

The background of the slide is a scenic photograph of a lake. The water is calm and reflects the sky and the surrounding trees. On the right side, a large tree with green and yellowing leaves stands prominently. In the distance, across the lake, a white water tower is visible against a backdrop of more trees and a clear sky. The overall atmosphere is peaceful and natural.

Sherburne County AIS Prevention 2021 Summary Meeting

December 20, 2020

Welcome

- ***Recap of 2021 AIS Activities (Dan Cibulka, Sherburne SWCD)***
- ***Sherburne Golden Clam Studies (Megan Weber, MAISRC)***
- ***Zebra Mussel Pilot Project (Chris Jurek, DNR)***
- ***Sherburne County COLA AIS Activities (Patrick Plant, SC COLA)***
- ***Open Forum***



Review of 2021 Activities

Sherburne County AIS Prevention Plan 2020-2024



Prepared by the Sherburne Soil and Water Conservation District
with assistance by the Sherburne County Aquatic Invasive Species Task Force

For Sherburne County

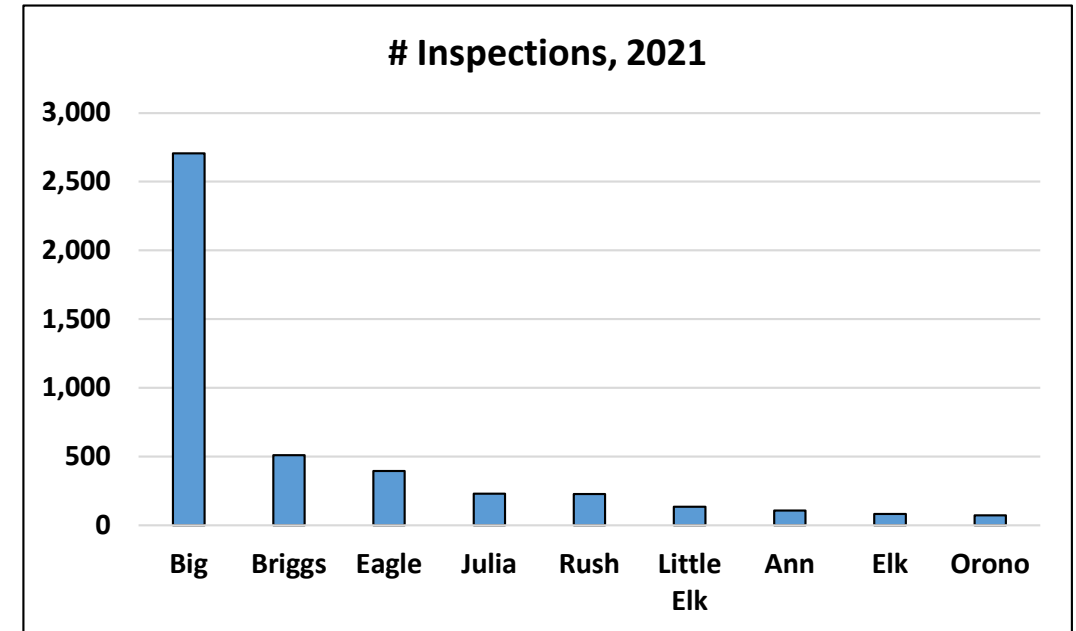
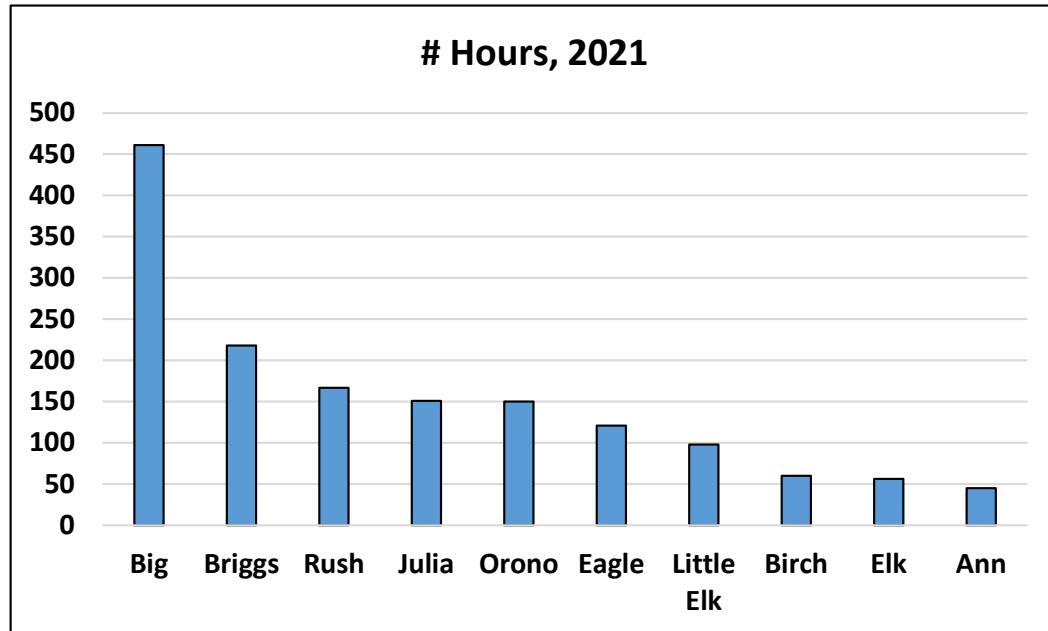
First Developed: June 2015

Last Revised: January 2020

Approved by the Sherburne County Board of Commissioners on January 21, 2020



Watercraft Inspections



Note:

- *Ann, Elk Lake hours and inspections lower than anticipated due to low water conditions.*
- *Orono Lake hours and inspections lower than anticipated due to construction activities.*
- *Big Lake inspections lower than anticipated due to data upload malfunction several days in August.*



Watercraft Inspections

To put things in perspective...

Year	Level 1 Inspection Hours	# Inspections	Inspections per Hour
2015	90	n/a	n/a
2016	600	521	0.87
2017	1,328	2,475	1.86
2018	1,300	1,757	1.35
2019	1,378	2,537	1.84
2020	1,716	3,889	2.27
2021	1,528	4,543	2.97
Total	7,940	15,722	Avg = 1.86

Note:

- *Low water conditions may have deterred use of several waterbodies in 2021.*
- *A data upload malfunction prevented several days worth of inspections to be counted.*
- *Level 1 Inspection hours include SWCD contracted hours, City of Big Lake contracted hours, Briggs Chain Lake Association and Three Lakes Improvement District contracted hours.*

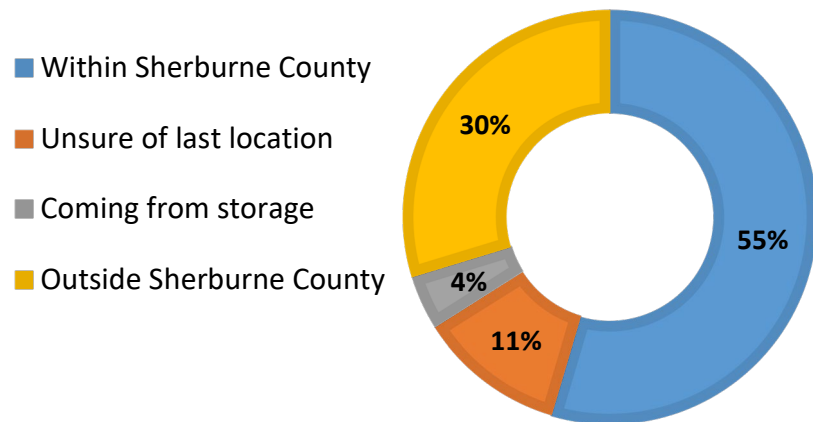


Watercraft Inspections

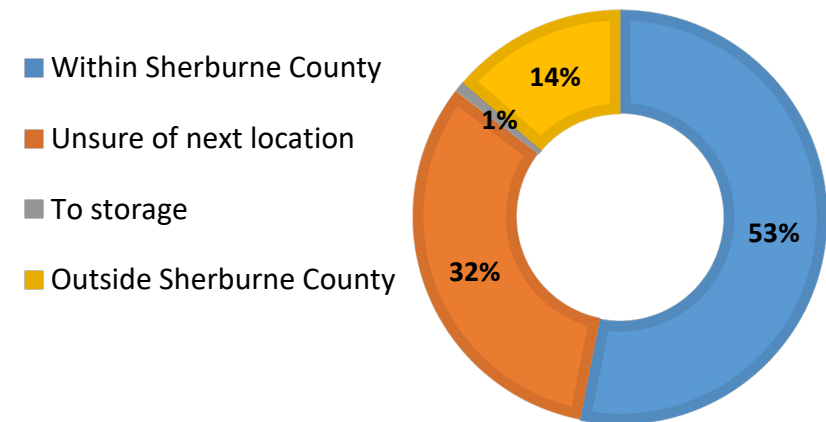
Of the watercraft inspected in 2021:

- 99% were from Minnesota
- 75% were a fishing boat style
- 75% had been out of the water 5+ days
- 65% will return to the water after 5+ days

Where are watercraft coming from?

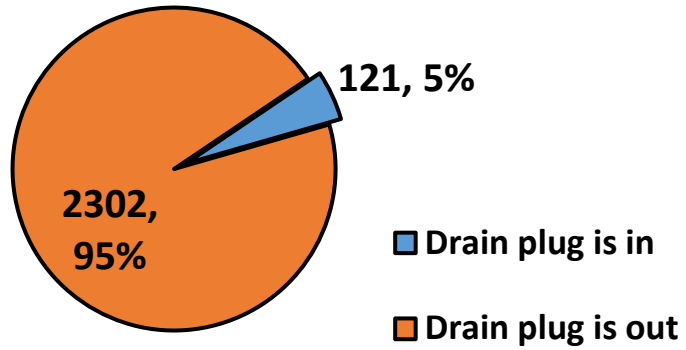


Where are watercraft going?

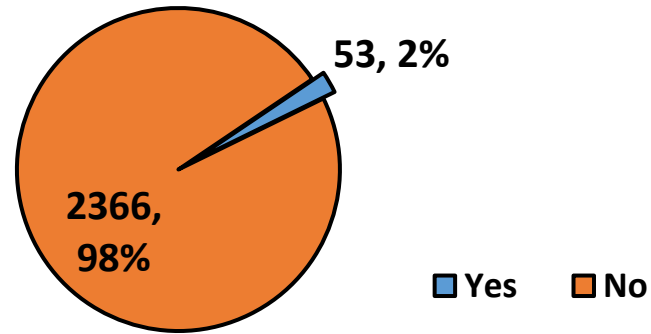


Watercraft Inspections

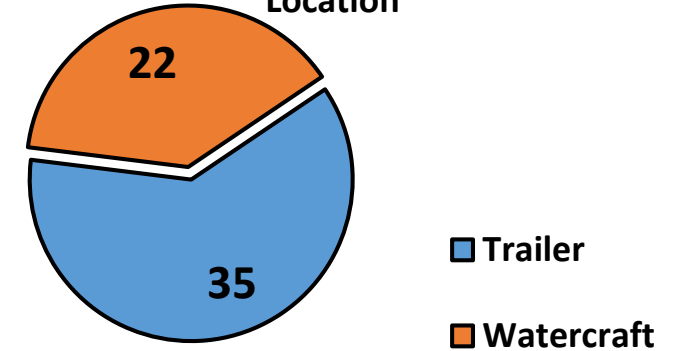
Incoming Watercraft - Drainplug



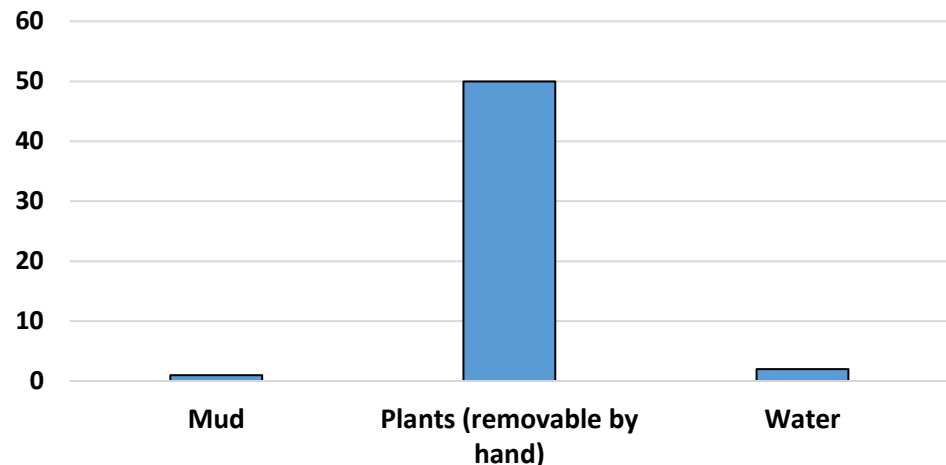
Incoming Watercraft - Material Found



Incoming Watercraft - Material Location



Incoming Watercraft - Types of Material Found



Year	Drain Plug Compliance	Water / Material Compliance
2017	90.6%	97.7%
2018	97.1%	97.4%
2019	96.0%	96.0%
2020	98.2%	99.7%
2021	95.0%	97.8%
Total	95.4%	97.7%



Sheriff Water Patrol Partnership

Hours: 60

Watercraft encountered: 309*

People encountered: 811*

Warnings: 13

Citations: 0

** Nearly 2x increase from 2020!*

Warnings:

- 7 – Vegetation or buildup on boat*
- 4 – Expired boat or trailer registration*
- 1 – Registration improperly displayed*
- 1 – No lifejackets*



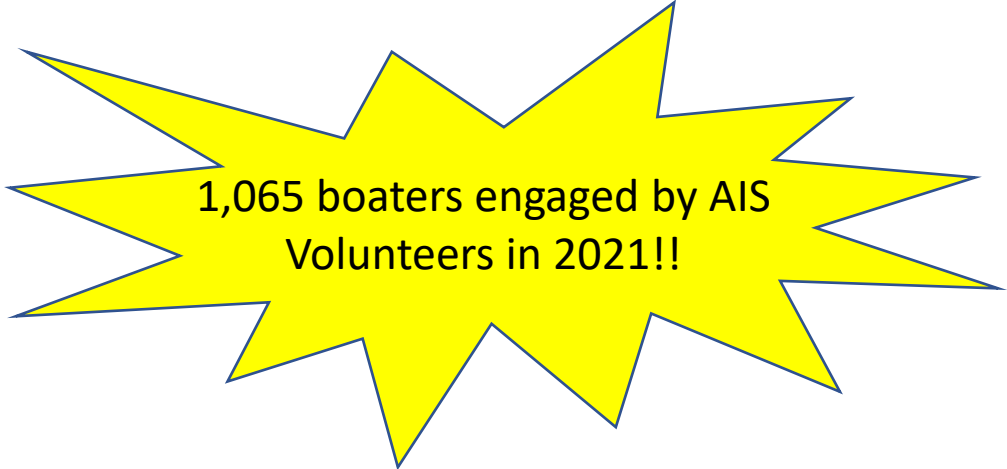
Volunteer AIS Education

Three lake groups completed AIS Education projects in 2021:

- Big Lake Community Lakes Association (75 hrs)
- Big Eagle Lake Improvement Association (75.5 hrs)
- Ann Lake Improvement Association (79 hrs)

*“We believe the AIS inspections were successful in educating boaters on how easy they could unknowingly transport an AIS to another lake and the need to clean, drain and dry every time.” – **Ann Lake Volunteer***

*“Through my direct interactions, and that of the others above with the public, it was overwhelmingly clear the boaters that use Eagle Lake appreciate our efforts, as well as understands their roles to protect our lakes.” – **Eagle Lake Volunteer***



1,065 boaters engaged by AIS
Volunteers in 2021!!

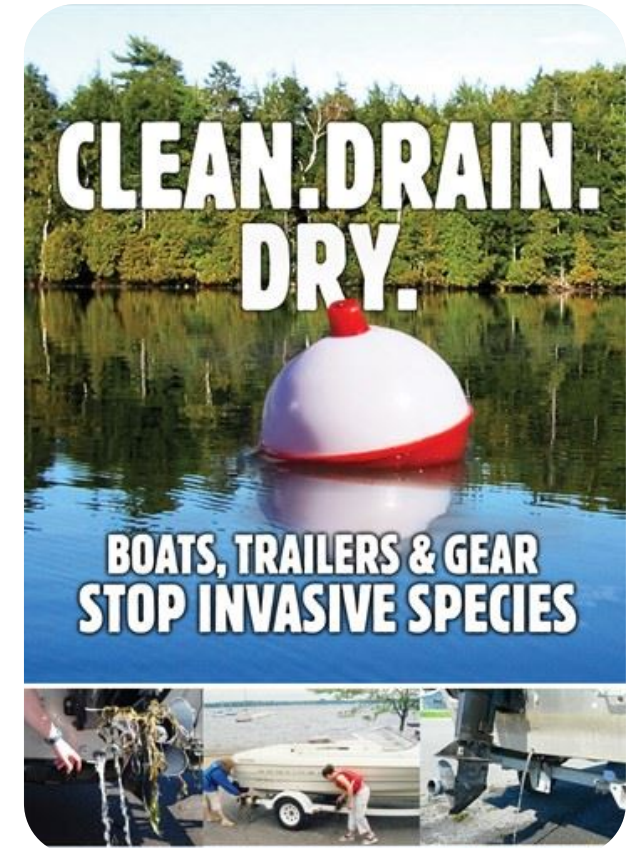
*“After not being able to participate last year because of Covid-19 challenges, we appreciate being able to participate this summer. Thank you for offering this grant opportunity” – **Big / Mitchell Lake Volunteer***



2021 Grant Program

Summary:

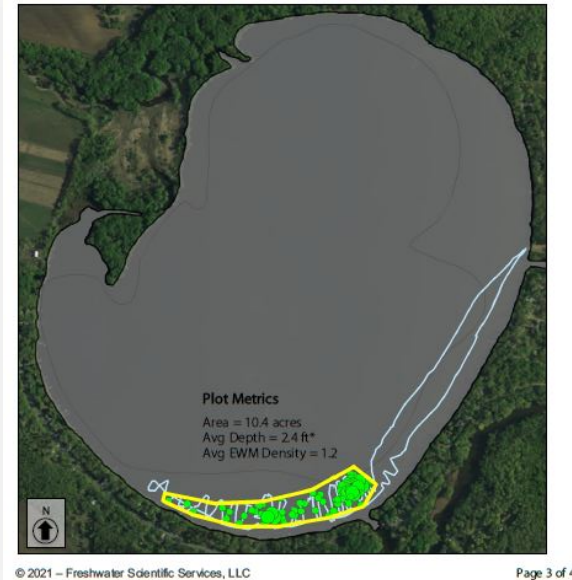
- Twelve successful applications for County program
 - Eleven accepted county funds, one accepted DNR funds
- \$17,447 in County grant funds distributed
- \$45,120 in additional funds leveraged for county program
 - **Five** Management Planning projects funded
 - **Six** AIS Control projects funded
 - **Three** 2020 AIS Volunteer projects completed



Program Flexibility

- Focus on local priorities
 - Orono Lake drawdown monitoring
 - Big / Mitchell starry stonewort concerns
 - Big Elk & Birch EWM early response
- Adapting to changing conditions
 - Fluctuations in AIS population
 - Timing and collaboration with contractors
- Coordination with DNR AIS grant program
 - Compliments, instead of competes with, state program

Big Elk Lake (#71-0141)
Eurasian Watermilfoil Delineation Survey: July 16, 2021



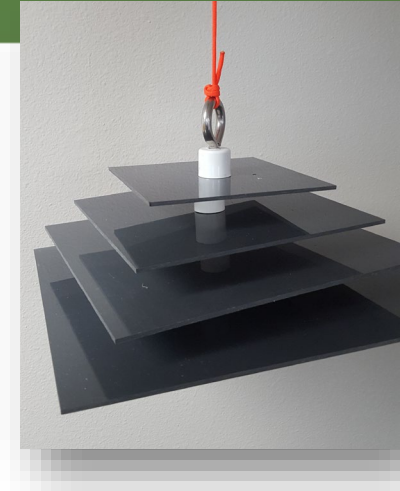
Starry Stonewort Search August 30, 2021
Big Lake, Sherburne County



Early Detection Monitoring

Zebra mussel monitoring program

- Infested lakes
 - Orono – veliger tows, settling plates, eDNA sampling
 - Big / Mitchell – infestation monitoring program with BLCLA, MN DNR and Sherburne SWCD
- Non-infested lakes
 - Increased settling plate program
 - Formal communication plan for coordinating effort
- All lakes
 - Increased settling plate distribution
 - Water equipment cleaning & inspection handout created



Early Detection Monitoring

Check it out!!!

View the water equipment cleaning & inspection YouTube video here:

<https://www.youtube.com/watch?v=-vabkGxzT9U>

Video is easily accessible from:

- Sherburne SWCD website (AIS page)
<https://www.sherburneswcd.org/>
- Sherburne County COLA website
<https://sherburnecola.org/>



Protect Our Lakes!
How to Clean Docks, Lifts, Swim Rafts, and Other Associated Equipment
View a video of these procedures here: <https://www.youtube.com/watch?v=-vabkGxzT9U>

Clean and Rinse these pieces of your equipment:

CLEAN
Thoroughly inspect all surfaces of your dock, boat lift, swim rafts, and other associated equipment. This includes any railings, posts, wheels, buoys, support bars, ladders, and steps. All of this equipment has been sitting in the water for a long period of time, which provides an opportunity for Aquatic Invasive Species (AIS) to attach themselves. Remove and dispose of any aquatic plants, small animals (e.g. snails, mussels, eggs), mud, and other debris. If you find an invasive plant or animal you think is new to your lake: take a picture, keep a sample, and report it to the Minnesota Department of Natural Resources immediately.

RINSE
All of your equipment should be rinsed off. Pressure washers work great for getting off any AIS that maybe stuck or attached onto your equipment that are not easily removed by hand or a cleaning tool. If possible, rinse your equipment off with hot water (at least 120°F). Hot water will be able to kill off any AIS that is present that you may not be able to see with the naked eye.

DRY
If you buy or sell a dock, lift, swim raft, or other associated equipment, it must dry for at least 21 days before moving to a different body of water.

PLAN AHEAD
Cleaning, rinsing, and drying your docks, lifts, rafts, and other associated equipment will take time. If you need help with any of these tasks, there are some cleaning tools available for purchase through different vendors. Or if you are physically unable to clean, drain, or dry your equipment, ask a family member, friend, neighbor, or hire a permitted Lake Service Provider. It is important to take all of these steps to help prevent and limit the spread of AIS!

Minnesota law requires a dry time of at least 21 days for any used docks, lifts, swim rafts, or other associated equipment before moving and installing the equipment to a different body of water.

Sherburne SWCD | DEPARTMENT OF NATURAL RESOURCES

Questions? Call the Sherburne SWCD at 763-220-3434 ext 103 or email dschultz@sherburneswcd.org or call DNR Information Center (651) 296-6157 or email info.dnr@state.mn.us



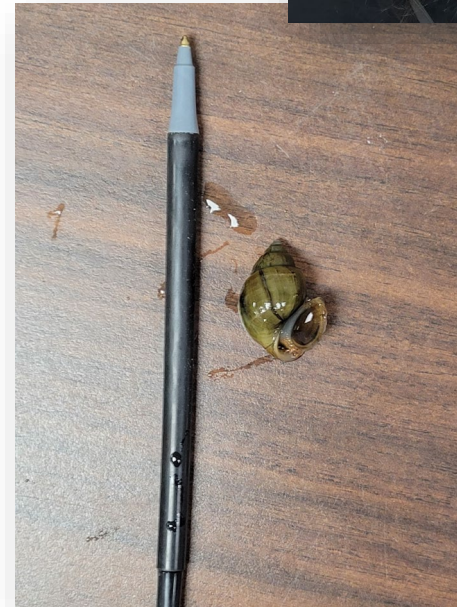
Early Detection Monitoring

Starry Trek

- 16 volunteers attended event (8% of state participation)
- 12 waterbodies searched
- Expanded protocol for golden clams

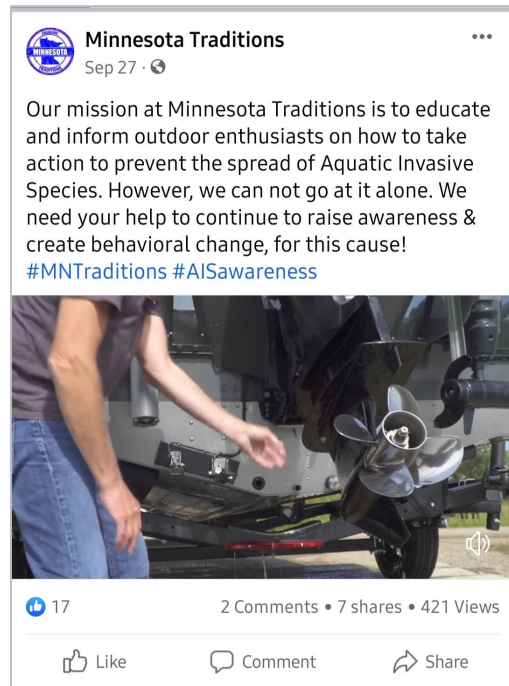
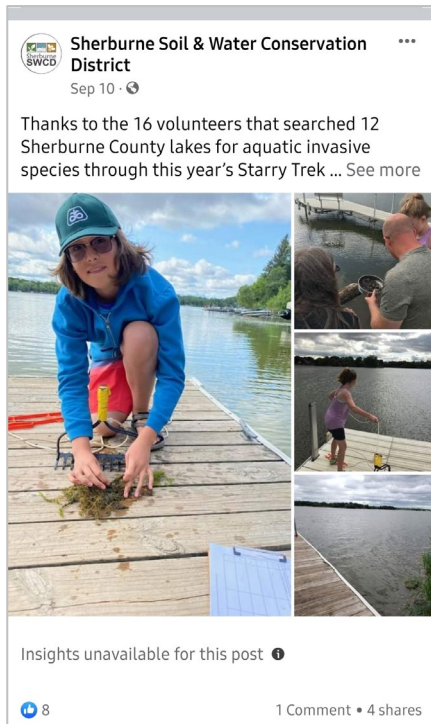
Findings:

- Live golden clam found in Big Lake at public access
- Empty, half-shell zebra mussel on Eagle Lake



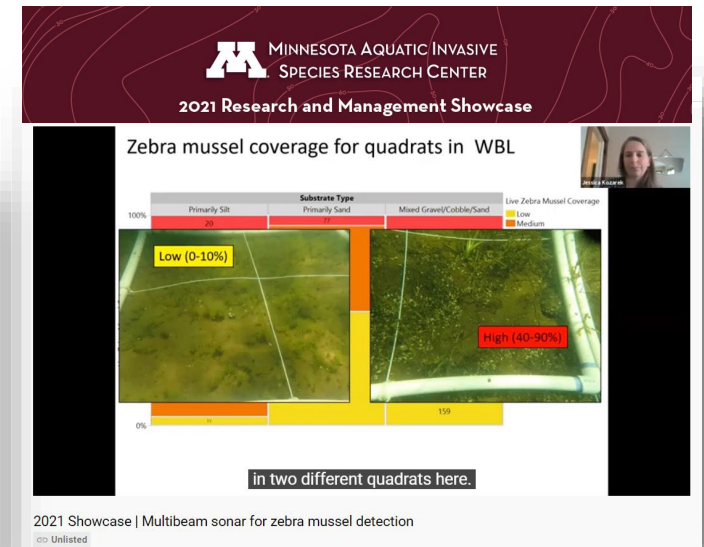
Social Media Highlights

- 10 social media posts on AIS topics
- Collaboration with MN Traditions





Awareness and Outreach Events

- Six events held or promoted
- An estimated 135 people engaged



Programs Launched

- Water equipment cleaning & inspection materials
- AIS Early Detection & Rapid Response Template
 - Partnership with Sherburne County COLA

Aquatic Invasive Species (AIS) Early Detection Rapid Response

LAKE USER (First Responder)

Upon finding a suspect plant or animal:

1 Collect

Collect a specimen in plastic bag with lake water or take photo of specimen

3 Report

Report to lake association
See: <https://sherburnecola.org/members> to contact your delegate

Or to one of the below:

Dan Cibulka, SWCD
dcibulka@sherburneswcd.org
(763) 220-3434 x 103

Christine Jurek, DNR AIS Specialist
christine.jurek@state.mn.us
(320) 223-7847

2 Record

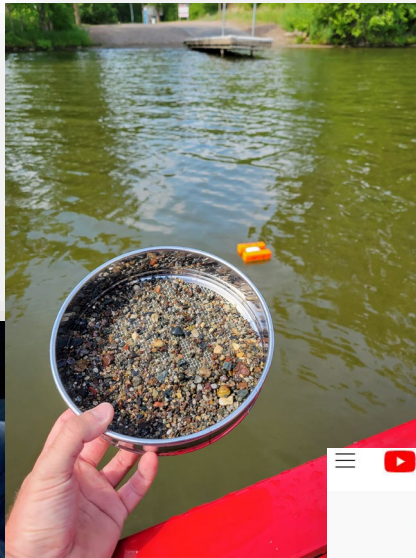
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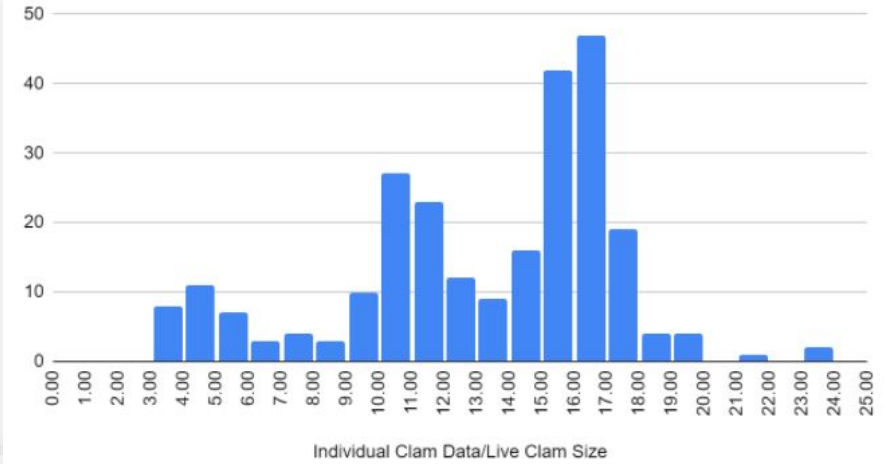
New Project – Golden Clam Monitoring

Briggs Lake (Oct 2020 – Sept 2021)

Big Lake (Sept 2021)



Histogram of Individual Clam Data/Live Clam Size



YouTube

MAISRC | Volunteer monitoring leads to rapid response project

142 views • Oct 7, 2021

2 DISLIKE SHARE SAVE ...



New Project – Eagle Lake Carp Study

Common Carp – a Common AIS

- Excessive carp can greatly impact a waterbody
 - Disturbs bottom sediment
 - Increases turbidity (reducing clarity)
 - Can disturb sight-feeding fish (walleye, bass, panfish)
 - Damage native plants & aquatic habitat
 - Feces contributes to nutrient load of water
- Management threshold commonly cited as 90 lbs/acre



Carp enclosure experiment showing the much clearer water and luxuriant aquatic macrophytes growing in deeper water inside the 1-ha vinyl-wall enclosure as compared to the surrounding water in Lake Wingra. (Photo: Mike DeVries, July 2007)

North Temperate Lakes Ecological Research Network

<https://lter.limnology.wisc.edu/>



New Project – Eagle Lake Carp Study



Eagle Lake Carp Preliminary Results

Biomass estimate #1	172 +/- 168 lbs per acre
Biomass estimate #2	109 +/- 61 lbs per acre
Approximate # Carp	3,394 individual fish
Estimated phosphorus contribution	362 lbs per year



2021 AIS Infestations Recap

- Big Lake – Golden Clam
 - Influence of swimmers itch treatment?
 - Continued monitoring outside swim area
- Eagle Lake – Unconfirmed Zebra Mussel
 - Follow-up inspections have yielded no other specimens
 - Increased monitoring in 2022



2022 Planning

- Continue with Community-Based Programs
 - Activity has continued to be exceptional – thanks to all of you!
 - Awareness and outreach expands our capacity to take on new challenges.
- Continue with a presence on the water
 - Level 1 inspections
 - AIS Volunteers
 - Water Patrol program
- Understand Golden Clam Distribution and Impacts
 - Expand surveillance at Briggs Lake
 - Understand dynamics of Big Lake population
- Understand carp dynamics and determine management feasibility

Thank You!!

Dan Cibulka

Sr. Water Resource Specialist

dcibulka@sherburneswcd.org

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