

HENNEPIN COUNTY
MINNESOTA

Aquatic invasive species
prevention program
2023 Accomplishments Report



Preventing the spread of aquatic invasive species: 2023 accomplishments

History and context

Hennepin County has received funding from the State of Minnesota since 2014 to implement plans to stop the introduction or limit the spread of aquatic invasive species (AIS). In 2019, county staff engaged more than 60 stakeholders in evaluating the AIS prevention program, guidelines, and funding options. From this evaluation, adjustments were made to the county's program, guidelines, and funding options. The county's [AIS prevention aid guidelines](#) were also adjusted. These guidelines are directing the use of funds received from 2020 through 2025.

In Hennepin County, there are 59 public accesses and 951 trailer launch parking spots (50 trailer launches and 9 carry-in). The public access administrators include 15 cities, two park districts, Hennepin County Environment and Energy, Minnesota Department of Natural Resources Division of Parks and Trails, and the National Park Service.

AIS are "non-native, aquatic organisms that invade water beyond their natural historic range" (Minnesota Statute 477A.19). These species may harm economic, environmental or human health and threaten our natural resources. A list of prohibited, regulated and unregulated non-native species is available at dnr.state.mn.us/invasives/laws.

2023 efforts:

In 2023, Hennepin County received \$313,896 to prevent the introduction or limit the spread of aquatic invasive species. Following the AIS prevention aid guidelines, this funding was distributed with the following administrative processes: \$100,000 towards expanding existing countywide watercraft inspection programs; The remaining annual funding is allocated approximately ½ through competitive pass-through grants; and approximately ½ other initiated projects.

The following provides a summary of the project accomplishments in 2023.

County project partnerships

The county leveraged many partnerships in 2023. Details about many of these partnerships are contained within this report.

Organizations partnered with in 2023	2015 to 2022
Lake associations – 3	9
Non-Profits – 2	5
Municipalities – 0	10
Watersheds/WMO/Conservation District - 2	4
Park Districts – 2	2
Private Companies - 8	10
County departments – 2	2
Research University Departments - 2	4
Multi-counties projects – 2	3

Presentations about AIS by county staff

Hennepin County staff conducted presentations about aquatic invasive species at nine events, trainings, or meetings in 2023. These presentations reached approximately 200 people.

- Lake Independence Association – April 15
- University of Minnesota AIS Detector group – May 5 and 12
- Christmas Lake Association – May 16
- Bush Lake – June 27
- University of Minnesota AIS Detectors – September 8
- Mitchell Lake Association – October 5
- Lake Minnetonka Conservation District – October 11
- Countywide environmental education network – October 16

Early detection

Early detection efforts involve training citizen volunteers to work alongside scientists to conduct lake surveys as well as to look for signs of aquatic invasive species in their daily activities. These efforts focus on early detection of AIS where management options may still be available.

AIS identification workshop

In June, Hennepin County partnered with the Bush Lake Izaak Walton League Chapter and held an AIS identification workshop on Bush Lake. Twelve people participated in this workshop which included an indoor presentation and review of resin preserved and dried AIS samples. This was followed-up with in-lake and shoreline identification of aquatic plants existing on Bush Lake.



[A short video reel](#) was created to summarize this workshop. It was shared on both Bush Lake Izaak Walton League and Hennepin County Environment and Energy Instagram channels. It reached 130 accounts on Hennepin Environment's Instagram on July 11.

AIS detector classes



In May, Hennepin County sponsored two University of Minnesota AIS Detector classes, held in Minneapolis and Wayzata. There were 27 total class participants. Of the participants, 65% reported they intended to start activities related to

AIS response (prevention, education, management, etc.) and 75% indicated they enjoyed the class. These volunteers reported 237 hours of service in Hennepin County in 2023.

AIS on-lake training and survey



In September, five Lake Independence citizen's association members participated in an AIS on-lake training/survey with a limnologist. This group learned the survey techniques and some identification tips. No new AIS were found. A partial survey

around most of the lake showed how zebra mussels have significantly expanded in 2023.

Rice Lake surveys

Rice Lake Association members have been surveying their lake for AIS each year since they were trained through the AIS Early Detection and Prevention program in 2015. They divided the lake into 14 different areas and monitored from June to September of 2023. Curly-leaf pondweed was identified in June, but they were all surprised not to find any Eurasian watermilfoil on the monitoring events, which is usually identified. They also recorded six native species.

Early detection assistance

When questions come in from the network of volunteers, trained AIS professionals from Bolton & Menk are available to provide quick and personal answers. This season they provided crayfish identification and in late October assisted the City of Eden Prairie and Riley-Purgatory Bluff Creek Watershed District in identifying a new plant that had infested a stormwater pond in Eden Prairie after excavation maintenance. The new plant infestation was confirmed to be Floating Marsh Pennywort, *Hydrocotyle ranunculoides*. This plant has been observed for sale in the county's garden centers and is an extremely fast-growing plant. It is listed as a prohibited plant in Wisconsin but is not regulated in Minnesota. It may freeze-out over the winter, so the city of Eden Prairie is working with the Minnesota DNR, Riley-Purgatory Bluff Creek Watershed District, and the county on continued assessment and next steps.

A new infestation of Eurasian watermilfoil was discovered this summer in Sweeney Lake, a recreational and scenic waterbody in Golden Valley. Thanks to its early discovery during a routine aquatic plant survey, the action of the lake community, and an established AIS Rapid Response Plan by Bassett Creek Watershed Management Commission, a prompt and coordinated response was engaged to help prevent the spread of this AIS. The milfoil was treated five days after discovery. Unfortunately, additional milfoil was identified later in the season and will require further follow-up in 2024.



Photos provided by Bassett contractor

Boat access redesign and boat cleaning stations

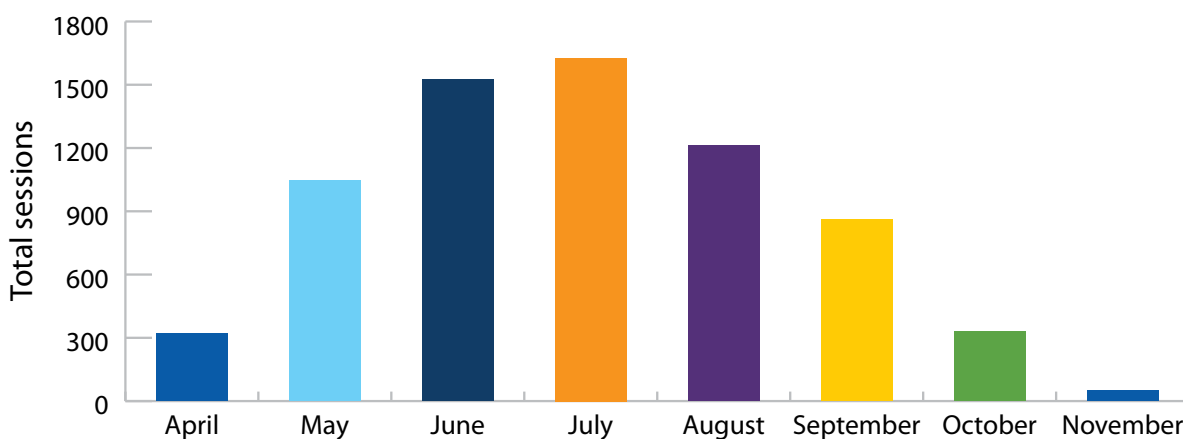
Having available space and tools for AIS prevention actions are common barriers boaters state for not taking correct prevention actions. The county has established processes to initiate access redesign projects aimed at reducing these barriers and utilizing behavior change psychology to help create social norms for AIS prevention. Any access administrator can call county staff to discuss possible projects at any time of the year. Current strategies include: the CD3 waterless cleaning system, which provides the tools to facilitate the actions; pavement markings to influence traffic flow, designated locations to take AIS prevention measures; and signs to prompt the desired behaviors. County staff will work in cooperation with access administrators to determine which approach(es) work best with their access. Currently, 19 accesses have what is considered a high-level redesign in the county including a CD3 station.

In 2023, county CD3 stations recorded 14,067 total tool uses throughout the county. The first four stations that were installed in 2017 stopped reporting data in 2023 due to 5g wireless data changes. These stations typically record around 10,000 tool uses per year, so the total tool use in 2023 was approximately 25,000 which is typical of past seasons. With the extensive baseline data available, the county is currently not planning to fund reconnection of the pilot stations in 2024, but we hope to fund reconnection every 2 to 3 years depending on countywide stakeholder preferences. We received data from 15 stations in 2023.



2023 CD3 tool use at 15 reporting stations

	Air	Brush/ Weed Hook	Grabber	Light	Plug Wrench	Vacuum
Tool use counts	3,623	1,690	3,137	1,125	2,959	2,073
Percent of overall tool uses	25%	12%	21%	8%	20%	14%



Inspections and decontamination

The county continued to work with local partners including Three Rivers Park District, Minneapolis Park and Recreational Board, and the Christmas Lake Homeowners Association to supplement and enhance existing watercraft inspection and decontamination programs. . This is a strong partnership which uses county funding to increase watercraft inspection hours, number of inspections completed per year, and number of public accesses on lakes countywide.

Pass-through grant watercraft programs

Two additional watercraft programs were administered through the county pass-through grant process.

- WaterGuards staff inspections included 723.5 hours of educational encouragement and watercraft inspections utilizing WaterGuards staff at 15 public accesses.
- Waterfront Restoration ambassador staff worked 532 hours at four different accesses. It is noteworthy that ambassadors are the only watercraft AIS prevention program approved at the Lake Minnetonka Surfside public access. Significant increases were observed in boaters initiating self-inspections from 52% in 2022 to 94% in 2023.

Inspection data and summaries

These statistics are from the MN DNR Watercraft Inspection Program database:

49,315

watercraft inspection interactions

(boater AIS compliance rate per access entrance was 98.52%)

39,085

(79.25%) of county watercraft inspections were conducted by local stakeholders (park districts, county, cities, lake associations).

County AIS funding accounted for 37% of all countywide inspections.

58%

of all public accesses with trailer launching availability have at least a part time access inspection program.

44%

of accesses with trailer launching have a CD3 station at exiting locations.

This table summarizes the hours and inspections funded solely from the county AIS state aid.

Bde Maka Ska

Minneapolis Park and Recreation Board

- 895 hours, 410 inspections

Bryant Lake

Three Rivers Park District

- 992 hours, 992 inspections

Bush Lake

WaterGuards, LLC

- 71 hours, 9 inspections

Christmas Lake

Christmas Lake Homeowners Association

- 477 hours, 533 inspections

Eagle Lake

WaterGuards, LLC

- 52.5 hours, 51 inspections

Fish Lake

Three Rivers Park District

- 1,444 hours, 2,926 inspections

Lake Harriet

Minneapolis Park and Recreation Board

- 198 hours, 134 inspections

Little Long Lake

Three Rivers Park District

- 895 hours, 410 inspections

WaterGuards, LLC

- 16 hours, 7 inspections

Long Lake

Waterfront Restoration, LLC

- 113 hours, 229 interactions

Medicine Lake

Three Rivers Park District

- 1,532 hours, 4,740 inspections

Mississippi River – Point Park

Waterfront Restoration, LLC

- 77 hours, 234 interactions

Lake Minnetonka – Carsons Bay

WaterGuards, LLC

- 98 hours, 260 inspections

Lake Minnetonka – Surfside Park

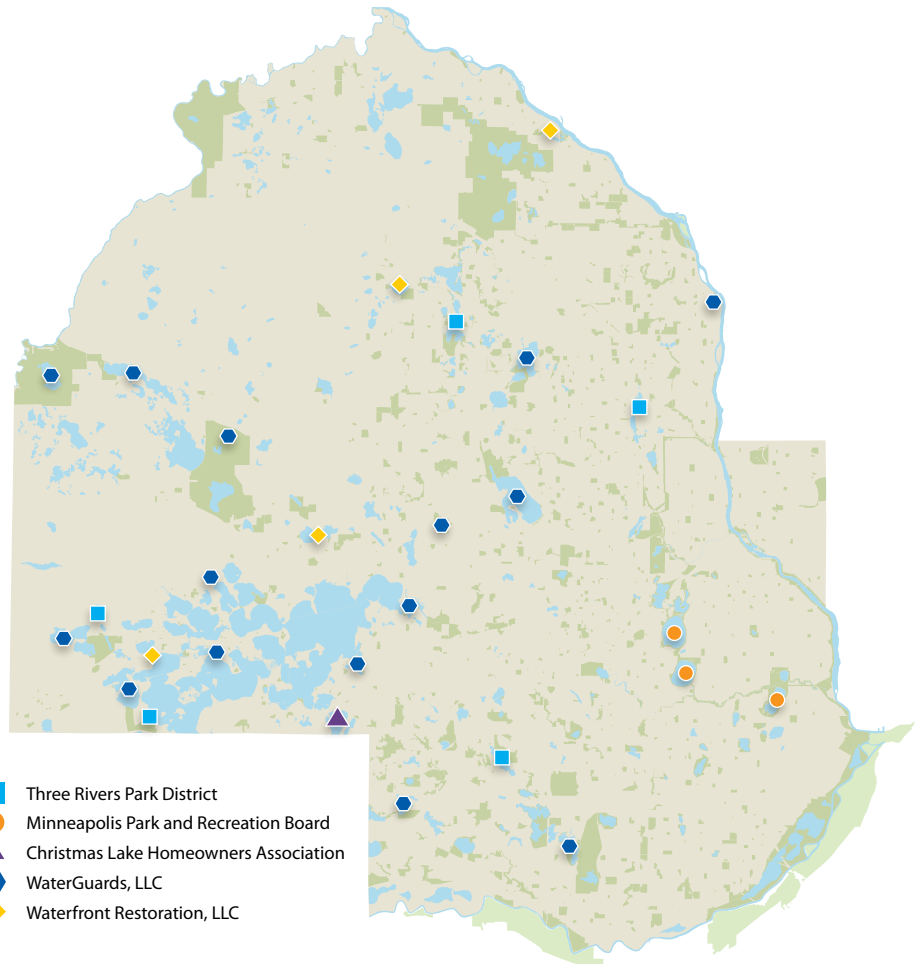
Waterfront Restoration, LLC

- 206 hours, 957 interactions

Lake Minnetonka – Grays Bay

WaterGuards, LLC

- 72 hours, 567 inspections



Lake Minnetonka – Halstead Bay

WaterGuards, LLC

- 72 hours, 219 inspections

Lake Minnetonka – North Arm

WaterGuards, LLC

- 60 hours, 173 inspections

Lake Minnetonka – Regional Park

Three Rivers Park District

- 1,230 hours, 3,648 inspections

Lake Minnetonka – Spring Park

WaterGuards, LLC

- 52 hours, 155 inspections

Mississippi River Park

WaterGuards, LLC

- 16 hours, 3 inspections

Mitchell Lake

WaterGuards, LLC

- 36 hours, 6 inspections

Lake Nokomis

Minneapolis Park and Recreation Board

- 654 hours, 690 inspections

Parkers Lake

WaterGuards, LLC

- 35 hours, 5 inspections

Lake Rebecca

WaterGuards, LLC

- 22 hours, 17 inspections

Lake Sarah

WaterGuards, LLC

- 51 hours, 172 inspections

Spurzem Lake

WaterGuards, LLC

- 24 hours, 4 inspections

Twin Lake

Three Rivers Park District

- 156 hours, 140 inspections

Weaver Lake

Waterfront Restoration, LLC

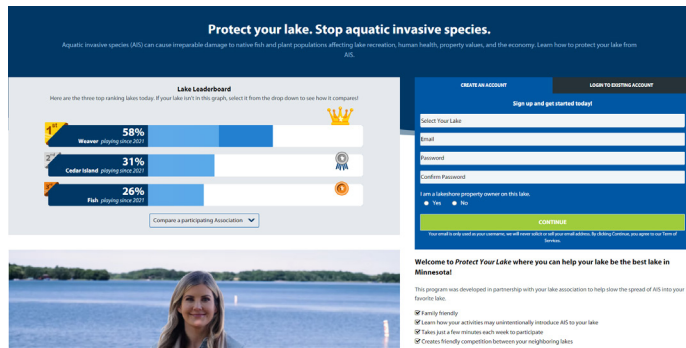
- 127 hours, 205 interactions

Whaletail Lake

WaterGuards, LLC

- 43 hours, 29 inspections

Lake Pledge



The county piloted Lake Pledge as a website and app late in the 2021 boating season with lakeshore homeowners on several lakes. The primary focus of Lake Pledge is to educate and obtain a pledge from lakeshore residents to take actions that better prevent the introduction of AIS into lakes they live by, in which pledge actions are specifically tailored to how they recreate. In 2022, this program was opened-up to all lake users in the county to take the pledge.

This program incorporates the important concept of gamification with five available virtual badges for the users to obtain. To receive all five badges, users must reach each of the following:

- Taking the pledge for their specific activities
- Getting their entire household/family to take the pledge
- Pledging to do one extra activity
- Pledging all 18 activities, and
- Sharing the website/App.

Unlocking these fun and rewarding badges can fuel a sense of accomplishment, act as milestones marking progress, and marking the journey to becoming more AIS aware.

At the end of 2023, a total of 794 people signed into Lakepledge.com and 624 completed the pledge for their activities (79% success rate). Pledges have been made on 23 different lakes and the Mississippi River. Depending on the percentage of homes pledging, participating lakes can obtain the Lake Titles of Beginner, Intermediate, Informed, Advanced, Expert, and Legendary. Currently, the county now has two lakes that obtained the AIS Prevention Title of "Expert" (Christmas and Weaver).

In 2023, Christmas Lake Homeowner's Association undertook peer-to-peer outreach to promote Lake Pledge as an incentive to increase funds for their public access watercraft inspection program. Their outreach resulted in 78% of all lakeshore homes taking the pledge and a total of 174 individuals who recreate on the lake to take the pledge!



Education projects

Three educational projects were started in 2023 with anticipated completion in 2024.



Absolute Science Studios is creating an elevated 3D printing of four different AIS to be installed at public accesses. This will be an innovative 3D model and very realistic in size and appearance to maximize engagement. The first pilot is planned to be installed in early spring of 2024.

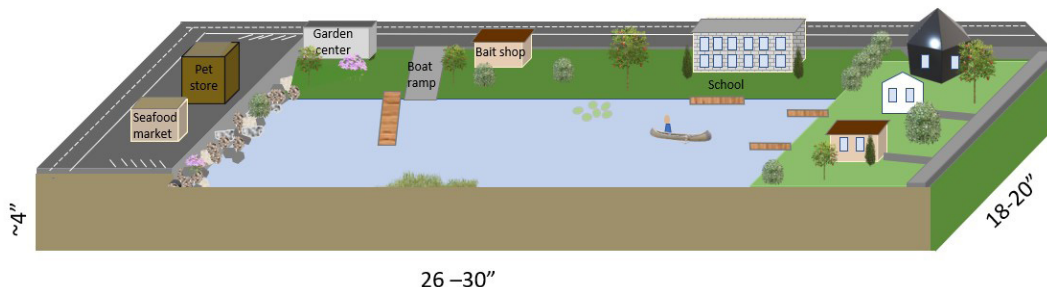
ATTENTION ANGLERS – STOP AQUATIC HITCHHIKERS!
ATENCIÓN PESCADORES – ¡DETENGAN A LOS POLIZONES ACUÁTICOS!
CEEETOOM COV NUU NTSES – CHEEM KOM TXHOB MUJ COV DEJ NROJ TSUAG THIAB TSHIAJ DEG KIS!

Before leaving take these steps: Do your part to prevent the spread of aquatic invasive species.
 Ponga su granito de arena para evitar la propagación de especies acuáticas invasoras. Antes de salir tome estas medidas:
 Ua ntej koj tawm mus tsev ua raws li cov lus qhia no. Ua koj li ntiag haujwv cheem kom tuhob muaj dej nroj tsuag, tshiaj deg kis.

-  **Clean your gear. Remove plants, mud and debris.**
 Limpie su equipo. Retire las plantas, el barro y los residuos.
 Tia koj cov khoom nuv kom huasi, tshem Nroj tsuag, av rikos, thiab tej yam khoom tiag kom huasi.
-  **Dispose of unwanted bait, fish parts, and packing materials in the trash.**
 Tire a la basura la camada sobrante, los restos de pescado y el material de embalaje.
 Muaj cov kab nuv, tej nte nte siv nuv tsiag, thiab tej khoom ntim portseg havv thooob khob nyab.
-  **Never release bait in the water because it can threaten the health of our fisheries.**
 Nunca amaje camada al agua porque puede poner en peligro la salud de nuestras pesquerías.
 Tsis tuhob too koj cov kab nuv nte tse hauv pas dej em nuv yuav ua tau lub pas dej thiab tej nte nyob tsi haum xeeb.
-  **To Keep leftover bait, drain bait container water on shore and replace with bottled or tap water.**
 Para conservar la camada no utilizada, vacíe el agua del depósito de camada en la orilla y sustitúyala por agua embotellada o de la canilla.
 Khaws cov kab nuv koj siv tsiag, tse cov dej portseg ntim ntag thiab muaj dej tshab los hloov xws li cov poom dej lossis cov ntim pem tsev tsuaj.

Aquatic invasive species prevention takes all of us. Show your commitment at lakepledge.com
 Prevenir la proliferación de especies acuáticas invasoras es cosa de todos. Muestre su compromiso en lakepledge.com.
 Qhov cheem kom tuhob muaj cov dej nroj tsuag thiab tshiaj deg kis, yov yuav siv sawdaws kev koomsab.
 Thov qhia kev koomsab tau ntawm lakepledge.com

County staff are partnering with Bassett Creek Watershed Management Commission to design, fabricate, and install new, updated and consistent signage on AIS prevention measures for fishing piers and carry-in access sites throughout the Watershed. The design has been completed and the county and Watershed will work with local partners to install in 2024.



The county awarded a grant to Bolton & Menk, Inc. to create a portable interactive AIS display prototype that can be replicated and used countywide at events, water accesses, etc. Discussions have been completed with county educators and the preliminary draft has been reviewed. This display will be educational and interactive for all ages and will promote the concept that we all have a role for preventing the spread of AIS by showing the connection between numerous pathways.

Prevention via additional pathways

Resources were created for garden centers and pet stores to educate about invasive plant and animal species. These include a short video, handouts, and a pledge program. Resource production was in response to past projects where a few county garden centers and pet stores were discovered to be selling prohibited species. This work was coordinated with Bolton & Menk, Inc.



Research

Submersed jets

In partnership with the University of Minnesota St. Anthony Falls Laboratory, research was completed in November 2023 to measure the effectiveness of submersed jets. These water jets can move surface water with the goal of minimizing invasive species directly at the access. Findings showed that most (67%) observations found less mass of suspended vegetation fragments with the jet operating. For the rest of the samples, it may be explained by mobilization of suspended plant fragments near the jet when it was turned on, increasing transport of the plant fragments towards the jet. Location and timing of the submersed jets may help reduce this transport, improving effectiveness.



Examples of what we want to prevent from happening.

Site selections for research projects

County staff supported AIS research by consulting with research teams from the University of Minnesota for site selections on **research projects** evaluating the effectiveness of watercraft inspections and enhanced AIS prevention messaging.

Communications

Digital newsletters

AIS early detection newsletter



AIS early detection e-newsletters were sent out to 1,599 countywide partners and volunteers in the spring and fall of 2023.

- [Spring 2023 edition](#)
- [Fall 2023 edition](#)

Subscribe to the newsletter:

- [Click this link](#)
- Click through the prompts to open a list of newsletter subscription options
- Open the Environment option
- Click the Aquatic Invasive Species: Early detectors newsletter to subscribe

Additional newsletters

Promotions of AIS prevention actions, Lake Pledge, and AIS grants were run in Hennepin Environment and Energy's Green Notes newsletter (6,700 subscribers) and Environmental education news newsletter (6,100 subscribers). These articles were also shared in four county commissioner digital newsletters.

Social media

AIS prevention actions, promotions of Lake Pledge, and AIS grants were included on Hennepin Environment and Energy's social media channels on Instagram (1,230 followers), Twitter (1,800 followers), and Facebook (11,000 followers) throughout the year.

Website

The [hennepin.us/aisprevention](https://www.hennepin.us/aisprevention) webpage was maintained and updated throughout 2023. There were a total of 777 page visits by 590 unique users in 2023.

Programmable message boards

In 2015, a capital improvement project and partnership with the Hennepin County Sheriff's Office, Hennepin County Emergency Management and Lake Minnetonka Conservation District made improvements to the Spring Park public access on Lake Minnetonka which included a programmable message board. In 2016 the county received a grant application to partner with the Hennepin County Sheriff's Office and Emergency Management to install programmable electronic message boards on the two busiest Lake Minnetonka boating channels, Arcola and Narrows channels.

Throughout the 2023 season, multiple messages, including AIS prevention messages, were displayed every day from approximately one hour after sunrise to 1.5 hours before sunset. AIS prevention messages were displayed for 40% of this playtime reaching boaters traveling through these busy boating channels, using the public access, and reaching the 17,900 average daily traffic on Shoreline Drive.



Communications partnerships

Minnesota Traditions

The county partnered with 18 other counties to participate in the Minnesota Traditions AIS campaign. The campaign goal is to motivate and influence behavior change through proactive positive messages. Minnesota Traditions currently has 59 videos for social media and over 57,000 followers.

Angling Buzz

The county partnered with 15 other counties to participate in AIS prevention messaging with Angling Buzz TV. This campaign included billboards, TV commercials, a web page, YouTube videos, digital newsletters, and social media posts on Facebook and Instagram. These AIS prevention messages had a large reach, one with over a million impressions. See below for details.

Website: **1,789,841** page views

YouTube: **1,672,445** views

Newsletters: **55,000** subscribers

Facebook: **50,000** followers

Instagram: **48,000** followers

Contact

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Website

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