

INTERNATIONAL LAKE SUPERIOR BOARD OF CONTROL

Minutes of the March 29, 2006 meeting

The International Lake Superior Board of Control met on March 29, 2006 in a conference room at the U.S. Army Corps of Engineers in Chicago. COL Johnston convened the meeting at 9:00 a.m. The attendees were:

United States

COL G.E. Johnston (Alt.)

Mr. J. Kangas

LTC D. Lauzon
Mr. S. Thieme (Alt.)

Dr. M. Colosimo
Mr. D. Sawruk
Ms. I. Brooks

Board Members

Secretaries

Regulation Representatives

Associates

Canada

Mr. C. McLeod

Mr. D. Fay

Mr. D. Fay
Mr. R. Caldwell (Alt.)

Mr. T. Lavoie
Mr. T. McAuley
Mr. A. McPhee

Item 1. Approval of Agenda

The agenda was modified to add a discussion about Board Member tenure.

Item 2. Update on Hydrologic Conditions and Regulation

Mr. Thieme provided the Board with the following update on hydrologic conditions for lakes Superior, Michigan-Huron, and Erie, and provided slides of recent net basin water supplies, levels (observed and forecasted), and Lakes Superior/Michigan-Huron water balance parameters.

- Water supplies to the Lake Superior basin in the past 6 months were above average, with only the months of September and February receiving below average supplies. Lake Superior basin monthly exceedance probabilities for water supplies ranged from 8% in October to 89% in February. Water supplies to the Lakes Michigan-Huron basin in the past six months were below average. Lakes Michigan-Huron NBS monthly exceedance probabilities ranged widely (from about 1% in January to 97% in October). Evaporation was estimated to be slightly below average.
- Lakes Superior and Michigan-Huron levels are below average, and below levels of a year ago. Lake Superior monthly mean levels were 10 to 20 cm (4 to 8 in.) below average for the past six months. Lakes Michigan-Huron were 39 to 48 cm (15 to 19 in.) lower than average.
- Lake Superior outflows were below average from September through November, and slightly above average December through February. The March outflow is below average. Outflows were as specified by Regulation Plan 1977-A, except for a minor unintentional underdischarge in September due to repairs at the Canadian hydropower facility. The gate setting at the Compensating Works remained equivalent to ½ gate open.
- Mr. Thieme presented the Board with a range of projected levels for the next 6 months, along with slides showing how 2005-2006 levels compare to the previous two years. With average supplies, Lakes Superior and Michigan-Huron levels are expected to remain below average. Lake Superior is expected to rise above chart datum in May,

while Lakes Michigan-Huron are expected to rise above chart datum in April or May with average supplies.

- The 1900-1986 “standardized departure” data as used in Plan 1977-A show that Lake Superior and Lakes Michigan-Huron were in close balance at the beginning of November, both being about the same number of units below their mean level. Since then, Lakes Michigan-Huron have fallen relatively further below its mean level than has Lake Superior.
- Ice conditions were light on the Great Lakes this past winter.
- Mid-March snow water equivalent on the Lake Superior basin appears to be above normal.

The Board agreed that outflows specified by the regulation plan be continued. The Board also discussed why Lakes Michigan-Huron have persisted at below-average levels the past eight years. A number of factors were discussed. The Reg Reps were asked to look at and report on annual supplies, precipitation, and temperatures.

Item 3. Update on Long Lac and Ogoki Diversions

Mr. Caldwell reported that Ontario Power Generation (OPG) provided the Board with an update on the discharges of the Long Lac and Ogoki Diversions. The Ogoki Diversion into Lake Nipigon (which flows into Lake Superior) averaged 83.9 m³/s (2,960 cfs) during September 2005 - February 2006. The Long Lac Diversion averaged 31.5 m³/s (1,110 cfs) for the same period. The total diversion was reported to be 82% of average for the reporting period. No water was spilled northward to the Ogoki River or northward from Long Lake during the reporting period.

Item 4. Hydropower Plant Status

4a). Edison Sault Electric Company (ESEC): Mr. Sawruk noted that there were no significant outages to report. Routine maintenance was conducted. There may be work in the intake canal in May; Mr. Sawruk will keep the Board’s representatives informed.

4b). U.S. Government Plant (USGP): Mr. Thieme reported that Unit 3A had tripped off-line in February and will be taken out of service later this spring for inspection. Other routine maintenance was performed.

4c). Brookfield Power Limited: Mr. Lavoie informed the Board that the annual inspection and maintenance outage are being planned for June. The reduced outflow capacity of the plant due to units being out of service several days for maintenance is not expected to prevent the plant from using its complete monthly water allocation with the forecasted Lake Superior flows. Other routine maintenance was conducted during the reporting period.

Item 5. Compensating Works

5a). Status. Messrs. Thieme and Lavoie reported that routine maintenance was performed during the reporting period. Similar routine work is expected during the next six months. The structure remains in generally good condition.

5b). Report on 5-year inspection of 2005. A full five-year inspection and alignment survey of the structure, including underwater inspections, was conducted in 2005. Mr. Lavoie reported that the Canadian gates would de-watered for re-painting and concrete and steel repairs at a rate of two gates per year from 2007 to 2010. The nose cones of 3 piers will be replaced. Mr. Thieme reported no major U.S. work needed to be done as a result of the 5-year inspection. The work plan summaries and schedules in response to the 5-year inspections were requested to be submitted to the Board for tracking and inclusion as an attachment to the semi-annual progress report.

Item 6. Flow Verification Measurements

6a). ESEC. Mr. Thieme reported that a preliminary analysis had been completed on the flow measurements taken in June 2005. All measured flows were within 5% of the flows reported by ESEC and were thus within measurement tolerances. The Board accepted the

recommendation that no adjustments were required for ESEC's reported flows. The next flow measurements are expected to be conducted in conjunction with the next 5-year inspection cycle for the Compensating Works (i.e., in 2010).

6b). US Government Plant. Mr. Thieme reported that a preliminary analysis had been completed on the flow measurements taken in June 2005. There continues to be a greater than 5% difference between measured and reported flows. Unit 10 flows are within tolerances, but the combined flows through the main plant and Unit 10 are outside of tolerances. There may be more than a calibration issue. About 20 m³/s more flow is being measured downstream than is measured in the combined outflow of Unit 10 and flow into the main powerhouse. The Corps is to look at the measurement sites to try to determine if flow is bypassing the powerhouse.

6c). Brookfield Power. Mr. Thieme reported that a preliminary analysis had been completed on the flow measurements taken in June 2005. All measured flows were within 5% of the flows reported by Brookfield Power and were thus within measurement tolerances. There was discussion on the flows through the plant when it is operating at less than capacity, e.g., when one or two units are down for maintenance. If the schedule permits, measurements will be taken this year at Brookfield Power under these conditions when the measurement crew is in the area for measurements at the Compensating Works or US Government Plants.

6d). Compensating Works. Mr. Thieme reported that a preliminary analysis had been completed of the flow measurements taken in 2005. This was the first time since July 2001 that flow measurements at the Compensating Works had been performed. The gate open settings ranged from ½ to 7 gates open. It appears that the measured flows may be greater than the flows computed from the rating curve. The greatest scatter of the data was at the ½ and one gate open settings. If measurements are taken this summer, the focus will be on ½ gate open and the ½ gate equivalent (4 gates partially open by 9 and 10 inches) to confirm the gate opening requirements for an equivalent ½ gate setting.

Item 7. Peaking and Ponding

Mr. Kangas discussed the background to this agenda item. It was noted that the Board had, in January 2006, submitted a report to the IJC on peaking and ponding activities and impacts during 2004 and 2005. The IJC had agreed, by letter of March 17, 2006, to approve peaking and ponding under the Board's supervision for an indefinite period of time. The Board is to provide summaries in its semi-annual reports. Peaking and ponding guidelines are to be reviewed every 5 years, starting in 2010 or when the Upper Lakes Study is completed (whichever comes first).

There was discussion on whether to change the threshold level for determining when to limit ponding. This had been suggested by a navigation interest but opposed by one environmental agency. The Board stated that this was not on the table but could be considered as part of the Upper Lakes Study. Mr. Sawruk stated that if the ESEC facilities are rebuilt then ESEC would like to revisit the issue of threshold levels.

Item 8. 2006 Meeting With the Public

The Board reviewed the logistics and assignments for a multi-site public meeting. The Board agreed to have a presentation at each site, followed by a link-up of the three sites for public input and questions. The three sites are Duluth, Sault St. Marie (Michigan), and Parry Sound (Georgian Bay). This is to take place the evening of May 24, 2006. The Canadian Member will lead the meeting.

Item 9. Other Business

9a). Upper Lakes Study. The background to this item was briefly discussed. Commissioner Brooks noted that a letter of intent from the Canadian Government was required prior to initiating the study. The geographic scope of the study would encompass Lake Superior down through Lake Erie, including the Niagara River. The study will not consider changes to the binational Treaties and Agreements. A binational team of experts from the governments,

citizens, First Nations and Native Americans, industries, and academia would conduct the study. Resource impact evaluations would include the coastal zone, ecosystem (including wetlands), recreational boating and tourism, municipal/industrial/domestic usages, commercial navigation, and hydropower. It is anticipated that the study would take five years at a cost of approximately \$14.6 million (USD), shared equally between the two countries.

9b). Great Lakes – St. Lawrence Seaway Study LTC Lauzon reported on the status of this study to look at the engineering aspects and cost of maintaining the current navigation system over the next 50 years, along with implications this has on the system's economy and the environment. Due to funding shortfalls, the effort is behind schedule. It is anticipated that the engineering analyses and economic models will be completed this calendar year.

9c). New Lock at the Soo Mr. Thieme reported that the Limited Re-evaluation Report for the replacement of a lock at Sault Ste. Marie MI, including an economic analysis, had been rewritten and submitted to U.S. Army Corps of Engineers Headquarters (HQUSACE). Comments from the Assistant Secretary of the Army (ASA) had been received and were being addressed. Letters of support had been received from several agencies and a letter was expected from the Department of Commerce. Revisions have been made to incorporate comments from the ASA.

9d) Board Member tenure. Mr. McLeod noted that he will likely be replaced as the Canadian Board Member within the next year, perhaps as soon as this summer. COL Johnston noted that he is being assigned to duty in Iraq, starting at the end of June 2006. It was also noted that the US Regulation Representative (LTC Lauzon) would be retiring this summer. In addition, Parks Canada has appointed a new representative at Sault Ste. Marie to work with the Board, and the Area Engineer for the Corps of Engineers (Mr. Jacek) had recently retired and his position is in the process of being filled.

Item 10. Review of Semi-Annual Progress Report

The Board reviewed and made some changes to the draft Semi-Annual Progress Report. Mr. Kangas will incorporate the changes, update the data, and distribute advance copies to the IJC.

Item 11. Next Meeting and IJC Appearance

The IJC Appearance has been scheduled for 2:30 p.m. on June 8. The fall Board meeting is scheduled for October 3 in the Niagara Falls area.

There being no other business, the meeting adjourned at 12:05 p.m.

INTERNATIONAL LAKE SUPERIOR BOARD OF CONTROL
MEETING OF MARCH 29, 2006

Approved Agenda

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3. Update on Long Lac and Ogoki Diversions
4. Hydropower Plant Status
5. Compensating Works
 - a. Status
 - b. Report on 5-year inspection of 2005
6. Flow measurements
7. Peaking and Ponding
8. 2006 Meeting With the Public
9. Other Business
 - a. Upper Great Lakes Study
 - b. Great Lakes – St. Lawrence Seaway Review
 - c. New Lock at the Soo
 - d. Board Member tenure
10. Review of Semi-Annual Progress Report
11. Next Meeting and IJC Appearances