



## International Lake Champlain - Richelieu River Study Board

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

## Public Advisory Group (PAG)

### *Meeting notes*

*Date: August 26<sup>th</sup> 2020 from 3 to 5 pm (by Teams and by phone)*

**Participants:** Lori Fisher, Philip von Bargen, Teresa Gagnon, Julie Robert (for Jérémie Lettelier), Renée Rouleau, Steve Peters, Mark Malchoff, Marla Emery, Kristine Stepenuck (US PAG Co-Chair), Madeleine Papineau (Canadian PAG Co-Chair), Deborah Lee (US Study Co-Chair), Jean-François Cantin (Canadian Study Co-Chair), Bill Richmond, Michael Laitta, Pierre-Yves Caux, Michèle D'Amours, Marion Melloul, Mae Kate Campbell, and Céline Desjardins.

#### **1. Welcome and list of participants**

The US PAG Co-Chair welcomed the new US PAG member, Steve Peters, to the group, and a round of introductions was made.

#### **2. Approval of minutes from the March 16<sup>th</sup>, 2020 PAG meeting**

The Canadian PAG Co-Chair asked PAG members to submit any changes to the minutes to her by email by the end of the week (8/28). If no changes or comments are received, the minutes will be considered approved.

#### **3. Update of Planning for the Virtual Public Meetings**

##### *Agenda*

The Canadian PAG Co-Chair outlined that the agenda gives the dates of the Public Meetings that can be shared with collaborators and stakeholders. The webinars will be held over Teams. Participants are asked to register for the meeting beforehand so they can be sent the Teams link, and there will be a toll-free number so participants without internet access can join by phone. The videos cannot be shared during the webinar due to potential issues with the quality when streaming, so the links to the videos will be sent out to registered participants beforehand. The Canadian PAG Co-Chair stated that feedback and advice from the planning group with holding these virtual meetings was to try to keep them as simple as possible, so the planning group decided not to have breakout group sessions for simplicity.

##### *LCRR Presentation: Overview*

- The US PAG Co-Chair stated that the draft presentation for the Public Meetings is based on the PowerPoint from the US Political Entity meetings, which was based on the Canadian version of the same presentation. The goal is to have a high-level presentation

that should take about 20 minutes. The US PAG Co-Chair and US Outreach Coordinator modified the Political Entity PowerPoint to focus it on the basics. TWG comments had been received about making sure the presentation is balanced across the four Themes. The US PAG Co-Chair displayed the PowerPoint and walked meeting participants through its content: The presentation provides an overview of the Study's progress to date, why the Study exists and what the Study goals are, frames the region of the Study and the places the 2011 flooding affected, demonstrates that flooding has been an ongoing issue in the basin, and talks about the two main goals of the Study: reducing high water levels and reducing flood vulnerability. The planning team decided to refer to the Themes as 'goals', because that is more straightforward and understandable to the public, and the goals will be presented in terms of what is happening in the Study. The US PAG Co-Chair requested feedback on whether or not the 4 Themes/goals are balanced in the presentation.

- The presentation shows the criteria that the Board are using to make determinations and discusses what has been done in the Richelieu River that has impacted water levels. Next, the presentation shows the 6 structural alternatives and includes visuals so viewers can see what the improvement would be in terms of flooding impacts in Canada and the US, so that there's meaningful context for participants on both sides of the border. Next, the presentation shows goal 2 (enhancing wetlands), then covers flood prediction and forecasting, and what's been done on the social, political, and economic side to understand community needs and reactions. Then, the presentation shows floodplain management, and what the Study is developing in order to make recommendations, starting with the models that have been developed in conjunction with the Study. The presentation ends with next steps, and the PAG Co-Chairs are hoping to put together a timeline towards the end of the Study by the Public Meetings. Finally, the technical webinars are introduced as a way for interested parties to engage more deeply with the technical content of the Study. Interest in the webinars will be gauged using the polling feature in Teams, which will make the presentation a little interactive. At the very end, an overview of the Teams platform is given so that participants know how to engage with the Q&A session.

#### *Comments/Feedback on the Presentation*

- A PAG member stated the need for clear communication about the upstream and downstream impacts the different structural solutions will have, not just in terms of water level. He noted that in the section of river downstream from the canal, there's an endangered species (the Copper Redhorse) that local groups are concerned about, and the Study needs to make sure solutions will not harm it. He asked for confirmation that the Study is addressing these broader issues be communicated to the public.
- Another PAG member noted that slide 8 refers to eel traps. He clarified that the eel traps have been removed, however their foundations remain in the river, and those are what are affecting water levels still. He said that the videos refer to the structures as eel trap vestiges, which would work instead, or they could be called sills or weirs.
- The same PAG member questioned the numbers given on slide 9 for changes in water level elevation that would come from dredging and diverting. **The US PAG Co-Chair will**

check and confirm the numbers. The PAG member noted a similar issue in slide 10 as well.

- The Canadian Study Board Co-Chair responded to the initial comment about upstream and downstream impacts, stating that we have the information to address those points, and that he thinks they should be addressed. He said he has asked his team to produce slides to show that the models that the Study is using are taking care of the downstream portions of the Chambly Canal, and that it as criteria of the study evaluation not to create a problem elsewhere by operating a diversion. He said he thinks a compelling story about the tools that the Study has put in place could be told. He emphasized that the Study has good hydrodynamic models that are representing reality in a way people can trust. There are indicators that are available and can be implemented, their response to a flood with and without the diversion can be computed, and those impacts can be quantified. The Study has a suite of Performance Indicators (PIs), which include the Copper Redhorse, that are being implemented to analyze the whole system. The Study also has SPE that has been doing a lot of good work, they've been assisting and asking questions to stakeholders, and they have a wealth of feedback they've received. The Canadian Co-Chair voiced that he thinks it would be valuable to give SPE an opportunity to say what they have heard so far.
  - The Canadian PAG Co-Chair responded that the PAG has asked SPE to produce and provide that slide. The Canadian Co-Chair responded that he would perhaps like to see 2 slides to fully encompass the perspective that was heard in Québec and the Champlain area. A PAG member added that PAG members had previously discussed emphasizing the improvements to forecasting and forecast response. The Canadian Co-Chair responded that he would like to see information about how forecasting could inform a response to only open the diversion when it's required and highlighting that integrated management approach. The same PAG member stated that she would like to see a base case for ISEE and for the Chambly Canal. The Canadian Co-Chair agreed, he said that currently there is information on how key PIs are responding with the 'do-nothing' option, the model is essentially run under that scenario and then a regulation is applied when the water levels are rising up to the minor flood stage, then the model simulates the opening of the diversion, and re-closing the diversion when the lake passes back under flood stage. Then, the same PIs can be run on that modeled suite of water levels and the difference can be analyzed. Conveying this information would send a message that the Study has the tools to analyze the impacts and has started evaluating the relative performance of some measures.
- A PAG member stated that the presentation was nicely put together and effective, however, she cautioned that in a few of the graphics, the differences that the presentation is trying to highlight do not jump out. On slides 12-13 in particular, and the other slides showing differences in water levels at Saint-Jean-sur-Richelieu, perhaps the colors could be modified to make it easier to detect the differences in those images.
- Another PAG member asked a clarifying question about the proposed technical webinar topic #3, what that presentation was actually supposed to be about. The US Co-Chair

responded that it is supposed to address the predicted damages in residential areas based on the mitigation strategy that the Study proposes, and it will communicate that the suite of measures will lead to less damage.

- The PAG member pointed out that along the Richelieu River, a lot of towns have significant numbers of houses along the river, and would be concerned if a suggestion was made that those houses should not be rebuilt. The Canadian Co-Chair clarified that decisions are not made based on the PIs, the sole role of the PIs is to quantify the relative performance of a few selected measures to minimize floods and the risk of flooding. The PIs will be used to develop a cost benefit ratio, and the Study has to recommend a measure with a positive cost benefit ratio in order to justify implementing a mitigation measure.
- The PAG member responded that the title was a little off-putting, that it could be interpreted as the Study recommending destroying houses. **The PAG Co-Chair agreed to reword the title.**
- A PAG member asked if potential future development (for instance, the expansion of urban centers around Plattsburgh and Burlington) is taken into account when developing cost benefit analyses? She asked if the infrastructure that is being studied takes into account what would happen if the situation were to worsen, considering climate change and future development? She noted that the territory is not very developed around the lake, and wondered if it was more developed if that could impact water levels? She asked if the studied solutions are being evaluated for whether they would be effective if the situation was worse than it was in 2011?
  - The Canadian Co-Chair responded that the Study is looking at how climate change could affect future water supplies, noting that this is a difficult question to nail down, but that the Study is using the best possible tools to establish a water supply scenario under climate change considerations to see if water supplies could get worse, and to quantify how much. The Study is using information on developments as they are right now, and is not making predictions of how development could change. The Co-Chair noted that the legacy of the Study is that the models and tools can be used by communities after the Study is completed, so that those communities could apply the tools to questions of future growth and evaluate those impacts. It could be done, but the Study is not currently geared to do that.
  - The Canadian IJC Liaison noted that the graph illustrating the Theme 2 wetland research reveals that current levels of wetlands mitigated 10% of the 2011 flood. If development goes on, the takeaway is that those existing wetlands need to be protected. The PAG member responded that the Study will convey this recommendation along with potential structural solutions, but in a worst-case scenario, those wetlands could still be developed. The US PAG Co-Chair added that Vermont is really invested in nature-based solutions, and because of the phosphorus TMDL, there's a lot of effort in restoring wetlands and increasing green infrastructure. Vermont is protecting wetlands for water quality purposes, but they have flooding benefits too.

- The US PAG Co-Chair noted that the suggestions that have been made so far could add 10 minutes of content to the presentation. She asked the group if the information discussed should be added, and if so, what other information should be removed from the presentation?
  - The Canadian Co-Chair cautioned that in slide 10, the Study might not have the numbers to fill out the table outlined on that slide for dredging or the weir. Calculating that information for those measures would have required a lot of analysis, so the Study focused on more promising alternatives. With the volume of dredging that would have been required for those alternatives, they would have never passed an environmental assessment, so we did not pursue those calculations. It was suggested to put some explanation on this slide based on questions the public has had in the past. We don't have the specific measurements, but the public needs some sort of quantifiable information about the differences in order to make a decision. The Canadian Co-Chair responded that the Board's decision can document why those alternatives weren't pursued, but for slides 9 and 10 if we don't have the information to back them up, should they even be explained in the presentation? The Canadian PAG Co-Chair responded that those alternatives are shown in the videos, so it would be good to mention them in the presentation for transparency.
- The US PAG Co-Chair noted that the alternatives are all explained in the video, and asked if the presentation should just start with the canal diversion, since the public can learn about the other options that aren't being pursued from the videos?
- The Canadian Co-Chair stated that the slides showing the models need to be comparable. He pointed out that slides 11-12 are comparing different models in different places.
  - A PAG member added that the public needs to be able to easily see the differences that the Study wants to highlight, so more effort needs to be put into making that happen.
  - The US Co-Chair asked if the color of the ISEE output can be changed? The Canadian Co-Chair responded that there might be something they can change about the color contrast or the zoom. In the second slide, perhaps just the area can be changed to highlight places that are really telling. He noted that the current information shown in slide 12 is concerning because it compares flooding when the lake level reaches 100 ft (the low threshold) to flooding when the lake level reaches 106 feet, which has never been reached. He emphasized that the same event needs to be shown across the slides. Slide 12 shows the 2011 flooding and flooding that would have happened with the diversion, slide 13 shows something different. One slide shows the impact of a measure, the other shows two different situations. **The Canadian PAG Co-Chair said they will reexamine those two slides.**
- **The US PAG Co-Chair asked PAG members to send any additional suggestions of information that could be cut from the presentation to allow for additional slides the Canadian Co-Chair requested be added and to keep the presentation to ~20 slides.**

- A PAG member agreed with the importance of having the same kind of comparison so people can understand, however she noted that at the same time people are very intelligent, so the most important thing is to give the public information that is well presented. The map of 2011 flooding is useful, but the location currently shown is too narrow, a wider window of view might help illustrate the difference better. She suggested having a table outlining the alternatives and the effects they would have, such as the reduction of peak flows, the cost, time, acceptability.
  - The US PAG Co-Chair agreed that would be helpful, but was unsure if the Study could provide those numbers at this time. The PAG member suggested presenting qualitative information, such as the approximate cost presented with a number of dollar signs (\$\$\$ vs \$). She stated that it is important to give people limits at the beginning of the presentation.
  - The Canadian Co-Chair suggested that those two slides could use the same comparison from the same model, but could also contain a bit of data such as the number of square kilometers of land prevented from flooding due to implementing that measure. That sort of data could be added if the visual is not striking enough. The US PAG Co-Chair recommended using the number of houses prevented from flooding instead of square kilometers of land, since that's more tangible.

### *Review of the Videos*

- The US PAG Co-Chair stated that yesterday the PAG Co-Chairs met with the film makers and shared the comments made on the videos to date. She noted that the music may change in video #1 because it is hard to transition between myths, so the music might be changed to help demarcate the different myths. (Comments on music are welcome for any of the videos; that is why the music has not yet been purchased.)

### Video #1

- A PAG member stated that she thought this video would be best presented as second in a series, that she didn't think it should be the first video presented. She suggested adding a map during the first part of the video where different areas are discussed, it would be nice to add that overview without taking much time.
- A Study member noted that the way the myths are introduced by the narrator makes it sound like they are facts. Because he doesn't say the word myth before orating the myth, it sounds like it is a true statement and not a myth. If I wasn't looking at the video where it says "Myth #X" while he is stating the myth, I would think he was saying something as fact. Some people might only be able to listen to the videos, which would make this even harder to distinguish.
  - The Canadian Co-Chair agreed that when the narrator says the myth it is stated like it is a fact. It's not the truth, it's a myth, but it is stated like it's fact.
- A PAG member raised a concern that when members of the public listen to these videos and they believe these myths, it might not be enough the way the video says this is the myth and this is not true, without explaining any in between of why. The video says

there are myths, but the video is addressed to people who believe these myths. The reality is that this infrastructure has changed water levels. The video needs to acknowledge the realities that have contributed to these myths coming about; yes, this infrastructure exists, but it has no impact on the lake itself. A chart could be included saying yes, this effect had this impact, but not the impact illustrated in the myth. The PAG member emphasized the importance of clearly explaining this information to people so they stop blaming the other side. It's a small thing to make sure that people understand that yes there are dams, they have had these impacts, but maybe not the impacts you think, otherwise they might stay skeptical and you don't want that.

- A PAG member noted that one of the videos presents the causes of flooding as mainly from nature, but the other video talks about the causes like human change in the landscape, then it says there is this myth, then it says there are other causes like landscapes, roads, and human development. The PAG member said it might be nice if this video or the other one could show the difference of what each impact does, a way that people can understand the importance of each of the causes of flooding.
  - The US PAG Co-Chair asked if presenting this information cumulatively would work, and if the Study has that data? She stated that with the eel traps and the widening of the canal, the water level changed by 22 inches, but was unsure if the Study had quantified the individual impact of both of those actions.
  - The PAG member suggested it could be presented as a pie chart, showing the biggest factor in the watershed that causes water levels to increase. For example, in 2011, the large snowpack is talked about as a cause.
  - The Canadian PAG Co-Chair agreed that that information would be great to have, but didn't think the Study has it all. She suggested comparing 1860 to 2011, but says making that pie chart becomes difficult. **She will go back to the Causes and Impacts report and see if that information is available.**
- A PAG member suggested adding links at the end of each video to point people towards more information.
  - The Canadian Co-Chair agreed, and suggested adding the links to the technical webinars as well. The US PAG Co-Chair said that information could be in the invitation but not in the videos, since they want the videos to be timeless.
- The US IJC Liaison said he though an explanation of what the IJC is any why they are taking on this work isn't included in any of the videos.
  - The Canadian PAG Co-Chair said she thought that information might have been in the first video that is already online, and that **she would check.**

## Video #2

- A PAG member commented that the part of the video showing how humans have changed landscapes moved very fast, and that the message and the image were not well linked. She would have liked to see the evolution of the development of an area and how that has affected water levels. You see the development and how streams are being straightened, and how more water is becoming runoff, but that message didn't come across. The Canadian PAG Co-Chair agreed that she also had trouble with the time lapse.

- The US PAG Co-Chair stated that 90% of the footage for the videos she had gotten for free, so the quality is variable. She asked the videographers to use the image FMMM made for showing development over time, but that it was not high enough quality. **She stated that the PAG Co-Chairs are working to identify additional footage, and asked PAG members to make her aware if they knew of any.** The PAG Co-Chairs are open to bringing in more and different footage.
- The Canadian PAG Co-Chair suggested including a link to the Causes and Impacts summary booklet.

### Video #3

- The US PAG Co-Chair noted that the depiction of the diversion going into the canal is not correct currently, but will be fixed. She stated that the drone footage had been arranged by the Canadian Study Manager and that it turned out nicely.
- A PAG member said that this video is interesting because it shows the structural solution and will provide a lot of information, but could also lead to some confusion because of the gaps in knowledge in the Study. It says the Board is thinking about each of these solutions, but we don't know how effective each is going to be. She noted that in an ideal world, the Study would be able to rank the solutions. She asked if it was possible to include a box when each of the alternatives is presented that provides 2-3 pieces of information on each alternative (some information about water level reduction, cost, ecological impact). She noted that this information could be covered in the public meeting presentation instead, but it might be good to have it as background in the video for discussion.
  - The US PAG Co-Chair asked the US Study Co-Chair if the Board had ranked the alternatives with that information in February? She recalled having some of that information from FMMM.
- The Canadian PAG Co-Chair emphasized that the message the video is not conveying is that since April, the Study has only been focusing on the Chambly Canal diversion, based on the Board's decision using the Study criteria. An FMMM member send a comprehensive table explaining the information associated with the diversion, but it was too complicated to include in the video, and that the report on the structural alternatives won't be available by the public meetings. She suggested that the PAG should examine some other tool for explaining this decision, since the need to explain the background of why there was this choice has been a theme in today's discussion.
  - The US PAG Co-Chair liked the earlier idea of including symbols to highlight the differences between the alternatives.
  - The Canadian Study Co-Chair agreed on the need to provide some rationale in the story, and cautioned that otherwise the information presented could bite them in the back. He said that removing the eel traps would cause the low lake levels to be lower, weirs require lots of dredging which did not seem feasible due to the environmental impacts. There are important reasons why the measures that are not being studied more did not make the cut. Presenting those reasons in a big table would be hard to understand, but maybe the rationale could be extracted and presented in a clear way.

- A PAG member stated that she found the video pertinent enough. She says it leaves the options open because the Study is ongoing. It provides reasons for the decisions made, but does not lock the Study into one decision and explains that progress is still ongoing. It provides channels for the public to get more information. This way, people can't come back to the Board and accuse them of being wrong.
  - A PAG member agreed, but noted that the reference at the end of the videos right now is general, and suggested adding a more specific link to at least this video, or perhaps adding a shortcut to the Study website itself to each video.

#### Video 4

- A PAG member said that when the video mentions streams being straightened, it would have been nice to see a before and after.
  - Another PAG member agreed; there is a timeline in the video, but it moves very quickly and should be slowed down. The images show the canal widening, but it moves too quickly to illustrate the change.
  - The Canadian Co-Chair added that if you zoom in enough on the current footage, there is a little stream on the right of the frame. After the canal widening, that stream is straightened as well. There are 2 things of interest in these shots that should be highlighted
  - A PAG member suggested using colored boxes or arrows over the stream and canal to illustrate the changes so that they are clear to viewers.
  - A PAG member suggested that a takeaway of the video should be that municipalities should enact laws to prevent stream straightening.
- A PAG member stated that he agrees with others to simplify the graphics and data sets. For example, "XX number of homes will be saved with this solution", or "XX number of square miles will not be flooded." It may be helpful to show maps that correlate to flood levels. If dredging can lower the lake level by 6", then show the comparison between the 2011 flood and what would be 6" less.
  - The US IJC Liaison suggested that an image swipe could be used to illustrate the change.
  - The US PAG Co-Chair suggested that slide 11 from the PowerPoint could be useful information here.
  - The PAG member suggested showing on a map in blue where the lake is now, in red where it was in 2011, and in purple where it would be with a flood similar to the 2011 flood if a mitigation measure were implemented.
- The Canadian Co-Chair asked who was going to be responsible for reaching out to the TWGs to get all of the information that has been asked for? The idea of new maps, # of houses that would be saved, that kind of information.
  - The US PAG Co-Chair stated that she will bring this information to the public meeting planning team, which has representatives from all the TWGs.
- The PAG Co-Chairs asked the PAG members to take the poll on the technical webinar offerings.

### *Role of PAG Members in the Public Meetings*

- The Canadian PAG Co-Chair said that for the French webinar, André will be the moderator, Celine will be monitoring the chat and helping with the technology. She asked if there is someone on the US PAG who is interested in helping out on with the English webinar? The plan is to have a dry run of the meetings the week before.
  - Celine volunteered to help for the English Webinar. Renée said she could lend a hand.
- The US PAG Co-Chair asked if PAG members could keep an eye on the chat, and help the moderators make sure they do not miss a question or pass by a topic on accident. PAG members can also help think about what the Study needs to do in response to the questions or concerns raised, since that is one of the roles of the PAG.
  - Mark volunteered to help monitor the chat in the morning during the English webinar.

### **4. Promotion, Advertising, and Communications**

- The Communications Advisor said that the postcard advertising the meetings has gone out. The postcard was not addressed to individuals. 13,476 were distributed in Québec, and 5000 in the US to areas that were affected by past floods. The postcard invited people to sign up to participate in the meetings, and there has also been advertisements about the meetings made on the IJC and LCRR websites, social media accounts (Facebook, Twitter, and LinkedIn). A press release is being drafted and will go out to media outlets to advertise a week before the meetings. John Yee will be assisting throughout the meetings, and there will be a dry run a week before the public meetings.
- A PAG member asked that along the Richelieu River among the smaller towns, if it would be possible to have a real public meeting. She noted that there are a lot of people without internet access, and that a meeting would be possible since the limit on group gatherings has been raised to 250 people, and that the people in this region are not as concerned about the virus.
  - The Canadian PAG Co-Chair asked what directives the Canadian Study Co-Chair has received on federal employees traveling. He responded that his workplace has not resumed in person operations and the guidance is not out yet. He said he could check, but that the restrictions for traveling are still in place.
- A PAG member stated that in Québec you can have gatherings of up to 125 people in a room as long as there is social distancing, and that there is a venue offering that option in Saint-Jean-sur-Richelieu. The difficult part would be getting the technical experts there. She suggested that a screen broadcasting the meeting could be set up, to allow people to watch the meeting.
- A PAG member noted that some of the municipalities along the Richelieu River are bilingual, and wondered if there are extra English postcards if they could be sent to those municipalities.
  - **The Communications Advisor said she could relay that request if there are extras.**
- The Communications advisor said that there are 29 people registered for the 29<sup>th</sup> and 19 people registered for the 30<sup>th</sup> so far.

## 5. **Wrap-Up**

- The PAG Co-Chairs thanked the PAG members for participating in this meeting. They noted that any additional comments on the videos or the presentation can be added to the existing documents for another day or so. They stated that hopefully the borders will be open in time for the next PAG meeting.

Approved by the Public Advisory Group April 28<sup>th</sup> 2021