

Minnesota Statewide AIS Advisory Committee (SAISAC)

August 25, 2022 Meeting Minutes

Teams Online Meeting

Members Present: Will Bement, Shelly Binsfeld, Charlie Brandt, Chris DuBose, Beto Garcia, Holly Kalbus, Michaela Kofoed, Chris Magnotto, Amy McGovern, Mike Sorensen, Ryan Wersal

Members Absent: Bruce Babcock, Pat Brown, Kate Hagsten, KoriiRay Northrup, Maggie Stahley

Ex-officio Members Present: Meg Duhr (for Nick Phelps), Amy McGovern

Ex-officio Members Absent: Nicole Lalum

DNR Staff Present: Adam Doll, Doug Jensen, Gary Montz, Heidi Wolf

Guests: Cori Mattke

Attachments:

- AISAC_Agenda_8.25.2002.pdf for approval
- AISAC_Minues_Draft_04.28.2022.doc for approval

Chair H. Kalbus called the meeting to order at 9:04 AM.

Motion to approve agenda: First by C. DuBose, second by M. Sorenson.

Motion to approve Meeting Minutes from April 28, 2022: First by C. Brandt, second by M. Kofoed.

Meeting Summary:

- The Committee learned about the biology, ecology and impacts of zebra mussels and spiny waterfleas.
- Members received an update on MAISRC's biennial Research Needs Assessment.
- The Committee discussed priorities for next meeting including MAISRC's Research Needs Assessment and DNR control grant award process and timing.
- The Committee discussed a process for gathering priority topics to be covered in 2022-2023.

Motions & Actionable Items:

- **D. Jensen** and **T. Fitzgerald** will create an electronic poll to identify topics and candidate speakers for meetings in 2022-2023.

Committee Member Updates (listed in alphabetical order):

- **Will Bement (White Earth Band):**
 - Using BIA funding to monitor 80 lakes for veligers and 40 more for faucet snails. One lake found with faucet snail, multiple leach/bait harvesters on that lake; discussed not transporting, and knowing what they look like.

- Visited with vendors. Some “seed” lakes, taking leeches from one lake to another; spent a lot of time educating them.
- Met with NWR; rice season is kicking off in a couple weeks – have a lot of members transporting canoes – doing a lot to educate them on the risks of AIS, especially concern over banded mystery snails. Lots of complaints this year and have noticed more washing up on shore this year. Have others seen this? Some would have expected it to happen last year with lower water temps, **D. Jensen** mentioned the cycle concerning typical 3-4 year die-offs.
- **Shelly Binsfeld (Sherburne SWCD):**
 - Listened in on spiny waterflea monitoring training.
 - Attended aquatic plant ID that Extension put on. Loved all the time with real plants, likes being able to ID more plants. Also, completed a wetland ID class at BWSR. Participated in Starry Trek (4th yr). More high school students, change from just retirees; talking to a lot more people about AIS.
 - Will be attending a leadership institute with SWCD so won’t be at September meeting.
- **Charlie Brandt (The Boat Center):**
 - Anecdotal comment that inspections seem to be going smoothly and boaters seem to be aware of the process.
 - Haven’t noticed as many zebra mussels attached to vegetation in lakes he visits as compared to previous years.
- **Chris DuBose (Chisago County):**
 - Not a lot for AIS things; been uneventful with no infestations.
 - Have 8 early detection samplers out for zebra mussels on the lake. Getting good turnout with public participation in Starry Trek and phragmites eradication.
 - Watershed plan – Lower St. Croix One Watershed One Plan – Going through growing pains with grants (metro vs. non-metro) but are working it out.
 - Developed a work plan; had a few large projects that ate up a bunch of the funds for next year and need to figure out how to even that out, make fair to create even playing field for others.
- **Beto Garcia (Business Consultant):**
 - Last spring, worked with Carp Solutions to check breeding connected waters; adding areas to Lake Owasso for carp; add to the areas that Ramsey Metro is doing.
 - Completed LSP training last spring and have been installing marine electronics for Wayzata and Tonka yacht clubs.
 - Creating biobased maps for AIS and vegetation.
- **Holly Kalbus (Le Sueur County):**
 - Conducting a lot of water sampling via MPCA: TP, DO, temp, hardness, chloride. Noticed a lot of blue-green algae at one lake in particular – had to put up signs and people were having dogs swim in the lake. It has been great to visit all the lakes and get on them.
 - One access on Tetonka is being redone this year – asked if we could have a decon station there – concrete station for now but then hoping to get unit there in the future; closure putting more pressure on Cannon River; watercraft inspectors stationed there, also removing weeds.
 - More boating pressure at Sakatah access since the other access is closed.

- Sunfish Lake infested with EWM, not one that gets a lot of traffic so may need to rethink how inspectors are placed – can do it everywhere but may be able to do spot inspections at smaller locations; not many live there; sent letter to landowners; will see if treatment is needed.
- **Michaela Kofoed (Business Owner):**
 - Last league night tonight for fishing; have been seeing quite a bit of inspectors out at lakes visited.
 - Sold multiple aqua weed stick units this year along with larger stations, good to see them there with tools when watercraft inspectors are not there – some have basic counters to track use; working to get into more distributors so we can get them to consumers easier.
 - Presented at kickoff Bass Federation meeting for Rogers High School kids and parents (30) this year; shared tournament experience and entrepreneur side; explained how to be good stewards; like using the tools available; 30 units statewide.
- **Chris Magnotto (Recreation and Professional Interest):**
 - Hasn't seen many checkpoints compared to past years.
- **Mike Sorensen (City of Robbinsdale):**
 - At City of Robbinsdale now – only water resources person for the city.
 - Doing a lot with stormwater infrastructure, rain gardens.
 - Did largescale carp removal with Crystal Lake/Shingle Creek using box nets – removed several thousand from the lake; using pit tags to help pick times to remove; 10k+ removed or 75% in last two summers. **B. Garcia** commented that carp like cracked corn.
- **Ryan Wersal (MN State University):**
 - Classes started last Monday so in full teaching mode. Had 4 graduate students in the field for flowering rush, starry stonewort, and Cuban bullrush (not in MN, but prelim modeling by a student shows that growth can continue to -5^o, -3^oC so not significantly impacted by ambient cold conditions). Puts it as far north as MO. So probably not a threat in MN, but reluctant to say no. Bass Lake field site that was curly-leaf pondweed and ENF testing but now has a cyanobacteria bloom, borderline public health concern. For inspectors – his 4 graduate students decided to be water guardians, talked to a lot of people, searched a lot of boats.

Ex-Officio Member Updates:

- **Meg Duhr (Interim MAISRC representative for Nick Phelps who is on sabbatical):**
 - Busy summer translating research to outreach; not mass media project; lots of direct outreach to managers, lake associations to help ensure that research is implementable.
 - Planning for annual MAISRC Showcase, which will permanently hosted online; also doing side regional events in spring and summer (e.g., Ottetail, Hubbard, Crow Wing) featuring issues of regional interest; efforts intended to still provide in-person opportunities; if you'd like to work with us to host please reach out, need about 6 month lead time to put together a quality event.
 - Field work – like to bring in local partners when working in the field; have done that with hybrid cattail experimental control this year – outreach last week at Long Lake in Becker County.
 - Cori will discuss research needs assessment later; every two years – public survey for people to share areas of concern. Once that goes live a link will be shared – please help share that with anyone.
 - 2 citizen scientist programs in pilot stage:

- Zebra Safari – Engagement tool that supports participants at lakes with sampling devices at places with known populations. Looking for linkages of settlement rates to climate patterns, water quality, etc. to see if there are any correlations; developing 3D images from settling plates to develop an index of accumulation (establish density for modeling); lots of hand counting, but once the index is in place photos will also help build into the modeling.
- Spiny waterflea surveillance – Using a standard plankton net with a fairly wide mesh - worked with Val Brady (NRRI) and Donn Branstrator (UMD) to create a user-friendly protocol and training program for taking plankton tows; couldn't fund providing nets but did find vendors who could create custom nets; also optimized reporting directly to DNR.
- Started working with South Dakota – starting to engage with zebra mussels and other AIS and trying to get caught up and fund prevention infrastructure.
- **Amy McGovern (USFWS):**
 - Nathan Evans, new grants person, starts next week; dealt a lot previously in IL with invasive species.
 - National EDRR being developed within Fish and Aquatics Program to help support states in RR, hoping for establishment of RR fund.
 - Doing a lot of coordination on invasive carp – trying to promote consistency and engaging in a national population study; focus surveillance on pathways using traditional gear; hoping to be able to manage population management better; expecting level funding for carp program.
 - GLRI work got a bump up from infrastructure bill; embarking on a horizon scan in Upper Midwest; working with partners starting next month to look at potential invasives that could invade; hope to get a watch list and then run risk assessments.
 - Starting to ramp up surveillance program EDRR in hot spots of the Great Lakes and are adding a genomic sequence (metabarcoding) to do assays for new species, existing AIS and native species to understand what's out there and where; more programs planned over the next few years.

DNR Updates:

- **Heidi Wolf:**
 - Two new hires – Doug Jensen and Jill Jacoby. Jill will be AIS north trainer; Doug is the new planner for the north region.
 - State Plan written by MISAC has been approved by the ANS Task Force; Laura Van Riper is leading the effort to have it designed and printed.
 - Invasive carp sampling in fall using Modified Unified Method at Pools 5/8; may involve tagging of carp alongside removal to understand when and where they move.
 - Launched a Take the Pledge program in June, a new pledge to protect MN waters – pledge affirms that they'll clean drain and dispose and encourage others to do so. See the [Pledge Page](#) and [News Release](#) online; used QR code at State Fair to track sign-up.
 - Meeting with M. Smanski, U of MN, and MN Dept of Health to discuss genetic biocontrol.
 - Also working on wild boar – the DNR was alerted that the MN Zoo wanted to acquire wild boar and made us aware there were groups still selling them in MN; farms were grandfathered in (1993), but two farms talked to have stated they no longer raise them.
 - Hosted aquatic plant training for LSP/contractors that want to do aquatic plant treatments as well as for AIS detectors.

- Considering moving the IAPM grant application timeline earlier.
- **Doug Jensen:**
 - Working with a lot of colleagues to get up to speed on all of their activities.
 - Co-chair of UMISC 2022 in Green Bay, Oct 25-27 (hybrid) – registration is open.
<http://www.umisc.net/>

Introduction to Zebra Mussels and Spiny Waterfleas: Biology, Ecology and Impacts

Presenter: Gary Montz, DNR Aquatic Biologist (gary.montz@state.mn.us)

Zebra Mussels

- Infested North American Great Lakes in late 1980s due to trans-Atlantic ship ballast water discharge.
- Spread through connected waterways and overland transport.
- First MN lake in 2000: Lake Zumbro near Rochester.
- Since 2000, confirmed in ~270 lakes (as of Nov 2021).
- Small D-shaped shell – adults 1 – 1.5” long.
- Color varies from solid brown or yellow, often striped.
- Produce byssal threads used to attach to hard substrate including plants and each other in clusters.
- Feed by filtering/siphoning water, zooplankton, larger phytoplankton and other small food particles.
- Larvae called veligers are microscopic, reproduction is external, eggs are released beginning early summer beginning at ~60F.
- Veligers are buoyant, can suspend themselves, but don’t actually swim; they move by currents, wind and waves; they stay suspended (10-14 d) until grow large enough to settle out.
- Pathways for spread:
 - Adults: attach to solid surfaces such as watercraft, docks, rafts, aquatic plants; can survive out of water for a few days depending upon temperature, humidity and whether in direct sunlight.
 - Veligers: can spread via livewells, bait buckets, ballast bags or untreated water transfer; fragile and can’t survive drying; can move downstream via connected waters.
- Impacts:
 - Environmental: Kill native mussels, filter feeding impacts food webs (take away food from zooplankton), resulting increase in water clarity impacts algae and increase in aquatic plant communities density and distribution; native mussels can disappear; some GLs areas have seen increases in harmful algae blooms likely due to zebra/quagga mussels; G. Hanson, MAISRC, showed 10% decrease growth in y-o-y young walleye.
 - Recreational: Irrigation for lawns and gardens, sharp shells cut feet, clog outboard and inboard motor water intakes, can create overgrowth of aquatic plant density and distribution.
 - Overall: No impacts are good; impacts are lake dependent - water chemistry, habitat, zebra mussel density, amount hard substrate and aquatic plants – not possible to generalize to a particular lake.

Spiny Waterfleas

- Infested North American Great Lakes in early-mid 1980s due to trans-Atlantic ship ballast water discharge.
- First found in northern MN lakes in 1990.
- Today, mostly found in northern lakes, Mille Lacs and Lake Mendota (Madison, WI).
- Small predatory zooplankton, ½ - ¾” long; feed on small zooplankton and other animals.
- Hatch from eggs in early summer, late June to early July.

- In late summer/fall, males and females produce resting eggs which fall to the lake bottom.
- During summer, they produce young without males (parthenogenesis) resulting in rapid population increases.
- In spring, adult females hatch from resting eggs overwintered in the lake bottom.
- Pathways for spread:
 - Water such as live wells, bait buckets, ballast bags or untreated water transfer.
 - Fishing lines and downrigger cables, easily snagged.
 - Overall: Adults are fragile and susceptible to drying while resting eggs can survive some drying conditions (6 hrs); like zebra mussels, they can also move downstream via connected waters.
- Impacts:
 - Environmental: Predator on small zooplankton, compete with fish for food resources; reducing small zooplankton community can cause extreme algae growth and loss of water clarity, which disrupts food webs; spines can prevent fish from eating them; they can bind up fish's stomachs.
 - Recreational: Foul fishing lines and impact fishing success.
- ZM and SWF Management and control:
 - Both small with high reproductivity.
 - Both are planktonic either as larvae (ZM) or adults (SWF).
 - Small numbers capable of establishing invasion quickly.
 - Elimination of lake-wide infestations is extremely difficult with few successes.
- DNR Program – Recommended Preventative Actions:
 - Drain livewells, bait buckets and remove bilge plugs.
 - Remove all aquatic plants from watercraft and gear.
 - Dry docks/lifts for 21 d prior to moving to new waters.
 - Support watercraft inspections and decontamination, assist in awareness, help ensure preventative actions are taken.
- DNR Program Collaborative Efforts:
 - Work with municipalities and groups regarding water transfer or appropriation from infested waters.
 - Work with researchers on controls (chemical, biological, genetic).
 - More info from Invasive Species Specialists across MN.

Discussion

- Question about SWF
 - Do fish eat them? Yes, some species can but some like young yellow perch have difficulty (video by D. Jude was referenced).
 - Can they survive in southern lakes? Probably, given that they're in the Madison chain of lakes that suggests that our lakes could be acceptable habitat.
- Question about soft bottom and if that impacts ZM invasion – Soft bottom lakes can take longer for mussels to grow but doesn't negate the possibility. Mussels can also grow into clusters over the years as they attached to each other or on dead shells.

Update on Biennial Research Assessment Survey

Presenter: Cori Mattke, University of Minnesota AIS Research Center (cmattke@umn.edu)

- Biennial process for new lines of research coming into the center for all potential AIS.
- Will assess going through a species prioritization system.
- Team consists of 4 DNR staff, 4 MAISRC Researchers, 1 local AIS manager and 1 tribal natural resource manager.

- Research needs assessment will include stakeholder input and prioritization.
- Research Needs Assessment Team will include: 5 DNR staff, 5 MAISRC researchers, 5 regional/national researchers and 5 add'l members.
- In January, request for proposals (RFP) will be based on prioritization, new research projects selected; proposals open to any MN based researcher.
- Try to find the biggest impact projects with the limited funding available.
- Projects typically 2 years in length with goal to have solutions/tools/or progress to solutions for AIS in the state.

Open Discussion

- DNR will be looking for strong feedback from this Committee on the list DNR will submit as part of the MAISRC Research Needs Assessment. Will want everyone to weigh in on that; upcoming year is a DNR budget year so will share plans when able to.
- **H. Wolf:** Legislative update – will share more later in terms of budget and specifics on boater education.
- Organisms in trade is important – DNR did apply for GLRI funding to open that position again for one year; will try to request for funding in following two cycles as well to allow it to be 3 years which is longest, we can do; would love it to be permanent but we need dedicated funding to do so; need permanent funding.
- **M. Sorensen** really enjoyed invert discussion today, would love one on plant species such as phragmites; also want to know what DNR is doing to increase outreach to other languages and cultural diversity.
- **S. Binsfeld** would like to see more of how DNR and SWCDs are connecting and moving forward; feel that SWCDs are often the people in the field and talking with associations; would love to hear how they are connecting and sharing resources.
- **M. Sorensen** wondered which other states have similar committees and would be interested with how they focus and spend their time.
- St. James and City of Aurora – They need to dewater and also need filtration due to infestation status; working with Gary Montz and hydrologists to work on the problem; looking at system at UTAC which seems to be working using UV light and sand filter.

Discussion Time for Unfinished Business

- Looking for topics from SAISAC for future meetings; topics will be compiled; an electronic poll will be created for selection of topics and write in candidates.

Adjournment at 12:04 PM

Next Meeting to be held virtually via Teams on September 22, 2022. On the agenda for the next meeting is reviewing existing and new research priorities for MAISRC's Research Needs Assessment and grants update.