

INTERNATIONAL LAKE SUPERIOR BOARD OF CONTROL

Minutes of the September 15, 2003 meeting

The International Lake Superior Board of Control met on September 15, 2003 in a conference room at the Old Stone Inn, Niagara Falls, Ontario. Mr. McLeod convened the meeting at 1:00 p.m. Those in attendance were:

<u>United States</u>	<u>Canada</u>
	<u>Board Members</u>
COL G.E. Johnston	Mr. C. McLeod
	<u>Secretaries</u>
Mr. J. Kangas	Mr. R. Caldwell
	<u>Regulation Representatives</u>
Mr. S. Thieme (Alt.)	Dr. S. Moin
	<u>Associates</u>
Mr. C. Woodruff	Mr. T. McAuley
Mr. D. Sawruk	

A concerned citizen, Mr. John Dyer, President, Great Lakes Flood Engineering School, Montague, MI, made a short presentation prior to the start of the meeting. While reviewing hydrographs since 1960, Mr. Dyer noticed that Lakes Michigan, Huron, St. Clair, and Erie seem to rise and fall together. During a storm on Lake Michigan in 1993, Mr. Dyer lost 5 m of shorefront. After constructing a working physical hydraulic model, Mr. Dyer contends that structures on the Niagara River hold water back on the above lakes. Mr. Dyer created a school to help educate other concerned shoreline owners about control of the Lakes, especially with regard to extreme water levels. Handouts of "Newsletter Issue #1" were provided to all meeting attendees.

Item 1. Review of March Meeting Minutes

Mr. Kangas noted that a formal review had been completed by e-mail and that the English version had been posted on the Web for some time now. Mr. McAuley noted that the French translation was also now ready for posting.

Item 2. Update on Long Lac and Ogoki Diversions

Dr. Moin reported that Ontario Power Generation provided the Board with an update on the operations of the Long Lac and Ogoki Diversions. Mr. Caldwell reported that the Ogoki Diversion into Lake Nipigon (which flows into Lake Superior) averaged 81.0 cms (2,900 cfs) during March-August 2003. The Long Lac Diversion averaged 35.5 cms (1,250 cfs) for the same period. The total diversion was reported to be 69 % of average for the reporting period. A request was made to include averages in future reports, as well as what percentage of total supplies these values represent, to help outline any potential impacts.

Item 3. Update on Current Conditions and Regulation Strategy

Dr. Moin provided the Board with the following update on current conditions and outlook for Lakes Superior and Michigan-Huron, and provided slides of basin precipitation, levels, net basin supplies, and forecasts.

- Lakes Superior and Michigan-Huron levels are below average and levels of last year. Lake Superior was 11 cm (4 in.) lower than the level recorded last year at the beginning of September,

while Lake Michigan-Huron was 31 cm (12 in.) lower. At the beginning of September, the levels were 183.28 m (601.3 ft.) and 175.99 m (577.4 ft.), respectively.

- The August water supplies to Lakes Superior and Michigan-Huron have been exceeded 84% of the time (very dry).
- Dr. Moin presented the Board with a range of projected levels and flows for the next 6 months, along with slides showing how 2003 levels compare to the previous two years. With average supplies, Lakes Superior and Michigan-Huron levels are expected to be 17 cm (7 in.) and 24 cm (9 in.) below chart datum, respectively, by February. It is very likely that Lake Superior will reach chart datum again this fall. Lakes Michigan-Huron will likely remain below chart datum, and could reach record lows with dry supplies.
- Dr. Moin presented the Board with a slide showing Lake Superior outflows for the past six months - Plan flows, approved flows, and actual outflows. Outflows were as specified by Regulation Plan 1977-A except in May and June following the dam break on the Dead River, and in August following the massive Northeastern blackout (August 14th) and the planned shutdown at GLPL for an underwater cable inspection (30th).
- The Board had a long discussion on water level forecast methods.
- The Board agreed that outflows specified by the regulation plan be continued.

Item 4. Board's Response to Hydropower Emergencies

a. Upper Peninsula Emergency of May 2003

Mr. Thieme provided background information related to the hydropower emergency following the Silver Lake Dam failure on 15 May 2003 (due to heavy rains). This resulted in the shutdown of the Presque Isle Generating Station (the area's largest producer) on the Dead River, near Marquette, MI. Following Board teleconferences on 23 and 27 May, the Board authorized Edison Sault Electric Company (ESEC) to over discharge to provide electricity to help stabilize the power grid in Michigan's Upper Peninsula. To ensure a 50:50 share of water, the Board authorized Great Lakes Power Limited (GLPL) to overdischarge at an equivalent rate, starting 28 May. Both plants at Sault Ste. Marie were able to return to their Plan-specified schedules on 21 June. The overdischarges equated to deviations from Plan 1977-A of 50 m³/s (1800 cfs) in May and 80 m³/s (2800 cfs) in June, resulting in an overall impact of less than 0.5 cm (0.2 in.) on either lake.

Mr. Sawruk thanked the Board for their timely assistance in this matter. It was noted that 2/3 (660 of 900 MW) of production capacity had been lost in the Upper Peninsula, though 2/3 of that is supplied exclusively to several mines in the area.

b. Northeast U.S.-Canada Blackout of 14 August 2003

Mr. Caldwell noted that, during the large-scale blackout, GLPL's Clergue plant suffered a short-term shut-down starting at 1511 hrs. on 14 August 2003. Units 1, 2, and 3 were returned to service at 2029, 2341, and 2319 hrs., respectively. ESEC and the U.S. Government Plant (USGP) were unaffected by the out-ages, and continued to operate normally. GLPL ran at capacity for the balance of August, and met their monthly allotment. Therefore, no monthly deviation was incurred. GLPL reacted quickly, and kept in close contact with the Canadian Secretary following the incident. Parks Canada and GLPL are working to develop an automated, audible alarm to warn the Canadian lockmaster during future plant shutdowns. This will prevent damage to the lock, since such shutdowns can result in large surges entering the upper lock canal, resulting in overtopping of the upstream gates and wall, as well as a rapid drop in levels at the lower gates. The Board will be kept up to date as these mitigation measures are enacted.

Mr. Sawruk added that it takes twelve minutes for the intake canal gates to close at ESEC, so surges would be precluded should that plant suffer a total shutdown.

Item 5. Peaking and Ponding Operations

Mr. Woodruff provided background information and updated the Board on peaking and ponding operations as outlined below:

- The Board submitted a follow-up report on 13 December 2002 and recommended that the Commission extend the authority for peaking and ponding operations for another year through the winter of 2003-2004.
- The Regulation Representatives will continue to collect data and continue development of a St. Marys River flow model. The Corps committed to completion of the model this year.
- The IJC issued a public notice on 23 January 2003 inviting comment on its proposal to extend the authority for peaking and ponding operations in the St. Marys River until 20 March 2004. Only GLPL and ESEC commented, in a joint submission dated 13 February 2003. The power entities requested that the extension be for multiple years, and that restrictions on ponding be eliminated, since no benefits to shipping interests had been shown during a series of restrictions in 2002.
- In March, Mr. Sawruk had requested that the Board review conditions weekly or bi-weekly instead of monthly. The Board agreed to monitor the conditions and also the forecasted levels and re-view its decision on ponding restrictions at mid-month. The Reg Reps will continue to use the current guidelines for ponding impacts on U.S. Slip levels as a decision tool.
- On 17 March 2003, the IJC re-authorized peaking and ponding until 20 March 2004, and requested that the Board submit a written report by 23 January 2004.
- Ponding operations were restricted for portions of April, May, and June, and all of July and September 2003.
- U.S. Coast Guard reports demonstrate that only one ship went to anchor this year due to low water, and that only two ships incurred significant delays in 2002.

The Board decided that it was imperative to get a position statement from shipping interests by the end of this year. Mr. Sawruk noted that the only interest that has expressed concern is the large ocean-going federations, and requested that the final report include some form of economic analysis to weigh the pros and cons of ponding.

Item 6. Compensating Works - Status of Repairs and Maintenance

Mr. Thieme reiterated that the replacement of the bottom gate seals on the U.S. Compensating Works gates was completed during August-October 2002. This has substantially reduced the leakage under these gates. During a June 2003 site tour, the Reg Reps noticed non-uniform flow through Gate 10. A large timber was found to be blocking a portion of the gate during a later inspection, and was quickly removed.

The side seals were not replaced at this time since it was considered to be cost-prohibitive since dewatering will be required. This next major work is not expected until after the next full inspection in 2005, which will include inspections above and below water line, plus a complete survey of the structure.

Item 7. U.S. Government Plant - Status of Equipment Automation

Mr. Thieme noted that all units were back on-line as of June except Unit 10. Unit 10 should be back on-line by the end of September. Acres International is expected to finish final modifications and testing of Unit 10 during late September or early October. Currently, only monitoring is being performed from Barkley, KY, and no remote operation of the plant has been undertaken from there yet.

Flow verification measurements to be performed by Board staff may need to wait until the Spring of 2004 if the weather does not cooperate late this Fall.

Item 8. Flow Measurements

Mr. Thieme reported that flow measurements were made during 12-14 August 2003 in the Edison Sault Electric Company (ESEC) power canal to help verify the accuracy of the flow calculation method implemented by ESEC in the Summer of 2001. Data analysis is yet to be performed, but may be complete by the end of the year. If deemed adequate, such tests will be performed in the future every fifth year.

Flow measurements to verify or update the stage-discharge rating relationships at the Compensating Works planned for 2003 were postponed. It was reiterated that this work should be done in the last week of July or in the first two weeks of August to minimize potential impacts to the fisheries.

Next season's schedule will be determined at the Board's next meeting in March 2004.

Item 9. Communications with the Public

- a. 24 June 2003 Public Meeting in Sault Ste. Marie, ON and Plan for 2004

The Board held its 2003 annual meeting in Sault Ste. Marie, Ontario on Tuesday evening, 24 June 2003. It was agreed that the initial assessment of the meeting was positive. The public engaged the Board and staff and seemed satisfied with answers.

It was noted that, with annual meetings alone, regions within the basin are often not revisited for five or more years. The Board discussed the possibility of having multi-city telephone (or video) conferences, similar to those held every six months by the International St. Lawrence River Board of Control. The Board asked the Secretaries to review the feasibility of holding a teleconference in March 2004, and to suggest potential locations during the IJC Appearances in Ottawa in October 2003.

- b. Water Level/Flow Information for Public

The Board continues to issue monthly news releases about Lake Superior regulation, up-to-date level conditions and, changes in gate settings at the Compensating Works. The Board also maintains its home page on the Internet that has links to the IJC home page and other U.S. and Canadian agencies' pages. During the period from June to August, 2003, the site averaged 116 visits per month.

Dr. Moin pointed out that the Canadian Hydrographic Service (CHS) will stop mailing copies of their monthly Great Lakes water levels bulletin to subscribers, and will make it available on the Web instead. There are currently approximately 2000 English and 600 French mailings. CHS is looking into using an outside agency to administer the mailings, but cost recovery issues will likely make this option infeasible. The Board feels it is worth looking into production of a monthly subscription-based media/public advisory. Such a product could be sustained by cost-recovery means, if necessary, and would offer a valuable educational tool. It was decided that further discussion on such communication strategies is warranted at a future meeting.

Item 10. Review of Semi-annual Progress Report

The Board reviewed and made some changes to the draft Semi-Annual Progress Report. The Board decided that it ought to be more "story like" in lieu of the usual "boiler plate" approach. Impacts from decisions will be outlined more clearly, and an executive summary will be added. The IJC's Technical Advisors prepare one-page briefings for the Commissioners prior to the semi-annual Appearances, and executive summaries would go a long way to help them prepare such documents.

Mr. Caldwell will incorporate the changes, update the data and distribute advance copies to the IJC.

Item 11. Other Business

a. Status of Dredging

Mr. Thieme reported on the completion of the 150 m (500-ft.) section of the Vidal Shoals dredging in the St. Marys River. The work was started in June 2001 following approval from the U.S. State Department and coordination with Canada's Department of Foreign Affairs and International Trade. This dredging project consists of deepening and modifying widths in existing channels in the Upper River between Pointe Louise Turn and the South Canal to the navigation locks, upstream of Sault Ste. Marie. Dredging of a 90 m (300-ft.) wide northern channel area portion was delayed due to contractor claims and is still under dispute. This portion should be completed by late Fall this year.

The Board was also informed of the dredging in the Lower St. Marys River extending from the southern approach of the Soo Locks to the northern end of the Rock Cut on the west side of Neebish Island. The U.S. State Department and Canadian Department of Foreign Affairs and International Trade indicated that they have no objection to the project provided it does not cause any transboundary impact on water levels and flows.

The U.S. environmental assessment process was completed with the signing of a "Finding of No Significant Impact" on 30 September 2002. Proposals for doing this dredging contract were opened 28 January 2003 and the contract was awarded on 26 February 2003. Work started in July and should be completed by early Fall.

The Board was previously informed of concerns from Environment Canada about potential impacts on transboundary water levels and the flow distribution around Sugar Island. A 2-dimensional model analysis completed by the Corps in July resulted in a finding of no significant impacts. Environment Canada reviewed the results, and agreed with the findings. The maximum change was found to be 2 mm, with a 0.15% change in flow to the north channel.

b. Status of Upper Great Lakes Plan of Study

The Board provided the IJC with a POS report for the Upper Great Lakes Study in January 2002 and the IJC forwarded it to the Governments. No funding has been allocated yet. The Board discussed the status of the Study, and there is still a question on the Canadian side as to whether there were enough technical personnel to handle another study, given the International Lake Ontario - St. Lawrence Study and the Great Lakes - St. Lawrence Seaway Review. At this time, it does not appear that the Study will proceed any time in the near future.

c. Information on U.S. Lock Replacement

The U.S. Congress authorized the construction of a new Poe-size lock in 1986 to provide more efficient movement of waterborne commerce. The Corps is reviewing the economic justification of replacing the two technologically obsolete locks (Davis and Sabin) with one new one. A Limited Reevaluation Report, including an economic/cost analysis, is being rewritten and will be submitted to the Headquarters of the US Army Corps of Engineers (HQUSACE) by the end of 2003. Lock design could start pending availability of funds. Completion is expected to take six years from start of construction.

d. Great Lakes - St. Lawrence Seaway Review

In 1999, the U.S. Congress authorized the Corps to review the feasibility of improving commercial navigation throughout the system. A reconnaissance study was submitted on 27 June 2002. Possible improvements include deepening connecting channels, the St. Lawrence Seaway, and specific ports, and reconstruction of locks. Results indicated that the reliability and adequacy of the existing system present problems and opportunities. Though the reconnaissance study was approved by HQUSACE on 13 February 2003, the Corps was asked to submit a supplemental report, including a more extensive environmental, economic, and engineering analysis. This report will take two to three years to complete. Public review and comments will be sought prior to the start of a feasibility study.

The Corps has had preliminary discussions with Canada on their partnering with the Corps on any future feasibility study. Transport Canada is currently assessing several strategies to determine future infrastructure requirements.

e. Inspection of Underwater Power Cables

Mr. Caldwell reported that the planned Clergue plant shutdown for the Lake Superior Power cable inspection on 30 August went well, and power to the Clergue plant was restored ahead of schedule. No problems were discovered during the dive, and a request will be made to the Board in 2004 to facilitate the annual inspection again next year.

Item 12. Next Meeting and IJC Appearance

The Board plans to meet informally in Ottawa the day of the IJC Appearance on 21 October to further discuss the proposed multi-city teleconferences. The Spring meeting is expected to take place between March 23-25, but the location is yet to be determined.

There being no other business, the meeting adjourned at 5:00 p.m.