INTERNATIONAL JOINT COMMISSION

Directive to the

International Lake Superior Board of Control

on Deviations from the Regulation Plan

This directive, created in conjunction with the 2014 Supplementary Order of Approval, provides specific protocols and guidance to the International Lake Superior Board of Control for implementing the regulation plan approved by the Commission and deviating from that plan.

Pursuant to Condition 7 of the 17 July 2014 Supplementary Order of Approval¹ (2014 Supplementary Order), the operation of all works referred to in Condition 5 of the Order shall be under the direct control of the International Lake Superior Board of Control. This includes setting monthly mean discharges, in accordance with the approved regulation plan, for the St. Marys River through the flow control structures located at Sault Ste. Marie. In most instances, it will be important to release flows as determined by the approved plan in order to realize its expected benefits. Therefore, the Commission anticipates few, limited instances where monthly mean flow releases would differ from those of the approved plan.

This directive, adopted in accordance with Conditions 7(d),(e) and (f) of the 2014 Supplementary Order, sets out when and how the Board can deviate from the outflows prescribed by the regulation plan. If the Board cannot establish consensus regarding deviations from plan outflows, the issue will be addressed to the IJC through the Commission's Board Liaisons located in Washington, DC and Ottawa, Ontario.

Emergency Deviations

Under Condition 7(d) of the 2014 Supplementary Order, the Commission authorizes the Board to alter or suspend peaking and/or ponding operations or deviate from the flow specified by the approved regulation plan when it determines that immediate action is necessary to respond to emergency conditions that pose threats to human life, threaten the integrity of the flow regulation structures, or could cause major damage to property or the environment. Examples could include the failure of lock gates, flooding of the hydropower control works, failure of a spillway gate, dike failure, a large-scale blackout, or other such active or imminent incidents. These arise on extremely rare occasions. In such cases, immediate action is required and the Board is directed to authorize the Regulation Representatives to direct and approve, on the Board's behalf, immediate emergency flow changes as required. The Regulation Representatives will promptly report any such emergency actions as soon as possible to the Board, and thereafter, the Board to the Commission.

As required by Condition 7 (g) of the Order, the Board will notify those who may be affected as appropriate as soon as possible of emergency flow deviations. The Board will include stakeholder outreach in an after-action report to the Commission.

Emergency deviations from the plan require accurate accounting of the amount of water released and effects on lake levels. If the amount of the deviation is small, it may be possible to offset the change in flow by adjusting subsequent flows within the month, such that there is no overall effect on the monthly mean flow. If the emergency deviation cannot be offset within the month, then the Board may propose that the effect of the emergency flow deviations be restored by permitting the regulation plan to automatically adjust subsequent months' releases based on actual lake levels, or it may propose proactive

¹ For the purposes of this directive, references to the 17 July 2014 Supplementary Order (2014 Supplementary Order) are references to the 26/27 May 1914 Orders of Approval, as amended by the 17 July 2014 Supplementary Order and other Supplementary Orders.

offsetting deviations from the plan specified releases as appropriate. The Board shall advise the Commission of the means by which it proposes the deviations in flow and levels to be offset.

Minor Deviations

Under Condition 7(e) of the 2014 Supplementary Order, the Commission authorizes the Board to conduct minor discretionary deviations from plan flow to respond to short-term needs on the St. Marys River provided they are within the criteria and other requirements of the Order and are without appreciable adverse effects to interests. The Commission considers variations of not more than +/- 0.5 cm from those which would have occurred had the releases prescribed by the Lake Superior regulation plan been followed to have no appreciable effect in Lake Superior or Lake Michigan-Huron levels. Minor deviations may be made to facilitate flow verification measurements, fishery studies, sea lamprey control efforts, maintenance of control works and other nearby structures and features, or to accommodate hydropower outages, problems with ice, and other unforeseen conditions as long as these are within the criteria and other requirements of the 2014 Supplementary Order and are without appreciable adverse effects to interests. The intent of minor deviations is to accommodate, where possible, those needs that are difficult to foresee and build into the plan.

As the Board deems necessary, it will consult with stakeholders prior to or following minor deviations.

These minor deviations may affect levels in the St. Marys River, especially immediately downstream of the control works in the vicinity of Sault Ste. Marie Harbor, but due to the relatively small volume of water involved, would have a very minor effect on Lake Superior or Lake Michigan-Huron water levels and the river upstream of Sault Ste. Marie.

The effects of any minor deviations from the plan on the amount of water released and lake levels require accurate accounting. The Board shall determine and implement methods and tools required to accurately account for cumulative deviations in flows and levels and their impacts.

Minor deviations are to be conducted in a manner such that cumulative adverse effects to interests are not substantial. To avoid or minimize cumulative impacts on the lake levels and to avoid changing the balance of benefits expected with the approved regulation plan, the Board should not allow the net effect of these minor deviations to cause either Lake Superior or Lake Michigan-Huron levels to vary by more than about +/- 0.5 cm from those which would have occurred had the releases prescribed by the Lake Superior regulation plan been followed. Owing to the systemic balancing nature of the regulation plan, the effects of any minor flow deviations will be gradually offset by the regulation plan automatically adjusting subsequent months' releases based on the actual lake levels, as soon as there is no longer a need for the deviation. However, if the Board determines that conditions require, the Board may choose to offset the minor deviations by manually varying subsequent releases from those specified by the plan. The offsetting deviations may be delayed if they may cause an immediate adverse impact on interests.

The Board will provide post-action reports to the Commission of these minor deviations from plan flows as part of normal semi-annual reporting requirements. Stakeholder outreach prior to or following minor deviations, if deemed appropriate by the Board, will be included in post-action reports to the Commission.

The Board may direct its Regulation Representatives to approve minor deviations from plan flow, within parameters set by the Board and consistent with the requirements specified above.

Deviations Requiring Prior Commission Approval

Condition 7(f) of the 2014 Supplementary Order requires the Board to obtain the Commission's advance approval for any deviations from the flow determined by the regulation plan other than minor deviations or emergency deviations described above, or peaking and ponding operations outlined in a separate directive to the Board. If circumstances are such that proposed deviations (either individually, or cumulatively over the course of several months) would be expected to cause the lake level to vary more than +/- 0.5 cm from the level resulting from the approved plan, or potentially have an appreciable adverse effect on interests, the Board shall advise the Commission as far in advance as possible and obtain prior approval from the Commission to deviate from the approved regulation plan.

The Commission considers that such deviations from the regulation plan should be avoided so as not to change the balance of benefits expected with the approved regulation plan and to minimize cumulative impacts on the lake levels and any possible appreciable adverse effects on interests.

The Commission may require the Board to consult with stakeholders to identify possible adverse impacts prior to seeking the Commission's approval of deviations.

If such deviations are approved by the Commission, once these deviations from the plan flow are no longer needed, the Board may propose that the effect of any such flow deviations be offset by permitting the regulation plan to automatically adjust subsequent months' releases based on the actual lake levels, or it may propose proactive offsetting deviations from the plan specified releases as appropriate. The Board shall advise the Commission of the means by which it proposes the deviations in flow and levels to be offset for Commission consideration.

Any deviations from the plan require accurate accounting of the changes in the amount of water released and the effect on lake levels.

As required by Condition 7 (g) of the Order, the Board will inform the public and stakeholders of changes in the Lake Superior outflow, including changes due to Commission approved deviations from the plan flow. The Board will include its public outreach in an after-action report on deviations to the Commission.

Signed this 9th day of February, 2015

Secretary

Canadian Section

Secretary

United States Section

Parlo a. Lamon