



## PROPOSED NEW ORDER

### **In the matter of the applications of the Government of Canada and the Government of the United States of America for an Order of Approval for the construction of certain structures for the development of power in the International Rapids Section of the St Lawrence River**

#### INTRODUCTION

On October 29, 1952, the International Joint Commission issued an Order of Approval, pursuant to the Boundary Waters Treaty of 1909, to the Government of Canada and the Government of the United States of America for the construction, maintenance and operation of certain structures for the development of power in the International Rapids Section of the St. Lawrence River. A copy of the Commission's Order of Approval of October 29, 1952, as amended on July 2, 1956 (1956 Order) is included as Attachment 1 to this new Order.

The Commission explicitly retained jurisdiction in the 1956 Order to change that Order after giving an appropriate opportunity to all interested parties to make representations to the Commission. Any such changes must comply with the rules or principles set out in Article VIII of the Treaty, which include an order of precedence among listed interests and require the Commission to ensure that suitable and adequate provision is made for the protection and indemnity of all interests in the other country which may be injured by the project.

The International Joint Commission has now completed a review of the 1956 Order. This review included a five-year study by the Lake Ontario-St. Lawrence River Study Board, public outreach by the Study Board with the assistance of a Public Interest Advisory Group, a review of certain key aspects of the five-year study by the U.S. National Research Council and the Royal Society of Canada, further studies requested by the Commission, and comments provided to the Commission by governments, interest groups, and members of the general public in written submissions and at public hearings held by the Commission.

Based on this review, the International Joint Commission has made the following Findings and new Order.



## FINDINGS

The International Joint Commission has jurisdiction to amend the 1956 Order in accordance with the requirements of the Boundary Waters Treaty of 1909 (Treaty).

The Treaty requires that the International Joint Commission observe an order of precedence among:

- (1) uses for domestic and sanitary purposes;
- (2) uses for navigation, including the service of canals for the purposes of navigation;  
and
- (3) uses for power and irrigation purposes.

Riparian interests were addressed in the 1956 Order, and the Commission finds that it is now necessary to also make provision for the environment and recreational boating in this new Order.

The Treaty also states that the International Joint Commission shall require that suitable and adequate provision be made for the protection and indemnity of all interests on the other side of the line that may be injured by the project.

The Commission finds that some of the benefits provided to interests identified in the 1956 Order resulted from *ad hoc*, discretionary decisions. The Commission also finds that regulation under this new Order will provide an overall level of comparable or greater benefits to each of the interests identified in the 1956 Order, and that the benefits can be conveyed with greater security and predictability. In assessing the benefits provided by regulation under this new Order, the Commission finds that the terms, conditions and other requirements of this new Order take into account the high and low water levels since 1954 and other new information not available when the 1956 Order was developed.

The Commission finds that the laws in Canada and the Constitution and laws of the United States of America together with the provisions of this new Order satisfy the requirements of Article VIII of the Treaty.

The Commission finds that it would be beneficial to all interests in the Lake Ontario - St. Lawrence River System to implement an adaptive management approach to regulation of the System. Socioeconomic and environmental conditions continue to evolve, and as new science-based information becomes available, there will be a need to consider such information for improving system regulation in the future. Monitoring, data collection, and assessment are necessary to validate the models upon which the regulation plan was built, to evaluate the effectiveness of programs designed to reduce the risk of damage or to provide benefits to interests affected by regulation, to analyze the effects of other changes, and to consider possible future improvements in system regulation.



The Commission finds that the risk of shoreline flooding and erosion on Lake Ontario increases under high water conditions during the fall, winter and spring, when seasonal storms can generate significant waves and surges. The shoreline impact can be reduced by better seasonal management of Lake Ontario high water levels and/or through mitigation.

## ORDER

As used in this Order:

“1956 Order” means the Order of Approval issued by the International Joint Commission on October 29, 1952, as amended on July 2, 1956, for the construction, maintenance and operation of certain structures for the development of power in the International Rapids Section of the St. Lawrence River, as set out in Attachment 1 to this Order;

“Supplies of the Past as Adjusted” means the range of supplies for the period 1860 through 1954 adjusted to a condition assuming a continuous diversion out of the Great Lakes Basin of 3100 cubic feet per second (88 cubic meters per second) at Chicago and a continuous diversion into the Great Lakes Basin of 5000 cubic feet per second (142 cubic meters per second) from the Albany River Basin;

“Pre-project condition” means the channel capacity of the St. Lawrence River that determined the outflow from Lake Ontario after the removal of Gut Dam from the Galop Rapids section of the river, but before construction of the project. These are the conditions that existed in March 1955.

“Board” means the International Lake Ontario-St. Lawrence River Board established by this new Order;

“Commission” means the International Joint Commission established by the Boundary Waters Treaty of 1909;

“IGLD 85” means the International Great Lakes Datum, 1985, which is the reference datum for all elevations in this Order; and

“Treaty” means the Boundary Waters Treaty of 1909 between Canada and the United States of America.



**The International Joint Commission orders that the approval given for the construction, maintenance and operation of structures in the 1956 Order, and the approvals given by the former St Lawrence River Joint Board of Engineers on September 1, 1959 and August 4, 1960 for ice booms shall continue in full force and effect subject to the conditions set out below in this new Order. Up to the date of this new Order, the operation and maintenance of the project were subject to the terms and conditions of the 1956 Order. The approvals concerning ice booms are considered to be approvals by the Commission.**

**The terms and conditions of the 1956 Order are modified by this new Order. The following new terms and conditions of this new Order will apply to the operation and maintenance of the structures starting January 9, 2009:**

- (a) The structures shall be maintained and operated so as not to tend materially to conflict with or restrain uses for domestic and sanitary purposes and uses for navigation purposes, including the service of canals for the purposes of navigation.
- (b) The structures shall be maintained and operated in such manner as to safeguard the rights and lawful interests of others engaged or to be engaged in the development of power in the St. Lawrence River downstream of the International Rapids Section.
- (c) The structures shall be so maintained and operated as to safeguard so far as possible the rights of all interests affected by the levels or flows of the St. Lawrence River or by the levels of Lake Ontario and the lower Niagara River downstream of Niagara Falls.
- (d) The hydro-electric plants approved by the 1956 Order shall not be subjected to operating rules and procedures more rigorous than are necessary to comply with the provisions of conditions (a), (b) and (c) of this new Order.
- (e) Before Ontario Power Generation and any successor makes any changes to any part of the structures, it shall submit to the Government of Canada for approval in writing, such detailed plans and specifications and details of the program of construction with respect to the changes as the



Government of Canada may require and shall obtain such other approvals as may be required under the Treaty. Likewise, before the Power Authority of the State of New York (also known as “NYPA”) and any successor makes any changes to any part of the structures it shall submit to the Government of the United States of America, for approval in writing, such detailed plans and specifications and details of the program of construction with respect to the changes as the Government of the United States of America may require and shall obtain such other approvals as may be required under the Treaty.

- (f) A Board to be known as the International Lake Ontario-St. Lawrence River Board (Board), consisting of an equal number of members from Canada and from the United States of America, shall be established by the Commission. The Board shall include state, provincial and federal members. The duties of the Board shall be to execute the instructions of the Commission as issued from time to time with respect to this new Order and to ensure compliance with the provisions of this new Order relating to water levels and the regulation of the discharge of water from Lake Ontario and the flow of water through the International Rapids Section of the St. Lawrence River. Ontario Power Generation and the Power Authority of the State of New York, and any successor entities, shall duly observe any direction given them by the Board for the purpose of ensuring such compliance. The Board shall also undertake other responsibilities, which at a minimum include establishing a monitoring and adaptive management committee, and developing and implementing a strategy for public communications. The Commission shall issue a directive to the Board enumerating these other responsibilities. The Board shall report to the Commission at such times as the Commission may determine, but not less than semi-annually. In the event of any disagreement among the members of the Board which they are unable to resolve, the matter shall be referred to the Commission for decision. The Board may, at any time, make representations to the Commission in regard to any matter affecting or arising out of the terms of this new Order with respect to water levels and the regulation of discharges and flows.
- (g) The discharge of water from Lake Ontario and the flow of water through the International Rapids Section shall be regulated to meet the requirements of conditions (a), (b) and (c) of this new Order and shall be regulated in accordance with the criteria set out below.

The structures shall be operated in such a manner as to provide no less protection for navigation and riparian interests downstream than would



have occurred under pre-project conditions with Supplies of the Past as Adjusted. The Commission will indicate in an appropriate fashion, as the occasion may require, the inter-relationship of the criteria, the range of elevations and the other requirements.

The criteria are as follows:

- 1) Montreal Harbour shall have no less protection than it had under criterion (a) of the 1956 Order.
- 2) The regulated winter outflows from Lake Ontario from 15 December to 31 March shall be as large as feasible and shall be maintained so that the difficulties of winter power operation are minimized.
- 3) The regulated outflow from Lake Ontario during flood discharges from the Ottawa River shall not be greater than would have occurred under pre-project conditions with Supplies of the Past as Adjusted, assuring no less protection than under the 1956 Order.
- 4) The outflow from Lake Ontario shall be regulated so as to provide net benefits and protection to Lake Ontario shore property owners in the United States and Canada comparable to those provided by the 1956 Order, taking into account any mitigation measures.
- 5) Consistent with other requirements, the minimum regulated monthly outflow from Lake Ontario shall be such as to secure the maximum dependable flow for power.
- 6) Consistent with other requirements, the levels of Lake Ontario shall be regulated for the benefit of property owners on the shore of Lake Ontario in the United States of America and Canada so as to reduce extremes of stage which were experienced prior to the construction and operation of the project.
- 7) Consistent with other requirements, flows through the International Rapids Section of the St Lawrence River shall be regulated so as to protect the resiliency of wetlands and biodiversity on Lake Ontario and on the St. Lawrence River.



8) Consistent with other requirements, the maximum regulated outflow from Lake Ontario shall be maintained as low as possible to maintain safe velocities in the International Section of the St Lawrence River for navigation and minimize spill at the hydropower plants.

9) Consistent with other requirements, flows through the International Rapids Section of the St Lawrence River shall be regulated so as to benefit recreational boating.

10) In the event the Board's three month forecast shows a significant probability of the Lake Ontario level going above the 1% exceedance level, or going below the 99% exceedance level, as defined in a table approved by the Commission for this purpose, the Board shall submit an analysis of system-wide risks to the Commission, and may request to undertake deviations from a Commission-approved regulation plan with Commission consent for a period of one month. The Commission may on one or more occasions renew the consent for a period of one month if the Board has on each such occasion provided the forecast, analysis and request set out in the preceding sentence.

The Commission shall approve a plan of regulation, and associated operational guides, for the discharge of water from Lake Ontario and its flow through the International Rapids Section of the St Lawrence River that satisfies the aforementioned requirements and criteria. The velocities and water surface profiles when applied to the channels (as determined in accordance with the 1956 Order) will not exceed those provided for in the 1956 Order. The flow of water through the International Rapids Section of the St Lawrence River in any period shall equal the discharge of water from Lake Ontario as determined for that period in accordance with the approved regulation plan. The Commission's directive to the Board shall make provision for deviations from the plan of regulation to address such matters as winter operations, emergencies, flood discharges from the Ottawa River, peaking and ponding, and other special short-term situations.

No later than two years after the effective date of this Order, the Commission will review the extent to which a monitoring program and mitigation measures have been implemented in the Lake Ontario-St. Lawrence River basin and will implement a variant of Plan B+ if it determines that such plan will satisfy all of the conditions, criteria and other requirements of this Order with such mitigation measures in place.



The review will be based upon the information that is available at the time of the review. This assessment review may be repeated in subsequent years.

No later than fifteen years after the effective date of this Order, the Commission will conduct a review of the results of regulation under this Order to assess the extent to which the results predicted by the models used to develop the approved regulation plan occurred as expected. The review will be based upon the information available at the time of the review. Information received and validated through this review may provide the basis for possible changes to the regulation of water levels and flows.

The installation, maintenance, operation and removal of the ice booms in the St. Lawrence River by Ontario Power Generation and the Power Authority of the State of New York, and any successor entities, are subject to the following conditions:

- 1) Any significant modifications in the design or location of the booms shall require the approval of the Commission;
- 2) The placement and removal of ice booms shall be timed so as not to interfere with the requirements of navigation; and
- 3) The St. Lawrence Seaway Management Corporation and the St. Lawrence Seaway Development Corporation, and any successor entities, shall be kept informed of all such operations.

- (h) Ontario Power Generation and the Power Authority of the State of New York, and any successor entities, shall maintain and supply for the information of the Board such accurate records relating to water levels and the discharge of water through the structures and the regulation of the flow of water through the International Rapids Section as the Board may determine to be suitable and necessary. They shall also install and maintain such gauges, carry out such measurements, and perform such other services as the Board may deem necessary for these purposes.
- (i) The Board shall report to the Commission as of December 31 each year on the effect, if any, of the operation of the downstream hydro-electric power plants and related structures on the tail-water elevations at the hydro-electric power plants approved by the 1956 Order.

AND IT IS FURTHER ORDERED that the Commission retains jurisdiction over the subject matter of the Applications that the Government of Canada and the Government of the United States of America submitted to the International Joint Commission on June 30, 1952 for its approval of the construction of certain



structures for the development of power in the International Rapids Section of the St. Lawrence River, and the Commission may, after giving such notice and opportunity to all interested parties to make representations as the Commission deems appropriate, make such further Order or Orders relating thereto as may be necessary in the judgment of the Commission.

**ATTACHMENT 1: 1956 Order**