

**INTERNATIONAL JOINT COMMISSION**  
**GREAT LAKES – ST. LAWRENCE RIVER**  
**ADAPTIVE MANAGEMENT COMMITTEE**  
**OF THE**  
**GREAT LAKES BOARDS OF CONTROL**

**DIRECTIVE**

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**INTRODUCTION**

Over the past century pursuant to the Boundary Waters Treaty the International Joint Commission (IJC) has approved the construction and operation of structures that affect levels and flows at Sault Ste. Marie on the St. Marys River, at Niagara Falls on the Niagara River and at Cornwall/Massena on the St. Lawrence River. In the case of the St. Marys River and the St. Lawrence River, flows through these structures are managed according to regulation plans that specify the amount of water to be released under a range of conditions. In the case of the Niagara River, the IJC monitors the maintenance and operation of the Chippawa-Grass Island Pool control structure to meet the scenic-beauty requirements of the 1950 Niagara River Diversions Treaty. Three international boards of control (Lake Superior, Niagara and St. Lawrence River) monitor compliance by the owners and operators of the structures with the operational requirements as set-out in the Orders of Approval and Directives for the construction and operation of the structures.

Consistent with these responsibilities, the Lake Superior and St. Lawrence River boards of control have periodically studied new regulation plans in an attempt to better meet the criteria in the Orders of Approval or to provide additional benefits to affected interests. Information on regulation plan impacts is important to support the evaluation process. Short-term study boards have been used in the past to consider improvements to the current regulation plans. The Lake Ontario-St. Lawrence River Study (2000-2006) reviewed regulation of levels and flows in the Lake Ontario – St. Lawrence River system and the International Upper Great Lakes Study (2007-2012) reviewed conditions in the Upper Great Lakes and the regulation plan for the outflows of Lake Superior. The IJC seeks to make the information and knowledge gained during these studies available to the Lake Superior and St. Lawrence River boards of control in their on-going review and evaluation of regulation plans as called for in the Orders of Approval. The IJC seeks to have this information provided to the International Niagara Board of Control since it is expected to also be of use in its ongoing oversight of the management of Niagara River flows and levels.

To aid in this effort a **Great Lakes – St. Lawrence River Adaptive Management (GLAM) Committee** is established by this directive to report to the three Great Lakes-St. Lawrence River boards of control (Superior, Niagara and St. Lawrence) (Boards). The GLAM Committee is to undertake the monitoring, modeling and assessment related to the on-going evaluation of the regulation plans and address other questions that may arise due to changing conditions in consultation with the Boards.

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Additionally, per Article 7(1)(i) of the Great Lakes Water Quality Agreement, as amended in September of 2012, the Commission is tasked with ensuring liaison and coordination between the Great Lakes control boards and the boards created by the Agreement – the Great Lakes Water Quality Board (WQB) and Science Advisory Board (SAB). To better link water levels and flows regulation with water quality considerations, the GLAM Committee will engage in outreach activities with the WQB and SAB. The Committee’s reporting is expected to coincide with the Commission’s triennial assessment progress report under the GLWQA.

## **OBJECTIVES**

The overall objective of the GLAM Committee is to provide information to the Boards regarding the effects that the structures approved in the Commission’s Orders of Approval and Directives have on levels and flows in boundary waters and the impacts these have on the affected interests. This includes the on-going review and evaluation of regulation plans related to (a) the effectiveness of the existing regulation plans in managing water levels and flows in the Lake Ontario-St. Lawrence River system and the outflows of Lake Superior; (b) examining how the system may be changing over time and whether any modifications to the regulation plan may be warranted to address what is learned over time including emerging issues and/or to address changing conditions; and (c) any other questions requested by the Boards and/or IJC that may affect the Boards’ water management decisions over the long-term. This GLAM Committee will undertake specific tasks to review and evaluate the regulation plans over time, focusing on mid-term to long-term assessments and not within-year decisions.

The GLAM Committee will design a work plan that assists the Boards in determining if there are opportunities to improve the management of levels and flows based on our improved understanding of the system and to address future conditions by addressing these questions:

1. How well are the impacts of levels and flows represented by current data and models used in the evaluation of the management of levels and flows?
2. Will future water supplies be different from those used to test the current management of levels and flows; and
3. How are other physical, chemical, biological, and/or socio-economic conditions of the system changing over time?
4. How can the management of levels and flows benefit other physical, chemical, biological and/or socio-economic conditions?

To achieve its overall objective, the GLAM Committee will:

- Formulate annual strategic work plans for executing adaptive management activities for approval by the three Boards and the IJC.
- In consultation with the Boards, establish, as required, sub-committees or task teams to undertake components of the approved work plan.
- Develop an open and collaborative process for updating models and incorporating new science.
- Provide semi-annual updates to the three Boards in advance of the IJC semi-annual appearances. To avoid duplication in reporting of adaptive management activities among

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the control boards, each control board will incorporate pertinent adaptive management aspects from the GLAM Committee's reporting as part of their normal reporting to the Commission every six months.

- Appear directly in front of the Commission upon Commission request. While the accomplishments of the GLAM Committee will normally be reported to the Commission semi-annually through the Boards, the GLAM Committee may also request to appear before the Commission as necessary.
- Prepare a comprehensive report on the progress of the work plan, making recommendations for modifying the work plan, providing advice to the Commission regarding adaptive management and providing key findings for the Boards. The timing of the report will be coordinated with the preparation of the Commission's triennial "Assessment of Progress Report" under the Great Lakes Water Quality Agreement. The GLAM Committee will seek the views of the three Boards, as well as the Commission's Science Advisory Board (SAB) and Great Lakes Water Quality Board (GLWQB) in the preparation of the report and will note substantive issues for which consensus could not be reached.
- As directed by the Commission, and not more than 15 years after the establishment of the GLAM Committee, provide a synthesis of the collective public and peer reviewed science and information gained from tasks outlined in the work plan related to the on-going evaluation of regulation plans and prepare formal recommendations to the Boards of any changes that may be warranted.
- Identify any areas of further work that may be required to fulfill this Directive.

To achieve these objectives the Boards will:

- Provide a list of priority issues for the GLAM Committee related to each Board, particularly noting issues related to the performance of the regulation plans raised during the Board's public meetings or consultations;
- Review and approve GLAM Committee work plans;
- Provide in writing requests to the GLAM Committee to address specific questions related to the Board responsibilities as outlined in IJC Orders of Approval and Directives to the Boards;
- Make recommendations to the IJC for modifications to the regulation plans to address what has been learned and/or to address changed conditions of the system.

Recommendations to the IJC will be based on consensus within the individual Boards. If consensus cannot be achieved on any specific issue, the IJC will be so informed by the Boards. Similarly, if consensus cannot be reached among the three Boards on GLAM Committee activities, the IJC will be so informed by the Boards.

The IJC will review and consider GLAM Committee work plans as recommended by the Boards. The information provided by the GLAM Committee reports will be used by the Commission in its review of Orders. The July 17, 2014 Supplementary Order for Lake Superior calls for a review fifteen years after its effective date.

IJC staff Liaisons to the Boards shall also serve as the Commission's Liaisons to the GLAM Committee. Additionally, a member of the Commission's Great Lakes Regional Office staff

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shall be designated by the Commission to serve as Liaison to the GLAM Committee to facilitate linking activities of the GLAM Committee to relevant work being conducted under the Great Lakes Water Quality Agreement.

## **MEMBERSHIP**

The AM Committee will be comprised of technical experts from both countries as appointed by the IJC. The GLAM Committee will be co-chaired by a technical lead from each country from the federal government. Membership will include, at a minimum, technical experts from the federal, state and provincial governments as well as the Regulation Representatives (or alternates) from the Superior and St. Lawrence Boards and Working Committee Chairs (or alternates) from the Niagara Board. Meetings of the GLAM Committee will be open to Board members and the Commission.

Key stakeholders, academia and representatives of non-government agencies that have the technical capacity to work on various components of the work plan may be engaged by the GLAM Committee as appropriate as members on sub-committees and task teams as required.

The U.S. and Canadian GLAM Committee Co-Chairs, after consulting with members of the Committee, may each appoint a secretary. Under the general supervision of the Co-Chair(s), the secretary(ies) shall carry out such duties as are assigned by the Co-Chairs or the Committee as a whole. These duties would include initiating, convening and coordinating the activities of the GLAM Committee and its sub-committees, including scheduling meetings, keeping records and tracking process of the Committee and its task teams.

Members serve at the pleasure of the IJC and are expected to be full participants in all activities of the GLAM Committee. As with all IJC Boards and Task Forces, the GLAM Committee members serve the IJC in their personal and professional capacity, not as a representative of their agencies or employers.

It is expected that most of the GLAM Committee's work will be conducted by electronic means (such as email, teleconference and webinar) but at least one meeting face-to-face will be conducted annually.

## **OUTREACH AND ENGAGEMENT**

Transparency, awareness and engagement of relevant organizations and institutions as well as members of the public are key operating principles of the Boards and the GLAM Committee. Among other things, this includes keeping these organizations, institutions and the public informed and engaged on progress of the GLAM Committee's work and, when appropriate, involving them in any sub-committees or task teams that may be established and/or establishing a separate public engagement committee. Therefore, the GLAM Committee will work with the Boards and IJC staff to develop an outreach and engagement strategy for the Commission's approval as soon as possible, but no later than six months following issuance of this Directive. This strategy is to complement and not duplicate existing outreach activities of the Boards.

Details of the GLAM Committee's deliberations and internal communications should be treated confidentially but, with the agreement of the Boards, the information produced by the GLAM Committee can be made available to governments, stakeholders, and the public.

## **TIMELINE**

The GLAM Committee's work is an on-going, long-term effort. However, there are timelines that must be adhered to as follows:

- Annually, the GLAM Committee will produce an updated work plan for approval by the Boards and IJC.
- Semi-annually, the GLAM Committee will update the Boards in advance of the IJC semi-annual to enable progress updates to be incorporated into Board reports to the IJC.
- Once every three years, the GLAM Committee in consultation with the Boards will prepare a comprehensive progress report to the IJC timed to inform the Commissions' Triennial Assessment of Progress, as described above.
- As directed by the Commission, and not more than 15 years after the establishment of the GLAM Committee, the Committee will facilitate comprehensive reviews and evaluation of the regulation plans by the Boards based on the available data and information garnered over the review period.

Signed January 16, 2015



Secretary  
Canadian Section



Secretary  
United States Section

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