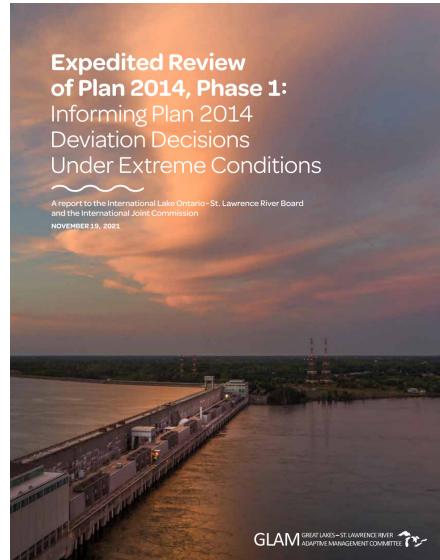


PHASE 2: EXPEDITED REVIEW OF PLAN 2014

Phase 2 Strategy

Background

In February 2020, the International Joint Commission (IJC) ordered an expedited review of Plan 2014, the regulation plan for Lake Ontario outflows into the St. Lawrence River. The review is being led by the IJC's Great Lakes-St. Lawrence River Adaptive Management Committee, known as the GLAM Committee. [Phase 1](#) was completed in November 2021. Phase 2 of the review is set to be completed when the GLAM Committee submits its findings to the International Lake Ontario – St. Lawrence River Board (Board).



The International Lake Ontario-St. Lawrence River Board will provide recommendations regarding Plan 2014 to the International Joint Commission in spring of 2025.

The Phase 2 Strategy

The GLAM Committee is developing a Phase 2 strategy to guide the collection of critical information needed for the Board to evaluate the performance of Plan 2014 in response to extreme high and low water levels and the variability exacerbated by climate change and make a recommendation to the IJC on whether revisions to Plan 2014 are warranted. These evaluations are based on the same objectives established during the creation of Plan 2014 which included objectives to restore ecosystem health while limiting other impacts. The Board and the GLAM Committee are committed to collaborate with area interests and Indigenous peoples to attain the best outcome.

Several different working teams have been established to assist the GLAM Committee in the development and testing of possible modifications to the regulation plan. For example, a hydroclimate teams is modeling how climate change may impact future water supplies into Lake Ontario and the St. Lawrence River so that modifications to the outflow regulation plan can be tested under a variety of conditions. Other teams are improving models used to simulate water movement through the Great Lakes and St. Lawrence River and capture impacts of regulation plan changes under a range of possible future supply conditions.



Lachine Lighthouse in Montreal, Quebec

A Public Advisory Group initiated during Phase 1 was re-established for Phase 2 of the Expedited Review to continue engagement with the public over the course of the review.

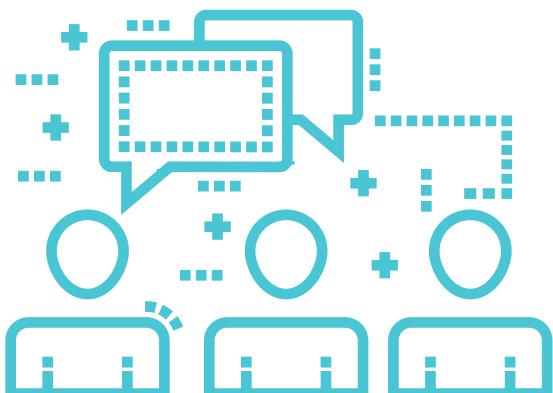
Two important parts of the Phase 2 strategy include:

(Part A)

Decision Factors, Plan Evaluation and Ranking Framework: Determine the factors to consider when deciding if there are better alternative regulation plans to Plan 2014. Determine how to assemble the knowledge needed to develop, compare and rank alternative possible revisions to Plan 2014.

(Part B)

Research and Modeling: Produce the information and options the Board will need to formulate a recommendation to the IJC (e.g. develop metrics for assessing impacts from possible revisions to Plan 2014, design and build evaluation models and generate test hydrologic datasets from climate



Measuring and modeling performance

A major tool being developed for Phase 2 is the Integrated Social, Economic and Environmental (ISEE) system model. The ISEE model is designed to estimate how different outflows and water levels that would result from revisions to Plan 2014 would impact shoreline properties and infrastructure, Indigenous communities, shipping, ecosystems, hydropower production, and recreation within Lake Ontario and along the St. Lawrence River. Other versions of this model were developed for previous IJC [water levels studies](#).

To estimate specific impacts and represent the sensitivity of users to various water level and flow conditions, the GLAM Committee is developing hydrologic attributes, performance indicators and impact ranges for use in the Lake Ontario – St. Lawrence River ISEE model.



Hydrologic attributes include impactful water levels and flows along with the duration, frequency and timing of these conditions at different points in the system.

Performance indicators quantify water level and flow impacts on uses in the system, such as: municipal water supplies, impacts to marina operations, cargo reductions and delays to commercial navigation, damages to shoreline structures, reduction in dependable hydroelectric generation, and ecosystem degradation. Performance Indicators measure the potential effects of differing water levels and flows on something of value to interests within the basin that are representative of broader impacts.

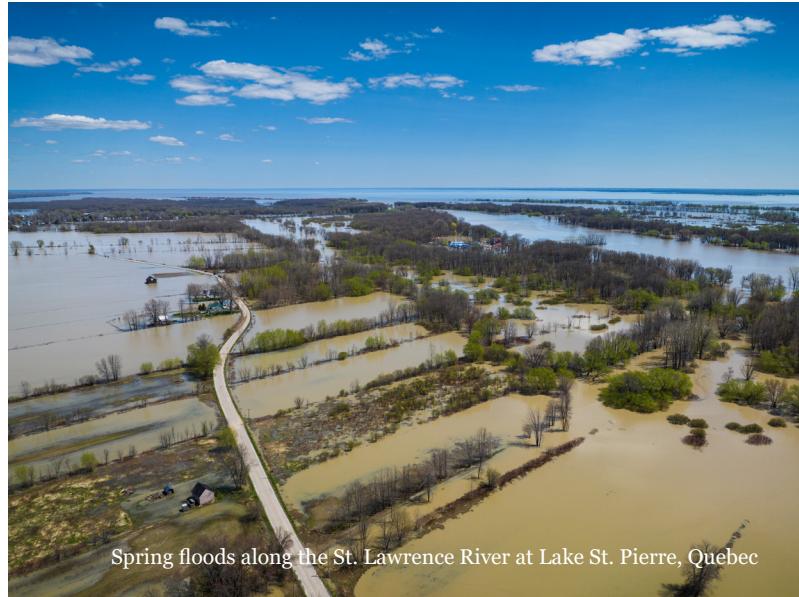
The GLAM Committee is also developing **impact ranges**. These combine both quantitative and qualitative information to provide a broad representation of the severity of impacts to a specific sector or geographic area under different water level and flow conditions.

Putting it all together

Computer models apply a range of climate conditions to different regulation plans resulting in water levels and flows. These simulated water levels and flows are combined with hydrologic attributes, performance indicators and impact ranges to illustrate effects on the lake, river, and surrounding areas. Since the performance indicators are measures of outcomes, this will help identify if potential revisions to Plan 2014 meet or exceed the specific objectives defined by the plan evaluation and ranking criteria under a range of plausible future climate conditions, both wetter and drier.

Evaluating modifications to Plan 2014

Once the GLAM Committee has completed its modeling and testing work, it will evaluate and rank revisions to the plan relative to the baseline Plan 2014. The evaluation will make use of each of the hydrologic attributes, impact ranges and performance indicators to ensure compliance with the 1909 Boundary Waters Treaty test to see how well a plan meets the IJC's 2016 Supplemental Order, the IJC's 2016 Supplemental Orders and assess potential tradeoffs between interests or regions. The robustness of any plan modification to climate changes will also be considered. There may be multiple rankings based on how tradeoffs between performance



Spring floods along the St. Lawrence River at Lake St. Pierre, Quebec

indicators are assessed, which provides some additional context and information for the Board in making its recommendation.

The next steps after recommendations are made

Next steps of the expedited review, the Board, with the support of the GLAM Committee, will present a report of their findings and recommendations to the IJC, expected in the spring of 2025. The Board may recommend changes to Plan 2014, which would need to be approved by the IJC and agreed to by the governments of Canada and the United States after a public comment period.



For more information, visit:
<https://ijc.org/en/glam>

