

Plan Formulation and Evaluation



1 What do we do?

The Plan Formulation and Evaluation Technical Work Group is responsible for the coordination and integration of efforts undertaken by each of the six technical work groups through the development and application of the "Shared Vision" model. This computer model provides a means for evaluating the effects of proposed regulation plans based on the interests important to stakeholders and decision makers.

2 Guidelines for choosing plans and criteria:

Prior to the assessment and evaluation of the proposed regulation plans, the Study Board developed guidelines for the selection of plans and criteria. They will use these guidelines to evaluate plans and criteria before making their recommendations to the International Joint Commission:

- Environmental sustainability,
- Net-benefit and no disproportionate loss,
- Management flexibility,
- Identifiable mitigation alternatives,
- Adaptability to potential climate change,
- Transparent decision making, and
- Adaptability to future science and technology.

3 What is the Shared Vision Model?

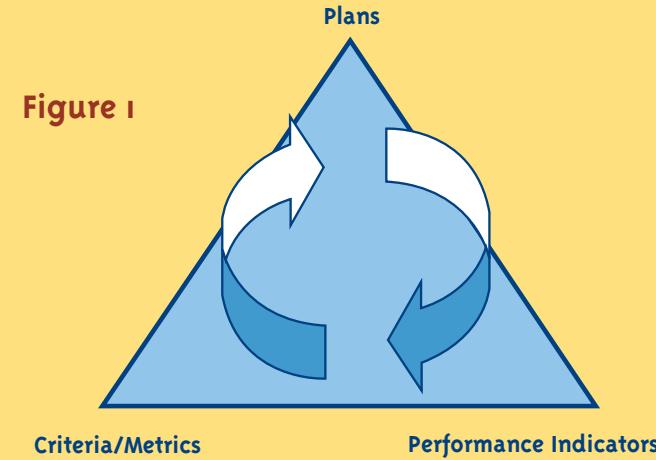
The Shared Vision Model is based on a "Triangular Evaluation Approach" (Figure 1) adopted by the Study Board. Each vertex of the triangle represents an essential component of the cycle/process and is critical to the selection of a suitable regulation plan. The three vertices are defined as:

Regulation Plans are written rules for making releases to regulate Lake Ontario and the St. Lawrence River. There will be numerous alternative regulation plans developed and evaluated.

The Criteria are conditions or standards for judging how well regulation plans meet a variety of objectives. The Study will use the existing "Orders of Approval Criteria" developed in 1962, but will also develop a revised set based on what we learn from our studies on the performance indicators. Metrics more fully define the criteria. (Figure 2)

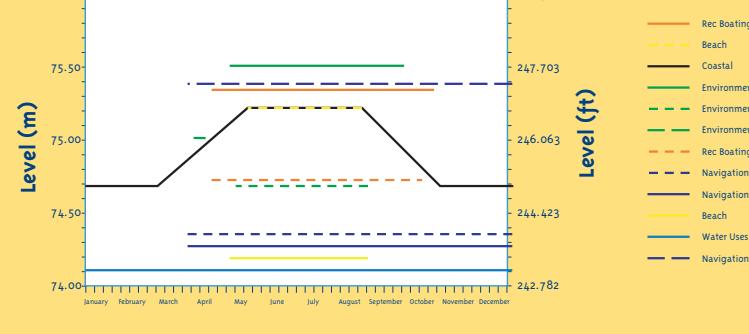
Metrics are specific maximum or minimum flows or water levels that satisfy the criteria.

Performance Indicators are measures of economic, social, or environmental health that result from a particular level/flow or series of levels/flows. They are based on something that can be measured and must have units (i.e. dollars, wetland area, etc.) associated with them. (Figure 3)



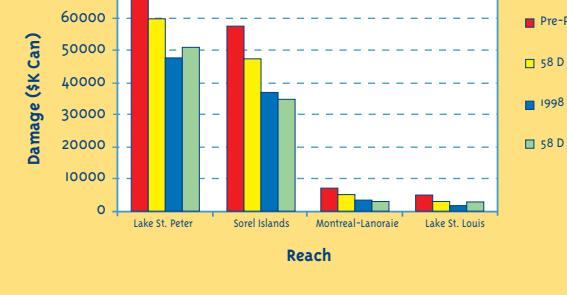
Triangular Evaluation Approach

Figure 2



Preliminary suggested criteria metrics for Lake Ontario

Figure 3



Residential Damage for a 101 Year Simulation

4 How does it work?

In order to evaluate the performance of a proposed regulation plan, the plan is formulated using simulated lake level controls within the computer model. The results produced from the model illustrate how the plans perform based on their ability to meet the selected criteria and the performance indicators. During the plan formulation, the lake level controls may be adjusted in an effort to improve the outcome of the plan being evaluated. The model helps to compare the results from each plan for the different areas of interest and for different locations within Lake Ontario and along the St. Lawrence River.