

Conference Agenda

Lake Winnipeg: The Mouth of the Red Speaks

23rd Annual Red River Basin Land & Water International Summit
Conference

Updated January 8, 2006

Wednesday, January 11

1:00 **Welcome & Introductions from the Red River Basin Commission and the City of Winnipeg**
National Anthems Charlene Jones, Singer
Master of Ceremonies Bud Oliver, Director, Red River Basin Commission
Councillor Justin Swandel, City of Winnipeg

Keynote Address

1:15 **Prescription for Great Lakes Ecosystem Protection and Restoration: Avoiding the Tipping Point of Irreversible Changes**
Henry Regier, Professor Emeritus of Zoology, University of Toronto
About a year ago, President Bush announced a Great Lakes Regional Consultation, to be led by the US Environmental Protection Agency. The Consultation's purpose was to investigate the current state of the Great Lakes and their tributaries and to advise on US federal strategies with respect to their management. No formal consultative partnership with a Canadian government agency was expected, which didn't offend Canadians. A number of experienced Americans decided to organize a network, a temporary non-government organization, to complement what was happening in the formal US Consultation. As an Americanophilic Canadian, who had lived and worked in the US for two extended periods, Dr. Henry Regier was co-opted to help. Peers in the US National Wildlife Federation assumed an organization role. The outcome was a concept paper titled as above and made public at a news conference in December 2005.
Dr. Regier will breathe life into this document by telling stories about the underlying ecosystem approach and the kind of science and practice that goes with this approach. Ultimate inferences in an evolutionary ecosystem approach come in the form of narratives, histories, stories and legends, with each having some unique contextual feature; thus any proposed universal law is necessarily unrealistic. He will induce conferees to recall what they already know with respect to the Red River Basin, to expose and clarify an implicit consensus and thus assist with mobilization of practice.

Past & Present

2:15 **Geology of the Red River Basin and Lake Winnipeg**
Harvey Thorleifson, PhD, Geology and Geophysics, University of Minnesota
By thoroughly understanding the geological history of the lake, we are far better prepared to deal with issues such as shoreline erosion, nutrient supply, flood history and water resources and we can understand the relevance of regional natural history to the understanding of earth systems on a global basis.

2:45 **Settlement and Water Management in the Red River Basin 1800 to 1900**
J. M. Bumsted, PhD, Department of History, University of Manitoba
As early as 1859, Henry Youle Hind had recognized the potential of the vast wetlands of the prairies, once they were cleared of ground water. Settlement quickly took up the good land, and by the later years of the nineteenth century, many began to look to the wetter land for farming. Governments on both sides of the border recognized the need to reclaim these wetlands, while appreciating that the expense of their drainage was beyond the capacity of either individuals or the small municipalities of the time. These early drainage efforts are neither well understood nor well chronicled in the history of the development of the Valley, although they were important in a variety of ways.

3:15 Refreshment Break/Visit Exhibits and Poster Session

Murky Waters: The Health of Lake Winnipeg

3:45 **Lake Winnipeg Nutrient Loads**
Nicole Armstrong, Water Quality Specialist, Water Quality Management Section of Manitoba Water Stewardship

4:15 **Planned and Current Research on the NAMA0**
Al Kristofferson, PhD, Fisheries Management Biologist, Lake Winnipeg Research Consortium

Lake Winnipeg has been the centre of considerable media attention in recent years because of the development of extensive algae blooms, particularly in its large north basin. The cause is nutrient enrichment from a multitude of sources within its massive drainage basin. The Lake Winnipeg Research Consortium (LWRC) was established in 1998 to facilitate multidisciplinary research on the lake, and has conducted a number of research cruises since 1999 using the former Coast Guard Ship NAMA0. The LWRC now owns the NAMA0 and will use it to continue its quest to understand this impressive body of water.

4:45 **An Overview of Lake Winnipeg Fisheries**

Warren Coughlin, Interlake Regional Fisheries Manager, Fisheries Branch, Manitoba Water Stewardship
The Lake Winnipeg commercial fishery began in the 1870s out of Dauphin River and Gimli, but it wasn't until the 1880s that a successful fishery was established. Lake whitefish dominated the catch during the early years of the fishery. Post-1930s harvest shifted to a predominately percid catch of walleye and sauger. Percid harvests, particularly walleye, continue to account for the majority of commercial harvest on Lake Winnipeg.

5:30 Icebreaker/Exhibits and Poster Session

Wednesday, January 11

Free PUBLIC PROGRAM registration not required

7:00 Working with the Red River Basin Commission
The Honourable Steve Ashton, Minister of Water Stewardship

7:15 **Paddle to the Amazon**

Donald Starkell, Adventurer, Athlete and Author

"In 1980, Don Starkell and his two teenage sons left Winnipeg in a 21-foot canoe. They paddled the Red River, Mississippi River, Intercoastal Waterway, along the shorelines of Central America, Orinoco River, Rio Negro and the Amazon River to its mouth at Belem, Brazil. Their journey took them 19,603 km and lasted 23 months. They were dumped 15 times at sea and were threatened with execution by Central American bandits and people in the Columbian drug trade. They also had to deal with violent storms, snakes, crocodiles, giant bees and man-eating fish." -Jack Brown, Kingston C.V.I., Kinston, ON

Thursday, January 12

Stakeholders Speak Out

8:00 **Stakeholders Speak Out**

Moderator, Don Buckhout, Red River Basin Coordinator, MN Department of Natural Resources

Since there are many perspectives on issues of concern, it is valuable for agencies working in the Red River Basin to hear comments from local stakeholders about the issues that affect them.

Red River Basin Natural Resources Framework Plan

9:00 **What Is the NRFP?**

Sam Schellenberg, Pembina Valley Water Cooperative and Red River Basin Commission Board Member
Lee Klapprodt, Director, Division of Planning & Education, ND State Water Commission and Red River Basin Commission Board Member
Lance Yohe, Executive Director, Red River Basin Commission

10:00 Refreshment Break/Visit Exhibits and Poster Session

Around the Basin: Flood Damage Reduction

10:30 **Grand Forks/East Grand Forks Flood Protection**

Al Grasser, City Engineer, City of Grand Forks

Following the devastating flood of 1997, the communities of Grand Forks and East Grand Forks decided to jointly pursue increased levels of flood protection. The first part of this presentation provides a brief history of the development of the flood protection project. This is a federally sponsored project, with the cities of Grand Forks and East Grand Forks as the local sponsors. The responsible federal agency for the project is the US Army Corps of Engineers. The presentation will show the various construction phases of the project, which started in 2000. Significant project features will be shown along with construction photos. The first phases of the project are now complete or nearly complete. Completed segments of levees, floodwalls, diversion channels and pump facilities will be presented and discussed.

10:45 **Breckenridge/Wahpeton Flood Control Project**

Cliff Barth, Mayor, City of Breckenridge

11:00 **Red River Floodway Expansion**

Ernie Gilroy, Chief Executive Officer, Manitoba Floodway Authority

In 1997, Manitoba experienced what has been referred to as the "Flood of the Century", a flood that stretched the City of Winnipeg's flood protection system to its limit. Subsequent studies by the governments of Canada and Manitoba led to the conclusion that Winnipeg should be protected against a flood larger than 1997, and that

the most effective way to achieve this was by expanding the Red River Floodway. In 2003, the Province of Manitoba established the Manitoba Floodway Authority to undertake the design, acquire environmental licenses and approvals and manage the construction of the expanded floodway. This presentation will include the risks of flooding, the benefits of the project, components of the project and an update on the construction, environmental aspects and public consultation of the expansion project.

11:15 **Maple River Dam**
Tom Fischer, Chair, Southeast Cass Water Resource District

Around the Basin: Water Supply

11:30 Red River Valley Water Supply Needs & Options
Rick Nelson, US Bureau of Reclamation

12:00 **City of Winnipeg Water Supply**
Duane Griffin, Water Planning Engineer and Branch Head for the Water Planning Branch, City of Winnipeg
Water & Waste Department

12:30 Lunch Provencher

The Role of Lake Agassiz in Global Change

Jim Teller, PhD, Department of Geological Sciences, University of Manitoba
Lake Agassiz formed along the retreating North American ice sheet, periodically releasing large bursts of water through various outlets. Several of these catastrophic outbursts impacted on ocean circulation and, in turn, global climate; the final drainage of the lake released 150,000 km³ and may have been the basis for the story of Noah's Flood.

Around the Basin: A Particularly Wet Year

2:00 **Weather Variability: What Most People Don't Know About the Weather**

John Wheeler, Meteorologist, WDAY TV
Does the weather get "bad" or do the people just get crazy? We all know that weather in the Red River Valley is prone to extremes. So why are we always so surprised by extreme weather? Meteorologist John Wheeler will examine the tendency of our weather to go to extremes and the crazy way we react to it.

2:20 **Hydrologic Impacts of the Weather Extremes Pertaining to 2005**

Alf Warkentin, Senior Flood Forecaster, Manitoba Water Stewardship
The province of Manitoba experienced the most widespread flooding on record during 2005. Flooding extended over virtually the entire province from the US boundary to the far north, and from Saskatchewan to northwestern Ontario. Most of the flooding in southern Manitoba was due to torrential rains in June and July. Spring flooding was of a relatively minor nature with only a few areas in western Manitoba experiencing serious flooding. Most of the summer flooding was of the overland type, but many rivers also spilled over their banks. This included large rivers such as the Red, Assiniboine, Souris, Pembina, Winnipeg, Saskatchewan, Churchill and Nelson Rivers. An all-time high river level was recorded on the Churchill River. Many smaller rivers and lakes also experienced flooding. Disruption to agriculture was the worst on record. A total of 188 local authorities requested disaster financial assistance and 22 municipalities declared a state of emergency due to difficulties in dealing with the excess water.

2:40 **Devils Lake and Stump Lake Infrastructure**

Joe Belford, Ramsey County Commissioner and Lake Emergency Management Committee Co-Chair
The presentation describes the infrastructure damage in the Devils Lake Basin and how as a region they publicized their story nation-wide, rounding up \$600-million to repair damages so as to continue the quality of life for the citizens of the Devils Lake area. The presentation will also address what the future will bring if the lake continues to raise to the 1,460 elevation.

3:00 Refreshment Break/Visit Exhibits and Poster Session

Around the Basin: Water Law

3:30 **Criteria and Indicators for Effective Local Water Institutions**

Robert R. Hearne, Assistant Professor, North Dakota State University Department of Agribusiness and Applied Economics

Researchers at North Dakota State University are initiating a USGS-funded research effort to identify the characteristics of local water institutions that have a demonstrated capability to meet local goals and wider goals of the greater river basin. The specific objectives of this research effort include supporting local institutions by identifying key characteristics that facilitate effectiveness, supporting the development of extension and education programs that strengthen local institutions by specifically addressing key characteristics of effectiveness and helping policy makers design strategies to improve water quality.

3:50 **Prairie Water Policy Transboundary Report**

Henry Venema, PhD, P. Eng., Director, Sustainable Natural Resources Management, International Institute for Sustainable Development

- 4:10 **International Joint Commission In Law and Practice**
Dr. Jack P. Blaney, Commissioner, International Joint Commission
- 6:30 Social Provencher
- 7:30 Banquet and Awards Presentation

Friday, January 13

Red River Basin Commission Annual Meeting

- 8:00 Annual and Financial Reports
Dan Wilkens, Chair
Herm Martens, Secretary/Treasurer
Lance Yohe, Executive Director

Lake Winnipeg: How Are We Responding?

- 9:00 **Identifying Priorities for Water Quality**
Bill Barlow, Chair, Lake Winnipeg Stewardship Board
- 9:15 **Manitoba Water Quality Improvement Programs**
Dwight Williamson, Director, Water Science and Management Branch, Manitoba Water Stewardship
- 9:45 **Minnesota Water Quality Improvement Programs**
Molly MacGregor, Red River Basin Coordinator, Minnesota Pollution Control Agency
The MPCA has undertaken activities that will have long-term water quality benefits for the basin. A basin-wide turbidity Total Maximum Daily Load Study (TMDL) has been initiated on tributaries to the Red River. Other TMDL's regarding bacteria, biological impairments and low dissolved oxygen are on-going. The MPCA, in cooperation with the Red River Basin Commission and Pheasants Forever, has initiated a demonstration project (The Red River Basin Buffer Initiative) targeting four small sub-watersheds to establish buffers and wetland restorations to improve water quality. Finally, the MPCA and cooperators, including the Red River Basin Watershed Management Board, have established the Red River Basin Monitoring Network within the basin. The goal is to expand water quality monitoring activities to develop a more comprehensive water quality database.
- 10:15 Refreshment Break/Visit Exhibits and Poster Session
- 10:45 **North Dakota Water Quality Improvement Programs**
Mike Hargiss, Environmental Scientist, ND of Department Health, Division of Water Quality
- 11:05 **City of Winnipeg Waste Water Treatment**
Nick Szoke, Senior Wastewater Facility Planning Engineer, City of Winnipeg Water and Waste Department
- 11:30 **Lake Winnipeg Implementation Strategy**
Norm Brandson, Lake Winnipeg Implementation Committee
- Lake Winnipeg: What Have We Heard?**
- 11:45 **Lake Winnipeg: What Have We Heard?**
Linda Kingery, Executive Director, Northwest Regional Sustainable Development Partnership
- 12:00 Lunch Provencher
Closing Remarks
Jasper McKee, PhD, Department of Physics and Astronomy, University of Manitoba