



The St. Lawrence  
Seaway Management  
Corporation

Corporation de Gestion  
de la Voie Maritime  
du Saint-Laurent

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Cornwall, ON

September 12, 2006

Mr. Murray Clamen  
Secretary, Canadian Section  
International Joint Commission  
234 Laurier Avenue West, 22nd Floor  
Ottawa ON K1P 6K6

Dear Mr. Clamen:

Re: Options for Managing Lake Ontario and St. Lawrence River Water Levels and Flows

The St. Lawrence Seaway Management Corporation (SLSMC) is pleased to submit its comments to the International Joint Commission (IJC) on the report entitled "Options for Managing Lake Ontario and St. Lawrence River Water Levels and Flows" (Report) prepared by the International Lake Ontario-St. Lawrence River Study Board (Study Board).

The SLSMC was established in 1998 as a not-for-profit corporation by the Government, Seaway users and other interested parties. In accordance with provisions of the *Canada Marine Act*, the SLSMC manages and operates the Canadian assets of the St. Lawrence Seaway for the Federal Government under a long-term agreement with Transport Canada. The SLSMC's mission is to pass ships through a safe and reliable waterway system in a cost-effective, efficient and environmentally friendly manner to meet our customer's transportation needs.

Given that the St. Lawrence Seaway is an international waterway, the SLSMC must and does work closely on all operational matters with its American counterpart, the Saint Lawrence Seaway Development Corporation (SLSDC). Our review was completed in conjunction with the SLSDC, and many of the conclusions and recommendations that we have advanced in this submission are shared by the SLSDC. Both Seaway Corporations recognize the magnitude and complexity of the task undertaken by the Study Board and appreciate the opportunity we were given to participate in the Study as members of the Commercial Navigation Technical Working Group (CNTWG).

Given the SLSMC's mandate, it is imperative that water levels/depths are sufficient to accommodate the drafts of vessels transiting the Seaway and that flows/velocities are in a safe range for navigation. Based on our experience to date, it is recognized that any plan, present or future, is largely dependant on available supplies and its performance is limited by the ability to forecast supplies in the weeks and months ahead.

<b>IJC / CMI OTTAWA</b> ACTION: McAuley INFO: M. Clamen / MV/FB  SEP 13 2006  FILE / DOSSIER 3-1-49 (68)
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From the perspective of the SLSMC, and that of the marine transportation stakeholders that we have consulted, our first area of concern is with the economics as they relate to commercial navigation. We feel that there are inconsistencies with the economic analysis as follows:

- Plan 1958D with deviations has been in operation since 1963 and there have been very few negative impacts to commercial navigation on the Seaway. Based on this, it would be difficult for any new plan to perform significantly better. However, the Report shows all three (3) candidate plans providing economic benefits for commercial navigation with respect to Plan 1958D with deviations.
- A Commercial Navigation Transportation Cost Model (CN Model) was developed by a consultant for the CNTWG as part of the Study. The CN Model used vessel movements from 1995-1999 and included vessel operating costs for movements through the study area which was from Becancour, Quebec to Port Weller on Lake Ontario. These were not the total origin to destination costs. For example, a vessel departing Rotterdam for Montreal would travel approximately 3290 nautical miles, while the CN Model only considered the portion of the trip from Becancour to Montréal which is less than 70 nautical miles or 2% of the total trip. In this section of the river, as in others, differences in revenues can be significant depending on the water levels provided by the proposed plans.
- The CN Model did not take into account revenue gains/losses for marine carriers attributable to changes in water levels and flows, but it is our understanding that revenue gains/losses were taken into account for other interests. If this is the case, the comparison of the economic impacts between the various interests would not be valid.
- The loss of business resulting from potential modal shifts caused by plans maintaining low levels and/or high flows/velocities for a period of time was not included in the analysis.
- The output from the CN Model was not directly integrated into the Shared Vision Model (SVM) as were outputs from models for other interests. Cost curves that approximated the economic impacts of low and high water levels and high velocities/gradients were developed to provide input to the SVM. Attempts to compare the outputs from the CN Model and the SVM were unsuccessful and therefore, the CNTWG did not provide their stamp of approval for the commercial navigation portion of the SVM to the Study Board, as requested. Further, to the best of our knowledge, the cost curves used in the SVM are not based on the final versions of the plans presented in the Report (i.e. A<sup>+</sup>, B<sup>+</sup> and D<sup>+</sup>.)
- The Report shows positive economic impacts for commercial navigation in the Seaway/River while showing negative impacts on Lake Ontario. Due to the facts that the majority of the vessels using the Seaway transit both the River and Lake Ontario and that low water at any point in the system, whether in the River or Lake, will cause delays to navigation, it is likely that the impacts would both be positive or both be negative.
- The CNTWG developed metrics which are critical levels and gradients/velocities along the River and on Lake Ontario which, when violated, negatively impact commercial navigation. The CN Model estimated the frequency, duration and severity of these violations. Attempts were made by the CNTWG to extract and compare results from the SVM with the metrics as part of the evaluation of new plans, however, time and resource constraints did not allow this to happen.

Secondly, we have completed a review of Plans A<sup>+</sup>, B<sup>+</sup> and D<sup>+</sup> and offer the following comments:

- Over the last twenty (20) years, the Seaway has typically opened late in the third quarter-month or early in the fourth quarter-month of March and closed in the last quarter-month of December therefore, the Seaway navigation season extends from the quarter-month 11 through quarter-month 48. This is not reflected in the Report or in the new plans. The proposed plans appear to assume that navigation is stopped between quarter-months 48 and 12 (i.e. the navigation season extends from quarter-month 13 through quarter-month 47).
- Due to the fact that the Seaway is a single system providing one published allowable draft, metrics' violations, whether they occur above or below the Moses-Saunders Dam, impact commercial navigation in the Seaway.
- Of the three (3) plans proposed in the Report, Plan A<sup>+</sup> would be the most disadvantageous for commercial navigation in the Seaway compared to Plans B<sup>+</sup> and D<sup>+</sup> for the following reasons:
  - During extreme wet supply scenarios, outflows with Plan A<sup>+</sup> would be higher than those considered safe for commercial navigation.
  - Plan A<sup>+</sup> has higher frequencies and durations of levels at Long Sault below 72.50 m than Plans B<sup>+</sup> or D<sup>+</sup>.

These conditions cause delays to navigation which result in increased costs and potential loss of revenues for commercial navigation in the Seaway.

- Plan D<sup>+</sup> would be more advantageous for commercial navigation in the Seaway compared to Plan B<sup>+</sup> for the following reasons:
  - Plan D<sup>+</sup> has lower frequencies and durations of outflows higher than those considered safe for commercial navigation than Plan B<sup>+</sup>.
  - Plan D<sup>+</sup> has lower frequencies and durations of levels at Pointe Claire on Lake St. Louis below 20.60m than Plan B<sup>+</sup> and only slightly higher frequencies of short duration events when the levels at Long Sault are less than 72.50 m than Plan B<sup>+</sup> does.
  - During dry supply scenarios, water levels at Pointe Claire on Lake St. Louis with Plan D<sup>+</sup> are better from June through the end of the navigation season than with Plan B<sup>+</sup>.
  - According to plan descriptions in Annex 3 of the Report, it appears that Plan D<sup>+</sup> is the only plan that recognizes that maintaining a level of 20.60m at Pointe Claire on Lake St. Louis is critical for commercial navigation.

The conditions described above cause delays to navigation which result in increased costs and potential loss of revenues for commercial navigation in the Seaway.

- While a comparison with other interests based on economic results from the SVM is not valid for the reasons stated above, a comparison of the economic results of the different plans for commercial navigation indicates that Plan D<sup>+</sup> performs slightly better than the others under the dry scenarios and significantly better than the others under the wet scenarios. The performance of plans under the extreme conditions is important for commercial navigation, provided that critical levels and flows are maintained during average conditions.

- One of the major concerns that we have with Plan D<sup>+</sup> is based on our understanding that it attempts to depress the level of Lake Ontario for two (2) consecutive years every twenty (20) years. The primary issues with this are as follows:
  - If outflows from Lake Erie in February appear to be conducive to low levels on Lake Ontario, Plan D<sup>+</sup> sets outflows to lower Lake Ontario and maintain it at a lower level through July. If supplies turn wet, there appears to be nothing in Plan D<sup>+</sup> to stop it from continuing to try to lower Lake Ontario. This would result in higher outflows and lower levels upstream of the dam.
  - The weighting scheme used provides for lower values for commercial navigation than for other interests.

Thirdly, it is our opinion that a Control Board with the authority to deviate from a plan is a vital element to any plan. Forecasting is, at best, an imperfect science which makes deviating from a regulation plan necessary. Short-term deviations can provide significant benefits to various interests while having minimal impact on the level of Lake Ontario and on other interests. While the Control Board has been criticized for the number of times they have deviated from Plan 1958D, the number of complaints received and amount of damage incurred has been small in relation to the number of people and amount of property that have the potential for being impacted by regulation.

Should continuation of Plan 1958D prove to be untenable in the future, we submit that the adoption of Plan D<sup>+</sup> represents the most viable alternative. However, we remain concerned about the roles and responsibilities of a new Board and its mandate with regards to deviations.

Finally, in terms of implementation, we believe that it would be important to continue with the status quo (i.e. continuing to use Plan 1958D and allowing the Control Board to deviate as in the past) while Plan D<sup>+</sup> is run concurrently in a simulation mode. This should be done for a number of years to:

- assess the effectiveness of the new plan,
- make adjustments to the new plan as required,
- determine the need for deviations from the new plan,
- provide time to install measures to mitigate the negative impacts of a new plan, and to allow time for some of the recommendations set forth in the "Review of the Lake Ontario Studies" which was prepared by the National Research Council of the National Academies in collaboration with the Royal Society of Canada to be addressed.

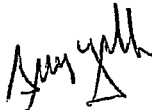
In conclusion:

- The SLSMC notes that many aspects of Plan 1958D have proven to be effective and practical in managing water levels and flow. In particular, the retention of a Control Board of a similar composition which has the authority to deviate from the Plan when necessary is of great value in terms of adaptability and response.
- The SLSMC recognizes the diverse range of interests that must be represented when assessing levels and flows, and is committed to working with all stakeholders.

- Should the retention of Plan 1958D prove to be untenable, the SLSMC recommends the adoption of Plan D<sup>+</sup>, as it best meets the goals of the study in terms of providing equitable improvements for all interests without disproportionate loss to any particular interest or geographic area. However, the issues with Plan D<sup>+</sup> trying to lower Lake Ontario and with the weighting scheme, as noted above, need to be addressed.
- Any implementation of a new plan must include a Control Board with the authority to deviate from the plan as necessary to address critical needs (in the greater interests of all stakeholders concerned).
- It is our position that the implementation of the new plan should be delayed to allow time to run Plan 1958D in parallel with a simulation of Plan D<sup>+</sup>, in order to monitor and assess the effectiveness of the new Plan, and the need to deviate and adjust it as required.
- This delay in implementation would also allow time to address the mitigation of the negative impacts of the new plan, and to address the issues raised by the National Research Council of the National Academies in its review of the Lake Ontario Studies.
- Any new plan should recognize that the navigation season has, in the past twenty years, started in the last week of March and closed in the last days of December and will continue to do so when weather and operating conditions are favorable and considering the impact on other interests.

Thank you for the opportunity to share our analysis of the report and our recommendations with all committee members. We are committed to working with you so as to ensure that the St. Lawrence Seaway continues to be a safe, reliable, economically-viable and environmentally-sustainable transportation artery. Please do not hesitate to call upon us, as we look forward to meeting with you to further discuss our analysis, concerns and recommendations.

Yours sincerely,



Richard J. Corfe  
President and C.E.O.

For.