

Lake Edward Lines

Newsletter of the Lake Edward Conservation Club



LECC WEBSITE ADDRESS

<http://edwardlake.wordpress.com>

Lake Edward DNR ID # 18030500

Zebra mussels attacking a clam.



It is often said the sunfish begin to bite when the lilacs begin to bloom in the Spring. An old sage on the lake says a better indicator of when the sunfish spring bite begins is when the reeds are just about to break the surface of the water.

Shore Soil Contents:

100% Sand

Weed Line:

14 to 17 feet

Maximum Depth:

75 feet

Elevation:

1,203 feet

Water Clarity:

12 feet

Public Landing:

Southwest shore

Width:

2 miles

Length:

3 miles

Size:

2,032 acres

Miles of Shoreline:

9.4 miles

% of water less than 15 feet:

59%

Acres less than 15 feet:

1,199 acres

Age:

8,000 years old

Boat Ramp:

Concrete

Help Us Keep in Contact

Updating a database is a never ending job. Lori Nelson updates the Lake Edward email list. In addition to using the list to send the newsletter we also send out notices in a timely manner. If your information changes please notify Lori Nelson at lorinelson@brainerd.net so she can make the appropriate changes and you will continue to receive all notices and requests. All emails provided are only used for Lake Edward correspondence and never sold or shared with anyone. No exceptions.

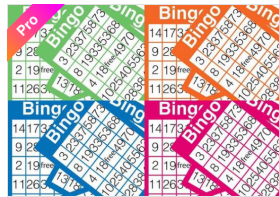
Plan For It

September 7, 2019
LECC Pot Luck and Bingo at
Cozy Bay Resort at 5:00.

September 2019						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 Labor Day	3	4	5	6	
8 Grandparents Day	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23 Autumn Begins	24	25	26	27	28
29 Rosh Hashanah	30					

Save the date.

Lake Edward Pot Luck and Bingo is just around the corner. Drop by and meet your neighbors, enjoy a sampling of lake fare and have a good time. Bring a white elephant gift for the prize table and a dish to share. Word has it everyone goes home a winner. Join us on September 7th at 5:00 at Cozy Bay Resort.



Curly Leaf Pond Weed

Curly Leaf Pond Weed has been present in Lake Edward for a few years. It is an invasive species and can crowd out native vegetation if given the right conditions. It can be controlled by chemicals if a permit is granted by the DNR. Thanks to those of you that made a specific donation designated for Curly Leaf Pond Weed, there is money available to hire a company to treat sections of the lake where the plant has been identified.

In order to get a permit to remove the plant, which is required by the DNR, certain conditions must be met. The first being the time of year the chemicals can be applied. Winter snow cover is a factor that determines when the treatment can occur. The last two years the weather prevented applications being applied. Curly Leaf Pond Weed grows under the ice before native plants grow giving it a head start so it must be treated before native plants begin their growth spurt, conditions the past few years prevented the plant from getting the head start it usually enjoys.

Having to postpone treatment of the lake did have some advantages. Since conditions were not conducive to the growth of the plant it didn't expand its territory. Also, research has developed a granular form of the chemical which is now available. In the past, the chemical used was often in a liquid form. A granular form is available now which is more effective since it doesn't dissipate in the water and instead sinks down and contacts the plant with much better results.

In the coming year when conditions are right the granular form will be applied.



**One
that
didn't
get
away**



Dock Talk

Dock talk is an impromptu stop and chat with folks when motoring around the lake and visiting with someone sitting on their dock.

Paul, how many years have you been on Lake Edward?

My grandfather brought the property in 1957 and built the cabin in 1958. When he passed away my dad and his brother inherited the property. I first came up with my dad when I was 1 year old. I have been coming up for 61 years.

What do you do when you're at the lake?

I'm from NW Iowa so I don't come up as often as I like but when I'm up, I fish as much as I can when the weather cooperates.

Over the years do you remember any specific fishing trips?

I remember when I was in middle school my dad and I would fish in the pond that holds the water as it flows out of the lake. In the spring we would catch bass one after another in there as well as blue gills with no problem getting our limit. I remember doing that for about six years. It was a challenge getting in there. I've gone in there once or twice in recent years but the pond is so full of lily pads it is hardly passable and never have been able to catch anything in the few times I've been in there since.

How did you get in there?

We had a 14 foot aluminum boat with a 6 horse motor. My dad's buddy, Mike, would use an oar and pole us through once my dad lifted the motor. I

remember one time it was particularly shallow and Mike snapped the oar in half trying to push us through.

I suppose you've seen quite a few changes over the years?

My dad says my grandpa bought the property and his intention was to move up here when he retired. He was able to buy 100 feet of lakeshore, hire someone to dig a well and build a cabin all for \$5,000. He could rent a boat for 5 dollars a week at one of the resorts on the lake. Back in the late 50's he had the opportunity to buy over 500 continuous feet of lakeshore for \$10 a foot but chose to use what money he had to build the cabin. He died before he could retire up here.

What time of the year do you like the best?

Fall, my brother and I come up for a week in October to close the cabin down and do some late season fishing. The weather is cooler, fish are active, there is less activity on the lake, the leaves are changing and it's just a beautiful time of the year. I've never been up in the winter so I've never seen the lake covered with ice. Once or twice over the years it snowed a bit during the week we closed the cabin down for the year but that's the only taste of winter I've experienced on the lake. I wouldn't mind giving ice fishing a try. After I retire I might try that.

Loon Center Coming to a Lake Near You



The money is appropriated, well some of the money anyway, the

architect's drawings are finished and a Loon Center in Cross Lake should be a reality.

Minnesota has the largest loon population in the lower 48 states. Loon populations are quite healthy but projections from the National Audubon Society predict that at the present pace there will be no loons in Minnesota by 2080 if we continue on our present course.

The loon center will be similar to other educational institutions already in place that focus on bald eagles, bears and wolves. It will be an education and research facility.

The building will be located on the shores of Cross Lake and be roughly 15,000 square feet. Cross Lake is part of the Whitefish Chain that has one of the largest gatherings of loons in the state.

Through education, the center hopes to inform the public of the problems facing loons and what can be done to insure that healthy populations of loons will be around for future generations to enjoy.

The hope is that the center will be open and running by the spring of 2021.

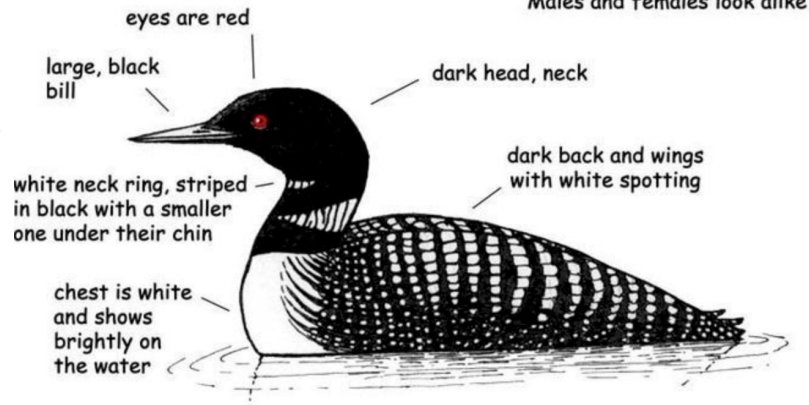
The loon (*Gavia immer*)

The loon (*Gavia immer*) became Minnesota's state bird in 1961. It is known also as the common loon. Loons are large black and white birds with red eyes. They have wingspans up to five feet and body lengths up to three feet. They are clumsy on land because their feet are situated toward the back of their bodies, but they are high-speed flyers and excellent underwater swimmers—they will dive to depths of 90 feet in pursuit of fish to eat. Loons are known for their soliloquy of cries, wails, and yodels; their eerie, echoing calls are a distinctive feature of Minnesota's northern lakes. Approximately 12,000 of this waterfowl make their summer homes in the state.

Common Loon

Gavia immer

Males and females look alike



Raindrops Keep Falling on My Head

Lake Edward is a ground water drainage lake meaning it is replenished by water from rain and runoff from the surrounding area.



When too much rain raises the level of the lake it exits through an outlet on the south side of the lake and drains to a wetland area. Water is trapped there until the level rises and it exits over the weir and into ditch 13 and then travels and mixes with the water in North Long. Water in North Long flows through a series of lakes until it reaches the Gull River which dumps into the Crow Wing River which in turn joins the Mississippi River south of Brainerd. We all know where the Mississippi ends. So, theoretically a drop of water falling from the sky into Lake Edward could travel roughly 2,300 miles and end up in the Gulf of Mexico. That's not the only connection with the Gulf of Mexico Lake Edward has. It's possible one of the loons that spent the summer on the lake, could very well winter in the Gulf, some of the 12,000 loons from this area do.

Don, the Volunteer

The DNR hasn't the staff to record accurate data on all lakes in the state. Accurate data is necessary for future planning and to establish budgets intended to protect our precious lakes and wildlife. Without lake volunteers willing to commit time and energy to the task, data would be missing that is essential to the health of lakes and wildlife. The data recorded ranges from loon counts to water clarity to AIS monitoring. It never stops.

We are very lucky on Lake Edward to have Don Rother wearing many volunteer hats. Don lives on the north side of the lake and takes a SECCHI reading and reports the results to RMB Labs as part of the Lakes monitoring Program. He lowers a rope with a disc on it and records the depth at which the disc can still be seen. Zebra mussels do change water clarity and with the information Don has collected over the years we'll know better of any changes in Lake Edward water quality due to this invasive species.

Beside monthly water checks Don also has conducted a loon survey on Lake Edward since 2010. His results are entered into a DNR spreadsheet that keeps track of nesting and immature loons on the lake.

The DNR loon survey program is on a one year hiatus but will be celebrating its 40th anniversary next year.

He also takes lake water level readings and sends the results to the DNR.

Oh, a couple more things. Don keeps meticulous records on ice out and ice on dates each year. Don and his wife also help coordinate the annual Lake Edward Pot Luck and Bingo event at Cozy Bay.

Thanks for all your work, Don.

Mercury, the Chemical not the Planet

Mercury is present in every lake in Minnesota. High levels of mercury pose health concerns to everyone. Some groups are more at risk than others. The DNR lists mercury levels in fish on the Lake Finder web site. That information is provided by the Minnesota Department of Health. The listing is a guide so folks can reduce their exposure and still enjoy many benefits from fish.

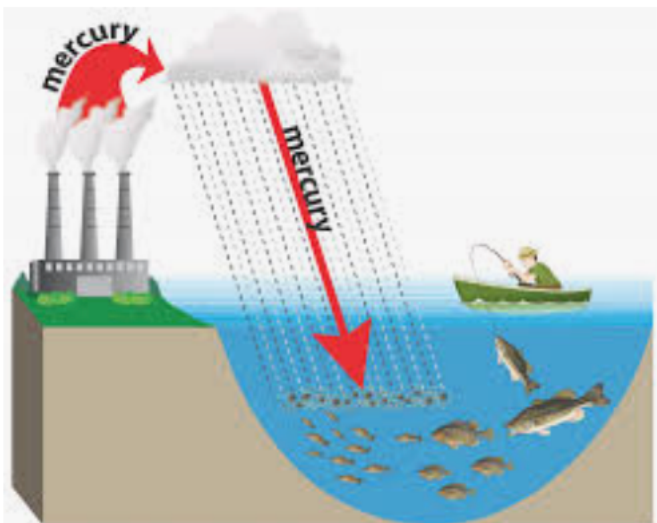
For the general population the recommendation for consumption of fish in Lake Edward is one meal a week from crappie, large mouth bass, northern, and walleye no matter the size. Cisco and bluegill sunfish have no restrictions and can be consumed as often as desired.

For pregnant women, women who may become pregnant and children under the age of 15 the guidelines change. These more vulnerable groups can eat unlimited consumption of bluegill

sunfish, one meal a week of Cisco and crappie, one meal a month of largemouth bass and northern and finally one meal a week of walleye under 16" and one meal a month of walleye over 16".

So, what does this all mean? Are mercury levels in Edward higher, lower or the same as other lakes in the area. For the most part the levels are very similar to other lakes in the area. Lake Edward is considered a "site" lake meaning fish in the lake are physically tested to determine mercury levels. All lakes in the state have some levels of mercury. Mercury is in the atmosphere and eventually enters the watershed. Once in the ground it can leech into lakes or rivers. "Non site" lakes are not tested specifically and have generic suggestions concerning fish consumption. The difference in levels from one lake to the next is dependent on the watershed area. Bacteria in the soil can turn the mercury into a form that can accumulate in fish. If the bacteria is not present in the watershed area, mercury doesn't accumulate in the fish in higher numbers.

Lake Edward was last checked for mercury in 2014 during the last DNR lake survey. Lake Edward is next scheduled for a lake survey in 2020. If there is enough money in the budget some fish trapped will be sent to the Minnesota Department of Health to be checked for current mercury levels.





President's Report,

As I write this, the weather has cooled off, the state fair is in full swing and Lori and I are planning to winterize the pontoon and dock. But our job continues to protect Lake Edward. Thank you so much for being excellent communicators. Please share your email and mailing address changes with LoriNelson@brainerd.net. It saves a lot of funds and labor if we can email the newsletter to you.

We'll continue monitoring the Crow Wing County Lakes and River Alliance (LARA) and a statewide equivalent organization for news that could affect Lake Edward. We have spare directories available if you have a neighbor that you'd like to invite to join. The first page of the directory has our contact information including our web page. Maybe some day we'll start a Facebook page too, if we can find someone to guide the page for the board. Have a great fall and winter.

Herb Nelson

LECC Board of Directors

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Did You Know

There are five lakes in the state of Minnesota that are named Edward. No definitive information is available but it is believed our lake was named after a fellow hired by the railroad to survey the area.

Word Scramble

Rearrange the letters to spell something pertaining to Lake Edward found in this newsletter

l r o e n n e t c o

Cormorant Jottings

Your Lake Edward board authorized a payment of \$550 to help defray the cost of sharpshooters hired to reduce the population of cormorants on Gooseberry Island on Pelican Lake. Success! The sharpshooters were able to eliminate 388 nesting pair of birds. The shoot was better than anticipated and the hope is another shoot won't be needed for at least a few years. You may have noticed the population of cormorants on Lake Edward has been noticeably down, far lower than in past years.

This is the third year a permit has been granted to control cormorants on Gooseberry Island. Historically the counts have been:

454 removed in 2016

225 removed in 2018

388 removed in 2019

The Brainerd DNR examined the stomach contents of 51 of the birds; 34 stomachs were empty, 17 had fish. One bird was found to have dined on walleye. Others were found to contain perch, shiners and darters, food preferred by walleye. There is some debate if cormorant eat walleye thus reducing the population but there is no question they both compete for the same fish on the food chain. Cormorants eat what walleye eat.

Going to the Lake: The New Normal

Tom Watson was guest speaker at the annual meeting at the Lake Edward Town Hall on June 8th. Tom is the past president of the Whitefish Lake Property Owners Association and his family has owned property in northern Minnesota for 110 years so he is passionate about maintaining the pristine lakes and property he and his family have enjoyed all his life. Tom made the point that water is what attracts folks to this area and the quality of water is important to the economy of the Brainerd Lakes area. Employment, recreation, quality of life and tourism are all dependent on water quality. Some lakes in the southern part of the state are so polluted they can not be used for any recreational use at all.

The challenge is to manage the pristine environment and yet enjoy the area as we are accustomed. Establishing a proper balance between maintaining quality of water in our lakes and the increasing use of our lakes is crucial. The balancing act is trying to sustain our area and combat the threat of pollution, AIS, oil spills and human overuse.

Warmer than normal summers and heavy more frequent rainstorms have an impact on lake water quality as does the biggest factor, non compliant septic systems. The more nutrients entering the lake the more stressed a lake becomes. Nutrients entering the lake have a negative impact on water clarity, fish habitat, lake water temperature and produce more frequent algae blooms. Lake water throughout the state is warming and that has an adverse effect on fish and quality of the water.

His advice: enjoy your lake property but be cognizant of how pristine lawns and leaking septic systems affect the quality of the lake.

Peak Season Is Over but Tick Season Is Not

We have just passed prime tick season, mid May to mid July. Back in the mid 80's it was safe to go outside and not worry about Lyme disease. There were very, very few of the ticks that spread the disease, but times they are a changing as a lyric from a popular song says. From only about 150 cases a year of confirmed Lyme disease in the mid 80's, the number has risen to over 1,000 a year in the last few years, that's a fourfold increase from the late 1990's.

There are thirteen species of ticks but one is the culprit and spreads the disease, the deer tick also called the black legged tick. It is usually all dark but could have some reddish orange coloring. Even though we now are in an "off season" for the critters we still need to be vigilant.

Since the mid 80's ticks have spread to all parts of the state. They prefer brush and forests areas that are damp and dark. In their lifetime they would never travel more than a couple of feet. To move about they need to hitchhike on mice, chipmunks, deer and even birds to catch a ride.

Lyme disease is named after a town in Connecticut called Old Lyme. The

disease came to light when children living in the community became afflicted with what was at first thought to be rheumatoid arthritis. The number of kids affected was too great a coincidence to be arthritis. Researches eventually identified the bacteria that caused the disease and it was named Lyme disease.



When diagnosed correctly the disease can be cured with proper medication; Doxycycline, an antibiotic proven to be effective. The best cure is to avoid ticks all together. If a tick can be removed before 36 hours, there is a good chance the disease will not spread. A tick needs about 36 hours to move the bacteria from it's digestive track to the bite site to infect a person.

Ticks like brush and woods so be extra careful when in the woods. They do not drop off of trees, jump or fly. To avoid them wear long pants, tuck the bottom of your pants in your socks. Dry windy sunny conditions can kill them so they prefer dark damp places. Deet is effective at deterring them as is a spray applied to clothing with permethrin in it to repel the ticks. Permethrin is effective for a couple of weeks when applied to clothing.



Good Eating



Some folks would rather have a plate full of panfish than a walleye filet. At a few local dining sites in the area sunfish can be found

on the menu as well as the ever present walleye. Does it seem like it takes more Lake Edward sunfish to fill the skillet than in the past? According to the DNR to boost the size of sunfish, anglers should lower the bar to meet the possession limit of 20. When sunfish are protected in a lake, the average weight went up. If more anglers released the largest sunfish and kept smaller ones the population becomes healthier.

The Minnesota Department of Natural Resources says the spawning cycle is impacted if anglers keep large sunfish for eating. Males are usually larger than female sunfish and protect their spawning nests. According to the DNR the largest sunfish tend to get the best spots to protect the eggs before they hatch. By keeping smaller fish for eating, it increases the opportunity for a healthy population.

Sunfish grow slowly, about an inch per year are considered big if they are 8 inches or longer. If current trends continue it is likely sunfish size will continue to decline because of the influence anglers have on sunfish populations.



The largest sunfish caught in Minnesota was 2 lbs. 13 oz. That whopper was caught in Alice Lake in Hubbard County in 1948.

Those poor loons

Conditions this year were favorable for a bumper crop of gnats and black flies. They are pesky, annoying, and can bite like the dickens. They aren't just out looking to make your day in the outdoors miserable. They look for anything they can bite and draw blood.

We have a game plan to combat these pesky insects such as, deet, long sleeve clothing or retreating inside. We can minimize the impact these blood thirsty critters have on us. Animals and birds aren't so lucky.

Folks monitoring birds for the DNR report that the insects were so abundant this year that some birds couldn't stay on their nests. In 2014 a species of black flies that feed on loons caused them to abandon their nests. That year, they were also annoying to Purple Martins. They would suck the blood out of purple Martin chicks.

Were conditions bad enough to duplicate 2014? We'll get a better idea of how bad nesting loons were bothered when DNR loon counters dial in their data and the information gets added to the spreadsheet. That's why loon watchers like Don Rother are so important to the understanding of what is happening on our lakes. Next time you get a bite from a black fly or have a gnat fly in your eye think of the birds that have no defense and just suffer.



Bluegill, *Lepomis macrochirus*, *Lepomis* (leh-p-OH-miss) is Greek for "scaled gill cover," *macrochirus* (MACK-row-KY-russ) is Greek meaning "large hand," referring to the shape of the body.

One Fish, Two Fish, Red Fish, Blue Fish

Lake Edward is scheduled for a fish survey in the spring of 2020. The DNR will use gill nets, trap nets and electrofishing to determine the number and kind of fish in the lake. We are on a six year rotation meaning 2014 was the last time the DNR surveyed the lake. Once the data is compiled it will be displayed on the DNR Lake Finder web site. Some of the results will be displayed using a series of graphs. The graphs below were taken from the data collected on northerns in previous surveys. Some of the categories are self explanatory but the category CPEU isn't a term often used.

Fish collected in trap nets can be released, however, those collected in gill nets can not.

An explanation of the term CPEU was provided by the DNR and it listed on the right.



Trap net

		CPEU	Normal Range	Average Weight	Normal Range	Count
1982	trap	0.25	N/A	1.3	N/A	3
1987	trap	0.75		2.08		9
1992	trap	0.08		3		1
1997	trap	0.33		0.5		4
2002	trap	0.73		1.77		11
2008	trap	0.29		1.65		4
2014	trap	0.67		2.29		10

Fish surveys - an explanation by the DNR

CPUE stands for "Catch Per Unit Effort" and is a way to measure and standardize our catch rates. If we set 5 gill nets in a lake and catch 20 Walleye their CPUE is 20 divided by 5 or 4 Walleye per net. If they come back to this same lake 5 years later and we set only 3 gillnets and get 20 Walleye again, their CPUE increased and is now 6.67 Walleye per net. The normal range of the CPUE is calculated from the catch rates across all lakes of that classification in Minnesota. Lakes are classified into 44 different lake classes based on physical and chemical characteristics.



If you are wondering when the DNR first surveyed the lake the answer is 1938. Yup, the first fish survey on the Lake Edward was 81 years ago.

The first sonar mapping of the lake bottom was done in 1962.



Gill net

		CPEU	Normal Range	Average Weight	Normal Range	Count
1982	gill	5.17	3.0 - 7.9	2.4	1.7-2.8	62
1987	gill	7.5	3.0-7.9	1.93	1.7-2.8	90
1992	gill	2.17	3.0-7.9	3.43	1.7-2.8	26
1997	gill	12	3.0-7.9	1.8	1.7-2.8	144
2002	gill	9.6	3.0-7.9	1.31	1.7-2.8	144
2008	gill	15.47	3.0-7.9	1.34	1.7-2.8	232
2014	gill	5.8	3.0-7.9	1.95	1.7-2.8	87

4th of July Lake Edward Style

July 4th was sunny when the flotilla of boats, about 40, promptly started at 11:00. Boats and pontoons were festively decorated in red, white and blue. The parade of boats stretched out as far as the eye could see. The only bump in the road was a very short rain shower at about the half way mark but that didn't deter most of the parade goers. The youngest participant was just a babe in arms, all of 6 months old. The oldest in the parade was a fellow in his 80's. Some regulars were saying the number of boats seems to be growing every year. Young or old, boy or girl, boat or pontoon, a good time was had by all.





Enthusiastic Spectators





A Flotilla of Vessels Stretched far in the Distance





**Red White and Blue decorations
were displayed everywhere**





Show Your Colors





The celebration didn't stop with the morning parade. Many boats cranked up their motors just at dusk and set out to view fireworks from

the lake to get a 360 degree view. Beside the fireworks in the distance from Crosslake, Breezy Point and Pequot Lakes there were some spectacular fireworks set off around the lake to enjoy. The

number of boats on the lake viewing fireworks at night was impressive. By 10:30 or so boats were docked, clouds reclaimed the sky and bonfire smoke filled the air.





Test your knowledge.

1. What is the best method to remove a tick?
 - a) Slather it with vasoline
 - b) Use a lighted match.
 - c) Gently pull it out with tweezers
2. What can be done to increase the size of sunfish in a lake?
 - a) Return all sunfish in a lake.
 - b) Keep smaller sunfish and return the largest.
 - c) Keep the largest and return the smallest to grow larger.
3. Where will the Loon Center be located?
 - a) Nisswa
 - b) Crosslake
 - c) Emily
4. How much rain fell on the 4th of July?
 - a) Downpour.
 - b) Steady drenching.
 - c) Minimal.
5. What is the #1 source of pollution in Minnesota lakes?
 - a) Phosphorus
 - b) Leaking septic systems.
 - c) Plastic bags
6. How do black flies and gnats affect loons.
 - a) They provide a food source for loons.
 - b) They pester loons and disrupt nesting.
 - c) They have no affect.
7. When is the 2019 LECC Pot Luck and Bingo?
 - a) September 7 at 5:00 p.m.
 - b) September 5 at 7:00 p.m.
 - c) August 24 at 10:00 a.m.
8. Water exiting Lake Edward via ditch 13 eventually could end up where?
 - a) North Long Lake.
 - b) Gulf of Mexico
 - c) Mississippi River.
9. Which is not an invasive species.
 - a) Zebra mussels.
 - b) Gnats.
 - c) Curly Leaf Pondweed.
10. Who do you contact to change your data to ensure you get updates and newsletters about Lake Edward?
 - a) Lori Nelson,
lorinelson@brainerd.net
 - b) LECC president
 - c) DNR
11. In 2020 what DNR program will celebrate its 40th anniversary?
 - a) AIS monitoring program
 - b) Loon Watcher program
 - c) Water clarity recording



Lake Edward Conservation Club
P.O. Box 134
Merrifield MN 56465-0134

Beware On Line License Purchase

The Minnesota DNR has received a limited number of reports from people who attempted to purchase fishing or hunting licenses online and came away from the transaction without a license, or having been charged in excess of the cost of a license.

People should keep the following in mind when purchasing a license:

- Online license purchases should be made only on the DNR website.
- If something doesn't feel right during an online transaction, stop and call the DNR License Center at (651) 297-1230 or (877) 348-0498.
- Licenses also may be purchased by phone at 1-888-665-4236 (1-MN-LICENSE), or at approved vendors throughout the state. A list is available here: <https://www.dnr.state.mn.us/licenses/agents.html>
- If you suspect you have been a victim of fraud in an online license purchase using a credit card, contact the card issuer immediately. You may also contact your local law enforcement agency.