



Short Ears, Long Tales

Courte Oreilles Lakes Association

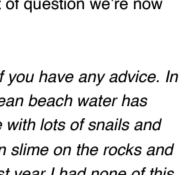
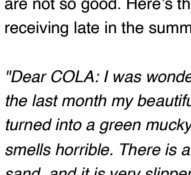
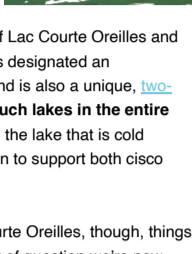
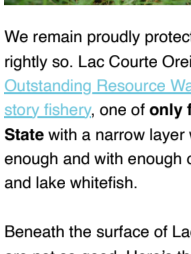
Issue #36 September 1, 2019

Beauty is Only Surface Deep

By Jim Coors
COLA Board of Directors

Another wonderful season on the lakes is coming to a close, but don't shut down and leave too quickly – fall is magnificent on Lac Courte Oreilles. Frankly, if you want my opinion, winter is also pretty nice in the north country. (So much for my credibility.)

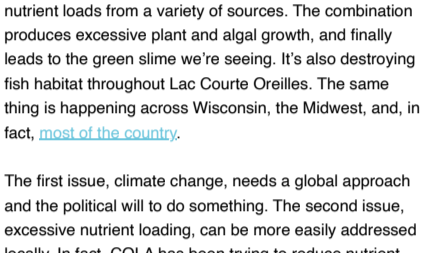
Above the surface, big and little Lac Courte Oreilles are as beautiful as swans, maybe even more so. Spring saw Canada geese, swans, mallards, wood ducks, mergansers, buffleheads and others all piled up and passing through. Eagles seem perpetually soaring, otters remain playful, beavers industrious, painted turtles with bellies blazing. And the loons! What a marvelous icon for Lac Courte Oreilles. The haunting wails evoke so much, no matter what your mood.



We remain proudly protective of Lac Courte Oreilles and rightly so. Lac Courte Oreilles is designated an [Outstanding Resource Water](#) and is also a unique, [two-story fishery](#), one of **only five such lakes in the entire State** with a narrow layer within the lake that is cold enough and with enough oxygen to support both cisco and lake whitefish.

Beneath the surface of Lac Courte Oreilles, though, things are not so good. Here's the sort of question we're now receiving late in the summer.

"Dear COLA: I was wondering if you have any advice. In the last month my beautifully clean beach water has turned into a green mucky haze with lots of snails and smells horrible. There is a green slime on the rocks and sand, and it is very slippery. Last year I had none of this. What can I do?"



It's Not Complicated

There are two reasons for this problem; increasing temperatures from global climate change and increasing nutrient loads from a variety of sources. The combination produces excessive plant and algal growth, and finally leads to the green slime we're seeing. It's also destroying fish habitat throughout Lac Courte Oreilles. The same thing is happening across Wisconsin, the Midwest, and, in fact, [most of the country](#).

The first issue, climate change, needs a global approach and the political will to do something. The second issue, excessive nutrient loading, can be more easily addressed locally. In fact, COLA has been trying to reduce nutrient loads (primarily phosphorus) for several decades.

Some Recent History

In 2014, at COLA's urging, Musky Bay was designated by the U.S. Environmental Protection Agency and the Wisconsin Department of Natural Resources (WDNR) as an [impaired water body because of high phosphorus concentrations](#). In 2018, again with COLA's insistence, all of Lac Courte Oreilles was listed as an [impaired water body because of low dissolved oxygen](#) – a result attributable to high phosphorus concentrations.

WDNR claims that the current upper-limit concentration of 15 ppb (parts per billion) of phosphorus is enough to protect a two-story fishery lake. The 2014-2018 averages were 25.9 ppb for Musky Bay, 13.8 ppb for Stuckey Bay, and 16.0 ppb for the West Basin of Lac Courte Oreilles. These are the areas most affected by discharges from cranberry marshes. The lake-wide average was 13.8 ppb. In 2018 alone, the lake-wide average was 15.3 ppb.

Historical water quality patterns in Musky Bay were [examined by the USGS](#) based on analyses of sediment cores collected in 2001. Results showed that since the 1980s, phosphorus levels have increased substantially. Best estimate of pre-development total phosphorus is ~10 ppb or lower.

In 2015 and 2016, Lac Courte Oreilles experienced [extensive whitefish and cisco die-offs](#). COLA compiled evidence, using state-of-the-art research, showing that high levels of phosphorus led to oxygen depletion in the critical habitat layer for cisco and whitefish. Cisco and whitefish are the primary food source for walleye and musky. Preserving cisco and whitefish habitat is essential to the lake ecosystem.

In March 2016, COLA [presented evidence](#) to WDNR supporting an upper-limit of 10 ppb phosphorus. WDNR did not act, so COLA and the Lac Courte Oreilles Band of the Lake Superior Chippewa Indians (LCO Tribe) joined in legal action brought in Dane County Circuit Court to force the agency to set an appropriate phosphorus standard. After a protracted series of appeals from WDNR, the Court demanded on July 2, 2019 that WDNR develop an appropriate phosphorus standard for Lac Courte Oreilles. We hope that when the new standard of 10 ppm is finally put in place, perhaps next year, it will be an effective tool for protecting Lac Courte Oreilles.

Where is the Phosphorus Coming From?

COLA spent several years and over \$200,000 to perform a [Maximum Total Daily Load \(TMDL\) analysis](#) to determine exactly what are the sources of phosphorus for Lac Courte Oreilles. This TMDL study was completed in 2014 and shows that phosphorus comes from several natural sources and sources related to human activity.

Natural sources include drainage via creeks from elsewhere in the watershed, natural runoff from undeveloped landscapes, and atmospheric deposition. Human-related sources include shoreland development (e.g., poorly maintained septic systems, impervious surfaces, fertilized lawns), and agriculture. Human-related sources are the most problematic, but they also the most controllable sources of phosphorus.

COLA has done everything it can to preserve Lac Courte Oreilles. Examples include leading the effort to [inspect and upgrade septic systems](#) of lake properties; installing a [shoreland restoration program](#); controlling [invasive aquatic species](#), re-establishing [musky habitat](#) in Musky Bay; mapping [erosion-susceptible agricultural](#) and [forest lands](#) on a watershed-wide basis; and working with Sawyer County to develop [reasonable and effective zoning](#).

Unfortunately, cranberry growers on Musky Bay and Stuckey Bay discharge water with high concentrations of phosphorus into the West Basin and are the single largest readily-controllable source of phosphorus pollution to Lac Courte Oreilles.

Cranberry growers should be recirculating their phosphorus-laden water into holding ponds, then reusing the water rather than discharging it back into Lac Courte Oreilles. This system of tail-water recovery is a recommended [best management practice](#) for the cranberry industry.

In fact, one grower did install such a closed water-management system for one bog discharging directly into Musky Bay, and the water quality improvements were so dramatic that, COLA placed an advertisement in the Sawyer County Record and issued a [state-wide press release](#) publicly applauding the effort. And in 2016, COLA and the Lac Courte Oreilles Foundation, Inc. went further by [setting aside \\$100,000](#) to assist in the installation of closed systems on the remaining bogs.

Unfortunately, the cranberry growers refused this overture and did nothing more to restrict their discharges from the remaining bogs.

What Do We Do Now?

WDNR, even with the new phosphorus standard, has no regulatory authority over agricultural discharges, including the cranberry marshes. **Compliance with the new standard is voluntary!** This is in spite of the fact that the discharges from cranberry marshes may have phosphorus concentrations exceeding 10X the current phosphorus standard of 15 ppb.

So, what can we, as individuals, do? All of us on the shores of Lac Courte Oreilles have a stake in the health of the lake, and those irresponsible few that knowingly harm Lac Courte Oreilles should be publicly held to account. Complain and complain loudly to all who will listen. Let your local politicians know of your anger. Band together with your neighbors and learn how to help heal the lakes through responsible property management. Make friends with the beleaguered Sawyer county conservationists and support local WDNR biologists who really do care about Lac Courte Oreilles. Applaud the LCO Tribal Conservation Department - it has provided much of what we know about the status of Lac Courte Oreilles' water quality over past decades.

And please support COLA in whatever fashion you can!



Jim Coors is a member COLA's Board of Directors. He retired from the University of Wisconsin-Madison in 2007 where he was a professor in the Plant Breeding and Genetics program and the Department of Agronomy for 24 years. He is married to Ann Pollock whose great grandparents, Edward Cady Higbee and Grace Fasset Higbee, purchased the land now referred to as the "Camp at Reserve" on the east shore of Lac Courte Oreilles in 1919.

Questions, comments, or suggestions for future articles may be sent to communications@cola-wi.org.

[View this email in your browser](#)

PLEASE RENEW YOUR COLA MEMBERSHIP FOR 2019-2020

COLA membership is a pretty good deal. For only 25\$/year, you help COLA protect the LCO Lakes, are informed about issues involving the LCO Lakes, and you get a picnic in return!

[Renew your membership](#) today in one of Wisconsin's most active and respected lake associations.

Are your neighbors and extended family members of COLA? If not, please ask them to [join](#).



LCO WATER QUALITY SUMMARY FOR 2018

Here's a quick glance at the state of LCO's water quality in 2018.



IS THIS ECO-HARVESTER IN COLA'S FUTURE?

From Gary Purford: "This could be a game changer... no more abuse for using chemicals, no pre and post surveys, no more permits from WDNR, no more monkeying around with AIS management grant applications/administration (except for the grant app. to buy the machine)...the long haul \$ savings (to say nothing about prevented frustration) would be huge."

Just looking right now. Demonstrations planned for later this year.

FROM THE NEW YORK TIMES

[Polluting Farmers Should Pay](#)

Fertilizer runoff is making us sick. States can step in to regulate farmers.

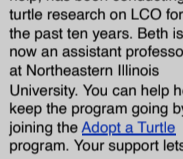
By Catherine King, Environmental Economist, Cornell University. August 26, 2019.

FROM THE MINNEAPOLIS STAR TRIBUNE

[Lakes Ilimitable are Lakes Lost](#)

Aquatic invasive species have changed the context of public access.

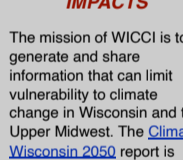
By Jeff Forester, May 10, 2019



LAKE TIDES

The [FREE newsletter](#) for people interested in Wisconsin Lakes.

Published by University of Wisconsin-Stevens Point & University of Wisconsin - Extension Lakes



ZEBRA MUSSELS ARE NEARBY

Close indeed - See linked lists for lakes/streams in WI and MN within a 150 mile radius of Lac Courte Oreilles.

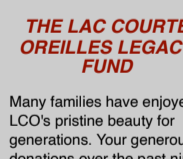
[Wisconsin lakes and rivers Minnesota lakes and rivers](#)

The Zebra Mussel is a serious invasive species and could destroy our lakes. See the message from COLA President Kevin Horrocks [here](#).



ADOPT A TURTLE

Beth Reinke, with COLA's help, has been conducting turtle research on LCO for the past ten years. Beth is now an assistant professor at Northeastern Illinois University. You can help her keep the program going by joining the [Adopt a Turtle](#) program. Your support lets her continue to purchase supplies and helps students from Northeastern Illinois University travel to LCO to get field experience. [\(More on Beth's research on LCO.\)](#)



WISCONSIN INITIATIVE ON CLIMATE CHANGE IMPACTS

The mission of WisCCI is to generate and share information that can limit vulnerability to climate change in Wisconsin and the Upper Midwest. The [Climate Wisconsin 2050](#) report is now available.

2018 ANNUAL LCO WATER QUALITY ASSESSMENT

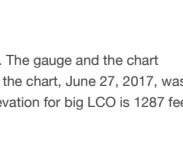
Wisconsin's Consolidated Assessment and Listing Methodology (WisCALM), from the WDNR, provides guidance on assessment of water quality data against surface water quality standards and for Clean Water Act reporting on surface water quality status and trends.

This assessment has been prepared for each of the last 6 years by LimnoTech Inc.

See the assessment [here](#).
[See more details about WisCALM on the WDNR website.](#)

NEW 700 FT SETBACK FOR ENHANCED BOAT WAKES

A new enhanced boat wake ordinance became effective on November 12, 2018. To view the ordinance [click here](#).



A higher resolution map of the new 700 ft setback requirements for enhanced boat wakes is provided [here](#).

THE LAC COURTE OREILLES LEGACY FUND

Many families have enjoyed LCO's pristine beauty for generations. Your generous donations over the past nine years have helped preserve the lake and remain the essential funding for current activities. Now we have another opportunity to protect the lake far into the future by putting the [Lac Courte Oreilles Foundation](#) into your estate plans.

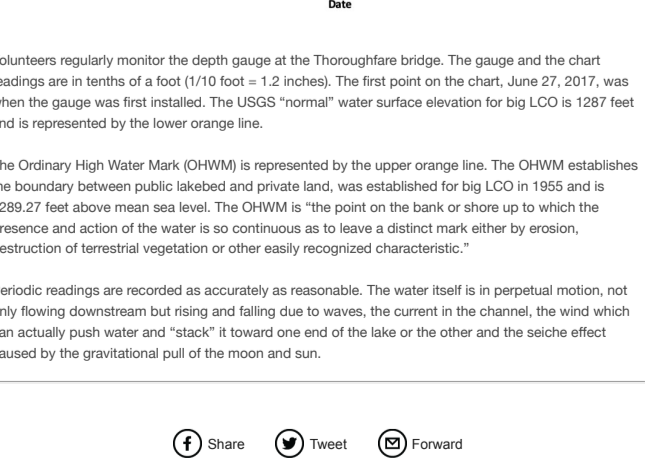
The LCO Foundation teamed up with the Eau Claire Community Foundation to create the [Lac Courte Oreilles Legacy Fund](#) and the [Higbee Family Fund](#). Endowment gifts include planned gifts such as a bequest in a will, charitable remainder trust, or outright gifts, such as of cash, or stock.

SPREAD THE GOOD NEWS

If you have friends or family on nearby lakes who would enjoy Short Ears, Long Tales, [let us know](#).
Help COLA by sharing this newsletter with friends.

[ARCHIVED ISSUES OF SHORT EARS, LONG TALES](#)

LCO Water Depth Recorded at Thoroughfare Bridge Gauge



Volunteers regularly monitor the depth gauge at the Thoroughfare bridge. The gauge and the chart readings are in tenths of a foot (1/10 foot = 1.2 inches). The first point on the chart, June 27, 2017, was when the gauge was first installed. The USGS "normal" water surface elevation for big LCO is 1287 feet and is represented by the lower orange line.

The Ordinary High Water Mark (OHWM) is represented by the upper orange line. The OHWM establishes the boundary between public lakebed and private land, was established for big LCO in 1955 and is 1289.27 feet above mean sea level. The OHWM is "the point on the bank or shore up to which the presence and action of the water is so continuous as to leave a distinct mark either by erosion, destruction of terrestrial vegetation or other easily recognized characteristic."

Periodic readings are recorded as accurately as reasonable. The water itself is in perpetual motion, not only flowing downstream but rising and falling due to waves, the current in the channel, the wind which can actually push water and "stack" it toward one end of the lake or the other and the seiche effect caused by the gravitational pull of the moon and sun.

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COLA Mission: 1) to protect, preserve and enhance the quality of Lac Courte Oreilles and Little Lac Courte Oreilles, their shorelands and surrounding areas; while respecting the interests of property owners and the rights of the general public; and 2) to consider, study, survey and respond to issues deemed relevant by COLA's membership.

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