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## FOCUS ON PHOSPHORUS AT WINNIPEG'S NORTH END SEWAGE TREATMENT PLANT

*The Lake Winnipeg Foundation (LWF), the International Institute for Sustainable Development (IISD) and the Lake Winnipeg Indigenous Collective (LWIC) lay out next steps in a joint statement in response to an updated plan from the North End Water Pollution Control Centre (NEWPCC) Project Steering Committee.*

Today, the NEWPCC Project Steering Committee, comprised of representatives from both the city and the province tasked with implementing interim phosphorus reduction to improve the health of Lake Winnipeg, released an [updated plan](#).

**Continued urgency from both governments is needed to meet their 2019 commitments to accelerate phosphorus reduction to improve the health of Lake Winnipeg.**

Previous deadlines to meet the NEWPCC's phosphorus licence limit of 1 milligram per litre (1 mg/L) have not been met while algal blooms worsen in Lake Winnipeg. According to today's updated plan, actual commitments to reduce phosphorus are still pending.

As members of the NEWPCC Project Advisory Committee, we have identified two concrete opportunities to tackle the treatment plant's steadily increasing phosphorus loads and protect Lake Winnipeg well before long-term upgrades are slated to be complete:

- By April 2022, implement the recommended interim phosphorus solution to reduce phosphorus concentrations as much as possible within the constraints of the plant's existing infrastructure;
- By January 2021, commit to designing NEWPCC's new biosolids facility to address existing constraints and optimize the interim solution, ensuring that compliance with the 1 mg/L phosphorus limit is achieved no later than 2028 when biosolids construction is complete.

LWF, IISD and LWIC remain committed to our roles as advisors throughout this process. This role includes maintaining transparency and accountability, and communicating outcomes to the public. In this role, we stress that as a licensee under Manitoba's Environment Act, the City of Winnipeg must operate the NEWPCC in a manner that safeguards our province's lakes and rivers. As provincial regulator, the Government of Manitoba has the responsibility to enforce compliance with the licenses it issues.

### The Problem: Excess phosphorus is harming Lake Winnipeg

[Research from IISD Experimental Lakes Area](#) has taught us that excessive amounts of phosphorus drive the growth of potentially toxic algal blooms (a process called eutrophication) in freshwater ecosystems, such as Lake Winnipeg.

Since the NEWPCC began operating in the 1930s, First Nations and other communities on the shores of Lake Winnipeg have directly experienced the consequences of its phosphorus pollution. The eutrophication of Lake Winnipeg is not a new environmental challenge, but it is an increasingly urgent one. Improving the health of this ecologically, economically, and culturally important freshwater resource requires phosphorus reduction from all sources across the watershed.

The NEWPCC is the single largest “point source” of phosphorus to Lake Winnipeg. Localized, concentrated point sources of phosphorus – like NEWPCC – are the easiest to identify, quantify and address through the implementation of proven technical solutions.

Total phosphorus concentrations at the NEWPCC are routinely three times higher than the provincial licence limit set in 2005, which states that phosphorus levels in the facility’s effluent must not exceed 1 mg/L. The first deadline for compliance with the phosphorus limit was Dec. 31, 2014; this was subsequently extended to Dec. 31, 2019. Today, the NEWPCC remains non-compliant with its phosphorus licence limit.

### The Solution: Implement interim phosphorus removal – then optimize it

LWF, IISD and LWIC have been advocating for a [phosphorus-removal process at the NEWPCC](#) called chemically enhanced primary treatment (CEPT). This process is widely used in jurisdictions across North America to reduce phosphorus loading and protect freshwater ecosystems; dozens of municipalities around the Great Lakes have employed variations of CEPT to achieve phosphorus limits of 1 mg/L.

Despite CEPT’s success in other jurisdictions, today’s updated plan suggests that the process can only lower total phosphorus concentration in NEWPCC effluent by 23 per cent, from 3.5 mg/L down to 2.7 mg/L. While this falls short of the phosphorus reduction required at the NEWPCC, it is a necessary first step to addressing the environmental impact of the treatment plant.

The updated plan says that the NEWPCC currently doesn’t have enough biosolids capacity to optimize CEPT and meet the phosphorus limit. Biosolids, also called sludge, are a by-product of wastewater treatment; phosphorus-removal processes like CEPT concentrate phosphorus within sludge, keeping it out of the liquid effluent which is discharged into local waterways. This increases the volume of sludge produced.

If sludge capacity currently limits the effectiveness of CEPT, then the NEWPCC’s new biosolids facility should be built to address this limitation, so that the plant can achieve phosphorus compliance as soon as possible by optimizing the CEPT process.

*LWF is an environmental, non-governmental organization advocating for change and coordinating action to improve the health of Lake Winnipeg. [lakewinnipegfoundation.org](http://lakewinnipegfoundation.org)*

*IISD is an independent think tank championing sustainable solutions to 21st-century problems. [iisd.org](http://iisd.org)*

*LWIC is a collective voice for First Nations around Lake Winnipeg. [lwic.org](http://lwic.org)*