



**INTERNATIONAL LAKE SUPERIOR  
BOARD OF CONTROL**



Canada  
Mr. Jean-François Cantin, Member  
Mr. Rob Caldwell, Secretary

United States  
Mr. Stephen Durrett, Member  
Mr. Bryce Carmichael, Secretary

**31 October 2019**

MEMORANDUM TO INTERNATIONAL JOINT COMMISSION

Enclosed are the approved minutes of the Board's 26 September 2019 meeting in Burlington, Ontario. We will post these to the Board Website as soon as possible.

Sincerely,

Enclosure

Rob Caldwell  
Secretary, Canadian Section

DISTRIBUTION:  
Mr. J-F. Cantin  
Ms. S. Lobrichon  
Ms. C. Mageau  
Board Members  
Mr. B. Carmichael  
Regulation Representatives

## INTERNATIONAL LAKE SUPERIOR BOARD OF CONTROL

Minutes of the 26 September 2019 meeting

The International Lake Superior Board of Control met on 26 September 2019 in the south seminar room at the Canadian Centre for Inland Waters in Burlington, Ontario. Mr. Jean-François Cantin, Canadian Chair, was on medical leave, so Mr. Stephen Durrett, Alternate US Chair, chaired and convened the meeting at 8:40 a.m. The attendees were:

<u>United States</u>		<u>Canada</u>
	Board Members	
Mr. S. Durrett (Alt.)		
	Secretaries	
Mr. B. Carmichael		Mr. R. Caldwell
	Regulation Representatives	
LTC G. Turner		Mr. J. Bruxer
Mr. J. Allis (Alt.) (by phone)		Ms. J. Dickhout (Alt.)
	Associates/IJC	
Dr. M. Colosimo		Mr. J. Real
Mr. A. Greeley		Mr. B. Lismanis
Mr. C. Sidick (by phone)		Ms. E. Klyszejko
		Mr. M. Shantz
		Dr. F. Seglenieks

### Item 1. Welcome and Introductions

Chair Durrett initiated a round of introductions.

### Item 2. Approval of Agenda and Status of Prior Action Items

The agenda was approved as drafted. Mr. Caldwell noted that all prior action items have been completed or were deferred.

### Item 3. Update from Regulation Representatives

#### *Hydrologic Conditions*

The Board was provided with an update on hydrologic conditions for Lake Superior and Lake Michigan-Huron. Ms. Dickhout presented slides showing recent net basin water supplies, levels and flows (observed and forecasted), precipitation, and climate outlooks. Highlights included:

- Supplies to Lake Superior were above average in the spring and near or below average through the summer.
- The six-month average (March through August) supplies to Lake Michigan-Huron were near record high.
- As a result, upper Great Lakes water levels remain well above average, near record highs, and above last year's levels.

#### *Regulation and Deviation Strategy Update*

Ms. Dickhout then provided an update on the Board's 2019 flow deviation strategy. On 30 November 2018, the Board had received Commission approval to deviate from Plan 2012 from December through April. The Board maintained additional flow through the Compensating Works with a gate setting equivalent to two gates fully open in lieu of the typical winter setting of equivalent to one-half gate open. With some reduced side-channel capacity some months, the net effects on total outflow and the water levels of Lake Superior and Lake Michigan-Huron were negligible. Given significant hydropower maintenance and reduced side-channel capacity had been expected this past spring and summer, on 30 April, the Board also received Commission approval to deviate from Plan 2012 from May to November and reduce the potential impacts of large, fluctuating flows in the St. Marys Rapids. The objective was to spread the excess flow that would have been required each month in the St. Marys Rapids due to side-channel flow capacity limitations over these several months, rather than month-by-month.

As a result, generally a more natural release pattern was followed this summer than the Plan would have called for in consideration of the hydropower plant maintenance that occurred. Total outflows were, on average, slightly less than the flow prescribed by Plan 2012.

#### *Winter Deviation Strategy*

The Regulation Representatives discussed that the Board intends to propose a deviation strategy again this winter and maintain a gate setting equivalent of up to two gates fully open all winter. It was noted that if Lake Superior is at a level of 183.90 m when the winter gate setting is established, the maximum winter outflow prescribed by Plan 2012 would increase to 2690 m<sup>3</sup>/s, which would require a gate setting of two gates fully open. It was also noted that higher gate settings create a potential ecosystem benefit with increased inundated habitat providing more area and opportunity for fish to spawn. An official deviation request will be sent in early November.

#### **Item 4. Hydropower**

##### *Recent and Expected Maintenance and Other Outages*

##### *Evolugen*

Mr. Lismanis reported that Evolgen is the new identity for Brookfield Renewable Canada. Planned unit outages totaled 568 hours (12.9 percent of the reporting period where at least one unit was shut down). Most of these outages were due to annual maintenance and cooler replacement of Unit G2, annual maintenance on Unit G3, and IESO-required compliance testing on all three units. Unplanned outages during the reporting period totaled 1,868 hours (42.3 percent of the reporting period) and were mostly due to blade-clearance and stator issues on Unit G3 and a runner-blade repair on Unit G2.

##### *U.S. Government Hydropower Plant*

LTC Turner reported 28 unit outages totalling 1,455 hours (32.9 percent of the reporting period), with 1,320 hours attributed to the governor upgrade project, 58 hours due to instrumentation issues, 55 hours to facilitate divers inspecting the International Bridge, 14 hours due to mechanical issues, and scheduled maintenance. The governor and exciter upgrades were successful and completed on schedule. Scaffolding will be installed at Units 1,2 and 3 this fall, and at Units 3A and 10 come spring. Each unit will need to be shut down for three to four days for this work. New trash racks will be installed next spring, resulting in further down time of approximately one week. Unit 10 was reported to be leaking. It may fail within five years if not repaired, so a plan is being developed to possibly coffer it off, resulting in a decrease of 50 m<sup>3</sup>/s through this unit. Otherwise, it may be decommissioned.

##### *Cloverland Electric Co-op (CEC)*

LTC Turner reported that canal restoration work, which began in the spring of 2015, continued this May and June. The work started late due to weather and finished early. Canal restoration work will not resume until spring due to a delay in receiving materials.

A two-year project to upgrade the excitation systems and relay protection units on all 74 units has begun. Two to three units will be down at a time.

#### **Item 5. Compensating Works**

##### *Inspections and Maintenance*

Routine monthly maintenance inspections continued to be conducted on the Canadian portion by Brookfield. In addition to the monthly inspections, the annual dam safety inspection was completed by the Regional Dam Safety Engineer and an Independent Consulting Engineer on 28 September. The annual inspection was performed on the Compensating Works structure and the earth dam north of the structure. The inspections found the Compensating Works facilities to be in good condition. No major issues were noted. New upstream public-safety signage was installed on the earth dam north of the Compensating Works at the end of May. The Board requested that future annual inspections take place in advance of the fall Board meetings, if possible.

An underwater repair of a cold joint and crack in the downstream concrete apron of Gate #8 planned for July was deferred to 2020 by Evolgen.

LTC Turner noted that monthly inspections and routine maintenance continued to be conducted on the U.S. portion by the U.S. Army Corps of Engineers (USACE) Soo Area Office. The monthly inspections found the Compensating Works facilities to be in good condition overall. Additionally, the scheduled periodic inspection was completed this year and the inspection report is undergoing Detroit District quality-control review and should be finalized by the end of November.

**Item 6. GLAM Committee and Superior Board Task Update**

Ms. Missy Kropfreiter will replace Mr. Bryce Carmichael as US Secretary. Mr. Carmichael will remain involved in GLAM activities in his capacity as Board Secretary.

*FY2020 work plan*

Mr. Allis reported that an inaugural face-to-face workshop between the Great Lakes – St. Lawrence River Adaptive Management (GLAM) Committee and the three Great Lakes Boards was held on 24 September. The workshop went well and ensured members are now in sync with respect to GLAM’s roles and strategies.

*Projects specific to the upper Great Lakes*

The Regulation Representatives have simulated Plan 2012 and former Plan 1977-A using 2018’s water supplies, no deviations, and limited side-channel capacities. The coordinated model for regulating and routing supplies through the Great Lakes is being updated, and will facilitate such efforts in the future.

International Watersheds Initiative (IWI) funding has been received to support further Integrated Ecosystem Response Model (IERM) development. Side-scan sonar bottom mapping of portions of the St. Marys River downstream of the rapids was completed. These data were collected in early spring, with a second trip in late September to collect differing vegetation data in this same area. This information will help quantify environmental impacts in the river due to regulation operations. The project will be completed in April 2020.

Performance indicators for Whitefish Island flooding and for rate of change of gate settings at the Compensating Works will be developed.

A questionnaire for shoreline residents as well as municipal and industrial users following the 2019 high-water event has been posted online. A Facebook post and news release to promote its completion will be prepared.

*Other recent and expected tasks*

Mr. Allis reported that the 12-year strategy document is nearing completion, and will organize the committee’s key paths to meet the IJC review mandate for Plan 2012 within a 15-year window since the plan’s adoption in 2015.

## **Item 7. Communications**

### *High-water Messaging*

Mr. Allis reported that his US Regulation Representative office team was very active with media and public outreach, and had fielded over 150 interviews or events with the media alone. Several dozen meetings with homeowner associations were attended. His team partnered with Michigan Sea Grant to attend several events, including ones in Traverse City, Port Huron and elsewhere with over 300 attendees each. Basic Board messaging was included during these outreach opportunities. Residents noted lots of concern with the high water but they were generally reasonable and understanding.

Mr. Bruxer added that the Canadian shoreline tends to be somewhat less susceptible to high-water impacts, but that the Canadian Regulation Representatives office had also fielded several media interviews. Provision of electronic briefings and phone conversations with conservation authority officials are working well, and Board messaging is getting relayed to the media in these manners too.

### *Criterion (a) Clarification*

Mr. Sidick noted this recent outreach issue. It was noted that a certain public group has dug into Plan 2012 and Board staff provided them with some detailed written documentation on Board operations. This particular criterion in the Order of Approval ensures that Lake Superior is maintained within its historic range with supplies of the past as adjusted, and kept below 183.86 m as a monthly mean under such conditions. It was agreed that this was a test criterion, not an operational criterion, and that it was thoroughly tested during Plan 2012's development. It was agreed that Plan 2012 would not be expected to pass this "test" under recent conditions, which clearly have been far wetter than the supplies of the past as adjusted used during the plan's development. It was noted that Plan 2012's fact sheet should be revisited to ascertain whether a targeted FAQ could be developed for addressing this misconception. The messaging on this criterion will be reviewed and clarified as necessary.

### *2019 Meeting with the Public*

Mr. Caldwell reported that the Board hosted a public webinar on 10 July at noon. A total of about 46 members of the public and media participated, including government officials, Board Members, staff and associates. This was a similar turnout to last year.

The date of next year's webinar will be established at the spring business meeting. A moderator may be provided by the Commission to help facilitate the meeting. The Board continues to seek out other, more-effective means of outreach and engagement. The IJC and the Boards will better define everyone's roles and responsibilities publicly, and the need for dedicated communication support was stressed. This raised a question about whether or not it's time to revisit the makeup of the Board. Should there be more than two members? Should a Community Advisory Group (CAG) be developed as a subcommittee of the Board? These questions will be raised at the October Appearance with the IJC.

### *2019 Engineer's Day*

Ms. Dickhout reported that hundreds of people spoke directly to Board representatives, and over 8,000 people attended the event. This is the seventh year with a Board presence. A similar Board presence is planned at next year's event.

### *Website/Facebook Updates*

Ms. Dickhout noted that not many changes have been made on the website recently. A news release widget has been added.

The Facebook site continues to be relatively popular, with 448 "Likes" and a maximum post "Reach" of up to 759. There was a noticeable uptick in activity following the August news release.

### *Additional communication with the public*

There was no further discussion during this item.

**Item 8. Construction of New Poe-sized Lock**

LTC Turner summarized the importance of this construction project. There is nearly a 7-m or 21-foot drop at the Soo Lock, which allows the transport of taconite ore used to produce 90 percent of the advanced high-strength steel used in the United States. Currently, 86 percent of the tonnage is restricted to the Poe Lock due to vessel size. The US Department of Homeland Security projects that a 6-month outage of the Poe Lock would cause an increase in national unemployment levels to 10% in the US and 23% in Michigan due to the loss of 11 million jobs in the US alone and a \$1 trillion impact on the economy. This project was assessed to have a benefit to cost ratio of 2.4.

The existing Sabin and Davis Locks (smaller locks to the north of the Poe Lock) will be replaced with one larger lock. The downstream approach has previously been deepened during Phase 1. Phase 2 involves deepening of the upstream channel. Phase 3 is construction of the upstream approach wall. Phase 4 is construction of the new lock chamber. Phase 2 is currently in the acquisition phase. The two other remaining phases are in design. From start of construction of Phase 2, the entire project will take ten years to complete.

**Item 9. Review Semi-Annual Progress Report**

Mr. Caldwell requested timely receipt of any additional comments or changes to the draft semi-annual progress report. He will incorporate changes, update the available data, and distribute advance copies to the IJC prior to its October meeting. A cover collage will be developed from available photos.

**Item 10. Other Business**

No additional agenda items were added.

**Item 11. Upcoming Meetings***IJC Appearances*

Mr. Caldwell noted that the Appearance would be on Wednesday, 23 October starting at 10:15 am. GLAM's follows at 10:45 am. The IJC reception will be held that evening.

*Spring Board Meetings*

Mr. Caldwell noted that the spring Board meeting would be held in March either in Syracuse, NY or Detroit, MI. The secretaries of the Great Lakes Boards will coordinate the dates and location.

*GLAM meetings*

Mr. Caldwell noted that there will be committee meetings in Canada in February and in the US in June. Details will follow when available.

**Item 12. Action Item Review**

Mr. Carmichael noted several major actionable items during this meeting:

- The Secretaries and Regulation Representatives will prepare a letter requesting winter deviation authority from the IJC in early November.
- The Secretaries will add Unit 10 updates to the semi-annual reports going forward.
- Evolgen will determine whether or not they can move the annual dam safety inspection to August from September.
- Regulation Representatives offices will develop performance indicators for Whitefish Island flooding and rate of gate movements at the Compensating Works.
- Criterion (a) descriptions will be clarified as needed on the website FAQs, the Plan 2012 fact sheet, and elsewhere.
- The Secretaries will schedule a call prior to the next Board meeting with the Regulation Representatives, Secretaries and IJC Advisors to discuss a public meeting strategy.
- The Canadian Secretary will add a slide to the October Appearance deck regarding possible development of a Community Advisory Group and/or addition of new Board Members.
- Mr. Allis will send suitable photos to the Canadian Secretary for use on the semi-annual report cover.
- The US Secretary will ensure that the Spring 2019 semi-annual report is posted online as soon as possible.
- The March Boards meetings dates and location to be determined by the Secretaries.

- The Secretaries will prepare an International Watersheds Initiative proposal similar to the Lake Ontario-St. Lawrence River binational community meetings project to extend this effort to the upper Great Lakes.
- The new GLAM questionnaire will be promoted on the Board Facebook site and in a news release featured on the website.
- Contact information on future media releases will be reviewed and updated.

**Item 13. Closing Remarks and Adjourn**

There being no other business, Mr. Durrett thanked everyone and adjourned the meeting at 11:50 a.m.

**INTERNATIONAL LAKE SUPERIOR BOARD OF CONTROL**  
**Board Meeting, 26 September 2019, 8:30 am to 12:00 pm**

Canadian Centre for Inland Waters, South Seminar Room  
867 Lakeshore Rd, Burlington, ON

**AGENDA**

- |  |           |
|--|-----------|
| 1. Welcome and introductions [Durrett]   | 0830-0840 |
| 2. Approval of agenda and status of prior action items [Durrett, Caldwell]                 | 0840-0845 |
| 3. Update from Regulation Representatives [Dickhout]                                       | 0845-0930 |
| a. Hydrologic conditions   |           |
| b. Regulation and deviation strategy update  |           |
| i. Review of summer (May to November deviation strategy)                                   |           |
| ii. Winter deviation strategy considerations   |           |
| 4. Hydropower [Real, Line, LTC Turner]   | 0930-0945 |
| a. Recent and expected maintenance and other outages                                       |           |
| 5. Compensating Works  | 0945-1000 |
| Inspections and maintenance [Real, LTC Turner]   |           |
| 6. GLAM Committee and Superior Board task update   | 1000-1030 |
| a. FY2020 work plan [Leger/Allis]  |           |
| b. Projects specific to the upper Great Lakes [Leger/Allis]                                |           |
| c. Other recent and expected tasks [Leger]   |           |
| Break (15 min)   |           |
| 7. Communications  | 1045-1110 |
| a. High-water messaging [Dickhout, Sidick]   |           |
| b. Criterion (a) clarification [Sidick, Dickhout]  |           |
| c. 2019 meeting with the public [Caldwell]   |           |
| d. 2019 Engineer's day [Dickhout]  |           |
| e. Website/Facebook updates [Dickhout]   |           |
| f. Additional communication with the public [Dickhout, Sidick]                             |           |
| 8. Construction of new Poe-sized lock [LTC Turner]   | 1110-1115 |
| 9. Review semi-annual progress report [Caldwell]   | 1115-1125 |
| 10. Other business   | 1125-1130 |
| 11. Upcoming meetings [Caldwell]   | 1130-1140 |
| a. IJC Appearances - Wed, 23 Oct 1015-1045, GLAM 1045-1130, Ottawa, reception that evening |           |
| b. Spring Board meetings - ?? Mar 2020 0830-1200, US (Syracuse area likely again)          |           |
| c. GLAM meeting – Canada, ?? Feb 2020; US, ?? Jun 2020                                     |           |
| 12. Action item review [Carmichael]  | 1140-1155 |
| 13. Closing remarks and adjourn [Durrett]  | 1155-1200 |