



Upper Hay Lake Association

P.O. Box 769

Pequot Lakes, Minnesota 56472

Winter Newsletter

January 2021

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Greetings from your President

Winter has arrived this year in a rather mild fashion, much unlike the corona virus. I am sure this is good news for the people who enjoy ice fishing on Upper Hay Lake. It looks like there are several houses out in the usual locations. Let's hope 2021 is a good year for fishing on our lake.

Now – for my annual question: Did you remember to include Upper Hay Lake on your list of New Year's resolutions? The media constantly reminds us to focus on improving our health habits for the following year. We often forget to make resolutions focused on taking care of our environment and our properties. With a precious resource such as Upper Hay Lake, perhaps we can consider setting a goal such as improving our water quality or taking better care of our shorelines on our list for the year 2021.

As I stated in the fall newsletter, taking care of our shoreline continues to be a priority for the UHLA Board. The board members would like you to consider having part of your shoreline restored with plants that have deep root systems to preserve the shoreline. Many of us consider it attractive to have a beautiful sandy beach which you can still have. However, we suggest that you consider having that as part of your shoreline. Perhaps you can share a native plant area with your neighbor so there is a longer stretch of preserved shoreline so that a more positive impact can be made on the water quality of our lake. We all need to be stewards of Upper Hay Lake and share in our responsibility to keep the phosphorus levels down to a more acceptable level.

Crow Wing Soil and Water Conservation District is conducting a virtual open house on January 27, 2021, 11 am – 2 pm. You can pre-order trees, shrubs, plants and seeds. There are discounts for attending the open house. Bare root trees and shrubs, wild flower and grass plant plugs, native seeds and pocket prairie kits (new) are available. You can call 218-828-6197 or go to www.cwswcd.org/about-us.

Crow Wing County is also hosting a 2021 Aquatic Invasive Species (AIS) prevention online presentation January 22, 2021 at 9:00 am. This will be a virtual

presentation and is open to the public to attend and learn more about Crow Wing County's AIS prevention plan for 2021. Topics to be covered include watercraft inspections, decontaminations, education and awareness, milfoil treatments and early AIS detection. You can visit the county's website at www.crowwing.us/ais for more information.

There will be AIS training available in early spring for volunteers willing to inspect at our boat landing. It would be a benefit to have volunteer inspectors at the landing in the early evening hours during the week. The 300 hours that is provided to our lake is barely enough to cover the weekends. Some of you may have noticed that there is increased evening fishing on Upper Hay Lake.

If you have any ideas or suggestions for a spring meeting, be sure to let a board member know. UHLA Board discussed having a Zoom (a new word for me this year) meeting or renting a tent in hopes of having an annual meeting this spring. Depending on the pandemic, we also would like to sponsor a get-together at the Jenkins VFW in August. We are again planning to celebrate the 4th of July with a boat parade. It has been such a successful and festive event.

Although the lake is solidly frozen, the days are beginning to get a little longer. In true January fashion, the sunrises and sunsets have been amazing. This time of the year gives us the time to ponder our New Year's resolutions. I know that I am committed to making improvements to our lake. How about you?

–Claire Steen

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Submitted by Board Member Whitey Larson

A lot of very good information is provided by the Minnesota Aquatic Invasive Research Center (MAISRC) at the University of Minnesota. You can sign up for their e-newsletter at: www.maisrc.umn.edu/. I found this article on Golden clams quite interesting.

Golden clams discovered in an inland Minnesota lake—what now?

Environmental Stewardship Today, for Tomorrow

You're never too old or too young to help protect Minnesota's waters from aquatic invasive species. This past August, a new population of golden clams, *Corbicula fluminea*, was discovered by twelve-year-old budding conservationist, William Guthrie. The new infestation was found in Briggs Lake (Sherburne County) while the Guthrie family participated in Starry Trek, an annual event where volunteers from across the state search for starry stonewort and other aquatic invasive species. [Read the full story >>](#)

Golden clams have been found in Minnesota in the past, but mainly in rivers where power plants discharge their cooling water—therefore keeping the surrounding water warmer year-round.

The discovery of golden clams in Briggs Lake is significant because it is an inland lake with no supplemental heat source. If the clams can survive our winter months, they could also spread and reproduce in additional lakes and rivers. Similar to zebra mussels, infestations of golden clams can clog water intake pipes and alter local ecosystems.

Minnesota Aquatic Invasive Species Research Center (MAISRC) maintains a Rapid Response Fund specifically for situations like this one. The fund is supported by private donations and provides flexibility to our researchers to respond to new invasive species detections outside of our normal research cycle. Last month, we approved a monitoring project at Briggs Lake where researchers will evaluate the overwinter survival of the golden clam population.

The following was received from Dr. Nicholas Phelps, Director, Minnesota Aquatic Invasive Species Research

2020 MAISRC Research Report

Dear friends,

It has been a wild year with lots of challenges, but I would like to personally assure you that MAISRC is still here and working as hard as ever to develop research-based solutions to reduce the impacts of aquatic invasive species in Minnesota. I hope the research highlights included in the report (which only scratches the surface of our progress!) will surprise, inspire, and give you hope.

Like the year 2020, research can often challenge the status quo. We test hypotheses, adjust to findings, and

learn new things all the time. This year in particular, flexibility has been one of our strongest assets. In the spring, our research teams quickly and effectively activated socially distant work plans to complete a truly remarkable amount of field and lab work. Meanwhile, our admin team has never broken stride despite working remotely full-time since March...

Invasive Fish - Big Win

In 2020, researchers collected hundreds of samples from a Koi Herpes Virus (KHV) -endemic lake to better understand the ecology of this potentially useful virus for biocontrol of common carp. As expected, KHV was widespread within the common carp population, with increasing prevalence in gill tissue during the warmer months, indicating an active outbreak. Importantly, the replicating virus was never detected in any of the native fish tested. These findings were supported by laboratory trials that also demonstrated the high host-specificity of KHV.

Invasive Plants - Big Win

After analyzing 11 years of starry stonewort treatment data across three states, MAISRC researchers have found that current methods (generally copper-based algaecide treatments) are not slowing starry stonewort's expansion within infested lakes. However, treatments can be effective at reducing abundance, e.g., biomass, of starry stonewort in localized areas, providing nuisance relief. Researchers also found that if infestations are found early enough—when they are still small—sustained hand removal efforts can be highly effective for reducing and containing infestations. These findings emphasize the need for early detection/containment efforts and identify a pressing need for continued research into effective control options for established infestations.

Invasive Invertebrates - Big Win

Our researchers have identified downrigger and surface fishing line and residual water in bait buckets/livewells to be two of the highest risk factors for spreading spiny water fleas. Armed with this knowledge, MAISRC, in partnership with St. Louis County and Minnesota Sea Grant, began a multi-media communications and awareness campaign to educate Minnesotans. Efforts have included PSAs on local television stations in areas with infestations and the distribution of 6,000 absorbent towels printed with tips for how anglers can help stop the spread.

Cross Cutting - Big Win

Researchers launched a one-of-a-kind, online dashboard specifically for aquatic invasive species surveillance and watercraft inspections in Minnesota. The dashboard uses a robust lake-connectivity network generated by over 1.6 million data points of boater movements and a complex array of river connections. The dashboard both forecasts the introduction risk of aquatic invasive species to individual waterbodies and provides decision-making support for optimizing watercraft inspection efficacy. MAISRC also hosted multiple workshops to train state and local resource managers how to use the dashboard. View the dashboard: AISexplorer.umn.edu

Outreach - Big Win

Due to COVID-19, MAISRC pivoted on our outreach initiatives to provide a variety of digital content to our stakeholders and the public. In September, our annual Research and Management Showcase was held online for the first time. Despite being an untraditional format, researchers and over 300 attendees were able to connect and discuss current research studies and management options. Additional online engagement opportunities included providing recorded Showcase presentations online, monthly AIS Detectors webinars, and online input opportunities for our biennial Research Needs Assessment. By moving these events and resources online, we are able to break down geographic and time barriers and expand the accessibility of our content. Watch the 2020 Showcase presentations online: z.umn.edu/ShowcaseVideos

—Richard "Whitey" Larson

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A Great Minnesota Effort to Support Loons, Lakes and Community

Web posted November 10, 2020

Scientists say that loons may cease to exist in Minnesota by the end of the century if we do not change our course. The National Loon Center Foundation will create the National Loon Center, an interactive educational destination that will transform visitors into champions for loons and fresh water everywhere. To be located in Crosslake, Minnesota, the Center will focus on loon species protection and freshwater habitat conservation through citizen science and technology. The entire project is to be built on the U.S. Army Corps of Engineers Crosslake Day Use Area.

A generous grant of \$750,000.00 will support the construction of the new Center. Jim Anderson, President of the National Loon Center Foundation stated, "During

these extremely difficult times, we feel very fortunate and humbled to receive this grant from The Margaret A. Cargill Foundation Fund at the Saint Paul & Minnesota Foundation. We hope this major gift will continue to inspire Minnesota Philanthropists to Help us to Answer the Call of the Loon."

Since 2017, volunteers and community-based partners have contributed over \$1 million to pay for planning, engineering studies, and community engagement to date. Additionally, our local Founders Circle has donated more than \$200,000 towards further development of plans, permits and curriculum efforts. In 2019, The National Loon Center Foundation was awarded \$4 million dollars by the State of Minnesota/Environmental Natural Resource Trust Fund (ENRTF). This state money is contingent on securing an additional \$6 million that is needed to break ground on the Center.

Estimated groundbreaking for outdoors exhibits and restoration is Winter 2020-21. The Center will break ground once the foundation has reached its total project fundraising goal of \$13 Million.

The National Loon Center Foundation has incredible support. Major partners include: Initiative Foundation, Environmental Natural Resource Trust Fund, U.S. Army Corps of Engineers, WIDSETH Architects/Engineers, City of Crosslake, Brainerd Lakes Area Chamber of Commerce, Minnesota Department of Natural Resources, University of Minnesota, Central Lakes College, MN United Football Club/The Loons Soccer Team, and now joining us is The Margaret A. Cargill Foundation Fund at the Saint Paul & Minnesota Foundation.

<https://www.nationallooncenter.org/>

Pine River Rock Dam to Pine River Fish Passage Project Video

The Crow Wing Soil and Water Conservation District releases start-to-finish video footage of the Pine River Fish Passage Project.

This video gives you the inside view of what it took to replace the Pine Rock Dam into a five-rock weir structure.

Beth Hippert lead project manager stated, "The dam has been blocking fish passage for more than 47 years. This was about restoring fish passage and aquatic habitat passage where there had been none."

Through this video you will see the fish-passage corridor that connects downstream habitats and to the arched rock structures that direct and diffuse high stream-flow. The videography was completed by Red Canoe Cre8tive.

YouTube Video Link: <https://youtu.be/yQtw8eGtZKQ>

—Bruce Ohland

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Upper Hay Lake Survey Report

I received a number of phone calls from UHLA members last August inquiring about all the flags marking spots around the lake. Every ten years, or so, the Minnesota DNR Fisheries Management conducts extensive surveys of our lake. Much of this is counting the fish. I received a draft version of a preliminary data report from them and I will *attempt* explaining some of the report to you. They should be finalizing the report in another 3 or 4 months.

The report starts out giving a little history of the lake, characteristics (size, depth, amount of shoreline, littoral acres, etc.) and watershed information. They touched on water quality. I found it interesting that on 8/04 they had a Secchi disk reading of 9 feet, which is pretty darn good (clear) for our lake. The surface temperature was 75.0°F and the Dissolved Oxygen was 8.8ppm. At a depth of 18 ft. the temp was 73.6° and the Dissolved Oxygen had dropped to 5.0ppm. At 25 ft. the temp was 63.3° and 0.2ppm. Those fish aren't getting a lot of oxygen in the deeper water.

For their *fishing*, they use a number of techniques; i.e., gill nets, trap nets, seining nets, and electrofishing. They do numerous sets on several days, for example, they did 9 sets with a standard gill net with the first set on 8/04 and the last lift on 8/07. The total fish in the 9 sets is listed in the table below:

Abbr.	Species	Total Fish	Total weight (lbs)
BLC	Black Crappie	10	5.02
BLG	Bluegill	24	5.53
BOF	Bowfin (Dogfish)	1	4.68
HSF	Hybrid Sunfish	1	0.25
LMB	Largemouth Bass	16	12.5
NOP	Northern Pike	31	47.69
PMK	Pumpkinseed	14	2.44
RKB	Rock Bass	5	0.71

WAE	Walleye	31	55.43
WTS	White Sucker	7	11.42
TEB	Yellow Bullhead	10	8.09
TEP	Yellow Perch	11	1.15

For their electrofishing they took their first sampling on 8/19 and their last on 9/08. It was all done in the daylight. The table below gives a summary:

Abbr.	Species	Total Number
JND	Johnny Darter	41
BKF	Banded Killifish	13
BLG	Bluegill	15
BNM	Bluntnose Minnow	45
BOF	Bowfin (Dogfish)	1
CNM	Central Mudminnow	2
HSF	Hybrid Sunfish	1
LMB	Largemouth Bass	48
LGP	Logperch	2
MTS	Mottled Sculpin	1
PMK	Pumpkinseed	3
RKB	Rock Bass	3
YEB	Yellow Bullhead	2
YEP	Yellow Perch	26

They did 12 hauls with a 50 foot 1/8 inch Beach Seine from 8/19 to 9/08. The number of species and number netted were too numerous to list, however, they only did 2 hauls with a 15 foot 1/8 inch Beach Seine on 9/08 so I'll list those below:

Abbr.	Species	Total Number
BLG	Bluegill	20
BNM	Bluntnose Minnow	2
HSF	Hybrid Sunfish	1
LMB	Largemouth Bass	8
PMK	Pumpkinseed	2
YEP	Yellow Perch	3

Now that is more information than you really wanted to know, so I'll leave you with this thought: If you go out fishing and catch a DOGFISH, consider yourself lucky!

—Ken Meyer



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Spring Newsletter

April 2021

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Greetings from your President

Spring is my favorite time of the year. The birds are busy singing and the loons are always anxious to let us know that they are back. It is with great anticipation that I look forward to enjoying Upper Hay Lake this spring. Soon the UHLA Board will be meeting in preparation for the new season.

As many of you know, Vern Buss passed away in January. I have known Vern from my teaching days at Pequot Lakes High School. We enjoyed many basketball games together. When we first purchased a cabin at Upper Hay Lake, I called Vern to ask him if the ice was thick enough to fish on. He asked me what my weight was and caught me off guard. Vern was always pulling pranks! He was the first to help others on our lake and will be sorely missed.

On February 22, 2021, an article was published in the Star Tribune regarding the Northern Waters Land Trust whose efforts are a significant part of the Pine River Watershed One Watershed One Plan. Leif Olmanson mapped the state's late summer temperatures. During the dog days when algae blooms, he saw that they have risen fastest in Minnesota's north-central regions where lakes have been warming the most. Slowly, the change in a few degrees could alter the state's prized cabin country and angler havens. As timber is harvested and as communities grow, there are also cabin owners "tinkering with shorelines". According to the article, the solution to protecting water quality in the state's deep clear lakes is to protect the intact forests around them. Northern Minnesota has some of the fastest warming rates in the United States, including during the late summer.

Nicole Erickson, an Environmental Services Specialist with the Land Services Department of Crow Wing county, has announced that the Pine River One Watershed, One Plan: Lake Implementation Plans are now on the County's website at <https://www.crowwing.us/1476/Pine-River-1WIP>. These plans were developed for lake associations to take

action and reduce pollution by achieving measurable goals for the next 10 years.

Taking care of your shoreline continues to be a priority for the UHLA Board. We urge you to consider having part of your shoreline restored with plants that have deep root systems to preserve the shoreline. As I have stated before, if having a beautiful sandy beach is important to you, consider having that as part of your shoreline. Also, try to share a native plant area with your neighbor so there is a longer stretch of preserved shoreline. This effort will have a more positive impact on the water quality of our lake. It is essential that we keep the phosphorus levels down to a more acceptable level on Upper Hay Lake.

Upper Hay Lake has been allocated 300 hours of inspection at the public landing. The seasonal watercraft inspector will begin on Saturday May 22 and Sunday May 23 from 9:00 AM to 5 PM each day. I am grateful that these inspection hours have been granted to us.

We look forward to having our fifth annual July 4th Boat Parade. In the past, it has been very festive with over thirty boats participating. We will meet at the public landing and plan to begin at 3:00 PM on July 4th. A concern that has been voiced by several board members is the activity of throwing water balloons and/or other balloons from the boats. We cannot have balloon fragments in the lake as this can be harmful to the loons and fish in our lake. Please remind your holiday guests that using balloons on the lake is not an option.

In light of the recent rise in Covid-19 cases in Crow Wing County, we have decided not to have the annual spring meeting at the VFW. The UHLA Board invites you to participate in providing ideas that you have for a get-together this summer. You are welcomed to call or email one of us. Suggestions would be welcomed! There are many opportunities for you to become involved in improving Upper Hay Lake and our association. Please consider how you can contribute to preserving our beautiful lake. Thank you!

—Claire Steen

Submitted by Board Member Whitey Larson**Crow Wing County AIS Prevention Funding**

- by Tony Coffey

Earlier this month, at the suggestion of Commissioner Brekken, several from the WAPOA Board of Directors met with Crow Wing County commissioners Bill Brekken and Steve Barrows to discuss the 2021 CWC AIS Inspections Plan. Also attending the meeting from the county were Jake Frie, Nicole Erickson, Jessica Shea (the county business manager), and Land Services Director Gary Griffin. We discussed several issues specific to inspections on the Whitefish Chain. Next, we expressed concerns that for the past three years there has been a sizable amount of the previous year's county AIS Plan budget carried over to the following year. Jessica explained that there are generally budgeted expense items that are not realized or savings that cause overall expenditures to be less than expected. Commissioner Barrows suggested that the county do a mid-year review and adjust the Plan to provide the optimal number of hours for inspections. We then broached the topic of potential Crow Wing County general funds being allocated to this or future years' county AIS Plans. Both Commissioners Barrows and Brekken acknowledged the importance of water quality to the economy of Crow Wing County and agreed that the county should look at the possibility of allocating county funds to AIS prevention. While neither commissioner could commit to funding, their acknowledgement of the need and the benefit is a significant shift in thought at that level of county government. The past several years has brought a significant increase in the cooperation between the county staff and the lake associations in the formation of the county's AIS Plan. Nicole Erickson is a wonderful partner as the full time Environmental Services Specialist. We now can work with Commissioners Barrows and Brekken to broaden the county support to include additional county funding of the AIS Plan. Please let your county commissioners know how important financial support for AIS prevention is to your lake and the water quality of Crow Wing County.

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I recently received the following from Jeff Forester of MN Lakes & Rivers (MLR):

Wake board boats are a marvel of engineering, using ballast tanks, hydraulic fins, redesigned hull shape and massive power trains, these boats to create huge wakes with enough energy to support a surfer on a board.

Wake board boats are the fastest growing segment of the water craft industry, and a growing water recreational opportunity. But these boats are also generating controversy as reports of eroded shore line, damage to docks, lifts and watercraft on shore, and impacts to waterfowl nests, and transport of aquatic invasive species in residual ballast water. Paddlers and anglers have been capsized or thrown in the water, pontoon boats swamped.

- *How deep does the prop-wash of these boats go?*
- *How far must a wake travel to dissipate?*
- *How to prevent AIS spread in residual water in ballast tanks?*

This summer MLR and partners set out to answer these questions.

Boat Wake and Propeller Wash on Minnesota Lakes is a project of St. Anthony Falls Lab's Healthy Waters Initiative, and funded by a CrowdFunding effort of lake associations, boat dealers, marina owners and citizens.

Research is focusing on wake energy, turbulence, and prop wash impacts. Preliminary findings are expected this Spring.

The water sports industry has advanced HF1606/SF1639 which would ban wake surfing within 200 feet of shoreline and infrastructure without clear scientific evidence 200' is far enough from sensitive shorelines to prevent erosion. There is language to prevent wake surfing on bays or lakes less than 50 acres, or waterways less than 500 feet wide. Scientists do not know if these measures would reduce ecological and private property damage. No one does.

We should wait for the science and use data to set Best Practices for operation of these powerful watercraft.

MLR believes that we should allow the St. Anthony falls Lab to finish the work that Minnesotan's funded with philanthropic gifts. Policy makers should use the best available science to drive public policy.

With research underway, now is not the time to push regulations that may soon prove untenable.

Thank you for your engagement and activism,

Jeff

Let's hope we don't see any of these on Upper Hay!

#

An AIS Reminder to All Boaters

Before you drop your boat into the water, don't forget about aquatic invasive species (AIS) and the things we all need to do to stop the spread. **Required Actions:** You must...

1. **Clean** all visible aquatic plants, zebra mussels, and other prohibited invasive species from watercraft, trailers, and water-related equipment before leaving any water access or shoreland.
2. **Drain** water-related equipment (boat, ballast tanks, portable bait containers, motor, etc.) and drain bilge, livewell and baitwell by removing drain plugs before leaving a water access or shoreline property. **Keep drain plugs out** and water draining devices open while transporting watercraft.
3. **Dispose** of unwanted bait, including minnows, leeches, and worms in the trash. It is illegal to release bait into a waterbody or release aquatic animals from one water body to another. If you want to keep your bait, you must refill the bait container with bottled or tap water.

Additionally, if you buy or sell a dock, a boat lift, or a swim raft, and that piece of equipment is going from one water body into another, **the law says water-related equipment like that must stay out of the water for at least 21 days.** If we can all follow these simple rules and change a few of our behaviors, we can keep AIS from spreading. It's entirely up to us.

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What's in your well water? by Sarah Fogderud

As lake lovers and lake property owners we are often concerned with the quality of our lake water. We think a lot about the clarity, phosphorus, algae growth, etc., but when was the last time you thought about the quality of your well water? Safe drinking water is essential to our health and well-being, yet it is something that we often take for granted. There are several contaminants that can affect the safety of drinking water. Some such as bacteria or parasites can make us sick right away while others such as arsenic cause more chronic health problems over a long period of time. Most contaminants that can cause harm to our health are colorless, odorless, and tasteless. Do not assume your water is safe because it tastes good and looks clear. The only way to know if your water is safe is to test it. Remember that cities and municipalities are required by law to test the water that they provide to the public and meet the safety standards that have been established by the state and federal governments. If you own your own well, it is up to you to ensure that you have safe drinking water for yourself and your family. The Minnesota Department of Health (MDH) provides recommendations for private well

owners regarding what you should test for and how often. At a minimum, test for coliform bacteria annually to check for any new contamination. This is especially important if you have a shallow (sand-point) well as they are more prone to contamination. For more information on what to test for and why, you can visit the MDH website on Well Testing and Water Quality: <https://www.health.state.mn.us/communities/environment/water/wells/waterquality/index.html> Testing should be done by an accredited laboratory which will provide you with sampling containers and instructions on how to properly collect the samples. You can find an accredited laboratory near you by visiting the Minnesota Department of Health's website or by following this link: <https://eldo.web.health.state.mn.us/public/accreditedlabs/labsearch.seam> Don't take the safety of your well water for granted! Testing your well water is a simple, relatively inexpensive, and important way to protect your health.

—Richard "Whitey" Larson

Submitted by Board Member Mickey Perwien

Fly rod fishing for Northern Pike

If you are interested in using a Fly Rod, you should watch the movie "*A River Runs Through It*".

There are only three parts of a Fly Rod. A good fishing rod is a two piece rod 8 or 9 feet long; sizes 3-5 weight. floating fly line matching the weight of the Rod and reel. Use braided 20-25 pound backer line (also used as the tippet).

The tippet should be 3-5 foot long and tied to a bi-color streamer with a barb that has been pinched flat by a pliers. I use a needle nose.

The fly will sink to the length of the tippet. It is like jigging for Northern. If you do not get any action at 5 feet go to 10 feet.

Good Fishing!

—Mickey Perwien

From our Roving Reporter, Bruce Ohland

Per the DNR, new panfish regulations are in place on a number of lakes for 2021 and they apply to the Whitefish Chain

The WF Chain limits on sunfish have changed from 20 to 5.

The WF Chain limits on crappie have changed from 10 to 5.

The WF Chain limits on northern pike are 10, but not more than two pike longer than 26 inches and all from 22 to 26 inches must be released.

Both spouses must be present to purchase a combination license in person.

New panfish regulations are in place on a number of lakes for 2021, so anglers should closely check regulations for new daily limits on specific lakes by:

1. Searching for the lake you're fishing in LakeFinder and scrolling down to view any special regulations.
2. Finding the lake's listing in the special regulations section of the 2021 regulations booklet.

Although sunfish are the focus of these changes, the DNR also reduced daily crappie daily limits on some lakes.

Signs will be posted at water accesses for lakes that have new sunfish and crappie daily limits.

These regulations lower daily limits on specific waters as part of the DNR's initiative to protect and improve panfish sizes. The changes are in response to angler-driven concerns over the declining sizes of sunfish.

The limits will be daily limits as opposed to possession limits, which means anglers can only keep the prescribed number of fish per day from the water, but they could return the next day for another limit as long as they don't exceed the statewide inland water possession limit of 20 sunfish or 10 crappie per angler.

New regulations impact only inland waters and include:

1. 44 waters that have a new daily limit of five sunfish;
2. 31 that have a limit of 10 sunfish;
3. 17 that have a limit of five for sunfish and five for crappie; and
4. Two that have a limit of 10 sunfish and five crappies.

In addition to the new waters, there are 57 waters that previously had reduced limits for sunfish and these regulations remain in effect.

Questions?

Call 651-296-6157 or 888-MINNDNR (646-6367)

Email us: info.dnr@state.mn.us

(Editor's note: the website doesn't list Upper Hay as being one of the Whitefish Chain of Lakes)

2020 Conservation Report Released

In 2020, Crow Wing County Landowners and community groups implemented projects for clean water and habitat. The Crow Wing Soil and Water Conservation District (SWCD) released the 2020 Conservation Report to highlight the great conservation work being done in the Brainerd Lakes Area.

Accordingly, to Melissa Barrick, Crow Wing SWCD District Manager, "Despite the many challenges that 2020 brought us; many people planted native trees in their yards, repaired shoreline erosion, and created pollinator habitats. Large projects that were completed included the Pine River Fish Passage Project and the Island-Loon Runoff Project in the Crosslake area."

Highlights:

1. Island-Loon Clean Water Project reduced approximately 1.5 ton less of algae growth per year to the lake (six-pound of phosphorous)
2. Pine River Rock Dam is now finished and fish can now swim upstream. All people can enjoy the tranquil five-rock riffle and weirs structures.
3. Landowners are protecting wildlife habitat and critical shoreline through the Reinvest in Minnesota Conservation Easement Program. Since 2012, landowners have protected over 22 miles of shoreline.
4. Individual property owners worked with professional plan writers to develop 14 Forest Stewardship plans for almost 3,000 acres of land and made 15 projects improvements to their forest and totaling 108 acres.
5. Citizens planted over 29,000 Trees and 3,000 plants. Help us reach one million trees for Crow Wing County. For more information visit: <https://www.cwswcd.org/native-trees/seedlings>
6. Leveraged over four million dollars for conservation for the Brainerd Lakes Area through State and Federal grants and contracts.

To receive the full 2020 conservation report, visit <https://cwswcd.org> or call 218-828-6197 for a printed copy.

Barrick stated, "We cannot do this work without our local partners, it takes a village to do conservation. We are so grateful for all partners, landowners, and grantors."

—Bruce Ohland



The next two articles are from the April 2 Environmental Stewardship Newsletter:

In 2016, MAISRC, the USGS, and their partners initiated a research project studying the effectiveness and impacts of using copper as a suppression treatment method for zebra mussel infestations. After multiple years of in-lab and small-scale testing, researchers conducted a large-scale, in-lake application of a liquid copper formulation (EarthTec QZ) at a low dose to St. Alban's Bay in Lake Minnetonka in the summer of 2019. When the research team returned to the bay one year after treatment (summer 2020), there was only a very small number of juvenile zebra mussels present (compared to the study's control site) and no live adult zebra mussels. Impacts to native species were closely monitored and noted. The team will survey invasive and native populations in St. Alban's Bay again in summer 2021.

In 2021, most of the research team's work will be at **Pelican Lake in Crow Wing County**. Researchers will be using a lakeside laboratory to collect and test water samples to refine the lowest possible dose of copper needed in zebra mussel treatments while also testing the effects on native species in the lake. Researchers will use the results to predict a liquid copper treatment for Pelican Lake—like the one applied on Lake Minnetonka in 2019—but customized specifically for Pelican. The goal of the proposed treatment will be to dial in the lowest dose of copper needed to effectively suppress zebra mussels and have minimal impact to native species. In 2023, the researchers will monitor results and an expanded list of native species to make sure there are no unexpected impacts from the treatments.

At the end of 2023, researchers hope to have firm, scientifically supported data for fighting zebra mussels with copper. After the study is completed, local/state governments, lakeshore associations, and resource managers will be responsible for implementing the science and choosing whether to pursue treatments.

Funding for this project was provided by the Minnesota Environment and Natural Resources Trust Fund as recommended by the Minnesota Aquatic Invasive Species Research Center (MAISRC) and the Legislative-Citizen Commission on Minnesota Resources (LCCMR). You can learn more about this project on the MAISRC website.

Crow Wing County Land Services Department will offer free radon testing kits to area residents. Every hour, one person in the US dies from radon-related lung cancer. It is the largest environmental cancer risk and the leading cause of lung cancer among non-smokers.

Fortunately, the risk is largely preventable. Crow Wing County and the Minnesota Department of Health (MDH) recommend that all homes in Minnesota be tested for radon. It's the only way to know if your home has an elevated level of radon, which can cause lung cancer. Radon is an odorless, colorless and tasteless radioactive gas that occurs naturally in Minnesota soils and can enter homes through cracks and openings in basement or foundation floors and walls.

To obtain a test kit, contact the Land Services Department at 218-824-1125 or visit the office at 322 Laurel Street Suite 14 Brainerd MN 56401. Land Services Department may also be contacted by email at environmental.services@crowwing.us. MDH estimates that one in three existing Minnesota homes have radon levels that pose a large health risk over many years of exposure.

Radon is the second leading cause of lung cancer in the United States and more than 21,000 deaths are attributed to radon each year. Radon exposure, however, is largely preventable. First, test your home to see if you have elevated radon levels. Testing is easy, inexpensive and only takes 3-5 days. In homes with levels over 4.0 pCi/L, homeowners should consider verification testing and possibly installing a mitigation system, which will remove radon from your home. The final step is to encourage friends, family, and coworkers to test their own homes for radon.

For more information on radon testing and mitigation visit www.health.state.mn.us/radon or call the Minnesota Department of Health Indoor Air Unit at 651-201-4601 or 1-800-798-9050.

Anyone interested in mitigating his or her home for radon should consult MDH's list of certified radon mitigation contractors at

<http://www.health.state.mn.us/divs/eh/indoorair/radon/mitigation.html>.

The Land Services Department is committed to providing excellent customer service while helping landowners make wise choices that protect Crow Wing County's extraordinary natural resources. Citizens are encouraged to contact the Environmental Services Office at (218) 824-1125 or

environmental.services@crowwing.us to discuss land use and water protection activities. Crow Wing County information and resources can be found at www.crowwing.us

RADON IS PERSISTENT HEALTH RISK IN MINNESOTA

—Ken Meyer

BOARD OF DIRECTORS 2020/2021

				<u>Term Ends</u>
Beaverson, Neil	33904 N. Oak Dr. 417 Bear Ave. S. Vadnais Heights, MN 55127	651-429-6672	nmbeaverson@comcast.net	2023
Braun, Bob	4875 Popple Trail 1262 Wilderness Curve Eagan, MN 55123	651-452-2872 651-587-5596 - Cell	rhbraun@comcast.net	2022
Larson, Whitey	33061 W Shady Beach Ln	218-568-5831	whiteylar@me.com	2022
Marshall, Jan <i>Secretary</i>	4309 Acorn Ln 763-486-5484 - Cell	218-568-4738	jhmarshall40@gmail.com	2021
Meyer, Ken <i>Treasurer</i>	4345 Acorn Ln 218-820-7683 - Cell	218-568-5414	kenmeyer@tds.net	2021
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Perwien, Mickey	33546 N. Oak Drive	612-386-4858 – Cell	mperwien@gmail.com	2022
Schultz, Brad	33143 Osprey Circle	952-393-1758	nlonglakers@gmail.com	2023
Steen, Claire <i>President</i>	33161 Osprey Circle 29 Kingwood Street Brainerd, MN 56401	218-829-3757 218-330-7059 - Cell	Claire.steen@charter.net	2021

TREASURER'S REPORT

Our fiscal year end financials on December 31, 2020 were as follows:

Wells Fargo Checking	\$ 1,114.94
Wells Fargo Savings	5,305.13
<u>American National CDs</u>	<u>35,818.08</u>
Total Assets	\$ 42,236.15

(This does not include the accrued interest on CDs)

We had 101 paid members in 2020. This brought in \$2,415.00 in dues and we received an additional \$1,570.00 in additional donations, for a total of \$3,985.00.

Our association also has membership in other associations that support our mission. They include the Pine River Watershed District, Conservation Minnesota (this also includes our web hosting), WAPOA, LARA, and MN Lakes & Rivers Advocates.

So far I have received only 68 memberships for this year. This is not unusual, as many wait until our annual meeting to pay their dues in person. Since our annual meeting is being postponed again this year due to COVID, I would appreciate it if those of you that haven't paid your annual dues yet would mail them in now. Each year, as directed in our bylaws, I mail out reminders to those who have been active members the last few years and are not current. Last year I mailed out 29 reminders; 26 mailed in their dues and three had recently sold. People do forget sometimes! If you are one of these, **please pay your association dues now!**

It sure was nice having the temp at 80 degrees Easter Sunday. I didn't expect it to stay like that; but it would be nice to have some warmer weather! I haven't seen any loons, orioles, or hummingbirds yet. The male redwing blackbirds are back, so the females should be here in another week or so. Likewise, some of our snowbirds haven't returned yet either. We miss you!

–Ken Meyer