



**International Lake Champlain -  
Richelieu River Study Board**

**Groupe d'étude international  
du lac Champlain et de la rivière Richelieu**

**Public Advisory Group (PAG) – Minutes from January 13<sup>th</sup>, 2022**

**Attendees**

PAG Members:

Madeleine Papineau (Canadian PAG Co-Chair), Kris Stepenuck (US PAG Co-Chair), Eric Howe, Mark Malchoff, Phil Von Bargen, Teresa Gagnon, Jérémie Letellier, Lori Fisher, Renée Rouleau, Steve Peters, Frédéric Chouinard, Marla Emery and, Julie Robert. Guest: Cynthia Gagnon.

Study Members:

Deborah Lee (US Study Board Co-Chair), Jean-François Cantin (Canadian Study Board Co-Chair), Mae Kate Campbell (US Study Manager), Bill Richmond (US Outreach coordinator), Andre Champoux (Canadian Outreach Coordinator), Serge Lepage (Canadian Study Manager), Serge Villeneuve (Canadian Study Manager), Paul Allen (Canadian International Joint Commission - IJC Liaison), Celine Desjardins (IJC), Christina Chiasson (Communication Advisor), Joris Arnaud (SPE member), Curt Gervich (US SPE Co-Lead) and, Hadar Pepperstone (SPE member).

Staff: Katie Darr (LCBP) and Lauren Jenness (LCBP)

**1. Welcome, list of participants and how the meeting will work**

- The PAG Co-Chairs welcomed participants to the call.
- The Communications Advisor provided an overview of the plan for the Public meetings. There will be two sessions on February 8<sup>th</sup>, one from 10am-12pm, and the other from 7-9pm. The meetings will be held virtually over the Zoom platform, with simultaneous translation provided. The slide deck will be shared in both languages. Each meeting will be binational and bilingual, not focused on a single location. The Communications Advisor noted that the January edition of *the Current* will be distributed shortly and will formally announce the public meetings. The Communications group is also working on an animated video explaining the submerged weir, which will be made available prior to the meetings. PAG members can help promote these meetings by sharing the announcement with their networks.
- The Communications Advisor shared that the PAG Co-Chairs will serve as hosts of the meeting, and the presentation will be delivered by the Study Co-Chairs. The presentation will detail key findings and recommendations, and there will be a pause for discussion/questions following the presentation of each Theme of the Study. PAG members were asked if they would be willing to help monitor the chat and/or discussion during the meeting. Interested PAG members should reach out to the Communications Advisor to be assigned a role. They will be invited to the practice dry run for the public meetings a few days prior to February 8<sup>th</sup>.

- Eric Howe, Mark Malchoff, Renée Rouleau, and Teresa Gagnon offered their services.
- A PAG member inquired about the public comment period.
  - Answer: The Communications Advisor noted that the public consultation period on the draft consultation report will launch with the Public meetings and be open through March 4<sup>th</sup>. The opportunity to provide comment will be highlighted on the LCRR webpage, along with videos and summaries of the Study’s work that the public can review. The public consultation platform will publicly display comments as they are submitted. The survey responses will be collected by Social Political and Economic Analysis Group (SPE) and will likely feed into what's on the website. To respond to the comments, the Communications Group will add to the existing Frequently Asked Questions (FAQ) page on the Lake Champlain – Richelieu River (LCRR) Study website.
  - The US Study Manager noted that the International Joint Commission (IJC) will be providing additional opportunities for public comment following the end of the Study.

## **2. Approval of minutes from the November 8, 2021 PAG meeting**

Two PAG members indicated they had written comments on the minutes from the November meeting. PAG members were asked to submit comments on the minutes to the PAG Co-Chairs by January 20th.

## **3. Presentation of slide deck to be used at public meetings and feedback from PAG members**

The US PAG Co-Chair noted that the Communications group recently reviewed this presentation, and edits are still being incorporated. The Communications Advisor stated that the finalized presentation will be shared with PAG members prior to the public meetings. It was noted that the recommendations will be updated prior to the public meetings. PAG members were asked to provide comments on the slides.

- (Slide 10): Theme 1
  - A PAG member suggested defining ‘modest’ (i.e. a few inches in flood level reduction) so people know what is meant. Or you can say it will be explained later in the presentation. It was noted that ‘modest’ could also refer to cost, so it should be clarified.
  - A PAG member suggested for example adding an amount in inches (and cm) in parentheses in the down and up arrows.
- (Slide 12): Solution 1 + low volume diversion through the Chambly Canal
  - Here again, a PAG member asked if the word modest is a good word to use with the public? Also, to say a ‘low volume diversion’ when you are talking about something you plan to do during high water levels could be confusing. They suggested finding a synonym to avoid that confusion. Two PAG members supported providing some unit of measure about how much water would be diverted. If possible, an example of how much 80 cubic meters per sec really represents would help people understand the amount of water we are talking about.
  - A PAG member wondered if the explanation of the reduction in damages with the structural solutions could be presented as how many houses would be saved per inch of water level reduction? For example, a reduction of from 6” to 12” in flood water levels would save maybe 500 houses.
- (Slide 13): structural solutions - the numbers

- A PAG member liked the definition of the term ‘modest’, and it should be defined earlier in the presentation.
- A PAG member suggested showing a map of where houses that are affected in these scenarios are located. People will ask questions.
- A PAG member continued by suggesting that an effective way to help viewers understand the effect of the proposed structural solutions would be to show the map with the normal area that floods (under a flood less extreme than in 2011), and then show what happened in 2011, and finally show what would happen under those flood situations if the first structural solution was implemented and then if both the first and the second alternatives were implemented together. The PAG member felt that people would then understand why it makes sense to implement these structural solutions. The PAG member suggested that it could also be effective to either show a map or a cut image with animation so you can see the level of the ground, the level of the river, when it’s going up and how the water spread. They suggested it could all be explained without words.
- Several PAG members agreed with the idea to use maps to illustrate the effects of the structural solutions. They agreed on the need to be prepared for questions and discussion, and that graphics will assist in this effort.
- (Slide 15): Theme 2: Watershed storage key findings
  - A PAG member asked if there is a way to express benefit/cost in lay terms?
- (Slide 16): Effects of increasing watershed storage
  - PAG members noted the need for a graphic that more effectively demonstrates the amount of land area that would need to be converted to wetland to significantly impact water levels during floods.
  - Several PAG members asked questions about what the effect of decreasing wetland area or forest area would be on water levels during floods. (See comment provided by a PAG member after the meeting in the annex)
- (Slide 17): Draft recommendations on theme 2: Watershed storage – the Study Board will be revising these considering:
  - PAG members reiterated interest in a stronger recommendation around protecting or increasing or restoring wetlands. The US Study Manager noted that this sentiment had been expressed by many stakeholders during recent outreach meetings, and that the Board was supportive of making a stronger recommendation.
- (Slide 19): Transition to Operations
  - A PAG member suggested pointing the public to the Burlington NWS Spring Flooding Forecasting.
- (Slide 20): Assessing Flood Risk
  - A PAG member asked what a "Fully integrated system" means, and noted that there is probably too much information on this slide to fit in both languages.
  - A PAG member noted that in general, the slides could use more spacing to make them easier to read.
- (Slide 23): Theme 3: Key Findings
  - PAG members indicated that the graphic on this slide would likely be unclear to the public. They worried that people could interpret that an increase in temperature and precipitation would lead to an increase in flooding. The Canadian PAG Co-Chair

indicated that the 5 key findings from the Climate Change report are clearer and even indicate a possible reduction in flooding in the future, but that very large flooding events could still happen. A PAG member suggested replacing the graph (something more intuitive).

- A PAG member noted that several times during the presentation, questions had come up that are answered later in the presentation. She pointed out that this will likely happen with the public also, and suggested considering delivering the entire presentation and then allowing for questions to avoid confusion.
- The US PAG co-chair suggested including a legend for 2040 (yellow) and 2070 (blue) in the Climate Change graph.
- A PAG member wondered if information about the amount of agricultural land that would be saved from flooding, or similarly the amount of roads that would be saved from flooding, could be shared in the presentation.
- A PAG member indicated that he was pleased with the presentation over all. In general, we should focus on being as bilingual and simple as possible.
- Recommendations related to changes in water levels (flooding stages) are very relevant to an individual. It is key and providing a good context is important. If the lake rises an inch, what does it mean for me?

#### **4. Summary of feedback from Canadian and US outreach meetings**

- A SPE member provided an overview of the outreach meetings and survey responses obtained so far in Canada. They received in general good feedback on the recommendation on Theme 1. No strong concerns were expressed about environmental impacts. The structural solutions were considered to be adequate, but some people said the solutions might not provide enough flood relief, so it would be nice to combine those solutions with other recommendations. There were also comments regarding the need to put emphasis on Theme 2-4 recommendations since they were not considered on the same level as Theme 1. Some people raised concerns regarding implementation of measures, that there aren't enough details or information presented to enable implementation. Also, there was a high level of interest in data, models and tools developed by the Study, and several questions about how they would be made available to them.
- The Canadian Outreach coordinator noted he was surprised that environmental groups had no comments on Theme 2 during the meeting. He reported that the Study is hoping to get more insight from a survey sent in following the meetings to outreach meeting participants. He also emphasized that many people discussed using the data and tools developed by the Study in the future. They understand that we will do our best to make tools available to potential users in the future.
- The US Outreach Coordinator provided an overview of the meetings held in the US. There were 3 different stakeholder meetings, and there's a possibility there will be another one (Note: this has since been planned for February 15 from 12:30-2:00 PM ET). Responses were similar to those received in Canada. The general sense was that Theme 1 solutions would be beneficial, but there were questions about ecological impacts. Stakeholders wanted emphasis on Theme 2 solutions as wetlands are important regardless of flood impacts. On Theme 3, there were questions of how flood forecasting tools might be used and who would be using/maintaining them in the future. On floodplain management, it was noted that there are differences between the US and Canada.

- The US SPE Co-Lead added that there were many questions about how implementation will be funded, as well as questions about how things will be maintained once they are implemented, and statements about whether or not there is local capacity to carry out the plans. The takeaway is that stakeholders are asking for guidance on capacity building. On Theme 1, one stakeholder said, “it was the least offensive structural measure they could imagine.” There was pleasant surprise about what the moderate structural measure is -- not a huge change in hydrologic regime, no big environmental impacts, acceptable from those perspectives. On Theme 2, a PAG member agreed with others in that it is important to rethink how the Study messages the wetland piece. The scientific finding that more wetland conservation doesn’t gain a whole lot when it comes to lakeshore flooding isn’t being challenged, but the way we message that is being challenged. When it comes to Theme 3, stakeholders think the new flood forecasting models and better coordination during emergencies is certainly useful. They asked questions about funding and implementation. For theme 4, we received comments about management of floodplain occupancy and the disincentive felt at the local level to restrict floodplain development. People like to live along the lakeshore and planning boards face pressure from people to let them build.
- PAG members also raised the dynamic of wealthy people who own lakeshore or riverfront property having more power to influence decision makers, which was expressed at the outreach meetings. There is also the dynamic of tax revenue or space limitations within municipalities. They noted existing legislation and suggested if the Study could point to the benefits of improved enforcement, that could be helpful. There was also an explanation of how insurance has had an adverse effect in the US in some situations.
- PAG members emphasized the importance of correctly messaging the wetlands piece and thought the suggestion of the SPE Co-Lead of leaving it out of the Study recommendations would be a mistake. A PAG member wondered about the potential to combine Theme 4 and Theme 2 recommendations, to include wetland management in land use planning recommendations.
- Several PAG members agreed with the need for capacity building within municipalities, which could help implement some of the Study recommendations.

## **5. Overview of advertising plan, videos for public meetings**

- The IJC Communications advisor summarized outreach plans around the public meetings. The Study will be sending out the newsletter indicating the public meetings will be occurring on February 8th. She indicated that it would be appreciated if PAG members could help spread the message to their networks about the public meetings. The newsletter includes links and information about how to participate and register for those meetings. The Study will also do a postcard drop in areas that were affected by flooding in 2011, and will place ads in local outlets (newspapers and potentially radios). The IJC social media team will also help advertise these meetings.

## **6. Continued discussion on the draft Study Recommendations**

### Theme 4

PAG members were supportive of adding more specific information to this recommendation. Some expressed hesitation around promoting flood insurance and did not want to add specific information about that topic. The PAG emphasized that flood risk communication was the most important aspect of this

Theme, and the importance of making flood-risk related data available in an accessible way. A PAG member suggested a piece about better enforcement of existing land use policies could be added to this recommendation.

### Climate Change & Flood Response

A PAG member noted a difficulty in communication around this topic – the Study is expressing that the risk of a flood larger than 2011 is low, but that modeling approaches all indicated the potential for larger floods. PAG members discussed this as a communications piece, the need to be prepared for larger floods even if the risk is low, and that communities need to plan for variability.

A PAG member suggested removing the text “The Study Board recommends that the IJC...” from each slide, as it gets repetitive across the presentation.

### Theme 2

As indicated during the November meeting, PAG members were supportive about adding language to the effect of protecting and restoring existing wetlands, or preventing further degradation of existing wetlands, to preserve their important ecological functions.

One PAG member provided edits to the draft recommendations after the meeting (see annex).

## **7. Thank you and next steps for PAG**

The Canadian PAG Co-Chair quickly spoke about the LCRR Study Data Products Committee and the two questions they had for the PAG. One response was received following the meeting (see annex).

Key Actions items are:

- PAG members should submit any comments on the November meeting minutes to Co-Chairs by January 20<sup>th</sup>.
- An invitation will be extended to self-identified PAG members for the practice run of the public meetings.
- PAG members are encouraged to assist with promoting and attend the public meetings.
- The Communications advisor will follow-up with updated slides for the public meetings for PAG review once further progress has been made.

The PAG Co-Chairs both expressed thanks for the work of the PAG over the course of the Study. In particular, they thanked PAG members for their great input, perspectives, and knowledge of the Basin. They also thanked PAG members for participating in the video project.

## **ANNEX**

### Comment provided by a PAG member after the meeting:

Consider Government Programs to help citizens immunize their houses already constructed in the flood zones (preventive measure) as well as a Program to help correct erosion that has occurred and will continue to accelerate on town and private woodlands. (Recommendation can be made by the IJC as it would be harder to ignore and could be referenced to help other groups (environmental etc, municipal & residents).

For your information, this is the difference between wetlands and natural protected woodlands (Plan de conservation des milieux naturels) which I did not explain well during the PAG meeting. These lands are numerous along the Richelieu River and contribute to ingesting large amounts of water during the flood periods, but have fallen into disrepair and efficiency due to erosion during the past. Unlike wetlands they are much easier to restore/repair with knowledgeable help. All small acts contributing to reduce flood impacts in inches add up to larger benefits in the future and less damage/costs for everyone.

Feedback from a PAG member on Product and Data Management:

1. **Where would you naturally want to go to find more information about the LCRR Study?** In US: Lake Champlain Basin Program website; stand alone website brought up by keywords “Lake Champlain water levels” and “Lake Champlain flooding” in major search engines
2. **What do you think are the key interests from stakeholders or the general public for particular datasets and models produced by this study?** Real-time spring lake level data (maps & tables); historical lake level data (maps & tables); 1-day, 1-week, & 1-month lake level forecasts (maps & tables).

Feedback from a PAG member on the text of draft recommendations:

**Theme 1: Draft Recommendation for Structural Measures**

*The Study Board recommends the IJC advise governments that a modest level of flood and drought relief can be achieved by returning the Saint-Jean-sur-Richelieu shoal and the hydraulic regime to a more **natural** state, through the removal of some **artifacts that impeded flow** and the installation of a submerged weir (Alternative 1). Additional flood relief can be gained through combining this with diversion through the Chambly Canal (Alternative 3).*

**Theme 2: Draft Recommendation for Upland Storage**

*The Study Board recommends that the IJC encourage the governments to continue **conservation and restoration** of existing wetlands as they provide some level of flood relief at the basin scale.*

**Theme 3: Draft Recommendations**

- **Binational Water Level Forecasting and Real-time Inundation Mapping System**

*The Study Board recommends that the IJC advise the governments that **state-of-the-art forecasting and mapping systems** can greatly aid flood response planning and should be maintained.*

- **Flood Emergency Response**

*The Study Board recommends that the IJC advise the governments that **state-of-the-art modelling tools** (such as the **Integrated, Social, Economic and Environmental system™**) developed for the Lake Champlain-Richelieu River basin can greatly aid flood response planning and should be maintained.*

- **Flood Response and Climate Change**

*The Study Board recommends that the IJC advise the governments that the **climate models** applied by the Study all indicated that **there will be great variability from year to year** with the potential for larger, more damaging floods than 2011.*

**Theme 4: Draft Recommendation for Flood Plain Management**

*The Study Board recommends that the IJC encourage the governments to work with the jurisdictions, private sector and communities to explore the ideas and analytical modelling approaches presented in the Study's **Integrated Flood Risk Management Strategy** for the Lake Champlain-Richelieu River basin.*

*Federal, state, and provincial governments work with municipal governments, the private sector, and communities to implement and make use of flood mapping, flood plain management, flood risk communication, and flood insurance as outlined in this report, with particular emphasis on flood risk communication.*

Approved by the Public Advisory Group, February 21, 2022