LWF LAKE WINNIPEG FOUNDATION

Submission to the Executive Policy Committee
Re: Report of the Standing Policy Committee on Water, Waste and Environment

Item No. 4 – Requesting Amendments to Phosphorus Compliance in Phase Two of the North End Sewage Treatment Plant Upgrade

Dr. Alexis Kanu, Executive Director, Lake Winnipeg Foundation

Mayor and Councillors,

Thank you for this opportunity to address you on Item #4 in the report of the Standing Policy Committee on Water, Waste and Environment.

Firstly, a critical correction to the motion presented in Item #4 must be made.

Section 1 A should read:

- "Amend the licence to require phosphorus compliance in ***Phase 2***"

This is absolutely essential, and the Lake Winnipeg Foundation ONLY supports the motion if that correction is made.

Phosphorus is the cause of algal blooms on Lake Winnipeg. Phosphorus compliance is therefore required to protect Lake Winnipeg.

Phosphorus compliance at the north end treatment plant can be accelerated as part of Phase 2 of the treatment plant upgrade. The new Biosolids Facilities can be designed to leverage the approved interim chemical phosphorus reduction solution – making that solution the ultimate, final solution for phosphorus compliance at the treatment plant.

This is a tested and proven solution used in many Canadian jurisdictions to achieve phosphorus compliance since the 1980s.

In 2001, a report produced jointly by Environment Canada and Health Canada recognized that:

"In most Canadian lakes, phosphorus is the nutrient that is most in demand, and algal growth in the majority of lakes is therefore said to be phosphorus limited. Discovering this relationship led to the significant reduction in releases of phosphorus from municipal water treatment plants, largely through the regulation of phosphorus in detergents and the chemical precipitation of

phosphorus in the plants prior to discharge. Major improvements in water quality resulted from these actions." [1]

Chemical precipitation of phosphorus resulted in major improvements in water quality.

This is from a federal report written over 20 years ago.

Scientists have know for a very long time that algal blooms can be effectively managed by reducing phosphorus. Unfortunately, the city of Winnipeg has been prevented from implementing this solution in the most cost-effective manner possible, due to other clauses and conditions in the treatment plant's provincial operating licence that do not contribute to reducing algal blooms.

Because these other requirements in the licence have prevented action on phosphorus, LWF supports the request in this motion to have the provincial task force review the nitrogen requirement.

Nitrogen reduction is not required for the protection of Lake Winnipeg – in fact, as shown in research from the IISD-Experimental Lakes Area, even if nitrogen is reduced to zero, there is no decrease in algal biomass.

LWF also encourages the committee to add a second request to section 1.B. of the motion:

- That the provincial task force be asked to review the requirement for biological nutrient removal at the north end treatment plant

While biological nutrient removal ***could*** be used to reduce phosphorus, it is significantly more expensive than the chemical method of phosphorus reduction. Biological nutrient removal will also take much longer to build and implement at the North End treatment plant, than will the chemical method of phosphorus reduction.

To reiterate:

1) The Lake Winnipeg Foundation only supports this motion if the correction is made to require phosphorus compliance in Phase 2.
2) With a plan for phosphorus compliance in place, the requirements for both nitrogen reduction and biological nutrient removal should be re-evaluated in light of the lessons we've learned over the past 20 years.

Yes, in a perfect world, we would do it all.

But we don't live in a perfect world. And we haven't been able to do it all. Over the last 20 years, none of these NEWPCC licence conditions – phosphorus, nitrogen, or biological nutrient removal – have been met.

[1] Environment Canada & Health Canada, February 2001. Ammonia in the Aquatic Environment. Priority Substances List Assessment Report. pp. 35-36.

As a city council that is now determined to do some good on this issue, you know that ignoring the very real constraints and barriers of the past twenty years is not a good plan.

But we can create a good plan by reviewing the evidence and evaluating the costs. And the new joint wastewater task force provides an opportunity to do just that.

I urge to you take the time, alongside your provincial counterparts, to assess and evaluate the nitrogen and biological nutrient removal requirements in the NEWPCC licence. What is their purpose? What is the evidence supporting these requirements? What is their cost – not just in dollars, but in time and energy and focus? Are there alternatives that should be considered?

Just as the Lake Winnipeg Foundation speaks to you on the topic of NEWPCC phosphorus compliance, we are continuously advocating the province on this issue as well. Based on our conversations, both Minister Klein and Premier Stefanson are very interested right now in finding an evidence-based, economically feasible solution for phosphorus compliance at the north end plant.

After decades of divisiveness on this issue, I believe we are closer than ever to agreement on the issue of NEWPCC phosphorus compliance using chemical phosphorus reduction in Phase 2.

I encourage you to maintain the momentum you, as Councillors, started last summer, when you approved the interim phosphorus reduction solution at the North End treatment plant. You also referred a new cost estimate for increased biosolids capacity to the multi-year budgeting process. I urge you to approve that necessary funding for the Phase 2 project to ensure it achieves phosphorus compliance. This sets you on the path to a win-win-win solution for this project – the largest infrastructure project in the city's history.

Thank you. I look forward to answering any questions you may have.

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