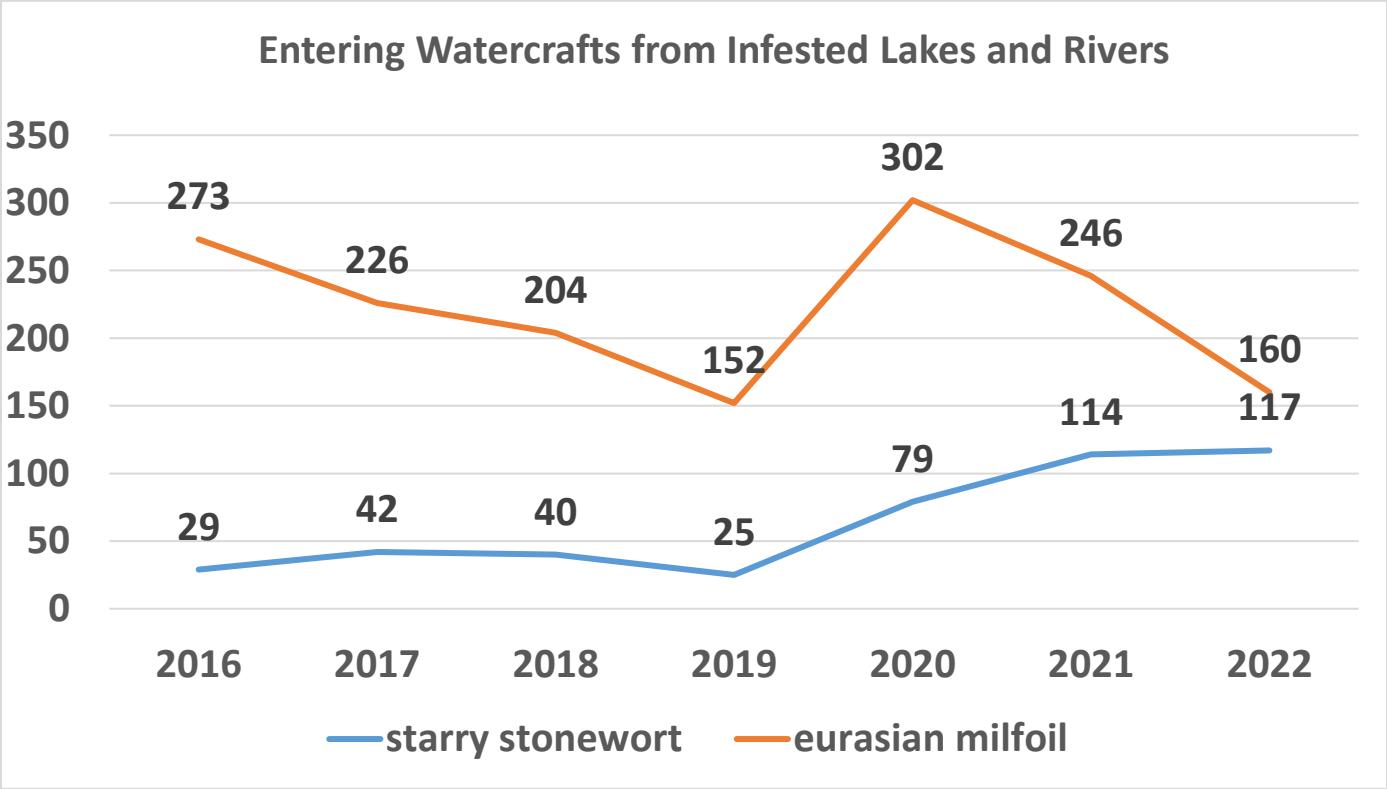


On 8/6/2021, a watercraft inspector removed this fragment of Eurasian Milfoil from a boat trailer arriving at Floyd Lake. The boater was arriving from Lake Minnewashta in Carver County

Watercraft Inspection continued

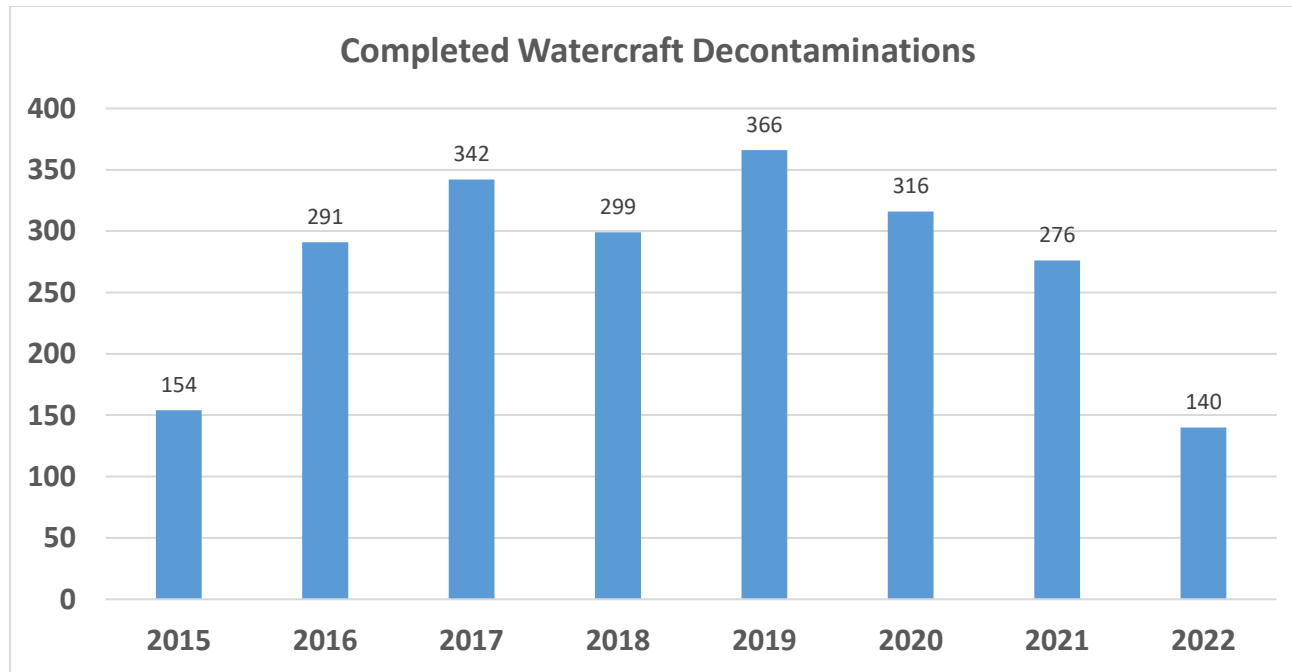
- 12,843 inspection hours were completed in 2022 at 25 public accesses in Becker County.
- 18,413 inspections were completed.
- Inspectors reported 237 watercraft arriving with plants, water or mud. (2.17% of entering watercraft)
- Inspectors reported 74 watercraft arriving with drain plugs installed. (.83% of watercraft equipped with plugs)
- In 2022, 2,146 boaters reported that they had last used their watercraft at a lake or river on MN’s list of AIS-infested waters. (19.65% of entering watercraft)





3. Watercraft Decontamination

Becker County completed 140 hot-water decontaminations in 2022. Watercraft decontamination services were offered at Detroit South, Melissa, and Big Cormorant West public access sites from mid-May to September. Decontamination services were available through mid-October at Detroit South as weather allows. In 2023, decontamination services will again be provided at the Becker SWCD shop location and these high-use access sites.



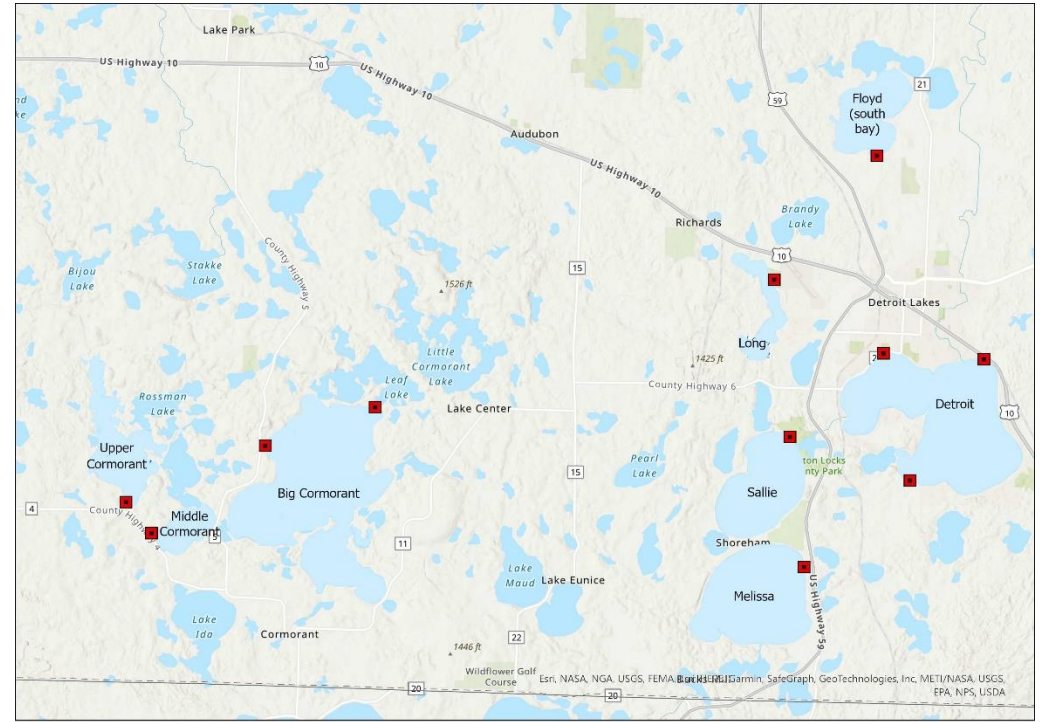
4. Monitoring and Management

Invasive plant monitoring efforts were completed with help from volunteers and LimnoPro llc., a MN-based 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 2022 following approximately 55 combined hours of sampling. Access sites listed below were checked by this method in August and September 2022.



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	Pickereel	
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 high-risk lakes were added in 2022. On September 13-16, 2022, 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.



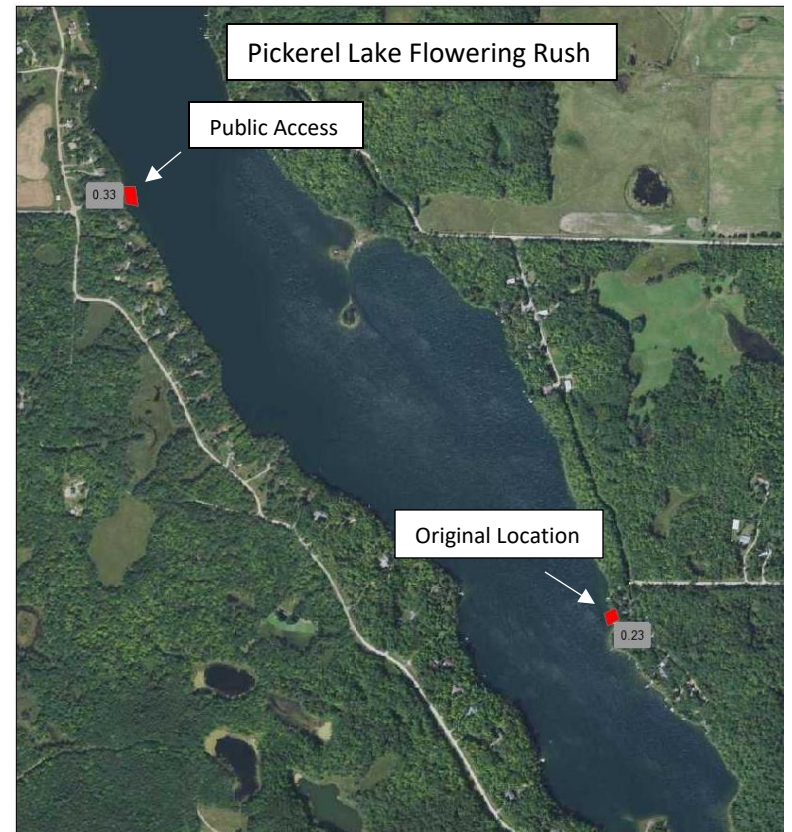
■ 2022 SCUBA Surveys

Docks can be inspected in late fall as they are removed from lakes to identify zebra mussel infestations. Dock equipment was inspected at the public accesses of the lakes listed below in October and November.

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

On 8/20/22, 9 volunteers participated in the 4th annual “Starry Trek” monitoring event. In Becker County, these volunteers searched 10 public access sites at Cotton, Tamarac, Buffalo, Little Floyd, Floyd, Melissa, Sallie, Ida, and Long Lakes. This event is hosted by The University of Minnesota’s AIS research center, and it was attended by 233 volunteers across the state. These volunteers searched for starry stonewort and other AIS at 289 public access sites on 248 water bodies across Minnesota.

In June 2022, DNR AIS Specialist Mark Ranweiler surveyed flowering rush sites on Pickerel Lake. A small patch was noted near the public access in the same location as previous years, but the original location on the east shore did not have any visible growth. A permit was issued to treat the location near the public access. Herbicide treatments were completed in July and August.



In 2022, management grants were offered to support herbicide management of invasive aquatic plants near public access sites. Two applications were received in 2022, and each applicant received funds to assist with their management projects. The Toad Lake Association continued their work to treat curly-leaf pondweed. The Pelican River Watershed District used their funds to continue management of curly-leaf pondweed at Detroit Lake. Two grants will be offered in 2023, with priority given to permitted projects near public access areas.

Proposed inspection hour allocations for 2023

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 2024.

Lake	PWA's (max 2)	# of resorts (max 3)**	2022 Insp. per Hour	2022 Risk Score***	Level	Base Hours 2023	Decon Hours	Adjustments/Carry over*	Total 2023	Notes	
Big Cormorant	2	2	2.48	6.48	5	1000	500	531.25 carry over	2031.25	High use, ZM infested, 2 accesses	
Detroit	2	3	1.76	6.76	5	1000	1000		2000	High use, ZM infested, 3 accesses, 2 Level 2 Inspectors	
Melissa	1	2	2.06	5.06	4	250	1000		1250	High use, ZM infested, 2 Level 2 Inspectors	
Bad Medicine	1	3	1.51	5.51	4	500			500		
Cotton	1	0	1.33	2.33	2	150		add 250	400		
Sallie	1	0	1.69	2.69	2	150		add 350	500	ZM infested	
Floyd	1	0	2.08	3.08	3	250		add 250	500	ZM infested, high use	
Ida	1	1	1.38	3.38	3	250		add 100	350	ZM infested, high use	
Long	1	1	1.09	3.09	3	250		add 100	350	moderate use	
Little Floyd	1	0	0.73	1.73	1	200			200	ZM infested	
Island	1	3	1.29	5.29	4	500			500	High fall traffic	
Straight	1	3	1.33	5.33	4	500			500	low fall traffic	
Height of Land	2	0	1.17	3.17	3	250			250		
Two Inlets	1	3	1.53	5.53	4	500			500	top of watershed priority	
Middle Cormorant	1	1	0.49	2.49	2	150		add 250	400		
Upper Cormorant	1	1	0.76	2.76	2	150		add 250	400		
Tamarac	2	0	0.77	2.77	2	250			250	may add hours for north access	
Leif	1	2	1.49	4.49	3	250			250		
Many Point	1	1	1.26	3.26	3	250		add 100	350	high fall traffic, may add hours	
Toad	1	2	2.25	5.25	4	500			500		
Boot	1	2	0.775	3.76	3	250		subtract 100	150	Saturday resort traffic is priority	
Total						7,550	2,500		12,131		
*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) + 2021 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)				

2022 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	1960.75	2.48	4220	2595	1645	0	0.24%	5	2.26%	58	582
Detroit	2052.25	1.76	2295	1425	878	3	0.68%	7	1.34%	19	293
Melissa	1196.5	2.06	1240	670	569	5	0.95%	5	1.04%	7	134
Bad Medicine	837	1.51	1267	726	545	0	0.16%	1	4.13%	30	127
Cotton	503.25	1.33	671	442	238	0	1.18%	4	0.90%	4	55
Sallie	817.5	1.69	1384	810	580	0	0.00%	0	3.33%	27	218
Floyd	482.5	2.08	1005	651	360	1	0.00%	0	0.62%	4	91
Ida	302.25	1.38	417	225	193	0	3.82%	7	3.54%	8	59
Long	384	1.09	420	290	132	0	0.00%	0	0.00%	0	61
Little Floyd	252	0.73	186	111	75	0	0%	0	0.00%	0	19
Island	705	1.29	912	510	406	0	1.94%	9	3.13%	16	88
Straight	318	1.33	422	246	177	0	0.56%	1	1.22%	3	31
Height of Land	299.25	1.17	349	179	170	0	0.00%	0	6.70%	12	24
Two Inlets	456.25	1.53	698	439	261	0	1.61%	6	0.68%	3	74
Middle Cormorant	273	0.49	134	85	49	0	2.74%	2	1.18%	1	25
Upper Cormorant	352.5	0.76	268	147	121	0	1.54%	2	0.68%	1	45
Tamarac	330.5	0.77	256	139	117	0	4.44%	6	2.16%	3	15
Leif	296.25	1.49	443	273	171	1	4.31%	9	3.66%	10	62
Many Point	385	1.26	487	261	226	0	0.00%	0	1.53%	4	51
Toad	519.25	2.25	1173	644	528	1	1.57%	9	2.33%	15	83
Boot	120	0.775	93	53	40	0	2.27%	1	22.64%	12	9
Totals	12,843	1.62	18,413	10,921	7,481	11	0.83%	74	2.17%	237	2,146
Corrected Hours**	11,343										
0.83% of entering watercraft equipped with drain plugs arrived with the plug installed (1,989 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.											

2022 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	522	16	9	2	3	2	3	5	15	5
Detroit	237	10	14	1	9	1	1	9	6	5
Melissa	113	5	2	1	2	0	1	3	5	2
Bad Medicine	93	4	4	1	4	2	3	9	7	0
Cotton	48	3	1	0	0	0	0	0	3	0
Sallie	198	7	4	0	3	0	0	2	2	2
Floyd	84	3	2	0	0	0	0	2	0	0
Ida	52	3	1	0	0	0	0	1	1	1
Long	54	1	4	0	1	0	0	0	0	1
Little Floyd	19	0	0	0	0	0	0	0	0	0
Island	65	5	4	1	4	2	1	3	1	2
Straight	24	0	3	0	0	1	0	1	2	0
Height of Land	19	0	0	0	0	0	1	2	2	0
Two Inlets	26	3	13	0	18	0	1	6	1	6
Middle Cormorant	25	0	0	0	0	0	0	0	0	0
Upper Cormorant	43	1	0	0	0	1	0	0	0	0
Tamarac	13	0	1	0	0	0	1	0	0	0
Lief	57	1	1	0	1	0	1	0	1	0
Many Point	29	0	7	0	4	0	3	2	5	1
Toad	66	2	3	1	4	1	1	2	1	2
Boot	8	0	0	0	0	0	0	1	0	0
Totals	1,795	64	73	7	53	10	17	48	52	27
ZM= Zebra Mussels SWF= Spiny Water Flea EWM= Eurasian Water Milfoil SSW= Starry Stonewort										

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	53	1108	0	76	168	24	129	455	0
Detroit	32	639	5	61	119	11	96	168	1
Melissa	9	314	0	4	37	6	43	123	0
Bad Medicine	3	261	0	4	248	4	79	0	0
Cotton	7	132	0	0	76	9	34	129	0
Sallie	4	298	7	4	66	6	174	33	0
Floyd	11	164	0	0	49	7	6	323	0
Ida	2	107	0	1	16	1	37	2	0
Long	6	78	1	8	16	2	3	114	1
Little Floyd	0	34	0	0	17	0	0	41	0
Island	16	131	0	0	170	4	22	79	0
Straight	9	130	0	0	50	1	25	0	0
Height of Land	2	80	0	0	51	0	2	20	0
Two Inlets	27	86	0	31	85	2	12	122	0
Middle Cormorant	2	35	0	0	12	0	11	0	0
Upper Cormorant	3	69	0	1	13	0	16	0	0
Tamarac	1	60	0	0	37	0	5	21	0
Lief	8	116	0	0	24	1	19	41	2
Many Point	7	91	0	0	91	0	3	18	0
Toad	0	242	0	0	141	0	36	142	0
Boot	1	23	0	0	14	0	6	0	0
Totals	203	4,198	13	190	1,500	78	758	1,831	4

Element	Activities	2022 Budget	2022 Actual and Notes
1. Outreach and Education	Newspaper Ads, Print Materials, Media Projects, Indoor Ads, Billboard	\$3,000.00	\$2,328.00
2. Inspections	Watercraft Inspectors, Field Supplies	\$241,193.00	\$239,396.00
3. Decontamination	Equipment, Fuel, Truck, Maintenance, Field Supplies, Storage	\$16,600.00	\$17,870.00 Storage fee increase
4. Monitoring/Treatment/Response	Contracted AIS Monitoring, Management Grants, Flowering Rush Pickerel Lake	\$14,500.00	\$11,907.00
5. Professional and Technical Services	Coordinator, Office Space, Cell Data, Vehicle Maintenance, Fuel, Trainings	\$75,140.00	\$82,646.00 Wage increase, rent increase
6. Operations, Liability, Administration	Insurance, Office Supplies, Program Administration	\$7,600.00	\$5,716.00
Total		\$358,033.00	\$359,863.00

Income	1-Jan	1-Feb	1-Mar	1-Apr	1-May	1-Jun	1-Jul	1-Aug	1-Sep	1-Oct	1-Nov	1-Dec	Total
AIS Prevention Aid							170,925					170,925	341,850
Lake Association Match*								5,125				6,297	11,422
DNR Inspection Grant													
DNR Public Awareness Grant													
Fund Balance	136,695												136,695
Misc. Income					10,840								10,840
Total Income	136,695				10,840		170,925	5,125				177,222	500,807
Expense													
Education/Outreach**	99			6,283	6,000	150	636						13,168
Inspections and Supplies				347	355	288		117	192,851		45,438		239,396
Decontamination/Shop Storage	1,195	1,305	1,205	1,202	1,186	1,574	1,619	1,728	2,420	1,543	1,670	1,223	17,870
Monitoring/Treatment							7,142	22			4,743		11,907
Professional and Technical	6,847	6,886	6,847	6,900	6,847	6,993	6,932	6,910	6,892	6,918	6,847	6,847	82,646
Administration	4,085	131	189	353	124	83	81	157	163	95	155	100	5,716
Total Expense	12,226	8,302	8,241	15,085	14,512	9,088	16,410	8,934	202,326	8,556	58,853	*8,170	370,703

** \$10,840 in 2022 Education/Outreach expenses represents funds from 16 counties that passed through for the Linder's Angling Buzz Media Project.

\$2328 of Becker County's AIS Prevention funds were used for Education/Outreach in 2021.

*DEC 2022 expenses estimated

Proposed 2023 Budget

Revenue	2023 Proposed	2023 Totals			
MN State AIS Prevention Aid		\$341,247.00	DECONTAMINATION		
MN DNR Inspection Grant			Field Supplies	\$1,000.00	
MN DNR Public Awareness			Fuel (Gas/Oil)	\$2,000.00	
From fund balance		\$16,347.00	Maintenance	\$3,500.00	
Total Revenue			Shop / Storage Fees	\$9,600.00	
Expense			Unit Purchase		
OUTREACH			Utilities	\$1,500.00	
Education & Training	\$500.00		Vehicle Purchase		
Media Collaboration	\$1,200.00		Sub Total		\$17,600.00
Newspaper / Radio			MONITORING & RAPID RESPONSE		
Printed Materials	\$250.00		Management Grants	\$8,000.00	
Signage / Updates	\$500.00		Technical Services	\$5,000.00	
Sub Total		\$2,450.00	Sub Total		\$13,000.00
INSPECTIONS			PROFESSIONAL & TECHNICAL		
Field Supplies	\$1,500.00		AIS Coordinator	\$70,000.00	
Level 1&2 Inspectors	\$217,144.00		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	\$8,000.00		Vehicle Maintenance/Replacement	\$8,000.00	
Sub Total		\$232,144.00	Sub Total		\$85,250.00
			ADMINISTRATION		
			Program Admin	\$2,500.00	
			Liability Insurance	\$4,500.00	
			Office Supplies	\$150.00	
			Sub Total		\$7,150.00
			Total Expense		\$357,594.00