

**International Watersheds Initiative
Multi-board Strategic Workshop:
Summary Report**

**October 27, 2015
Ottawa, Ontario**

Executive Summary

Nearly sixty people from IJC boards and Commission staff participated in the workshop to exchange ideas, learn more about the International Joint Commission's (IJC) three new strategic priorities for the International Watersheds Initiative (IWI), develop strategies to implement these new priorities, and further advance current priorities.

The participants expressed considerable enthusiasm and interest, and provided some excellent feedback. The key messages and suggested actions from the workshop are presented below in the order that they were addressed during the workshop:

- *The participants suggested that the Commission should highlight the accomplishments of IWI through a "story map" on the IJC website.*
- *Given that participants only had a limited amount of time to review the 4th IWI Report to Governments prior to the workshop, they agreed to provide more comprehensive input on the report to the Commission for the April 2016 IWI workshop.*
- *The participants agreed that a well thought-out communications plan should be a priority for all IWI projects, and that one effective approach to achieving this goal is to engage stakeholders (e.g., scientists and interest groups) in the design and implementation of the communications plan itself. This approach should ensure that research and other IWI efforts are shared with key audiences in an effective and timely manner.*
- *The participants were very interested in the data harmonization work and requested information on where the harmonized data are stored and how it can be accessed.*
- *Participants expressed a lot of interest in the binational water quality modelling and wanted to know how it could be expanded into other basins where the Commission has a water quality mandate.*
- *Participants from boards with a water quality mandate were particularly interested in knowing more on how they will be engaged in the international water quality objectives analysis and how the findings of this work will be reported.*

- *The participants acknowledged that the Pembina River Hydraulic Modelling Project is a good example of how, through the IWI, the Commission is achieving its mandate to prevent and resolve water-related disputes.*
- *The participants agreed that the Rainy River/Lake of the Woods Fisheries Project is very innovative in its use of traditional ecological knowledge and expressed an interest in learning more about the results once the project is completed.*
- *The participants likewise agreed that the Great Lakes- St. Lawrence Adaptive Management Committee's work provides an excellent example of, and a number of transferrable lessons on, how to integrate adaptive management into transboundary water-level and flow regulation.*
- *Climate change impacts on water quantity and quality in transboundary basins:*
 - *Are occurring in all transboundary basins in a variety ways,*
 - *Necessitate a broad, holistic approach to hydrology,*
 - *Will require an adaptive management approach.*
- *Addressing the impacts on water quality of transboundary basins from nutrient loading and eutrophication/harmful algae blooms will require:*
 - *Facilitating the exchange of information and coordination of expertise across IJC boards,*
 - *Raising the profile of this issue and facilitating effective communication and understanding,*
 - *Improving the capacity to predict when and where algal toxins may occur and the participants agreed that monitoring for algal toxins across transboundary basins is important,*
 - *Organizing a workshop on the role of adaptive management to nutrient loading and algal blooms.*
- *Impacts on quality of transboundary waters from heavy metals and associated contaminants priority will require:*
 - *Clarification of the purpose and scope of this priority,*
 - *A better understanding of the status and characteristics of heavy metals in transboundary basins,*
 - *Fostering a better understanding of ecosystem stressors.*
- *To improve communications there is a need to:*
 - *Understand why IJC/IWI research is important to specific audiences,*
 - *Identify practical, proactive approaches for engaging each target audience,*
 - *Recognize the key challenges related to communicating IWI projects and ways to address them.*
- *To advance geospatial and data harmonization will require:*
 - *Creating and maintaining a common data exchange platform,*

- *Building the capacity of boards to use the common data exchange platform and to develop geospatial datasets and products,*
- *Expanding data harmonization beyond hydrographic data to other datasets.*
- *Moving forward on SPARROW (Water Quality) modelling will require:*
 - *Sharing lessons learned with all boards,*
 - *Providing training on the use and interpretation of model outputs,*
 - *Incorporating climate change into the model.*

In addition to these key messages and suggested actions, the workshop demonstrated that all those boards in attendance were very interested in, and committed to, the IWI. The workshop facilitated a cross-pollination of ideas and opened doors for future cross-board collaboration. With the addition of all IJC boards now involved in the IWI dialogue, as well as changes in board membership, it appears that the Commission should:

- Develop a strategy to consistently inform, educate, and seek input and advice from the boards on IWI and its achievements; and,
- Provide training to the boards on harmonized datasets, SPARROW modelling, communication plans, and applying traditional ecological knowledge.

Over the coming months the IJC will be designing and preparing for the follow-up IWI workshop in April, 2016. This will involve incorporating a broad range of input:

- The findings from this workshop;
- Feedback from the boards on *4th IWI Report to Governments*;
- Feedback from the boards on moving forward with the key messages and suggested actions; and,
- Advice and guidance from the Commissioners.

Introduction

Nearly sixty people representing all but one of the International Joint Commission's (IJC) transboundary boards (*i.e.*, Great Lakes Water Quality Board) gathered in Ottawa to exchange ideas, learn more about IJC's three new strategic priorities for the International Watersheds Initiative (IWI), develop possible strategies to implement these new priorities, and further advance current priorities. Forty-six people attended in-person, comprising board members and Commission staff, and another thirteen people participated via WEBEX ([attendance list](#)).

The specific objectives of the workshop were:

- To obtain board input on the approach and activities (*i.e.*, tools, methods, and products) required to address the Commission's new three strategic initiatives:
 - Impacts on water quantity and quality in transboundary basins from climate change;
 - Impacts on water quality in transboundary basins from nutrient loading and eutrophication/harmful algal blooms; and,
 - Impacts on water quality of transboundary waters from heavy metals and associated contaminants.
- To facilitate board collaboration, knowledge transfer, and discussion on the ongoing IWI strategic initiatives (*i.e.*, Hydrographic Data Harmonization and SPARROW Modeling) and other key board work;
- To explore with the boards how to improve communications and better promote the IWI; and,
- To provide information to the boards on the *4th IWI Report to Governments*.

Commissioners Morgan and Glance welcomed the participants and explained the Commission's hopes and aspirations for the workshop, as well as the IWI more generally. Participants then introduced themselves and got to work on a very ambitious [agenda](#).

Key messages and suggested action items are presented in *italics* throughout this summary report.

4th IWI Report to Government

Mark Colosimo and Pierre-Yves Caux provided a brief overview of the *4th IWI Report to Governments*. The [presentation](#) highlighted the IWI operating principles, identified current

and future strategic priorities, the allocation of past IWI funding across the boards, and where the Commission will focus its attention in moving the IWI forward.

The participants acknowledged that a great deal of good work has been accomplished through the IWI. The participants suggested that the Commission should highlight the accomplishments of IWI through a “story map” on the IJC website.

Given that participants only had a limited amount of time to review the report prior to the workshop, they agreed to provide more comprehensive input on the report to the Commission for the April 2016 IWI workshop.

IWI Communications

Nick Heisler and Frank Bevacqua provided an overview of communication challenges and the need to develop messages for scientific studies that target a variety of audiences. Their [presentation](#) highlighted the importance of a good communications plan that is in place from start to finish for an IWI project, and not waiting until the final reports are being released to develop such a plan.

The participants agreed that a well thought-out communications plan should be a priority for all IWI projects, and that one effective approach to achieving this goal is to engage stakeholders (e.g., scientists and interest groups) in the design and implementation of the communications plan itself. This approach should ensure that research and other IWI efforts are shared with key audiences in an effective and timely manner.

Update on Current IWI Strategic Priorities and Other Initiatives

Several Commission staff and board members provided short, informative presentations on current IWI strategic priorities and other key IWI work. A total of six presentations were given on the following topics:

1. *Geospatial and Hydrographic Data Harmonization*

The [presentation](#) by Michael Laitta and Wayne Jenkinson provided an update on hydrographic data harmonization. It also covered the range of geospatially-related activities that the Commission is focusing on and highlighted the findings from a recent survey on geospatial data and product needs.

The participants were very interested in the data harmonization work and requested information on where the harmonized data are stored and how it can be accessed.

2. ***SPARROW (Water Quality) Modelling***

Nicole Armstrong and Glenn Benoy gave a [presentation](#) on binational water quality modelling work. They highlighted findings and conclusions, and described how the information is being used for different jurisdictional purposes. They explained the next steps for this current strategic priority, including the application of the model to other transboundary basins.

Participants expressed a lot of interest in the binational water quality modelling and wanted to know how it could be expanded into other basins where the Commission has a water quality mandate.

3. ***International Water Quality Objectives Analysis***

This [presentation](#) explained the ongoing review of international water quality objectives and the parameters reported on by various boards. Mark Gabriel and Glenn Benoy also described how the review is being conducted, along with the associated deliverables and timelines.

Participants from boards with a water quality mandate were particularly interested in knowing more on how they will be engaged in the international water quality objectives analysis and how the findings of this work will be reported.

4. ***Pembina River Hydraulic Modelling Project***

This multi-phased hydraulic modelling work demonstrates the considerable effort that is required to establish a scientifically credible foundation for making decisions. Mike Renouf's [presentation](#) explained the project history and culminated in how the Commission is helping jurisdictions find solutions for resolving a long-standing flooding issue in the basin.

The participants acknowledged that the Pembina River Hydraulic Modelling Project is a good example of how, through the IWI, the Commission is achieving its mandate to prevent and resolve water-related disputes.

5. ***Rainy River/Lake of the Woods Fisheries Project***

Gail Faveri's [presentation](#) illustrated how conventional science and "traditional ecological knowledge" (or TEK as it is often referred to) is being used to identify when sturgeon may be spawning and how to minimize any detrimental impacts due to flow regulation. The project demonstrates how the Commission is working closely with First Nations in addressing environmental issues.

The participants agreed that the Rainy River/Lake of the Woods Fisheries Project is very innovative in its use of traditional ecological knowledge and expressed an interest in learning more about the results once the project is completed.

6. ***Great Lakes- St. Lawrence Adaptive Management Committee***

To illustrate how the Commission is incorporating adaptive management into transboundary water level and flow regulation, Wendy Leger and Kyle McCune provided a [presentation](#) on how adaptive management is being applied in the St. Lawrence-Great Lakes basin. They also highlighted how IWI funding is being used to conduct some essential work and the relevance of this work to other boards.

The participants likewise agreed that the Great Lakes- St. Lawrence Adaptive Management Committee's work provides an excellent example of, and a number of transferrable lessons on, how to integrate adaptive management into transboundary water-level and flow regulation.

First Break-out Session

Following the informational presentations the participants engaged in two rounds of smaller group dialogue.

During the first round, participants were pre-assigned to address the three new strategic priorities for IWI. Each facilitated dialogue revolved around the following questions:

1. Is this strategic priority clear? If not, how could it be improved?
2. What work has your board undertaken with respect to this priority? What work might it undertake?
3. What are some specific tasks or work the Commission could focus their efforts on under this priority?

The group facilitators were asked to report back to the plenary session with 3 to 4 key messages based on their group's discussions.

Break-out Session # 1: Impacts on water quantity and quality in transboundary basins from climate change.

This break-out group agreed on the following key messages:

Transboundary basins face a variety of impacts due to climate change – The initial dialogue among the participants in this break-out group emphasized that transboundary boards face a wide-range of climate change issues, including changes in:

- basin hydrology, including flood and drought frequency and severity;
- the timing of spring runoff, frequency of winter rain events, and snow accumulation;
- water temperature and ice cover; and,

- uncertain effects of these changes on surface and groundwater availability, water quality, invasive species and the ecosystem health.

The participants also highlighted the variation in people's response to climate change and the potential increase in competing water demands.

Adopt a holistic approach to hydrology in the face of climate change – The participants agreed that IJC should adopt a holistic approach to hydrology given the wide range of conditions that change with a changing climate, and the need to monitor, model, and assess how climate is causing conditions to change. The participants agreed on the need for comprehensive hydrological basin modelling, and recognized the need to review the Commission's Orders of Approval to ensure they are flexible enough to deal with changes in the hydrology and other climate-related conditions. The participants also highlighted the need to identify and examine other tools to help with the inevitable need to prevent and resolve disputes that will likely be more frequently occurring with a changing climate.

Implement an adaptive management approach – Given the uncertainty about how much and how fast the climate will change and how these changes will affect basin conditions, the participants agreed that the Commission and its boards should adopt and implement adaptive management. The group also agreed that funding must be available to adequately monitor the changing hydrology and other basin conditions. The ability to monitor provides essential information needed to reduce uncertainty and guide the process of learning and adapting.

Break-out Session # 2: Impacts on water quality in transboundary basins from nutrient loading and eutrophication/harmful algal blooms.

This break-out group came up with the following key messages:

Facilitate the exchange of information and coordination of expertise across boards – The participants in this break-out group emphasized that nutrient enrichment and harmful algal blooms (NE-HABs) is one of the most significant water quality issues facing most, if not all, of the transboundary watersheds. Although local symptoms of eutrophication may vary, the participants agreed that the IJC should facilitate the exchange of information and coordination of expertise across the boards.

Given the severity of this issue in Lake Erie, Lake of the Woods, and Lake Winnipeg, these boards are already conducting research, developing policy options, and engaging the public. The participants agreed that several lessons can be harvested from these experiences to date, and also emphasized the need to better understand the:

- economic consequences of NE-HABs and how such information could be used to prioritize policies and best/beneficial management practices (BMPs);
- uncertainty surrounding the relative importance of urban loading and the role of combined sewer outflows (CSOs); and,
- influence of zebra mussel infestation on algal communities and bloom dynamics.

Raise the profile of this issue and facilitate effective communication and understanding –

Given the impact of this issue to a variety of audiences within and across nearly all transboundary watersheds, the participants agreed that the IJC could play an important role in raising the profile of this issue to governments. This objective could be done directly through Commission reports, and indirectly through coordinated board-level efforts. The participants agreed that there is a need to:

- foster a shared understanding of the causes of eutrophication; and,
- share knowledge and transfer solutions across boards with respect to BMPs and policy and regulatory responses.

The participants agreed that there is need for a synthesis of:

- BMPs for agriculture and urban lands; and,
- conservation practices for streams, river valleys, wetlands would be of particular value.

Improve the capacity to predict when and where algal toxins may occur – The participants agreed that monitoring for algal toxins across transboundary watersheds is uneven, and that the capacity to predict when and where algal toxins are released is limited by uncertainty related to the:

- chemical conditions of surface waters that may yield toxins; and,
- best way to measure toxicity.

The participants also recognized that boards without water quality mandates (*e.g.*, International Osoyoos Board of Control) are at a disadvantage when it comes to addressing algal toxins and risk to human health.

The participants concluded that IJC should facilitate improvements in the capacity of boards to predict when and where algal toxins may occur.

Facilitate a workshop on the role of adaptive management to nutrient loading and algal blooms – The Great Lakes - St. Lawrence River Adaptive Management (GLAM) Committee representative participating in this break-out group was specifically interested in how changes in temperature and precipitation regimes might affect nutrient loading and the occurrence of harmful algal blooms, and whether restoration or improved management of wetlands represents a way to improve water quality and reduce the frequency and severity of algal blooms.

The participants agreed that adaptive management is one of the most promising approaches to track nutrient loading, algal blooms, and the effectiveness of alternative management strategies.

Break-out Session # 3: Impacts on quality of transboundary waters from heavy metals and associated contaminants.

This break-out group presented the following key messages:

Clarify the purpose and scope of this priority – The participants in this break-out group agreed that the current framing of this priority leads to a variety of interpretations. For example, does “associated contaminants” refer to organometallic compounds that are largely composed of metals (*e.g.*, some pesticides); or is it organic or inorganic compounds that contain metals, or even metal formulation additives? Are we referring to heavy metals (*i.e.*, those deemed toxic), or to metalloids that have different degrees of toxicity? Although the participants eventually agreed that the current framing of this issue seems to refer to “heavy metals and other contaminants that are made up of metals,” they concluded that the purpose and scope of this priority needs to be clarified.

Provide for a better understanding of the status and characteristics of heavy metals in transboundary basins – The participants agreed that there is a widespread need to clarify and communicate the properties of contaminant exposure. To facilitate this objective, the participants suggested:

- generating and sharing accurate, site-specific information; and,
- building on existing knowledge and work.

They also emphasized the need to minimize and mitigate inconsistencies in data collection and evaluation, which can create confusion in the minds of citizens, stakeholders, and officials (*e.g.*, fish consumption advisories vary from jurisdiction to jurisdiction).

The participants also emphasized the need to address impacts of contamination on the entire ecosystem (*e.g.*, when looking at industrial and municipal inputs, what is the impact that these have on the entire ecosystem?).

Foster better understanding of ecosystem stressors – The final key message offered by this break-out group is to foster better understanding of ecosystem stressors (once exposure is clarified). The participants agreed that ecosystem stressors are generally defined as the cumulative impact of potential exposure relative to ecosystem sensitivity, the latter of which would have to be determined. So, for example, it would be important to assess the multiple industrial operations in a particular transboundary watershed so as determine their cumulative impacts of the ecological carrying capacity of the system.

Second Break-out Session

After the first round of break-out sessions, participants were free to participate in one of three groups, each addressing a different topic. The three topics, their guiding questions, and key take-away messages for each are as follows.

Break-out Session # 4: Communications

This break-out group was asked by the workshop organizers to address three questions:

1. What areas are the Commission/boards doing a good job with respect to communications on IWI?
2. What are the areas where the Commission/boards could improve upon?
3. What types of communications should the Commission/boards use to promote the three new strategic initiatives?

These questions were not addressed, instead the facilitators of this break-out group decided to focus the conversation on developing a communications plan for an actual IWI project that was presented at the workshop (Rainy River/Lake of the Woods Fisheries Project).

Following the steps of preparing an effective communications plan presented earlier in the day, the participants identified the:

- audiences that are likely to have the greatest interest in the findings of this ongoing research (the dam operators, First Nations, user groups (*i.e.*, boaters, fishers, cottagers), and the environmental NGO community);
- communication messages (including the correlation between water temperature and the onset of spawning, which allows for more precise timing of water flows, as well as the correlation of indicators from traditional ecological knowledge);
- most effective mechanisms to share information and engage people (the participants concluded that a joint press release by stakeholders involved in the research, including the power companies, researchers and First Nations, would be a powerful way to add credibility to the findings); and that in-person meetings might be the best method for engaging First Nation audiences; and,
- communication challenges, including the fact that talking about research findings can be technical and dry. Capturing interesting anecdotes from the process, as well as relating unexpected findings, can help in developing an engaging story.

The participants also addressed the challenge of internal communications, and the limited capacity of IJC staff. The participants thought that the IJC communication advisors should be assigned to specific boards to provide guidance and support. It was also noted that enhancing the communications capacity of the boards might be a consideration when board members are selected and appointed.

The key messages from this exercise are:

- understand why IJC/IWI research is important to specific audiences;
- determine practical, proactive approaches for engaging each target audience; and,
- identify the key challenges related to communicating about the project and ways to address them.

Break-out Session # 5: Geospatial and Data Harmonization

The guiding questions for this break-out group were:

1. How important is this work to your board and why?
2. What could/should be done next with respect to these tools?
3. What can the Commission/boards do to better advance this work?
4. How can geospatial tools and data harmonization be used to contribute to the three new strategic initiatives?

This break-out group submitted the following key messages:

Create and maintain a common data exchange platform – Many of the participants in this break-out group recounted their experiences of trying to piece together transboundary data and identifying currently available information. Many of the participants explained that they do not know how to find/access the harmonized hydrographic datasets, for instance. In conclusion, the participants agreed that the IJC should create and maintain a common data-sharing platform for use by all the boards. A common data exchange platform would not only inform current and emerging management issues, but also help identify data gaps.

The participants expressed an interest and/or need for “harmonized data” for a variety of purposes, including:

- data for modelling and model development (*e.g.*, Light Detection and Ranging - LIDAR, Digital Elevation Model-DEM);
- human health data (both occurrence and source/cause information);
- hydrometric and water quality data (*e.g.*, issues with measurement, reporting methodologies); and,
- other purposes.

The participants realized that some of these needs and interests may fall outside the scope of IJC’s existing data harmonization initiative.

They also identified several challenges related to creating a common data exchange platform, including: who would own, manage, and maintain the data? and, where would the data reside?

Build the capacity of boards to use the common data exchange platform and to develop geospatial data and products – Building on the first key message, the participants quickly agreed on the need for IJC staff to provide training to build the capacity of boards on how to develop and use some of the data and tools available on the common data exchange platform. The participants suggested that each board could identify a local geospatial or data harmonization “champion.” This champion could be trained and develop geospatial skills and work to develop applications or data as required by the board with assistance from the IJC geospatial team. The participants also discussed the need for a process by which the boards could request geospatial help or get access to data.

Expand data harmonization beyond hydrographic data – The participants agreed that the existing and emerging hydrographic harmonization data will be useful for a variety of purposes. They also suggested that other data-sets would be valuable to harmonize from a modelling perspective, such as elevation data and land use cover.

Break-out Session # 6: SPARROW (Water Quality) Modelling

The guiding questions for this break-out group were:

1. How important is this work to your board and why?
2. What could/should be done next with respect to this tool?
3. What can the Commission/boards do to better to advance this work?
4. How can SPARROW modeling be used to contribute to the three new strategic initiatives?

This group agreed on the following key messages:

Share lessons learned with all the boards – The participants in this break-out group were either currently involved with SPARROW modelling or were curious to learn more about it; they seemed to be impressed by the experiences of modelling the Red-Assiniboine basin and the Great Lakes basin, both of which suggest the value of modelling other transboundary watersheds. That said, the participants also raised a number of questions related to spatial scale (how small is too small? how big should it be?), and what water quality parameters could be modelled, other than nitrogen and phosphorus? The participants concluded by suggesting that IJC staff and boards should share the lessons learned to date with all the boards (*e.g.*, through fact sheets and webinars).

Provide training on the use and interpretation of model outputs – The participants seemed to appreciate the value and multiple uses of the model and its outputs. Among other things, they learned that the calibrated SPARROW model represents the initial value and use of the model, and that the model can be used with decisions support systems as well. The participants concluded, in part, that the IJC should provide training on the use and

interpreting outputs of the model, including an appreciation of the uncertainties and appropriate use for policy development.

Incorporate climate change into the model – After learning how the SPARROW model works (*i.e.*, particularly the underlying hydrographic layer) and thinking about the overarching influence of climate change on water quality dynamics, the participants explored how the model could be used in concert with climate models. Some of the participants noted that they are observing changes in temperature and precipitation regimes, and suggested that any long-term, regional water quality model should be responsive to climate change.

Other participants noted that the U.S. Geological Survey is continually looking to improve the SPARROW model by responding to user interests, such as climate change and nutrient fractions (*e.g.*, dissolved reactive phosphorus). Consistent with the IJC's interest in cross-cutting issues, the participants concluded that IJC should incorporate climate change into the modelling scenarios.

Next Steps

The workshop report will be presented to the Commission (tentatively by the end of December) after the boards have had their opportunity to review and input into the report.

Although the 4th IWI Report to Governments was released November 12, 2015 to the public, the participants in the workshop agreed to provide additional feedback to the IJC on the report: Does it clearly communicate the purpose, scope, and accomplishments of IWI in a compelling way? What, if anything, was missed? How could the IWI process of soliciting, reviewing, and selecting projects be improved? The boards should submit their feedback to the IJC by January 31, 2016, which then will be used to help further shape and guide the IWI.

Over the coming months, workshop participants should share these key messages and suggested actions with all members of their boards and seek input and advice on these questions in an effort to move IWI forward:

1. Which of the key messages, suggested actions, and projects is your board currently working on and how? Are they currently identified in the work plan of the board?
2. Which of the key messages, suggested actions, and projects would you most like to start working on if time and resources are available? Is your board interested in adding them to the board's work plan?
3. Which of the key messages, suggested actions, and projects would you most like to work on with other boards? Is your board interested in adding them to the board's work plan?

The boards should submit their feedback to these questions to the IJC by February 28, 2016 in order that it can be synthesized and presented at the follow-up IWI workshop.

The workshop organizers received a considerable amount of feedback in-person and in-writing, through the on-line survey, that the workshop was extremely useful and well organized and facilitated. Many participants felt that more time could have been allotted to the round table discussions and break-out groups so as to be to provide more insights and fleshing out of ideas.

All the above information will be used in the design and preparation for the follow-up IWI workshop in April 2016.

Attachment 1. List of attendees who attended in-person or remotely to the workshop event.

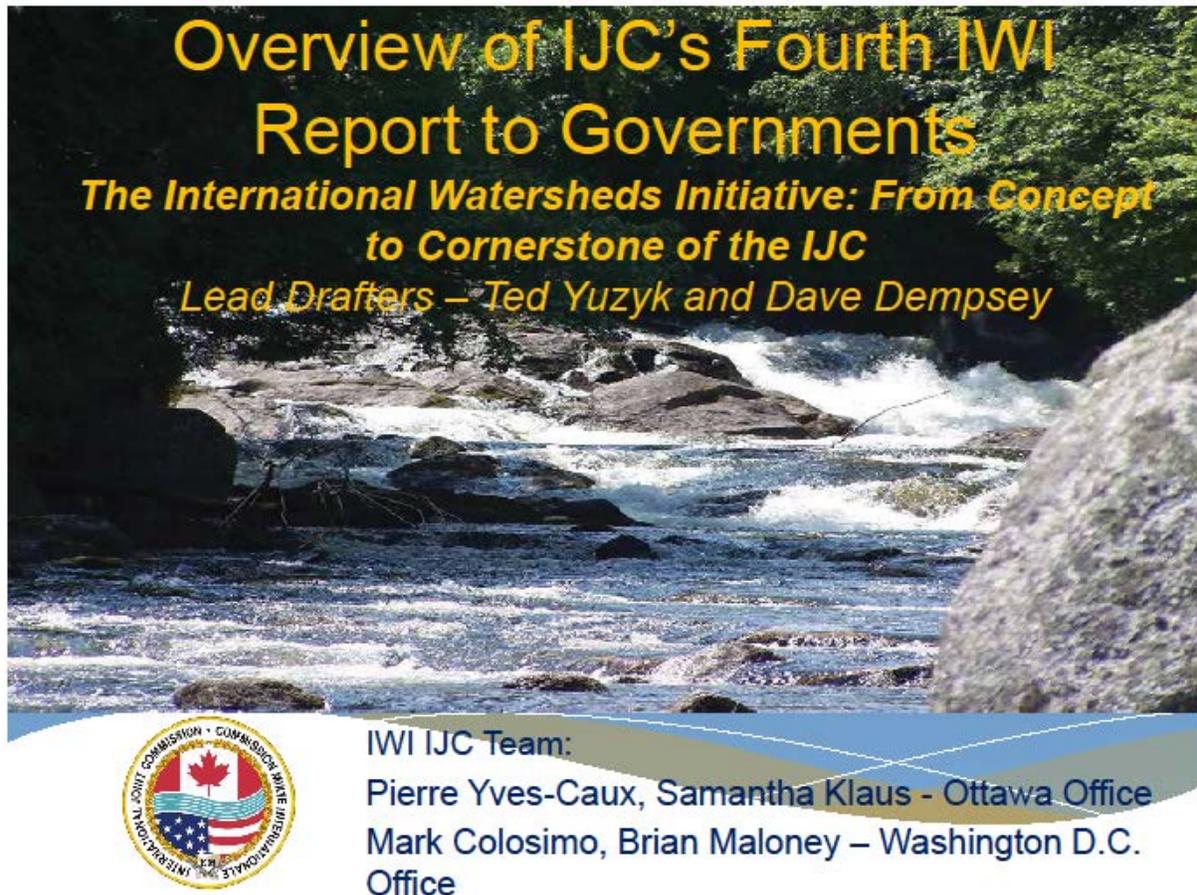
IWI Multi-Board Workshop Attendee List
 October 27, 2015
 Ottawa IJC Office

In-Person Attendees:

| Affiliation | Name |
|--|----------------------|
| International Joint Commission – Canadian section Commissioner | Richard Morgan |
| International Joint Commission – US section Commissioner | Derreth Glance |
| Facilitator – University of Minnesota | Matt McKinney |
| Great Lakes Adaptive Management Committee | Kyle McCune |
| | Wendy Leger |
| Great Lakes Science Advisory Board – Science Priority Committee | Carol Miller |
| | Jeff Ridal |
| Health Professionals Advisory Board | Laurie Chan |
| | Seth Foldy |
| International Lake Superior Board of Control, International St. Lawrence River Board of Control, Great Lakes Adaptive Management Committee | Rob Caldwell |
| International Niagara Board of Control | Aaron Thompson |
| | Derrick Beach |
| International Niagara Board of Control, International Lake Superior Board of Control, International St. Lawrence River Board of Control, Great Lakes Adaptive Management Committee | Arun Heer |
| International Osoyoos Lake Board of Control | Anna Warwick-Sears |
| International Osoyoos Lake Board of Control, International Columbia River Board of Control | Marijke van Heeswijk |
| International Osoyoos Lake Board of Control, International Columbia River Board of Control, International Kootenay Lake Board of Control | Bruno Tassone |
| International Rainy Lake-of-the Woods Watershed Board | Todd Sellers |
| International Rainy Lake-of-the Woods Watershed Board, International Red River Board, International Souris River Board | Scott Jutila |
| International Rainy Lake-of-the Woods Watershed Board, International St. Lawrence River Board of Control | Gail Faveri |
| International Red River Board | Mike Renouf |

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Attachment 2. Overview of IJC's Fourth IWI Report to Governments



**Overview of IJC's Fourth IWI
Report to Governments**
*The International Watersheds Initiative: From Concept
to Cornerstone of the IJC*
Lead Drafters – Ted Yuzyk and Dave Dempsey



IWI IJC Team:
Pierre Yves-Caux, Samantha Klaus - Ottawa Office
Mark Colosimo, Brian Maloney – Washington D.C.
Office

Note: Double-click the image in order to view the embedded presentation.

Why Communicate About IWI Projects

Nick Heisler

Multi-Board Discussion

October 27, 2015

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Geospatial and Hydrographic Data Harmonization

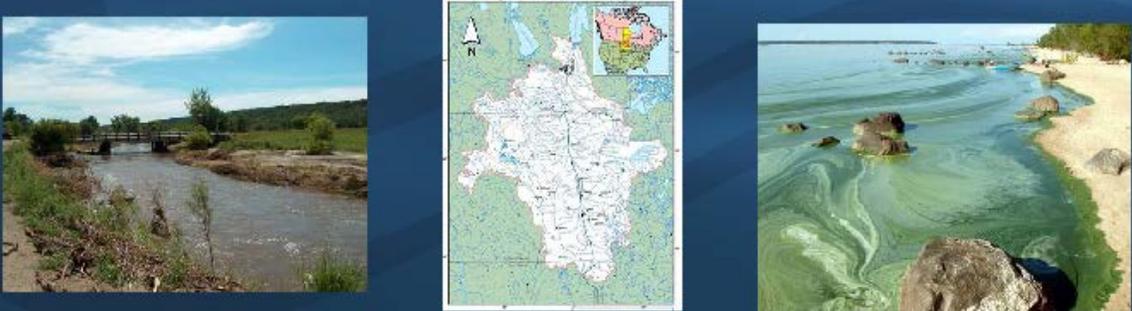


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Attachment 5. SPARROW Modelling: A Tool to Address Water Quality Issues in the International Red-Assiniboine River Basin

SPARROW Modelling: A Tool to Address Water Quality Issues in the International Red-Assiniboine River Basin



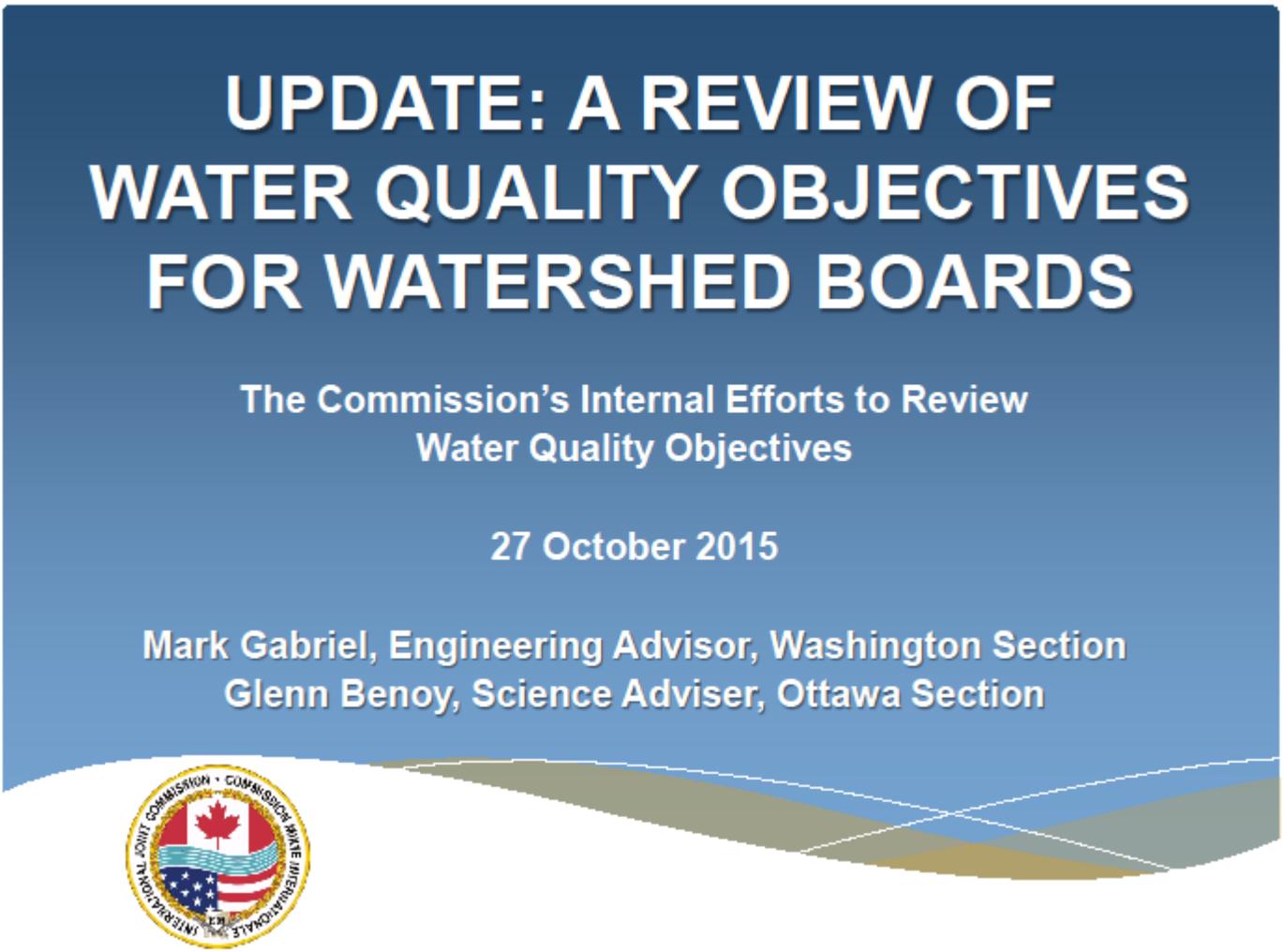
**Presentation at the Fall 2015 IJC Semi-annual Meeting
IWI Multi-board Workshop**

**Nicole Armstrong (Co-Chair IRRB's Water Quality Committee and Manitoba CWS)
Glenn Benoy (International Joint Commission)**



A century of cooperation protecting our shared waters www.ijc.org

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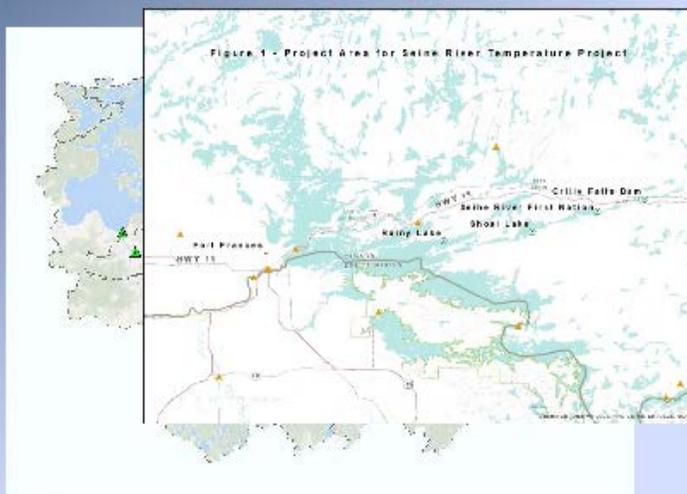
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IRLWWB – IWI Proposal: LOWRR-01-2015

Seine River Temperature Project



John Kabatay, Tom Johnson,
Ryan Haines,
Nolan Baratono, Gail Faveri

27 October 2015



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