

November 19, 2021

Dear Secretaries Wilkie and Daniel:

On behalf of the GLAM Committee, we are pleased to forward on to you a report prepared by the Public Advisory Group (PAG) on their experiences and “Lessons Learned and Way Forward”. This document provides the collective wisdom of the 18 member PAG in terms of summarizing their contribution to the Phase 1 effort, the challenges and limitations of the process and their recommendations for future public engagement.

The PAG was created so that representatives of groups that are directly affected by Board deviations could bring their insights into the impacts of extreme high water to the GLAM Committee. The GLAM Committee has greatly appreciated the contributions and commitment of the PAG members to the first phase of the expedited review of Plan 2014. The PAG spent many hours working with the GLAM in learning about the Lake Ontario-St. Lawrence River (LOSLR) system and the adaptive management process and coming to a common understanding of how the system works, the complexities of regulating outflows and the type and range of data necessary to understand tradeoffs. They spent time and effort preparing information to share with the rest of the group and GLAM Committee of their own accounts focused on their interests and locations. Despite our virtual presence, they managed to build relationships with one another and with the GLAM Committee. They showed an openness to learning more about the issues faced throughout the LOSLR system and were willing to share their stories.

Throughout 2021, the PAG was highly effective in providing input and insights as the GLAM Committee worked to develop the Decision Support Tool for informing and supporting the Board relative to potential deviation decisions. The PAG assisted the GLAM Committee with laying out key objectives for the tool such as ensuring that all interests and uses are accounted for, and that the analysis of impacts is multi-dimensional and evidence based. The GLAM Committee made numerous adjustments to the DST based on the feedback from the PAG. This included advice from the PAG on scenarios to test, thoughts on what “fairness” means, advice on metrics to consider (e.g. psycho-social metrics) along with very practical advice on how to visualize results so they are easier to understand and interpret.

Within the PAG report you will find guidance on the value and benefits of the PAG in ensuring a transparent process, building relationships and shaping the engagement effort. The PAG has reported on challenges and limitation of the PAG process which are important lessons learned for moving forward, not the least of which was the time commitment required from these

volunteers. As well, some PAG members struggled with the lack of direct access to the Board. This also at times challenged the GLAM Committee and we look forward to further discussion with the IJC and Board on this moving forward. The PAG has provided a number of specific recommendations related to public engagement moving forward. This includes some very practical suggestions as well as more lofty goals. The GLAM Committee looks forward to working through these recommendations with IJC Commissioners and staff to consider the best path forward. As is recommended in our Phase 1 report, the GLAM Committee wholly supports the continuation of the Public Advisory Group in Phase 2 and beyond and is dedicated to finding ways to maintain the benefits of a PAG while making improvements to the process to ensure success.

Finally, the GLAM Committee would like to thank the IJC for supporting us with a third party facilitator Consensus Building Institute (CBI) throughout Phase 1. We are certain that the experiences of both the PAG and GLAM Committee would not have been as positive without this support. CBI's ability to build and maintain relationships with PAG members, facilitate discussion, provide neutral moderation and a safe space for discussion and debate was absolutely essential to this effort and we sincerely hope similar arrangements can be made for Phase 2.

We look forward to the continued and productive engagement with the PAG over the coming months as Phase 1 is rolled out to the public and we look forward to initiating our public engagement efforts for Phase 2.

Sincerely,



Wendy Leger and John Allis
Canadian and U.S. Co-Chairs,
IJC Great Lakes-St. Lawrence River Adaptive Management Committee
wendy.leger@ec.gc.ca / 289-208-5697 John.T.Allis@usace.army.mil / (313) 226-2137

cc. D. Harper, Canadian Co-Chair, ILOLSRB
S. Durrett, U.S. Co-Chair, ILOSLRB

**International Joint Commission-Great Lakes – St. Lawrence River Adaptive
Management Committee
Stakeholder Engagement: Phase One of the Expedited Review**

LESSONS LEARNED & WAY FORWARD

Written on behalf of the Public Advisory Group by the Consensus Building Institute

26 August 2021

Table of Contents

I.	Challenges in Public Engagement in the Lake Ontario-St. Lawrence River System	2
II.	The Establishment of the Public Advisory Group: Background and Objectives	3
III.	The Charge and Process of the Public Advisory Group	4
IV.	The Value and Benefits of the Public Advisory Group	5
V.	Challenges and Limitations of the Public Advisory Group Process	9
VI.	Recommendations for Future Public Advisory Groups	10
VII.	Broader Public Outreach: The Promise and Limits of the PAG	13
VIII.	Recommendations for Broader Public Engagement and Outreach, Including in Phase 2 of Expedited Review	15

I. Challenges in Public Engagement in the Lake Ontario-St. Lawrence River System

The Lake Ontario-St. Lawrence River (LOSLR) System is home to millions of people; engaging its many publics is a daunting challenge due its vast scale, complexity in regulation of the natural system and governance across multiple jurisdictions. The system geographically spans some 750 km west to east from Hamilton, Ontario, to Trois-Rivières, Quebec. The area comprises two countries, with the shoreline touching one state and two provinces, numerous First Nations and Tribal Nations, and numerous municipalities, requiring coordination across multiple jurisdictions – each with its own governance model, constituencies, and priorities. The system provides a major shipping route for commerce for two large, developed countries' economies and is the focal point of a travel and tourist economy that generates hundreds of millions of dollars in visitor spending. The LOSLR System is fed by numerous watersheds and affected by precipitation both within the system itself and through inflow from Lake Erie and the other Great Lakes above it. The system is also importantly a complex ecosystem with rich natural resources from riverbanks to wetlands, including countless biota that inhabit the lake and river system. The Great Lakes contain 20% of the world's surface freshwater, a resource that is increasingly important.

Through the Moses-Saunders Dam, adjustments in the flows of water from Lake Ontario into the St. Lawrence River can be made. Plan 2014 is the current framework for guiding regulation decisions made by the International Lake Ontario-St. Lawrence River Board (Board), a body of the binational International Joint Commission (IJC). However, decisions often must be made in the face of great uncertainty due to forecasting limitations, including the inability to accurately predict weather conditions weeks and months out and extreme conditions that can usurp any control humans have through structures they placed on the system. Climate change adds uncertainty by altering historic precipitation patterns, making past data potentially less reliable as a reference point for the future. Temporal effects of decisions manifest over months, not days or weeks and are a function of the weather that occurs over the same time-period. For example, the Board's decisions about releases in mid-winter, based on the best available science and forecasts of expected weather conditions, can have modest effects on water levels in the spring. Months out, precipitation can change dramatically, making those decisions appear prescient or misguided, depending on the outcome. These decisions are not inconsequential, as mid-winter deviations can have negative impacts to ecosystems.

The Board is required to regulate flows to provide for a wide and sometimes competing range of desired outcomes, such as the production of energy, municipal and industrial water uses, navigation, minimizing flooding and erosion, and recreational activities. Under Plan 2014, environmental stewardship is also an important new goal for the LOSLR System, based on growing scientific understanding of how ecosystems are affected by regulation of water levels and flows. Sometimes, these interests are directly at odds with each other.

Accounting for differing monetary and psycho-social costs, protection, and benefits across geographies and interests is complicated. For example, releasing more water from Lake Ontario can potentially mitigate flooding on that lake to some degree in high-water years, but may cause communities along Lake St. Lawrence, the forebay to the Moses-Saunders Dam, to experience lower water levels while others downriver in Quebec become subject to increased flood risks, especially when there is a substantial Ottawa River freshet. Releases from Lake Ontario can benefit shoreline residents by mitigating some of the personal safety risks and financial pain of flooding. At the same time, they may also impede safe navigation of the Seaway and impact the

regional economy that depends on it. Higher or lower water levels can also have significant impacts on many local economies that depend heavily on a host of tourism activities – such as boating, attractions, lodging, restaurants and groceries, second home purchases, and retail shops – which may include up to 10% of the workforce in some areas. Releases that draw down the lake in the fall and winter to reduce the probability of spring flooding can cause harm to the health of the ecosystem that sustains tourism, recreation, and quality of life, especially if enacted over a multi-year period. Releasing more water to reduce the risk of flooding may later exacerbate dry conditions in the event of a dry spell. Board decisions hence involve a set of difficult trade-offs within a risk-based management approach that is technically intensive, full of uncertainty, and difficult to communicate to stakeholders.

The Board is part of a complex web of binational IJC bodies, overseen at their apex by politically appointed commissioners and staffed in turn by numerous Canadian and U.S. federal agencies. It is hard for the public to understand who, within this intricate institutional structure, holds what role, influence and accountability, what the parameters and procedures are for arriving at a certain decision, and what accountability there is for decisions once made. This challenge is exacerbated by increased polarization and partisan discourse, and a generalized growing lack of trust in expertise. These trends are also amplified by social media and information systems that can both provide an avenue for sharing accurate information, collective action and coordination as well as spread anger and misinformation at a rapid pace. This coupled with a very complex and dynamic lake and river system affected by continental and local climates that are not easy to understand or predict has all made it increasingly difficult for a formal body, especially one as multi-layered as the IJC, to communicate clearly, effectively, and with a sense of authenticity and legitimacy.

II. The Establishment of the Public Advisory Group: Background and Objectives

In 2017 and again in 2019, the LOSLR System – like all the Great Lakes –experienced unusually high precipitation and high-water levels that led to substantial flooding, property loss, and human suffering from the shores of Lake Ontario to those of Lac Saint-Pierre. In response to the ensuing public outcry and high-level political attention, the IJC tasked the Great Lakes-St. Lawrence River Adaptive Management Committee (GLAM) to conduct an expedited review of Plan 2014. The goal of Phase 1 of the Expedited Review was to assess and explore improvements in data availability to inform deviation decisions, with a focus on extreme high water supply conditions and prioritizing shoreline issues while considering the range of affected interests. Deviation decisions under Plan 2014 are triggered when certain thresholds or limits are exceeded, and the Board may then deviate from the prescriptions in the Plan.

The GLAM is an IJC-appointed committee that reports to the Great Lakes water regulation boards and implements an adaptive management process to review the rules for regulating outflows. It was formed in early 2015, is comprised of technical experts from Canada and the U.S., and works within a long-term perspective of meeting the 15-year review timeline outlined in the IJC's Orders of Approval and Directives for the regulation of Lake Superior and Lake Ontario outflows.

In response to the IJC's request, the GLAM undertook an [Expedited Review](#) of Plan 2014, designed with a phased approach. Phase 1 focused only on deviations from Plan 2014 under high water conditions (when the lake is above H14 triggers established under Plan 2014) This review is expected to be completed by October 31, 2021. Subsequently, Phase 2 will undertake

a more comprehensive review of Plan 2014 with a focus on how the plan operates under both high and low water extremes. The IJC sanctioned a Public Advisory Group (PAG) to advise and support the activities of the GLAM in Phase 1 in an effort to increase transparency and public involvement in the Expedited Review.

Several key assumptions asserted by the IJC drove the creation of the PAG, including:

- as groups aligned with different stakeholder interests and rights-holders experience the outcomes from outflow management, representatives of these groups can work with the GLAM and each other to build a collective understanding of the impacts of flow regulation;
- greater trust and transparency between the technical experts and those affected by water level and flow conditions in the LOSLR System can be achieved when trusted and knowledgeable representatives of networks work directly with experts to gather and assess information and work to present it in useful and compelling ways; and
- the PAG can serve as a small group of voluntary and trusted representatives as a core circle, or network, whose members can share information and provide two-way communication with their constituency groups and networks.

III. The Charge and Process of the Public Advisory Group

The PAG was convened by the GLAM in the late Spring of 2020. The IJC appointed eighteen (18) individuals representing a host of interests from across the region. These interests included First Nations and Tribes, shoreline residents up- and down-stream, recreation, municipalities and counties, hydroelectric production, navigation and shipping, agriculture, and the environment.

The PAG was tasked with advising the GLAM on the following specific issues:

- what criteria the GLAM should suggest to the Board for their use in making decisions on water flow changes;
- what impacts should be assessed and through what methods;
- how the information should be presented to the Board; and,
- how best to share knowledge gained and lessons learned related to the performance and limitations of the regulation plan with those who are most directly impacted by water level fluctuations and extremes.

The PAG has held twenty-one (21) full-group meetings since it first convened on June 30, 2020. The PAG began its work with two introductory workshops in July 2020 and then moved to semi-monthly meetings through the end of May 2021. Due to COVID, all meetings took place online through the Zoom platform. Typically, GLAM and PAG members, as well as a number of IJC staff, participated in these meetings, although on several occasions the PAG also met by itself. The Consensus Building Institute (CBI) facilitated the process.

The PAG covered a host of issues and topics during its meetings. Early meetings were dedicated to building a shared understanding of the complex system in all its facets: the natural system, the history of human management of the system and the physical structures built for this purpose, the Board's operations, governance decisions, and the various details and components of Plan 2014, including the H14 criteria, rule curves, the relevant limits, namely the L-limit for safe operating conditions for navigation, the I-Limit for safe formation of ice cover, and F-limits for managing flooding and erosion upstream and downstream of the Moses-Saunders

Dam. Each PAG member was also offered an opportunity to share their constituencies' specific experience with and use of the LOSLR System as well as to lay out their priority interests and key concerns.

The PAG concluded its 2020 work by outlining what it had learned and identifying additional key issues concerning resilience and emergency response, which are outside the IJC's mandate but are deemed critical to managing flooding along shorelines. In 2021, the PAG spent most of its time supporting the GLAM in developing a Decision Support Tool (DST) which aims to incorporate a high degree of specificity to reflect the various physical, economic and social impacts experienced during extreme conditions and how various deviation decisions would affect those impacts. The PAG also reflected on a regular basis on current conditions and the Board's ongoing responses to them. Considering and offering advice on public engagement to the IJC, Board, and GLAM was a recurring theme throughout the PAG's Phase 1 work.

IV. The Value and Benefits of the Public Advisory Group

The PAG and GLAM have identified several benefits of the structured and focused stakeholder and rightsholder engagement process employed in Phase 1:

1. *Joint learning and education underpinning a system-wide approach.*

approach. A solid and shared knowledge base is necessary to offer nuanced and useful advice on the complex LOSLR System. The PAG thus spent considerable time seeking to learn about the complexity of the natural system, the institutions and procedures that form its governance, the content and application of Plan 2014, and approaches to modeling and prediction that inform Board action. Importantly, PAG members educated each other and the GLAM on the diverse experiences and perspectives around the table. Across multiple meetings, PAG members individually presented their views on issues, including but not limited to:

- managing a hydroelectric facility and the drivers of energy markets;
- navigation and the complexities of moving large vessels through narrow channels;
- Indigenous views of natural and human connection;
- managing marinas through varying water levels;
- the dependence of many local economies on tourism and recreation;
- how Board decisions and natural fluctuations affect shoreline residents and families, young to old, poor to well-off, disabled to able-bodied;
- how downstream agricultural interests approach the fluctuations in the system and their adaptations to it over many decades;
- how natural variability provides the pulse of life for ecosystems over both the shorter and longer term; and
- the diversity within this large system not only across but within stakeholder interest groups such as farmers, recreational boaters, anglers, hunters and wildlife watchers whose activities depend on a healthy environment.

"This has been an opportunity to anchor the process in reality, not just statistics and academic knowledge. It's bringing that statistical, theoretical, academic, and technical knowledge into reality."

PAG Member

The process thereby created the means by which various strands of knowledge, from Indigenous and local to technical and system-wide, could be better woven together.

Key insights emerged from these exchanges, including what officials and the public more broadly need to recognize with respect to the limits of the IJC's control over conditions in this vast, natural system. As one PAG member said: "I feel it's important that the public, and all government levels, understand what the IJC can and can't do. That understanding will help build trust moving forward." The communications challenge here lies not only in making a complex human altered natural system accessible, but in conveying that there are not often easy or clear fixes to serious problems sometimes experienced by residents, businesses, and authorities throughout the LOSLR System.

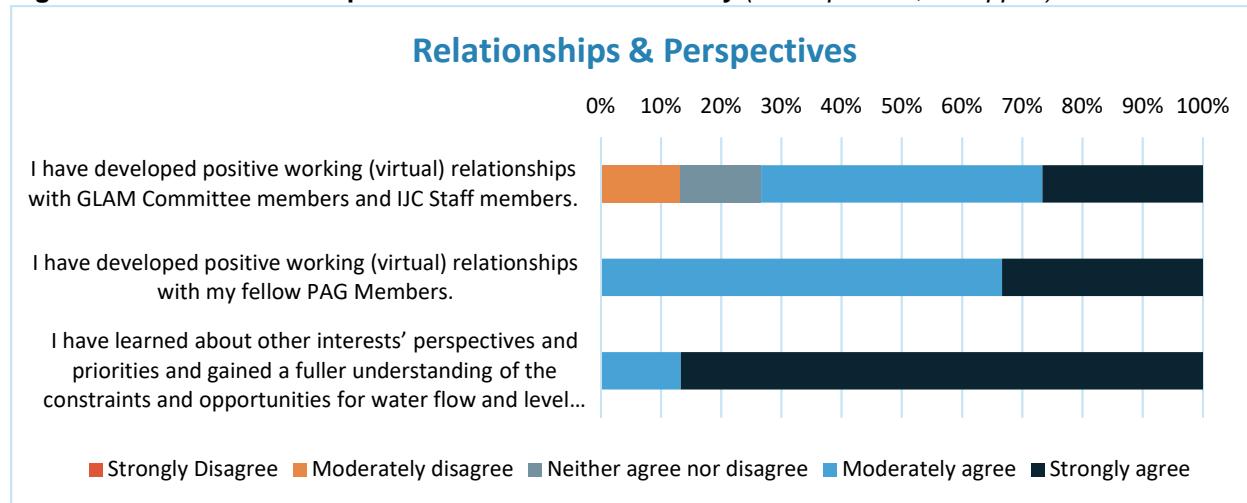
While essential, this extensive learning phase was time-consuming and tended towards one-way communication through detailed technical presentations over the initial months. This generated some frustration. In the October survey, some PAG members expressed concern that, "during the presentations, which are very informative and well done, the exchange is collegial. However, the atmosphere is not open, as we are driven by an agenda of presentations, and there is no time for dialogue." The PAG and facilitators adjusted the process in light of this feedback, shifting the design to include more breakout groups and PAG deliberations without GLAM members present. The flow of the work over time moved naturally from learning to dialogue, and discussions among the PAG and with the GLAM became more balanced as the GLAM began to identify queries on a range of issues on which they sought PAG's input and guidance.

Nonetheless, the "start-up costs" were significant, raising the question of how to preserve and leverage this knowledge capital going forward. Overall, the IJC's goal of creating "greater trust and transparency between the technical experts and those impacted by water level and flow conditions in the Lake Ontario – St. Lawrence River system" was likely met through the PAG process for PAG members and the technical experts who participated. We say more about the difficulties of achieving this goal beyond direct participants later in this report.

2. **Relationship building.** Though limited to virtual-only engagement due to COVID restrictions, the PAG process did create significant spaces for PAG members and the GLAM to build working relationships with each other. In their interactions with the GLAM, PAG members regularly posed direct questions, challenged presenters as they thought necessary, and provided alternative approaches or perspectives rooted in their lived experience and/or professional expertise. On these occasions, the PAG and GLAM took the time to craft a better joint understanding of, if not always agreement on, the issues at hand. Most of this communication happened during the sessions, but there were also lively email exchanges on points of confusion or contention and additional, informal calls were held to clarify or discuss specific issues.

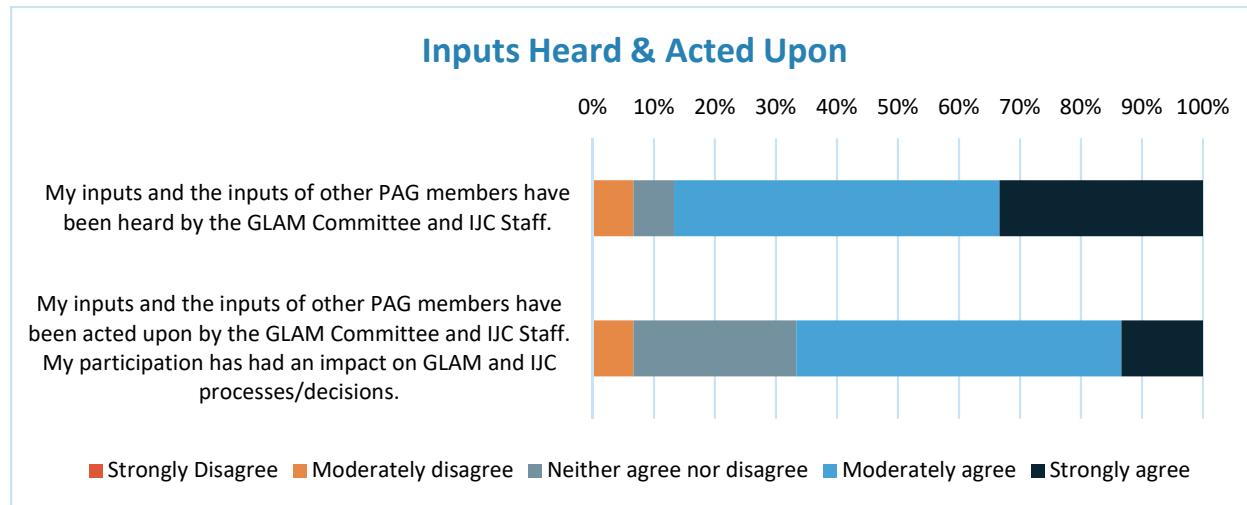
PAG members also made connections with one another, developing an authentically respectful climate of mutual listening, questioning, and receptivity. This allowed the formation of a fuller and more complex picture of the diverse interests in the system that transcended general impressions or the sometimes reductionist portraits that can be found in public discourse or the media. As with the understanding of the technical dimensions, the puzzle emerged about how a more human face of the people and problems in the water system could penetrate beyond the PAG. As one member summarized the atmosphere: "There is empathy here – how can we harness that word and frame it within the communications to our networks and the general public?"

Figure 1: PAG member responses from June 2021 survey (15 responded, 3 skipped)



3. ***Building transparency through real-time information sharing.*** Given the regular meeting schedule of the PAG, the participating GLAM, IJC, and Board staff were able to share critical information in a timely fashion and in sequence with the Board receiving and considering that information in their deliberations. For instance, on a number of occasions, the GLAM shared what deviation strategies were under consideration prior to official Board meetings. This approach permitted the PAG to voice their questions and views, most of the time ensuring that the PAG was informed ahead, not after, decisions were made, and significantly enhancing a sense of transparency around decisions. An exception was during the Spring 2021, when a rapid change in conditions refocused public concern from high to low water and some PAG members found themselves fielding questions and accusations from the public even as the Board needed to react quickly to the situation, resulting in perceived information gaps in the general scramble.
4. ***Shaping engagement itself.*** Again, because of the iterative and ongoing nature of the PAG, the PAG was able to shape several engagements and information gathering and sharing tools that the GLAM or Board was pursuing. The GLAM shared a recreational boating survey with interested PAG members and asked for input and advice prior to administering it. When GLAM surveys administered in Quebec garnered a comparatively low response rate, PAG members from the area reflected on the organizational structures of interest groups there and how these may affect optimal engagement strategies. The PAG also was able to meet directly with the Co-Chairs of the IJC and offer advice on how to improve public engagement, including on the approach and design for a series of stakeholder meetings in a dozen communities in the LOSLR System planned for later in 2021. And, through this report, the PAG is able to offer specific, informed, and joint advice about public engagement going forward for Phase 2 of the Expedited Review and in general.

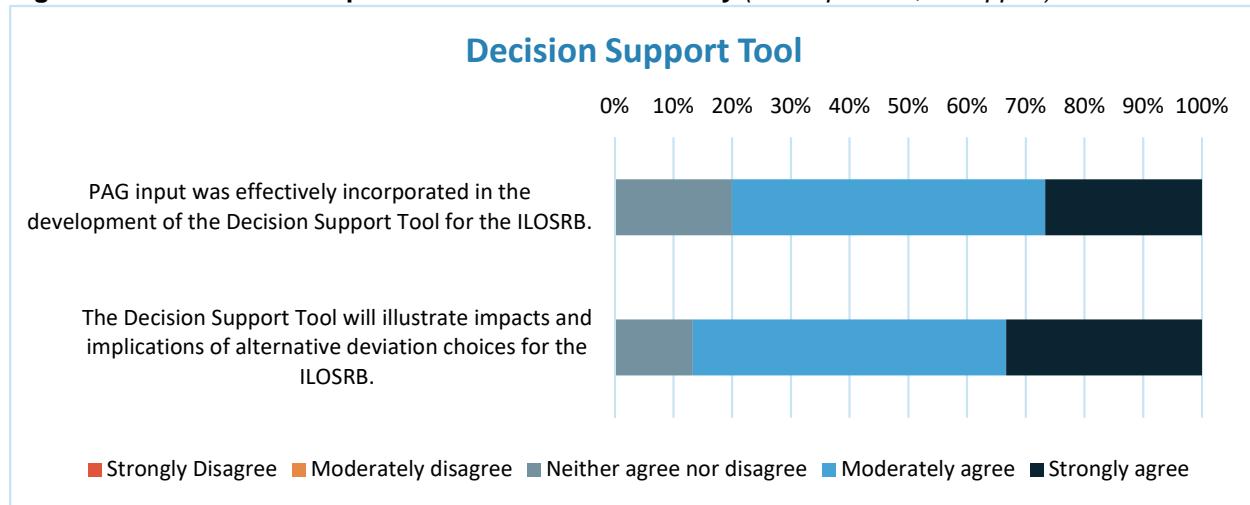
Figure 2: PAG member responses from June 2021 survey (15 responded, 3 skipped)



Please note that, in above figure, the reference to IJC staff is inclusive of Board staff.

Weaving socio-economic data with engineering data across scales, sectors, and locales through an emerging Decision Support Tool. Much of the Winter and Spring of 2021 was spent collectively trying to advance a Decision Support Tool (DST) based on the learnings in the earlier PAG interactions and the additional technical and socio-economic data being gathered by the GLAM through various studies in Phase 1 of the Review. This DST seeks to combine all available information on impacts into a series of both broad quantitative metrics across the entire system and descriptive local impact zones based on observed impacts for a number of local communities. As well, the DST is to include more local context through the use of story maps or fact sheets. This is to provide a greater deal of contextual information about local issues and the impacts experienced by various communities through photos, narratives and stories, to help provide the Board with a more nuanced and people-centered view of how various options may affect various parts of the system when deviation decisions are made. So, rather than consider decisions only from a very general perspective, with insufficient granularity to showcase local impacts in a clear, data-driven, and personalized way, the DST will aid the Board in exploring the possible impacts of choices across a range of parameters and a range of scales from very local to system-wide. The GLAM and PAG hope that this kind of analysis will both help the public gain some confidence that direct and diverse impacts are more fully presented before the Board when it makes decisions and that the Board will have a sharper and more detailed view of how various options affect the lives of individuals, families and communities.

Figure 3: PAG member responses from June 2021 survey (15 responded, 3 skipped)



V. Challenges and Limitations of the Public Advisory Group Process

The PAG also identified three primary challenges and limitations to the PAG engagement process to date.

1. **Public exposure and personal risk.** As IJC, Board, and GLAM staff learned during the floods of 2017 and 2019, impacts from extreme conditions trigger high emotions and can cause some members of the public to be antagonistic, if not threatening, to those working on these issues. Several PAG members expressed concern about the IJC's expectations for PAG members to be conduits of information to the public in general, and the visibility and misperceptions that membership in the PAG can create, including for individual volunteers who operate without institutional backing and are worried about their public exposure, especially on social media, and potential legal liability in a litigious society.

"I had one person very angry with me on social media as if I'm responsible for the low water and people are very harsh. . . Somewhere in our PAG there has to be consensus and supportive messaging to ensure that we are keeping people safe. I will often not share things on social media for that reason."

PAG Member

"I do not report all the hours I do for PAG because my director will come into my office and challenge that."

PAG Member

2. **Time commitment.** Time commitment was a central challenge to PAG participation and the group's effectiveness. In order to engage both the technical and relational issues, PAG members participated in meetings roughly twice a month for three hours each with additional time preparing for each full meeting, as well as occasional longer or side meetings. Thus, PAG members were spending at least 6 hours per month, with 86% of PAG members indicating in a June 2021 survey they were spending between 6-15 hours per month, and 14% indicating they were spending 16-25 hours, taking time away from other professional and personal obligations. Those PAG members who sought to inform and engage their networks to share the learning and work of the PAG, faced an even more demanding task. Those who participated individually apart from their livelihood, reported a significant opportunity cost in participating. Even those whose job description encompasses issues addressed by the PAG had challenges to find the time required.

3. **Influence and impact.** As noted above, the PAG was successful in building understanding, establishing relationships, and helping shape the DST. The PAG also had an opportunity to engage with GLAM and Board staff around key deviation decision points during the year. Some PAG members nonetheless wrestle with the question of impact versus time spent within an institutional structure that by design makes the PAG an advisor to the GLAM, with the Board at arms-length, while questions about governance and representation on the Board itself persist. The PAG's responsibility was to advise GLAM and did not include shaping the Board's decisions directly. The Scope of Work of the PAG in this regard was always circumscribed, focusing on creating a more transparent process and improving the evidence based for information considered by the Board. How the advice cascaded to a Board with which, in contrast to the IJC Commissioners themselves, the PAG had little interaction was perhaps not apparent, and expectations for speedy and concrete changes in policy and practice may have been out of reach given the scientific and institutional complexity. Specifically, the PAG process did not result in a clear set of prescriptions for deviation decisions once they are triggered under H14, and the IJC, which has limits on its own mandate, has not yet been able to visibly catalyze greater action on resilience as recommended in the PAG December 2020 year-end summary. The DST, while innovative, potentially powerful and substantially shaped

"We need a realistic time estimate moving forward. This phase took more time than expected. That would involve some planning on behalf of GLAM to define the frequency and length of meetings – we need to do better forecasting."

PAG Member

"The challenge that remains is providing deliverables to my constituents and to my organization."

PAG Member

by PAG input, is intricate to construct and populate with data, and as such remains a work in progress, with additional sectors, such as the environment, and geographies, yet to be integrated. The DST's use by and influence on the Board is still in an experimental phase at this time. One PAG member noted: "I question how much influence PAG had in deviation decisions over the last year. When I review our feedback that was presented over the last year, I struggle to see what we accomplished."

In conclusion, the IJC's goal that "the PAG is a small group of voluntary and trusted representatives as a core circle, or network, but can share information and provide two-way communication with their constituency groups and networks" is perhaps too difficult to achieve under present circumstances due to time, personal risk due to public exposure, and the limitations of the PAG's influence and impact explained above.

VI. Recommendations for Future Public Advisory Groups

As per its Terms of Reference, the PAG repeatedly reflected on its own process and developed the following recommendations for potential future PAGs, including for Phase 2 of the Expedited Review:

1. **Manage participation time.** The IJC needs to consider how to make these PAG processes as efficient as possible. Preparation for PAG meetings and the meetings themselves took up extensive time by both PAG members and GLAM and Board staff. PAG members had to read materials, get up to speed on upcoming agenda items, prepare their own presentations, review complex materials and tools like the DST, and engage with their networks, when possible. GLAM and Board staff had to prepare coherent, clear presentations, develop agendas with the facilitators, solve particular

group dynamic issues as needed, and coordinate across the many agencies that staff these efforts. Thus, the IJC needs to: 1) set clear and realistic expectations for participation by all from the start; 2) build on the investment of learning and deepening understanding by engaging willing current PAG members in the future while adding in new participants over time in a phased and regularized way; and 3) develop summary and communications tools like short videos and fact sheets on key topics like F, L, and I limits; the H14 criterion; and the DST to remind current members of these topics and educate new participants outside of meetings as well as inform the broader public. As many PAG members noted, long, detailed technical reports and even short, but complex technical briefings do not suffice for clear, concise, and understandable public communications.

2. ***Publicly clarify PAG mandate and role.*** Some PAG members have reported concerns over their safety and well-being. The role of the PAG is not widely understood, and the level of influence of PAG members on outcomes – both those deemed positive and negative – in the LOSLR System is overestimated by some members of the public. This can make them a target of ill-treatment, including in an online environment where public discourse can veer into the irrational and nasty. It is not easy to insulate PAG members completely from such phenomena; at a minimum, the communication on the PAG's role should be clear, including that it serves in an advisory capacity only and has no decision-making power, that it is one of several bodies providing input to the Board, in this case indirectly via the GLAM, and that its members include many independent volunteers. This information should be highlighted in key messages on the website, alongside the full PAG Terms of Reference. This challenge could grow even greater during Phase 2 – if PAG has a role – since an overall review of Plan 2014 will “increase the stakes” and likely require many participants to obtain approvals from their organizations before signing on or supporting any number of changes not to mention be subject to their networks’ heightened scrutiny. It will also be important both for internal and external purposes to clarify the distinction in roles, make-up, and responsibilities of the PAG and an advisory body that interfaces directly with the Board. The latter was created when the number of Board members was reduced in 2020 and currently comprises former Board members but is to be reconstituted going forward.
3. ***Provide liability protections.*** As noted above, at least some PAG members are concerned that they may have exposure to legal liability through participating in such efforts. While US and Canada have differing legal contexts, it is important for the IJC to investigate the legal conditions prevailing in each of the countries (and regarding provincial and state law as needed) as to whether PAG members bear any liability risk and what umbrella legal protections or disclaimers the IJC can offer to avert those, as needed. As one member suggested: “On the liability front, perhaps providing some sort of entrance coverage for litigation to PAG members.”

4. **Compensate PAG members' efforts as appropriate.** While the aspiration that volunteers deliberate at their own expense to advance the public good is appealing, it may not be realistic with highly resource- and time-intensive efforts. While some PAG members are compensated for their time on the PAG through their jobs and institutions, many are not. The IJC should consider some kind of compensation assuming this is possible both financially and legally. One PAG member remarked: "Things are valued by how much you pay for them – if it's free, it's written off."

"I don't see a model moving forward where volunteers don't get compensation for their time."

PAG Member

Such compensation could take several forms: 1) an honorarium for each year or term; 2) a per diem for time, as is done for commercial fishermen participating in fisheries management in the US Fishery Management Council structure under the Magnuson-Stevens Act; and/or 3) a fee or payment for detailed review and comment on specific products. At the same time, payment would have to be structured to provide participants continued independence from the IJC and its various entities so that participants can continue to offer advice and opinions unfettered by such financial compensation as well as maintain their public credibility. As one PAG member noted: "Having paid volunteers like oil companies do – that's critical. But if you bring people in too close, you don't maintain neutrality or independence. They need to feel free to criticize. You need to maintain some independence." Another PAG member noted: "There is a very serious concern of the creation of bias as a paid PAG member. 'Oh, they (IJC) PAID you to say that.' This is a very delicate subject."

5. **Diversify representation while retaining interested current members.** The PAG, while diverse in geography and interest, is not diverse across socio-economic status, race, gender identity, and ethnicity. The value of greater diversity relates both to better representation of affected communities and drawing on additional lived experiences and ways of knowing to tackle complex problems like the management of this large system. As one PAG member said: "We need to ensure that proper representation is present. Specifically for Communities of Color. We need to acknowledge that we need to increase that engagement." The IJC should also retain interested members of the PAG given their commitment to learning and engaging, working constructively with one another, as well as the IJC's substantial investment in educating and informing the PAG members on many complex and nuanced issues.
6. **Provide more "ready to use" information for PAG dissemination.** While there are limits to the outreach PAG members can do as noted above, there are opportunities for PAG members to share clear, effective, and timely information as conditions in the watershed unfold. One of the PAG lessons learned is that real-time engagement on the issue of the moment, such as the advent of low water in the spring 2021, can increase understanding, decrease confusion, and mitigate adverse reactions. However, that requires the GLAM and Board to produce real-time information that is accurate, balanced, and informed by the PAG input both on the substantive issues and on the ways and means of communicating to the public, so that PAG members can in turn disseminate it to their networks. As one member said: "Getting us the meaningful information that can be communicated on a timely basis. When we are sitting out there, and my organization is taking it right on the chin, we need that information if we are going to stand in there and support the work being done by the Board."

7. **Separate volunteerism from expert and specialized advice.** Many PAG members come seeking to represent or at least share the concerns of a constituency or network, all bring a level of expertise from their respective work and experience, and all come with lived experiences from living in the region. However, some PAG members come with particular and specialized expertise that is particularly relevant to the technical aspects of the work. On the one hand, this “outside” and volunteer expertise provides a meaningful way for PAG members to build trust in their fellow members and can provide a reasonable “check” on GLAM technical commentary. On the other hand, there comes a point when the extensive technical vetting and back-and-forth conducted under volunteerism in fact begins to meld into outside peer review or even consulting advice. Thus, the IJC should make clear what is and is not expected of volunteers with particular expertise and consider when the roles between PAG member and “professional advice giver” cross to the point where different arrangements may need to be made.

VII. Broader Public Outreach: The Promise and Limits of the PAG

As outlined above, there are improvements to the PAG that could make a successful process more effective and sustainable into the future. But to truly meet the IJC’s goal of achieving greater trust and credibility with the broader constituent interests in the system, engagement strategies will need to be implemented, which may involve the PAG but also must extend beyond it.

The PAG was conceived as a key building block in a “circle of influence” in which information cascades outward through the PAG to the respective members’ constituencies and input is collected and fed back into the IJC system via the GLAM’s data enhancement platform. PAG members struggled to fulfill this function for a number of reasons:

1. **The packaging of accessible, timely information that is ready to be shared.** As we have seen, an important basis for trust building between the PAG and the GLAM was the fact that the GLAM consulted almost in real-time with PAG members. This means that the GLAM shared unfinished products and incomplete information under the protections of the PAG’s Terms of Reference in an effort to gather advice about how to improve their different work streams, including the design of research studies, the preliminary findings of data collection efforts, and the development of the Decision Support Tool (DST). Through this, the PAG gained an appreciation of the complexity of the data gathering and management issues, and an opportunity to contribute additional information and insight on how to better measure and feature impacts from extreme conditions. However, at the same time, it limited the opportunities for sharing beyond the PAG since: 1) many GLAM presentations were often in draft form and as such marked for “internal use only”; 2) the multitude of dimensions addressed by the PAG process, and the technical intricacy of many of the issues, also made it difficult to crystalize key messages that the PAG could own and convey, individually or collectively, to their reference groups and to distill queries on which input could usefully be sought from them; 3) the PAG’s time was spent mostly grappling with their own understanding over this complex system and this left little time for crafting jointly shared messages and information.
2. **Representational issues.** Some PAG members belong to groups or organizations with a clear institutional structure, making it easier for them to identify and bound who constitutes

“How do we expand the reach of this group? We have a great nucleus of people working well together. On the other hand, it’s the 18 of us. I like the idea of how we sustain this and keep this momentum but have to think about how to bring in new voices and new minds.”

PAG Member

their interest group and what channels of communication can be used to reach their constituents. But even where that was the case, PAG members cautioned that they could not speak for, or maintain outreach efforts with, groups that belonged to the same general category of interests but were in a different geographic part of the system (for example, agricultural interests). This problem of what representation meant in this context was more acute still for those PAG members hailing from more diffuse interests (e.g., shoreline property owners) or groups that themselves have distinct and sovereign governance structures (e.g., Indigenous Peoples).

3. **Capacity.** If the core work of the PAG itself was demanding and time-consuming, adding a broader information-sharing and consultative function to the PAG's responsibilities was a big ask. Not only because coordinating briefings and gathering input are in themselves painstaking work, but also because, as we have seen above, Plan 2014 and the IJC have suffered reputational damage in a highly politicized environment. Changing entrenched mindsets that sometimes feed on anger, grief, and fear is more than any 18 volunteers can take on.

Several PAG members nonetheless kept their constituencies abreast of PAG's proceedings at regular intervals, and some issued statements to their interest groups and/or the public (some of which were promptly misrepresented in the local media). What's more, the PAG is cognizant of the IJC's ambition to build more solid bridges to the public and is largely willing to support these efforts directly by participating in planned stakeholder engagement meetings and use their unique advantage as "credible messengers."

Some efforts were made to have the public hear the voice of PAG members, such as a video on the [IJC website](#) with PAG member reflections on process. Specific initiatives, such as the production of a video on navigation as part of a broader new Board audiovisual series that featured a PAG member were enthusiastically received by the PAG and spurred an appetite for further communications effort that showcase the PAG as a diverse yet cohesive group collectively seeking to create a better LOSLR System-wide future. Ideas included hosting short, informative sessions to educate a range of audiences on a variety of topics throughout the LOSLR System, bringing in PAG members as contributors and inviting journalists to ensure broader reach.

The PAG has built a remarkable commitment to this vision – and to each other – as evidenced by the fact that more than 70% of PAG members "definitely would" consider participating in another iteration of the PAG. This commitment would likely be cemented even further by holding in-person meetings as the pandemic abates in North America; a prospect many on the PAG relish. The PAG hence can become a key anchor for the continuing review of Plan 2014 into its second, more expansive and more comprehensive, phase.

But, the PAG is one tool in a broader toolkit for constituency and public engagement, which requires a multi-dimensional effort. Given their roots in geographic and professional communities in the LOSLR System, PAG members are well positioned to advise on how to shape this broader strategy, as well as to provide direct hands-on feedback on approaches to specific communications efforts such as the public webinars hosted in June by the Board to apprise residents of what to expect with respect to low water conditions. Over the course of their work the PAG has done both. Below, we synthesize the PAG's recommendations for the IJC's public outreach and engagement.

VIII. Recommendations for Broader Public Engagement and Outreach, Including in Phase 2 of Expedited Review

The PAG's recommendations fall into several different inter-related categories:

- 1. *Supplement the IJC's engineering culture with more accessible, public-facing communications expertise.*** The management of the LOSLR System impacts different interests in complicated and interesting ways. The economics of international transport, the dynamics of the energy markets, the planting and harvesting of crops, the steering of vessels through treacherous waters, the ecology of wetlands and lakes and rivers, the provision of drinking water to municipalities, where families live – all of these and more converge in a complicated puzzle that continues to be reconfigured as weather conditions change. Building bridges between these various disciplines, as well as between technically intensive knowledge and the lived reality of people affected by extreme conditions, is both challenging and absolutely essential in order to build wider understanding of the IJC's responsibilities and faith in its actions.

Of necessity, IJC and GLAM staff are deeply anchored in a scientific and engineering culture that is the foundation for day-to-day and adaptive management involving a great deal of risk and uncertainty. Plan 2014 itself is a technically complicated instrument, with triggers and rule curves and limits that are difficult to grasp and explain. It is no surprise that the expertise needed to run a complex water management entity is not the same as the expertise needed to communicate effectively to broad audiences.

The IJC, Board, and GLAM recognize this and have made strides towards using clearer, simpler language and more accessible communications materials. An example includes the storyboards, with visuals, integrated into the DST. The PAG recommends that the IJC, Board, and GLAM focus attention and resources on generating user-focused and user-friendly communication that addresses the key questions and concerns raised by the public. These should be conveyed in language, manner and form that will resonate across a broad audience and avoid unintentional but real biases, such as characterizing certain states as the norm (“baseline”) or certain impacts as “small” when those are terms laden with assumptions or judgments that may not be shared or could be misinterpreted.

Bringing in storytelling and narratives, appealing to people's values and identities, and using multiple digital and in-person platforms under an integrated strategy are all best practices in communications. Social and communications science has shown that information alone, “just the facts,” is rarely sufficient to change minds, influence opinions, or break through the noise of an overloaded information environment. As one PAG member noted: “This requires rethinking a public communications strategy that actually talks to people, employing a humbling approach of communications from the IJC...Building a public discourse beyond this group requires press releases that are not rote, engineering language. Those releases are not representative of the conversation that is happening in the public.” The IJC should consider increasing its capacity for

“On May 29th, outflows from Lake Ontario were set to 100 m3/s (3,530 cfs) below the amount prescribed by the ‘Rule Curve’ of the regulation plan. Outflows will be further decreased on June 5 to 7,620 m3/s (269,100 cfs), which is 200 m3/s (7,060 cfs) below the amount prescribed by the ‘Rule Curve’ of the regulation plan.”

IJC Communication, June 4, 2021, Drought Conditions in Great Lakes – St. Lawrence River System Prompt the International Lake Ontario – St. Lawrence River Board to Implement Deviations

technical translation and communications science at the interface between its complex policy instruments and analytical tools and the public's understanding of its environment, perhaps through entities with outside media expertise informed by the latest in communications science research.

2. Increase transparency and clarity about IJC procedures and decision-making.

Beyond the science, the IJC and its various sub-bodies play intricate political, legal, and operational roles that are difficult for people to parse. At the core, there is a sense that it is unclear who is ultimately accountable for decisions and on what basis these decisions are made. The hostile environment in 2017 and 2019 gave rise to attacks on Board and staff members, prompting the removal of information on the website as a safeguarding measure. While understandable, the reluctance to sharing information about Board members, combined with the emphasis that they are ultimately the decision-makers, provides fertile ground for misgivings by a wary public. Efforts by IJC Co-Chairs to step into the public space are instrumental in putting a human face on the IJC. The Board too should consider what kinds of public-facing roles it might play, especially with the advent of its new advisory board. As mentioned above, it is important, however, to clarify the role and membership of the new Board advisory group going forward, including any linkages to public that may be envisioned, since little has been shared about this since the change was made in early 2021.

Not only are publicly available professional profiles of Board members sparse, the basic calculus and process through which they arrive at decisions is sometimes also couched in vague, professionalized, and bureaucratic terms that raise as many questions as they answer. An example, again drawn from the June 4, 2021, IJC communication on drought conditions follows: "Deviations from plan-prescribed 'Rule Curve' flows under the low Criterion H14 threshold are meant to 'provide all possible relief to municipal water intakes, navigation and power purposes, upstream and downstream.' Impacts to all interests were considered by the Board while exploring possible deviation strategies under this authority." While this statement is factually correct, it conveys almost no information. What were the tradeoffs? What are the impacts, and how do they differ across interests and geographies? Does the IJC acknowledge that businesses and lives have been harmed due to the low water? Does the IJC note that these rhythms are part of the natural ecosystem and that the health of the lake and river depend upon them? How much control does the IJC have in these matters anyway?

"With this DST, the data you put into it shows what the impacts could be. So, the IJC can take the technical data they put out each week [in news releases] and use the DST to kind of explain, in matter-of-fact terms, "this is what this forecast is going to mean" and find a clever way to get that out to the public."

PAG Member

To increase transparency and clarity, the IJC and the Board should retool their public outreach, with a focus on key messages and an accounting of how conditions in the system evolved and what to expect in the near-term, even if the news is unpleasant (as it often is with a complex, dynamic system and millions of users). As an example, some PAG members reported that recent public webinars organized by the Board to provide updates on low water demonstrated an improvement in public outreach efforts.

The IJC and Board should seek to operationalize whenever possible the "no surprises" rule. Early communication on the IJC's understanding of evolving conditions and difficult trade-offs not only provides residents with an opportunity to adjust as they can but also

strengthens the public's faith in its competence. As one PAG member recounted: "In January, when we lowered the water in Lake St. Lawrence, people were upset with the impact that would have on wildlife. When I communicated back that I believed the IJC understood this, temperatures cooled. The IJC could have communicated before the action that it understood the potential impacts and believed that the benefits would be worth the risk."

The IJC should prioritize timely responses to questions raised in public forums and interactions. A quick turnaround on answering key questions may be more important than a comprehensive rendering of scientific considerations that are behind a given answer. Not only will quick turnaround of answers to questions address the question, but it can also reduce questioners' anxiety and show care and concern for those asking.

The IJC should also provide more detail about how public and stakeholder input was considered. It is important to follow-up after a public meeting or consultation with a summary of the feedback received, how this feedback is being considered, and how it was used in decision-making.

The IJC should support the further development of the Decision Support Tool (DST) and ensure its use by the Board. The DST is seen by the PAG as an advancement with potential, not only in capturing possible impacts of decisions but in communicating these to key stakeholders – helping to translate the technical details of forecasts and Board decisions into meaningful information about potential impacts for different interests and geographies. In a PAG survey administered in June 2021, more than 85 percent of respondents moderately or strongly agreed that "the DST will illustrate impacts and implications of alternative deviation choices for the ILOSRB." PAG members support the further elaboration of the DST planned by the GLAM, including incorporating data on additional factors, such as ecological impacts and shipping, and, down the road, low water scenarios. A strong point of feedback is to do as much as possible to stay attentive to factors that are harder to capture but key to assessing coping capacity of various interest groups, including social and emotional impacts and resilience.

3. *Be present more consistently in communities.* The IJC could enormously benefit from strengthening its day-to-day presence in the various geographies in the LOSLR System.

First, the IJC and Board should strengthen their engagement with Indigenous leaders and local elected officials, who are trusted conduits to the broader public and often find themselves at the frontlines of response to extreme conditions. The IJC already does outreach to elected officials and is planning on centering them alongside other "influencers" in upcoming stakeholder engagement meetings in up to 14 communities up- and downstream. The IJC is also undertaking specific outreach to Indigenous communities on both sides of the border. These are important steps in the right direction, and perhaps could be further leveraged. For instance, the IJC could formalize and support more permanent relations with Indigenous communities and local municipalities.

Second, the IJC may want to consider creating new, paid roles that can supplement and enhance PAG work specifically and communication and outreach more broadly. The IJC could hire staff to work as community liaisons and embedded in specific geographies and communities. There are several examples of these kinds of roles. Major gas and oil

companies often fund community liaison officers who in fact work for the company but whose responsibility is to gather and represent the community to and within the company. In the growing offshore wind industry in Europe and the US, wind companies are encouraged to have and pay both full-time staff as liaisons to the fishing community as well as fishery representatives who are not staff but are organizations who can serve as conduits of information. While there are challenges with identifying such individuals and organizations and ensuring the remuneration arrangements are in line with an “arms-length” relationship with the IJC, this could be an important investment.

4. ***Encourage resilience and emergency response measures by governments at all levels (local, regional, and national).*** It is well understood by the PAG that the IJC's authority is circumscribed, and that resilience and emergency response planning lie outside of its authority. Nonetheless, especially given the limitations inherent in water regulation, throughout the PAG process these issues rose to the forefront of what is needed to find sustainable solutions and protect people and livelihoods from the impacts of extreme events. Even under the best of management conditions, in extreme events and periods, flooding and property damage will occur to homes, buildings and infrastructure located in vulnerable areas. In December, the PAG issued a [communiqué](#) addressed to the GLAM on these matters, which GLAM forwarded to the IJC, prompting a much welcome meeting between the IJC Co-Chairs and the PAG.

Resilience and emergency response remain high priorities for PAG members. The PAG urges the IJC to include these issues in their public outreach efforts – with officials and with the public at large – to raise awareness of the critical importance of resilience and emergency response and prompt ideas for action. In addition to recommending that the IJC elevate the public discourse, the PAG hopes that the IJC can more actively use its knowledge-generation, convening, and mobilization powers to sponsor studies on resilience, share successful approaches from around North America, and to promote stronger baselines for emergency response requirements across all jurisdictions.