



February 12, 2020

Comment on the Proposed Nutrient Concentration Objectives and Loading Targets for the Red River at the US/Canada Boundary

PRESENTATION TO THE INTERNATIONAL JOINT COMMISSION

First Nation people - Cree, Ojibway and Dakota - have lived throughout the Red River watershed and around Lake Winnipeg since time immemorial. Long before the international border, long before even the Red River and Lake Winnipeg were formed. Our Indigenous ancestors lived and survived along these water ways, passing teachings generation to generation. Each teaching showed us how to survive, and how to thrive. These teachings showed us that our survival depended on the land and the waters that give us life. These teachings survive to this day, the lake and water continue to give life to all human and non-human inhabitants, and yet, we find that the waters are increasingly polluted, and increasingly disrespected.

When I speak with other First Nations people about the lake, the thing I hear most is frustration at the continuing disrespect for the water - disrespect for the muskrat, for the fish, for our teachings, and disrespect for future generations. For too long the cities, towns, farmers and industries, alike, have treated the river and the lake like a toilet to flush away their waste. Forcing everyone down stream to deal with contaminated water and algal blooms.

The Lake Winnipeg Indigenous Collective sees this process by the IJC to set targets for the Red River as a positive step to reduce these harms and ensure our shared waters can be enjoyed by all inhabitants. After careful review of the various reports informing the process, we do not think the proposed limits are adequate, will not accomplish the objectives set out by the IJC and will have little benefit to Lake Winnipeg. For phosphorus target, we find that limit is too relaxed. For nitrogen, targets, we find that the limit is too strict, given the evidence is that phosphorus is



the limiting nutrient for algal growth and, outside of temperature and rainfall, the cause of eutrophication in Lake Winnipeg.

Long term research conducted at the Experimental Lakes Area has consistently demonstrated, over the last fifty years, that controlling phosphorus is the only way to reduce algal blooms in freshwater lakes. We find it odd that this work has not been cited or described in the report, suggesting that this robust, long term evidence was not part of the consideration in developing limits and a major gap in the justification.

We recognize that there are reasons for controlling both nutrients at the same time. These arguments are better suited for other watersheds that tend to be in close proximity to oceans, with fewer lakes, or in some cases in lakes looking to avoid hyper-eutrophication when phosphorus levels are already extremely high. Simply put in freshwater, nitrogen is only important to control, if we fail to control phosphorus. In the Red River, reducing elevated levels of phosphorus should be the primary goal.

Given the importance of phosphorus and a comparison done in research literature, the 0.15 mg/L phosphorus limit set is too relaxed. We would have expected a limit to be no more than 0.10 mg/L, but 0.02 mg/L would not have been surprising. This was noted in the report for the IJC water quality committee, but will be worth reviewing in the future.

While it is tempting to control all manner of chemical or nutrient flowing into any waterway, we note that jurisdictions controlling both nutrients may have more trouble achieving their targets, leaving those water ways vulnerable. We see the effects right here in Winnipeg, where the city has been unable to reduce either phosphorus and nitrogen in treated water for nearly 15 years, and does not plan to fully address either for an additional 15 years.

To their credit, the city and province have committed considerable resources and effort to address the short coming, but at the heart of this paralysis are stringent and unnecessary nitrogen limits, requiring massive capital investments to upgrades at the North End Water Pollution Control Center that the city has so far been unable to afford or implement. In the meantime, Lake Winnipeg continues to suffer because of elevated concentrations of phosphorus coming down the river from the municipal waste systems and non-point sources. Nitrogen continues to be a minor issue that does not contribute to the eutrophication of Lake Winnipeg or any waterway north of the border. We urge the IJC commissioners to recommend that only a phosphorous loading target and concentration objective be set at this time.

Presented by Daniel Gladu Kanu

References

- RESPEC. 2016. The development of a stressor-response model for the Red River of the north. Roseville, Minnesota. Topical Report RSI-2611.
- Schindler, D. W. 2012. The dilemma of controlling cultural eutrophication of lakes. *Proc. R. Soc. B* 279, 4322–4333.
- Schindler, D. W., R. E. Hecky, D. L. Findlay, M. P. Stainton, B. R. Parker, M. J. Paterson, K. G. Beaty, M. Lyng, and S. E. M. Kasian. 2008. Eutrophication of lakes cannot be controlled by reducing nitrogen input: Results of a 37-year whole-ecosystem experiment. *Proceedings of the National Academy of Sciences*. 105 (32), 11254–11258.

About the Lake Winnipeg Indigenous Collective

The Lake Winnipeg Indigenous Collective works collaboratively to seek healthy and equitable solutions for our waters and people from the diverse communities who have a relationship with our sacred great lake. The collective was established in 2014 by fourteen First Nations in partnership with the Lake Winnipeg Foundation. Our vision is that our sacred waters are healthy, traditional livelihoods are restored and Indigenous perspectives are influential in leading the protection and sustainability of Lake Winnipeg as a source of life for all future generations. Our Creation stories speak of how our people were placed on Mother Earth by the Creator. Our ancestors have inhabited Lake Winnipeg basin since time immemorial, long before the current political boundaries were drawn. Our spiritual and cultural connections to our Mother Earth are evident by our willingness to embrace the responsibility of protecting and preserving the lands and waters.

Lake Winnipeg Indigenous Collective
107-62 Hargrave St.
Winnipeg, MB R3C 1N1

Daniel Gladu Kanu, Director
daniel@lwic.org
(204) 956-0436