INTERNATIONAL RAINY LAKE BOARD OF CONTROL (IRLBC) INTERNATIONAL RAINY RIVER WATER POLLUTION BOARD (IRRWPB)

NEWSLETTER

4th Quarter 2011

This newsletter provides a summary of the activities of the International Rainy Lake Board of Control (IRLBC) and the International Rainy River Water Pollution Board (IRRWPB) during the 4th Quarter (October through December) of 2011.

Basin Conditions and Regulation

The last quarter of 2011 was a continuation of dry, warm conditions that persisted since June in the Rainy River basin. December was the fifth consecutive month of below-normal precipitation in the basin, and the last quarter of the year was the warmest in 80 years in Minnesota. Inflow to Rainy Lake in the last quarter was the second lowest in over 100 years of record, 2006 being the only lower year. Further upstream, inflow to Namakan Lake was 8th percentile during this period, while inflow to Lac La Croix was only 5th percentile. Many upstream tributaries were at or near historic minimum levels and

flows during the fourth quarter, under the continued moderate to severe drought conditions.

The level of Rainy Lake remained below the lower rule curve from the last week of September through year-end. Outflow at International Falls / Fort Frances were maintained at the minimum prescribed by the IJC's 2001 Consolidated Order from late August. Inflows remained below the 10th percentile from early September through year-end.

Flows out of Namakan Lake were regulated to bring the lake level into the middle portion of the rule curve band in



Low Rainy Lake levels leave this dock crib exposed on Minitaki Island in early winter. Photo: Lee Grim

early October. The lake level followed the decline of the rule curve band through to the end of 2011 as inflows hovered around the 10^{th} percentile.

Water level, inflow and outflow for both Namakan Lake and Rainy Lake are shown on the attached graphs.

Board Meetings and Activities

The Boards held a joint meeting in Ottawa on October 19th to review projects and prepare for their appearance at the IJC semi-annual meetings in Ottawa. The Boards met to discuss International Lake of

the Woods and Rainy River Watershed Task Force recommendations for watershed governance of the Lake of the Woods and Rainy River basin, regulation issues, updates on studies for the year 2000 rule curve review and local IJC International Watershed Initiative studies.

On the afternoon of October 19th, the Boards appeared before the IJC to present a summary of the Boards' fall report. A copy of the report can viewed on the Boards websites under "Publications". (To access the Boards' respective websites, go to www.ijc.org and follow the links under "Boards".)

The Boards also held a teleconference on December 5th to discuss future water quality monitoring needs for the Rainy River. The Rainy Boards currently report to the IJC on discharges from municipal and industrial sources in addition to ambient water monitoring in the Rainy River for exceedences of alert levels for priority pollutants. In addition the Boards discussed strategies for maintaining their archive of documents, correspondence and other Board materials and making them more accessible electronically.

Implementation of IJC 2000 Rule Curve Assessment Workgroup Recommended Studies

The Voyageurs National Park (VNP) project management team continued to work with the Rainy Boards to facilitate the implementation of the projects recommended in the 2009 Plan of Study (POS) for the Evaluation of the International Joint Commission 2000 Order for Rainy and Namakan Lakes and Rainy River. The project management team worked with principal investigators to prepare and submit scopes of work (SOW) for two additional studies in this quarter for Rainy Boards approval. The following SOWs were approved by the Boards:

- 1. Study of the relationship of Rainy River hydrology to distribution and abundance of freshwater mussels.
- 2. Characterize the hydrology of the Rainy River in terms of levels and flows, tributary and local inflow, flow attenuation and alteration from pre-dam and pre-2000 Rule Curve hydrology.

In addition the Boards approved a principal investigator for the hydrologic modelling portion of the project entitled "Develop reservoir hydrologic model and reservoir PHABSIM habitat model for Rainy Lake and the Namakan Chain of Lakes". The results of the hydrologic model will provide information needed for several other POS projects in the reservoirs.

Several of the projects previously approved by the Boards were granted funding through the IJCs International Watershed Initiative (IWI) program. The Rainy Boards and the VNP project management team continue to work on developing the remaining projects outlined in the 2009 POS.

Canadian Paper Company Name Change

The Boards were informed that, effective November 7th, AbitibiBowter Inc., owner and operator of the Canadian paper mill at Fort Frances, had changed its name to Resolute Forest Products Limited.

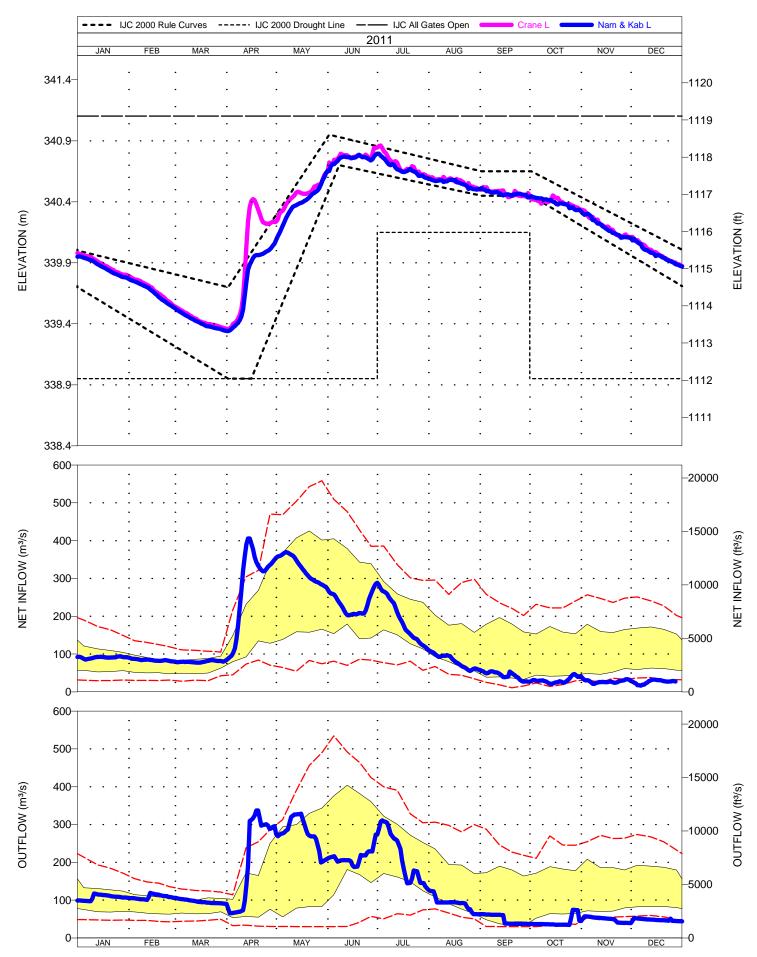
Boards Concerns Regarding Basin Monitoring

The Boards have become concerned about the reports of possible resource cuts to monitoring programs

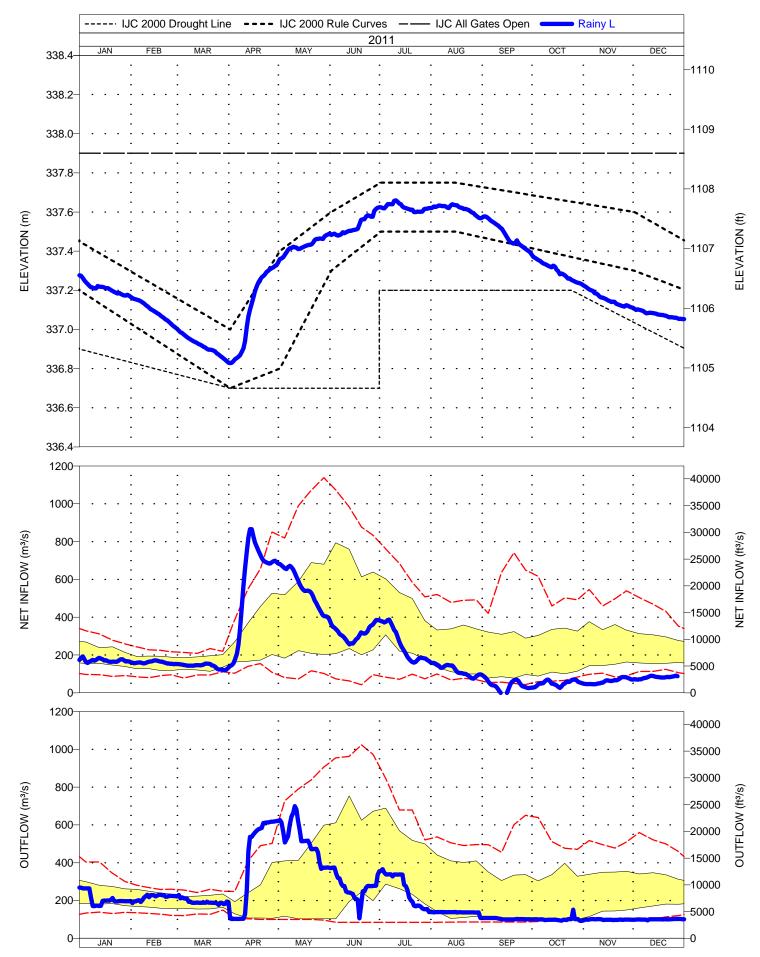
and other activities carried out by government agencies in the Lake of the Woods and Rainy River basin. During the quarter, the Boards wrote 2 letters to the IJC to express their concerns over these possible cuts and the impacts that they may have on basin resource management.

Boards Response to ILWRRW Task Force Final Report

The Boards provided comments to the IJC on the recommendations made in the Final Report on Binational Management of Lake of the Woods and Rainy River Watershed by the International Lake of the Woods and Rainy River Watershed Task Force. (The report can be viewed here: http://www.ijc.org/conseil_board/rainy_river_watershed/.)



IRLBC RAINY LAKE



LEGEND - LEVEL AND FLOW GRAPHS

WATER LEVELS AND FLOWS

Actual Data



Actual data for the dates shown

- levels are 1-day means plotted daily
- inflows are 7-day means plotted daily
- outflows are daily values

Rule Curves (Namakan & Rainy Lakes)



IJC Upper & Lower Rule Curves

___i___ IJC 2000 Drought Line

IJC "All Gates Open" Level

Statistical Data



Level/flow has been above this line 10% of time



Normal level/flow range:

Level/flow has been above this range 25% of time Level/flow has been within this range 50% of time Level/flow has been below this range 25% of time



Level/flow has been below this line 10% of time

All statistical levels are based on 3-day means at month quarter points.

All statistical flows are based on quarter-monthly means.

Period of record for all percent data is 1976-2005.

Datums for water levels are:

- Namakan Lake US Coast & Geodetic Survey (1912)
- Rainy Lake US Coast & Geodetic Survey (1912)