

The ice has finally gone from the Lake of the Woods and for many of us another great summer at the lake soon will be upon us. There's a magic to the Lake of the Woods. It has a very special place in our hearts, which goes far beyond a primordial contentment about being near water or being close to nature. This lake has majesty in size, beautiful waters, and a tremendous variation in landscape, from the sandy shores of the south basin to the over 14,500 islands with stunning rock and white pines at the north end. Whatever the reason, the draw of this place is powerful. For me, like many of you, the Lake of the Woods is the emotional anchor that brings family and friends together, generation after generation. For others of us as well, this lake is essential to the economies in the many communities around the basin. We must do everything that we can to protect and sustain this magical lake.

Over the winter the Foundation started several important research and advocacy initiatives that will be the basis for developing a sustainability plan for the lake. I'll highlight a few of these projects in this newsletter. Also, the Foundation will be featured at the summer meeting of the Lake of the Woods District Property Owners Association, on the afternoon of July 11th in Kenora – please drop by. But before you read on, I'd like to thank all of you who care about sustaining this great lake and who've supported the mission of the Lake of the Woods Water Sustainability Foundation.

I look forward to seeing you this summer at the lake and at the summer meeting on July 11th, in Kenora – see you there!



Todd Sellers, Executive Director

SUMMER MEETING & LOWWSF PRESENTATION – JULY 11

You're all invited to attend a presentation by the Foundation, 1 pm July 11th at the Best Western Lakeside Inn in Kenora, during the summer meeting of the Lake of the Woods District Property Owners Association. We'll be making a presentation about the Lake of the Woods, and what we all can do to protect this magnificent lake. We'll be featuring a sneak peak at some of the research we've begun, including the:

- Lake of the Woods and Rainy River State of the Basin Report
- Lake of the Woods Nutrient Budget and Nutrient Model feasibility assessment study

We plan to have some of our key partners in research on hand to help present and answer questions, including Anna DeSellas (who's

leading the State of the Basin Report project), Dr. Andrew Paterson (Ontario Ministry of Environment) and Nolan Baratonio of the Minnesota Pollution Control agency.

By the way, it's a Farmers' Market day on Kenora's Harbourfront – so plan on visiting the market before we see you at 1 pm!

4TH ANNUAL INTERNATIONAL LAKE OF THE WOODS WATER QUALITY FORUM

Our annual water quality forum has grown exponentially over the past four years and continues to provide a focus for stimulating scientific collaboration and interest in the Lake of the Woods and Rainy River basin. This March, over 90 scientists from the USA and Canada attended to share the results of their research.

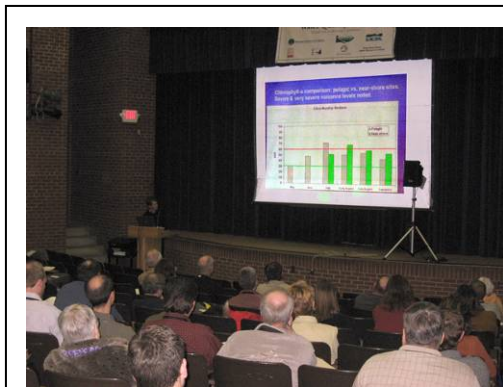
The Foundation's keynote speaker was Dr. John Carey who is Director General of Environment Canada and Canada's representative to the International Joint Commission's Great Lakes Science Advisory Board. Dr. Carey delivered a thought provoking address on the range of institutional mechanisms available for addressing pollution problems on transboundary waters, such as the Lake of the Woods.

There were so many important research projects presented, it's impossible to represent them all here. Proceedings of the Forum should be compiled soon and will be posted on our website (www.lowwsf.com) when they are available. In the meantime, let me highlight just a few...

- Dr. Tammy Karst-Riddoch of Gartner Lee Ltd, presented an encouraging, "preliminary peek" at the Lake of the Woods Nutrient Budget – Nutrient Model feasibility assessment, initiated and funded jointly by the Foundation and Environment Canada.
- Steve Heiskary and Nolan Baratono presented results of the Minnesota Pollution Control Agency's multi-year assessment of the nutrient and algae conditions on the lake, results of which may lead to the MPCA adding Lake of the Woods to its draft list of "Impaired" waters. We should probably know by the end of June if this will be the case. Draft listing will be subject to public consultation and review by the US EPA, prior to a final determination for listing by the EPA. If EPA listing occurs, additional federal resources could be applied by Minnesota to its ongoing nutrient loading studies. Inevitably, international efforts will be needed.
- Dr. Brian Kotak's research indicated that the toxin microcystin (produced by some blue-green algae) was found in both offshore and alongshore locations in the south basin last summer. Toxin concentrations varied from day to day and even during the day. At certain times, toxin concentrations were high enough (highest about 600 µg/litre) to be considered a high risk for recreational contact (World Health Organization guideline of 20-2000 µg/litre).
- If you think the water is low on Lake of the Woods this year, check this out. Trevor Mellors presented intriguing research into changes in water levels on the lake over approximately the past 8000 years. During August of 2006, 10 long cores of the lake bottom sediments were recovered at locations around the Lake of the Woods (including two cores from Shoal



Bev Clark (ON MOE), Mike Hirst and Josh Stromland (both of LOW County, MN) discuss nutrient monitoring program of the Lake of the Woods County Soil and Water Conservation District in Minnesota.



Steve Heiskary of the MN PCA presents results of nutrient and algae monitoring on Lake of the Woods



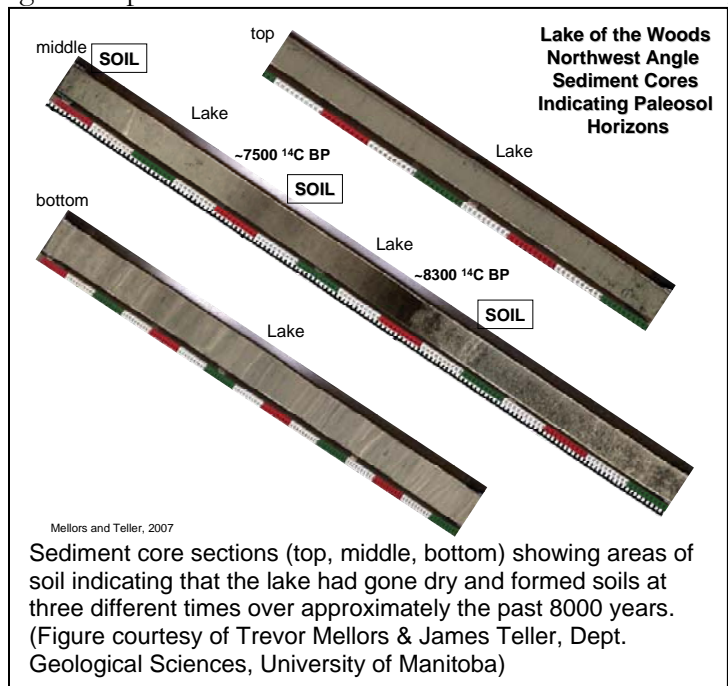
LRC (Limnological Research Center in Minneapolis) coring rig used to recover 10 cores from around the Lake of the Woods last summer

Photo: Trevor Mellors & James Teller

Lake) by James Teller and Trevor Mellors (Dept. Geological Sciences, University of Manitoba) as part of a major research project related to the paleohistory (historical conditions inferred from the sediments and fossils entombed in the lake sediments) of this area. A preliminary study of one of these cores from the Northwest Angle region has provided a view back in time to the Mid-Holocene, and indicates the lake has gone dry and formed soils at three different times in the past 8000 years or so, in a portion of the lake this is currently about 10 metres deep!

A study of changes in the populations of small crustaceans (called Ostracodes) in the lake sediment cores is now underway to link these creatures to the changing history of the regional hydrology and regional climate of the Lake of the Woods region, over millennia as inferred from the remains of fossils preserved in these sediment cores (James Teller and Trevor Mellors, Dept. Geological Sciences, University of Manitoba).

Importantly, understanding the past may provide some insight into the future impacts of climate change on the regional hydrology and ecology of the Lake of the Woods basin.



Sediment core sections (top, middle, bottom) showing areas of soil indicating that the lake had gone dry and formed soils at three different times over approximately the past 8000 years. (Figure courtesy of Trevor Mellors & James Teller, Dept. Geological Sciences, University of Manitoba)

STATE OF THE BASIN REPORT PROJECT

Work is well underway on the “*Lake of the Woods and Rainy River State of the Basin Report*”! In January, Ms. Anna DeSellas (MSc. Queens University) joined the Foundation to lead this project, in a partnership between the Foundation, Environment Canada, Ontario Ministry of Environment, and the Minnesota Pollution Control Agency.

The State of the Basin Report will provide a baseline of existing information about the lake and its watershed, and identify issues or threats to sustaining the water quality and ecology of the lake. Another key element of the report will be to identify gaps in knowledge or data and identify research needs.

Anna has amassed a tremendous amount of data, reports, and information sources and is busy analyzing and building a synthesis of this information. Many thanks go out to all the researchers in a variety of agencies in Canada and the USA who have opened their files and contributed to this project.

Although completion of the State of the Basin Report is not expected until next December, Anna will give us all a brief update at the summer meeting, July 11th in Kenora.



State of the Basin Report team (l-r): Dr. Andrew Paterson OMOE, Anna DeSellas LOWWSF, Tony Stephens LOWWSF, Todd Sellers LOWWSF, John Merriman Environment Canada; missing from picture: Nolan Baratono MPCA

NUTRIENT BUDGET & MODEL FOR LAKE OF THE WOODS

Work started in January on the first phase of a nutrient budget study for the Lake of the Woods. This first phase will provide a feasibility assessment, compilation of available data (and identify data needs), and comparison of approaches for developing the complete nutrient budget for the lake. Dr. Neil Hutchinson and Dr Tammy Karst-Riddoch of Gartner Lee Ltd are conducting this research under contract to our Foundation and Environment Canada.

Ultimately, a nutrient budget will identify the sources and amounts of nutrients entering the lake and the nutrient model will be used as a tool to determine the potential for controlling algal blooms.

The Gartner Lee feasibility assessment should be completed in the next two weeks. I've had a peek at an early draft of the report and I'm encouraged that it may indeed be possible to develop nutrient loading budgets and a model for what happens to nutrients in the lake.

IJC WATER QUALITY REFERENCE INITIATIVE

The Foundation is continuing to advocate for independent, bi-national coordination for water quality efforts on the Lake of the Woods. We are continuing our campaign to convince the Governments of Canada and the USA to jointly provide the IJC with the mandate ("a Reference") for Lake of the Woods water quality. Since our last newsletter, we have:

- Sent letters to the Minnesota Delegation in Washington, requesting their assistance with our request that the USA seek an IJC Reference for the Lake of the Woods, in coordination with Canada.
- Asked the Hon. John Baird (Minister of Environment for Canada) to request that Canada similarly seek an IJC Reference for Lake of the Woods, in coordination with the USA. We expect to meet with Minister Baird soon to discuss this request.

- We have requested a meeting with Minister Peter MacKay (Foreign Affairs Canada), to discuss our request that Canada seek an IJC Reference for Lake of the Woods, in coordination with the USA.
- Met with Ms. Theresa McClenaghan, Senior Policy Advisor to the Hon. Laurel Broten, Minister of Environment for Ontario.
- Met with Minister Broten, to solicit provincial support for an IJC reference. We also urged the Minister to initiate discussions with her counterparts in Manitoba, Minnesota, and Environment Canada to develop an agreement for cooperative action to protect the Lake of the Woods.
- Met with the Minister Christine Melnick, (Manitoba Water Stewardship) to discuss the role of foundations in addressing the problems of the broader Lake Winnipeg watershed, which includes our lake. We've requested another meeting to seek Manitoba's support for an IJC Reference for our Lake of the Woods.

Over the coming months, we will continue to encourage our provincial, state, and national governments to focus scientific and political attention on our lake and also to give the IJC a Reference for water quality.

HOW CAN YOU HELP?

Please invest in our lake's future by donating to the Lake of the Woods Water Sustainability Foundation. Donations are tax deductible in Canada.



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