



MEMORANDUM

To: MCWD Board of Managers
From: Eric Fieldseth
Date: December 14, 2017 MCWD Board Meeting
Re: 2017 AIS Updates

Purpose:

To provide a review of AIS activities and findings from 2017 as the AIS Program transitions to better align with the District's new strategic priorities.

Background:

In February 2017, the MCWD Board of Managers adopted a strategic direction that would focus MCWD programs to prioritize the following activities:

1. Develop high impact capital projects integrated with non-water initiatives through multi-jurisdictional partnerships.
2. Change the land-use and water policy environment to increase early, value-added partnership with private development, public infrastructure, and public policy/planning.

Through the strategic planning process, AIS Program activities have been proposed to be recalibrated as follows:

1. Management and control of AIS when criteria are met (e.g. common carp) to effectuate improvements in water quality and ecological integrity
 - a. Prioritized and coordinated with organizational planning and project priorities
 - b. Manage high ecological impact species
2. Early Detection and Rapid Response
 - a. Baseline monitoring to identify recent introductions and respond with management and control when specific criteria are met, directly managing to improve ecological integrity by preventing new infestations.
3. Promoting Research
 - a. Encouraging the development of low-cost, low-risk, strategic partnerships to facilitate the use of Minnehaha Creek Watershed aquatic systems as a living laboratory to advance AIS science and inform MCWD management planning and implementation.
4. Supporting Prevention Efforts
 - a. Developing optimal cost solutions to support partner led efforts to implement prevention programs

The next page of this memo will review 2017 AIS activities as they have begun transitioning with the new priorities identified above.

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LSOHC Six Mile – Halsted Bay Habitat Restoration Project

Coordinated across departments with planning staff to develop an application to the Lessard-Sams Outdoor Heritage Council for a project to begin restoration of the Six Mile – Halsted Bay Subwatershed through a phase 1 of carp management. The application was based off the Carp Assessment recently completed through a partnership with the University of Minnesota. This work will restore 2,488 acres of in-lake habitat used by fish and waterfowl, and is the first step towards improving water quality in the subwatershed. The District's application was ranked high, and was recommended for funding by the LSOHC. The next step is for the legislature to approve the LSOHC's recommended allocations. More updates on this project will be coming early 2018.

Early Detection

The District performed or partnered on early detection monitoring on 14 lakes with public accesses. Partnerships continue to be vital to this work, as MPRB staff have taken a lead role on monitoring at the MPLS Chain of Lakes and Nokomis, Three Rivers Park District takes a lead role on lakes within the Carver Park Reserve, and starting in 2018 Carver County staff has indicated they will likely take a lead role on lakes within Carver County. The MN DNR also performs some monitoring on Lake Minnetonka. The District will continue assisting these partners and fill in monitoring at other high priority lakes not monitored by a partner agency. The District also relies on a pool of volunteers to add additional early detection monitoring across a variety of lakes and streams.

Lake Minnewashta Zebra Mussel Rapid Response

The District, Carver County and the Lake Minnewashta Preservation Association partnered on a rapid response to a new infestation of zebra mussels in 2016. Follow-up monitoring in 2017 was conducted by Carver County, DNR and MCWD. During a June search, one lone zebra mussel was found at the boat launch area. It's unknown if this zebra mussel survived the 2016 treatments, or if it was from a new infestation this spring. The zebra mussel was removed. More monitoring occurred in July, no zebra mussels were found during this search. Another search occurred in September with four juvenile zebra mussels being found at the public access. These zebra mussels likely represent another new introduction, or were possibly reproduced in the lake from adult zebra mussels that have not been detected thus far. The County decided to treat the boat launch area with remaining chemical from the year prior. More monitoring will occur in 2018, and the District will continue to assist and act as a technical resource.

Lake Harriet Zebra Mussel Discovery

On September 8, MPRB discovered one lone zebra mussels attached to debris in Lake Harriet near the boat launch. MPRB staff organized multiple search efforts made up of their staff, DNR, MCWD, as well as additional diving services they contracted for directly. No additional zebra mussels were found. The MPRB will continue monitoring in 2018, and the MCWD will continue to assist and act as a technical resource.

Christmas Lake Rapid Response Published in Lake and Reservoir Management

The District, in partnership with MN DNR and Minnesota AIS Research Center, were able to publish a paper on lessons learned from the Christmas Lake Rapid Response in a peer reviewed journal, Lake and Reservoir Management. This paper can be utilized by other lake managers who may be faced with a zebra mussel rapid response scenario.

Research Partnerships

The District continued its partnership with the Minnesota AIS Research Center (MAISRC), this time by providing some local assistance to their researchers who were assessing the impacts of low doses of a copper-based chemical on microscopic zebra mussel veligers as both a control and prevention technique. The project took place in Lake Minnetonka near Lake Minnetonka Regional Park.

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District staff member, Eric Fieldseth, also served on the MAISRC Technical Committee, which was tasked with developing research needs and priorities for MAISRC. It provides an opportunity for the District to provide its perspective on the AIS research that is conducted in Minnesota.

AIS Prevention Cost-Share Funding

The District was able to continue our AIS prevention cost-share relationships with five partners: MPRB, TRPD, LMCD, City of Shorewood and Carver County. The District committed to reimbursing our partners up to 50% of their watercraft inspection programs, with our partners committing an equal share if not more in some instances. A total of \$174,902 was requested. These funds are proposed to be reduced in 2018 and subsequent years, with a District AIS cost-share reimbursement planned to cover approximately 35% of our partners' watercraft inspection program for 2018, assuming they maintain their current level of program.

AIS Statewide Funding Update

Since 2014, the Minnesota Legislature has appropriated annual funding of \$10 million in AIS Prevention Aid to MN Counties. Each county is responsible for submitting their plan on using the funds to the MN DNR by the end of the calendar year. A funding formula based on watercraft trailer launches and parking spaces at the launches determines the funding amount for each county. Hennepin County received \$307,000 in 2017. A report developed by Hennepin County on how they used their funds is included with this memo. Carver County received approximately \$132,000 in 2017, and uses these funds to combat AIS through Education, Monitoring and Watercraft Inspections. Its report on use of 2017 funds is not yet available on their website.

The MN DNR recently announced that due to budget constraints, they will not be able to offer grants for AIS awareness projects, control projects and watercraft inspections in 2018. The report from the MN DNR stated, "Currently there are less revenues coming into the Invasive Species Account than the enacted budget. The enacted fiscal year 17-18 budget did not include \$400,000 in general funds that the DNR received in fiscal year 15 to support the county work generated by the ten million dollar Aquatic Invasive Species Prevention Aid to Counties. The increased surcharge proposal (that would have covered these resource issues) did not pass last year. The resources we have available for FY16/17 are less than what we had in FY15. Based on these budget issues we needed to determine how we would reduce our expenditures. In working with our AIS Stakeholder Advisory Committee it was decided that all grants would be eliminated for the 17-18 fiscal years."

If there are questions in advance of the meeting, please contact Eric Fieldseth at efieldseth@minnehahacreek.org or 952.471.7873.

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Aquatic invasive species prevention program

Preventing the spread of aquatic invasive species: 2017 accomplishments

Hennepin County has received funding from the State of Minnesota since 2014 to carry out or support activities that prevent the introduction or limit the spread of aquatic invasive species. Aquatic invasive species are “non-native, aquatic organisms that invade water beyond their natural and historic range” (Minnesota Statute 477A.19). Aquatic invasive 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.html.

In 2017, Hennepin County received about \$307,000 to implement projects that prevent the spread of aquatic invasive species. Many of the projects were conducted by partners who received pass-through grants from the county while others were done by county staff. Funding was used for inspections at public accesses, outreach and education, early detection and monitoring, research, boat cleaning facilities and more. Learn more about the grants and funding guidelines at hennepin.us/aisprevention. The following provides a summary of the project accomplishments in 2017.

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 aquatic invasive species where management options may still be available.

- Held an aquatic invasive species early detection hands-on training at the Plymouth City Hall in June. Attendees included 30 lakeshore homeowners from 23 different lakes throughout the county.
- Paired a limnologist with lakeshore homeowners, many of whom attend the classroom training, to investigate their lake for a day. In total, 17 lakes throughout the county were investigated. No new aquatic invasive species were detected, although there were some species identified that were not listed with the Minnesota Department of Natural Resources. For example, an unusual watermilfoil plant was pulled from Lake Independence that may need further monitoring in 2018.



Lakeshore homeowners work with a limnologist to look for aquatic invasive species on Lake Independence.

- Empowered lakeshore homeowners to continue to monitor for aquatic invasive species on their own. This included partnering with the Bassett Creek Watershed to purchase monitoring equipment for their volunteers. One participant explained: "Since our on-the-lake training session, the newly trained aquatic invasive species individuals held a meeting to develop a plan for ongoing monitoring. Five of the trained members have agreed to meet as a team two times a year to canvass the lake for aquatic invasive species. We'll also be looking for aquatic invasive species along their shoreline and other parts of the lake as we go about our daily activities."

Decontamination stations

Although boaters are generally aware of aquatic invasive species, they often lack the tools and specific knowledge to prevent their spread.

Decontamination stations help users learn best management practices and give them the tools to take the necessary actions of cleaning, draining and drying their watercraft and disposing of bait.

- Installed four innovative, user-operated CD3 watercraft cleaning stations on Bryant Lake and Riley Lake in Eden Prairie and the Spring Lake Park and North Arm accesses on Lake Minnetonka.
- Partnered with the Minnetonka Yacht Club to install a boat decontamination station for their sailboats that participate in regattas throughout the U.S. If this pilot project is successful, the county will seek to work with other private access points on Lake Minnetonka.



CD3 staff demonstrate how to use their decontamination station during an event celebrating their installation on Lake Minnetonka.

Education

Educational efforts focus on engaging audiences and raising awareness about aquatic invasive species through interactive displays, hands-on materials and messaging close to where people need to be taking action.

- Supported Nine Mile Creek in creating a pop-up educational cart that includes games that illustrate how invasive species spread, education about the importance of not releasing pet fish into the wild, and art activities about native and non-native fish. The cart engaged more than 670 people at parks, beaches and city events over the summer.
- Partnered with the county's Emergency Management and Sheriff's Office to install programmable messages boards on two of the busiest channels on Lake Minnetonka. The boards will display aquatic invasive species prevention messages along with safety and emergency information.
- Participated with several other Minnesota counties support an aquatic invasive species prevention advertising campaign.
- Created an educational piece and pledge for classroom teachers and students encouraging to properly dispose of classroom pets and plants and not release them into ecosystems.
- Worked with the City of Edina to investigate the use of 3D printers to create samples of aquatic invasive species, such as zebra mussels, to be used in countywide aquatic invasive species education.



Attendees at a summer event visit Nine Mile Creek Watershed District's pop-up education cart to learn about fish species and actions they can take to prevent the spread of aquatic invasive species.

Inspections

Having inspectors on site at public accesses is an effective way to ensure people are taking the necessary actions to prevent the spread of aquatic invasive species.

- Expanded watercraft inspections with the Three Rivers Park District and Christmas Lake Association at Christmas Lake, Bryant Lake, Fish Lake, Lake Minnetonka, Little Long Lake, Medicine Lake and Twin Lake. Most of the boaters that encountered these inspectors were in compliance and supportive of the inspections. Some violations were identified and dealt with.



An inspector on Lake Minnetonka helps ensure boaters that the necessary actions to prevent the spread of aquatic invasive species.

Management

For some aquatic invasive species, management options exist to help control or reduce populations.

- Introduced bass to the wetland ecosystem at Wood Lake Nature Center with the goal of reducing the goldfish population and helping the duck population rebound. The nature center has observed in recent years that as the goldfish population has increased, the duck's food source and the duck population in their wetland has decreased.
- Created an education display in partnership with the Wood Lake Nature Center in Richfield to inform visitors about the impact of releasing unwanted pets like goldfish on aquatic ecosystems.

Research and pathway analysis

There is still much to be learned about aquatic invasive species. Research projects provide insights on potential management options for aquatic invasive species and the effectiveness of various programs aimed at preventing the spread of aquatic invasive species.

- Observed boater behavior at four public accesses for compliance with aquatic invasive species actions. Observations were conducted by staff from a private consulting group, and the accesses ranged from small public accesses with no inspection program to large accesses where inspectors are present nearly every day. The findings of the research will be available this winter.
- Studied zebra mussel management on Lake Minnetonka in partnership with the University of Minnesota. A mid-project updated showed some success in managing larvae in just a few days with low-dose treatments. The final findings of this research will be presented over the winter.