

## CONDUCTING RESEARCH ON LAKE WINNIPEG

Lake Winnipeg is a very complex ecosystem that has not been studied in detail until recently. University, provincial and federal scientists have established a total of **65 sampling stations**, which are sampled three times over the open water season using the **Namao**. Some stations are sampled in the winter by helicopter and snowmobile.

The LWRC holds an annual **Science Workshop** open to all LWRC researchers, LWRC members and the general scientific research community. Scientists share study results in an effort to understand and explain changes in the Lake Winnipeg ecosystem.

## EDUCATION PROGRAM

As part of the Education Program, the LWRC is focusing on the development of **web-based interdisciplinary resources** that will allow hands-on and problem-based learning. Emphasis is being placed on Grades 6, 7, 8 and 10; however, efforts will be made to achieve relevance across the science curriculum since there is great opportunity within the current framework to do so.

These resource materials will be integrally **linked to the LWRC's field program** on board the *Namao* for teachers who wish to deepen their exploration of the Lake Winnipeg ecosystem and watershed with their students.

**For more information**, please contact us at: outreach@lakewinnipegresearch.org and visit the LWRC website for updates.

**Membership** in the LWRC has grown to over 30 agencies representing various universities, government departments, and corporate and stakeholder groups.

**Funding** from Manitoba Hydro, the Governments of Manitoba and Canada, the City of Winnipeg, corporate and private donations and scientific research grants enables operation of the MV *Namao* for on-lake studies.

In 2008, the LWRC was granted **charitable tax status** which allows the organization to issue receipts to donors for income tax purposes.

**On-going, long-term study** of Lake Winnipeg will depend on continued public, corporate and government support of the LWRC.



### Lake Winnipeg Research Consortium Inc.



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Visit our web-site at:  
[www.lakewinnipegresearch.org](http://www.lakewinnipegresearch.org)

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# LAKE WINNIPEG RESEARCH CONSORTIUM INC.



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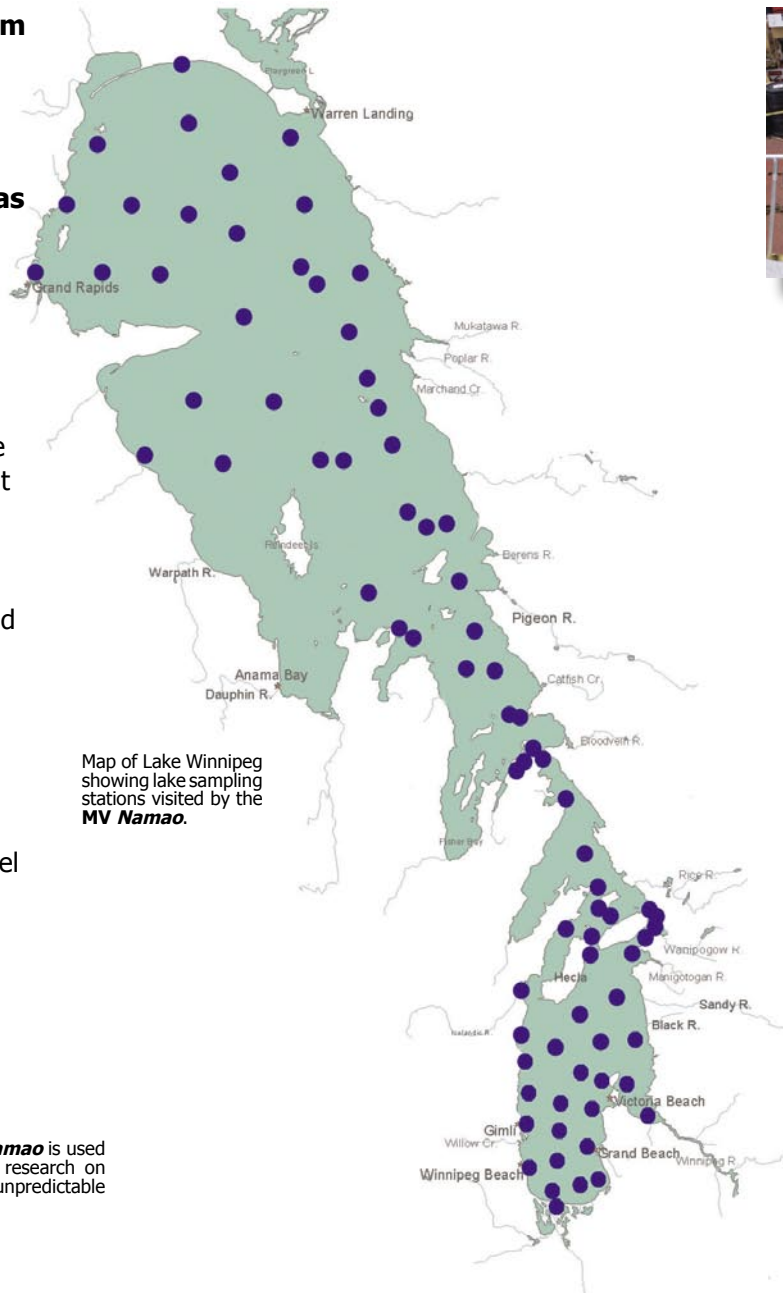
The Lake Winnipeg Research Consortium (LWRC) Inc. was founded in August 1998 to facilitate scientific research on Lake Winnipeg following evidence of water quality deterioration related to the 1997 Red River flood. The LWRC was incorporated in Manitoba in 2001 and was granted charitable status in 2008.

## Goals of the LWRC

- Coordinate scientific research on Lake Winnipeg to gain a better understanding of the biological, chemical and physical processes that are critical to its well-being.
- Create educational opportunities and increase public awareness of the ecology and natural history of Lake Winnipeg and of the environmental issues currently facing the lake.
- Expedite information exchange and foster co-operation among all stakeholders.
- Provide a research platform, the Motor Vessel (MV) "Namao", for research and education on Lake Winnipeg.



The MV *Namao* is used to conduct research on this often unpredictable lake.



Deployment of Environment Canada weather buoy by the *Namao* crew.

## CURRENT STUDIES ON LAKE WINNIPEG

The research that is currently being carried out on Lake Winnipeg includes the following studies:

- Nutrient cycling and impacts of excessive nutrients (nitrogen and phosphorus) on the water quality and food chain components of the lake;
- Use of satellite imagery to measure the abundance and distribution of surface chlorophyll-a, an indicator of algal growth;
- Use of satellite imagery to discriminate different types of algae in algal blooms;
- Assessment of food web processes using stable isotopes;
- Determination of bioavailable phosphorus in Manitoba streams;
- Development of a whole ecosystem model, including physical, chemical and biological processes, to help determine ecologically relevant nutrient targets.