Public Comments and DNR Responses on the draft Economic Impact Analysis for:
NR 102: Site-specific criteria for phosphorus for Lac Courte Oreilles, a lake in Sawyer County
(Natural Resources Board Order No. WY-09-17)

August 28, 2019

This document presents a summary of public comments received on the economic impact analysis (EIA) for rule package WY-09-17, establishment of a site-specific criterion for phosphorus for Lac Courte Oreilles, a lake in Sawyer County, in ch. NR 102 Wis. Adm. Code. Responses from the Department of Natural Resources (DNR) are provided.

OVERVIEW

A 14-day public comment period on the Draft EIA for the rule was held from August 12 to 26, 2019. Along with notification on the Department's rules website, email notification was sent to the following distribution lists, totaling 4528 recipients:

- List of interested parties, including those previously involved in the LCO SSC discussion, DNR & EPA
- Local municipal contacts (Sawyer & Washburn counties, city of Hayward, townships)
- Water Quality Standards & Assessments GovDelivery List

Three comment letters/emails were received during the EIA comment period, addressed below. Some comments were outside the scope of the EIA comment period but pertain to the rule itself, and may be resubmitted during the rule comment period.

A public comment period will be held on the proposed rule in September-November, with a public hearing on November 8, 2019.

Economic Impact Analysis (EIA) Comment Summary and Responses

(Comments received during EIA comment period: August 12-26, 2019)

A. Economic value of the resource

Comment from COLA and LCO Tribe: The Courte Oreilles Lakes Association (COLA) and the Lac Courte Oreilles Band of Chippewa Indians (LCO Tribe) provided comments regarding how the two-story fishery lake economically benefits the LCO Tribe and members of COLA, representing over 650 property owners on LCO, as well as local businesses and local units of government.

The Comments from COLA and the LCO Tribe stated that although WDNR does not anticipate any compliance costs related to this rule, a more stringent criterion of 10 ug/L "will have a huge economic benefit to both the regional economy and the rights the LCO Tribe has under the 1837 and 1842 Treaties when the LCO community rises to the challenge of achieving the goal of reducing and maintaining a lake phosphorus level of the WDNR proposed 10ug/L concentration." In their comments, COLA and the LCO Tribe provided supporting information regarding the economic and cultural value of the resource and they referenced a 2010 Economic Survey and Lake Assessment Analysis as supporting information. This Assessment and Survey can be found online at the COLA website: https://static1.squarespace.com/static/589d2006ebbd1a9c437fd84a/t/5a26ea2ef9619ae8205b82b0/1512499761371/LCO_Economic_Survey_and_Assessment_Nov_28.pdf. They also stated that failure to establish a more stringent phosphorus SSC would result in loss of the coldwater fishery.

Citizen Comment: The commenter stated that the risk of NOT implementing the rule needs to be quantified. He stated that the LCO is a world class two-story fishery and that the current levels of ~12-14 ppb TP seriously threaten the LCO cisco population with extinction, a species which is invaluable to the lake's ecosystem. The value

of the fishery and the economic loss from it's demise, can be computed. It is easily in the order of millions of dollars per year.

He further stated: No one seems to want to acknowledge that cisco extinction is a rough index of "green water", too. That type of more general, "non-fishery", property , tax, and recreation impact is very well covered in the lake literature. Millions of dollars, too: It is unclear whether this would be in addition to fisheries impact or if fisheries values are already part of that.

DNR Response: The Department recognizes the value of the Lac Courte Oreille, its fishery, its recreational opportunities, and its importance to the Tribe. The DNR's 2016-17 creel survey estimated over 66,000 hours were spent fishing on LCO, not including Tribal fishing. Because cisco provide an important part of the diet of several gamefish species (notably musky, pike, and walleye), loss of cisco could result in food web effects on gamefish species.

As mentioned in the comments, a document titled "Lac Courte Oreilles Economic and Assessment Survey" was prepared in 2010 (C. Bruce Wilson) and is available on the Courte Oreilles Lakes Association website at https://static1.squarespace.com/static/589d2006ebbd1a9c437fd84a/t/5a26ea2ef9619ae8205b82b0/1512499761371/LCO_Economic_Survey_and_Assessment_Nov_28.pdf. As noted in the comments received, this survey of lake residents provided the following information: Lake resident expenditures are approximately $10 million annually, with regional economic effects of up to almost $15 million annually. Property values from 2009 were ~$331 million. The large majority of residents participate in water-related recreational activities such as boating, swimming, fishing and sailing. A majority of survey respondents (77%) indicated that lake water quality was excellent at the time of their property purchase, but 59% indicated that water quality is worse today (2010) than at the time of purchase. Over half of respondents believed that their property values have been negatively impacted by water quality, and the degree of water quality degradation appears to strongly influence intent to maintain property ownership.

However, the proposed rule itself will not create better or worse water quality. Because setting a lower water quality criterion does not, in this case, set any regulatory requirements for phosphorus-reducing actions, any progress within the watershed will continue to be voluntary. Voluntary efforts can also occur regardless of which criterion is set, and such efforts can strive to achieve any goal that the lake association and the Tribe wish to pursue.

B. Economic impact related to point/nonpoint sources

Comment from WSCGA: The Wisconsin State Cranberry Growers Association (WSCGA) submitted the following comments: SCGA represents approximately 160 of Wisconsin's cranberry growers who grow more than 85% of the state's cranberry crop. Cranberries are Wisconsin's largest fruit crop and Wisconsin leads the nation in cranberry production. It is estimated that the state's cranberry industry provides more than 3,400 jobs for Wisconsin residents and has a $l billion impact on the state's economy. WSCGA agrees with WDNR's statement in the Analysis that "[t]here are no point source discharges to this lake, so there will be no regulatory required reductions of phosphorous discharges.. .." WSCGA also specifically agrees with the WDNR's reference that cranberry bogs are nonpoint sources.

DNR Response: Thank you for your comments. No change to EIA.

Outside the scope of the EIA

The following comments are related to the rule itself or voluntary management measures rather than the EIA. Comments specific to the rule proposal may be resubmitted during the public comment period on the rule.

C. Criterion selection

Comment from COLA and LCO Tribe: We applaud the WDNR on their proposed rule for setting a 10 ug/L total phosphorus criterion to protect fish and aquatic life uses and recreational uses for Lac Courte Oreilles. WDNR, the LCO Tribe and COLA know and agree that LCO is not currently meeting its designated uses pursuant to State and Federal water quality statues and rules. In proposing 10 ug/L site specific criteria, WDNR is appropriately setting a goal, that when achieved, will halt and reverse the declining water quality of LCO and protect into the future this unique two-story cold-water fishery and designed Outstanding Resource Water.

The LCO Tribe and COLA believe a "no change" in the LCO phosphorus criterion will surely result in the loss of the cold water fishery that has existed in LCO for thousands of years. LCO is currently listed as impaired for low dissolved oxygen, and low dissolved oxygen has contributed to cisco and whitefish fish kills in recent years. One of the most powerful drivers of low dissolved oxygen is phosphorus driven algal growth and the subsequent decomposition oxygen demand. Phosphorus levels in LCO have been on a steady increase since the 1930s. The five-year average across the three main basins in 2018 was 13.5 ug/L. That average is less than the current Wisconsin criterion for two-story lakes of 15 ug/L.

Since LCO is currently meeting the current two story lake standard/goal, yet dissolved oxygen levels have been reduced summer after summer in recent years and cisco and whitefish are dying for lack of suitable habitat, it only makes sense to establish a site specific criteria (goal) that the LCO community can work toward to reverse the downward spiral and provide some hope of preserving one of Wisconsin's premier fishing/recreational lakes.

Comment from WSGA: Notwithstanding that there is no regulatory impact on cranberry growers, WSCGA is opposed to the more stringent l0 ug/L criterion of Option A. As noted by WDNR in the Analysis, WDNR "...has the authority to develop a site-specific criterion in place of the generally applicable phosphorus criteria in ch. NR 102.06, Wis. Adm. Code, if site-specific, scientifically defensible data and analysis demonstrate a different criterion is protective of the designated use of the specific surface waterbody and the site-specific criterion is no more stringent than is reasonably necessary to protect the designated use." (emphasis added). The WDNR concluded in its draft rule that the above standard could not be met. Accordingly, WDNR cannot adopt Option A and, if it is going to adopt a site-specific criterion, it should adopt Option B, which maintains the current standard of 15 uglL as the site-specific phosphorous criterion.

Citizen Comment: The 15 ppb statewide standard for Wi. 2 story lakes is way, way, too high. The recent WDNR data set shows most 2 story lakes meeting those TP standards. Yet an alarming number of those waters (LCO included) are already a showing signs of stress in their cold-water fish communities, and their oxy-thermal habitat. Climate change is upping the ante, too. (Especially increased run-off and a longer growing season).

> **DNR Response:** Comments in this section are related to selection of the criterion itself but are outside the scope of the economic impact analysis. Comments related to a criterion of 10 ug/L or 15 ug/L as it relates to this particular lake may be submitted during the public comment period. Comments related to the applicability of the statewide criterion of 15 ug/L to other two-story fishery lakes would be outside the scope of this rule.

D. Land uses and lake management strategies

Citizen Comment: Should 10 ppb TP prove unreachable, or even if it is and oxy-thermal habitat cannot be restored by nutrient reduction alone, there is a remediation strategy available: hypolimnetic aeration. It has been used successfully for years in Lake Geneva, Switzerland to safeguard whitefish oxy-thermal habitat. It is very, very

expensive. But it can be done. The fascinating lake management literature and experience for western Europe has so far, gone untapped in North America.

The future of cranberry marshes at this latitude: Very much in doubt, according to Ocean Spray's own climate studies. Marshes in RI have been advised to look for another land use within the next 20 years. That would be midwest latitude Madison-Chicago. So any claims of negative economic impact or cost to cranberry culture will have to be critically evaluated, long-term. Perhaps the best longterm land use might be as solar farms? To off-set the power demands and electric costs of hypolimnetic aeration?

> **DNR Response:** The comments above pertain to potential management strategies and long-term land uses. Because any implementation of phosphorus reduction efforts or land use changes would be voluntary, regardless of the applicable water quality standard, implementation of these or other reduction efforts would not change the economic analysis for this rule.