Lake Edward Lines

Newsletter of the Lake Edward Conservation Club

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

KEEP LAKE EDWARD HEALTHY

LECC WEBSITE ADDRESS

http://edwardlake.wordpress.com

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

LECC Annual Meeting

The Lake Edward Conservation Club annual meeting will be held at the Merrifield Marathons Center from 10:00 a.m. to 12:00 noon on June 15th, 2013. All are welcome to attend. Refreshments to follow the business portion of the meeting. Anyone with agenda items contact Herb Nelson 218-765-4001 or Jay Beebe 218-963-7750. The Merrifield Marathons Center is located on County Road 3, South of Merrifield.

Annual dues for the LECC are $15.00 per property owner. Dues are due January 1. Not a member? The application to join is on the fourth page of this newsletter. Thanks for your support.

There are 158 fish species in Minnesota waters. State Wide Most Caught Fish are:
1.Panfish 2. Walleye 3. Northern

A new law went into effect July 1, 2012 dealing with a quarantine period for water related equipment. It is against the law to transfer any water related equipment such as docks, lifts, swim rafts from one body of water to another without waiting 21 days before moving it into the water.

Know the Enemy

(A) Forms dense mats that interfere with boating or swimming. Long spaghetti-like stems. Delicate feather-like leaves. Leaves arranged in whorls (circles) of 3-5 around stem. Each leaf has 12-21 leaflet pairs.

(B) Forms weed mats that shade out native plants. Has somewhat stiff wavy leaves with fine toothed edges that are 1/2" wide to 2-3" long, arranged alternately around stem. When it dies back in mid summer it releases nutrients, which causes algae blooms and other problems. **Has been found in Lake Edward.**

(C) Filter feeders which take plankton out of the water that young fish rely on for food. Yellowish brown-clams up to 2" long, have light and dark stripes on their "D" shaped shells. Damages ecosystems. Uses byssal threads to attach to all hard surfaces.

(D) A hardy perennial which can degrade wetlands and diminish their value for wildlife habitat. 3-7" spike with small purple flowers. Downy smooth-edged leaves, usually paired, opposite. Mature plants have many stems that grow from a root crown.

A _____ B _____ C _____ D _____

*** AIS answers below ***

(1) Curly Leaf Pondweed

CURLY-LEAF PONDWEED

(2) Purple Loosestrife

PURPLE LOOSESTRIFE

(3) Zebra Mussel

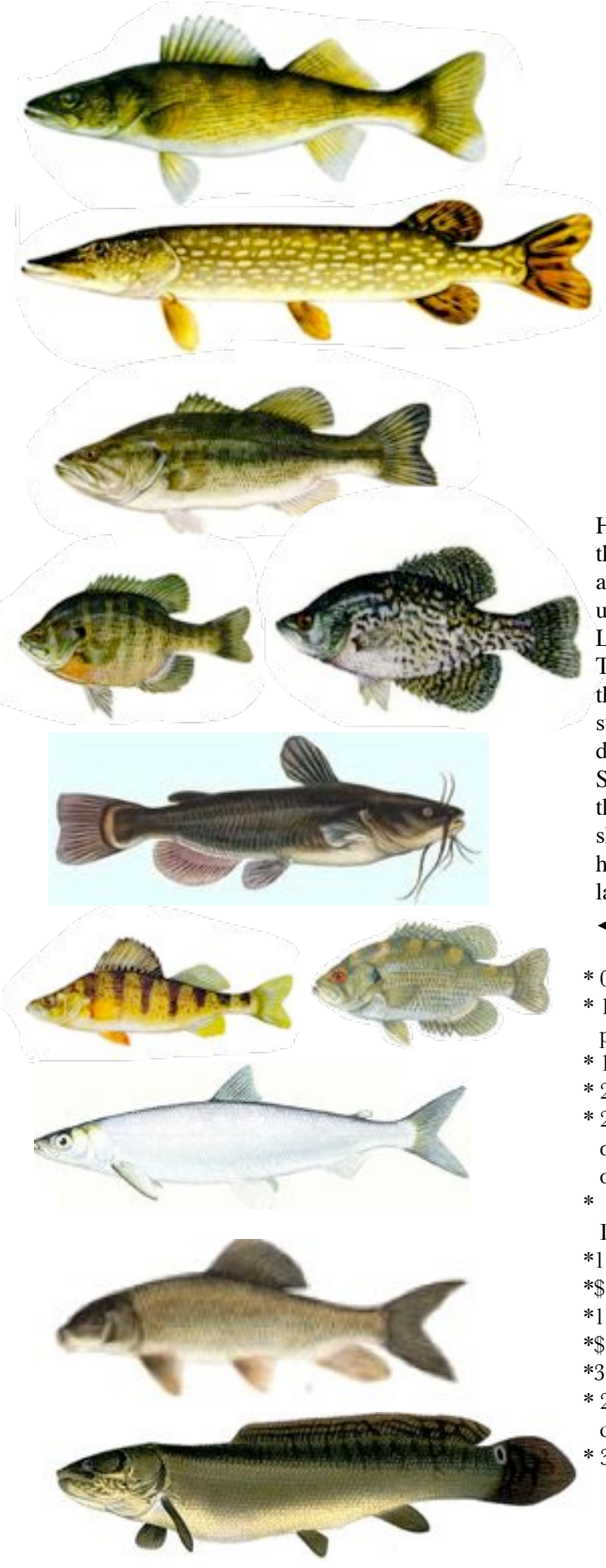
ZEBRA MUSSEL

(4) Eurasian Watermilfoil

EURASIAN WATERMILFOIL

Lake levels got above ordinary high water for a while last summer, so we worked on Ditch 13 to release water from Lake Edward. Ditch 13 is the primary water outlet from the lake and beavers like to dam it up. Thirty Lakes Watershed District (TLWD) and our lake association paid a trapper to remove 10 beavers in 2012. Also, TLWD and our lake association installed a clemson pond leveler into one big beaver dam on Ditch 13 to release water through the dam. During fall 2012, we got a DNR permit to clean sediment and vegetation out of a 10-foot by 50-foot area of the outlet at the shore of Lake Edward. Thanks to Gordon Hardy of TLWD, Darren Mayers from the county Soil and Water Conservation, Ralph Morgan, Lynn Hansch, Dave Christenson, Don Rother, Dave Townsend and Herb Nelson from the lake association for helping. Thanks also to the Mingos and others for providing access to the outlet channel on their properties. Depending on water levels, we expect to continue to help with maintenance work on the outlet in 2013.

Answers to the AIS quiz above A --- 4 B --- 1 C --- 3 D --- 2



Lake Edward Fish Population

Walleye
Northern
Large Mouth Bass
Sunfish
Crappie
Bullhead
Perch
Rock Bass
Tullibee (Cisco)
Sucker
Dogfish (Bowfin)

The last fish survey on Lake Edward was in July of 2008. Eleven species of fish were sampled by the DNR and survey results can be found at the DNR Lake Finder web site. Images of the netted fish are shown on the left.

Lake Turnover

Here's a simple science experiment. Take an empty bottle that has a secure top, any size works, and fill with half water and half oil. Shake it up. What's on the top. Turn the bottle upside down. Now what's on the top? That's the same thing Lake Edward and all lakes go through each Spring and Fall. The dense cold water sinks to the bottom and stays there and the less dense warm water floats to the top. In Fall when the surface water gets colder, more dense, it pushes it's way down and forces the lower lever water to the top. In the Spring the opposite happens. At some point the water reaches the same temperature 39 degrees and freely mixes, during the shake up part. That's what's called lake turnover and it happens twice a year. Lake turnover makes for a healthy lake.

AIS By The Numbers

* 0 number of zebra mussels found in Lake Edward
* 1 number of AIS species found in Lake Edward, curly-leaf pond weed
* 1991 first sighting of Eurasian Milfoil (Bay Lake)
* 2003 first sighting of zebra mussels (Ossawinnamakee)
* 2012 New law - any water related equipment must be quarantined for 21 days before being put in water such as docks, lifts, rafts etc.
* 800 number of lake service businesses that have attended DNR training sessions and are certified
*19 number of AIS training session sites throughout the state
*$0.00, price for a business to attend an AIS training session
*1 number of exams needed to pass before being certified
*$50.00 application fee for a business to obtain a permit
*3 hours a DNR AIS training session takes
* 2011 year legislation passed that require businesses to be certified
* 3 number of years permit is valid

PRESIDENT'S REPORT ----- HERB NELSON 2013

Did you know that we already have an invasive species in Lake Edward? It's curly leaf pondweed (CLP). The DNR confirmed it in 2004 & 2005. CLP is a problem because it can grow to nuisance levels in very cold water, even under the ice, to out-compete native plants. Dense CLP beds can interfere with boating, fishing and lake water quality. So in April, I attended a local workshop on CLP with other MN lake associations, AW Research and others that help control CLP.

At the CLP workshop, folks with much experience with CLP recommend that we map plants in Lake Edward every year to detect an impending CLP bloom. Fortunately, there is a way to treat CLP, but it's very expensive, about $1,200 per acre. Treatments are needed for at least 3 years in a row to make a dent. CLP is not a problem yet in Lake Edward, but we prefer to catch it early for treatment, like early detection of a tumor in a person.

We are looking for the best affordable way to map CLP and other lake plants. One alternative we're exploring uses information recorded using a Lowrance HDS depth finder. I happen to own one. But we are looking for others that can help by submitting tracks from their HDS units. If you can help. my email is herbnelson@brainerd.net.

By the time you get this newsletter, I hope that a number of us have taken MDNR training on being invasive species volunteers at the boat ramp. Hopefully, this will at least help delay introduction of zebra mussels until some effective new treatment is found. But until then, clean your boats after fishing in infested lakes. If you buy a used boat, dock or lift from an infested lake, let them sit out of water for at least 21 days before using them in Lake Edward. Over winter is better. Please consider joining me on our Invasive Species Committee. We need your perspective and help. Keep in touch,

RENEW YOUR MEMBERSHIP

To renew current memberships or to become a first time member please send a check for $15.00 to: LECC P.O. Box 134 Merrifield MN 56465-0134. Your membership dues are tax deductible as are any donations to the organization.

Name _____

Lake Edward Address _____

Lake Edward Phone # _____

Other address, if applicable _____

E-mail address _____

( ) New member

( ) Renewal

You are receiving this newsletter with funds the LECC board designated for postage and paper and paid for from our budget generated by member dues. Are you a member? The survey conducted on "hot spots" in the lake in March was partially funded by dues and the rest from the Thirty Lakes Watershed District. The beaver bounty match, also, came from our fund balance. For our LECC group to be effective we need capable passionate folks to chair committees, fill officer positions, be stewards of the lake and maintain a modest fund balance. Thankfully, dedicated people have stepped up to pitch when needed. Volunteers have tackled beaver dam removal and monitor lake levels. In addition to the many hours contributed toward our goal of keeping Lake Edward healthy the LECC also needs as many Lake Edward members as possible to support the group financially. Our dues have not increased in many years and continue to be modestly priced. If you are not a supporting member of the LECC please consider a $15.00 membership to allow us to continue to pay for postage and fund projects that enhance our wonderful lake experience. Dues come to 4 cents a day.

The LECC is a 501C(3) non-profit organization in case anyone wishes to donate to support our activities. We currently have more worthy ideas than we have cash flow from dues.

Stay Alert

Traveling down highway 10 and excited about his great buy on a used boat lift last summer, my nephew drove straight down to the lake to unload it. He had carefully checked it for any invasive species at the site where he bought it, such as curly leaf pond weed and zebra mussels. Sliding the lift toward the lake, he tilted it at the shoreline and noticed it has open rail ends. Checking inside, there they were - zebra mussels!

According to the DNR, suggested ways to eliminate them were to wash the lift thoroughly with hot water, use a power washer or let the lift sit for at least five days. If not washing with hot water, and to kill all organisms, it needed to sit for 21 days.

We all need to stay vigilant to save Lake Edward from these invasive species. Thoroughly clean everything coming from the, pontoons, motors, trailers, sea legs, used docks and dock parts including the wheels on rollouts, etc. It's the law in Minnesota.

If you have not seen "Aquatic Invasive Species-Minnesota Waters at Risk", Google it and share it with others; it is also a great learning opportunity for kids.

Thanks Mabel Schultz for this contribution to the newsletter.

Lakes infected by AIS in Crow Wing County

Zebra Mussels

Black Bear
Boom
Half-Moon
Little Rabbit
Love
Miller
Nisswa
Ossawinnamakee
Pelican Brook
Pelican
Pickerel
Pine River
Rice
Round
Roy Bishop Creek

Eurasian Milfoil

Bay
Clearwater
Kimball
Long (Tame Lake)
Louise Mine Pit
Lower Mission
Ossawinnamakee
Ripple River
Ruth
Upper Mission

Link to certified dock installers ---- 79 certified as of January 7
http://files.dnr.state.mn.us/rlp/permits/lsp/lsp-permits.pdf.

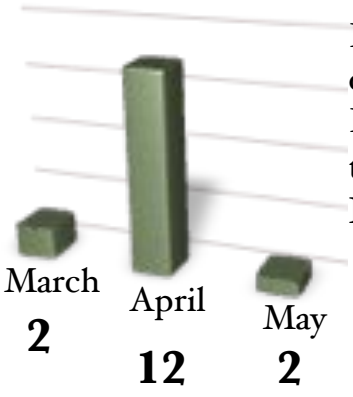
Water Quality News

Thanks to Don Rother and Bud Olson for continuing to collect field samples for our water quality work. In 2011 & 2012, AW Research used our sampling results to conclude that average clarity of the lake continues to slowly worsen in the long run. We know phosphorous is the culprit, but where is it coming from? It could be a variety of sources, but based on his specific knowledge of Lake Edward, Al Cibuzar at AW Research suspects our septic drain fields are a key source. Al says "Even septic systems that are working perfectly release phosphorous to groundwater. Then the ground water can carry phosphorus into the lake to feed algae and otherwise reduce clarity." To test Cibuzar's theory, AW Research used a special camera mounted on a plane to spot slightly warmer spots in the lake. Cibuzar says those spots are springs where groundwater is naturally coming up through the sand bottom and into the lake. Groundwater springs are naturally driven by rises of ground around the lake, even the 4 to 15-foot hills on the north and east side of the lake. So with the aid of Gary Austin (Thanks, Gary!) and his snowmobile, AW Research recently collected water samples through seven holes drilled in the ice at springs located with the special camera. Water samples were carefully collected from between the ice and lake bottom. AW Research staff tested for unique evidence of water from septic drain fields. If the samples from the lake spring contain evidence of septic drainage, then we know that septic drain fields are contributing phosphorous to groundwater that enters the lake. As of this writing, AW Research has not yet finished our study. We'll certainly tell you about it in a future newsletter or you can come to the lake association meeting at 10 AM on June 15 at the Merrifield Marathoner's club house. Thirty Lakes Watershed District and the lake association shared the cost of this work.

On A Somber Note

Sue Jordan, past president of this organization for many years, passed away in March at the age of 64. Sue retired, several years ago, and moved to Lake Edward after a career at 3M. She was very knowledgable about our lake and instrumental in expanding the LECC. Her obituary is posted on our LECC website.

Ice Out



In what month does ice out occur most often? If you guessed April you'd be right. In the last sixteen years April has had twelve ice out days, by far the most. Latest? This year.

Earliest ice out ---- March 26, 2012
Latest ice out ------ May 2013
Median ice out ----- April 16th

Thanks to all who support the LECC through dues, donations, and volunteering!

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