



**LAKE
WINNIPEG
FOUNDATION**

Grant Recipients

LWF is an environmental non-governmental organization (ENGO) advocating for change and co-ordinating action to improve the health of Lake Winnipeg. We recognize collaboration is necessary to realize our vision of a clean, healthy Lake Winnipeg and watershed, now and for future generations.

The following list includes some of the projects supported by the Lake Winnipeg Foundation.

Little Saskatchewan River Conservation District

The residents at Kerr Lake (located south of Riding Mountain National Park between the Rural Municipalities of Rosedale and Clanwilliam-Erickson) have proactively contacted the Little Saskatchewan River Conservation District (LSRCD) to remedy water-quality concerns such as algae blooms.

LWF's grant will be used to implement a water-quality monitoring program with a goal of identifying the sources of phosphorus loading to Kerr Lake, establishing lake water nutrient concentrations and calculating phosphorus export from Kerr Lake into the Little Saskatchewan River, which eventually drains into the Assiniboine River. This program will operate as part of the Lake Winnipeg Community-Based Monitoring Network, using scientifically vetted protocols. Collected data will enable LSRCD to target phosphorus hotspots and implement beneficial management practices (BMPs) in order to minimize phosphorus loading into the lake.

Canadian Parks and Wilderness Society (CPAWS) - Manitoba Chapter

CPAWS - Manitoba will move forward with a community and stakeholder engagement process created in partnership with Fisher River Cree Nation and the Manitoba government. The purpose of this process is to explore opportunities to expand Fisher Bay Provincial Park and establish other protected areas in the region, located on the western side of Lake Winnipeg. Maintaining the ecological health of this region is an essential key to restoring Lake Winnipeg, our beloved Great Lake.

FortWhyte Alive

FortWhyte Alive will bring together stakeholders, educators and the general public to develop opportunities for citizen science in urban freshwater monitoring, using LWF's standardized water-sampling protocols and working with partners to archive and share gathered data. This project will also enhance and expand on the education opportunities at FortWhyte Alive - including school programs, public education programs, volunteer engagement, public demonstration sites and interpretive displays. Immersive training for University of Manitoba and Winnipeg students will be offered using FortWhyte Alive as a field site for research in an urban environment. Lastly, the project will plan for onsite lake restoration, information from which can be transferred to other Canadian sites with poor water quality.

University of Manitoba

Researchers at the University of Manitoba will study water quality in Manitoba's other "Great Lakes," Lake Manitoba, Lake Winnipegosis and Lake Waterhen, investigating whether satellite imagery can be used to estimate chlorophyll concentrations in surface waters. By combining satellite imagery with surface-water sampling and analysis, scientists can learn more about how nutrients may be contributing to algae blooms. Testing water can also identify any potential algal toxin concerns in these lakes. These toxins cannot be removed by filtration or boiling, and can negatively impact the drinking water of First Nations. Algae blooms that occur near First Nations traditional territories are a concern, since many residents may drink the water untreated while out on the land. In conjunction with the Lake Winnipeg Foundation's community-based monitoring program, participating First Nations community members will be trained on water-quality sampling and sample-processing techniques that can readily be adapted to sampling for potable water quality, enabling First Nations to monitor community priority areas.

Royal Canadian Geographical Society

The Royal Canadian Geographical Society will design an innovative Lake Winnipeg watershed mapping project, OPEN Water, which will enable students to explore the watershed in both the classroom and the field. A collaborative initiative of three geographic education alliances (Minnesota, North Dakota and Canada) with the support of the National Geographic Education Foundation, the map will be created so that students can visualize the entire watershed, locate their own communities and appreciate the impact of activities in one location on the watershed as a whole. Designed in consultation with teachers in order to tailor it to curricular needs, the map will be produced in three formats: print, digital (to enable data gathering, analyzing and sharing) and tiled (for downloading and classroom assembly).

University of Winnipeg

Researchers from the University of Winnipeg will work to optimize the physical, chemical and ecological factors that control the removal efficiency of wastewater nutrients and contaminants by the pioneering passive sub-surface filter treatment technology installed at the wastewater treatment facility of Dunnottar, Manitoba. This will be done by characterizing the performance of the full-scale system in its first full season of operations in 2015, and by using the existing pilot-scale system as an experimental test-bed to gain insights into operational procedures that could potentially enhance nutrient and contaminant removal in the full-scale system.

Native Plant Solutions (Ducks Unlimited Canada)

Native Plant Solutions (a branch of Ducks Unlimited Canada) will complete the development and evaluation of an innovative new technology for the removal of phosphorus from natural and waste water, leading to its eventual commercial deployment. There are numerous applications for this technology, which is focused immediately on the restoration of Netley-Libau Marsh.

Oak Hammock Marsh Interpretive Centre

Oak Hammock Marsh Interpretive Centre will promote, coordinate and facilitate a contest in which high-school students create and submit realistic, achievable and budgeted proposals on how they can help their watershed. The goal is to implement as many environmental projects as possible. The centre will also offer free workshops for educators and participants, and provide mentorship to students throughout both the contest and implementation stages of the project.

The University of Manitoba and IISD Experimental Lakes Area Inc.

The University of Manitoba and IISD Experimental Lakes Area Inc. will undertake a research project that will use standardized methods to survey Lake Winnipeg for microplastics (i.e., tiny manufactured beads found in cosmetic products). The goal is to understand the current spatial distribution of plastics, as well as help establish a baseline for microplastics in the lake and provide a comparison to other freshwater lakes where comparable surveys have been conducted.

University of Winnipeg, department of environmental studies and sciences

Researchers from the University of Winnipeg's department of environmental studies and sciences will examine the contribution of pesticides and pharmaceuticals entering the Red River, and the effects of these substances on Lake Winnipeg. This project will seek to determine how much current-use pesticides and human and veterinary-use pharmaceuticals and personal care products are exported into Canada from the U.S. via the Red River, as well as the net contribution of rural southern Manitoba from the Red and Assiniboine Rivers and the city of Winnipeg and finally, Lake Winnipeg.

Centre for Indigenous Environmental Resources

The Centre for Indigenous Environmental Resources (CIER) will initiate a First Nations Alliance focussed on stewardship of Lake Winnipeg, in recognition that First Nations' relationships with water are complex and include cultural, spiritual, economic, stewardship, governance and rights-based aspects. CIER will hold a gathering with First Nations residing around Lake Winnipeg to share perspectives, identify common goals, and determine how to work together and with the government on broader stewardship decisions.

The CIER will enhance and restore the Brokenhead Wetland in Manitoba on Lake Winnipeg, and build the capacity of the local community, Brokenhead Ojibway Nation (BON), to conduct wetland monitoring. The ultimate goal is to establish wetland monitoring and hands-on restoration practices that will limit erosion to reduce nutrient loading to Lake Winnipeg, improve habitat for rare and culturally important species, and provide information to assist BON with planning and collaboration with other First Nations to improve the health of Lake Winnipeg.

South Basin Mayors and Reeves (Lake Friendly)

Lake Friendly, an initiative established by the South Basin Mayors and Reeves, will continue to distribute and promote H2O iQ, a newly created educational resource for students and the public. This resource workbook is designed to provide accessible information, tools and resources to fully explore issues related to the importance of water and to issues facing water in the Lake Winnipeg watershed.

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[LWF](#)

[Collaboration](#)

[Grants](#)