

DIRECTIVE
TO THE
INTERNATIONAL LAKE CHAMPLAIN-RICHELIEU RIVER
PLAN OF STUDY WORKGROUP
May 18, 2012

The purpose of this directive is to establish and direct the International Lake Champlain-Richelieu River Plan of Study Workgroup (Workgroup) to develop a Plan of Study (POS). This Workgroup will examine and report to the International Joint Commission on matters expressed by the governments of Canada and the United States in letters to the International Joint Commission dated March 19 (copies attached). In response to the devastating floods of 2011 in the Richelieu River and Lake Champlain and its tributaries, the Governments requested that the IJC review and make recommendations regarding a comprehensive study of measures to mitigate flooding and the impacts of flooding in the Richelieu River and Lake Champlain Basin. The purpose of the Workgroup is to develop a Plan of Study that would establish specifically what studies are necessary to allow an evaluation of the causes and impacts of the flooding that occurred during the spring and summer of 2011; and what studies are necessary to develop appropriate mitigation solutions and recommendations.

This POS shall include:

- a. the definition of the studies to be performed and the level of detail anticipated for each study,
- b. recommendations as to the agencies or organizations capable of carrying out each study, recognizing that studies are to be conducted bi-nationally,
- c. sources of, or means of obtaining, needed information and data,
- d. recommendations on the order and duration of the overall study and its phases (in the case of a phased study), and
- e. estimates of the time, dollar and personnel resources required for the conduct of each unit of the study.

Consideration shall always be given to the goal of an improved short and long-term flood management framework for Lake Champlain and the Richelieu River in formulating the extent to which any topic or issue is to be studied.

The POS should clearly indicate the various studies both required and preferred to develop a comprehensive flood mitigation framework and to meet the requirements as set forth in the letters attached. Within the Plan of Study, the Workgroup should take into account the work ongoing or already undertaken in the Lake Champlain Basin and Richelieu River, possible in-kind contributions that jurisdictions may support, and the overall costs required to fulfill the request from the Governments. At a minimum, the following studies are required:

1. An evaluation of the causes and impacts of flooding in the Lake Champlain watershed, with emphasis on the events of 2011;
2. An evaluation, including a cost and benefit analysis of flood mitigation solutions for Lake Champlain and its tributaries and the Richelieu River, considering both structural and non-structural solutions;
3. An analysis and recommendations for adapting to the variability of water supplies to the Lake Champlain and Richelieu River watershed, building upon existing relevant studies. This includes, but is not limited to, work produced by the Lake Champlain Basin Program, the University of Vermont, and the Ouranos Consortium on regional climatology and adaptation to climate change;
4. An analysis of existing, country-wide flood plain regulation best management practices, to include recommendations for community-based regulation; and
5. An evaluation of the need for real-time flood inundation mapping to help predict flooding potential and prepare local communities and emergency responders for future floods.

The Workgroup should address, in a sustainable development perspective including its three pillars of economic and social development and environmental protection, the need for:

- a. Review of available data and research that will inform and prioritize studies and activities to be completed throughout the implementation of the POS;
- b. Review of the economic and social impact of floods for various Lake Champlain Basin and Richelieu River interests;
- c. Topographic and bathymetric data acquisition;
- d. Examination of the effects of past structural work in the basin including among other possible items: past and/or current dredging, streambed straightening, and the operation of Chambly Canal on levels and flows;
- e. Examination of environmental considerations of the possible impact of anthropogenic regulation effects compared to natural levels and flows in the basin;
- f. Development of alternative mitigation measures, including recommendations on structural and non-structural methods, on regulatory or policy changes that consider economic, social and environmental interests, the integrity of the ecosystem, make provisions for emergency conditions and respect the requirements of the Boundary Waters Treaty;
- g. Examination of shoreline impacts of levels and flows, including assessment of zoning and other land use management issues;

- h. Examination of social considerations, including qualitative assessment of how demographic and other possible future changes that may affect all interests and alternative mitigation measures;
- i. Ongoing public involvement in executing the study, including institutional arrangements to ensure appropriate communication with and among all interests, as well as a means of testing and demonstrating the effects of possible mitigation measures with the public; and
- j. Consideration of climate change impacts on levels and flows and subsequent impacts on suitability of mitigation measures.

The Commission will appoint Members of the Workgroup, Co-Chairs to lead the Workgroup's efforts, and Co-Secretaries. The Co-Chairs will be responsible for organizing and executing the work of the Workgroup, and for coordinating with, and reporting to, the Commission. The Workgroup will be bi-national, comprising an equal number of members from each country. Under the general supervision of the Co-Chairs, the Co-Secretaries shall carry out such duties as are assigned by the Co-Chairs or the Workgroup as a whole. When identified by the Workgroup, the Commission will pursue technical assistance from the two Governments, the province of Québec, and the States of Vermont and New York. Members of the Workgroup and any committees or work groups created by it will be responsible for their own expenses unless otherwise arranged with the Commission.

The Commission may provide guidance to the Workgroup. The Workgroup shall consult with others as necessary to seek their views so that each is aware of any activities in the basin that might be useful to it in carrying out its responsibilities.

The Workgroup shall produce:

1. Within six weeks of its formation, a document outlining how it plans to proceed in developing a POS, with special emphasis on public involvement;
2. By October 1, 2012, a draft POS; and
3. By December 3, 2012, a final POS (an electronic copy and two signed copies, one provided to each section of the Commission.)

The Workgroup will submit a work plan with an associated schedule of activities and budget for the Commission's approval as soon as practicable. The work plan shall include a proposal that will describe how public consultation will be undertaken. The consultation plan shall discuss how the Workgroup will collaborate with federal governments, the province, and states, as well as the wider body of stakeholders and the public.

The Workgroup shall make use of public input received prior to and during the development of the POS. The Workgroup shall distribute information widely to raise awareness of the effort to develop a Plan of Study and the purpose of the proposed study. To the extent possible, the development of the POS shall be an open and transparent process. The Workgroup shall provide opportunities for the public to comment on the draft POS concurrently with the

Commission's review. The Workgroup shall coordinate its public involvement plans with the Commission.

The Workgroup will evaluate and analyze available information, and it will inform the Commission of any additional informational requirements necessary to address the matters raised by the Governments. The Workgroup will strive to reach decisions by consensus and will immediately notify the Commission of any irreconcilable differences. Any lack of clarity or precision in instructions or directions received from the Commission shall be promptly referred to the Commission for clarification.

Documents, letters, memoranda, and communications of every kind in the official records of the Commission are privileged and become available for public information only after their release by the Commission. The Commission considers all documents in the official records of Workgroup or any of its committees or work groups to be similarly privileged. Accordingly, all such documents shall be so identified and maintained as separate files.