



## A NEWSLETTER FOR THE MEMBERS OF THE LEECH LAKE ASSOCIATION

**Our Mission:** *To be good stewards of Leech Lake and its environs, recognizing the vulnerability of the lake, and the need for citizens — both individually and collectively — to assume responsibility for its care.*

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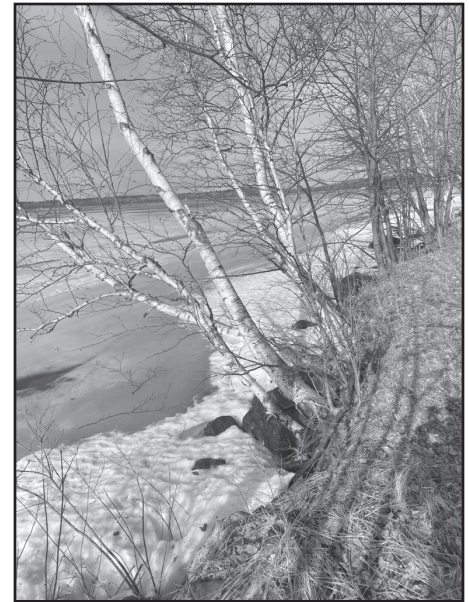
### Letter From the President

What a difference a year makes. The dry spring of a year ago, which led to low water levels on Leech Lake, has evolved into a spring where the snow couldn't seem to stop falling. That is good news for Leech Lake water levels and for those who had difficulty getting their boats off their boat lifts last summer. The recent drought seems to have ended, at least for a time.

I am pleased to report that the Leech Lake Association Board was able to meet in person throughout last year, which wasn't possible in 2020 before widespread vaccinations became available. Still, during the shutdown and since, we have been able to continue our work uninterrupted, thanks to our volunteers and the financial support of our loyal membership.

During the summer of 2021 we continued to collect monthly water samples from four locations on Leech Lake for the fourth year in a row. This work will continue yearly going forward to allow us to track potential changes in water chemistry and phytoplankton populations over time due to the presence of zebra mussels and other invasive species.

I am also pleased to report that the Northern Water Land Trust closed the purchase last December on sensitive lakeshore on Miller



*Ice and snow draw back after a cold and wet spring.*



*Rudy waits for winter's thaw on Agency Narrows.*

Bay which we have long sought to protect. The total property involves some six acres and 13 hundred feet of shoreline adjacent to offshore spawning beds where muskies and other fish are known to spawn. As

*(Continued on page 2)*

## Leech Lake Association Newsletter

(Letter from the President continued from page 1)



Roosevelt Canal looking south.

reported elsewhere in this newsletter, the property is being acquired in stages through various grants. The Leech Lake Association contributed significant financial support to this acquisition, as we have in the past to protect other sensitive shoreline on Leech Lake (e.g., Five Mile Point).

A newer challenge to all of us was the discovery last summer of starry stonewort in and adjacent to a harbor on Steamboat Bay. Starry stonewort is a particularly nasty invasive in that it forms a scum on the surface which makes boat passage difficult. It also infiltrates the wild rice, which is another concern.

We began directing our resources at this new invasive

last fall and are developing a plan of action with Cass County, the DNR, and the Leech Lake Band of Ojibwe to halt or mitigate this latest threat, as well as those on the horizon like spiny water fleas. This spring, we will continue to monitor the Roosevelt Canal for navigation issues and take appropriate action. We are also working with the Sheriff's Department to acquire additional buoys, some lighted, for Agency Bay and Walker Narrows.

For those of you who would like to volunteer or assist in these efforts, we invite you to attend one of our monthly meetings which are held the third Monday of each month at 9:30 AM in the Cass County Courthouse.

Here's wishing all of you a safe and enjoyable summer,

Robert Gisvold, President  
Leech Lake Association

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## Water Monitoring Continues Into 2022

This summer Leech Lake Association volunteers will continue to collect water samples and take Secchi disc readings monthly from 4 sites: the main basin north of Stony Point, Agency Bay, Walker Bay and Kabekona Bay. These samples will be sent to RMB Laboratories in Detroit Lakes for analysis of water chemistry. Another set of samples will be sent to a Michigan laboratory to test for phytoplankton (algal) populations.

The Leech Lake Association has employed RMB Labs for the past five years to conduct water chemistry testing on Leech Lake. They have been doing similar analyses for over 20 years on some 500 lakes. All of this information goes into a common MPCA database for use in state, county, and local decision-making.

### The RMB Lab analyses include:

- **TP or Total Phosphorous:** A nutrient needed for plant growth. Phosphorus can enter the lake during run-off from manure or fertilizer or through seepage from leaking septic and holding tanks.
- **Chia or Chlorophyll-a:** The pigment that makes plants and algae green. Chlorophyll-a is measured in lakes to determine algae concentration, or in other words, how green the water is.
- **Secchi Disc:** A measure of water clarity that can indicate the overall health of a lake. A white metal disc is lowered into the water on a segmented rope until it can't be seen anymore and raised to the point where it can be seen. The depth of the disk to the surface of the water is the Secchi Depth.
- **TSI or Trophic State Index:** A measurement of overall lake productivity (nutrient enrichment). The overall TSI of a lake is the average of the TSI for phosphorus, chlorophyll-a and Secchi disc.

### Secchi Disc Readings on Leech Lake

The Secchi disc readings taken by Leech Lake Association volunteers from May through September, averaged as follows, along with comments:

**MAIN BASIN:** In the summer of 2021, Secchi disc reading was only done twice due to high winds on the survey date. May recorded 20 feet of clarity. July recorded 10 feet with consistent wind. In 2020 the Mean was 10.7 feet, based on four rather than five readings and no Mean was established in 2021 because only 2 readings were recorded. Readings are taken on specific

days regardless of the weather.

**WALKER BAY:** The 2021 Summer Mean Secchi disc reading was 10.1 (9.9 feet in 2020) based on 5 readings both years.

**AGENCY BAY:** The Summer Mean Secchi disc reading was 12.8 feet. This is slightly clearer than the 11.4 Mean in 2020 readings, probably due to less wind disturbance. However, zebra mussels have increased in Agency Bay, whose long-term effect will be clearer water.

**KABEKONA BAY:** Summer Mean reading was 11.7 feet in 2021 and 11.1 feet in 2020, based on 5 samples each year.

### Trophic State Index of Leech Lake

The Trophic State Index (TSI) can be thought of as the lake condition taking into account phosphorus, chlorophyll-a, and Secchi disc. Trophic States are deemed divisions of a continuum in phosphorus and algal con-



*Marty Cook, LLA volunteer, uses a water sampling tube to take water from Kabekona Bay.*

*(Continued on page 4)*

*(Water Monitoring Continues Into 2020 continued from page 3)*

centration. TSI ranges from 0 to 100, where 0-30 represents very deep, cold water, with oxygen throughout the year to the bottom of the lake. Phosphorus is low and algal scarce (a typical trout lake). A TSI of 30 to 50 is an in-between stage, where the number of aquatic plants algae increase due to more available phosphorus. Leech Lake fits within this range, though the TSI may vary some between basins. Agency Bay, for example, had an annual mean of 40.3 in 2008, and 41.4 in 2020. This shows that the lake has not changed much since 2008. But changes are likely on the horizon.

With zebra mussels established now in Leech Lake, water clarity will increase. The long-term effect on fish populations is less well known, though studies by the Minnesota AIS Research Center found that walleye in lakes infested with zebra mussels are 10 percent smaller after the first growing season, and less likely to survive to year 2. First year growth rates of Leech Lake walleyes are still good, though the zebra mussel infestation here is just beginning. First year growth rates are also affected by other factors, including weather and water temperature, and also the kinds of food are available. This is why the phytoplankton studies are so important and why we want to track the kind and abundance of this critical food source over time.



Starting in 2017, the Leech Lake Association agreed to collect water samples and fund the analysis of the phytoplankton population in Leech Lake. In 2019, 2020 and again in 2021, we partnered with the DNR to successfully apply for a Cass County Partnership Grant to cover the cost of both water chemistry testing at RMB labs and algal analysis at a Michigan laboratory. Continuing these studies over the next few years will provide the DNR with the information it needs to monitor the food chain and its effect on the Leech Lake fishery as the lake reacts to zebra mussels and possibly other aquatic invasive species (AIS).

Leech Lake Association volunteers will continue to collect the water samples in 2022 and beyond. We thank Doug Schultz and Carl Pederson at the local DNR Fishery Office for their help in obtaining the Cass County Partnership grants mentioned above.

## Prime Muskie Spawning Areas Preserved



For many years the Leech Lake Association has contributed time and dollars to the acquisition of sensitive shoreline areas and spawning beds on Leech Lake. One such project was the acquisition of sensitive shoreline on Five Mile Point to protect offshore spawning beds, for which we received a Governor's Habitat Conservation Award.

More recently, we have partnered with the DNR and the Northern Waters Land Trust (NWLTL) to acquire and protect some six acres and 1,300 feet of sensitive shoreline on Miller Bay off Rogers Point (see illustration). This shallow bay has been used for years by the DNR to trap spawning muskies and produce fingerlings for stocking elsewhere. A certain percentage of the fingerlings are also returned to Leech Lake.

We are pleased to report that 2.2 acres of the Miller Bay property has now been acquired by the Northern Waters Land Trust using a Conservation Partners Legacy Grant and contributions from the Leech Lake Association and the Hugh Becker Foundation and private donors. This acreage will be conveyed to the DNR and managed as the Miller Bay Aquatic Management Area (Tract 4). Another part of the Miller Bay property (Tract 3) will be purchased by the DNR directly, and this transaction should be concluded in early 2022. These acquisitions will support continued pristine water quality and help protect Leech Lake spawning areas, particularly for muskellunge. There will be press releases announcing these acquisitions in the near future. We thank everyone involved in the preservation of this critical habitat, and the Rogers family, owners of the property.



## Leech Lake in Antiquity

### The Pike Expedition

By Dave Laursen

Following the Louisiana Purchase in 1803, much of mid-America now belonged to the United States. President Thomas Jefferson, to examine his new purchase, sent Lewis and Clark on their historic trip to explore lands west of the Mississippi, where they eventually reached the Pacific Ocean. This journey was the sexy one, and rightfully got most of the publicity before and afterwards. The Zebulon Pike Expeditions, though less well known, were just as dangerous, difficult, and consequential in many ways.

His first expedition in 1805 took him from St Louis up the Mississippi where he was directed to discover its headwaters, select sites for military posts, make peace, if possible, between the warring Sioux and Ojibwe tribes, and determine the status of British traders who still occupied posts in the newly acquired territory. After six months of arduous travel, Pike and his company of 20 men reached Leech Lake, where they found the British firmly entrenched in the Indian villages. His job was to explain to the Ojibwe that there was now a new sheriff in town.

A big reason for their subsequent difficulties was that they got a late start from St Louis. After reaching the present area of St Paul, and purchasing from the Sioux land where Ft Snelling now stands, winter caught them just above the Falls of St Anthony. From then on it was a nightmare of dragging boats through rapids up to their necks in freezing water, and falling through the ice of sleds where they lost clothing, food supplies, ammunition — even books and personal items. In the vicinity of Little Falls, Pike built a fort where part of his party would spend the winter, and he moved on using homemade boats and on foot. In this area, on the edge of the prairie, there was apparently plenty of wild game, which influenced his decision to remain there.

I have included below some diary entries, which give a flavor for what the men were experiencing.

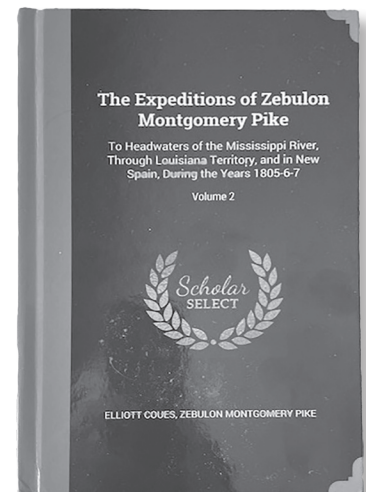
October 16th: When we arose in the morning found that snow had fallen during the night; the ground was covered, and it continued to snow. This indeed was poor encouragement for attacking the rapids, in which we were certain to wade up to our necks. I was determined, however, if possible, to make it to (the Crow) river, the highest point ever made by traders in their



BRIGADIER GENERAL Z. M. PIKE

bark canoes. We embarked, and after four hours work became so benumbed with cold that our limbs were perfectly useless. We put to shore on the opposite side of the river, about two thirds of the way up the rapids. Built a large fire, and then discovered that our boats were nearly half full of water, both having sprung such large leaks that I was obliged to keep three hands bailing. My sergeant Kemmerman, one of the stoutest men I ever knew, broke a blood vessel and vomited nearly two quarts of blood. One of my corporals, Bradley, also evacuated nearly a pint of blood when he attempted to void his urine. These unhappy circumstances, in addition to the inability of four other men who I had to leave on shore convinced me that if I had no regard for my own health and constitution, I should have some for these poor fellows, who were killing themselves to obey my orders.

After we had breakfasted and refreshed ourselves, we went down to our boats on the rocks, where we were obliged to leave them. I then informed my men that we would return to the camp, and there leave some of the party and our large boats. This information was pleasing, and the attempt to reach the camp was accomplished. My reasons for this step have partly been already stated. The necessity of unloading and refitting our boats, the beauty and convenience of the spot for building huts, the fine pine trees for perouques, and the quantity of game, were additional inducements. We immediately unloaded our boats and secured their cargoes. In the evening I went out upon a small but beautiful creek



*(Leech Lake in Antiquity continued from page 5)*

which empties into the falls on the west side for the purpose of selecting pine trees to make canoes. Saw five deer, and killed one buck weighing 137 pounds. By leaving men at this place, and from the great quantities of game in its vicinity, I was insured plenty of provision for my return voyage. In the party (to be) left behind was one hunter, to be continually employed, who would keep our stock of salt provisions good. Distance(location) about 111 miles above the falls of St Anthony.

October 17: It continued to snow. I walked out in the morning and killed four bears, and my hunter three deer. Felled our trees for canoes and continued working on them.”<sup>1</sup>

Pike’s diary confirms that there was an abundance of game in this part of the country at the edge of the prairie. This was not the case in the forested country further north, including Leech Lake, where the Northwest Company had a trading post and five acres under cultivation, which produced, according to G.H. Monk, a clerk at the post: “1000 bushels of potatoes, 30 bushels of oats or rice, cabbages, beets, beans, pumpkins, and Indian corn. Hunters’ meat is scarce in this country, every possible effort is made in the fall to lay in the necessary stock of provision for the winter; consequently, a quantity of wild rice is purchased from the natives.”<sup>2</sup>

The scarcity of wild game must have left an impression on Mr. Monk. When shown the site of some old Sioux villages whose occupants had been driven out by the Ojibwe some 70 or 80 years before, Monk comments: “the former (Sioux) surely did not regret evacuating a country covered with wood to go and inhabit vast plains covered with buffalo, which animal alone affords them meat and clothes, whereas the condition of the Santeux (Ojibwe) is laborious and unproductive compared to nations who inhabit the plains and meadows.”<sup>2</sup>

Surely, Mr. Monk is wrong about this. The Sioux did indeed regret being driven from the lake country. That action precipitated the half century of bloody Indian wars that followed. As Pike continued his journey north, he did bring Sioux and Ojibwe together to smoke the peace pipe. But peace didn’t follow.

1. The Expeditions of Zebulon Montgomery Pike, Edited by Elliot Coues, , Vol 1, pp 104-107,

2. Letters of G.M. Monk, Minnesota Historical Society.

## Meet our Conservation Officer - Patrick McGowan

*By Dave Laursen*

Some of you have asked in the past why the Walker field station did not have its own conservation officer? This was in fact the case for several years following the retirement of CO Gary Sommers and the move of CO Eric Sullivan to the Brainerd district. During this period of vacancy, we were promised each year that the Walker position would be filled, but with retirements, and the time required to recruit and train new officers, the filling of open positions could not keep up.

This did not mean that there was nobody patrolling the Leech Lake area during this period, but patrols required bringing in conservation officers from other districts, which was regularly done and is standard practice around the state.

The good news is that the Walker field station once again has its own conservation officer. His name is Patrick McGowan, and he has been in the Walker station for about a year. McGowan is a 2004 graduate of the University of Minnesota with a B.A. in fisheries, wildlife, and conservation biology. Shortly after graduating from the U of M, he received law enforcement training and certification from Central Lakes College in Brainerd. In 2005 he was hired as a police officer in the City of Maple Grove. He worked there as a patrol officer until hired by DNR enforcement in 2008. Since 2008, McGowan has worked as a conservation officer in the McGregor, Pine River, and now Walker Field stations.

In terms of full disclosure, I should admit that my two companions and I were checked by McGowan on Opening Day a year ago. He was very thorough, and no, I did not get a ticket.

### Leech Lake Association Newsletter

This newsletter is published by the Leech Lake Association board for its members and the Leech Lake community. We strive to keep you informed and welcome your feedback and suggestions for future issues.

Leech Lake Association

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May 2022

## Report: US Army Corps of Engineers, St. Paul District, Leech Lake

All elevations are referenced in 1929 NGVD.

This newsletter article was written on 5/12/2022 with information available at that time.

On April 22nd, 2022, the elevation of Leech Lake is 1294.72 Ft. which is almost exactly in the middle of the normal summer band. The current discharge from Leech Lake Dam is 540 cubic feet per second (CFS).

Leech Lake Dam is one of six dams operated by the US Army Corps of Engineers within the Mississippi Headwaters Lakes Project. Water levels are governed by a congressionally approved water control plan that coordinates the operation of each reservoir as needed to achieve water control plan targets throughout the seasons and varying weather conditions. Local conditions are considered as much as possible but downstream flood damage reduction can become priority when warranted. For example, during wet cycles the Mississippi River in and around the Aitkin area often is forecasted or within flood stages that impact the operational decisions of Pokegama, Leech, and Winnie dams to assist with minimizing downstream flooding. Another example that may impact operational decisions is the Mississippi River channel capacity in the Ball Club/Deer River area of only 2200 cfs that is allowed from the combined flows of Leech and Winnie. See the following two images to get a better glimpse:

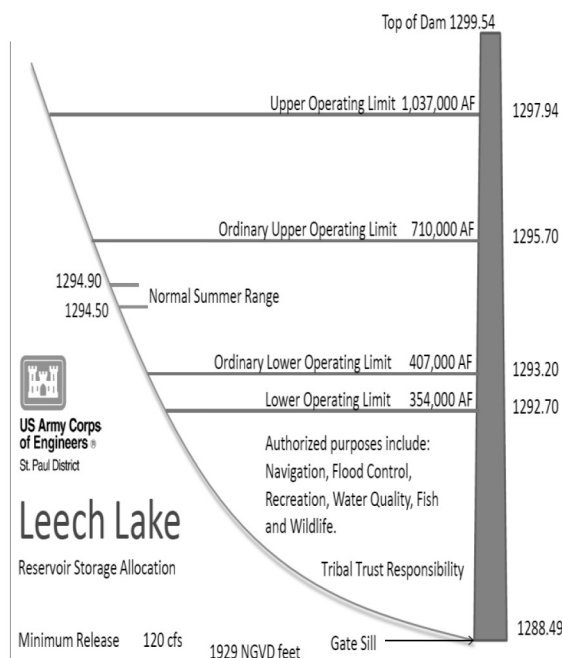
### Looking Back:

Much of 2021 was impacted by severe drought effects resulting in lower-than-normal lake levels. But late fall of 2021, and winter/spring of 2022 delivered significant amounts of precipitation resulting in Leech Lake water levels currently in a desirable position.

### Where we stand now:

With the current level of Leech Lake resting in the middle of the summer band and with rain in the forecast and remaining snowpack yet to runoff, water levels on Leech Lake should be near the top of the summer band (1294.90) during the early parts of the open water season.

Mississippi River Headwaters Watershed



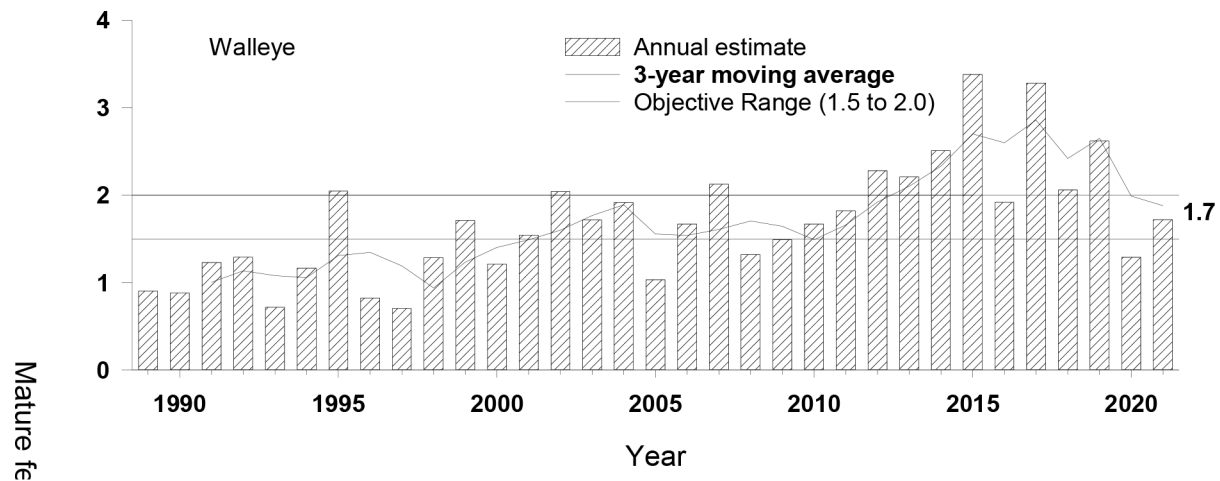


## MN DNR Fisheries Management Survey Result on Leech Lake: 2021

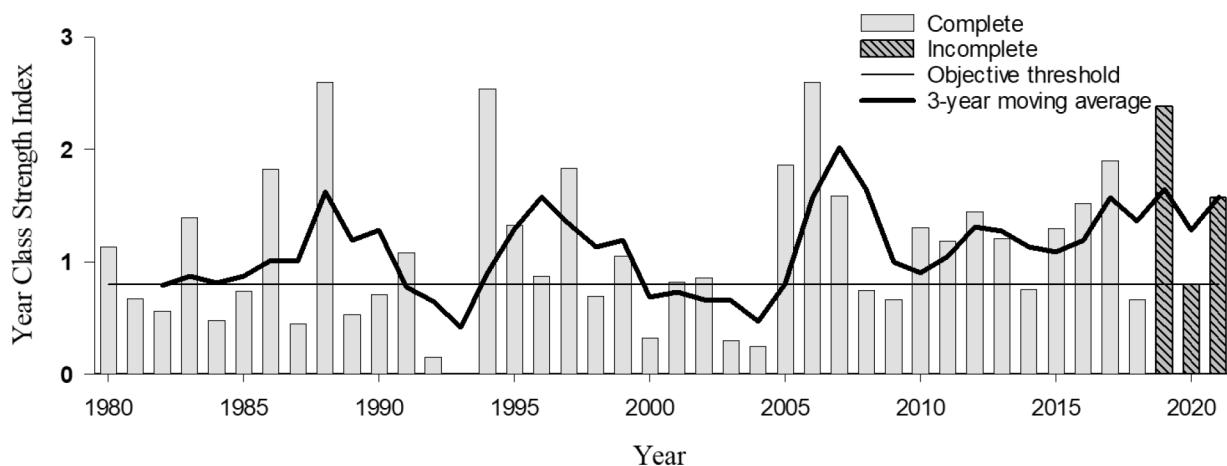
### Young-of-Year Walleye Growth and Abundance

- August Trawling: The average length (5.7 in.) was above the long-term average of 5.3 inches while the number sampled per hour (105), was below the long-term average of 182.
- September Electrofishing: The average length (7.0 in) was above the long-term average of 6.2 inches. Walleye recruitment is generally higher when mean September length exceeds 6.0 inches. The number sampled per hour (53) was below the long-term average of 92.

**Walleye Reproductive Potential:** Reproductive potential is a measure of the number of mature females in the lake. Maintaining an adequate density of mature females (i.e. spawners) reduces recruitment variability and increases the relative abundance of subsequent year classes. The management objective of maintaining between 1.5 to 2.0 pounds/acre is based on historical catch rates. The value of 1.7 and the 3-year running average (1.9) are within the objective range.

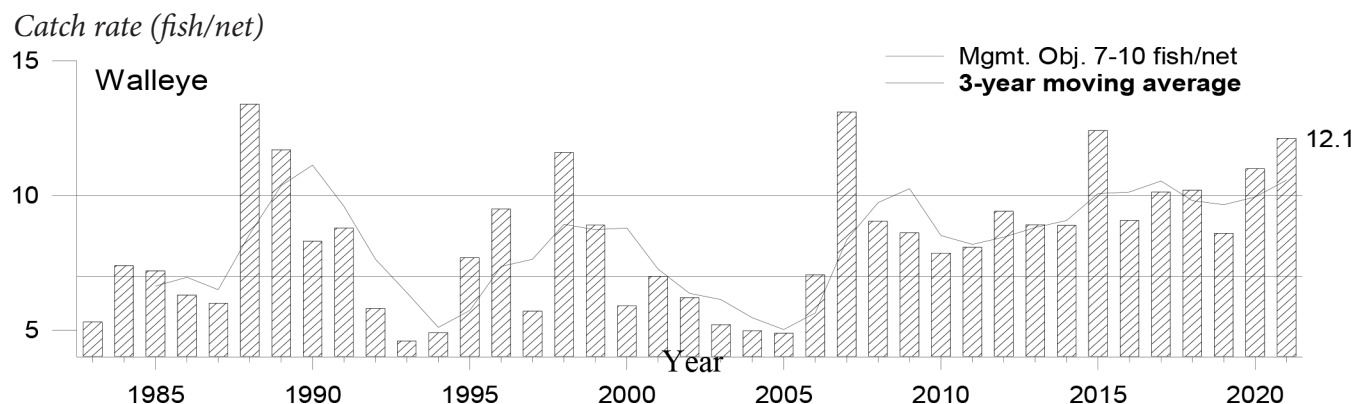


**Walleye Recruitment:** Year class strength index values are determined from gill net catch of ages 1-3 and predicted for age-0 from gill net and trawl catch data. Incomplete values for 2019 (2.38) and 2021 (1.57) cohorts exceed the management plan objective threshold (0.79) while the 2020 predicted year class (0.79) just met the objective. The 3-year running average (1.58) is above the objective threshold.

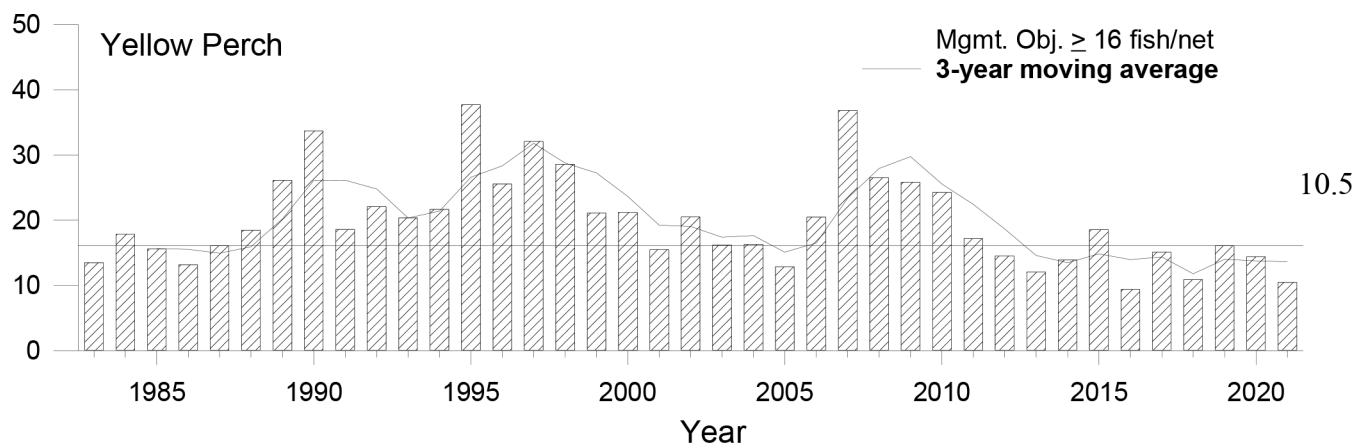




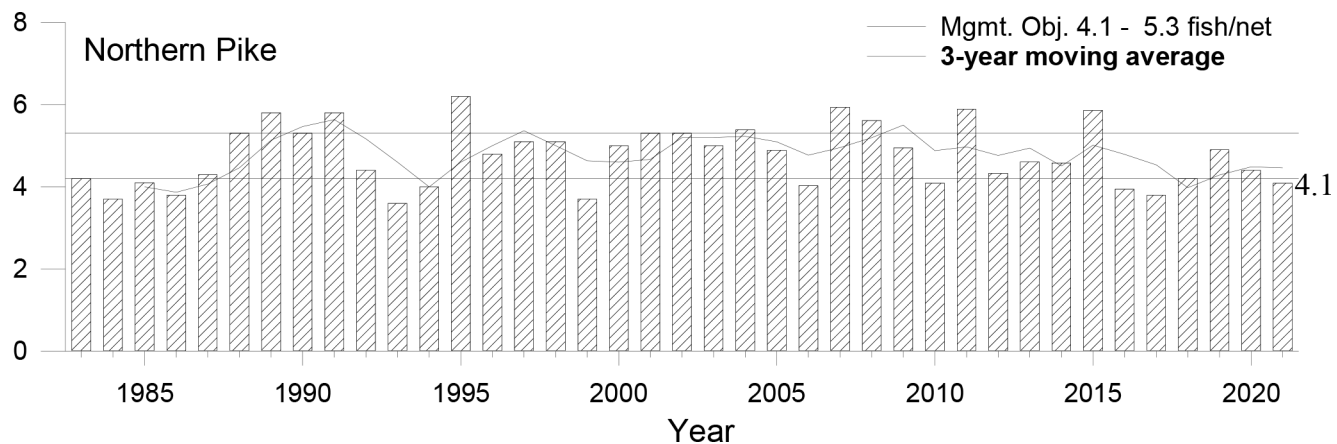
**Walleye Abundance and Size Range:** The gill net catch rate of 12.1 fish/net was above the management objective range (7-10 fish/net). Lengths of Walleye sampled ranged from 6 to 31 inches and demonstrated a balanced size distribution.



**Yellow Perch Abundance and Size Range:** The gill net catch rate (10.5 fish/net) was below the management plan objective of at least 15 perch per net. Perch up to 12 inches long were sampled.



**Northern Pike Abundance:** The Northern Pike gill net catch rate (4.1 fish/net) was just below management plan objectives. Pike up to 35 inches were sampled.



Please direct questions or comments to:

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Doug Schultz, Area Supervisor, Walker Area Fisheries, Doug.W.Schultz@state.mn.us (218) 552-2338

## **m** DEPARTMENT OF NATURAL RESOURCES DNR predicts good fishing ahead

Leech Lake: The 2022 fishing outlook on Leech Lake should be good. Walleye numbers were within or above various management objectives in the 2021 September survey with promising numbers of walleye that should be available for harvest for the opener. Walleye in the fall sample ranged in length from 6 to 31 inches, and again included a number of younger year classes that are starting to be large enough to harvest. The walleye regulation of 4 fish with only 1 over 20.0 inches allowed in possession implemented in 2019 is showing early signs of being beneficial to walleye as well as the yellow perch population. We will continue to follow these trends with adjustments being made based on management plan objectives and action items.

New as of March 1, 2021 was the implementation of sunfish and black crappie reduced daily limits on Leech Lake. Specifically, anglers can harvest 5 sunfish and 5 crappie daily; statewide possession limits of 20 sunfish and 10 crappie remain unchanged. The purpose of the reduced bag limits is to ensure the size quality of panfish in Leech Lake is maintained.

Northern pike catch rates in fall netting are very consistent and within management objectives with 4.1 fish/net in the fall sample. Catch rates have historically ranged from 4 to 6 fish per net and the lower management goal is at least 4.1 fish/net. New northern pike zone regulations were put in place in 2018, and should

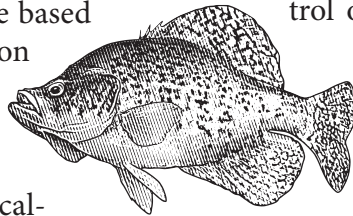
benefit the northern pike population on Leech Lake.

Leech Lake continues to be a destination for several largemouth bass, muskellunge, and walleye fishing tournaments each year. There has been anecdotal and creel survey evidence of an increase in smallmouth bass catches in Leech Lake as well.

Yellow perch numbers in the 2021 fall survey were below management objectives but there were reports of anglers finding some larger fish during the winter season. Perch sampled ranged from 5 to 12 inches with more than 30 percent of fish longer than 8.0 inches.

A continued focus on Leech Lake is the impacts that zebra mussels will have in the future. Immature zebra mussel larvae, called veligers, were found in 2016. Adults are now being reported in most all areas of the lake. There are currently no known methods to control or reduce numbers of zebra mussels once they are found in natural systems.

Starry stonewort, which is an invasive algae was also found in the lake in Steamboat Bay. If it spreads it can impact the native vegetation in the lake. Aquatic invasive species (AIS) like zebra mussels and starry stonewort are moved from infested to non-infested waters by anglers, boaters, and lake shore owners and can adversely impact lakes and fish populations. To avoid spreading AIS, lake users are required to remove all aquatic plants or animals from their watercraft and drain all water from their boat before leaving the access. Additional information on all of these topics can be found on the DNR website ([www.dnr.state.mn.us](http://www.dnr.state.mn.us)) or by contacting the Walker Area Fisheries office.



### **In Memoriam - Cathy Denker**

*By Dave Laursen*

It is with profound grief that I announce the untimely passing of our Newsletter Graphics Designer, Cathy Denker, from pancreatic cancer in January of this year at the young age of 59. Cathy designed our original newsletter and has been overseeing its publication for the past dozen years. Cathy was the daughter of Chuck and Jo Allen who live on Oak Point. Chuck served on the Leech Lake Association Board of Directors for many years.

Our condolences go out to all whose lives she touched — and there were many — for she was an amazing person, and an amazing friend. How many people do you know who, having three children of their own, would act as a surrogate mother for a friend? That was Cathy. And that doesn't even begin to describe her. We miss her so much.

White Pelican



Double-Crested  
Cormorants



Herring Gull



## Colonial waterbird update

There are six species of colonial waterbirds that nest on Leech Lake, including White Pelicans, Double-crested Cormorants, Herring Gulls, Ring-billed Gulls, Caspian Terns, and Common Terns. All of these species nest in mixed colonies on Gull and Pelican Islands. With the exception of Common Terns, all of these species are doing well. Common terns have a difficult time as they are smaller and return to nest later so they have a hard time competing for the best nesting spots. In 2021, a small number of young were fledged. Leech Lake is one of only four sites where this species nests in Minnesota and there is increasing concerns about this species in the State. The Caspian Tern is the other species of tern that is now seen on Leech Lake. This is the only place in Minnesota where this species has been documented to successfully nest. In 2021 they fledged well over 300 young.

### Cormorant Management Plan – 2022

Leading up to 2021 the US Fish and Wildlife Service completed an environmental assessment that allowed for us to operate under a new permit and remove cormorants because of concerns for free swimming fish. In 2021 ice out was early and occurred at the beginning of April. We believe this resulted in Leech Lake having a lower number of cormorants staying on the lake in comparison to years with normal to late ice out dates. A total of 1,390 cormorants were removed from the lake in 2021. We plan to operate under this same permit in 2022 to reduce cormorant populations down to 500 reproducing pairs. We also plan to use artificial eggs to help reduce future cormorant populations growth.

*Prepared by Tanya Roerick and Steve Mortensen, Biologists for the Leech Lake Reservation DRM*



Ring-Billed Gull



Common Terns



Caspian Terns

## Check Out the Goodies in Your Newsletter Package!

We are asking you to be on the lookout for starry stonewort and spiny water flea, two new AIS that threaten Leech Lake!

### Aquatic Invasive Species Watch Card

You will see images of starry stonewort and spiny water flea. Starry stonewort invasive has only been found near Steamboat Bay, and we want to make sure that it does not spread. Massive efforts will be made this summer to contain it. If you see a grass-like plant in the lake like this in other places, please take action.

### Spiny Water Flea Cloth

You've likely seen Swedish (cellulose) wash cloths like this in gift stores! Here's one you can use in your watercraft. Use it to wipe out water surfaces and even your fishing lines. These cloths function as both a cloth and a sponge and dry quickly, minimizing the risk of spiny water flea survival, and are advantageous to looped fiber cloths that can accumulate spiny water fleas.

To report suspected starry stonewort or spiny water flea, please take photos, save a sample, note your location and text 218-536-0584 or email [dana.gutzman@co.cass.mn.us](mailto:dana.gutzman@co.cass.mn.us).



## STOP THE SPREAD

- > Wipe fishing lines and reels
- > Drain and wipe livewells
- > Drain and wipe bait buckets

## Starry stonewort gets special attention Summer brings renewed effort to tackle AIS

Last July starry stonewort, a new aquatic invasive species to Leech Lake, was discovered in the north-western end of Steamboat Bay. Immediately following, the Leech Lake Band of Ojibwe, funded by the DNR, sent in a crew of divers and equipment to pull up or harvest as much as possible from the lake bed. And, once the lake froze over, various groups used the winter months to make plans for action this summer: to understand its spread and impact, to get rid of as much of it as possible, and to keep it from spreading further in Leech and elsewhere.

With starry stonewort as with other invasive species, the public's role is critical to help stop its spread – from learning how to identify it, to avoiding areas where it is growing, and by taking these three steps every time they leave a lake or river:

- Clean all aquatic plants, zebra mussels, and other invasive species from boats, trailers, and water-related equipment.
- Drain water from your boat, ballast tanks, motor, live well and bait container. Remove drain plugs and keep drain plugs out while transporting equipment.
- Dispose of unwanted bait in the trash. To keep live bait, drain the water and refill the bait container with bottled or tap water.

### Why is starry stonewort a problem?

Starry stonewort forms a dense mat at the water's surface that can interfere with recreational and other uses of the lake. It out-competes native vegetation, permanently altering ecosystems and upsetting the balance of



*In October an aquatic management company pulled starry stonewort out of Leech Lake using the diver-assisted harvesting equipment.*

lakes and rivers.

As of last summer, it's estimated that the invasive algae occupies 22 acres of the lake, some of it in wild rice beds. First discovered in Lake Koronis in 2015, it has since spread to 19 other lakes in Minnesota, including nearby Cass Lake and Lake Winnibigoshish. Starry stonewort has never been eradicated from any U.S. lake, but treatment or careful removal can help reduce the risk of spread and lessen the impact on water-related recreational activities. Early detection is key to effective management.

Given these challenges, the MN DNR, the Leech Lake Band of Ojibwe (LLBO) Cass County AIS Program, the Leech Lake Association and others are determined to contain starry stonewort, as much as possible. Here's what you are likely to see going on this summer to tackle starry stonewort and other aquatic invaders:

- **The Leech Lake Band of Ojibwe has purchased Diver-Assisted Suction Harvesting (DASH) equipment** and plan to set up three rounds of DASH harvesting this summer. Their work, in partnership with the Minnesota Aquatic Invasive Species Research Center (MAIRSC), will include research and control plots to understand the effectiveness of treatment and its spread.

*(Continued on page 13)*

(Starry stonewort gets special attention continued from page 12)

- **The DNR is planning to work with local organizations and provide funding**, if needed, to have the starry stonewort pulled by divers again this year, as was done last year. DNR Invasive Species staff will survey other areas of the lake to see if it has spread in other areas. If another infestation is found, the actions taken will depend on the size and location(s) of the new infestation. According to Wendy Crowell, MN DNR Aquatic Invasive Species Management Consultant, “If DNR Invasive species staff think that an aggressive response in the additional area(s) will help prevent the spread within the lake, or help prevent spread to other lakes in the area, then we will work with local cooperators to help make that happen. Depending on when it was found we would likely do additional searches for the plant in area where the new infestation was located.”
- Boaters who enter and exit Leech Lake on the three launches on Steamboat Bay will be able to use a new **CD3 Waterless Cleaning Station** located at Anderson’s Cove Resort. These high-tech, self-clean stations allow people to clean, drain, and dry their recreational equipment with brushes, air blowers and vacuum tools. The CD3 units were provided through an Environment & Natural Resources Trust Fund grant obtained by Minnesota Lakes & Rivers Association. The CD3 units were accepted by the Leech Lake Band of Ojibwe for ownership, which includes annual operating expenses, maintenance, contract work, and providing insurance. These units would not be possible in Cass County without the support of the Leech Lake Band of Ojibwe.

Ann Anderson, who with her husband, Chris, own Anderson’s Cove Resort on Steamboat Bay said that they want to make it easier for their customers to keep their boats clean and “to be good stewards for the environment - to make sure that fishing is good now and well beyond our years. We’re thrilled to be working with the Ojibwe Band and the Minnesota DNR, to have their direction and expertise.”

(Continued on page 14)

## Ways You Can Help the AIS Effort

### Where starry stonewort may be present...

On the western edge of Steamboat Bay, “Boaters should stick in the main channel area to avoid fragmentation of the stonewort caused by boat props,” advises Dana Gutzmann, Cass County AIS Program Lake Technician.



### On July 6, learn to identify native and invasive plant species

Take the Basic Aquatic Species Identification Workshop on Wednesday July 6th at 9:30 AM. Free. Walker City Park. In an hour and a half, you’ll view samples of invasive and native aquatic plants, as well as examples of zebra mussels, mystery snails, native snails and hopefully rusty crayfish. Afterwards, for those who are interested, we will split into smaller groups and try out rake throws at nearby public accesses to look for AIS.

This workshop will be presented by a collaboration of aquatic invasive species partners from the region including Nicole Kovar, DNR AIS Specialist; Raining White, LLBO Invasive Species Specialist/Crew Lead; Kate Hagsten, LLBO Plant Program Manager; Dana Gutzmann, Cass County AIS Lake Technician.

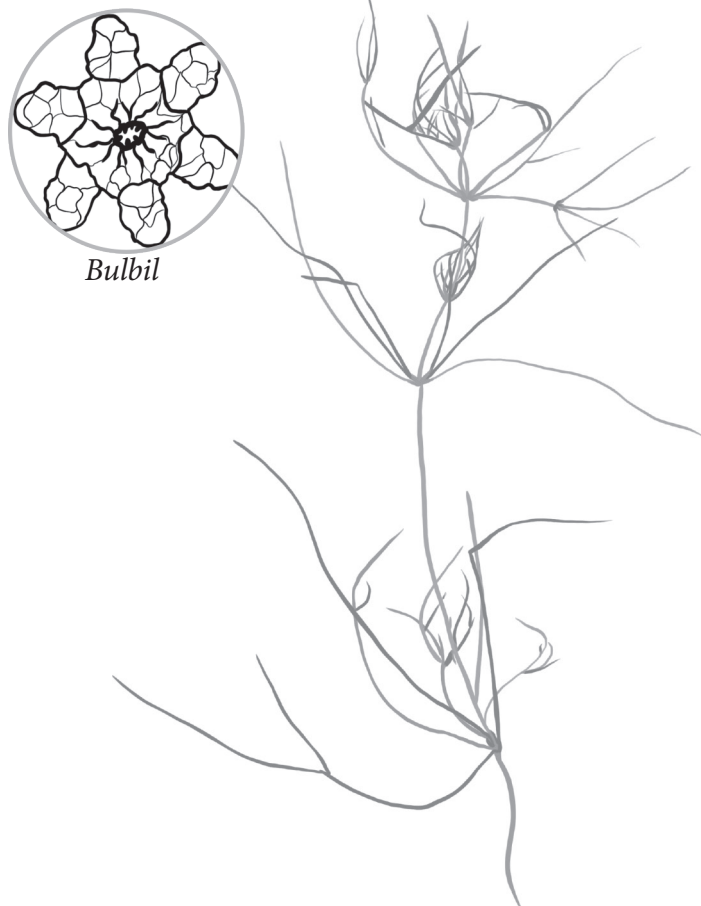
### Text if you suspect!

Early detection of AIS is key! To report suspected starry stonewort or spiny water flea found in Leech Lake, please take photos, save a sample, note your location and text 218-536-0584 or email Dana Gutzmann at [dana.gutzmann@co.cass.mn.us](mailto:dana.gutzmann@co.cass.mn.us).

### Use the spiny water flea cloth

It’s a user-friendly and effective tool for wiping down fishing lines and gear, and for soaking up residual water from boat compartments. A cloth and a sponge, it dries quickly to minimize the risk of spiny water flea survival.

(Starry stonewort gets special attention continued from page 13)



Starry stonewort is a green macroalga with whorls of long, narrow branchlets in groups of 4 to 6 coming off of main shoots.

- **The Cass County AIS Program is gearing up again to have a presence at public and private launches** on Leech Lake this summer. Together, the DNR and Cass County conducted 11,005 boat inspections on Leech Lake in 2021, up from 3,783 inspections in 2020. Dana Gutzmann, Cass County AIS Lake Technician, praised boaters saying that last year 99% of boats showed up with drain plugs out – an important action to prevent potentially AIS-contaminated water moving from lake to lake. Cass County will continue to run the decontamination station at Federal Dam Thursday-Sunday, other area decontamination station locations can be found at <https://stopais-casscountymn.hub.arcgis.com/>
- The Leech Lake Association will continue its volunteer-led **water quality sampling and monitoring** to detect and understand changes to water quality, as

a result of AIS and/or increased pollution or shoreline disturbances. A sampling of the phytoplankton population in Leech has also been initiated, anticipating that the rapidly growing Zebra mussel population will reduce the abundance of this valuable food source, increase transparency, and potentially affect other factors as well. The association is also partnering with Cass County AIS to expand educational efforts to help people identify and report potential AIS in and around the lake.

- **The Leech Lake Association is participating in spiny water flea monitoring work** in partnership with the Cass County AIS Program. This involves evening plankton tows in the late summer/early fall when spiny water fleas have been found to be more active in the upper water column. They stay in deeper, darker water during the daylight hours then come up to the surface at night for feeding and/or predator avoidance. Anglers in Leech Lake should also keep their eye out for the gelatinous globs on trolled fishing lines and down rigger cables, collect and report any findings to the local DNR AIS Specialist on this website: <https://www.dnr.state.mn.us/invasives/ais/contacts.html>.
- **Support Cass County FiveStar Lake Service Providers.** A new program sponsored by the Cass County AIS program, it champions public area businesses that are savvy about AIS and implement prescribed AIS safeguards and standards. Lake service providers are DNR-certified, sign a contract agreeing to apply additional specified AIS best practices when moving from one lake or river to another. As of this printing, the FiveStar Lake Service Providers named are The Dock Guys, Grand Rapids Marine, Lake Life Dock & Lift, Land O'Lakes Marine, Musky House Marine, Northwoods Dock & Service, Prosocki All Care Services, Resort Marine and Service, Rock Solid Services, Wheeler Dock & Lift Service, and Wheeler Marine. For more information about the program, or to become designated as a FiveStar Lake Service Provider, contact Cass County Environmental Services department.

While many hands are undertaking the work to manage AIS once in the lake, it requires individual efforts to **stop the spread by cleaning, draining and drying all equipment.**

## Dedicated to preserving our lake quality

### Visit our new Leech Lake Association website

We've updated our association website! Put in your browser: Leech Lake Association and you'll find us right away, or type: <http://www.leechlakeassociation.com/>.

You can use the site to renew your membership, learn about the association's activities, lake quality and fishing data, plus our governance and contact information.

### Become a member or renew today for 2022!

Fill out the membership form (inserted in your packet) and mail your check to Leech Lake Association, PO. Box 1613, Walker, MN. 56484. This is a tremendous value considering the many projects and efforts the Leech Lake Association is participating in for the betterment of Leech Lake.

### Volunteer!

Are you interested in water quality? Identifying invasive species? Organizing events? Writing for the newsletter or website? Many hands make organizations run and we heartily welcome your participation – an hour here or there? Or maybe even more? Every bit helps. To find out more, contact any board member (page 2).

### Leech Lake Association Annual Meeting: August 5.

We hope you'll attend! Watch for more news this summer.

Costs for printing and distribution of the spring edition of the LLA Newsletter have been donated by the First National Bank North, and Hummingbird Press.



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Recycling is an important way for us to conserve energy, reduce waste in our landfills and conserve our natural resources for many years to come. Please take a moment to recycle that water bottle, aluminum can, or glass spaghetti jar instead of tossing it into the garbage. Our earth will thank you for it.

For more information go to <http://www.environment-green.com/>

## Leech Lake Association Sponsors

We are very grateful to all those who have chosen to become or remain sponsors of the Leech Lake Association (\$100 and above). Your generous donations, plus the annual dues of all our members, allow us to continue our mission of protecting Leech Lake and environs. To become a member or sponsor, please go to <https://www.leechlakeassociation.com/membership.html>

A special thank you to:

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### In Memory Of:

- LeRoy & Sherry Heitz, by Tony Ozark

A special welcome to all our new members, and to all of you who have continued to support us over the years as we have strived to maintain good fishing and the pristine nature of Leech Lake.



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