



**LAKE
WINNIPEG
FOUNDATION**

Manitoba's lakes: from "threatened" to "most improved"

The Lake Winnipeg Foundation (LWF) is an environmental NGO seeking solutions to ensure a clean, healthy Lake Winnipeg and watershed through research, education, stewardship and collaboration. Combining the expertise of our Science Advisory Council (comprised of leading freshwater experts) and the deep commitment of our broad base of members and volunteers, LWF is nationally recognized for our unique capacity to link science and action to create innovative solutions that address the root causes of harmful algae blooms.

Our flagship initiative, the Lake Winnipeg Health Plan, identifies eight science-based actions to manage phosphorus loading and provides a coordinated, comprehensive action strategy for the health of Lake Winnipeg.

Action 1 – Keeping water on the land

With strong and growing agriculture and tourism industries, Manitoba's prosperity depends on cost-effective solutions that keep our farms healthy and our lakes clean. Manitoba's new government has the opportunity to legislate the protection our province's threatened wetland habitats, providing the triple dividend of mitigating floods and droughts, protecting water quality, and securing a sustainable future for our agriculture industry.

Ten years of consultation with diverse stakeholders and the public emphasize the need for urgent progress in developing strong wetland policy. Through the work of Manitoba's Drainage Regulations Task Force (2012-2014), competing interests were balanced, and the common goals of reduced flooding, improved water quality and nutrient management, and reduced red tape were addressed. Most recently, in an April 2016 Probe Research survey conducted by LWF, 83% of Manitobans indicated they favour a regulatory approach to prevent the further destruction of our valuable wetland habitats.

There is an immediate opportunity to develop new made-in-Manitoba legislation that ensures no net loss of water retention capacity by combining regulatory and incentive-based approaches to wetland protection.

LWF supports strong and enforced regulatory protection for Class 3, 4 and 5 wetlands, and encourages Manitoba's new government to introduce legislation to achieve this in the fall legislative session. Incentives for the protection of Class 1 and 2 wetlands and for wetland restoration projects will provide additional water quality benefits, while also supporting the long-term sustainability of our agriculture industry.

Action 3 – Setting the standard for wastewater treatment

Whole-lake studies at the Experimental Lakes Area over multiple decades demonstrate that phosphorus controls the growth of blue-green algae blooms. The most effective solution to reduce algae blooms is to restrict, monitor and carefully manage the amount of phosphorus entering our lakes. This research points to the need to maximize phosphorus removal from the City of Winnipeg's sewage – a concentrated, localized phosphorus source.

LWF is encouraged by the Minister of Sustainable Development's commitment to rely on good science in achieving the objectives of City of Winnipeg wastewater treatment plant upgrades. Freshwater scientists from around the world agree that immediate action to aggressively remove phosphorus from Winnipeg treatment plant effluent is imperative to improve water quality in Manitoba.

Manitoba's new government has the opportunity to strengthen partnerships and jumpstart progress on a stalled issue by ensuring City of Winnipeg wastewater treatment plant upgrades focus on phosphorus and are completed before 2020. This decisive, science-based action will have measurable results for Manitoba's water quality.

Action 4 – Monitoring our waterways

As water challenges across the prairies get increasingly complex, new partnership initiatives for water quality monitoring can generate cost-effective, reliable data to inform management and policy decisions. Across Canada, citizen science networks are emerging to engage youth, farmers, cottagers and businesses in collecting, analyzing and sharing water quality data – while also providing opportunities for education.

With support from Manitoba Sustainable Development, LWF has convened community-based monitoring partners with the goal of building a coordinated citizen science network across the province. In our 2016 pilot field season, LWF's Science Advisory Council members developed and tested data collection and analysis protocols in collaboration with Manitoba's Conservation Districts and school partners. Refined protocols and network infrastructure will be shared with a larger number of community partners in 2017 and beyond.

All citizen science partners will be trained to use common scientifically-rigorous protocols developed for the network. LWF's science advisors will analyze and interpret collected samples, sharing the data back to community partners in person and online through the Lake Winnipeg Basin Information Network.

Manitoba's citizen science network will leverage new partnership initiatives, supplement existing long-term data sets, support research priorities, and provide credible, cost-effective information to policy-makers and community members to improve Manitoba's water quality.