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

NEWSLETTER

2nd Quarter 2012

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 2nd quarter (April through June) of 2012.

Basin Conditions and Regulation

Record-breaking warm temperatures in March cleared the way for the earliest ice-out on record for Namakan Lake (April 1) and Rainy Lake (April 8). After more than six months of very dry conditions, above-normal rainfall across the basin in April and May restored inflows to the normal range.

Summer solstice sunrise on Rainy Lake. Photo: Lee Grim

For Namakan Lake, the increasing inflow led to a rise through the upper portion of the Rule Curve band through April and May. With the decline of the Rule Curve band after May 31, and a second significant peak in inflow in June, ouflow was increased above 90th percentile to keep the lake within the band.

On Rainy Lake, with the freshet occurring ahead of the spring rise in the Rule Curve, the level exceeded the Upper Rule Curve from March 30th to April 4th. For the remainder of the quarter, outflow was managed to keep the lake level in the upper portion of the Rule Curve band.

Board Meetings and Activities

Commissioner Rich Moy with Ed Eaton, U.S. Engineering Advisor to the IRLBC.

On April 11th, the Boards convened a conference call with the managers of the Plan of Study for the review of the 2000 Rule Curves to discuss progress and planning.

The Boards visited Washington, D.C. on April 25th for the semi-annual IJC meeting. Before their appearance before the IJC, the Boards met to finalize their presentation on their spring report, to discuss the implementation of the Plan of Study for the evaluation of the 2000 Rule Curves, and to cover ongoing and planned International Watershed Initiative (IWI) - funded studies. That evening, IJC Commissioner Rich Moy presented Ed Eaton with a plaque in recognition and thanks for the many years of dedication to his role as U.S. engineering advisor to the IRLBC.

On May 23rd the Boards convened a conference call to discuss plans for the annual public meeting in the Rainy basin. They also discussed their current work plan and water regulation during sturgeon spawning.

Implementation of IJC 2000 Rule Curve Assessment Workgroup Recommended Studies

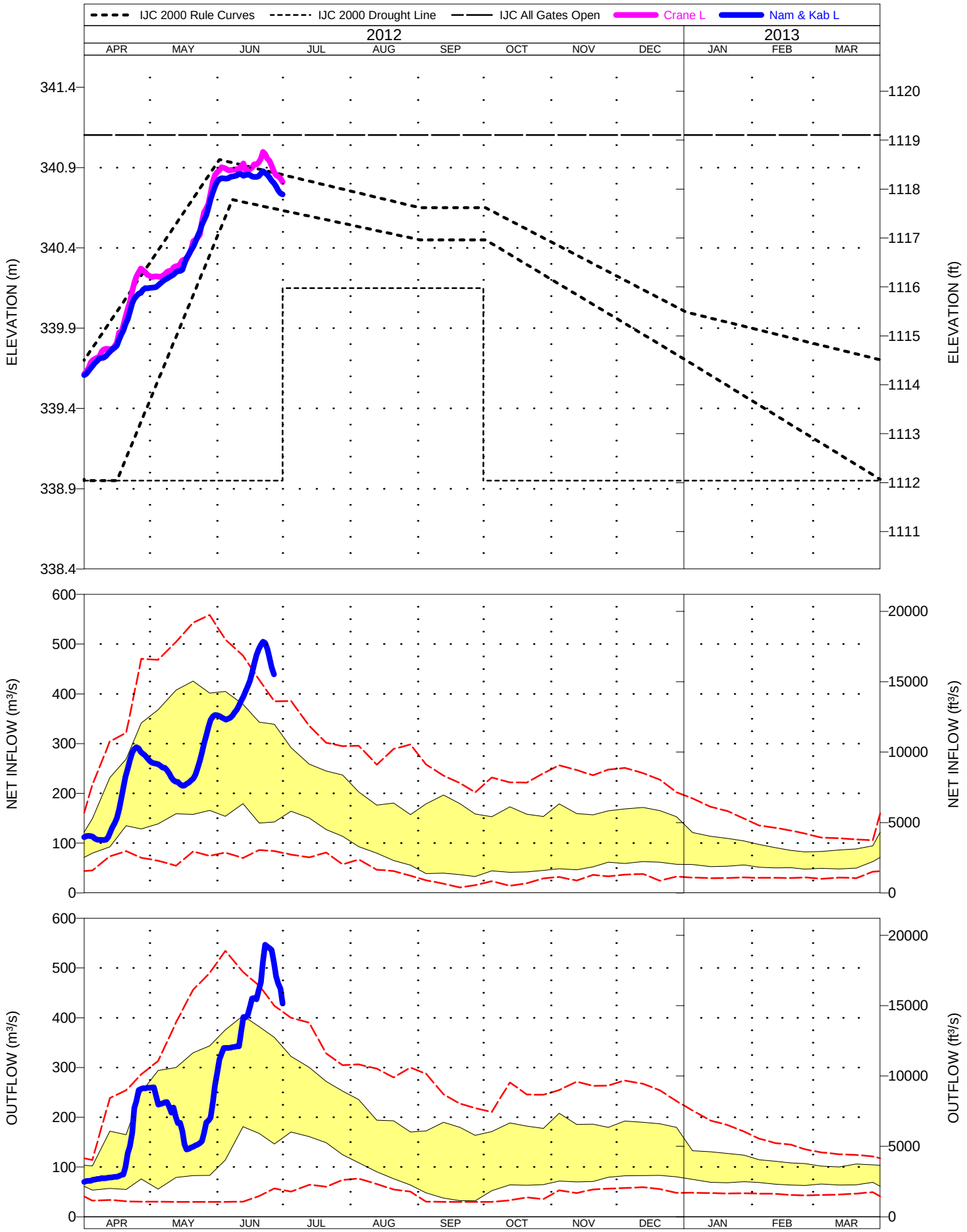
Many of the studies commissioned by the IJC to provide information for the review of the 2000 Rule Curves are already underway. Field work is currently being conducted for two studies on the impacts of the 2000 Rule Curves on critical spawning and reproductive habitat for northern pike and walleye in Rainy and Namakan lakes. A study identifying critical habitats for marsh nesting birds and herptiles is also underway in Rainy and Namakan lakes as is a study looking at changes to the benthic invertebrate community.

In the Rainy River, researchers are looking at critical fish spawning and nursery habitats at selected locations. Analysis is continuing on the development of a model (HEC-RAS) to characterize the natural hydrology of the Rainy River as compared to the current rule curve regimes.

IRLBC

Figure 1

NAMAKAN LAKE



RAINY LAKE

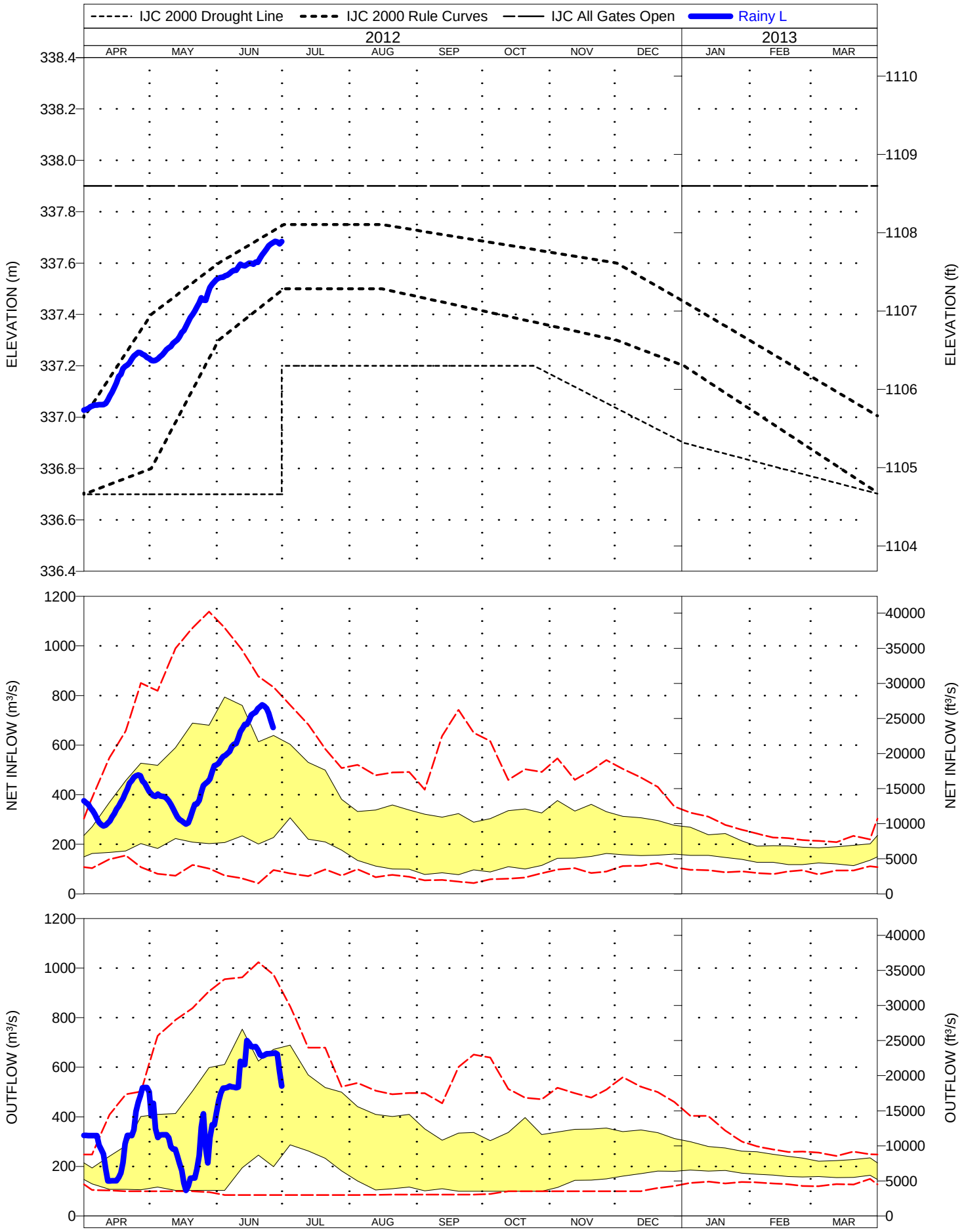

IJC 2000 Drought Line
IJC 2000 Rule Curves
IJC All Gates Open
Rainy L
2012
2013
APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR
ELEVATION (m)
ELEVATION (ft)
338.4 338.2 338.0 337.8 337.6 337.4 337.2 337.0 336.8 336.6 336.4
1110 1109 1108 1107 1106 1105 1104
NET INFLOW (m³/s)
NET INFLOW (ft³/s)
1200 1000 800 600 400 200 0
40000 35000 30000 25000 20000 15000 10000 5000 0
OUTFLOW (m³/s)
OUTFLOW (ft³/s)
1200 1000 800 600 400 200 0
40000 35000 30000 25000 20000 15000 10000 5000 0
APR MAY JUN JUL AUG SEP OCT NOV DEC JAN FEB MAR

Figure 3

LEGEND - LEVEL AND FLOW GRAPHS

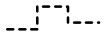
WATER LEVELS AND FLOWS

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



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)