



Impact Assessment
Agency of Canada

Agence d'évaluation
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MEETING

Technical Advisory Group: Lake Manitoba and Lake St. Martin Outlet Channels Project

June 2-3, 2020

8:30 a.m. to 4:00 p.m. (via videoconference)

Meeting Notes

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June 2, 2020 (Day One)

OPENING PROTOCOL

Harold Tarbell, Facilitator, welcomed participants to the June 2-3, 2020 Technical Advisory Group (TAG) videoconference meeting on the Lake Manitoba and Lake St. Martin Outlet Channels Project at approximately 8:40 a.m. He acknowledged the traditional territories on which the meeting was being held, and the lands and waters that were directly or peripherally affected by the project.

Jim Ransom, Harold Tarbell Facilitation, shared a Thanksgiving Address (the “Ohen:ton Kariwatehkwen”) traditionally offered in Mohawk communities to open and close meetings, and to give thanks for fulfilling responsibilities to take care of creation.

1. LOGISTICS

Facilitator Tarbell explained that he had been tasked with facilitating the June 2-3, 2020 Meeting, and that Matthew Dairon, Impact Assessment Agency of Canada (the Agency), was hosting the meeting and would address any technical issues.

During a review of the agenda for the June 2-3, 2020 meeting, it was confirmed that the TAG meeting was not a replacement for engagement or consultation.

2. WELCOME AND OPENING REMARKS

Jennifer Saxe, Director General, Regional Operations, Impact Assessment Agency of Canada

Director General Saxe reviewed her role as lead on environmental assessments for major projects, and thanked attendees for joining the second TAG meeting. She acknowledged the traditional territories in which the Lake Manitoba and Lake St. Martin Outlet Channels Project is proposed.

Director General Saxe recalled the first TAG meeting held in June 2019, at which the Agency heard concerns that TAG members’ needs were not being met, and received requests for engagement with Manitoba Infrastructure (MI). The June 2-3, 2020 meeting was structured to include detailed presentations and engagement with MI and representatives from Stantec Consulting Inc. (Stantec).

It was further noted that:

- The revised Terms of Reference were provided for the “Technical Advisory Group for the Federal Environmental Assessment of the Lake Manitoba and Lake St. Martin Outlet Channels Project”, dated May 21, 2020 (see attached “List of Appendices)
- The Agency accepted a revised Environmental Impact Statement (EIS) for technical review in March 2020, which included additional information in response to gaps identified; further information is anticipated throughout the Environmental Assessment (EA) process
- Feedback identified challenges with gathering project information after the technical review; the final project report submitted to the Minister will include recommendations based on science and Indigenous knowledge
- The meeting intended to provide an opportunity for Métis, First Nations and municipalities to communicate with the proponent, on mitigation and monitoring plans

- Key objectives for the meeting included receiving an update and an enhanced understanding of the project and the environmental assessment process
- MI will provide information on the EIS, including information on potential effects and mitigation; time will be provided for questions and discussion.

The Facilitator invited a participant to read aloud a June 1, 2020 letter sent to the Agency on behalf of Interlake Reserves Tribal Council regarding “Lake Manitoba and Lake Saint Martin Outlet Channels, IAAC Reference #80148”. The letter was emailed to participants for information (see attached “List of Attachments”).

3. OVERVIEW OF FEDERAL ENVIRONMENTAL ASSESSMENT PROCESS TO DATE

Matthew Dairon, Project Manager, Impact Assessment Agency of Canada

Matthew Dairon reviewed the six steps outlined in the chart titled “Environmental Assessment Process, Lake Manitoba and Lake St. Martin Outlet Channels Project”, dated June 2020 (see attached “List of Appendices”) and commented on:

- Future opportunities for the TAG to discuss information requests, and the feedback received during the technical review of the EIS
- MI’s response to some (12) of the information requests submitted on April 23, 2020:
 - o The responses will be posted to the website and available to TAG as soon as possible
 - o MI’s responses to the remaining questions are anticipated
- Information received can be pieced together into an EA report, which can be updated as new information arrives:
 - o The Agency-produced document will be informed by the TAG, federal departments, Indigenous groups, and others
 - o The draft will be shared for comments, and finalized for the Minister’s review and decision.

During a review of the document titled, “Frequently Asked Questions - Lake Manitoba and Lake St. Martin Outlet Channels Project” (see attached “List of Appendices”), it was noted that efforts were made to promptly post feedback received. Mr. Dairon acknowledged that the protection of information submitted to be shared and posted, was not guaranteed.

In response to questions raised, the Facilitator confirmed that perspectives shared by participants were appreciated, and that comments submitted in the videoconference “chat room” and verbally, would be included in the notes of the June 2-3, 2020 meeting.

Meeting Discussion

The Facilitator welcomed questions and comments (Q/C) from participants, and responses (R) from the presenters, which prompted the following:

Q/C: Can Agency representatives explain why this project was not referred to a review panel? The registry needs to be better organised to make it easier to find documents and understand the types of documents available. There are significant gaps in due process.

R: *Early in an EA process, the Minister may refer a project for review. The Canadian*

Environmental Assessment Act (CEAA) lays out criteria the Minister will consider. The Minister took into account concerns related to Indigenous and other groups. An Agency-led EA process is underway. The TAG was established to support those with an interest in the project, with opportunities for understanding.

Q/C: How will the Agency improve the comments section in the registry? It includes a wide range of documents, without a users' guide. It does not have a folder of comments received on the first version of the EIS.

R: *The Agency's registry is an online document-sharing platform intended to outline what projects are under review, what stages of the EA they are at, and to notify when certain documents are received. The registry enables the Agency to convey information. Comments received specific to Lake St. Martin are indicated online, in a separate folder.*

Q/C: Consider asking users whether the site is efficient. There are over 150 documents to search through. Do TAG members have access to Poplar River First Nation's comments on the initial version of the EIS? Is there a search function provided to make it easier to search through the comment section?

R: *It can take some time for documents submitted to be posted to the registry. If there is a specific document you are looking for, please email us for assistance. We may be able to help with your search and can send a link to the document you are looking for.*

Q/C: Comments submitted on the first version of the EIS have been posted separately. They should be accessible with the current comments.

R: *Any comments on the earlier and revised versions of the EIS should be posted. If they are not posted, we can request that this be addressed.*

Q/C: How does the Agency track information received related to this project? Were any adjustments made in response to comments received? Will materials be readily available on the Agency's website?

R: *We can discuss concerns related to any comments that were not addressed directly. The Agency has a website designed for collaboration and sharing of TAG-related documentation (www.iaac-aeic.gc.ca/050/evaluations/exploration?projDocs=80148). To keep members informed, efforts are being made to ensure regular communications, and to ensure that sharable information is accessible as soon as possible.*

Q/C: The Little Saskatchewan First Nation (LSFN) would be severely impacted by the proposed project. Consultation and accommodation with LSFN must be on the "deep end" of the Haida/Mikisew consultation spectrum. Complete and accurate information, complete context, and transparency is critical.

LSFN was surprised that the EIS was accepted in its current form for technical review, as our review found the second version of the EIS continued to be incomplete against the EIS guidelines.

Also, it is important to acknowledge difficulties for everyone during the COVID-19 crisis. For LSFN and many First Nations involved in this process, this EA has been occurring throughout a nine-year period of crisis and emergency. The COVID-19 crisis has added another layer of difficulty, compounding the even greater, ongoing challenges confronted by LSFN and the other communities over the past decade dealing with: the continued impacts of the 2011 and 2014 floods; impacts of the October 2019 snow storm; and, the impacts of successive evacuations.

R: The EIS Conformity Review was not initially incorporated into the process. There are caveats for the proponents presenting information and providing rationale. During the technical review, we reviewed the validity of the information provided and asked technical questions. The Agency's intent is that views can be explored during the technical review process. We want to further the consultation process, and recognize limitations due to current social restrictions.

Q/C: I agree with the statements regarding the current version of the EIS. A comparison of EIS content charting through our office, shows that there are areas in the EIS that are still not conforming to the guidelines. How will the Agency deal with the areas identified during the Conformity Review?

R: Efforts are being made to address the information gaps. There are levels of engagement. We are working with MI to address the gaps. The level of information needed to inform the Minister's decision has not changed.

Q/C: Misiwistik Cree Nation (MCN) shares the concerns about the EIS conformity issues. Here is a direct quote from Misiwistik's formal EIS response: "The EIS, as submitted, demonstrates a significant lack of engagement and consultation, a lack of understanding of Indigenous rights, a lack of appropriate methodology, and a stark failure to comply with guidelines clearly expressed by CEAA at the outset. Unfortunately, these gaps undermine the validity and legitimacy of every aspect of the EIS that requires Indigenous engagement and consultation."

Q/C: Step 6 of the EIS process says it will be determined if there are "significant" adverse effects. What is the definition of "significant" and to "whom" are the affects "significant"? Our communities have already experienced significant adverse effects by the work that has been undertaken on this project.

R: The final EA decision will focus on significant and adverse effects. The report can discuss and identify recognized and remaining effects. Indigenous groups specified they have experienced effects of these projects, past actions and flooding.

Q/C: Thanks for your response, regarding the Agency's commitment to ensure that all information gaps and inadequacies in the EIS are addressed through the information request process. LSFN expects the critical information gaps in the EIS to be fully addressed before the EA process moves to the review of the draft EA report phase.

R: *TAG informs consultation but does not replace consultation. There will be opportunities to submit comments during the June 2-3, 2020 meeting, and outside the meeting.*

4. **PROJECT OVERVIEW, PURPOSE, COMPONENTS, ALTERNATE MEANS**

Christine Baljko, Director of Environment and Consultation, Manitoba Infrastructure

Christine Baljko, MI, acknowledged her colleagues in attendance Jaime Smith, Scott Johnstone and Stephanie Woltman; and extended thanks to participants for attending the meeting to provide comments and questions, and to the Facilitators for supporting the meeting's process.

Ms. Baljko confirmed the objective to provide as much accurate information as possible, and noted that if she or any member of the project team was unable to provide a complete answer to a question, efforts could be made to follow-up as required.

Ms. Baljko reviewed pages 1-15 of the presentation titled "Lake Manitoba, Lake St. Martin Outlet Channels Project" (see attached "List of Appendices"), and commented on:

- The intent of the project to represent a solution to mitigate a long-term issue of flooding in the Lake Manitoba and Lake St. Martin area
- The province's review of a number of options considered
- The province's recommendation to move forward with flood protection measures for the lakes, by developing two outlet channels
- Design features of the Lake Manitoba Outlet Channel (LMOC) and Lake St. Martin Outlet Channel (LSMOC)
- Project overview/benefits of the solution developed
- Next steps in the EA process, including: addressing technical questions received; working towards additional authorizations; and determining how to move forward given the existing restrictions
- Further information is available on the project, at www.gov.mb.ca/mit/wms/lmbldsmoutlets; additional inquiries can be emailed to channels@gov.mbc.ca

Meeting Discussion

The Facilitator welcomed questions and comments (Q/C) from participants, and responses (R) from the presenters, which prompted the following:

Q/C: Is there documentation on the review of all the options considered by MI?

R: *There are reports posted and accessible on the website, developed by KGS (including "The Stage 2 Report").*

Q/C: The alignment through the Rural Municipality of Grahamdale will go through prime agriculture land. Previously, land has been expropriated by the province, causing farming

families and others to move away. MI may have selected a poor option for this project.

R: This comment will be brought back to the project team, for a response from the appropriate expert.

Q/C: Were any flooding scenarios applied in the EIS other than in previous scenarios? Why is the 2011 water level considered as the maximum amount of water for planning the scenarios?

R: This question will be conveyed, for a response from the appropriate expert.

Q/C: Further information would be helpful on the alternative projects considered for flood mitigation and the benefit cost analysis done on those projects. A number of the projects considered would have stored water on the prairies, which is valuable to agriculture, the environment, municipal drinking water supply, etc. This was not accounted for in the cost benefit analysis. It only considered benefits from costs saved by flood protection. After reviewing the projects, the benefit cost analyses were unfair. Why were only benefits of the flood protection costs, particularly in south west Manitoba?

R: This question will be conveyed, for a response from the appropriate expert.

Q/C: Regarding the project description for the LMOC, was the conceptual design for the inlet structure included in the project description? I do not see any information on that structure and how it will function. Is it a gated structure? What is the inlet going to consist of? Why is the information not included in the project description or the EIS? Why has the access road not been considered in the EIS?

R: Section 3.4.2.3 of the main text in the EIS describes the water control structure for Lake Manitoba. The emergency channel was not initially required, and has some disadvantages. To use the emergency channel, the access road was required. MI has a responsibility to maintain flood protection on Lake St. Martin.

Q/C: Clarification is needed on who Christine Baljko is representing, as she referenced statements that indicated she may be representing the provincial Crown. It was understood that MI was the proponent on this project.

Why did the province disregard the Section 35 process for the access road? There are multiple supreme court rulings that specify Section 35 is required. There was no Section 35 process at the provincial level for the access road.

Q/C: Regarding flood management overall, this has been occurring in Manitoba for a long time. It has always been about “moving the risk around”. A requirement of the EIS is to talk about costs and benefits for affected communities, and how the project fits into the existing flood management control structures.

Is there an intention for MI to provide a supplementary submission that provides this analysis? Can MI confirm whether the project purpose is to prevent flooding on both lakes in the future, not just on Lake Manitoba? When the proponent confirms the capacity of the LSMOC and operational guidelines, will they keep water levels at or below 800-feet in Lake St. Martin, in the event of a flood similar to the levels of the 2011 floods?

The EIS indicates Manitoba will seek easements that would prevent flooding on reserve lands around Lake St. Martin. Is the project designed to prevent flooding on both lakes? Why would Manitoba seek flood easements to continue flooding reserve lands? The purpose of the project, as stated in the EIS, is to prevent flooding on Lake St. Martin and Lake Manitoba. There needs to be greater transparency on this.

R: We respect Peguis First Nation's view on consultation. MI is the Crown and the proponent in this case. We will move forward in fulfilling Manitoba's requirement for Crown consultation, and as a proponent. We will hold discussions with Peguis as needed. In Chapter 3 we discussed how this project works with the existing flood infrastructure. We are pleased to provide opportunities for follow-up discussions.

Questions on the operating guidelines and continued flooding on Lake St. Martin will be conveyed, for a response from the appropriate expert.

Q/C: Why did MI not utilize the Golder Report for the EIS application and its mitigation measures? Lake sturgeon spawn at the end of the channel; however, MI continues to construct its channel, which will impact this. The channel's right of way was already cleared, which has impacted a prime area of moose hunting in Dauphin River First Nation. The LSFN graveyard will be at risk if the channel is constructed due to the water levels. The fishing industry will be destroyed due to this construction because of Lake St. Martin becoming a reservoir, rather than its nutrient-rich lake.

MI has shared that they wanted to reset the relationship with the Interlake Reserves Tribal Council (IRTC) and its member communities; however, the illegal clearing that occurred in the spring of 2019 shows that the relationship would continue to be one where the Province would prefer do things "to us" rather than collaborate "with us".

R: Efforts were made to demonstrate how information received over the last few years has been incorporated, including information that communities provided. The information received has been used, and MI hopes to discuss how to gather more. Field investigation work has occurred for a number of years, and will help ensure there is accurate design work incorporated into future planning. MI's presentation will provide further information.

Q/C: Is the Golder Report posted in the public registry as part of the record for the Inlet Channels project ?

R: I do not believe the Golder Report has been posted to the registry.

Q/C: Has MI reviewed all federal/provincial agreements for existing flood infrastructure, which the water headed to the channel will use? If so, please share the results of that review.

R: *This question will be conveyed, for a response from the appropriate expert.*

Q/C: The KGS report titled, “Assiniboine River and Lake Manitoba Basins Flood Mitigation Study”, dated January 2016, recommended a combined approach to addressing flood vulnerabilities, especially on the Assiniboine River. This included the Lake Manitoba and Lake St. Martin Channels, along with upgrades to the Portage Diversion and dike improvements along the Assiniboine River. This combined approach does not seem to be explained in the EIS. Could you explain where in the project justification this context is explained, or how the current project differs from the KGS 2016 recommendations?

Q/C: If Manitoba allows Lake St. Martin to rise to 806-feet (i.e. flood levels) it would have a major impact on the farmers and residents in the Rural Municipality of Grahamdale.

R: *The “Assiniboine River and Lake Manitoba Basins Flood Mitigation Study” recommended proceeding with the LMOC and LSMOC as a priority.*

Q/C: Please comment on federal/provincial agreements related to flood infrastructure, referenced in the slide presentation.

R: *There is a document posted on the website that indicates the results of the review of northern flood agreements.*

Q/C: Will there be any funds available to support the work associated with the increase in TAG meetings? Will funds be available to the Rural Municipality of Grahamdale to attend meetings?

R: *There is funding available through the Participant Funding Program for the TAG. Contact Matthew Dairon for further information.*

Chat Window Comments

During discussion on this section of the presentation, participants offered the following additional comments in the videoconference chat window, which were not read aloud:

- I agree with an earlier question regarding MI as the proponent and not the Crown. Even Manitoba Hydro is clear that when public works are being assessed in Manitoba, they do not speak for the Crown and do not undertake consultations.
- During your next steps, what other work do you plan to do on the land, and when and where are you planning it?
- It is critically important that questions be answered on the project’s purpose and distribution of the impacts of this flood management project.
- Stantec representatives should not answer questions specific to the Manitoba government’s roles and responsibilities.
- To better understand the project purpose, it is important to know whether it is expected that flooding will continue, on First Nations reserve lands on Lake St. Martin.

5. ENVIRONMENTAL MANAGEMENT, MITIGATION AND MONITORING PLANS

Chris Propp, Hydrologic Services Engineer, Manitoba Infrastructure

Chris Propp reviewed pages 17-32 of the presentation titled “Lake Manitoba, Lake St. Martin Outlet Channels Project”, and commented on:

- MI’s use of water balance models for the Lake Manitoba, Lake St. Martin, and Lake Winnipeg system to simulate various operating conditions over 100 years of recorded data
- Lake Manitoba/Lake St. Martin Water Balance Model Calibration Results
- Operating guidelines developed for the permanent outlet channels, through an iterative approach, which assessed hydrologic conditions, including multiple decadal wet/dry cycles
- Guidelines for the LMOC and the LSMOC
- Simulation results for Lake Manitoba and Lake St. Martin.

Meeting Discussion

The Facilitator (F) welcomed questions and comments (Q/C) from participants, and responses (R) from the presenter, which prompted the following:

Q/C: My understanding of the water balance model, is that Lake St. Martin was treated as one lake. In fact, there is a south basin and north basin that are connected by narrows, that will act like a river as a result of the additional inflow at 7,500 cubic feet per second (cfs), with the LMOC and the contributions of the Fairford River. This increased inflow to the south basin will elevate the south lake, due to the narrows constriction.

In large flood events, like the 2011 flooding, the differential elevation between the lakes could be in the order of three feet. This impacts the performance of the LMOC and LSMOC and will impact the 806-foot Lake St. Martin flood easement, currently being negotiated with the First Nations. Flood benefits for Lake Manitoba will not be achieved because of the hydraulic restriction. Does MI foresee the hydraulic model being upgraded to address this issue?

R: *The water balance model does not have this built in. We are looking at this through the channel design team, and we will build it into the hydraulic model. In terms of flood protection, the channels will be designed so that the level is the target elevation (i.e. 800-feet in the south basin). The design team will ensure the channels can meet the flood protection requirements and will not have a phenomenal result on just one side of the lake.*

Q/C: A response was requested to an earlier question: “The EIS indicates Manitoba will seek easements that would prevent flooding on reserve lands, around Lake St. Martin. Is the project designed to prevent flooding on both lakes? Why would Manitoba seek flood easements to continue flooding reserve lands? The purpose of the project, as stated in the EIS, is to prevent flooding on Lake St. Martin and Lake Manitoba. There needs to be greater transparency on this.”

R: The easements were negotiated under comprehensive settlement agreements and are based on existing infrastructure. We are looking at the existing infrastructure, and the emergency outlet channel (EOC). After 10 years, we could consider reducing the flood easement level, accordingly.

MI recognizes the flood protection benefit achieved from these outlet channels. The comprehensive settlement agreement and channels are working in parallel with each other. Recognizing the flood risk that exists without the channels in place, is why we are getting the 806-foot easement, with a clause they could be reduced considering the increased flood protection around the lake.

Q/C: Can you restate this? We need to clearly understand the 806-foot easement.

R: The easement is based on the existing infrastructure. It does not include the outlet channels, as proposed. They have not been constructed and have not been licensed yet. Having these easements will address flood risk in the interim, until the outlet channels are in place. Then we would likely have a reduced easement negotiated.

Q/C: The actual flood easement incorporates winds and wave action on Lake St. Martin. Without wind influences, there are 803.5-foot levels. The wind set up and wave action could take levels to 806-feet. Further to this, hydraulic restriction could add another three feet in an extreme flood event. With significant hydraulic differential, the channel could create a higher constriction than in 2011.

There is only one gauging station on Lake St. Martin, at the south basin. We need another gauging station on the north basin. These issues need to be addressed in the design and operating rules.

R: We are going to install a temporary gauge today on the north basin. The plan is to have a permanent gauge installed on the north basin. We will need to know the differential between the two lakes. The design team will make sure there is the capacity required within the LSMOC.

Q/C: If Manitoba allows Lake St. Martin to rise to 806-feet, it would have a major impact on the farmers and residents in the Rural Municipality of Grahamdale. No flooding has been asked of the deeded land owners. I understand the operating rules contemplate winter operation.

Based on 100 years of data, the channels will be operated in seven years. In the past 25 or 30 years, there have been seven events. The control structure is 20 kilometres downstream on the LMOC. Given the ice jamming issues and a control structure that will block ice in the channel, the fishers on Lake St. Martin are sensitive to adjustments in the lake level, particularly in the winter. They experience shifting ice problems, which can be impactive.

Have winter operations been considered? What is MI doing to mitigate ice impacts in the channels and shifting ice on Lake St Martin?

R: Overwinter levels contribute to the reasons for so many guidelines for the LSMOC. We looked at keeping those from jumping up as much as we could. Lake Manitoba is not fluctuating significantly over the winter. If you continue operations from the fall into the winter, you will see a stable flow, which should allow for a stable ice cover.

F: Responses have been requested to earlier questions on traditional issues, Lake Winnipeg's fishing seasons, and lake depth measurements.

R: We may need to get back to you on the exact details of considerations in the operating guidelines, rather than providing inaccurate information. We could also forward a copy of the 2003 and 2013 reports, which will include details on who had input, how the regulation ranges were identified, and what factors were included.

R: MI welcomes the opportunity to make the information requests available. Efforts will be made to follow-up with the information requests, in writing or otherwise. I am aware that notetaking is occurring and we commit to responding to questions raised.

We know we have more work to do when it comes to the Environmental Management Program (EMP), and want to reiterate the commitment to community workplans and engagement plans, and to additional discussions on the site-specific management and monitoring plans.

It was confirmed that the slides and information presented by MI and TAG at the meeting were emailed to TAG members, for information.

Chat Window Comments

During discussion on this section of the presentation, participants offered the following additional comments in the videoconference chat window, which were not read aloud:

- What is the invert elevation of the inlet of the LMOC?
- Did any consideration of traditional ecological knowledge on flooding get into the operating guidelines?
- Was the water balance model run for the baseline condition without the Portage Diversion in operation?
- If you operate the LMOC in the winter it would ruin the winter commercial fisheries in the south basin of Lake St. Martin.
- Were the Lake Winnipeg fishing seasons taken into account when developing operation guidelines for the channels?
- Lake Manitoba is a large lake, and presumably when Portage Diversion is fully open, there would be variation in depths across the lake over time. Are these average depths included in the operating guidelines? Where on Lake Manitoba is water depth being measured for making determinations for the guidelines?

- What about solid ice on Lake Winnipeg that can occur in May and June, while rapid thawing is happening elsewhere? Why are levels of water and ice in Lake Winnipeg not considered relevant in the EIS?
- Can you clarify that Lake St. Martin will never go above 800-feet? Why is Manitoba requesting a 806-foot easement on Lake St. Martin?
- Does the hydraulic model used in the EIS include flow constriction at the narrows, between the south and north basins of Lake St. Martin?
- How was an independent external review of these guidelines undertaken before the EIS was submitted? Who participated in the review?
- Did the hydraulic model erroneously treat LSM as a single basin lake system, ignoring effects on flow caused by the narrows? It would have the result of under-estimating peak water levels in the south basin.
- Is Manitoba requesting easements for Lake Manitoba as well? If so, what is the level that Manitoba will allow the water to come up to?
- We are interested in seeing the results of water balance modelling without the Portage Diversion inflows.
- Can Chris Propp confirm that there is no guarantee that the proposed easement levels of 806-feet would be reduced on Lake St. Martin even after the project is in place?

Neil Cory, Vice President, Infrastructure Sector Lead, Stantec Consulting Inc. (Stantec), reviewed pages 33-35 of the presentation titled “Lake Manitoba, Lake St. Martin Outlet Channels Project”, and commented on the Environmental Management Program Framework.

6. WATER: GROUND WATER, SURFACE WATER

Neil Cory, Vice President, Infrastructure Sector Lead, Environment Services Canada, Stantec

Neil Cory acknowledged MI and Stantec representatives present to assist in responding to questions. He reviewed the “Groundwater” section (pages 1-9) of the presentation titled, “Manitoba Infrastructure, Lake Manitoba and Lake St. Martin Outlet Channels Project” (see the attached “List of Appendices”) and commented on:

- Feedback from engagement processes related to potential drainage effects, spills during construction, and groundwater quality/quantity impacts
- Reducing the upwards groundwater pressure on the project during construction
- Mitigating potential construction/operation effects including:
 - o Effects on wetlands from depressurization
 - o Changes to groundwater flows and groundwater/surface water interactions
- Monitoring the effects during dewatering, and communicating to affected well-users.

Meeting Discussion

The Facilitator welcomed questions and comments (Q/C) from participants, and responses (R) from the presentation team, which prompted the following:

Q/C: Along the alignment, where the channel will be situated, there are a number of artesian wells. There is significant pressure on the wells, in fact there is so much pressure that people do not need pumps on their wells. How much will be pumped into streams to depressurize these wells? How far down will this deplete other water?

Manitoba currently does not have a surface water management plan. When these channels gets built, how will Manitoba keep water in Birch Creek and Watchorn Creek? The channel will cut water runoffs.

R: *There is a lot of groundwater flow going through the area, some at lower pressures. There will not be a shortage of groundwater, as it will be discharged through depressurizing, during and after the project. There will be a drop in the artesian pressure, especially around the LMOC area. People living near the channel who rely on pressure without pumps, may require mitigation by drilling new wells and/or installing pumps.*

There will be a reduction during and possibly after construction, as artesian pressure will be reduced in the Lake Manitoba area. We could see reductions of 7-8 pounds per square inch (PSI) in the area.

Q/C: We are concerned with Manitoba cutting into these wells. There is significant pressure on the artesian wells. How much good, clean drinking water will be spilled during the groundwater depressurization process? What is going to happen to residents in the area when the wells run dry after they are depressurized? What will Manitoba do to mitigate in spawning areas? There will not be any runoff in the creeks, which will impact the fish. How will you get runoff into the creeks?

Q/C: Can you describe the groundwater/surface water interactions to the northwest of the LSMOC with the construction and operation of the LSMOC, and the additional drainage channel and the EOC being in place? With the LSMOC, there is a drainage channel to the northwest, and an EOC. We have three different drainage issues occurring in parallel. How will the groundwater and surface water interactions be affected? We understand the EOC is still there. How will the three drainages impact groundwater and surface water?

R: *From an overall guidelines and operations perspective, we are looking to repurposing the EOC. When you are looking at the groundwater and surface water interaction, do you want to know more about how they work together? The Agency and MI could discuss this further.*

R: *There is a main LSMOC, which outlets to the lake. There is an outside drain next to the channel, that is there to intercept flow. We do not want the channel to act as a barrier to the flow. The outside channel drains are intended to prevent flows from backing up.*

- Q/C: How much water will be affected on an annual basis from the depressurization? How much groundwater do you estimate on an annual basis will be intercepted by the wells and channel construction?
- R: *We likely will not know the quantity at this point, as it relates to surface water and groundwater interaction on Lake St. Martin (a complex wetland). There may be a need to monitor Poplar Creek and understand its affect and potential mitigation. This has not been planned yet.*
- R: *More engineering work is being done. We cannot be more specific yet.*
- Q/C: Have you done any water balancing on the carbonate aquifer? Do you know the sustainable yield for the annual water balance for the aquifer?
- R: *This is still being reviewed in preliminary engineering.*
- Q/C: Peguis has concerns with fluctuations to the groundwater, which will impact streams and lakes in the area, around the channels and eastward. We would like to see an idea or estimate in terms of how much groundwater will be affected by the dewatering.
- R: *The management plans will include further design details.*
- Q/C: Has a groundwater model been developed? Why wasn't it shared in the EIS?
- R: *During the conceptual design, KGS did an analysis of Option C and Option D. A conceptual design report was prepared, which referenced analysis on the effects on the bedrock aquifer from construction dewatering, and how depressurization would reduce water levels in the area. The reductions will be greater as you get closer to the channel. As you get 3-5 kilometres away from the channel, the reductions will be less.*
- The reductions will have to be mitigated, and pumps may be required for domestic wells. On the Lake St. Martin side, we looked at the potential effects on the wetlands. There could be effects on either side of the LSMOC (e.g. 500 metres). This is based on the EOC and its proxy. This could be reduced by an outside drain.*
- Q/C: Please use a map to outline the zone of influence throughout the full project.
- R: *The assessment process has iterations and successively greater levels of detail. When we assess things, we are capturing potential impacts and the overarching approach to addressing mitigation from a management approach.*
- Q/C: As the pre-engineering design is not completed, how can we consider the completed EIS? When will the pre-engineering design be completed? How does this impact the completed EIS?

R: During an assessment, a variety of data is used. It is not uncommon to use conceptual engineering in the assessment of a project. When you assess a project and look at various pathways, there is an understanding of the level of uncertainty and how you can manage it through mitigation, additional design, etc. The EIS talks about uncertainty and what it means for the conclusions presented. This is done in the context of understanding the process, or better understanding an adaptive approach.

Q/C: How can you evaluate a “level of uncertainty”, which is part of the EA process? You have done work since the EIS was submitted. What level of uncertainty do you still have? What is the ability to mitigate effects over time? Would you agree that there is currently a fairly high level of uncertainty with regards to the predicted effects on groundwater and the ability to mitigate the effects over time?

R: There is an uncertainty. The EIS is a planning tool, and there is detail in conceptual engineering. The analysis considered how far the effects could be in a large range. We tried to build an envelope around it, so that as engineering progresses, we will work within the envelope of effects. As we look at sensitivity analysis in the engineering study, we look at this as an envelope. There are uncertainties in groundwater. The groundwater management plan is an evolving document used by project engineers to continue to understand what is occurring. Part of the process is to share with well-owners in the area.

R: Stantec has a methodology for approaching this. It is important to define the basic characteristics of impact. Uncertainty is one of them. If we commit to manage an effect within a range of conditions and we are confident of their success, it decreases our uncertainty. Whether it is a wind project, linear corridor or other project, the uncertainty is based on existing data, future commitments, etc. It continues to evolve. MI is committed to a series of management plans, which will be refined based on input from a variety of sources.

Q/C: It is apparent that an independent external review of groundwater and surface water modelling for the project is needed.

Q/C: Good EA practice in the federal setting is to ensure that there is a well-defined project description, and that studies required in the EIS guidelines are included in the EIS. If the project description is flawed or incomplete, or if studies are missing and not adequately incorporated into the EIS (i.e. not just deficient), it is a valid concern for the TAG members. It is a responsibility of the Crown to ask why this required information is not included.

Q/C: Why was there not a Section 35 process undertaken on the access road? What happens to small lifeforms in Lake St. Martin? If that channel becomes operational, will the lifeforms and aquatic animals lose their eco-system? Will that lake become a dead lake?

Can a process be considered with Manitoba Hydro to meet their energy requirements using the water from Lake Manitoba or Lake St. Martin? What are the sustainable plans for the fishers who will lose their livelihoods as a result of this plan? This will negatively impact the fishery. Will our monitors be a part of the long-term monitoring process?

R: Another presenter may be able to answer questions on fisheries resources, and the behaviour of the lakes from a nutrient perspective.

R: MI's intent is to gather more feedback on what we need to include in our management and monitoring plans, and how they should be developed. We need more discussion and opportunities to consider adaptive processes. We may not realize how effective our mitigations are for a while, but intend to imbed relevant provisions in our management and monitoring plans.

As there are opportunities for collaboration with communities on the monitoring portion of this project, it is good to know that there are 10 people at Peguis with monitoring certification.

MI can communicate directly with the TAG member who asked questions regarding the access road.

Q/C: Clarification is needed on the overall impacts of dewatering on the entire aquifer. How will the dewatering impact the sustainable yield of the aquifer? We need local modelling, and we need to know the effects on the larger system. Groundwater in larger systems can take years (10 to 20) to react to a drawdown.

R: An EIS can focus on examining the most likely effects that can occur. We are looking at a bigger picture review and looking at regional assessment areas. There is a stepped process that goes hand-in-hand as part of engineering design. I take note of your concerns about the aquifer on a large spatial scale.

Chat Window Comments

During discussion on this section of the presentation, participants offered the following additional comments in the videoconference chat window, which were not read aloud:

- An independent review and specifics on the methodology used are missing from the EIS. We need more information. Why is there so much planning, mitigation, and environmental management content missing from the EIS? This is unusual for a public project in Manitoba at this stage.
- All TAG members want to hear about and discuss the access road.
- The access road went over the CEAA limit by a number of kilometres. It should be acknowledged as being in the federal requirements for assessment.
- See the report on the Manitoba Clean Environment Commission's hearings on Manitoba Hydro's request for a licence for Lake Winnipeg regulation. There is no surface water management plan or a Lake Winnipeg management plan.

Maureen Matthew, Engineering Geologist, Stantec

Maureen Matthew reviewed the “Surface Water” section (pages 10-17) of the presentation titled, “Manitoba Infrastructure, Lake Manitoba and Lake St. Martin Outlet Channels Project”, and commented on:

- Feedback from engagement related to water quality issues from erosion and farmlands, water quality (sediment/debris) affecting Lake Winnipeg, and water levels affecting lake Winnipeg
- Addressing concerns through environment management and monitoring programs
- Existing surface water conditions, which were reviewed in the EIS
- Mitigating potential construction/operations effects, such as:
 - Temporary increase in sediment and debris from construction
 - Changes in shoreline morphology
 - Changes to surface water quality, regional flow, water levels, erosion and deposition
- Monitoring water levels and flows in accordance with the project’s operation guidelines
- An Aquatic Effects Monitoring Plan, which includes monitoring surface water
- Positive anticipated effects of the project on hydrology, sediment and surface water quality.

Meeting Discussion

The Facilitator welcomed questions and comments (Q/C) from participants, and responses (R) from the presenters, which prompted the following:

Q/C: Have these mitigation plans been developed, or are they still in the planning stages?

R: *We can make sure that specific mitigations are developed. We can follow up on this, as we have not made specific decisions. This is why you do not have finalized plans in front of you. There could be more specific pieces in the EIS plans, workplans and engagement plans. There is a commitment to work with you in the development of monitoring plans.*

R: *It is important for people to recognize that the EIS includes details on how we will manage a particular situation. As we may not have details on how exactly they will be addressed, we need to ensure we have mitigation plans, based on where the project will end up. There will be commitments in the EIS, which are building blocks on which these plans will be constructed as time goes on.*

R: *MI has made a commitment to develop plans before construction begins, especially for plans that are relevant to construction.*

Q/C: Earlier today a question was raised about whether the hydraulic model used considered the fact that Lake St. Martin is divided into two basins. This could create a water level discrepancy between the two ends of the lake. In doing the surface water assessment, was there an assumption of what the peak water level would be in the south basin? Did you distinguish between them?

What I heard from Chris Propp earlier is that hydraulic modelling will be modified, and run again to account for the flow-constriction effects of the narrows between the south and north basins of Lake St. Martin. Based on those results, there might have to be

changes made to the project design to ensure that project objectives, including reduction of flood levels in all areas of Lake St. Martin, are being met. Is this correct? If so, what feasible changes to the project design could address this?

R: This could be based on the water level gauge, which is on the south basin. There is an issue within the design itself. It is critical to make sure you can rely on the level in the south basin to be your design level in the north basin. Targets are based in the south basin.

Q/C: The hydraulic model did not consider two basins in Lake St. Martin; there will be a constricting effect of the narrows. If you had the Fairford River control structure and the LMOC fully opened, it could lead to flooding beyond the 800-foot level, due to time delayed effects on the narrows, moving forward in the north part of the lake. This is a consideration of all First Nations located on Lake St. Martin.

R: This is a design issue that needs to be looked at. The hydraulic model would have an outflow relationship that would have assumed the south basin levels. The design team has to consider how to achieve south basin levels. It is important to ensure that the geometry of the channel is such that we are able to account for the differential level, while still meeting our target. We need to make sure the channel can accomplish what we have simulated in the hydraulic model.

R: A review of the plan does not constitute "consultation". We want to work with communities to share draft plans, and gather feedback.

Q/C: Sediment transport occurs from north to south. The channel will be excavated into the lake and will be wide. It will be subject to sediment. Jetties may be considered to mitigate the sedimentation of the channel. Jetties and groins will have impacts on the shorelines, as they cause sand build-up in some areas, including upstream of the jetty. There is no detail on the consideration of the inlets and how they will impact shoreline processes.

The inlet channels were not well-defined in the EIS. Inlet jetties into Lake Manitoba will be considered to trap sediment before it enters the LMOC. The issue is that jetties will disrupt the north to south sand transport, potentially affecting the beautiful beaches of Watchhorn Provincial Park. Modelling would be helpful in determining sediment transport.

R: There is a detailed design and interactive process. We will need to discuss how this relates to the detailed design and how it relates to the management plans associated with the issue. I appreciate your concerns regarding how sediment will be impacted.

Q/C: One of the potential effects listed in the presentation says is "changes to regional flows". MCN observed significant changes in flows as a result of the EOC. This had significant impacts on the fishery. What is your definition of "regional flows"? How will the permanent channel affect flows into the north basin of Lake Winnipeg?

- R: From an assessment standpoint, we use study area boundaries. We talk about and evaluate big pictures of the project. This is a surface water management project.*
- Q/C: Hydraulic modelling will be modified to account for flow constriction effects between the south and north basins of Lake St. Martin. After the model is modified, I understand it will be run again to identify likely water levels. There may be a need to make project design changes to ensure project objectives are met.*
- Q/C: Fishermen recall experiencing significant fluctuations in flow. As many people rely on the commercial fishery for their livelihood, it would be devastating if the work on the channels negatively impacts them.*
- R: We will need to follow up on this. Another representative may be more qualified to answer questions about the impact on the fisheries.*
- R: The emergency channel provided flood mitigation support through 2011 and 2014; we need to recognize that water would move through Dauphin River as it moves from Lake St. Martin to Lake Winnipeg. It would be helpful to have discussion on input into Lake Winnipeg.*
- R: Efforts will be made to make a map available for the June 3, 2020 discussion.*
- Q/C: Phosphorous is a concern throughout the area. Based on existing data, can we predict what the potential increase in phosphorous may be and how it will impact future nutrient levels in Lake Manitoba and Lake St. Martin? Include what is understood about phosphorus inputs from the Portage Diversion and whether these may change if the diversion is used more often.*
- R: When we are considering floods and the movement of water across the landscape, we can expect movement of nutrients. Flooding will impact overland flow, which will affect the overall contribution of phosphorous. Another representative may be able to comment on the portage diversion and how operations will or will not change.*
- R: Elaine Page, Water Quality Modelling Specialist, prepared a study on water quality conditions in Lake Manitoba and concentrations between the south and north narrows. There have been a few studies on nutrients, however consideration was not given to the effects of whether the diversion was used and when it was not.*
- R: Stantec and MI representatives can consider this further, and identify where information on phosphorous is indicated in the EI.*
- Q/C: The EIS includes averages on water quality and nutrients. Are the nutrients improving in Lake Manitoba, or are they getting worse? Is the diversion causing an increase in nutrients over time? There isn't a trend analysis of water quality data for Lake Manitoba. Communities are concerned about the potential effects of the project on water quality.*

R: We hear your questions on water quality in the system overall. How we manage this, and the type of plan we develop, will be determined in conjunction with designing how the project will be constructed and operated. We will consider this while developing the appropriate monitoring program.

R: Did we present the right information related to the project? Can you speak to the request on trends analysis? Will this address the effects of flooding?

Q/C: The flood waters may be more contaminated than water picked up during the rest of the year. What are the phosphorous trends in Lake Manitoba over the last 20 years? If they are increasing, the trend could be transferred (e.g. into Sturgeon Bay). I do not see water quality trends being analyzed in the EIS.

R: This question will be conveyed, for a response from the appropriate expert.

Chat Window Comments

During discussion on this section of the presentation, participants offered the following additional comments in the videoconference chat window, which were not read aloud:

- Are wetlands affected included in surface water plans and monitoring etc.?
- Why are we talking about plans and programs that are not in the EIS, and are not available for review?
- Will these plans be developed before construction begins?
- The proponent and Stantec need to let us all know when these plans will be available for review and comment.
- MI needs to confirm that discussion of these plans via the proponent, are not deemed to be “Aboriginal consultation”.
- These plans need to be developed in consultation with First Nations.
- Lake Winnipeg seems to be missing from the project area and the EIS, despite so many communities around Lake Winnipeg potentially being affected by the project.
- The RAA was inadequate, given the impacts experienced during operation of the EOC.
- Surface water effects and mitigation are relevant to islands. Our research has failed to find clear EIS content about the islands. For instance, in Lake St. Martin the Manitoba First Nations have lost a number of islands due to public works projects. Fishing communities (commercial and rights-based fisheries) depend on water flow. Any flow changes affect islands, erosion, fishery, the local economy, tourism, and the location and protection of sacred sites.
- MCN has questions about the impacts of increased water from the Portage Diversion.
- The EIS is unclear about pollution, and changes in load of certain toxic levels. It does not acknowledge that we would be changing the route and importing more from Saskatchewan waterways. Being at the end of the Prairie Provinces Water Management Agreement is not addressed in the EIS.
- How have water inputs into the channels from the diversion ditches been considered with respect to water quality?
- During your next steps, what other construction work do you plan to do on the land? When and where are you planning it?

MEETING ADJOURNED

June 2, 2020 (Day One) - Technical Advisory Group Meeting

Director General Saxe acknowledged a number of questions raised during the meeting that required further follow-up, to support a greater level of understanding. Attendees were thanked for their participation throughout the day.

The meeting adjourned on June 2, 2020 at approximately 3:45 p.m. after agreeing to reconvene on June 3, 2020 at 8:30 a.m.

June 3, 2020 (Day Two)

The Facilitator welcomed attendees back to the meeting at approximately 8:30 a.m. He recalled the discussions that ensued on June 2, 2020, which included conversations regarding online access to historic and other information, related to the project.

7. WELCOME AND OVERVIEW OF JUNE 2, 2020 DISCUSSIONS

Barbara Pullishy, Director, Prairie Northern Region, Impact Assessment Agency of Canada

Barbara Pullishy acknowledged the traditional territories in which the project is proposed, and welcomed attendees back to the meeting. Ms. Pullishy explained that she was leading the team managing the process and the review of the project, and confirmed that a follow-up TAG meeting could be held to address additional questions.

Meeting Discussion

The Facilitator welcomed questions and comments (Q/C) from participants, and responses (R) from the presentation team, which prompted the following:

Q/C: The lack of depth in the surface water assessment was disappointing. There was no physical modeling of sediment. The reason for the project review is water diversion. It is critical to consider how the currents transport flood waters. Although analysis of plumes at the outlet of the channels is provided, consideration is needed on how these outlet discharges will be impacted.

There is a lack of investigations reflected in the assessment. There was no information on water quality presented, except for a reference to Elaine Page's thesis, which identifies differences between the north and south of Lake Manitoba and the impact of the Portage Diversion on the lake. The effect of the Portage Diversion was to dilute the south basin, and decrease the total dissolved solids in the Lake. Ms. Page's thesis points out that it also increases phosphorous loading in the lake. The surface water assessment in the EIS does not consider mass loading; it only considers concentrations.

Phosphorous concentration may be the same, although the mass of phosphorous entering the lakes is greater. Consider the analogy of a conveyor belt, with an average flow of one package per minute. During normal flow there may be one or two conveyor belts operating. During flood flow, there may be 100 conveyor belts operating. Can the lakes assimilate that level of loading from the floods?

Ms. Page investigated the role of the Portage Diversion on the Lake Manitoba, and suggested that the Portage Diversion was increasing the mass of phosphorous entering the system. There are also greater incidences of algae blooms in the lake now.

Overall, analysis is missing on water quality and currents, and the surface water analysis lacks depth. As such, it is premature to begin planning mitigation, when the effects of flood waters on the system are not understood.

Although we are redirecting flood waters from Assiniboine River into Lake Winnipeg, there does not seem to be any surface water assessment, or any analysis of how the waters move through the system (except for the reference to Elaine Page's work). There must be years of additional information available for Lake Manitoba for analysis.

R: MI could respond directly with the member who raised this question.

Q/C: It is important that this information be brought back to the entire TAG, not just the member who raised the question.

We are talking about surface water assessment. A lot depends on getting surface water flows, loadings and the effects, correct. You cannot go forward without having a full understanding of how the flood waters will move through the system, and the outlet discharges.

R: Given time constraints, MI cannot provide a full response without the full context. Some of the questions raised may be answered through the day's discussions on fish habitat, etc. A response to the additional questions raised, including on the Portage Diversion, could be prepared for the full TAG.

R: There will be a presentation on "Current Use" later in the day. We welcome the opportunity to provide the best person to respond to a question. If we are unable to, we will record the question and Stantec will work with MI to convey a response back. We will ensure that the right people get the question.

8. FISH/FISH HABITAT AND FISHING

Don MacDonnell, Aquatic Biologist

Don MacDonnell reviewed the "Fish and Fish Habitat" section (pages 18-24) of the presentation titled, "Manitoba Infrastructure, Lake Manitoba and Lake St. Martin Outlet Channels Project", and commented on:

- Feedback from engagement related to impacts to fish health and fish spawning, zebra mussels, and damage to fishing equipment
- Existing aquatic environment conditions, including up to 54 species in the regional assessment area (a good habitat for cisco, lake whitefish, walleye, sauger and suckers)
- Species spawning in creeks, rivers, and offshore in Lake Winnipeg during the spring
- Whitefish migration up Dauphin River to Lake St. Martin in the fall
- Up to seven species-at-risk and 15 aquatic invasive species in the area
- Mitigating potential effects of construction/operation, including: changes in fish habitat; changes in groundwater inflows and flow patterns; changes in fish movements; and accidental releases, which could impact fish health and harvests
- Benefits including increased habitat in channels, which should not impact overall productivity of the fishery.

June 3, 2020 (Day Two) – Technical Advisory Group Meeting

Meeting Discussion

The Facilitator (F) welcomed questions and comments (Q/C) from participants, and responses (R) from the presenters, which prompted the following:

Q/C: I was recently involved in an EA where a proponent conducted both numerical and physical modelling (in a warehouse) to identify the hydraulic effects of a project. This involved a high standard of hydraulics and morphology. I suggest this approach be considered by the Agency, as a best practice reference point.

(https://projects.eao.gov.bc.ca/api/public/document/5b734384d496410024db230d/download/Appendix%20%2018.2_Fraser%20River%20Hydraulics_Morphology.pdf)

R: *The quality of the fish habitat in the channels is “what it will be”. The channel will be fully watered and quite deep at all times. This has been productive fish habitat. The fish will move through this when the project is not in operation. Lake St. Martin will be designed to sustain fish throughout the year. We are looking at some small streams.*

Anytime you have a project like this, it is hard not to alter fish habitat. There is no doubt there will be a decrease in some flows, including in British Creek. One third of the watershed will be cut off. The streams do not have major migrations of walleye, although there may be some perch and other species. There will be some loss, which will be taken care of in the offset plan.

Q/C: The MCN Review Team has concerns that the new habitat created will not be of the same quality as the habitat that is being destroyed.

Q/C: Our experts also indicated that the quality of the new habitat in the channels would not be equivalent to the habitat lost.

R: *The fish habitat “is what it is”. It is not designed as part of the project, but it is a result of the project. We will end up with fish habitat; however, whatever it does to the fish, will be the effect of the project. The channels have been designed to not have a detrimental effect on the fish population. It is important to note that anything in the EIS is a prediction. There will be monitoring in place to determine if our provisions are correct. Adjustments may occur post-project if the enhancements are not as productive as anticipated.*

Q/C: I understand the proponent is saying “it is not too impactful in terms of the project on certain species”. After meeting with our communities, we know that near the south of the channel, as it leaves Dauphin River territory, there will be direct impacts to the lake sturgeon species. What you are saying contradicts this. How will this be mitigated?

R: *There was a comment yesterday about this in the Golder Report. The offshore spawning areas were based on information in the Golder Report and from other local information and resource users. This the first we have heard that there is a sturgeon spawning area at that location.*

Q/C: We have had only one meeting, which demonstrates a lack of consultation.

R: Regarding the concerns raised about the sturgeon, we did an assessment of the species that are there. When we looked at the LSMOC, we could see water pouring into Sturgeon Bay, into a beach-type environment with some moving sediment. From a sturgeon spawning perspective, we know that sturgeon prefer turbulent water when they spawn. As such, we do not see potential detrimental effects to the sturgeon.

Q/C: We disagree with that statement. The studies are incomplete. The local communities have constitutional rights and have not been communicated with. The study was done without involving local treaty people. Why are we the last to be involved in the engagement on this massive project?

F: A number of comments have been raised on the impacts to the channels, water flow, and fisheries. Members have emphasized improvements needed to the process, particularly from a rights-based perspective. More engagement with First Nations throughout the stages has been requested.

Q/C: We heard yesterday that the hydraulic modelling assumed that the fish ladder was being removed from the Fairford River control structure to improve discharge performance. Is a new fish ladder being installed at this structure? This fish ladder is the only avenue for the movement of fish to Lake Manitoba.

Q/C: A number of questions asked on June 2, 2020 remain unanswered.

In 2010, we flooded four times, which had significant impacts. What will the project do to the small micro-organisms? Look at projects throughout Canada where the flow was changed with devastating effects on the fisheries. Small micro-organisms were flushed out, which changed the livelihoods for First Nations in a negative way. We are worried that this project could have the same impacts on micro-organisms in Lake St. Martin (on the north end particularly). There is important habitat that surrounds the lake, including for birds, muskrats and beaver.

In South Indian Lake, the flow was changed with big impacts. Fluctuations in the water can eliminate the areas where muskrat and beaver survive. They cannot live in an environment where the water moves up and down all the time. I know the animals and how they work. We have seen the results of flooding. What will the impacts of the channel be to the small lifeforms and lifeforms long the shoreline?

R: Modifications to the fishway is not part of this project. Operating guidelines will ensure the fishway continues to operate as it has been, prior to the project. There is debate on how effective that fishway is.

R: We heard yesterday that operating guidelines assume the fishway is removed. We have had some discussions with the Department of Fisheries and Oceans (DFO) on an offsetting plan, and are developing this in relation to the EOC. We are committed to coming up with a new plan for the fishway, and an alternate design to take it out of the bay. Further discussion is needed with communities.

R: Anytime you move flows around, there will be effects on lower trout communities in the lake. There are algae and bugs living on the bottom. Our understanding is that those components of the environment react to water quality, flows, substrates, and temperatures. Anytime you move water around, you will have an effect on those communities. They are resilient when conditions change, and they react quickly.

Although we see short term changes in operation, we see that the water quality from Lake St. Martin to Lake Winnipeg is high in nutrients, and similar in terms of productivity. We do not expect major changes in substrates in these lakes, although some sediment may move around. We do not expect major changes in the lower trophic communities in Lake St. Martin as a result of this project. The primary productivity is similar between Lake St. Martin, Lake Manitoba and Lake Winnipeg. We do not see this as a major effect of the project.

Q/C: Our treaty rights are being watered down and the sacredness of our treaty is not being respected or mentioned. Obligations related to the concept of free, prior and informed consent are not being regarded. I have additional concerns as a fisherman. Impacts on our young people, youth and communities in poverty, have not been mentioned.

R: The comments raised have been heard. We are planning on sharing later in the day, on what we know about traditional knowledge. There is more to do in terms of discussion and consultation with community. We do not know everything. I would like to talk with you more about your comments.

F: Members have referred to a section within the EIS that specifically references Indigenous issues. The current discussion is acknowledging an inadequacy of conversation, and a non-responsiveness to the rights context.

Q/C: We are dealing with a lot of complex information, which is sometimes hard to respond to immediately. We retained experts to review the EIS, who provided a long list of comments and information requests. How will the information requests process go? When will responses be provided?

Q/C: There is a control structure on Lake Manitoba that has gates. During no-flood periods the intent is to keep water in the channel and run minimal flows. Those gates will effectively be closed almost 90% of the time. I do not see the LMOC (approximately 20 kilometres downstream from Lake Manitoba) being effective for fish passage.

R: I referred earlier to the base flow in the LMOC. There will be no fish passage at that structure. There is no fish passage at that channel now. We do not expect fish passage in an upstream direction.

Q/C: Lake St. Martin has a control structure on it. Will it be operated during low flow conditions? Will it be a dry channel?

R: The LSMOC has been designed to deal with fish. There are several mitigation measures incorporated into that channel for fish. Notably, it will be impassable upstream. Fish should not be able to pass into the Lake St. Martin channel. Drop structures in the channel will keep the channel wetted. The pools will be deep enough to overwinter fish, providing an ability to maintain conditions and prevent winter kills.

Q/C: Consultation is a huge piece that has not been addressed during the meeting. It requires conversation in terms of trust and relationship-building. From MCN's perspective this has not been demonstrated.

MCN's response to the EIS indicated: "MCN has a positive relationship with many departments of the provincial and federal governments. As they actively work towards Nation re-building and improving the health and well-being of their members, MCN has partnered with these departments in areas such as environment, health, and social services. Just as MCN follows protocols and agreements that allow these partnerships to be successful, they expect that the proponent in this project acknowledges and honours the policy and protocols outlined in Manitoba's *Bill 18: Path to Reconciliation Act* and the rights outlined in the federal *Section 35 of the Constitution Act*. They would also hope that the proponent would be guided by the calls to action set up in the Truth and Reconciliation Commission and the principles set out in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).

Unfortunately, MCN has not been engaged by the proponent using these frameworks. The EIS, as submitted, demonstrates a significant lack of engagement and consultation, a lack of understanding of Indigenous rights, a lack of appropriate methodology, and a stark failure to comply with guidelines clearly expressed by CEAA at the outset.

Unfortunately, these gaps undermine the validity and legitimacy of every aspect of the EIS that requires Indigenous engagement and consultation. These gaps touch on nearly every feature of the EIS including the determination of spatial and temporal boundaries, development of valued components, residual effects, cumulative effects, significance of effects, and prediction confidence in all impact areas. Given this, it is unclear how the EIS as submitted can be judged as meeting the initial standards for conformity outlined by CEAA or how the EA process can proceed without conducting significant research and engagement to address these shortcomings."

Matthew Dairon confirmed that MI's responses to information requests, will be posted on the registry website. Further details on the information request process, will be provided.

The Facilitator welcomed discussion on concerns raised related to trust-building in a rights-based context, which prompted the following questions/comments (Q/C) and responses (R):

R: *MI and the Province of Manitoba are committed to a full and comprehensive Crown consultation. The EIS includes the information we have to date. We came to this event knowing that the work with consultation is incomplete.*

We hope that our relationships with communities will continue and will improve, as we reach out to continue the work and discussions on the project. We are currently working with communities to develop a work plan so we can work together in the development of mitigations and monitoring plans. Our Crown consultation process is not complete. We look forward to working with communities so we can help develop a better project.

Q/C: I disagree strongly with the earlier comments by MI. I have worked with MI for almost 18 months, and I have not been successful to date in getting funding.

Director General Saxe affirmed that, from a federal perspective, there was an absolute commitment to consulting, and reaching out on a nation-to-nation basis. The EIS was just one piece of the engagement. Thanks were extended to TAG members for maintaining flexibility, for their significant contributions at the meeting, and for helping to inform the information requests.

Chat Window Comments

During discussion on this section of the presentation, participants offered the following additional comments in the videoconference chat window, which were not read aloud:

- We have not received or seen a copy of the surface water management plan by Manitoba, and are quite concerned about spring water runoff and the spawning creeks running dry. The LMOC runs just west of Birch Creek and Watchorn Creek. The water coming from the west going east, will no longer enter these creeks. This will halt spring fish spawning.
- MI says when they depressurize the aquifers, the wells will quite likely run dry. MI/Stantec will be on standby to dig wells deeper. With regards to wells that are in people's homes, is Manitoba prepared to move houses off their foundations to gain access?
- Does MI actually know how far these aquifers run? How far away from the alignment will the wells possibly run dry?
- I have read Elaine Page's work. So far, this process is not useful, as there are few answers that have any depth. The project purpose has not even been explained with any transparency. There are numerous technical issues that are not being addressed in the assessment.
- We have heard yesterday that the province is correcting the hydraulic model and redesigning the configuration of the channels. Will the TAG see the results of the redesign? I believe it is important that there is a peer review of the hydraulic modelling.
- It is necessary to start with an accurate description of the project justification in order to properly define the assessment boundaries, including the cumulative effects.
- Information should be shared with the entire TAG, not as a side issue.
- It is not possible that the proponent does *not* understand the context of the issues raised.
- LSFN agrees that the channels are not functional fish habitat and cannot be considered as part of mitigation or offsetting.

- There is very little information in the EIS regarding the potential quality of the channel habitats. Are there lessons learned from other flood channels in Manitoba that can be shared?
- Section 6.4.7.3, "Changes in Regional and/or Local Fluvial of the EIS" states, "[t]he channel design will provide for downstream fish passage, but the channels are hardened to prevent erosion, and they are not designed to mimic a natural riverine system with ecological functions. Therefore, the PDAs of the LMOC and LSMOC are not included in further discussion of effects on regional fluvial geomorphology".
- The increased flows through Lake St. Martin will dilute the nutrient-rich waters of Lake St. Martin. This would be detrimental to the fish populations in all surrounding regions.
- From a fisheries perspective, a critical shortcoming of the EIS is the lack of any estimates of past, present, or future fish production under historical, current, and projected project conditions, respectively.
- As the LMOC is being operated on a continuous basis (i.e. 50 cfs, in non-flood periods) the control structure downstream of Highway 6 will be a barrier to fish passage.
- The EIS assumes that the channels, essentially giant ditches, will serve as habitat offsetting for impacts of the project on fish and fish habitat. Is there anyone from DFO on the call, who can comment on the use of the channels as habitat offsets?
- DFO will review the project for effects on fish and fish habitat. DFO considers residual effects of the project after all measures to avoid and minimize effects, have been applied. When we get to the discussion about offset residual effects, it is important to note that DFO Offset Policy Principle #3 states: "Measures to offset should provide additional benefits to the ecosystem. Measures to offset are additional works, undertakings or activities that should achieve conservation and protection outcomes greater than the results that would have occurred if the measures to offset had not taken place. In other words, the coincidental positive benefits of the works, undertakings and activities being authorized should not be considered as measures to offset. For example, nearshore areas created as a result of the rock used in a proposed shoreline stabilization, cannot be used as measures to offset."
- In reference to the quality of "new fish habitat" the presenter stated that, the fish habitat "is what it is." How is it possible that this level of assessment is acceptable?
- Birch Creek will run dry. Far more than 1/3 of the water flow will be cut-off from the outlet channel being built. Birch Creek runs 15 miles long. The outlet channel only runs two miles to the control structure. The fish spawning grounds will be cut. There aren't many spawning grounds on Lake St. Martin, and we cannot afford to lose any.
- The initial information request package (April 23, 2020) includes an information request from DFO, which states, "The design of the outlet channels have been optimized for flood control and not as fish habitat. Creating a trapezoidal wetted channel will not meet the regulatory and policy requirements to be accepted as a habitat offset plan, and may not be effective mitigation for the potential effects of the project on fish and fish habitat." As DFO does not accept the proponent's proposal to rely on the channels as fish habitat, what is the proponent's plan to identify mitigation for effects on fish (i.e., within the context of the EA)? It needs to be noted, that the effects assessment for fish and fish habitat is incomplete, as meaningful mitigation has yet to be identified.
- DFO will be required to conduct consultation prior to deciding to issue a *Fisheries Act* authorization. Many of the questions being raised here today will be used to support those consultations. The timing and coordination of those consultation activities are not yet scheduled as DFO has not received a formal application for authorization.

- No information has been provided regarding effects of the channel on fishing in the McBeth Point area. Satellite maps show the channel flow goes up and around Saskatchewan Point and into the McBeth area where Fisher River Cree Nation's fish station is located.
- To meet Crown's legal duty to consult and accommodate prior to the federal EA decision, there needs to be a credible assessment of effects on fish, including consideration of mitigation, offsetting, cumulative effects, etc. This must occur before the federal EA decision statement is issued. The assessments on impacts on fish are directly related to understanding project impacts, on the exercise of LSFN Aboriginal and treaty rights, and therefore cannot be deferred to post-EA permitting phase.
- The current negotiations on previous impacts from the emergency channel project, inform the commitment by the province and MI on these matters.
- It would be helpful to start to collect offset project ideas and options to support our evaluation of whether the residual effects of the project can be counterbalanced by any proposed offset options. It would be beneficial to have conceptual offsetting options during the EIS process, enabling Indigenous groups and other interest holders an opportunity to comment and provide feedback.

Meeting Discussion

The Facilitator (F) welcomed further questions and comments (Q/C) from participants, and responses (R) from the presenters, which prompted the following:

Q/C: As a commercial fisherman, I fish in the spring and fall. Our fishing area is from McBeth Point to Saskatchewan Point. We do not go further west than Saskatchewan Point. During the presentations we heard a lot of “we do not believe” and “what ifs”. We do not know how this project will go. The government has initiated a project that will serve a purpose and will protect waterways in the event of flooding further south. This may come at a cost, particularly to Lake Winnipeg in the north. This may reduce or wipe out the Lake Winnipeg commercial fishing industry in the north basin.

Norway House residents felt significant effects of the 2011 flood, in terms of pollution. This took a few years to get past. The provincial government is not a friend to the commercial fishery. What compensation has been built in for the fishermen if the fishery is destroyed?

R: *I have heard your concern about the fishery on Lake Winnipeg, specific to the north basin. We are focussed on understanding the concerns, and working on mitigating and preventing impact. As we are able to develop a project that will not have the kind of impacts that would require a compensation program, we would rather focus on ensuring we are doing everything we can to avoid compensable impacts.*

9. VEGETATION – WILDLIFE – SPECIES AT RISK AND MIGRATORY BIRDS

Nick De Carlo, Senior Vegetation Ecologist

Nick De Carlo reviewed the “Vegetation” section (pages 26-35) of the presentation titled, “Manitoba Infrastructure, Lake Manitoba and Lake St. Martin Outlet Channels Project”, and commented on:

- Feedback from engagement related to impacts to shoreline vegetation and harvesting, wetland drainage, impacts to buffalo Lake Bog and the availability of traditional plants
- Addressing concerns through mapping, modelling, surveys, and literature reviews
- Monitoring changes to shoreline vegetation, wetlands, and traditional plants
- Existing vegetation conditions observed, including 202 plant species and six species of conservation concern
- Components of the project development area (indicated on a colour-coded map)
- Mitigating potential construction effects on species of interest and conservation concern, and a reduced landscape diversity of older trees, native vegetation, and wetland/catchment areas
- Mitigating potential operation/maintenance effects, including reduced vegetation growth due to high channel flows, and impacts on wetlands and harvestable vegetation
- Follow-up and monitoring through the Environmental Management Program, and assessing the establishment of vegetation cover, and the success of reclamation measures
- Overall project effects on landscape and species diversity, and wetlands.

Leane Wyenberg, Senior Biologist

Leane Wyenberg reviewed the “Wildlife and Wildlife Habitat” section (pages 36-46) of the presentation titled, “Manitoba Infrastructure, Lake Manitoba and Lake St. Martin Outlet Channels Project”, and commented on:

- Components of the project development area (indicated on a colour-coded map)
- Feedback from engagement related to disturbances to wildlife
- Addressing concerns by assessing changes to wildlife habitat, developing an Environmental Management Program with a wildlife monitoring and mitigation program
- Existing wildlife, including elk, white tailed deer, and coyote, typical in open agriculture lands to the south (LMOC); moose, wolf, lynx, and marten typical in spruce/peatlands to the north (LSMOC); mammal, bird, amphibian and reptile species including 23 species of conservation concern (SOCC)
- Mitigating potential construction effects on wildlife habitat, through the Environmental Management Program (EMP) and the project’s environmental requirements
- Mitigating potential operation/maintenance effects of: reduced flooding; linear features, which may alter wildlife movements; and sudden increases in LSMOC water levels on species
- Critical habitat for eastern whip-poor-will and red-headed woodpecker, (indicated on colour-coded maps)
- Follow up and monitoring through the EMP, Environmental Protection Plan (EPP), and Wildlife Monitoring Plan (WMP), including monitoring species-at-risk
- Some loss of wildlife habitat anticipated, although right of way revegetation and reclamation may restore some species; wildlife mitigation through the EPP and offset plans for the red-headed woodpecker and eastern whip-poor-will.

Meeting Discussion

The Facilitator (F) welcomed questions and comments (Q/C) from participants, and responses (R) from the presenters, which prompted the following:

R: Wetland compensation is a process, just like the design is. As the design refines, so will information on wetlands. At this point we do not have the exact process laid out for

compensation for wetlands. As the project and mapping of wetland continues, this will become clearer. MI may have more information to share on compensation programs.

R: We will be working this summer towards informing plans to get a better understanding of wetland mapping and functionality, to inform future management and planning for wetlands. Compensation may need to occur for loss of wetlands; however, we do not know if there will be loss of wetlands yet. We will combine work on environmental management planning with field work that will occur this summer, so we can get an accurate picture of what is going on with the wetlands. We can combine this with detailed mitigation planning. We do not know exactly what a compensation plan will look like, but we remain committed to understanding future work in the field and with communities.

Q/C: The LMOC may be a source of major sedimentation. From the control structure to Lake Manitoba is 20 kilometres. That channel will be full about 360 days of the year, as its level will be the same level as Lake Manitoba. There will be significant pounding in that channel, which will discourage vegetation growth. Sandy areas in the channel may erode. Is there an erosion control measure considered?

R: There is a possibility we will hit sand in some areas. We are working to increase our knowledge of those areas. If there is an area of vulnerability, we are hoping to include it in our management plan, along with suitable erosion control methods. In the project environmental requirements and the plans, there will be applications and things we need to do, to ensure sediment control and erosion measures are applied.

We know we have to apply proper erosion control methods along the channel. We have included vegetation and rip-rap, and will have monitoring arranged to watch their effectiveness.

Q/C: Further to the June 2, 2020 presentations, we learned that the hydraulic model used for EIS did not consider that Lake St. Martin has two separate basins, separated by narrows, and did not consider water level differentials that would likely result if/when the LMOC was operating along with the Fairford water control structure.

The hydraulic model needs to be revised, new results need to be generated, and to achieve the objects of the project model to reduce water levels, the project design may need modification. There are conclusions from the EIS, based on a previous hydraulic model, which did not indicate what the flooding effects would be on Lake St. Martin with the project.

Regarding construction of the channels, the EIS assumes that these deep channels extending between each lake (100 metres wide with a 400-metre right-of-way) have no dedicated wildlife crossing structures. It was suggested the channels will not impact wildlife after construction. We have questions on this. Are there other studies on the impacts of avoidance effects? Part of the wildlife in the area includes wolves, what do we know about the increased population of undulates? What are the likely results?

- R: As this question is about wildlife movement and the effect of the channels, we will refer to our wildlife lead to speak to the concerns, with respect to how a channel like this will intercept movement. We know that linear disturbances can provide some barriers for some species. Stantec representatives will take this question away, to prepare a fulsome response.*
- R: There is not a lot of literature on similar situations to draw from, specifically on how the channels could affect movement. We looked at more natural examples on the landscape, and how wildlife moves in the presence of rivers. Some rivers are wider than this channel and have greater velocity. We looked to see how animals might respond to a similar long linear channel, which animals would need to swim across to traverse.*
- Q/C: Did you look at natural river systems, as a proxy for how wildlife would respond to the construction of these channels?
- R: When preparing any environmental assessment, it is not possible to find an exact situation, in the same place, with the same species. As such, we reviewed literature on linear disturbances, particularly those that include water as a crossing feature. Then we brought in pieces of additional information and drew conclusions on what to expect. As this design gets developed, there can be an integration of additional field work results. We are in the process and continue to add these pieces, with respect to how we mitigate this.*
- Q/C: I am trying to understand how these large and extensive structures do not pose any impacts on avoidance patterns. This is the conclusion of the EIS? What is your level of confidence for reaching conclusions on the effects of the channels on wildlife?
- R: Given the methodology applied, we acknowledge uncertainties. There are degrees of uncertainty on any environmental assessment. We often refer to this as “sorting issues as we refine the design”. Stantec can provide the reference on how uncertainties are dealt with.*
- Q/C: This is not just related to the wildlife. It is brought into a number of valid components related to the exercise of treaty rights. In cases of uncertainty, monitoring and further follow up programs are typically brought in. It is important to understand the impacts of rights in EA, and to understand the likelihood of effects on wildlife. If there is a conclusion that there is a negligible or low impact on wildlife, we need to understand the level of confidence in that determination. Stantec’s response to the TAG will be appreciated.
- Q/C: The regional assessment areas (RAAs) for vegetation and wildlife do not coincide with the RAA for groundwater. The groundwater RAA extends eastward to Peguis and encompasses the carbonate aquifer. If changes to groundwater may occur in the groundwater RAA, can you explain why the RAAs for vegetation and wildlife do not extend to the groundwater RAA?
- R: As we were doing the EA and choosing spatial boundaries to focus on, we established local assessment areas (LAAs), the areas over which direct effects can reasonably be measured.*

Direct and indirect effects are considered. A drop of water could fall in Lake St. Martin, which ends up thousands of kilometres away, but can you measure the effects?

In the case of vegetation and wildlife, the LAA and RAA sizes were set up to measure the area over which direct effects could be measured, in addition to regional “big picture” effects. Groundwater is linked to wetlands across the landscape. What we are able to conclude, from an inter-relation standpoint, is that each ended up being different. They are set in a way to manage effects from an investigation standpoint.

Q/C: Can you provide the work plan for vegetation field surveys this summer? When and where is this fieldwork going to take place this summer and what does this fieldwork entail? It is important to define what the field work is, given the concerns raised regarding the right-of-way.

R: *I am not aware of when or how, but MI can respond to the TAG with specifics of the vegetation field surveys.*

Q/C: The RAAs, LAAs, and groundwater assessment areas, do not really coincide. Yesterday we talked about the carbonate aquifer modelling. MI indicated this is an iterative process, and has agreed to respond to feedback. The modelling for the CAM has not been done. The amounts of aquifer water to be drawn has not been calculated. As such, we still do not know the potential impacts, on the west and east side of the aquifer. There is a hill of water beneath the ground. Peguis is concerned about long term fluctuations in the water level as it will impact wildlife and vegetation.

R: *We needed to identify effects pathways. We built pieces into the project, based on an understanding of where the effects could most likely occur. From an engineering standpoint, we have enough to determine where the effects will be. As with all EA processes, we consider new information, whether it changes or impacts what we thought, or if it warrants another form of mitigation or commitment to be put in.*

There are uncertainties in some areas, as indicated in the EIS. By managing, monitoring and committing to adaptive management, we will continue to refine. There is still an iterative process. We will continue to consider where we need to look at something differently. With EAs in general, there is always the ethic that “more is better”.

As practitioners, we need to consider the level of information we require in project design to understand how this will work, and can then help to hone in on mitigations. Based on the information we have, I am comfortable to speak on where the effects pathways will occur, and how they relate to the areas.

Chat Window Comments

During discussion on this section of the presentation, participants offered the following additional comments in the videoconference chat window, which were not read aloud :

- Because Manitoba is taking away all this prime agriculture land from the farmers, will residents be able to make hay on the channel banks to feed their livestock?

- Can you speak more about wetland mitigation and compensation to offset losses?
- Wetlands and seasonally flooded areas are critical spawning and nursery habitats for a majority of Canadian freshwater fishes. If these areas are reduced or lost, overall fish production is reduced or lost.
- Given that the LMOC from Lake Manitoba to the control structure will have water year round to suppress drainage of the aquifer, channel vegetation for erosion control will not establish in the wetted area of the channel. Will alternate in-channel erosion control measures be provided as part of the project, particularly in areas of sandy soil conditions?
- Yesterday's revelation that the hydraulic model is flawed, and has not considered water level differentials between north and south basins, puts into question the assumption that the project will be successful in reducing flooding in the south basin of Lake St. Martin. The hydraulic model needs to be revised and new results generated to determine what water levels on Lake St. Martin would result from the project, as described in the EIS. Until we have these results, conclusions about project effects, including on wildlife and wildlife habitat – are premature and incomplete.
- Will Indigenous communities be involved in the environmental management program?
- Can you cite the peer-reviewed scientific studies that have examined the effects of similar linear structures posed across a range of representative species, including ungulates? Can you discuss any limitations there may be in drawing conclusions about the effects of the outlet channels from the findings of these studies? Of particular concern are increased avoidance effects, habitat fragmentation, and correlation between linear features and increased predation of ungulate populations (especially moose).
- We were told that the clearing of the right of way was "fieldwork".
- "Section 8.3.9 – Prediction Confidence" of the EIS states: "Prediction confidence for the residual effects on wildlife is considered moderate based on the amount and quality of data available, experience with similar projects, and confidence in the effectiveness of mitigation measures in the Environmental Management Program, which reflect accepted best industry practice. Limitations in the quality and quantity of baseline information used to predict Project residual effects has resulted in uncertainty associated with the distribution and abundance of wildlife, particularly species at risk (SAR) and species of conservation concern (SOCC), within the LAA. Predictions are based largely on existing data sources that provide insight into the distribution and habitat associations of wildlife within the RAA and inferences are then made to corresponding habitats in the LAA".

10. CURRENT USE

Colin Buchanan, Principal, Stantec

Colin Buchanan reviewed the "Current Use" section (pages 47-58) of the presentation titled, "Manitoba Infrastructure, Lake Manitoba and Lake St. Martin Outlet Channels Project", and commented on:

- Maps of the area indicating: Indigenous communities, groups, governments and nations engaged on the project, and areas identified for "traditional land and resource use"; many of the 18 communities evacuated during the 2011 and 2014 floods remain evacuated
- Feedback from engagement related to the impacts of debris/contamination and pollution; and impacts on fishing grounds, fishing equipment, hunting, and traditional items; MI continues to engage and share information about the project

- Addressing concerns by aligning project activities to reduce impacts; and developing environmental management, monitoring and mitigation programs
- Current uses in the project area, including harvesting for traditional purposes
- Mitigating potential project effects through engagement with Indigenous groups, the EMP and other programs, including: the loss of access to traditional resources and areas; and impacts on wildlife, harvesting, drinking water, fishing, trapping, forestry, recreation, etc.
- Positive effects of reduced flooding on agricultural and other activities
- Follow up and monitoring through the EMP and related programs
- Minimal disruptions anticipated to species relied on for traditional land and resource use.

Meeting Discussion

The Facilitator welcomed questions and comments (Q/C) from participants, and responses (R) from the presenters, which prompted the following:

Q/A: The EIS acknowledges that the conclusions have low level of confidence based on low levels of information incorporated into the EIS.

R: *“Prediction confidence” is along the lines of what you have indicated.*

Q/C: From a historical context, I would like to talk about the pre-existing level of alienation, for LSFN and other First Nations, to exercise their hunting, fishing, harvesting and cultural rights on the land to date. We can look at alienation from a variety of perspectives (cultural, agricultural etc.). Was that acknowledged in the assessment conducted?

R: *There are multiple pieces that contribute to an assessment. We understand there is more site-specific information and context to be gained before further developing the project. Uncertainty is inherent in an EA process, and there is a process for dealing with it. If you have no information on vegetation and wildlife, your uncertainty is too great to be the basis for a process or mitigation.*

Regarding the historical context, when you scope these types of effects, there are long histories socially, culturally, and environmentally, going back to days when there were more contiguous habitats. MI may also want to comment on the historical context.

R: *We recognize that “we have what we have”, in terms of traditional knowledge and input from communities. There are two things to keep in mind: what we know, and what has been provided to us by communities. You asked about our degree of confidence and comfort, and whether we feel we have enough – we may not, as we know we still need to connect, discuss, consult and get more information. We need to increase our understanding of traditional use and concerns and incorporate them into the assessment.*

The degree of confidence in the predicted effects, based on what is known, is high. We are committed to working together to have a better project, through the management plans, monitoring plans and adaptive processes.

Q/C: LSFN looks forward to addressing this. When can we discuss baselines? LSFN will conduct its own study, and will address the conclusions that are not recognizing current use. We look forward to working with MI on this.

Q/C: What is MI referring to as “post-project follow up”?

R: *MI is committed to discussions to inform management and monitoring plans, prior to completing and getting our licenses. We need these discussions before we consider moving forward with construction.*

Q/C: Potential effects downstream of Lake Winnipeg are discounted, or described as “not discernable” even though the purpose of the project is to pass flood waters downstream more quickly. We are concerned about an incremental increase in high water effects along the Nelson River as a result of the entire flood control and hydroelectric system. Can there be a more thorough consideration of downstream effects in the cumulative effects assessment scope?

R: *We looked at the impacts to Lake Manitoba through a water balance model, and found a small change in water levels for peak events, in the order of an inch or two. The contributions to Lake Winnipeg from Lake Manitoba are relatively small compared to the catchment of the watershed.*

Manitoba Hydro was engaged to run simulations, particularly their downstream routing model, as they evaluated impacts to downstream communities. The results of their analysis was in the order of inches in peak events. This is why it is noted as “not significant” or “indiscernible”.

Q/C: Where are the results of Manitoba Hydro’s models? Are they included in the EIS?

R: *There is information in the EIS in Chapter Three. The map reviewed earlier provides background and other information on the contribution of all the different water sources onto Lake Winnipeg. MI will address this further over the next break.*

Q/C: I would like to follow-up on the effects of the flood waters on the north basin of Lake Winnipeg and Sturgeon Bay and down to Nelson River. To say that the cumulative effects are insignificant may be incorrect, based on differences in water levels that may occur. I agree with Manitoba Hydro’s assessment, that we may be looking at centimetres or inches in water levels, however Manitoba Hydro also pointed out that the inlet channels to Nelson River, take water more quickly. The movement of water is quicker during high flows than during low flows. As such, there will be added effects when water transits faster through the system. Why is there is no assessment of this?

I am concerned about nutrients in the water arriving in the channels, from outflow from Lake Manitoba into Lake St. Martin etc. There isn’t a good assessment in the EIS on the effects of the nutrients down to the Nelson River. Subsequent answers on water quality

and nutrient loading during flooding, are missing in the EIS. In terms of cumulative effects, we need to consider the effect of regulations.

Q/C: There has been a discounting of downstream impacts. We want to see additional modelling done. We need another session that looks at these issues specifically. We need to go over in detail, the points we are trying to make, as we still have questions.

Q/C: It is expected that a description of a project within a system as a whole, could be described in detail and accurately. The purpose this project and the scope of the assessment have not been transparently explained. We need a clear set of facts on the project, so we can all consider this clearly. The EIS is missing information that needs to be explained.

Q/C: Manitoba Hydro's modelling analysis indicates there was a seven-centimetre impact on Lake Winnipeg peaking at July 2011. While we recognize this sounds minimal, it translates to significant flooding of land around Lake Winnipeg (the tenth largest lake in the world) at the peak of the flood. The EIS does not provide inundation maps, which would provide the incremental land flooded around Lake Winnipeg. The lake is subject to huge wind and wave impacts, which can be devastating, particularly in the peak of a flood.

Chat Window Comments

During discussion on this section of the presentation, participants offered the following additional comments in the videoconference chat window, which were not read aloud:

- This section does not include impacts specific to the Rural Municipality of Grahamdale, such as agriculture, road impacts etc.
- Remember there are Indigenous governments and nations, not just "Indigenous groups".
- Is every step MI just mentioned, occurring after Manitoba government licenses the project?
- We have looked at the results of the water balance modelling; more discussion is needed.
- We need to consider the flow velocities in the narrows into Playgreen Lake and narrows downstream of Cross Lake.
- The additional nutrient loading is a concern.
- Cumulative impacts need to be discussed more fully with the proponent and TAG members.
- Manitoba Hydro's modelling analysis can be found in Appendix 6 of the EIS (Impacts of the outlet channels to downstream water levels).

11. HEALTH AND SOCIO-ECONOMIC CONDITIONS

Bryan Leece, Senior Toxicologist, Stantec

Bryan Leece reviewed the "Human Health" section (pages 59-67) of the presentation titled, "Manitoba Infrastructure, Lake Manitoba and Lake St. Martin Outlet Channels Project", and commented on:

- Components in the project development area, including the LSMOC and LMOC (shown in a colour-coded map)
- Feedback from engagement related to impacts from farmland (i.e. pesticides), and changes in the quality of fish and country foods
- Assessments undertaken that confirmed the project will have no measurable effect on chemical concentrations in water, soil, fish or foods mitigation programs
- Current quality guidelines for air, soil, groundwater, surface water and sound levels

- Mitigating potential project effects through complaint procedures for equipment emissions, pollution and noise; contaminant concentrations should remain below applicable thresholds
- Positive effects of reduced flooding on agricultural and other activities
- No human health effects expected as a result of the anticipated changes to air, water, soil or food quality; changes in environmental media will be monitored.

Frank Bohlken, Senior Associate, Stantec

Frank Bohlken reviewed the “Socio-Economic Conditions” section (pages 76-89) of the presentation titled, “Manitoba Infrastructure, Lake Manitoba and Lake St. Martin Outlet Channels Project”, and commented on:

- Components in the project development area, including the LSMOC and LMOC (shown in a colour-coded map)
- Addressing concerns received, through management and mitigation plans, related to accessing and the loss of agricultural lands, increased vehicle traffic, service impacts, contractor spending and job opportunities
- Existing socio-economic conditions in the area, including hunting, trapping, fishing, mining/quarries, forestry, agriculture, and recreation
- Mitigating potential project effects on agriculture, hunting, trapping and fishing, changes to resource access, and changes in the groundwater for agricultural use
- Benefits of the project, including increased demand for local goods and services during construction, and overall improvements in areas previously impacted by flooding
- Follow up anticipated through various monitoring programs and ongoing engagement with stakeholders.

Meeting Discussion

The Facilitator welcomed questions and comments (Q/C) from participants, and responses (R) from the presenters, which prompted the following:

Q/C: I have concerns on the use of an assessment template from project to project, and on the inequity of First Nations and others being able to access economic benefits through the process and from the project itself. The impacts on culturally sensitive sites, north of the area are also concerning.

R: *We need to have an understanding of the exact locations. If there is guidance on the conditions of where those sites could be?*

Q/C: MCN has experienced significant impacts with the EOC, with the ability to fish and find fish, and make a living. If the operation of the permanent outlet channel continues to cause these issues, it will decimate the communities’ economic viability, as a huge percentage of economic activity is related to fishing. There are probably similar concerns around all of the Lake Winnipeg area.

R: We plan to get feedback on monitoring plans. These discussions are needed to continue work-planning. We want to have more discussions on the impacts to fisheries on Lake Winnipeg, so we can recognize how the understandings were gained. We want to further

incorporate concerns and the information MCN has, and to have discussions about potential flood-related and project-related effects. We want to understand how we can move forward through project planning, and managing project-related effects and monitoring, and appreciating the nuances between them.

Q/C: Can you provide your rationale as to how drinking water in domestic wells will not be altered? The LMOC will have Lake Manitoba water in the channel on a continuous basis to suppress draw down of the carbonate aquifer. This will create a condition that is known as GUDI (Groundwater Under Direct Influence), which is prohibitive in the *Manitoba Drinking Water Act*.

R: *Stantec can take this question away for additional discussion, and will provide a response to TAG through the Agency.*

Q/C: The new proposed Gall Feed Lot by Gall Family Farm LTD (which was recently approved by the Rural Municipality of Grahamdale) will potentially drain contaminants into Lake St. Martin through the channel from Lake Manitoba. What measures are in place to prevent the contaminants from draining through the channels? Our members are concerned that the proposed feedlot was not properly assessed before approval.

R: *They are subject to their own approval process and mitigation. Floods in general are sporadic events, and mobilize a variety of contaminants. The way we put together the mitigation and management plan speaks to what the project is creating versus what the flood is creating. With or without the channels, there will be increased runoff and contaminants, irrespective of the project. We cannot influence that aspect of the project.*

Q/C: “Human Health” must include consideration of the presence of blue-green algae in Lake St. Martin, Lake Winnipeg, Nelson River and Split Lake. It is apparent that phosphorus concentrations are increasing in Lake Manitoba. Phosphate attaches to small clay particles in the wash load of the Assiniboine River during floods.

Once the Portage Diversion is in use, this phosphorus-rich flood water can be expected to wash through Lake Manitoba and Lake St. Martin via the channels, and on to Lake Winnipeg and Split Lake. This supply of phosphorus encourages the growth of algae. Our sampling of the Nelson River shows that plant available nitrogen are used up by the time the water reaches Split Lake. This is encouraging the growth of blue-green algae, which can fix nitrogen from the air. Many of these blue-green algae release toxins. This pathway needs to be assessed by the human health component of the EIS. This starts with understanding the hydraulics of the system and how water moves through the system.

R: *These lakes are connected. During flood conditions, things change.*

Q/C: If the water moved through the Fairford system it would move through Lake St. Martin then through Dauphin River to Lake Winnipeg. With the channels, there is an expedient way for the wash load from Assiniboine River to make its way through the system faster. The phosphates will end up in Lake St. Martin and Lake Winnipeg. There is no assessment

in the EIS. Part of the assimilation is to take up the algae. In sampling on Nelson River there are huge colonies of algae without any nitrogen, encouraging blue-greens. What is the effect of this project on the already increasing phosphorous loads in Lake Winnipeg and Lake Manitoba? How much is this project going to add to that?

R: I understand the points raised.

Q/C: Most EAs do not limit themselves to the physical determinants of health, which this EIS seems to do. Given the socio-economic conditions and the impacts that LSFN and other First Nations have been dealing with, due to long term effects of the Fairford water control structure, there is a context question about the current health condition trends, particularly on the social determinants of health. This is important to characterize in the EA, as it is important for understanding further socio-economic impacts from this project and how it should inform decision making. Can MI consider a supplementary study on the social determinants of health?

Additionally, to understand how environmental changes impact socio-economic and health conditions, there is a requirement under CEAA section 5.1c). We are seeking this information and it seems to be missing. We need a supplementary assessment on the social determinants of health, and a socio-economic assessment with a baselined effects analysis that considers how the project could be impacted. There are potential effects which are cumulative, and project-specific. How will there be an ability to derive benefits from Lake St. Martin, including treaty rights based benefits?

R: MI is not committing to additional comprehensive studies. We are committing to work with individual communities to try to understand concerns, so these can be applied in our work, and can achieve solutions through management and monitoring plans. We can be more specific in trying to address individual concerns raised by communities. If we find we are not seeing success in addressing these concerns, we will re-address this.

Q/C: I recognize this is MI's perspective. I cannot think of any EA I have participated in within the last 10 years that has any greater demand, considering the conditions the communities are already facing today, for some meaningful socio-economic assessments.

If this is something MI cannot support, then definitely LSFN will look to the federal Crown as a funding partner in this project, and to the Agency to supplement this. Without that study, the legislative requirement and reconciliation requirements of this assessment are not being met.

R: Thank you for your comments.

Q/C: A lot of the residue from potash mining is getting into the river systems, from areas out of the province areas. There are also impacts from fracking. Are long term affects being considered of these implications? The province never wants to provide funding for communities to access experts. I would like to hire an economist to consider what happened in 2011 and 2014 and what will happen now. Fishers have been blamed for low

walleye numbers. The prior floods decimated species. The residue from the 2011 and 2014 flooding came out in 2012 and 2015, and impacted Lake Winnipeg. The spawning will be impacted. We need someone to hire an economist to examine the socio-economic impacts. What is the sustainable plan for people that live off the land, other than just buying out fishing licenses?

R: We need additional discussion, as we do not have all the answers for a number of issues within the provincial jurisdiction. I am hearing requests for answers on the effects of flooding, and concerns about infrastructure. I want to speak to these at another opportunity.

Q/C: With the Natural Resources Transfer Agreement in the 1930s, the federal government handed over authority to the province, to ensure that the use of the land remained viable for Indigenous people. There are portions of that agreement that need to be adhered to. There is more to this than just treaties. Indigenous people need the ability to continue to use that land.

Chat Window Comments

During discussion on this section of the presentation, participants offered the following additional comments in the videoconference chat window, which were not read aloud :

- Where will construction staging sites and fuel depots be situated?
- Everything is obviously a rerun of recent and past projects; the pattern is the same.
- Is there any place where the spiritual and cultural connections to health are considered in relation to this project? The Indigenous world view uses a holistic health perspective that is not reflected in this presentation.
- The labour force referenced, does not include our communities.
- Our team noted in the EIS response, that the study area for socio-economic conditions must include all Nations that are or will be impacted in relation to fishing. Many of the Nations rely on fishing as a primary industry, as discussed earlier today in the Fish and Fish Habitat section. It does not make sense to exclude these communities from socio-economic considerations.
- We consider socio-economic impacts and benefits; we know who will get benefits and who gets “economic leprosy”; the whole process is flawed, fish wildlife and habitat are considered a nuisance including timber.
- There was a dam built adjacent to a site of cultural significance at Tataskweyak; it was a rock that was a place of memory for generations; now it is subject to rapid water fluctuation; it was important for the people but work went ahead; burial sites and mass graves were exposed from previous pandemics; permafrost has preserved many human remains.
- Where in the EIS identification and mitigation of project-related impacts, is the ability for the Rural Municipality of Grahamdale to provide services and maintain assets? You referenced it in the need for waste management, emergency services management etc., but please clarify the Rural Municipality’s ability to support the community as a result of the project.
- LSFN is requesting MI undertake a supplementary health assessment that examines social determinants of health. Can MI confirm this will be done during the EA?
- The application of various construction and operations phase management plans is cited as the main mitigative solution for many of the socio-economic concerns. Where in the EIS is there a description and clarity on how potentially impacted stakeholders will participate in

- the development, implementation and monitoring of these potential unknowns? Uncertainty is inherent to the assessment process, but greater certainty is needed on how this will be managed, to provide greater comfort with the current process.
- There are several requirements in the EIS Guidelines to address this type of cumulative effect.
 - Do the EIS Guidelines require an answer to the concerns raised regarding algae?
 - There appears to be little understanding of how to address cumulative effects in this EIS (i.e. algae). The fact that the EIS studiously ignores the relationship of the project with the Portage Diversion, creates numerous gaps in the EIS. The Fairford Control Structure has been mentioned several times, including making changes to the structure. This structure continues to impact our communities and has led to inland flooding in the past. These changes are not currently part of this project or the EIS, but will have impacts.
 - There is a need for a study on social determinants of health.
 - The Clean Environment Commission under the *Manitoba Environment Act* requires health determinants, including those arising from a social context, for all public projects (including public funds and for public/citizens). Why did MI leave this out?
 - The EIS Guidelines require some description of activities outside of provincial jurisdiction that may contribute to cumulative effects.
 - This study on social aspects of human health throughout potentially affected communities and their environment and participants, is urgently needed. It is among the other reports, science, and data missing from the EIS.
 - When were the contents of province of Manitoba/MI website updated on this project? Did MI notify the participants in the EIS review when these changes and updates were made? In particular, when were the June 2019 Open House materials posted? Our office has been asking for these for a year. What has been posted for the June 2019 Open House does not include all the materials.
 - The 2019 Open House story boards are posted to the website. IAAC staff can confirm everything is included.

12. SITES OF IMPORTANCE – PHYSICAL AND CULTURAL HERITAGE

Butch Amison, Principal, Environmental Services, Stantec

Butch Amison reviewed the “Sites of Importance Physical and Cultural Heritage” section (pages 68-75) of the presentation titled, “Manitoba Infrastructure, Lake Manitoba and Lake St. Martin Outlet Channels Project”, and commented on:

- Components in the project development area, including the LSMOC and LMOC (shown in a colour-coded map)
- Feedback from engagement related to the effects to archaeological sites, cemeteries/burial sites, historic trails and traditional travel ways
- Addressing concerns through identifying known archaeological resources, historic trails/cemeteries and developing mitigation measures; protocols include stopping work as needed, until a project archeologist can provide further instruction
- Sites of importance, including: Fairford Historic Trail, the travelway along LMOC, an unnamed trail; cultural heritage sites, including: potential for unrecorded archaeological sites, Bayton St. Thomas Cemetery, Bissel United Church, and cemetery sites
- Periodic post-construction photographic monitoring of the Bayton Cemetery for changes in headstone positioning.

Meeting Discussion

The Facilitator welcomed questions and comments (Q/C) from participants, and responses (R) from the presenters, which prompted the following:

Q/C: Peguis First Nation hired an archaeologist to do research in the project area. There are a significant number of archaeological sites where the inlets are, including in the Buffalo Lake area. There is potential for artifacts to be found. If we submit a report to the province, will it be reviewed intact? We will submit the whole report to CEAA later this week. Do you want a copy? Or will you extract pieces that do not contradict what you are reporting today?

R: *If you can share that information it would be useful for informing the preconstruction efforts, and could be included as a source document.*

Q/C: It is unclear in the EIS what you were contracted to do with the EIS. Were you contracted to do a “desk study” in terms of the province’s records and assessments?

R: *That was a component. Additionally, I looked through a traditional land use (TLU) study prepared by Golder Associates and engagement studies, to learn from communities in the area on important places, and cultural features including the travelway from Lake St. Martin and Lake Manitoba along the ridge. You are correct this is a desktop exercise. An on-site, on-the-ground visit is still to be done.*

Q/C: You referenced a land study and a TLU study. What community information has been used to reach conclusions? Are you referring to a study specific to single communities?

R: *The TLU study was prepared by Golder Associates in 2018. The use of the information was to inform my desktop review, and search for architectural features on the ground, including cabins, trails, and references to important travel ways, which were captured in the document. The other source I mentioned, specific to the project area, was done by Dr. Virginia Petch in 2016 (published in 2017), which provided a regional heritage overview. It was comprehensive and informative.*

Q/C: Please help us find Virginia Petch’s report. Has it been filed and posted on the Registry? Field work has not been done yet. We worked with Dr. Petch on different projects. She used predictive modelling in all her work. Are they paying attention to predictive modelling on this project? For example, the trail referenced earlier will require field work and land work. Did you do any research into the 76 kilometre road? Did you look at the road, although it is not part of this review?

R: *Stantec is focussed on the outlet channel project so they cannot speak to other MI projects. Dr. Petch’s report is on the website now, and has been provided to the Agency as part of the filing. I can check to see how long it has been available. I can verify the exact posting date.*

Q/C: You mentioned updated information on the channels. The information from the June 2019 Open House is not complete, although it has been requested for a year.

Q/C: The cultural heritage section in the presentation (“Sites of Importance”) underlines an important physical dimension: the EIS guidelines and federal assessment guidance related to cultural heritage for Indigenous peoples. The EIS Guidelines, on Page 29, indicates that the EIS needs to include consideration of cultural landscapes, language use, transmission, intergenerational knowledge transmission, etc.

The channels will bisect an area where people traditionally hunted for generations. Intergenerational knowledge transmission will be impacted. MI could collaborate with LSFN to address these gaps, during the pre-construction Heritage Resources Impact Assessment, or alternatively a supplementary submission. These requirements are stipulated in the EI guidelines, and are part of the EA.

R: *This part of the assessment is new to us. We want to find the best way to address this, and commit to work collaboratively and address these gaps rather than attempting to describe how the EIS addresses this. There is a commitment to work with communities and understand how to incorporate information and knowledge.*

Chat Window Comments

During discussion on this section of the presentation, participants offered the following additional comments in the videoconference chat window, which were not read aloud:

- Is the archeologist experienced in Indigenous sacred sites? If so, in which regions? Why would any part of any lake affected by the project be left out of the area regarding heritage resources? Why would the location of First Nation communities be left out of the area assessed? They need to clearly provide a definition of predictive modeling for Indigenous sites, or tell us that Indigenous sites were left out of the assessment. Given that all the lands studies are late, when will the proponent revisit this context for the EIS? What traditional land use study was referenced in this presentation? Tell us if this report is based on desk study only, or whether there were any field studies. How old are the studies that were used? When is the information for these sites from? Has MI assessed the islands in Lake St Martin for archaeological, heritage sites? Has MI assessed the islands in Lake St. Martin for archaeological, heritage sites?
- There has been no consideration to Limestone Bay in the north basin of Lake Winnipeg. This area is relevant as a spawning area as well as a protected area.
- On Page 29 of the EIS Guidelines, there is a requirement for baseline cultural heritage assessment to include intangible cultural heritage. LSFN has not been able to find evidence that the EIS assessed the following components that are required by the EIS, to be considered: cultural landscapes, language use and transmission, intergenerational knowledge transmission, and any aspects of cultural identified through cultural impact statement. Is MI able to commit to working collaboratively on these gaps in the EIS through either the Pre-construction Heritage Resources Impact Assessment or a supplementary submission during the IR phase?
- It has not been argued to the satisfaction of Norway House Cree Nation that Limestone Bay and Playgreen Lake should be outside of the assessment area for potential cumulative effects.

- Is there any appetite for working groups including surface water and groundwater, fish and fish habitat, socio-economic, etc.? This would, of course, never replace consultation.
- The evidence and transcripts for the Keeyask project are thorough on concerns of communities and experts, related to algae.
- Can the presentations be sent out to the attendees a couple of work days before the next meeting? This may allow people to read and talk amongst each other before the meeting.
- Any working sessions via MI or working groups will need to have AAC Channel project participate, as outcomes are part of the review under CEAA etc. Anything less would be a waste of resources and time. MI would need to make a commitment as to access to results, review of new EIS content, etc. This affirmation has not been heard over the two days. Communities and experts cannot participate without resources, and should not be expected to work for free.
- The Aboriginal people from Fairford and Lake St. Martin were still being tossed around in Winnipeg before the new year, and suffered many hardships since the floods. If it takes that long, they will face more issues before they settle down, if they all finally make it home. Some long term effects will need to be addressed.

13. NEXT STEPS AND REMARKS

Neil Cory extended thanks for the issues and topics raised during the discussion, and noted that the conversation contributed to improving the level of detail on the project.

Christine Baljko recognized the importance of productively considering the frustrations expressed. She acknowledged that although the project offered a good solution to a problem, more work and discussions may be needed. It was confirmed that MI remained committed to continued discussions with individual communities, or as a larger group.

Meeting Discussion

The Facilitator welcomed further questions and comments (Q/C) from participants, and responses (R) from the presenters, which prompted the following:

- Q/C: Some members have an interest or expertise in channels, fish, or socio-economic concerns. Working together as a large group may be more helpful and economically feasible, particularly given the cost of consultants joining the discussion. Some members may have a better understanding of the relationship between TAG, IAAC and CEAA.
- Q/C: It would be helpful to have workshops specific to groundwater modeling, the hydraulic model, and amendments to baseline information. TAG members who are keen to participate should be involved in those discussions/workshops.
- Q/C: Some members would need to go back to leadership for direction, before joining a working group. There are capacity implications of people participating in working groups. Some communities would be challenged to participate without support. In 2013, it was confirmed that no new works would be undertaken either on Lake Manitoba or Lake St. Martin without the effective approval of the First Nations below the Fairford River water control structure. Given federal government's commitment to advancing UNDRIP, and seeking consensus, this project should only proceed with the agreement of First Nations.

Q/C: I welcome further discussion on matters including: water modelling, water quality, nutrients and algae. These issues are not addressed in the EIS and need further investigation.

Q/C: A number of comments have been helpful in confirming the initial work of the EIS. There is acknowledgement that work is needed, including on significant technical issues and the effects of water infrastructure. We are in the midst of a regulatory undertaking through a federal act, where federal review is in lieu of provincial hearings and other provincial undertakings. We need to ensure that anything that proceeds from this point, includes participation from agency staff, where there is protocol for input and output, and conditions in terms of access to information. Public works projects often have different risks in terms of access to information. Everything going forward now should be part of the regulatory process. Working groups and follow up sessions will require adequate funding to enable participation. The discussions cannot be one-on-one meetings.

R: *MI has committed to reviewing the notes and questions provided. We appreciate that the questions have been captured and we will work through them as quickly as possible. We will provide feedback in a written form, and get them back to the members, knowing that additional discussion is needed on these topics. We can work towards how this will occur, with TAG members while working with the Agency.*

Chat Window Comments

During discussion on this section of the presentation, participants offered the following additional comments in the videoconference chat window, which were not read aloud:

- Can you send an evaluation/comment form to participants?
- The regulatory process needs to drive any further technical sessions, working groups etc. Information going in and coming out should be available to all participants and be part of the CEAA/IAAC proceedings, and registry. MI reporting back to the Agency is insufficient, and does not include all participants or the Agency fully.
- Nothing can come out of sessions that appears to allow avoidance of the Act or the project guidelines. There are topics and issues still to deal with in the TAG, beyond (but affected by) the technical issues discussed. We would all benefit from knowing that any such sessions or groups would report to the TAG also.

Jennifer Saxe, Director General, Regional Operations, Impact Assessment Agency of Canada

Director General Saxe extended appreciation for attendee's active engagement, participation and contributions throughout the meeting. Further feedback on the process from all members is encouraged.

Director General Saxe acknowledged the commitment from MI to follow-up on a number of issues, based on the feedback received at the meeting, and confirmed that the Agency will follow-up on the information requests.

The Director General confirmed that future meetings will focus on drafting information requests with TAG members on issues raised, incorporating requested responses, and eventually reviewing the actual EA report and conditions.

June 3, 2020 (Day Two) – Technical Advisory Group Meeting

The Facilitator extended appreciation to participants for keenly sharing their knowledge and insights, which contributed to the meeting's discussions.

CLOSING PROTOCOL

The June 2-3, 2020 Technical Advisory Group Meeting concluded at approximately 3:30 p.m. Jim Ransom offered a Closing Prayer.

* * *

Acronym List

The following acronyms are used in these notes:

CEAA	Canadian Environmental Assessment Act
CFS	Cubic feet per second
DFO	Department of Fisheries and Oceans
EA	Environmental Assessment
EIS	Environmental Impact Statement
EMP	Environmental Management Program
EOC	Emergency outlet channel
EPP	Environmental Protection Plan
GUDI	Groundwater Under Direct Influence
IAAC	Impact Assessment Agency of Canada
INFC	Infrastructure Canada
IRTC	Interlake Reserves Tribal Council
LAA	Local Assessment Areas
LMOC	Lake Manitoba Outlet Channel
LSFN	Little Saskatchewan First Nation
LSMOC	Lake St. Martin Outlet Channel
MCN	Misipawistik Cree Nation
MI	Manitoba Infrastructure
PSI	Pounds per square inch
RAA	Regional Assessment Areas
SAR	Species At Risk
SOCC	Species of Conservation Concern
TAG	Technical Advisory Group
TLU	Traditional Land Use
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
WMP	Wildlife Monitoring Plan

Information Items

The following items were referenced or reviewed on Day One – June 2, 2020:

1. Agenda for the June 2-3, 2020 Meeting of the Technical Advisory Group – Lake Manitoba and Lake St. Martin Outlet Channels project
2. “Technical Advisory Group for the Federal Environmental Assessment of the Lake Manitoba and Lake St. Martin Outlet Channels Project”, date May 21, 2020
3. Correspondence sent to the IAAC on behalf of Interlake Reserves Tribal Council regarding “Lake Manitoba and Lake Saint Martin Outlet Channels, IAA Reference #80148”, dated June 1, 2020
4. Chart titled “Environmental Assessment Process, Lake Manitoba and Lake St. Martin Outlet Channels Project”, dated June 2020
5. Document titled, “Frequently Asked Questions - Lake Manitoba and Lake St. Martin Outlet Channels Project”
6. KGS report titled, “Assiniboine River and Lake Manitoba Basins Flood Mitigation Study”, dated January 2016
7. Presentation titled, “Manitoba Infrastructure, Lake Manitoba and Lake St. Martin Outlet Channels Project”

The following items were referenced or reviewed on Day Two – June 3, 2020:

8. Study titled, “A water quality assessment of Lake Manitoba, a large shallow lake in central Canada” prepared by Elaine Page (2011)
https://mspace.lib.umanitoba.ca/xmlui/bitstream/handle/1993/4831/Page_Elaine.pdf?sequence=3&isAllowed=y
9. Study titled “River Hydraulics and Morphology, Technical Report”, prepared by Northwest Hydraulic Consultants Ltd., for Hatfield Consultants on behalf of TransLink (South Coast British Columbia Transport Authority) (June 2018)
https://projects.eao.gov.bc.ca/api/public/document/5b734384d496410024db230d/download/Appendix%20%2018.2_Fraser%20River%20Hydraulics_Morphology.pdf

List of Attendees

List of Attendees

The following were pre-registered as attendees:

MEMBERS/REPRESENTATIVES:

Brokenhead Ojibway First Nation:

- Alison Fraser
- Bev Smith
- Levi Snook

Fisher River Cree Nation:

- Councillor Vince Crate
- Harley Jonasson

Interlake Reserves Tribal Council, representing Lake Manitoba First Nation, Dauphin River First Nation and Kinonjeoshtegon First Nation:

- Tosan Okorosobo
- Seetta Roccola
- Karl Zadnik

Lake St. Martin First Nation:

- Blake Russel
- Mervin Sinclair
- Steve Topping

Little Saskatchewan First Nation:

- Trefor Smith

Manitoba Metis Federation:

- Morrissa Boerchers
- Jasmine Langhan
- Marci Riel

Misipawistik Cree Nation:

- Derek Kornelsen – Rootstalk Resources
- Kirsten Earl McCorrister

Peguis First Nation:

- Meggie Okeke

Pimicikamak Okimawin and Norway House Cree Nation:

- Annette Luttermann
- Darrell Settee

Southern Chiefs Organization, representing Black River First Nation and Bloodvein First Nation:

- Coty Zachariah

Tataskweyak Cree, Nation Mispawistik Cree Nation, and Peguis First Nation:

- Ian Halket, Halket Environmental Consultants
- Robert Spence

Pinaymootang First Nation, Sagkeeng First Nation, and Sandy Bay Ojibway First Nation:

- Alex Nisbet, Myers LLP

Poplar River First Nation:

- Norway Rabliuskas
- Jared Whelan
- Gaile Whelan Enns

Rural Municipality of Grahamdale:

- Jason Bittner
- Clifford Halaburda
- John Osler
- Steve Topping

FEDERAL GOVERNMENT REPRESENTATIVES:

Environment and Climate Change Canada:

- Orlagh O'Sullivan

Fisheries and Oceans Canada:

- Richard Gervais
- Jeff Moyer

Health Canada:

- Joel Kaushansky
- Paul Partridge
- Pierre Pelletier

Indigenous Services Canada:

- Dan Benoit

Infrastructure Canada:

- Heather Flynn

Natural Resources Canada:

- Peter Unger

Transport Canada:

- Chris Aguirre
- Dallas Babuik
- Jackie Barker

List of Attendees

PROVINCIAL GOVERNMENT REPRESENTATIVES:

Manitoba, Conservation and Climate:

- Shannon Kohler
- Bruce Webb

Manitoba Infrastructure:

- Christine Baljko
- Scott Johnstone
- Chris Propp
- Jaime Smith
- Stephanie Woltman

Manitoba Indigenous and Northern Relations:

- Chelsea Silva

Stantec Consulting Inc. (Consultant):

- Butch Amundson
- Carmen Anseeuw
- Nick Barnes
- Frank Bohlken
- Colin Buchanan
- Neil Cory
- Nick De Carlo
- George Hegmann
- Bryan Leece
- Maureen Matthew
- Leane Wyenberg

ALSO PRESENT:

Impact Assessment Agency of Canada:

- Greg Bosse
- Matthew Dairon
- Rebecca D'Onofrio
- Chelsea Fedrau
- Heather Flynn
- Ashifa Jiwa
- Anna Kessler
- Ian Ketcheson
- Laurence Provençal
- Barbara Pullishy
- Sumaiya Rizvi
- Spencer Roth
- Jennifer Saxe
- Ayesha Sohail

WebEx Support:

- Alice Zimmer

Facilitation Services (Tarbell Facilitation Network):

- John Ransom
- Harold Tarbell

Preparation of Meeting Notes:

- Carrie Peacock, Raincoast Ventures Ltd.