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July 10, 2020

Christine Baljko
Director – Environment & Consultation
Manitoba Infrastructure
1520-215 Garry Street
Winnipeg, MB R3C 3P3

Dear Christine Baljko,

SUBJECT: Technical Review of the Environmental Impact Statement for the Lake Manitoba and Lake St. Martin Outlet Channel Project – Information Request Round 1 Package 2A

The Impact Assessment Agency of Canada (the Agency), with input from Indigenous groups, the public, federal authorities, and the Technical Advisory Group, is conducting a technical review of the Environmental Impact Statement (EIS) for the Lake Manitoba and Lake St. Martin Outlet Channel Project (the Project) received from Manitoba Infrastructure on March 5, 2020.

Upon review of the EIS and expertise from parties noted above, the Agency identified gaps in the information provided in the EIS. This information is necessary to determine whether the Project is likely to cause significant adverse environmental effects and to inform the Agency's preparation of the Environmental Assessment (EA) Report under the *Canadian Environmental Assessment Act, 2012* (CEAA 2012).

The Agency prepared the attached Information Request Round 1 Package 2A to allow Manitoba Infrastructure to continue gathering essential information in a timely manner. A second part to this package informed by Indigenous groups, the public, and federal authorities, may be issued following consultation, as necessary.

The attached information requests are in addition to the Information Request Round 1 Package 1 issued on April 23, 2020. The information requested herein does not duplicate information requested in the previous package; therefore, to support the timely issuance of the current information requests, the Agency's analysis to responses provided by Manitoba Infrastructure on Information Request Round 1 Package 1 is not integrated into the information requests attached and will be provided separately.



When responding to information requests, the Agency requests that Manitoba Infrastructure:

- demonstrate and discuss consideration of the interconnected nature of bio-physical, social, cultural, and spiritual effects of the Project;
- consider the context and rationale for the required information for every question;
- include updated information and assessments of effects that take into account any data gathered, mitigations measures considered, analysis undertaken, and engineering and design details planned since the submission of the EIS and in exceptional circumstances where information and assessments of effects are still forthcoming describe methodology and timing for proposed works, reporting, and integration of information;
- describe specific, achievable, measureable, and verifiable mitigation measures in a manner consistent with direction provided in the EIS Guidelines;
- present thorough discussions of any areas of uncertainty, applying a precautionary approach, given that some studies and plans may not be complete at this time;
- where uncertainty remains, provide clearly defined, detailed follow-up program measures, including proposed further mitigation measures; and
- present complete or summarized information and discussion within the information request responses, rather than limiting responses to references to applicable reports.

Where results of modelling, studies, or information gathered for Information Request responses inform project engineering and design, Manitoba Infrastructure must present information on any modifications or additional specificity.

In accordance with CEAA 2012, time taken by Manitoba Infrastructure to provide the required information is not included in the legislated timeline within which the Minister of the Environment and Climate Change must make an EA decision. Issuance of this Information Request Package pauses the timeline at day 152 of 365.

The Agency welcomes the opportunity to discuss the outcome of this review with you and provide further advice on how to best address the information required to move forward with the assessment process. To this end, the Agency proposes a technical workshop with federal experts and your team to facilitate a better understanding of the expectations of the Agency and federal authorities, and to ensure complete responses to information requests. In light of recent public health

recommendations, we are proposing a virtual meeting or teleconference at this time. Please contact the Agency to confirm availability for a discussion during the next few weeks. If you have any questions, please contact me at Barbara.Pullishy@canada.ca or 587-341-4350.

Sincerely,

Barbara Pullishy
Regional Director, Prairie and Northern Region

cc:

Ruth Eden, Assistant Deputy Minister, Manitoba infrastructure
Jaime Smith, Manitoba infrastructure
Scott Johnstone, Manitoba infrastructure
Bruce Webb, Manitoba Conservation and Climate
Jennifer Saxe, Director General, Impact Assessment Agency of Canada
Chelsea Fedrau, Impact Assessment Agency of Canada
Matthew Dairon, Impact Assessment Agency of Canada
Anna Kessler, Impact Assessment Agency of Canada

Attachment (1): Information Request Package 1 – Technical Review – Lake Manitoba and Lake St. Martin Outlet Channels Project

Lake Manitoba and Lake St. Martin Outlet Channels Project - Technical Review
Information Requests Round 1 Package 2A – July 10, 2020

List of Acronyms and Abbreviations

Acronym/Abbreviations	Definition
BOD	Biochemical Oxygen Demand
CAAQS	Canadian Ambient Air Quality Standards
CBOD	Carbonaceous Biochemical Oxygen Demand
CCME	Canadian Council Of Ministers Of The Environment
CEAA 2012	<i>Canadian Environmental Assessment Act, 2012</i>
COPC	Contaminant Of Potential Concern
CRA	Commercial, Recreational, Or Aboriginal
DFO	Department Of Fisheries And Oceans
EA	Environmental Assessment
ECCC	Environment And Climate Change Canada
EIS	Environmental Impact Statement
EOC	Emergency Outlet Channel
FRWCS	Fairford River Water Control Station
GCDWQ	Guidelines For Canadian Drinking Water Quality
GHG	Green House Gas
ha	Hectare
HC	Health Canada
Hr	Hour
IAAC	Impact Assessment Agency Of Canada
Indigenous Groups	Indigenous groups identified in Part 2, Section 7 of the EIS Guidelines, and any groups that were identified after the Guidelines were finalized
LAA	Local Assessment Area
LMOC	Lake Manitoba Outlet Channel
LSMOC	Lake St. Martin Outlet Channel
MAAQC	Manitoba Ambient Air Quality Criteria
MSD	Manitoba Sustainable Development
MWQSOG	Manitoba Water Quality Standards, Objectives And Guidelines
NO2	Nitrogen Dioxide
NRCan	Natural Resources Canada
PAL	Protection Of Aquatic Life
PDA	Project Development Area
PM2.5	Particulate Matter With A Diameter < 2.5 Micrometers
QA/QC	Quality Assurance/ Quality Control
RAA	Regional Assessment Area
ROW	Right Of Way
SAR	Species At Risk
SARA	<i>Species At Risk Act</i>
TDS	Total Dissolved Solids
TSS	Total Suspended Solids
VC	Valued Component
WCS	Water Control Structure

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Reference IR#	Related information sources and submissions ⁱ	EIS Guideline Reference	EIS Reference	Context and Rationale	The Proponent is Required to – Comments and potential Information Requests
Atmospheric Environment					
IAAC-64	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway First Nation– Written Submission on the EIS – June 1, 2020	7.1.1 Atmospheric Environment	6.2.2.2 Overview of Atmospheric Environment	The EIS Guidelines require baseline information regarding relevant meteorological information, including wind speed and direction, to inform understanding of potential changes to the environment from the Project. With respect to wind speed and direction, the EIS section 6.2.2.2 states that the wind directions are predominantly from the west and provides wind speeds as averages in a range. The CALMET data contradicts this in terms of both direction and speed. This could have implications to seiche set up particularly at the LSMOC on Lake Winnipeg, which given the fetch involved could be significant. It is not clear in the EIS how wind speed and direction data has been used throughout assessments of effects to other VCs and how the contradictory information identified above may have influenced the outcomes of these assessments. Clarity on the use of wind speed and direction information is necessary to understand the assessment of effects to related VCs.	a. Clarify what wind speed and direction data was used in the characterization of baseline conditions for the atmospheric environment. b. Describe whether and how the use of the other data set has implications for any assessment of effects of the Project presented in the EIS.
Surface Water					
IAAC-65	Tataskweyak Cree Nation – Written Submission on the EIS – June 10, 2020	7.1.4 Groundwater and Surface Water 7.2.2 Changes to Groundwater, Surface	6.4.5 Existing Conditions for Surface Water 6.4.6 Project Interactions with	The EIS Guidelines require the proponent to provide baseline water quality data and information on any local and regional potable surface water resources. The proponent is required to assess the changes to water quality and quantity during all phases of the Project and assess changes to the quality and quantity of	a. Provide baseline water quality data for Split Lake. b. Describe the potential environmental effects of the Project on Split Lake and any associated adverse effects to drinking water quality, Indigenous health, and the

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		Water, and Fluvial Morphology 7.6.3 Cumulative effects assessment	Surface Water Environment 6.4.8 Summary of Project Residual Effects 11.4.2 Surface Water	drinking water sources. The EIS Guidelines also require the proponent to identify and assess the Project’s cumulative effects. Section 6.4.5 of the EIS describes existing conditions for regional and local waterways, and includes water quality data. Sections 6.4.6 and 6.4.8 of the EIS describe potential environmental effects of the Project and potential residual environmental effects of the Project on surface water, respectively. Baseline water quality data has not been provided for Split Lake and an assessment of potential environmental effects of the Project, including residual effects, has not been conducted for this waterbody. Split Lake was also not considered in the cumulative effects assessment for surface water quality provided in the EIS. Tataskweyak Cree Nation has expressed concerns that the Project will cause further deterioration of the water quality of Split Lake, which is already experiencing cumulative adverse effects to water quality from previous flood events and other developments in the region, including hydroelectric developments and contaminants from agricultural and municipal sources. As noted by Tataskweyak Cree Nation, a large proportion of the water in Split Lake originates from the north basin of Lake Winnipeg via the Nelson River. Tataskweyak Cree Nation also noted that algal blooms resulting from nutrient loading have been worsening in recent years and expressed concerns regarding potential increases in algal blooms as a result of the Project and effects to water quality from algal toxins. As community members of Tataskweyak Cree Nation use Split Lake as a source of drinking water and for traditional purposes, information on direct and cumulative effects of the Project on this waterbody is required to support a full understanding of the potential adverse effects of the Project on Indigenous health and socioeconomic conditions and the current use of lands and resources for traditional purposes by Indigenous peoples.	current use of lands and resources for traditional purposes. c. For any potential adverse effects identified above, describe measures that will be implemented to mitigate effects. Describe monitoring and follow-up to be implemented to validate the predictions of the assessment, confirm the effectiveness of mitigation measures, and respond to any unanticipated effects identified during monitoring. Describe how Indigenous groups will be involved in follow-up monitoring. d. Revise the cumulative effects assessment to consider potential effects of the Project to Split Lake, in combination with past and potential future flood events, agricultural and municipal contaminant runoff, and other existing and future developments in the region, and any associated adverse effects to drinking water quality, Indigenous health, and the current use of lands and resources for traditional purposes.
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IAAC-66	Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Lake St. Martin First Nation – Written Submission on the EIS – June 5, 2020	7.2.2 Changes to Groundwater, Surface Water, and Fluvial Morphology	6.4.10 Predication Confidence	The EIS Guidelines require the proponent to assess changes to groundwater, surface water and fluvial morphology as a result of the Project. The EIS Guidelines direct the proponent to apply the <i>Agency's Operational Policy Statement, Determining Whether a Designated Project is Likely to Cause Significant Adverse Environmental Effects under CEAA 2012</i> when assessing the significance of the potential effects of the Project (https://www.canada.ca/en/impact-assessmentagency/services/policy-guidance/determining-project-causesignificant-environmental-effects-ceaa2012.html). Section 6.4.10 of the EIS states that a determination of the significance of potential residual project effects to groundwater and surface water has not been conducted. The EIS also does not predict the full range of changes to groundwater and surface water. Significance criteria used in effects assessments are useful indicators with which to understand the changes to groundwater and surface water. Thorough understanding of changes to groundwater and surface water resources from the Project is necessary to understand potential effects to valued components, such as fish and fish habitat, species at risk, and Indigenous peoples.	a. Provide a thorough description of potential changes to groundwater and surface water that applies the full suite of significance criteria to support a full understanding of the predicted changes.
IAAC-67	Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway Nation – Written Submission on the EIS – June 1, 2020	7.1.4 Groundwater and Surface Water	6.4.5 Existing Conditions for Surface Water	The EIS Guidelines require the proponent to provide baseline information on seasonal surface water quality, including information on wetlands. Section 6.4.5 of the EIS provides information on the physical and chemical quality of surface water for some surface water bodies along the Lake Manitoba Outlet Channel and Lake St. Martin Outlet Channel alignments. Several Indigenous communities have expressed concerns that the EIS does not present surface water quality information for major wetlands and creeks that flank the project alignment and that exist in the PDA, LAA, and RAA and that are important for the exercise of traditional harvesting activities. This information is necessary to assess how groundwater may be interacting with surface water bodies to influence their chemistry,	a. Provide baseline water quality data for all wetlands and creeks that may be affected by the Project. Demonstrate opportunities for Indigenous groups' involvement in the selection of waterbodies and parameters for which water quality data is gathered.

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	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020 Little Saskatchewan First Nation – Written Submission on the EIS – May 25, 2020			and to support a full understanding of the effects of these changes to VCs.	
IAAC-68	Little Saskatchewan First Nation – Written Submission on the EIS – May 25, 2020 Fisher River Cree Nation – Written Submission on the EIS – June 22, 2020	7.1.4 Groundwater and Surface Water 7.2.2 Changes to groundwater, surface water, and fluvial morphology 7.3.3 Indigenous Peoples	6.4.5 Existing Conditions for Surface Water 6.4.7.2 Changes in Regional Flow and Water Levels 9.6.3 Project interactions with Heritage Resources	The EIS Guidelines require the proponent to provide baseline data on the seasonal and annual flow rates and potential changes to flow rates and currents for all affected waterbodies and watercourses. The EIS Guidelines also require the proponent to assess effects of changes to the environment on Indigenous peoples’ physical and cultural heritage, and structures, sites or things of historical, archaeological, paleontological or architectural significance to groups. Sections 6.4.5 and 6.4.7.2 of the EIS describe existing conditions for Lake St. Martin, including water levels and flow, and potential effects to Lake St. Martin as a result of construction and operation of the Project, respectively. However, as noted by Little Saskatchewan First Nation, the description of baseline data and assessment of potential effects to surface water flow treat Lake St. Martin as a single water basin, overlooking the fact that Lake St. Martin has two basins that are separated by the narrows, which act as a pinch point for water flow. Given this, the assessment of potential project effects does not take into consideration potential flooding that may occur in the area surrounding the narrows and does not recognize that potential project design changes to mitigate effects, such as dredging of the narrows to allow for higher flow rates, will also have effects on surface water flows.	a. Provide an updated description of baseline surface water flow and assessment of potential project effects to Lake St. Martin, including any available surface water modelling results, to consider: i. the effect of the narrows on surface water flow; ii. flooding that may occur in the area surrounding the narrows; iii. the fact that this waterbody is comprised of two basins separated by the narrows; iv. any effects that dredging of the narrows will have on surface water flows.; and v. effects to the extent, severity, and timing of flooding around the south basin of Lake St. Martin, including any potential effects to Indigenous communities in those areas. b. Describe potential effects to fish and fish habitat, including fish passage and distribution, as a result of any effects identified in question a). c. Describe the potential effects of dredging of the narrows of Lake St. Martin in the context of physical and cultural heritage, given the importance of this site

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				Effects to surface water flows may also affect fish and fish habitat, including fish passage and distribution. There are also concerns from Indigenous groups that, due to lack of consideration of the narrows, the analysis presented in the EIS does not accurately reflect potential effects of the Project to the extent, severity, and timing of flooding along the south basin of Lake St. Martin, and resulting effects to Indigenous communities in this area. Further, the narrows of Lake St. Martin are considered a site of importance to Indigenous peoples; therefore potential project effects to the narrows will have an impact on physical and cultural heritage of Indigenous peoples. Information on the potential effects of the Project on the narrows in the context of their importance to Indigenous peoples is necessary to understand the potential effects of changes to the environment from the Project on Indigenous peoples.	to Indigenous peoples. Present an updated assessment of potential effects of the Project on physical and cultural heritage of Indigenous peoples to consider these effects. d. Describe measures that will be implemented to mitigate any adverse effects described above. Describe the monitoring and follow-up that will be implemented to validate the predictions of the assessment, confirm the effectiveness of mitigation measures, and respond to any unanticipated effects identified during monitoring. Describe how Indigenous groups will be involved in follow-up and monitoring.
IAAC-69	Little Saskatchewan First Nation – Written Submission on the EIS – May 25, 2020 Norway House Cree Nation – Written Submission on the EIS – June 16, 2020 Pimicikamak Okimawin – Written Submission on the EIS – June 19, 2020	2.3 Engagement with Indigenous groups 3.2.3 Spatial and temporal boundaries; 7.5. Significance of residual effects	6.4 Groundwater and surface water	The EIS Guidelines require the proponent to describe spatial and temporal boundaries and to present information on baseline conditions to support the assessment of the potential effects of the Project on VCs. The EIS Guidelines also require the proponent to describe any residual environmental effects of the Project on VCs. For those VCs related to effects of changes to the environment on Indigenous peoples, the proponent is required to discuss the residual effects with Indigenous groups and consider the view of Indigenous peoples in the determination of significance criteria. As noted in Round 1, Package 1, IAAC-11, clarity on the information used to inform the selection of RAA and baseline information on conditions is required to support an understanding of the potential changes to surface water quality and related effects on the environment, including fish and fish habitat. Several Indigenous communities have expressed concerns that the RAA for the Project does not include the south basin of Lake Winnipeg, Playgreen Lake, or the Nelson River. Given the	a. Provide a rationale for why the south basin of Lake Winnipeg, Playgreen Lake, Limestone Bay, and the Nelson River were not included in the scope of the RAA for the Project, including a discussion of the potential for adverse project effects on these waterbodies. b. Provide a rationale for why Saskatchewan Point, McBeth Point, Fisher Bay, Fisher River, and the northern half of Sturgeon Bay were not included in the scope of the LAA for the Project, including a discussion of the potential for adverse project effects on these areas. c. If the potential exists for the Project to result in adverse effects on these waterbodies, provide an assessment of these effects and potential effects to Indigenous peoples. This assessment must include the perspectives of Indigenous communities, particularly with respect to the ecological and social context of effects.

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	Fisher River Cree Nation – Written Submission on the EIS – June 22, 2020		importance of these waterbodies for the current use of lands and resources for traditional purposes, including fishing, and the presence of aquatic species at risk in these waterbodies (e.g. bigmouth buffalo, silver chub, bigmouth shiner, and chestnut lamprey) clarification is required to understand why these waterbodies were not included in the scope of the RAA for the Project. Norway House Cree Nation has also expressed concerns that Limestone Bay, which provides important spawning habitat for pickerel and walleye, was not included in the scope of the RAA for the Project. As Limestone Bay is located in a low area of Lake Winnipeg and separated from Lake Winnipeg by a sand bar, the community is concerned that contaminants in flood waters and a potential reduction in water levels as a result of the Project could affect the health and/or existence of the Bay and the fish species that rely on it for important life processes. Fisher River Cree Nation expressed concerns that areas within their community’s traditional fishing grounds have not been included in the scope of the LAA, including Saskatchewan Point, McBeth Point, Fisher Bay, Fisher River, and the northern half of Sturgeon Bay. Clarification is required to understand why these areas were not included within the scope of the LAA for the Project and whether potential effects to these areas were considered in the EIS, given the importance of these areas for the current use of lands and resources for traditional purposes, including fishing. From the perspective of Norway House Cree Nation and Pimicikamak Okimawin the magnitude, geographic extent, timing, duration, and frequency of adverse effects of the Project on the Nelson River, in combination with the existing Manitoba flood control system, have been underestimated in the EIS. In particular, the community is concerned about potential changes to seasonal water levels and flow patterns on the Nelson River, which may affect the ability of community members to practice traditional use activities. For instance, existing patterns of water regulation	d. Describe measures that will be implemented to mitigate any adverse effects identified above, including a discussion of their anticipated effectiveness. Describe monitoring and follow-up to be implemented to validate predicted effects, effectiveness of mitigation measures, and respond to any unanticipated effects identified during monitoring. Describe how Indigenous groups will be involved in follow-up and monitoring. e. Provide the results of discussions with Indigenous groups regarding the determination of significance criteria for potential residual effects to Indigenous groups and other VCs, including criteria established for the cumulative effects assessment.
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				for flood control and hydroelectric generation within these communities' traditional territory has affected road access in certain areas, the health of aquatic and riparian ecosystems, and navigation, which forces community members to travel farther to hunt, fish, and gather plants. Concerns were expressed that the Project may act to exacerbate these existing issues. The EIS concludes that any downstream changes due to the LMLSM channels would be minor as the contribution of inflows from Lake St. Martin to Lake Winnipeg is relatively small. Pimicikamak Okimawin expressed concerns with this conclusion, noting that even small changes in peak water flows in the future may contribute to erosion and degraded shoreline conditions downstream on the Nelson River. Norway House Cree Nation and Pimicikamak Okimawin are also concerned that the ecological and social context of the Project and cumulative effects, from the perspective of Indigenous communities, has not been considered in the EIS and that Indigenous communities were not involved in discussions with Manitoba Infrastructure regarding the determination of significance criteria for potential residual effects to Indigenous groups or other VCs.	
IAAC-70	Norway House Cree Nation – Written Submission on the EIS – June 16, 2020 Pimicikamak Okimawin – Written Submission on the EIS – June 19, 2020	7.2.3. Changes to riparian, wetland and terrestrial environments	8.2.4 Assessment of Residual Effects on Vegetation 8.2.9.4 Change in Wetland Functions	The EIS Guidelines require the proponent to describe potential changes to the habitat of migratory and non-migratory birds, including wetlands frequented by birds. Section 8.2.9.4 of the EIS indicates that the Project may result in changes to wetland functions, a reduced abundance of wetlands, and potentially altered hydrology, which may in turn affect water quality, including turbidity and nutrient levels. The EIS also notes that elevated phosphorus levels have been recorded in wetlands following reductions in tree cover due to flooding and have persisted for several years.	a. Describe how changes to wetland function, abundance, and hydrology as a result of the Project and in combination with other existing or past developments will affect nutrient inputs to waterbodies and watercourses in the LAA and RAA, and the Nelson River. b. Describe measures that will be implemented to mitigate any adverse effects identified above, including a discussion of their anticipated effectiveness. Describe monitoring and follow-up to be implemented to validate predicted effects, effectiveness of

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				Norway House Cree Nation and Pimicikamak Okimawin have noted that changes to wetlands that have already occurred in Lake Manitoba may have reduced wetland function in relation to nutrient cycling. This may be the case not only in the Delta marsh, but also along all riparian areas that have been affected by long-term water level regulation. These communities are concerned that further loss or alteration of wetlands due to the Project may exacerbate this issue and result in further degradation of water quality and increased nutrient inputs to waterbodies important to the community for traditional use purposes. Further, as Lake Winnipeg is connected to the Nelson River, which is an area of importance to Norway House Cree Nation and Pimicikamak Okimawin, concerns were also expressed regarding the potential for the Project to contribute to increased nutrient loading downstream of Lake Winnipeg. Further details are required to understand the effects of the Project to wetland functions, and related effects to water quality and the current use of lands and resources for traditional purposes by Indigenous peoples.	mitigation measures, and respond to any unanticipated effects identified during monitoring. Describe how Indigenous groups will be involved in follow-up and monitoring.
IAAC-71	Fisher River Cree Nation – Written Submission on the EIS – June 22, 2020	7.6.2 Effects of the environment on the Project	3.5.3.5 Ice Management 14.2.1 Outlet Channel Breach/Control Structure Failure: Causes 14.2.2 Incident Prevention	The EIS Guidelines require the proponent to describe potential effects of the environment on the Project, including external events such as ice jams. Section 3.5.3.5 of the EIS indicates that a solid cover of ice will form within both channels during winter which could reduce the capacity of the channels. If flow on the channels is constricted, this could lead to an artificial and uncontrolled increase in the water level within the channel that could result in overtopping and breach of the containment dikes, as described in section 14.2.1 of the EIS. Fisher River Cree Nation has expressed concerns that, should operation of the Project during winter be required, ice jamming at control structures, drop structures, and bridges could significantly reduce channel capacity, increase damage to infrastructure, and	a. Describe the methods of operation that will be implemented by Manitoba Infrastructure to reduce the risk of ice jams occurring during project operation. Describe the anticipated effectiveness of these methods for preventing or reducing the risk of ice jams. b. In the event that the methods described in a) are ineffective at preventing overtopping and breach of the containment dikes should occur, describe potential effects to all VCs. With respect to Indigenous peoples, potential effects should be described for each group individually. c. Describe contingency measures to address potential adverse effects described in b) in the event that

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				result in over-topping of channel banks causing overland runoff, adverse effects to roads, and increased erosion and sedimentation. An event such as this has the potential to result in adverse effects to VCs, including Indigenous peoples. With respect to Manitoba Infrastructure's plans to mitigate potential effects of ice jams, section 14.2.2 of the EIS states that "Manitoba Infrastructure has experience operating water control structures with ice conditions, and as such has methods of operation that reduce the risk of ice jams occurring". Details regarding the methods of operation that will be used to reduce the risk of ice jamming are not provided in the EIS. Information regarding the potential effects of the environment on the Project, and associated environmental effects, related to ice, is required to understand potential effects of the Project to VCs.	methods to prevent effects to the Project associated with ice jamming are ineffective.
Groundwater					
IAAC-72	Misipawistik Cree Nation – Written Submission on the EIS – May 22, 2020 Tataskweyak Cree Nation – Written Submission on the EIS – June 10, 2020 Peguis First Nation – Written Submission on the EIS – June 11, 2020	7.2.2. Changes to groundwater, surface water, and fluvial morphology	6.4.3 Project Interactions with Groundwater	The EIS Guidelines require the proponent to carry out modelling as required to present and substantiate anticipated changes to groundwater quality and quantity in all project phases and in all operational scenarios. Section 6.4.3 of the EIS indicates that there is no potential for project interactions with regional groundwater flows, levels, quality, or surface water/groundwater interactions, but that local effects to groundwater level and flow may occur. Several Indigenous communities have expressed concerns that the EIS does not present modelling data to support this assertion, including a water balance model for the carbonate aquifer, or modelling of interactions of the Project with local and regional groundwater resources. This modelling data is required to assess the accuracy of the proponent's conclusions with respect to potential effects to local and regional groundwater resources. Further, as effects to groundwater quantity and quality and groundwater-surface water interactions may affect drinking water sources, wetlands, surface waterbodies, etc., project interactions with groundwater may also affect Indigenous peoples, including	a. Provide groundwater modelling data at the local and regional level, including for the carbonate aquifer, and assess potential interactions of the Project with groundwater resources based on this data. The data should include water balance modelling for pre-project and post-project conditions. b. Should modelling results indicate that effects to groundwater quantity and quality at the regional level are anticipated, describe potential effects to all VCs. With respect to Indigenous groups, potential effects should be described for each group identified in the EIS Guidelines. c. Describe measures that will be implemented to mitigate any adverse effects described above. Describe the monitoring and follow-up that will be implemented to validate the predictions of the assessment, confirm the effectiveness of mitigation measures, and respond to any unanticipated effects identified during

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	Manitoba Metis Federation – Written Submission on the EIS – May 22, 2020			Indigenous health and socioeconomic conditions and the current use of land and resources for traditional purposes.	monitoring. Describe how Indigenous groups will be involved in follow-up and monitoring.
IAAC-73	Peguis First Nation – Written Submission on the EIS – June 11, 2020 Misipawistik Cree Nation – Written Submission on the EIS – May 22, 2020	7.2.2 Predicted Changes to Groundwater	6.4.4. Assessment of Residual Environmental Effects on Groundwater	The EIS guidelines require the proponent to provide information about the potential effects of the Project on groundwater, including associated effects on nearby groundwater users. As requested in Round 1, Package 1, IAAC-27, details on the assumptions and methods used in groundwater modelling are required to review the results presented. The timing and duration of the dewatering of both the LMOC and LSMOC during construction is required to understand the potential impacts of groundwater drawdown on nearby groundwater users. Peguis First Nation has expressed concerns that the effect of dewatering during project construction could affect water levels and flow patterns in surrounding lakes and wetlands which may affect Aboriginal and Treaty rights and the current use of lands and resources for traditional purposes, including fishing, hunting, trapping, and gathering/plant harvest.	a. Should groundwater drawdown associated with construction dewatering have the potential to result in adverse effects to surrounding lakes and wetlands, including effects to water levels and flow patterns, describe the associated effects to Indigenous peoples, including Aboriginal and Treaty rights and the current use of lands and resources for traditional purposes. Describe measures that will be implemented to mitigate any adverse effects described above. Describe monitoring and follow-up to be implemented to validate predicted effects, effectiveness of mitigation measures, and respond to any unanticipated effects identified during monitoring. Describe how Indigenous groups will be involved in follow-up and monitoring.
Fish and fish habitat					
IAAC-74	Manitoba Metis Federation – Written Submission on the EIS – May 22, 2020	7.2.2 Changes to groundwater, surface water, and fluvial morphology 7.3.1 Fish and Fish Habitat	7.2.4.2 Permanent Alteration or Destruction of Fish Habitat 10.2.4.4 Change in Availability of Traditional	The EIS Guidelines require the proponent to describe potential changes to flow rates and currents for all affected waterbodies and to describe the effects of the Project on fish and fish habitat, including modifications of hydrological and hydrometric conditions on fish habitat and on the fish species' life cycle activities. The EIS Guidelines also require the proponent to describe potential effects of the environment on the current use of lands and resources for traditional purposes by Indigenous peoples.	a. Describe how alterations in localized flow patterns, including the timing and duration of flows, as a result of the Project may affect fish species that rely on flows for certain life cycle cues. b. Describe the potential for the Project to result in a decrease in biodiversity or a change in distribution of fish species, including species important to Indigenous fisheries, downstream of the Project following

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	Tataskweyak Cree Nation – Written Submission on the EIS – June 10, 2020 Brokenhead Ojibway Nation – Written Submission on the EIS – May 22, 2020 Misipawistik Cree Nation – Written Submission on the EIS – May 22, 2020	7.3.3 Indigenous Peoples	Resources for Current Use	Section 7.2.4.2 of the EIS states that operation of the Project will alter localized flow patterns in Watchorn Bay, Birch Bay, the northeastern basin of Lake St. Martin, and Sturgeon Bay, which may affect the availability and suitability of habitat in these locations for spawning, rearing, foraging, or overwintering of fish species. The EIS concludes that these effects will be minimal, given the implementation of mitigation measures. However, as noted by several Indigenous communities, fish species rely on flows for certain life cycle cues, such as spawning and over-wintering, including spring spawning fish such as walleye, yellow perch, and pike. Therefore, alterations in localized flow patterns may result in adverse effects to fish beyond the availability and suitability of habitat; these potential effects were not considered in the EIS. Effects on fish due to alterations in localized flow patterns, including the availability and distribution of fish, may also affect the ability of Indigenous peoples to practice traditional use activities, such as fishing, and may have economic implications if Indigenous fisheries are affected. For instance, the Manitoba Metis Federation, Tataskweyak Cree Nation, and Misipawistik Cree Nation noted that changes in fish distribution as a result of the Project would require Métis citizens and First Nations community members that rely on potentially affected waterbodies to travel further to find suitable fish harvesting grounds. The Manitoba Metis Federation and Misipawistik Cree Nation also expressed concerns that operation of the Project may result in a decrease in biodiversity or a change in distribution of fish species downstream of the Project for up to a year, as was witnessed following operation of the Emergency Outlet Channel (EOC) in 2011. Similar to above, this may result in adverse effects on the ability of Indigenous groups to practice traditional use activities, including in areas that are preferred. This potential effect was not discussed in the EIS.	operation during large flood events, including an assessment of the anticipated duration of any effects. c. Describe how changes to the availability and distribution of fish as a result of alterations to localized flow patterns and changes in downstream biodiversity may affect Indigenous socioeconomic conditions and the ability of Indigenous peoples to practice traditional use activities, including in areas that are preferred. d. Describe measures that will be implemented to mitigate any adverse effects identified above. Describe monitoring and follow-up that will be implemented to validate the predictions of the assessment, confirm the effectiveness of mitigation measures, and respond to any unanticipated effects identified during monitoring. Describe how Indigenous groups will be involved in follow-up and monitoring.
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IAAC-75	Manitoba Metis Federation – Written Submission on the EIS – May 22, 2020	3.2 Project Activities 7.3.1 Fish and fish habitat	3.7.2 Construction Environmental Management Program Chapter 3, Appendix 3F 7.2.4.2 Permanent Alteration or Destruction of Fish Habitat	The EIS Guidelines require the proponent to provide a list of project activities, with emphasis on activities with the greatest potential to have environmental effects and require that sufficient information be included to predict environmental effects and address concerns identified by the public and Indigenous groups. The EIS Guidelines also require the proponent to consider how the predicted changes to the environment as a result of the Project being carried out will affect fish and fish habitat. As discussed in Round 1, Package 1, IAAC-38, the EIS states that final design decisions have not all been made, resulting in information gaps on how the proposed work, undertaking, or activity may impact fish and fish habitat. Section 3.7.2 and Appendix 3F of the EIS indicate that temporary diversions of surface water, including temporary diversion channels, ditches, drains, or dewatering structures, may be required during construction of the Project. However, no further detail regarding these temporary diversions is provided, nor is an assessment of the potential effects of these project components on fish and fish habitat.	a. In describing the updated project design referred to in Round 1, Package 1, IAAC-38a, provide details on any temporary diversions that will be required for construction of the Project and describe any potential effects to fish and fish habitat.
IAAC-76	Manitoba Metis Federation – Written Submission on the EIS – May 22, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway	7.1.5 Characterization of fish populations 7.1.10 Indigenous peoples 7.2.2.1 Methods	7.2.2.2 Overview of Fish and Fish Habitat 10.2.2 Existing Conditions for Traditional Land and Resource Use	The EIS Guidelines require the proponent to provide baseline information on fish and fish habitat, the current use of lands and resources for traditional purposes, and the health and socioeconomic conditions for each Indigenous group, including data on commercial and recreational fishing. Section 7.2.2.2 of the EIS provides data on fish habitat and fish communities within the RAA and LAA and section 10.2.2 of the EIS generally describes recreational, subsistence, and commercial fishing activities conducted by Indigenous groups. Several Indigenous groups have noted that the EIS does not include sufficient data regarding commercial, subsistence, and recreational fishing by Indigenous peoples. This information is required to understand baseline conditions for Indigenous peoples' current use of lands and resources for traditional purposes and Indigenous socioeconomic conditions, and to assess	a. Describe potential effects of the Project on Indigenous socioeconomic conditions, culture, and the current use of lands and resources for traditional purposes as a result of potential effects of the Project on recreational, subsistence, and commercial fishing. b. Describe measures that will be implemented to mitigate any adverse effects identified above, including a discussion of their anticipated effectiveness. Describe monitoring and follow-up that will be implemented to validate the predictions of the assessment, confirm the effectiveness of mitigation measures, and respond to any unanticipated effects identified during monitoring. Describe how Indigenous groups will be involved in follow-up and monitoring.

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	Nation – Written Submission on the EIS – June 1, 2020 Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020 Misipawistik Cree Nation – Written Submission on the EIS – May 22, 2020			potential project effects to commercial, recreational, and subsistence fishing by Indigenous peoples. Indigenous groups have also noted that fish are important for ceremonial and other cultural events, which may also be affected by changes in fish populations as a result of the Project.	
IAAC-77	Manitoba Metis Federation – Written Submission on the EIS – May 22, 2020 Brokenhead Ojibway Nation – Written Submission on the EIS – May 22, 2020	3.2 Project Activities 7.1.6 Aquatic Invasive Species 7.3.1 Fish and fish Habitat [Predicted effects on valued components] 7.4 Mitigation Measures	3.7.2 Construction environmental Management Program 3.7.3 Operation environmental Management Program 7.2.4.2 Permanent Alteration or Destruction of Fish Habitat	The EIS Guidelines require the proponent to describe potential adverse environmental effects of the Project associated with the introduction and/or spread of aquatic invasive species. Section 7.2.4.2 of the EIS describes the existing presence of invasive species and mitigation measures to prevent their spread. The EIS does not adequately discuss the potential impacts that the Project may have on the introduction and/or spread of aquatic invasive species. The proponent has not evaluated the possibility that the channels may act as corridors that facilitate the spread of aquatic invasive species, including species that are not yet found in the RAA, such as the Prussian carp (currently found in Saskatchewan), which are adapted to the poor habitat conditions that may be present in the channels. There is a risk that aquatic invasive species may also be spread during construction. The Biosecurity Management Plan and Emergency Response Plan described in section 3.7.2 of the EIS focus on terrestrial invasive	a. Provide further discussion regarding how the Project may contribute to the introduction and spread of aquatic invasive species to the RAA. The discussion should re-evaluate the potential for the channels to allow the upstream passage of invasive species such as zebra mussels and spiny water flea, and evaluate the potential for the channels to act as a corridor for the introduction of species not evaluated in the EIS such as the Prussian carp. b. Describe potential effects to Indigenous peoples should the Project result in the introduction and/or spread of aquatic invasive species, including effects to the current use of lands and resources for traditional purposes and health and socioeconomic conditions. c. Provide detailed invasive species monitoring plans, including aquatic invasive species. If complete plans are not yet available, provide preliminary details that

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			12.0 Follow-up and Monitoring Program 12.5 Fish and fish Habitat	species that may be spread during construction but do not address aquatic invasive species. The lake system in the LAA and RAA provides critical fish habitat for fish species of cultural and economic importance to Indigenous peoples. The proponent has not provided sufficient detail on the monitoring and follow-up plans. This information is required to ensure that mitigation measures to prevent the spread of aquatic invasive species will be effective, and to understand potential residual effects of the Project on fish and fish habitat and the current use of lands and resources for traditional purposes by Indigenous peoples, including fishing.	describe the methods, principles, and objectives of the plans and describe monitoring and contingency measures.
IAAC-78	Manitoba Metis Federation – Written Submission on the EIS – May 22, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway Nation – Written Submission on the EIS – June 1, 2020	7.4 Mitigation Measures 9.1 Follow-up programs; 9.2 Monitoring	2.4.3 Mitigation Measures for Environmental Effects of the Proposed Project 7.3.4.4 Changes to Fish Health and Mortality 12.5 Follow-up and Monitoring Program: Fish and Fish Habitat; Appendix A: Proposed Lake Manitoba and Lake St. martin Operating Guidelines	The EIS Guidelines require the proponent to describe technically and economically feasible measures to mitigate any significant adverse environmental effects of the Project. Section 2.4.3 and 7.3.4.4 of the EIS describe measures that will be applied to mitigate potential project effects on fish and fish habitat, including fish salvage. The EIS does not provide information on the effort that will be applied to fish salvage or rescue (e.g. until no fish are left in the areas) or whether all fish, including invasive species, will be salvaged during fish rescue operations. This information is required to understand potential residual effects of the Project on fish and fish habitat and the current use of lands and resources for traditional purposes by Indigenous peoples, including fishing.	a. Round 1, Package 1, IAAC-39 requested information on Fish Rescue Plans being developed for the Project. These plans must specify how invasive species will be handled during fish rescue and salvage and describe measures to prevent the spread of aquatic invasive species (including fish and other aquatic biota) during fish rescue and salvage operations.

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	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020				
IAAC-79	Manitoba Metis Federation – Written Submission on the EIS – May 22, 2020	7.3.1 Fish and Fish Habitat 9.2 Monitoring	6.2.2.4 Change in Acoustic Environment 6.2.6.3 Conclusions for Atmospheric Environment: Change in Acoustic Environment 7.2.4.4 Changes in Fish Health and Mortality 12.5 Follow-up and Monitoring Program: Fish and Fish Habitat;	The EIS Guidelines require the proponent to provide a discussion of how vibration caused by blasting or other construction activities may affect fish behaviour, such as spawning or migration. Section 7.2.4.4 of the EIS describes the effects of blasting on fish and fish habitat and outlines measures to prevent effects on fish and fish habitat from blasting. The EIS does not address other potential effects of noise and vibration on fish and fish habitat. No details have been provided regarding monitoring and follow-up to confirm the effectiveness of mitigation measures for the effects of blasting or effects from noise and vibration. This information is required to understand the potential significance of residual effects to fish and fish habitat and the current use of lands and resources for traditional purposes by Indigenous peoples.	a. Describe potential effects of the Project on fish and fish habitat as a result of noise and vibrations. b. Describe measures that will be implemented to mitigate any adverse effects identified above, including a discussion of their anticipated effectiveness. Describe monitoring and follow-up that will be implemented to validate the predictions of the assessment, confirm the effectiveness of mitigation measures, and respond to any unanticipated effects identified during monitoring. Describe how Indigenous groups will be involved in follow-up and monitoring. c. Provide detailed fish monitoring plans for blasting events. If complete plans are not yet available, provide preliminary details that describe the methods, principles, and objectives of the plans and describe monitoring and contingency measures.
IAAC-80	Manitoba Metis Federation – Written Submission on the EIS – May 22, 2020 Misipawistik Cree Nation – Written	7.3.1 Fish and fish habitat 7.3.3 Indigenous Peoples	7.2.2.2 Existing Conditions for Fish and Fish Habitat; 12.5 Follow-up and Monitoring Program: Fish and Fish Habitat	The EIS Guidelines require the proponent to provide The EIS guidelines require that the EIS present preliminary follow-up and monitoring programs. The lake system in the LAA and RAA provides critical fish habitat for fish species of cultural and economic importance to Indigenous peoples. Section 7.2.2.2 of the EIS provides a discussion of fish habitat present in LAA and RAA. The description provided in the EIS indicates that little is known about fish species presence in certain LAA and RAA waterbodies, such as in Pineimuta Lake, but that a number of species are suspected to be present. Section 12.5	a. Describe monitoring and follow-up that will be implemented in the LAA and RAA to validate the predictions of the assessment, confirm the effectiveness of mitigation measures, and respond to any unanticipated effects identified during monitoring. Describe how Indigenous groups will be involved in follow-up and monitoring.

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	Submission on the EIS – May 22, 2020			of the EIS outlines the follow-up and monitoring program for fish and fish habitat, but does not specify what monitoring will be conducted in the LAA and RAA. Additional detail on the monitoring and follow-up plans for fish habitat in the LAA and RAA should be provided. This information is required to ensure that habitat required by culturally important fish species is not adversely impacted, and to understand the potential effects of the Project on the use of lands and resources for traditional purposes by Indigenous peoples.	
IAAC-81	Manitoba Metis Federation – Written Submission on the EIS – May 22, 2020 Tataskweyak Cree Nation – Written Submission on the EIS – June 10, 2020 Brokenhead Ojibway Nation – Written Submission on the EIS – May 22, 2020 Fisher River Cree Nation – Written Submission on	7.2.2 Changes to groundwater, surface water, and fluvial morphology; 7.3.1 Fish and Fish Habitat	7.2.4.2 Fish and fish Habitat: Permanent Alteration or Destruction of Fish Habitat 7.2.5 Fish and fish Habitat: Determination of Significance	The EIS Guidelines require the proponent to describe changes to water quality and quantity and sediment quality and quantity during all phases of the Project. Section 7.2.4.2 of the EIS states that the amount of sediment mobilized from the channels and deposited in Birch Bay and Sturgeon Bay is expected to decrease over time as the amount of fine, erodible substrates diminishes with each successive use of the channels. As discussed in Round 1, Package 1, IAAC-44, the EIS does not characterize sediment erosion and deposition during all phases of the Project. The information available in the EIS is insufficient to make a determination of significance of the effects of the Project on fish and fish habitat or assess habitat suitability under different flow scenarios. Lake Winnipeg is of particular importance to Indigenous fisheries and concerns have been expressed by several Indigenous communities regarding the potential significance of effects due to the sedimentation described in the EIS. For instance, Fisher River Cree Nation noted that, following operation of the EOC, there was an increase in sediment build-up in McBeth Point and other areas within the community's traditional fishing grounds, resulting in sediment build-up in fishing nets and reduced fish harvest. Information on sediment transport and deposition is required to understand changes to surface water from the Project and	a. Applying results from sediment modelling, discuss the potential for the Project to lead to sediment build-up in fishing nets and to impact Indigenous fisheries. Describe potential effects to the current use of lands and resources for traditional purposes by Indigenous peoples (e.g. fishing) and Indigenous health and socioeconomic conditions due to any impacts to Indigenous fisheries. b. Considering the above, if the significance of residual effects of the Project from sedimentation has not changed following results of Round 1, Package 1, IAAC-44, provide the rationale for maintaining the residual effects determination for sedimentation as “not significant”.

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	the EIS – June 22, 2020			potential environmental effects, including to fish and fish habitat and to Indigenous peoples.	
IAAC-82	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway Nation – Written Submission on the EIS – June 1, 2020 Misipawistik Cree Nation – Written Submission on the EIS – May 22, 2020	7.1.5 Fish and fish habitat	7.2.2.2 Overview of Fish and fish Habitat	The EIS Guidelines require the proponent to provide maps, at a suitable scale, indicating the surface area of potential or confirmed fish habitat for spawning, rearing, nursery, feeding, overwintering, migration routes, etc. Section 7.2.2.2 of the EIS refers to various habitat uses for a number of fish, including habitat used during particular life stages (such as spawning), but does not provide information on the extent of fish habitat in terms of surface area, except in a very general way for all water bodies assessed. Information on the Projects’ impact to fish habitat is required to understand the impact on fish.	a. Provide a detailed description of the surface area of fish habitat used by fish, including the surface area of fish habitat used for spawning, for all potentially affected waterbodies.
IAAC-83	Pinaymootang First Nation – Written Submission on	7.1.5 Fish and Fish Habitat 7.3.1 Fish and Fish Habitat	7.2.2 Existing conditions for Fish and Fish Habitat;	The EIS Guidelines require the proponent to identify fish migration routes and effects of changes to the aquatic environment on fish and fish habitat, including any modifications in migration or local movements.	a. Describe migratory routes and staging areas for fish in Watchorn Bay and provide an analysis of potential effects of the Project on these migratory routes and staging areas.

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	the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway Nation – Written Submission on the EIS – June 1, 2020		7.2.4.3 Change in Fish Passage	The EIS states that the shallow depths and wave action in Watchorn Bay create conditions that mobilize sediments, which likely makes the habitat suboptimal for spawning for most large bodied fish species in Lake Manitoba. However, several Indigenous groups have noted these species migrate through the bay to access the tributaries draining into it for spring spawning and summer rearing (i.e. walleye, northern pike, and suckers). While Watchorn Bay may not provide optimal fish habitat, it does provide an important fish migratory route. Several Indigenous groups have also noted that Watchorn Bay is used as a migratory staging area for Watchorn Creek and Mercer Creek, which both support a commercial fishery. With the development of a flared intake bay bounded by rock jetties, these movements may be restricted somewhat. By changing the currents in the area, fish passage into these creeks could be diminished in the future. Indigenous groups have also expressed concerns that the construction and operation of the Lake Manitoba Outlet Channel intake will alter the lateral movement of fish and fish larvae in Watchorn Bay, Watchorn Creek, and Mercer Creek. Similarly the outlet into Birch Bay may affect use and lateral movement within the bay for fish and fish larvae during both the construction and operational phases of the Project. The probability of these effects have not been discussed in detail and no mitigation measures have been described in the EIS. This information is required to understand changes to surface water currents from the Project and potential environmental effects, including to fish and fish habitat and to Indigenous peoples.	b. Describe potential effects on the lateral movement of fish and fish larvae in Watchorn Bay, Birch Bay, Watchorn Creek, and Mercer Creek, and effects of the Project on fish passage into Watchorn Creek and Mercer Creek. c. Update the assessment of effects to fish and fish habitat, including the residual effects assessment, to include effects described above. d. Describe measures that will be implemented to mitigate any adverse effects identified above, including a discussion of their anticipated effectiveness. Describe monitoring and follow-up that will be implemented to validate the predictions of the assessment, confirm the effectiveness of mitigation measures, and respond to any unanticipated effects identified during monitoring. Describe how Indigenous groups will be involved in follow-up and monitoring.
IAAC-84	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020	7.3.1 Predicted effects on valued components: Fish and Fish Habitat	7.2.4.4 Change in Fish Health and Mortality	The EIS Guidelines require the proponent to describe potential effects of the Project on the productivity of fish habitat and any imbalances in the food web in relation to baseline conditions. Section 7.3.4.4 of the EIS states that in Birch Bay, the effect of sedimentation is “expected to be too brief and too small to have a	a. Assess the effects of sedimentation on substrates, and the associated effects to primary and secondary productivity, during construction and operation of the Lake Manitoba Outlet Channel and Lake St. Martin Outlet Channel.

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	Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway Nation – Written Submission on the EIS – June 1, 2020			measurable effect on production of periphyton, benthic invertebrates, or fish using the habitat”. Potential effects on periphyton and benthic invertebrates in Sturgeon Bay are not specifically discussed in the EIS. Several Indigenous communities have expressed concerns that increased sedimentation, as is predicted following construction of the channels, could have negative effects on the diversity of substrates, primary and secondary productivity, and the use of the area by fish, including fish important for Indigenous fisheries. Primary and secondary productivity are important characteristics of fish habitat that provide food sources for fish. This information is required to understand changes to fish habitat from the Project and potential environmental effects, including to fish and to Indigenous peoples.	i. Describe associated effects to fish health and mortality, and potential effects to the current use of lands and resources for traditional purposes by Indigenous peoples, including Indigenous fisheries. b. Describe measures that will be implemented to mitigate any adverse effects identified above, including a discussion of their anticipated effectiveness. Describe monitoring and follow-up that will be implemented to validate the predictions of the assessment, confirm the effectiveness of mitigation measures, and respond to any unanticipated effects identified during monitoring. Describe how Indigenous groups will be involved in follow-up and monitoring.
IAAC-85	Tataskweyak Cree Nation – Written Submission on the EIS – June 10, 2020 Misipawistik Cree Nation – Written Submission on the EIS – May 22, 2020	7.3.1 Predicted effects on valued components: Fish and Fish Habitat 7.3.3 Predicted effects on valued components: Indigenous Peoples	7.2.2.2 Overview of Fish and fish Habitat	Section 7.3.1 and 7.3.3 of the EIS Guidelines requires the proponent to describe potential adverse effects of the Project to fish and fish habitat, including on any species of importance to Indigenous peoples. Section 7.2.2.2 of the EIS notes the presence of Lake Sturgeon in Lake Winnipeg, albeit in low numbers, and anecdotal reports of Lake Sturgeon captured in Lake St. Martin, although no official records exist. Due to the rarity of natural occurrences of Lake Sturgeon in the LAA, potential effects to the species were not assessed in the EIS. However, Indigenous groups have noted the presence of Lake Sturgeon in the LAA and RAA and have described the cultural importance of this fish species. Given this, the proponent should conduct an assessment of residual environmental effects on Lake Sturgeon and any related effects to Indigenous peoples due to effects to this culturally important species. This assessment should include input from Indigenous communities. This information is required to understand changes to fish habitat from the Project and potential environmental effects, including to fish and to Indigenous peoples.	a. Conduct an assessment of potential residual effects of the Project to Lake Sturgeon, taking into account the knowledge and input of Indigenous communities. b. Should the assessment identify potential residual effects of the Project on Lake Sturgeon, describe any associated effects to the current use of lands and resources for traditional purposes by Indigenous peoples. c. Describe measures that will be implemented to mitigate any adverse effects identified above, including a discussion of their anticipated effectiveness. Describe monitoring and follow-up that will be implemented to validate the predictions of the assessment, confirm the effectiveness of mitigation measures, and respond to any unanticipated effects identified during monitoring. Describe how Indigenous groups will be involved in follow-up and monitoring.

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IAAC-86	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway Nation – Written Submission on the EIS – June 1, 2020	7.1.5 Fish and Fish Habitat	7.2.2 Existing Conditions for Fish and Fish Habitat	The EIS Guidelines require the proponent to provide a characterization of fish populations on the basis of species and life stage. Section 7.2.2 of the EIS states that walleye abundance in Lake Winnipeg has increased in concert with rainbow smelt abundance. However, the Coordinated Aquatic Monitoring Program data referred to in the EIS suggests that rainbow smelt abundance has decreased substantially over the last few years. The EIS does not present sufficient information to understand whether walleye population abundance has followed a similar trend. Walleye were selected by the proponent as one of the four focal fish species for the assessment. The EIS states that Walleye are known to be an important component of commercial, recreation, and aboriginal fisheries in Lake Winnipeg, Lake St. Martin and Lake Manitoba. This information is required to understand the current baseline conditions for fish and fish habitat, and therefore the potential effects of the Project on fish populations, and on the current use of land and resources for traditional purposes by Indigenous peoples (i.e. fishing).	a. Justify the conclusion that walleye abundance in Lake Winnipeg is increasing in concert with rainbow smelt considering the Coordinated Aquatic Monitoring Program data on rainbow smelt abundance may suggests otherwise. Confirm whether walleye abundance has decreased in recent years. b. If walleye abundance has been declining in recent years, describe whether this was considered in the assessment of potential effects of the Project on the current use of land and resources for traditional purposes by Indigenous peoples. c. Describe measures that will be implemented to mitigate any effects identified above. Describe monitoring and follow-up that will be implemented to validate the predictions of the assessment, confirm the effectiveness of mitigation measures, and respond to any unanticipated effects identified during monitoring.
Wildlife					
IAAC-87	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020			The EIS Guidelines require the proponent to describe VCs in sufficient detail to allow the reviewer to understand their importance and to assess the potential significance of adverse environmental effects arising from the Project activities. The EIS Guidelines require that the EIS provide a rationale for selecting specific VCs and for excluding any VCs or information specified in these guidelines and to describe how engagement with Indigenous groups informed VC selection. While the EIS considers focal species of moose, elk, furbearers, bats, migratory birds, and species at risk into a single VC (Wildlife), the overall assessment of effects and the determination of significance of effects is broadly based on wildlife as a general VC.	a. Provide a rationale for selection of a single VC as the most appropriate solution for the effects assessments of all wildlife components. Describe how the focal species were selected, what the omissions are, and why certain species may have been omitted. Describe how Indigenous knowledge was incorporated in the decision to adopt a single VC for vegetation. b. Discuss why species of cultural importance were limited to moose and caribou. Provide a holistic list of species of cultural importance; describe how the list was developed and how indigenous groups were

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	Sandy Bay Ojibway First Nation – Written Submission on the EIS – June 1, 2020 Pimicikamak Okimawin – Written Submission on the EIS – June 19, 2020 TAG Meeting June 25-26, 2020			This pooling dilutes and obscures effects that the Project may have on specific wildlife communities and species, resulting in an assessment that is not sensitive enough to detect change. The assessment of a single wildlife VC does not include enough specific information to be able to properly define the cause and effect pathways, appropriate mitigation measures, determinations of significance, or to identify the response metrics for measurement. Information on the assessment of and methodology used in selecting and defining the wildlife VC is necessary to support understanding of the effects of changes to wildlife on the current use of lands and resources for traditional purposes by Indigenous peoples, as well as effects to cultural heritage.	involved; and, assess project effects to those species and the impacts to rights.
IAAC-88	Norway House Cree Nation – Written Submission on the EIS – June 16, 2020 O-Chi-Chak-Ko-Sipi First Nation – Included in the EIS Tataskweyak Cree Nation – Written Submission on	Part 2, Section 7.3.3 Indigenous peoples	Section 6.4.7.7 Section 8.3.1.3	The EIS Guidelines direct the proponent to assess the quality and quantity of resources, access to resources, overall quality of the experience of the practice is to be assessed. Despite noting that surface water quality in Lake Manitoba varies spatially and is not well understood, the EIS states that the Project is not expected to change regional water quality and therefore a measurable change in wildlife health is not expected. As such, water quality was not assessed as an effects pathway for wildlife. This approach ignores potential changes to localized water quality from sources such as agricultural inputs and therefore potential effects to wildlife at an individual level are not assessed. Wildlife at an individual level contributes to subsistence hunting and country foods and traditional resource use. Changes in water quality and invasive species have been identified as a potential pathway to aquatic wildlife mortality by Indigenous	a. Justify the assertion that surface water quality is not a pathway of effects on wildlife and will not subsequently effect Traditional resource use. Provide a discussion which considers spatial scales smaller than a regional context. b. Discuss the potential for surface water quality at a local scale to have an adverse effect on wildlife. Include how any adverse effect may impact Traditional resource use. c. Describe measures that will be implemented to mitigate any potential adverse effects identified above. d. Describe monitoring and follow-up to be implemented to validate the predictions of the assessment, the effectiveness of mitigation measures, and respond to unanticipated effects identified during monitoring.

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	the EIS – June 10, 2020 Manitoba Metis Federation – Written Submission on the EIS – May 22, 2020			groups. Impacts to aquatic life (health, productivity, distribution) may have cascading effects to wildlife that depend on aquatic species and subsequently Traditional use of those resources. For example, Norway House Cree Nation expressed concerns pertaining to the drainage of agricultural lands which may contain pesticides, herbicides, fertilizers, and other chemicals that may affect water quality, fish and other aquatic species, riparian and lake vegetation including wetlands, lake bottom conditions, waterfowl, and small and large game animals.	
IAAC-89	Fisher River Cree Nation – Included in the EIS Little Saskatchewan First Nation – Written Submission on the EIS – May 25, 2020 Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on	Part 2, Section 7.1.10 Indigenous peoples Part 2, Section 7.3.3 Indigenous peoples	Section 8.6.8.3	The EIS Guidelines require the proponent to present information to support an understanding of the current use of lands and resources (including wildlife) of importance for traditional use and an assessment of the changes in the quantity, quality, and availability of these resources. The EIS identifies vehicular collisions as a pathway of effects during construction; however, it is not considered during operation. The EIS does not include increased predation pressure and hunting and trapping access as a potential residual effect during operation. Beyond these statements, the EIS does not evaluate the extent of these effects on species of cultural importance. Concerns have been raised by several Indigenous groups with respect to direct and indirect effects on wildlife mortality resulting from the Project due to increased traffic (vehicular collisions), increased access (hunting pressure), and the creation of linear disturbances (increased predation). This concern was particularly raised for species of cultural importance such as furbearers, moose, and other ungulates. Further to concerns surrounding mortality effects, some groups raised specific concerns about how this will also impact their hunting and trapping rights, changes to traditional hunting areas, and subsistence hunting.	a. Provide a revise assessment of effects on wildlife mortality to include all species of cultural importance. This assessment must include effects from vehicular collisions and increased hunting pressure. b. Describe any adverse effects to the current use of lands and resources for traditional purposes associated with changes in mortality to species of cultural importance. c. For any potential adverse effects identified above, describe measures that will be implemented to mitigate effects. d. Describe monitoring and follow-up to be implemented to validate the predictions of the assessment, the effectiveness of mitigation measures, and respond to unanticipated effects identified during monitoring.

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	the EIS – June 1, 2020 Sandy Bay Ojibway First Nation – Written Submission on the EIS – June 1, 2020			Further evidence-based characterization of potential project effects on mortality of species of cultural importance is required to understand the effects of changes to the environment on Indigenous peoples.	
IAAC-90	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway First Nation – Written Submission on the EIS – June 1, 2020	Part 2, Section 7.1.10 Indigenous peoples Part 2, Section 7.2.3 Changes to riparian, wetland, and terrestrial environments Part 2, Section 7.3.3 Indigenous peoples	Section 8.6.8.3	The EIS Guidelines require the Proponent to present information to support a full understanding of the current use of lands and resources (including wildlife) of importance for traditional use, the changes to these resources, and the effects of these changes. The EIS Guidelines direct the proponent to assess the quality and quantity of resources, access to resources, and overall quality of the experience of the practice. The EIS Guidelines require changes to key habitat, movement corridors, and population numbers for species important to current use of lands and resources for traditional purposes The development of linear disturbances may have a greater effect on some species over others. For example, Sandy Bay Ojibway First Nation specifically identified white-tailed deer as species of importance to Indigenous communities. While mortality effects have been assessed generally for wildlife as a whole, white-tailed deer may be especially subject to increased mortality due to heightened vulnerability to hunting from linear features and increased human access to the area. Species specific assessments are required to understand mortality effects; changes to habitat from fragmentation, destruction, predation, hunting, sensory effects, etc. on culturally important species such as white-tailed deer. This assessment is necessary to understand the effects of changes to the environment on Indigenous peoples.	a. Identify species that may be uniquely susceptible to mortality effects resulting from the development of linear features and habitat fragmentation and describe those effects. b. For all species of cultural importance, describe the baseline population and potential effects from the Project on wildlife populations. Where baseline data has not been collected, describe the limitations in the assessment and provide details on how gaps in knowledge will be filled. c. For any potential adverse effects identified above, describe measures that will be implemented to mitigate effects. d. Describe monitoring and follow-up to be implemented to validate the predictions of the assessment, the effectiveness of mitigation measures, and respond to unanticipated effects identified during monitoring.

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IAAC-91	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway First Nation – Written Submission on the EIS – June 1, 2020	Part 2, Section 7.1.10 Indigenous peoples Part 2, Section 7.3.3 Indigenous peoples	Section 8.6.8.3	The EIS Guidelines require the Proponent to provide information to support a comprehensive understanding of the current use of lands and resources (including wildlife) of importance for traditional use, the changes to these resources, and the effects of those changes. The EIS Guidelines direct the proponent to assess the quality and quantity of resources access to resources, and overall quality of the experience of the practice. It is not clear in the EIS if the full extent of potential effects on furbearers has been considered in the wildlife assessment and the determination of significance of effects of the Project. For example, Pinaymootang First Nation identified that changes in water levels from past operation of the Fairford River Water Control Structure caused increased mortality in muskrats. Further, the changing water levels also made travel on ice unsafe. Both of these effects contributed to an effect on the ability to practice trapping rights. The EIS does not address concerns that that similar effects to muskrats and to trapping may will occur as a result of the Project. Further information on effects to species of importance for trapping, including muskrat, is required to understand effects of changes to the environment from the Project on Indigenous peoples.	a. Describe how changing water levels resulting from the construction and operation of the Project may affect furbearers that require aquatic environments. Specifically discuss potential effects on muskrat. b. Describe how changing water levels resulting from the construction and operation of the Project may adversely affect the ability of Indigenous peoples to access resources to practice rights such as trapping. c. For any potential adverse effects identified above, describe measures that will be implemented to mitigate effects. d. Describe monitoring and follow-up to be implemented to validate the predictions of the assessment, the effectiveness of mitigation measures, and respond to unanticipated effects identified during monitoring.
IAAC-92	Little Saskatchewan First Nation – Written Submission on the EIS – May 25, 2020 Pinaymootang First Nation – Written Submission on	Part 2, Section 7.2.3 Changes to riparian, wetland, and terrestrial environments	Section 8.3.6.2 Section 8.3.6.4	The EIS Guidelines require consideration of changes to key habitat, movement corridors, and population numbers for species important to current use of lands and resources for traditional purpose. Habitat fragmentation and the development of linear features may affect habitat usage, movement corridors, and populations of various wildlife species. Changes in movement, mortality, and habitat to species of cultural importance such as moose, elk, deer, furbearers, etc. may affect traditional resource use. The EIS notes that indirect loss or alteration of habitat may result in habitat avoidance and reduce habitat effectiveness for moose,	a. Describe the direct and indirect effects of the Project on wildlife from habitat fragmentation and quantify the extent of the effects. Effects should be quantified for each species at risk, migratory birds, and species of cultural importance. Groups of species or focal species may be used where applicable; however, a rationale for any use of groups of species or focal species must be provided. Revise the residual effects assessment to include species of cultural importance. b. Describe how habitat fragmentation may affect future populations of species of cultural importance. Describe any adverse effects to the current use of lands and

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	the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway First Nation – Written Submission on the EIS – June 1, 2020 Lake St. Martin First Nation – Written Submission on the EIS – June 5, 2020 TAG Meeting June 25-26, 2020			elk and furbearers. However, beyond that statement, no assessment of residual effects on species of cultural importance has been provided with respect to changes in habitat. Species may be affected differently from one another due to direct and/or indirect changes to habitat function, composition, connectivity etc. As such, it is important that changes to habitat for each wildlife species, or groups of species where applicable, including species of cultural importance is sufficiently assessed. Furthermore, several Indigenous groups raised concerns with how the Project will create linear corridors that will bisect otherwise intact habitat (fragmentation) and may affect wildlife movement, avoidance, mortality, etc. Not all species of cultural importance will be affected equally by the changes to habitat. For example, Sandy Bay Ojibway First Nation notes that furbearers were considered generally in the EIS without recognizing that furbearing mammals include both upland and aquatic species and the Project may affect these species differently. As such, habitat and the effects of changes to habitat must be assessed specific to each species of cultural importance and must include effects to populations (sustainability, growth potential, etc.) from baseline as a result of the Project. Changes to habitat, movement, and population numbers for culturally important species have not been discretely discussed in the EIS. This assessment is important to understand the effects of changes to the environment on Indigenous peoples including subsistence hunting, trapping, and recreation.	resources for traditional purposes associated with changes in movement to species of cultural importance. Include an assessment of the effects of habitat fragmentation on populations and population sustainability and relate this to Traditional resource use. c. For any potential adverse effects identified above, describe measures that will be implemented to mitigate effects. d. Describe monitoring and follow-up to be implemented to validate the predictions of the assessment, the effectiveness of mitigation measures, and respond to unanticipated effects identified during monitoring.
IAAC-93	Little Saskatchewan First Nation – Written Submission on the EIS – May 25, 2020	Part 2, Section 7.2.3 Changes to riparian, wetland, and terrestrial environments	Section 8.3.6.4 Section 8.3.6.2	The EIS Guidelines require the Proponent to present information on changes to key habitat, movement corridors, and population numbers for species important to current use of lands and resources for traditional purpose as well as changes to habitat connectivity. The EIS notes that the conveyance of water may exacerbate changes to wildlife movement due to linear features. The EIS	a. Provide a justification for the assumption that wildlife will be able and willing to cross the channel. The justification should include evidence that uses similar linear disturbances that are representative of the channels in terms of size, terrain, water levels, flow rates, etc. This should be justified for each species at risk, migratory birds, and species of cultural importance. Groups of species or focal species can be

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	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway First Nation – Written Submission on the EIS – June 1, 2020 Lake St. Martin First Nation – Written Submission on the EIS – June 5, 2020 Peguis First Nation – Written Submission on the EIS – June 11, 2020			states that when the WCS gates are closed, 70-80% of the time, wildlife will be capable of crossing the channels. No evidence has been provided to support this claim and the capability to cross a landscape feature does not represent a willingness or preference for wildlife to cross. The EIS acknowledges that the construction of the electricity distribution line RoW to the LSMOC water control structure is expected to increase habitat fragmentation north of Lake St. Martin and remove habitat for some birds and furbearers however it is not clear whether the assessment of these effects has been extended to the loss of habitat created by the channels. Furthermore, several Indigenous groups raised concerns regarding reduced access to hunting and trapping areas due to Project construction and operation and the presence of permanent infrastructure that will bisect the land The residual effects assessment does not specifically discuss species of cultural importance other than marten and elk nor how the channels may affect access to hunting and trapping lands for traditional use. Further information on these subjects is required in order to understand the effects of changes to the environment on Indigenous peoples.	used where applicable; however, a rationale for any use of groups of species or focal species must be provided. b. Revise the assessment of residual effects and the significance of effects on wildlife movement from the channels to include all species of cultural importance. Include the significance of effects on Indigenous peoples in the assessment. c. Discuss how the presence of the Project may affect how Indigenous people access lands for Traditional resource use such as hunting, trapping, etc. d. For any potential adverse effects identified above, describe measures that will be implemented to mitigate effects. e. Describe monitoring and follow-up to be implemented to validate the predictions of the assessment, the effectiveness of mitigation measures, and respond to unanticipated effects identified during monitoring.
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	TAG Meeting June 2-3, 2020				
IAAC-94	IAAC	Part 2, Section 7.1.10 Indigenous peoples Part 2, Section 7.3.3 Indigenous peoples		The EIS Guidelines require the proponent to present information to support a full understanding of the current use of lands and resources (including wildlife) of importance for traditional use, the changes to these resources, and the effects thereof. The EIS Guidelines direct the proponent to assess the quality and quantity of resources, access to resources, and state that overall quality of the experience of the practice is to be assessed. Indigenous groups have indicated that they use islands in Lake Winnipeg and have expressed concerns that the increase in water levels will affect the surface area of these islands and the birds and wildlife that utilize them. The EIS does not discuss islands of importance to Indigenous peoples. Effects on island shorelines are not addressed. Further information on this subject is required in order to understand the effects of changes to the environment on Indigenous peoples.	a. Assess the effects of changes to the environment from increasing water levels on islands in Lake Winnipeg, including their shorelines, effects on wildlife and wildlife habitat, and the associated potential adverse effects to VC's, including effects on Indigenous peoples. b. For any potential adverse effects identified above, describe measures that will be implemented to mitigate effects. c. Describe monitoring and follow-up to be implemented to validate the predictions of the assessment, the effectiveness of mitigation measures, and respond to unanticipated effects identified during monitoring.
IAAC-95	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020	Part 2, Section 7.1.10 Indigenous peoples Part 2, Section 7.3.3 Indigenous peoples	8.3.2.2 8.3.6.2	The EIS Guidelines require the proponent to provide information that supports a comprehensive understanding of the current use of lands and resources (including wildlife) of importance for traditional use, the changes to these resources, and the effects of those changes. The EIS Guidelines direct the proponent to assess the quality and quantity of resources access, to resources, and the overall quality of the experience of the practice. The EIS Guidelines require information on changes to key habitat, movement corridors, and population numbers for species important on current use of lands, and resources for traditional purposes The proponent has described the total area of potential habitat loss associated with the PDA and has qualitatively described pathways of effects contributing to indirect habitat loss in the LAA and RAA. However, total habitat loss or alteration, including direct	a. Provide a summary of potential direct and indirect changes to wildlife habitat associated with the Project, including a summary of total area and percent change in habitat at the PDA, LAA, and RAA scales. Include a description of how these values were calculated and summarize results for each habitat type or wildlife species in a table. b. Provide a revised assessment of effects based on the data presented above and include a discussion of how species of cultural importance were considered. c. Describe measures that will be implemented to mitigate direct or indirect effects on wildlife habitat. Provide further details pertaining to wetland offsetting

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	Sandy Bay Ojibway First Nation – Written Submission on the EIS – June 1, 2020 Misipawistik Cree Nation – Written Submission on the EIS – May 22, 2020 Little Saskatchewan First Nation– Written Submission on the EIS – May 25, 2020 Lake St. Martin First Nation – Written Submission on the EIS – June 5, 2020 TAG Meeting June 25-26, 2020			and indirect effects has not been calculated, resulting in concerns that Project-related effects have been underestimated. The types of habitat, including wetland types, for SAR, Migratory Birds, and species of cultural importance have not been sufficiently described. The EIS notes that the hydrology of watersheds will be altered and will result in a change in wetland habitat and wetland loss. These changes may have effects on furbearer sustainability and can affect the migration paths of birds. Changes to wetlands outside of direct loss in the PDA have not been adequately assessed. Changes to wetland types as a result of the Project can affect the suitability of habitat for species of cultural importance and subsequently hunting, fishing, trapping, and gathering. Insufficient details have been provided around wetland offsetting and other mitigations to changes in habitat. For example, Little Saskatchewan First Nation notes the baseline wildlife report (EcoLogic Environmental, 2017) includes a summary of modeled habitat and core areas for various wildlife VCs, including moose, beaver, marten, otter, lynx, and species at risk, among others. Despite this, the EIS does not provide a quantitative summary of wildlife habitat within the PDA, LAA, and RAA for each of the wildlife VCs. Understanding changes in habitat as a result of both direct and indirect effects is critical for making an informed assessment of potential Project effects on wildlife and their habitat. Without this information, a conclusion cannot be made about the overall change in habitat and residual project effects and the associated effects of these changes to the environment from the Project on Indigenous peoples.	including general locations and how Indigenous groups will be consulted and involved in the offsetting process. d. Describe monitoring and follow-up to be implemented to validate the predictions of the assessment, the effectiveness of mitigation measures, and respond to unanticipated effects identified during monitoring.
IAAC-96	Little Saskatchewan First Nation– Written	Part 2, Section 7.2.3 Changes to riparian, wetland, and		The EIS Guidelines require a description of changes to the habitat of migratory and non-migratory birds, with a distinction made between the two bird categories.	a. Assess the effects of changes to habitat on non-migratory birds with a focus on species of cultural importance.

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	Submission on the EIS – May 25, 2020	terrestrial environments		Changes to habitat for non-migratory birds have not been discussed in the EIS, nor have specific mitigation measures been proposed. There are non-migratory bird species important to current use of lands and resources for traditional purposes and these should be assessed in a similar manner to migratory birds. Further information is required to assess the effects of changes to the environment on Indigenous people.	b. Describe measures that will be implemented to mitigate any potential adverse effects identified above. c. Describe monitoring and follow-up to be implemented to validate the predictions of the assessment, the effectiveness of mitigation measures, and respond to unanticipated effects identified during monitoring.
Vegetation					
IAAC-97	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway First Nation – Written Submission on the EIS – June 1, 2020 Brokenhead Ojibway Nation – Written Submission on	Part 1. Section 3.2.3 Part 2, Section 5	4.4.3 5 8.2.1.2 8.2.1.4 8.3.1.4	The EIS Guidelines require the proponent to define and present rationale for the spatial and temporal boundaries of its assessment. The EIS Guidelines allow that spatial and temporal boundaries used in the EIS may vary depending on the VC and will be considered separately for each VC, including for VCs related to the current use of lands and resources for traditional purposes, or other environmental effects. The EIS does not include all the watersheds and wetlands within or overlapping with the LSMOC in the LAA and RAA (including Buffalo Lake watershed) and does not describe how hydrological inputs were considered in the determination of spatial boundaries. Therefore, potential changes to all potentially affected wetlands are not considered or assessed. Appropriate spatial boundaries are necessary to support understanding of changes to vegetation and wildlife and associated wetland habitats, including species of importance for current use of lands and resources for traditional purposes.	a. Identify all wetlands whose hydrology may be affected by the LSMOC and associated project components. Discuss how hydrological inputs were considered in the determination of spatial boundaries for vegetation, especially wetlands. b. Discuss and present a rationale for the LAA for all wetland-dependent vegetation VCs including species of cultural importance, taking into account the wetlands identified in the EIS and potentially affected wetlands not included within the current LAA. c. Discuss the implications of the current spatial boundaries on the assessment of changes to wetland and wetland-dependent species, and associated effects to Indigenous peoples' current use of lands and resources.

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	the EIS – May 22, 2020 Misipawistik Cree Nation – Written Submission on the EIS – May 22, 2020				
IAAC-98	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway First Nation – Written Submission on the EIS – June 1, 2020 Little Saskatchewan First Nation – Written Submission on	3.2.1 3.2.2 4.2.2 5	4.4.1 8.2.1	The EIS Guidelines require the proponent to describe VCs in sufficient detail to allow the reviewer to understand their importance and to assess the potential significance of adverse environmental effects arising from project activities. The EIS Guidelines require that the EIS provide a rationale for selecting specific VCs and for excluding any VCs or information specified in these guidelines and to describe how engagement with Indigenous groups informed VC selection. The EIS combines riparian and upland vegetation, wetlands, all plant communities, plant species, and plant species of conservation concern into a single VC (Vegetation). This pooling dilutes and obscures effects that the Project may have on specific plant communities and species, resulting in an assessment that is not sensitive enough to detect change and subsequently, potential changes to wildlife habitat. The assessment of a single vegetation VC does not include enough specific information to be able to properly define the cause and effect pathways, appropriate geographic assessment areas, appropriate temporal scopes, appropriate mitigation measures, or to identify the response metrics for monitoring and follow-up. Information on the assessment of and methodology used in selecting and defining the vegetation VC is necessary to support understanding of the effects of changes to vegetation on the current use of lands and resources for traditional purposes by Indigenous peoples, as well as effects to cultural heritage.	a. Provide the rationale for selection of a single VC as the most appropriate solution for the effects assessments of all vegetation components. Describe how Indigenous knowledge was incorporated in the decision to adopt a single VC for vegetation. b. Provide a rationale for excluding wetlands and riparian communities as one or more separate VCs when they are the vegetation communities most likely to be adversely affected by the Project. c. Discuss how the vegetation assessment provides sufficient detail to inform the assessment of potential effects of the Project on specific habitats and wetland types, and related potential effects on wildlife (SAR, migratory birds, species of cultural importance) that use those habitats and wetland types. d. If required, revise the vegetation assessment to provide information at an appropriate level to inform effects to changes in wildlife habitat, movement, and mortality.

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	the EIS – May 25, 2020 Misipawistik Cree Nation – Written Submission on the EIS – May 22, 2020				
IAAC-99	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway First Nation – Written Submission on the EIS – June 1, 2020	7.1.7 7.2.3 7.5	8.2.2 8.2.3 8.2.4 8.2.5 8.2.7	The EIS Guidelines require the proponent to present a description of the Riparian, Wetland and Terrestrial Environments. The EIS Guidelines specify that each of the riparian and wetland environments is to be considered in the assessment of the potential effects of the Project. The EIS does not include consideration of riparian areas in the assessment of the effects of the Project on vegetation. Two sets of calculations are provided in the EIS to categorize the vegetation in the PDA, LAA, and RAA. On average they indicate that wetlands comprise 45% of the PDA, 23% of the LAA, and 39% of the RAA. However, wetland hydrology and ecological function are not measured or assessed. The EIS reported that there will be no effects or changes to landscape diversity or community diversity from Project operation and maintenance (p. 8.34) as no vegetation clearing will occur beyond construction. This ignores Operation phase direct effects of varying water levels and flows, effects related to erosion, change in wetland hydrology and function, and all indirect effects arising from the presence of the outlet channels. The deficiencies in: the selection of a single Vegetation VC; the poor	a. Provide separate assessments of the effects of the Project on riparian areas, bogs, fens, marshes, and swamps. Include changes in wetland hydrology and potential for chemical, pathogen, weed, and non-native plant dispersal by water flowing through the channel as a pathways in these analyses. i. Identify an approach to categorize and inventory riparian areas in the PDA from remotely sensed data or from field work. Undertake the necessary steps to properly include and assess the effects of the Project on those riparian areas. Include riparian zone erosion in that assessment. ii. Delineate all individual wetlands, by type, in the PDA and those in the LAA whose drainage is affected by the Outlet Channels. iii. Model the hydrology of those wetlands and assess the effects of changes in their hydrology and predict the effects on wetland

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	Brokenhead Ojibway Nation – written submission – May 22, 2020 Little Saskatchewan First Nation – Written Submission on the EIS – May 25, 2020 Lake St. Martin First Nation – Written Submission on the EIS – June 5, 2020 Misipawistik Cree Nation – Written Submission on the EIS – May 22, 2020			characterization of wetlands and riparian areas; and inadequate details on mitigation leave the subsequent assessment of residual effects and the determination of significance unsupported. The EIS states that prediction confidence for the assessment will change when the assessment is revisited. Water levels and flows in wetlands are critical to maintenance of species composition and ecological function. The effects of the Project on wetlands cannot be assessed simply through calculation of the direct disturbance footprint. Disruption of wetland hydrology is important to the assessment of potential adverse environmental effects from the Project. Riparian area and wetland characterization is required to understand the effects of the Project on the current use of lands and resources for traditional purposes by Indigenous peoples, as well as effects to cultural heritage.	integrity as measured against reference species composition and ecological function. Assess those effects under the complete range of operational water levels and flow regimes and describe limitations in the methodology used and uncertainties in the assessment.. iv. Identify and describe mitigation measures associated with effects to riparian areas and wetlands, including effects to due changes in hydrology. Determine the residual effects of the Project specifically on riparian communities, wetlands and wetland function. Discuss expectations for effects to landscape and community diversity. b. Provide a revised assessment of effects of the Project on vegetation, including an assessment of the effects of the Project on medicinal plants and other plant species of cultural importance. Present additional and species specific mitigation measures. Discuss the determination of significance of the residual effects and the prediction confidence of this assessment, taking the above information into account.
IAAC-100	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020	7.4	8.2.	The EIS Guidelines require the proponent to describe proposed mitigation, including mitigation commitments, methodologies, strategies, and action plans as well as associated risks. The EIS Guidelines require the proponent to document specific suggestions from Indigenous groups for mitigation.	a. For each vegetation species at risk and each riparian and wetland type, describe specific mitigation measures in sufficient detail to satisfy all mitigation criteria established in the CEAA Guidelines, Section 7.4. i. Include a discussion of the risks associated with and anticipated effectiveness of

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	Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway First Nation – Written Submission on the EIS – June 1, 2020 Brokenhead Ojibway Nation – written submission – May 22, 2020 Little Saskatchewan First Nation – Written Submission on the EIS – May 25, 2020 Lake St. Martin First Nation – Written Submission on the EIS – June 5, 2020			The EIS does not meet all requirements of Section 7.4 of the EIS Guidelines for all potentially affected vegetation species. For example, specific riparian communities and wetland types may require unique mitigation measures that are not described in sufficient detail in the EIS. The introduction and establishment of invasive plant species is an important focus for mitigation and is of particular concern to Indigenous land users. Specific details pertaining to mitigation measures presented in the EIS are missing, such as details pertaining to the vehicle, equipment and personnel clothing cleaning protocol described on page 8.34. This information is required to understanding the impact of the Project on vegetation in relation to traditional land and resource use.	mitigation measures. Provide measurable parameters to determine the effectiveness of the mitigation. Discuss residual effects linked to specific vegetation communities or SAR. ii. Provide detailed descriptions of monitoring and follow-up linked link directly to specific mitigation actions, to determine of the effectiveness of mitigation and verify the predictions of the effects assessment. iii. Describe how clean equipment protocol will be implemented as part of a vehicle hygiene program to prevent the spread of weeds and non-native invasive plants. iv. Describe how and when survey and mitigation of invasive plant and animal species will be conducted before construction and during operations. Include details on will the information will be shared prior to the commencement of construction and whether this information will be a part of the Aquatic Effects Monitoring Plan, Vegetation Monitoring Plan or Wildlife Monitoring Plan. Note: the information requirements regarding vegetation and mitigation should be considered when responded to IAAC-102 (Vegetation – Assessment of Effects).
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	Manitoba Métis Federation – Written Submission on the EIS – May 22, 2020 Misipawistik Cree Nation – Written Submission on the EIS – May 22, 2020				
IAAC-101	Pinaymootang First Nation – Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway First Nation – Written Submission on the EIS – June 1, 2020	7.3.3	3.4.1 5.3 9.2.1.2 9.2.4.5 10.2.1 10.2.4	The EIS Guidelines require the proponent to provide a comprehensive understanding of the current state of each VC related to effects of changes to the environment on Indigenous peoples. The EIS Guidelines require the proponent to present baseline information for current use of lands and resources for traditional purposes, which will focus on the traditional activity (e.g. hunting, fishing, trapping, plant gathering) and include a characterization of all attributes of the activity that can be affected by environmental, social, and/or cultural change. These include quantity and quality of resources, changes in resource availability and change in access to areas and resources. The EIS presents information collected during the Project engagement sessions indicating that there was a loss of areas for hunting and harvesting berries following historic water management projects for local Indigenous groups, and that concern had been expressed over additional losses of hunting, trapping, and farming opportunities resulting from the effects of the Project, including the areas where the outlet channels are planned, and decreased availability and access to plant and animal resources. However, in assessing effects to current use of lands	a. Present a revised assessment of effects of the Project on Land and Resource Use and Traditional Land and Resource Use. i. Using the updated assessment of effects to vegetation and wildlife resources from associated Information Requests, provide a quantitative assessment of seasonal changes to availability of and access to land and resources used for traditional purposes arising from all phases of the Project. b. Discuss and reconsider or confirm the assumption that traditional resources and lands are abundant and available to Indigenous peoples and other traditional users.

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	Brokenhead Ojibway Nation – Written Submission – May 22, 2020 Misipawistik Cree Nation – Written Submission on the EIS – May 22, 2020			and resources for traditional purposes, the EIS assumes that traditional land and resources are abundant and available. The EIS further identifies potential effects to lands and resources of importance to Indigenous peoples, with limited discussion of the seasonality of potential effects. The EIS reports the scope of the TLRU assessment is limited to availability and access to lands and resources used traditionally and acknowledged that assessment outside the LAA was unreliable. Information on changes to vegetation and wildlife resources and associated effects to current use of lands and resources for traditional purposes is required to support full understanding of the potential effects of the Project on Indigenous peoples.	
Federal Lands					
IAAC-102		3.2.2 7.1.11 7.3.4	2.3.1.2 Historic Flood Mitigation Initiatives and Infrastructure Appendix 3D – Operational Guidelines 9.2.6 Potential Land and Resource Use Effects on Federal Lands	The EIS guidelines require that environmental effects on federal lands must be taken into account in the EIS. The proponent has described the ongoing negotiations for a Comprehensive Settlement Agreement in the EIS. The settlement agreements are expected to include a flood easement to the province of Manitoba to allow for some inundation of reserve land in the course of operating flood control infrastructure. The proponent has also indicated that the Project is not expected to adversely affect land and resource use on federal lands or First Nation Reserves. Indigenous communities have indicated concern with the 806 ft. flood easement, as portions of reserve lands are below 806 ft. elevation. Indigenous groups have also expressed concern that the Operational Guidelines for the Project appear to allow for future inundation of reserve lands on Lake St. Martin, which could	a. Discuss how frequently the proponent expects water levels may flood Federal Reserve Lands in the PDA, LAA and RAA b. Provide an assessment of impacts to Federal Reserve Lands in the PDA, LAA and RAA during possible future flood scenarios. c. Provide additional information on what actions the proponent will take during different flooding scenarios

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				result in ongoing adverse effects on each Nation's treaty rights, treaty lands, health, and socio-economic well-being. Information regarding potential effects to reserve lands associated with the Project and related lake level management is required to understand the potential effects of the Project on federal lands and Indigenous peoples.	
Health and Socio-economic Conditions of Indigenous Peoples					
IAAC-103	Little Saskatchewan First Nation – Written Submission on the EIS – May 25, 2020 Brokenhead Ojibway Nation – Written Submission on the EIS – May 22, 2020	Part 1, Section 2.3 Engagement with Indigenous groups 7.3.3 Indigenous Peoples	10.2.2 Existing Conditions for Traditional Land and Resource Use	The EIS Guidelines require a description and analysis, for each Indigenous group, of how changes to the environment caused by the Project will affect the health and socio-economic conditions. The EIS Guidelines also direct the proponent to engage with Indigenous groups in the gathering and validation of the information presented in the EIS. The EIS does not include comprehensive information on TLRU resources, activities and sites in the RAA, nor a comprehensive discussion of how these resources, activities, and sites are interrelated with health and socio-economic conditions. The EIS notes that mitigation measures included in the EIS were recommended by Indigenous communities for other projects, but not for this project specifically. Additionally, information in this section is heavily reliant on information from government databases (e.g. CIRNAC; CEAA), Indigenous websites, or from literature from other organizations (e.g. the Golder Associates' 2018 report that contracted by the IRTC). The EIS does not demonstrate engagement with all Indigenous groups as required by the EIS Guidelines in seeking this information and the EIS does not demonstrate that the information presented has been validated by the appropriate Indigenous groups. It is acknowledged in the EIS that information on TLRU is incomplete. Complete information is critical to the understanding and mitigating and potential adverse effects on health and socio-economic conditions.	a. Provide a discussion of how any anticipated change to traditional land and resource use could affect the health and socio-economic conditions of Indigenous peoples. Identify and discuss mitigation measures specific to addressing effects to health and socio-economic conditions, as well as the associated monitoring and follow up. i. This should include information directly from and/or validated by each Indigenous group identified in the EIS Guidelines.

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IAAC-104	Pinaymootang First Nation– Written Submission on the EIS – June 1, 2020, Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway First Nation– Written Submission on the EIS – June 1, 2020 Lake St. Martin First Nation – Written Submission on the EIS – June 2, 2020	7.3.3 Indigenous Peoples 7.4.4 Mitigation Measures 9.2 Follow-up and Monitoring Programs	10.2.7 Follow-up and Monitoring	The EIS Guidelines direct the proponent to engage Indigenous groups in the preparation and execution of follow-up and monitoring programs, as appropriate. The EIS Guidelines also require a description and analysis, for each Indigenous group, of how changes to the environment caused by the Project will affect health and socio-economic conditions. The EIS acknowledges that follow-up and monitoring programs have not been identified, and that proposed mitigation for effects of the Project will be discussed with Indigenous groups. Limited detail is offered to demonstrate how, and the extent to which, Indigenous groups will be involved in the development of follow-up and monitoring programs. Information on monitoring and follow-up is important as it relates to mitigation measures associated with and effects of changes to the environment from the Project on Indigenous peoples. Further, involvement in monitoring and follow-up programs could serve to introduce benefits of the Projects and/or mitigate adverse effects to health and socio-economic conditions of Indigenous peoples, as Indigenous communities have stated their interest in training and employment opportunities with the follow-up and monitoring. Information about follow-up and monitoring programs is required to understand the likely effectiveness of these activities and opportunities to mitigate effects to the health and socio-economic conditions of Indigenous peoples.	a. Provide a discussion on opportunities for Indigenous peoples to participate in a monitoring program. This should include training and employment opportunities b. Describe how Indigenous groups have been, or will be, involved in the development and implementation of monitoring and follow up programs. Include a discussion of training and employment opportunities for Indigenous groups and community members.
IAAC-105	Little Saskatchewan First Nation – Written Submission – May 25, 2020 Lake St. Martin First	7.3.3 Indigenous Peoples	2.3.2.2 Environmental and Social Costs and Effects; 10.3 Effects on Commercial Fishing;	The EIS Guidelines require a description and analysis, for each Indigenous group, of how changes to the environment caused by the Project will affect the health and socio-economic conditions. The EIS provides high level information regarding the potential effects of the Project on fish and fish habitat, and notes that more detailed information on mitigation, monitoring, and follow-up is forthcoming. This creates gaps in understanding the potential	a. Provide a description of mitigation measures that specifically address lost and altered habitat in consideration of Indigenous values and practices associated with fish and fish habitat. Include: i. a description of monitoring and follow-up programs specific to fishing, including monitoring of fish harvest returns during operational phases of the Project, and how information from this monitoring and follow-

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	Nation – Written Submission on the EIS – June 2, 2020			effects of changes to fish and fish habitat from the Project on health and socio-economic conditions of Indigenous peoples. Indigenous groups recommend annual fish harvest returns should also be monitored during the operational phases of the Project in order to quantify any impacts that the Project would have on the fishery in the future. Information on mitigation measures, monitoring and follow-up programs specific to fishing is required to understand the conclusions drawn with respect to the potential effects of the Project on Indigenous peoples.	up program will be used to inform additional mitigation measures required for effects of the Project to fish and/or effects of the Project on Indigenous peoples. b. Describe how Indigenous groups were or will be involved in the development of these mitigation, monitoring, and follow-up plans. c. The responses to the above should be informed by responses to information requests IAAC-33, IAAC-34, IAAC-35, IAAC-36 and IAAC-37 from IR Round 1 Package 1 sent on April 23, 2020 which inquire about fish and fish habitat impacts, including the requirement of baseline studies.
IAAC-106	Manitoba Métis Federation – Written Submission on the EIS – May 22, 2020 Brokenhead Ojibway Nation – Written Submission on the EIS – May 22, 2020	7.3.3 Indigenous Peoples; 7.1.4 Groundwater and Surface Water	10.2.8.6 Effects on Quality of Country Foods; 6.4.5.2 Surface Water Overview	The EIS Guidelines require a description and analysis, for each Indigenous group, of how changes to the environment caused by the Project will affect the health and socio-economic conditions. The EIS does not adequately describe the effects of increased methylmercury concentrations in surface water as a result of the Project and the subsequent effects this may cause on wetlands, which hunters and gatherers use as a source of country foods. Note that Information requests IAAC-12 and IAAC-13 from IR Round 1 Package 1, sent on April 23, 2020, also request additional information regarding effects of the Project on surface water. Information about changes to water quality is required to support an understanding of potential effects on the health of Indigenous peoples.	a. Provide an assessment of the potential effects on the health of Indigenous peoples resulting from a change to methylmercury concentrations in water and a subsequent change to country foods, as a result of the Project. b. Describe how this assessment is informed by the detailed hydrological study on the Buffalo Creek Watershed including Big Buffalo and Little Buffalo lakes, to better understand the potential effects of the Project on this watershed, including methylmercury, and the consequent effects on Indigenous rights, claims and interests.
IAAC-107	Manitoba Métis Federation – Written Submission on the EIS – May 22, 2020	7.3.3 Indigenous Peoples; 7.2.2 Changes to groundwater, surface water and fluvial morphology	3.5.3.4 Water Management; 3.7.2 Construction Environmental Management Program; 6.4.7.7	The EIS Guidelines require the proponent to present a description and analysis, for each Indigenous group, of how changes to the environment caused by the Project will affect the health and socio-economic conditions. There is limited detail in the EIS on how increased nutrient runoff from the operation of the channels will affect algae and the	a. Provide an assessment of the potential effects of the Project on the health of Indigenous peoples resulting from the nutrient transport from Assiniboine River flood waters released by the Portage Diversion through Lake Manitoba, Lake St. Martin, Lake Winnipeg and Nelson River, through to Split Lake and further downstream. Include:

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	Brokenhead Ojibway Nation – Written Submission on the EIS – May 22, 2020 Peguis First Nation – Written Submission on the EIS – June 10, 2020		Changes in Regional and/or Local Surface Water Quality	subsequent effects this may cause on the quality of drinking water and Indigenous health. The proponent has indicated that the water moved through the Project infrastructure would move through these water bodies without the Project and has therefore omitted potential changes to the environment from its assessment. The Project will change the way and rate in which water moves through the affected waterbodies. For example, water otherwise naturally filtered through wetlands may not undergo the same processes. Information about changes to water quality is required to support an understanding of potential effects on the health of Indigenous peoples.	i. A discussion of the potential change in nutrient transport as a result of the way and rate in which the Project would move water between waterbodies, and associated effects on algal blooms. ii. A discussion of the effects of algae, especially blue-green algae and the effect of algae toxins on human health. b. Responses to the above should take into account responses provided to information requests IAAC-15 and IAAC-16 from package sent April 23, 2020, that inquire about surface water quality and mitigations.
IAAC-108	Little Saskatchewan First Nation – Written Submission on the EIS – May 25, 2020	7.1.10 Health and Socio-economic Conditions; 7.3.3 Indigenous Peoples	10.3.1.6 Significance Determination	The EIS Guidelines require the proponent to present a description and analysis, for each Indigenous group, of how changes to the environment caused by the Project will affect the health and socio-economic conditions. The EIS Guidelines require baseline conditions for health conditions, including the state of physical, mental and social well-being. The characterization of potential significant effects on Indigenous health conditions (human health) in the EIS focuses primarily on physical determinants (air, water, soil, noise) and does not consider the full scope of determinants of health and well-being in Indigenous communities, including social determinants (such as health care systems, cultural continuity, food insecurity, employment, etc.). This information is required to understand the potential effects of the Project on the health and socio-economic conditions of Indigenous peoples.	a. For Indigenous Groups provide an updated health effects analysis, based on current community-based baseline data, using a population health and social determinants of health model to guide health impact assessment.

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IAAC-109	Little Saskatchewan First Nation – Written Submission on the EIS – May 25, 2020 Lake St. Martin First Nation – Written Submission on the EIS – June 2, 2020	7.3.3 Indigenous Peoples 3.2.1 Site Preparation and Construction	3.4.2.7 Temporary Construction Camps and Staging Areas	The EIS Guidelines require the proponent to present a description and analysis, for each Indigenous group, of how changes to the environment caused by the Project will affect the health and socio-economic conditions. The EIS states that temporary work camps will be used during Project construction and that their locations have not yet been determined. Although the exact location for temporary construction camps and staging areas are not known at this time, Indigenous groups are concerned that the proximity to Indigenous communities will introduce potential new impact pathways to Indigenous health on vulnerable members of Indigenous communities. The information in the EIS on the potential effects to the health of Indigenous communities, including the transmission of infectious diseases to Indigenous peoples is insufficient. There is no mention of protection and measures of avoidance for project employees. As these mitigation measures would protect employees, it would in turn add preventative measures and peace of mind for the Indigenous People. Information on mitigation measures associated with effects to Indigenous communities from temporary construction camps and staging areas is necessary to understand the potential effects of the Project on the health of Indigenous peoples.	a. Provide a supplemental analysis that identifies appropriate locations and/or criteria for appropriate locations for temporary work camps, including a description of how Indigenous peoples have been engaged in choosing these locations, and an assessment of potential effects to Indigenous health and socio-economic well-being, taking into consideration mitigations to avoid or minimize effects on Indigenous peoples. b. Determine and describe the scope of possible infectious diseases that could be spread from temporary work camps to Indigenous peoples during the operation and construction of the Project, thus affecting Indigenous health.
IAAC-110	Lake St. Martin First Nation – Written Submission on the EIS – June 2, 2020	7.4 Mitigation measures; 7.6.1 Effects of potential accidents or malfunctions	14.2.4 Incident Response and Mitigation; 14.2.2 Incident Prevention; 14.3.2 Incident Prevention; 14.6 Summary of Residual Effects	The EIS Guidelines require the proponent to present a description and analysis, for each Indigenous group, of how changes to the environment caused by the Project will affect the health and socio-economic conditions. The EIS states that cleared vegetation may be burned during the construction phase of this project. The EIS does not discuss potential effects of a wildfire starting as the result of this activity.	a. Provide a detailed analysis of how wildlife resulting from the burning of cleared vegetation during the construction phase will be prevented. i. Include mitigation measures and a potential emergency response plan for an accidental wildfire b. Responses to the above should take into account information request IAAC-62 from IR Round 1 Package

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				Information about mitigation measures and potential residual effects from wildfires resulting from Project activities is required to understand the potential environmental effects of the Project.	1 sent on April 23, 2020 regarding accidents and malfunctions.
Section 5(2) of CEAA 2012					
IAAC-111	IAAC Rural Municipality of Grahamdale – Written Submission on the EIS – June 11, 2020	7.1.12 7.3.4	9.2.4.4 Change in Parks, Recreation and Tourism	The EIS Guidelines require the assessment of health and socio-economic conditions, including recreation. The EIS identifies Watchorn Provincial Park as located approximately 400 m to the southeast of the LMOC inlet. Watchorn Provincial Park is noted to have campgrounds, picnic and a swimming beach. Although the EIS does describe potential effects to recreation as “nuisance effects (i.e., noise, emission, light)”, the duration and level of exposure to effects of Watchorn Provincial Park users is not described. Due to the close proximity of Watchorn Provincial Park, there is greater potential for recreational use to be affected, which could lead to health and socio-economic effects. In the assessment of effects to recreational use of Watchorn Provincial Park, the EIS does not describe how potential changes to shoreline morphology due to changes in water flow and sediment transport may affect the Park and its recreational use. As the Park is located near/on the shore of Lake Manitoba and has swimming beaches, there is the potential for changes in shoreline morphology to affect the recreational use of the Park. Information on potential changes to recreational use areas is required to understand potential effects of the Project on health and socio-economic conditions.	a. Update the assessment of potential effects of the Project on recreation, so that it considers the potential duration and exposure of effects to the recreational use of Watchorn Provincial Park and the potential associated health and socio-economic effects. b. Provide an assessment of the potential changes in shoreline morphology caused by the Project near Watchorn Provincial Park and the related effects to recreation, health and socio-economic conditions. c. Describe mitigation measures to address the potential effects on recreation, health and socio-economic conditions that are identified through this assessment.
IAAC-112	IAAC Rural Municipality of Grahamdale –	7.3.4	9.2 Land and Resource Use	The EIS Guidelines require the assessment of the effects of a change to the environment on health and socio-economic conditions. The EIS states that aggregates will be sourced from local resources. An assessment of the estimated available resources, the estimated	a. Describe the estimated amount of available local aggregate resources, anticipated use and the potential socio-economic effects associated with the use of these resources. If adverse effects are identified, describe mitigation and follow-up measures to address these effects.

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	Written Submission on the EIS – June 11, 2020			resources utilized by the Project and the associated potential socio-economic effects of this resource use has not been provided. If a high percentage of local aggregate resources are consumed by the Project, there is the potential for a socio-economic effect as a result of the depletion of these resources. Information on changes to local aggregate resources is required to understand potential effects of the Project on health and socio-economic conditions.	
IAAC-113	IAAC	Part 1 section 4.3	EIS	The EIS Guidelines require that the EIS identify discrepancies of views on information presented between Indigenous Groups and Manitoba Infrastructure and provide rationale for the selection of information for use in the assessment. The EIS does not clearly identify where there are discrepancies between the views of Indigenous groups and Manitoba Infrastructure or provide a clear rationale for the selection of information when discrepancies exist. The identification of discrepancies helps the Agency, Indigenous groups and the public understand these differences in views and rationale for the information presented.	a. Identify and discuss areas where discrepancies exist between the views and conclusions of Indigenous groups and Manitoba Infrastructure regarding information used in the assessment. Describe efforts that were made to reconcile the disparities, and the rationale for conclusions on matters for which disagreements remain.
Physical and Cultural Heritage of Indigenous Peoples					
IAAC-114		7.2.2 Changes to groundwater, surface water, and fluvial morphology 7.3.3 Indigenous Peoples	6.4.7.2 Changes in Regional Flow and Water Levels 9.6.2 Existing Conditions for Heritage Resources 9.6.3 Project interactions with Heritage Resources	The EIS Guidelines require the proponent to describe changes to surface water quantity in all project phases and in all operational scenarios. The EIS Guidelines also require the proponent to assess effects of changes to the environment on Indigenous peoples' physical and cultural heritage, and structures, sites or things of historical, archaeological, paleontological or architectural significance to groups. Sections 9.6.2 and 9.6.3 of the EIS describe baseline conditions for physical and cultural heritage resources and potential effects of the Project on physical and cultural heritage resources, respectively. A description of physical and cultural heritage resources of importance to Indigenous peoples located on islands within Lake St. Martin and Lake Winnipeg has not been provided,	a. Provide baseline data regarding physical and cultural heritage, and structures, sites or things of historical, archaeological, paleontological or architectural significance to Indigenous peoples that may be present on islands located within Lake Manitoba and Lake St. Martin. b. Describe potential effects of the Project on islands located within Lake Manitoba and Lake St. Martin, including potential changes to water levels and erosion patterns, and any associated effects on physical and cultural heritage, and structures, sites or things of historical, archaeological, paleontological or

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				nor have the potential effects of the Project on these resources been assessed. As noted by Poplar River First Nation, sacred sites and areas of cultural and historical importance are known to exist on the islands within Lake St. Martin and Lake Winnipeg, and several of these sites have already been lost or damaged as a result of past and existing developments. Section 6.4.7.2 of the EIS states that water levels in Lake St. Martin and Lake Winnipeg are expected to decrease as a result of the Project. Poplar River First Nation has expressed concerns that changes to water levels and flows in these waterbodies as a result of the Project may alter erosion patterns which may affect sacred sites located on these islands. This information is required to understand potential effects of changes to the environment from the Project on physical and cultural heritage, and structures, sites or things of historical, archaeological, paleontological or architectural significance to Indigenous peoples.	architectural significance to Indigenous peoples that may be present on islands. c. Describe measures that will be implemented to mitigate any effects identified above. d. Describe monitoring and follow-up that will be implemented to validate the predictions of the assessment, confirm the effectiveness of mitigation measures, and respond to any unanticipated effects identified during monitoring. Describe how Indigenous groups will be involved in follow-up and monitoring.
IAAC-115	Ebb and Flow First Nation – EIS Misipawistik Cree Nation – Written Submission on the EIS – May 22, 2020 Fisher River Cree Nation – Written Submission on the EIS – June 22, 2020 Interlake	7.3.3	10.2-2 Potential Effects, Effect Pathways and Measurable Parameters for TLRU	The EIS Guidelines require the proponent to present information on the potential effects of the Project on physical and cultural heritage. The Guidelines stipulate that cultural heritage include aspects identified as important by Indigenous groups, including transmission of language, knowledge, and practices. The EIS Guidelines direct the proponent to engage with Indigenous groups in the gathering and analysis of this information, and the validation of secondary source information. The EIS does not provide sufficient description of indirect effects associated with the interrelated nature of the Traditional Land and Resource Use effects listed, including potential effects on community cultural health and well-being associated with changes to the environment and changes to land use. The EIS does not appear to consider all pathways of effects, such as reduced access to important gathering sites and resources such as plant species of cultural, spiritual, and medicinal importance due to permanent structures bisecting the landscape. Further, the EIS does not include a discussion of the cumulative effects on land, resources	a. Provide an assessment of the potential effects of the Project on physical and cultural heritage. The assessment should include a discussion of how changes to the environment, may cause interrelated effects to culturally important VCs. The discussion should include: i. the cultural value or importance associated with traditional uses or areas affected by the Project (e.g. values or attributes of the area that make it important as a place for inter-generational teaching of language or traditional practices, communal gatherings, integrity of preferred traditional practice areas); ii. how the timing of project activities (e.g. construction, blasting, discharges) have the potential to cause related effects to culture if project activities overlap with the timing of

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	Reserves Tribal Council Lake Manitoba and Lake St. Martin Outlet Channels - EIS and Conformity Review- May 9, 2020 Little Saskatchewan First Nation – Written Submission on the EIS – May 25, 2020 Brokenhead Ojibway Nation – Written Submission on the EIS – May 22, 2020			and culturally valuable sites within the region and within the immediate project area. Indigenous groups have identified that way of life will be disturbed, and that the Project may contribute to loss of language and culture, and may result in negative effects to the intergenerational transmission of Indigenous knowledge, including traditional ecological knowledge. Further, Indigenous groups have noted the potential effects of the Project in this regard will be distinct for each First Nation and for Manitoba Metis Federation. Information regarding interconnected effects and indirect effects to cultural heritage, including effects to language, knowledge, and practices is required to understand the effects of the Project on Indigenous peoples.	traditional practices, cultural transmission, etc.; iii. the selection of pathways of effects related to cultural heritage; iv. consideration of the regional context for traditional use and cultural heritage, and the value of the project area in that regional context, including alienation of lands from traditional use; and b. Identify and discuss mitigation measures for the effects identified above, and monitoring and follow-up programs that will address predicated and/or unanticipated effects. c. Describe how each Indigenous group listed in the EIS Guidelines was and/or will be engaged in the gathering, analysis, and validation of the information presented in the EIS and in information request responses, related to physical and cultural heritage.
IAAC-116	Dauphin River First Nation, Lake Manitoba First Nation and Kinonjeoshteg on First Nation – Written Submission on	Part 1 Section 3.2.3 Spatial and temporal boundaries, Part 1 Section 4.3 Study strategy and methodology and Part 2 Section 7 Effects Assessment	Section 9.6 Heritage Resources	The EIS Guidelines state that the spatial and temporal boundaries used in the EA may vary depending on the VC and should be considered separately for each VC. Further, the EIS Guidelines require the proponent to describe the rationale for all spatial boundaries, including local and regional study areas, used in assessing the potential adverse environmental effects of the Project. The EIS Guidelines stipulate that temporal boundaries will span all phases of the Project, including operation and maintenance of the outlet channels. The EIS Guidelines also state that for each VC, the EIS will describe	a. Describe how the HRIA will be completed Describe and present a rationale for associated spatial and temporal boundaries; i. Describe how and from whom the baseline data will be collected. Present a discussion on how community and Indigenous knowledge will be integrated to inform the assessment methodology and analysis ii. Explain how the results of the HRIA will be shared with the Indigenous communities;

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	the EIS – May 25, 2020			the methodology used to assess project-related effects, and will include an analysis of the pathway of the effects of environmental changes on each VC. The EIS Guidelines also require the proponent to integrate Indigenous knowledge into all aspects of its assessment and to describe this integration. The EIS Guidelines also state that baseline information for physical and cultural heritage (including any site, structure or thing of archaeological, paleontological, heritage or architectural significance) will consider all elements of cultural and heritage importance to groups in the area. The EIS indicates that an HRIA, and associated mitigation and monitoring for heritage resources that have been discovered, has not been completed and will be undertaken. The EIS states that spatial boundaries are established for the assessment of Project environmental effects and cumulative environmental effects for each valued component and that a rationale is discussed for the choice of local assessment area (LAA) and regional assessment area (RAA). The EIS does not provide evidence that Indigenous knowledge was integrated in establishing the spatial and temporal boundaries, including local and regional study areas, or that the boundaries are appropriate for heritage resources. Further, section 9.6.1.2 of the EIS excludes heritage sites from assessment, even while raised as important by Indigenous groups in the area. While section 9.6 of the EIS contains some discussion of the potential effects of the Project on heritage resources within the LAA, there is no assessment of the anticipated regional extent of potential direct, indirect and cumulative effects that may extend beyond the LAA. Additionally, section 9.6 of the EIS notes that a Heritage Resource Impact Assessment (HRIA) of the Project will be conducted preconstruction for any undiscovered heritage resources in the PDA. Information on the scope and selection of spatial and temporal boundaries of relevant VCs, including information on how Indigenous knowledge was integrated into the selection of	iii. Explain how any artifacts/heritage resources discovered during the HRIA or during other phases of the Project will be handled. Identify specific mitigation measures that will be taken if a significant site is discovered during the HRIA; iv. Describe monitoring programs that will be undertaken during construction in areas of high archaeological potential. v. Identify the regional significance of any site relative to other heritage sites found in the region; vi. Identify how/if Indigenous communities can participate/contribute their cultural/traditional/heritage knowledge to the HRIA.
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				boundaries in the EIS is required to support full understanding and assessment of the potential effects of the Project and the appropriateness of the conclusions drawn regarding potential effects to Indigenous peoples.	
IAAC-117	IAAC Little Saskatchewan First Nation – Written Submission on the EIS – May 25, 2020	Part 2 Section 7 Effects Assessment Little 7.1.1 7.6.1. Effects of potential accidents or malfunctions;	Section 9.6 LSFN EIS Review May 2020 Table 9.6-4 Historic Features in the PDA and LAA	The EIS Guidelines require the proponent to provide an assessment of the effects of changes to the environment on Indigenous peoples’ physical and cultural heritage, and on structures, sites or things of heritage, archaeological, paleontological or architectural importance to Indigenous groups. The EIS Guidelines further stipulate requirements for the description of mitigation measures and determination of the significance of effects. The EIS Guidelines state that cumulative effects must be considered if “the implementation of the Project may cause direct residual adverse effects on the VC, taking into account the application of technically and economically feasible mitigation measures.” The EIS draws conclusions on the potential effects of the Project on physical and cultural heritage and sites of importance in the absence of baseline data, a thorough description of pathways of effects, or potential mitigation. The EIS does not appear to assess the effects from all potential pathways of effects to sites of importance. For example, the EIS notes that an “increase in the water table or flooding can cause recent burials to float, pushing up on the grave shaft and potentially tipping headstones and cracking and tilting grave covers”, but the EIS does not address potential effects to the buried remains due to changes in water levels from the Project The EIS does not identify mitigation measures for all potential sites of importance. The EIS provides a summary of residual effects, but does not provide a detailed analysis of the significance of the residual effects following the implementation of mitigation measures. A cumulative effects section for Heritage Resources VC appears to be have been omitted from the EIS without clear justification or acknowledgement.	a. For known heritage resources and sites of importance, discuss the effects to each type of heritage resource and sites of importance in the region from past, existing, and reasonably foreseeable physical activities. Discuss how potential effects of the Project on heritage resources and sites of importance would interact with these effects from past, existing, and reasonably foreseeable physical activities. b. Given the deferral of gathering of baseline data in the PDA to the HRIA, discuss the uncertainty associated with the conclusions drawn regarding potential effects to physical and cultural heritage and sites of importance. The discussion should include: i. How community and Indigenous knowledge informed the assessment methodology and analysis, ii. An assessment of the potential effects of the Project, for all phases, including changes to water levels and flooding, to various types of heritage resources and sites of importance that could be present, applying a precautionary approach in the absence of HRIA information; iii. A description of mitigation measures for the different types of heritage resources (heritage, archaeological, paleontological or architectural) that could be discovered during the HRIA on the Project and a discussion of the likely effectiveness of these mitigation measures; iv. A discussion of the methodologies used to determine the importance of each type of heritage resource and/or site of importance

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				Rationale for the conclusions drawn is required to understand confidence in predicted effects of the Project to Indigenous peoples. The EIS states that Manitoba Infrastructure is developing an Environmental Management Protection Program (EMP) to address mitigation and monitoring requirements (see Section 3.7). The EMP will include a Cultural and Heritage Resources Protection Plan developed to specifically deal with potential effects. Table 9.6-4 of the EIS identifies historic features within the Project Development Area (PDA) and the Local Assessment Area. Two of these sites, the Carn Ridge School and Bayton St. Thomas Lutheran Cemetery, come within 30 meters of the PDA. These projects are likely to interact with project activities either during construction or operations. Through flood control facilitated by the Project, it is anticipated that the likelihood of this effect will be reduced. The Bayton St. Thomas Lutheran Cemetery is in the LAA and the east cemetery boundary is within 25 m of the west edge of the LMOC PDA. It is not currently known whether there are unmarked graves outside the cemetery boundaries. To mitigate any residual effects of changes to the Bayton St. Thomas Lutheran Cemetery because of altered surface or ground water flow, Indigenous groups have recommended that the extant burials be periodically checked for evidence of tilting headstones. They have also suggested that a baseline photographic survey could be used as a comparative model to periodically check the cemetery as part of a follow up and monitoring program.	(archaeological, paleontological or architectural). c. Describe mitigation measures that will be taken to preserve the Carn Ridge School and the St. Thomas Lutheran Cemetery during the construction and operation phase of the Project. d. Given that the St. Thomas Lutheran Cemetery is still considered active, and that funerals by their very nature are hard to predict, identify the actions that MI will undertake should a funeral occur if construction or maintenance work is taking place on the Project at that time.
IAAC-118	IAAC	7.1.1 7.6.1. Effects of potential accidents or malfunctions;	14 Accidents and Malfunctions 14.2 Outlet Channel Breach/Control Structure Failure	The EIS Guidelines require the proponent to assess the effects of accidents and malfunctions, including the likelihood that they will occur, and describe preliminary emergency response measures. The Guidelines state that the EIS must take into account how local conditions and natural hazards could adversely affect the Project and how this in turn could result in effects to the environment.	a. In the case of a channel breach or infrastructure failure, discuss any effects to Physical and Cultural Heritage Sites and historic Resources of Importance that could occur due to the interaction of the Project, the event and the environment. For example, interaction of

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			15 Effect of the Environment on the Project 15.5 Effect of Long-Term Climate Change on the Project	The EIS indicates that if a breach were to occur, effects to VC's would be similar to during a flood event in the absence of the Project. It also indicates that if damage to Project infrastructure occurs at the same time as a flood event, the potential residual effects of a channel breach would extend beyond the PDA, depending on the location of the breach, and lessen the effectiveness of the Project acting as a flood mitigation measure. The EIS does not describe Project effects to the environment from such a scenario, other than to say the effects on the environment would likely be less than those expected without the Project. Given that the Project involves large infrastructure and will channel and move water within the landscape, further information is needed to understand effects that might not otherwise occur during a flood due to interactions between the Project and flood waters	infrastructure and flooding location of effects due to project routing of water.
IAAC-119	IAAC	7.1.1	Section 9.6 Table 9.6-4 Historic Features in the PDA and LAA	The EIS Guidelines require the proponent to assess the potential effects of changes to the environment from the Project on physical and cultural heritage and sites of archaeological, paleontological or architectural importance. The EIS identifies some historic features within the Project Development Area (PDA) and the Local Assessment Area. A historical feature, the Fairford Trail, crosses the PDA within 380 m of the confluence of Watchorn Creek and Watchorn Bay on Lake Manitoba. Fairford Trail is an overland route that connected the fur trade post and mission at Fairford with the Red River Settlement, which was the basis for present-day Winnipeg. Parts of this historic trail are still actively used. The EIS notes that construction of the Project will remove a 465 m long segment of this feature. A section of the trail is within 130 m of the lake and therefore, as a historic travel route near a major waterbody, there is the potential for heritage resources related to the use of the trail to be present. This will be determined by a preconstruction HRIA, which will also innumerate how many heritage resources will interact with the Project.	a. Describe measures associated with the removal of a 465 meter long segment of the Fairford Trail that will be taken during or before the construction and operations phases of the Project to preserve/record this heritage resources not only for the removed portion of the trail but the remaining portion as well. b. Identify mitigation measures associated with ongoing use of sections of the trail, including what steps will be taken Land Users (both Indigenous and Non-Indigenous) who may still use the Fairford Trail.

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				The EIS acknowledges the Project will adversely affect the trail and heritage resources within the PDA because there will be a net loss of a 485 m segment of the Fairford Trail and removal of other heritage resources within the PDA that have not yet been identified. The EIS does not describe mitigation measures for the known anticipated effects of the Project on this site of importance and does not present mitigation measures for effects associated with effects to the known use portions of the trail that may be affected by the Project. Information on the mitigation of potential effects to this site of importance is necessary to understand the potential effects of the Project on physical and cultural heritage and sites of importance.	
Current use of lands and resources for traditional purposes					
IAAC-120	Transport Canada – comment on the EIS Manitoba Metis Federation – Written Submission on the EIS – May 22, 2020	Part 2, Section 3.1 Project Components Part 2, Section 7.3.3 Current Use of Lands for Traditional Purposes	10.3.3.2 Assessment of Residual Environmental Effects on Indigenous Socio-Economic Conditions 3.4.2.2 Channel Inlet and Outlet 3.4.3.2 Channel Inlet and Outlet	The EIS Guidelines require the proponent to determine the effects of the Project on current use of lands for traditional purposes, including navigation and any changes to access to waterways for navigation. In addition, the EIS Guidelines require the EIS to describe the Project by presenting project components and associated ancillary works, and other characteristics that might assist in understanding the environmental effects. The Proponent discusses impacts to navigation in the EIS, and provides some project information that describes the potential effects to navigation. Indigenous groups have indicated that impacts of navigation as a result of the Project are of concern. In particular, concerns were raised in regards to debris from the channels damaging boats and motors, and decreased access to navigable waters on Lake St. Martin due to reduced access to the boat launch (due to increased water levels on Lake St. Martin).	a. For each of the inlet and outlet portions of the LMOC and LSMOC, provide the following : i. Plan and profile drawings ii. Plan and profile drawings for the rock-filled jetties iii. Water level measurements b. Provide updated revised assessment of the effects the Project that includes all potential pathways of effects on navigation identified by Indigenous groups. c. For any potential adverse effects identified above, describe measures that will be implemented to mitigate effects. d. Describe monitoring and follow-up to be implemented to validate the predictions of the assessment, the effectiveness of mitigation measures, and respond to unanticipated effects identified during monitoring.

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				Transport Canada has stated that further information on the project components are required to understand the effects of the Project on navigation. Transport Canada has also indicated that the Proponent refers to Navigation Protection Act (NPA) instead of the Canadian Navigable Waters Act (CNWA) throughout the EIS. The CNWA came into force on August 28, 2019, and replaced the former NPA. Information on effects of the Project on navigation is required to support a full understanding of effects of the Project to areas of federal jurisdiction, including effects to Indigenous peoples.	e. Discuss the requirements of the CNWA, whether these result in any changes to the Project and/or proposed mitigation measures, and whether any measures to comply with the CNWA affect the assessment of effects of the Project for the EA.
IAAC-121	Manitoba Metis Federation – Written Submission on the EIS – May 22, 2020 Brokenhead Ojibway Nation – Written Submission on the EIS – May 22, 2020	7.3.3 Indigenous Peoples 7.1.4 Groundwater and Surface Water 7.6.2 Effects of the environment on the project	6.4.4 Assessment of Residual Environmental Effects on Groundwater 6.4.6 Project Interactions with Surface Water Environment 6.4.7. Assessment of Residual Environmental Effects on Surface Water Chapter 15 Effects of the Environment on the Project 15.5 Effect of Long-term Climate Change on the Project	The EIS Guidelines require that the EIS take into account how local conditions and natural hazards could adversely affect the Project and how this in turn could result in effects to the environment; that effects of the environment on the Project be considered in different probability patterns, under a range of future climate states; and that details of planning, design and construction strategies intended to minimize the potential environmental effects of the environment on the Project be provided. The EIS Guidelines also require the proponent to assess effects of changes to the environment on the current use of lands and resources for traditional purposes by Indigenous peoples and Indigenous health and socioeconomic conditions. As discussed in Round 1, Package 1, IAAC-23 and IAAC-58, the EIS does not describe the potential effects of the construction and operation of the LSMOC on groundwater and surface water interactions, groundwater and surface water quality and quantity, and wetlands, or how lake water dynamics may change under future climate scenarios. The Manitoba Metis Federation and Brokenhead Ojibway Nation have expressed concerns regarding potential effects of the Project on the Buffalo Creek watershed, including the wetlands within this watershed, which may negatively affect traditional use of these areas by Indigenous community members for hunting, fishing, and trapping. Further, as several Indigenous communities rely on the waterbodies potentially affected by the Project for income	a. Describe how changes to lake water dynamics under future climate scenarios and the effects of the Project on the Buffalo Creek watershed may affect the current use of lands and resources by Indigenous peoples and Indigenous health and socioeconomic conditions. b. For any potential adverse effects identified above, describe measures that will be implemented to mitigate effects. c. Describe monitoring and follow-up to be implemented to validate the predictions of the assessment, the effectiveness of mitigation measures, and respond to unanticipated effects identified during monitoring. Include how Indigenous groups will be involved in the follow-up and monitoring.

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				through tourism and commercial fishing, changes to lake water dynamics as a result of climate change and effects on the Buffalo Creek watershed may also negatively affect the socioeconomic conditions of Indigenous peoples. Information on how changes to surface water and ground water may affects Indigenous peoples is necessary for understanding the potential effects of the Project.	
IAAC-122	Little Saskatchewan First Nation – Written Submission on the EIS – May 25, 2020 Misipawistik Cree Nation - Written Submission on the EIS – May 22, 2020 Pinaymootang First Nation– Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay	2.3 Engagement with Indigenous groups 7.1.10 Indigenous Peoples 7.3.3 Indigenous Peoples	3. Project Description 5.3 Indigenous Engagement and Consultation 9.2.1.2 Engagement and Key Concerns 9.2.4.5 Change in Resource Use 10.2.1 10.2.4	The EIS Guidelines require the proponent to provide baseline information on current use of lands and resources for traditional purposes for each Indigenous group. Baseline information for current use of lands and resources for traditional purposes should focus on traditional use (e.g. use related to ceremonies, customs, cultural practices, traditional governance, trade or stories) or activities (e.g. hunting, fishing, trapping, plant gathering) and include a characterization of all attributes of the use that can be affected by environmental, social, and/or cultural change. The description of baseline conditions in the EIS does not include current traditional activities, nor the use of lands and resources that may have intangible value linked with spiritual, artistic, aesthetic and educational elements as often associated with the identity of Indigenous groups. Baseline information regarding current use of land and resources is required to conduct an appropriate analysis of the effects of the Project.	a. Describe the baseline conditions for current use of lands and resources for traditional purposes by Indigenous groups. Traditional activities should include, at minimum, hunting, fishing, trapping, berry and plant gathering. Baseline information should include nation-specific and provide: i. quality, quantity and availability of resources; ii. access to resources; and, iii. overall quality of the experience of the practice. b. Describe how potential changes to the environment caused by the Project may affect the current use of lands and resources for traditional purposes. The assessment should consider: i. access to lands and resources, for all phases of the Project and considering seasonal changes; ii. the quantity, quality and availability of resources; and, iii. the spiritual and cultural value of the experience. c. For any potential adverse effects identified above, describe measures that will be implemented to mitigate effects.

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	Ojibway First Nation– Written Submission on the EIS – June 1, 2020 TAG Meeting June 25-26, 2020				d. Describe monitoring and follow-up to be implemented to validate the predictions of the assessment, the effectiveness of mitigation measures, and respond to unanticipated effects identified during monitoring.
IAAC-123	Misipawistik Cree Nation - Written Submission on the EIS – May 22, 2020 Pinaymootang First Nation– Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway First Nation– Written Submission on	2.3 Engagement with Indigenous groups 7.3.3 Indigenous Peoples 7.5 Significance of Residual Effects	10. Indigenous Peoples	The EIS Guidelines require an analysis of the significance of adverse residual effects of the Project. For effects of the Project on current use of land and resources for traditional purposes, the EIS Guidelines also require the proponent to discuss potential residual effects with the Indigenous groups prior to submitting the EIS. Residual effects, even if very small or deemed insignificant, have not been described in the EIS. The EIS Guidelines state that regardless of the approach chosen by the proponent to consider uncertainty (quantitative or qualitative), sources and nature of uncertainty should be clearly described to justify the stated level of confidence in the results of the assessment. The EIS does not adequately identify and define the criteria used to assign significance ratings to predicted adverse effects and justify the methods used to determine significance. It is not clear how the proponent reached conclusion regarding the significance of residual effects. The consideration of the effects on valued components seems to be limited to the tangible value of a component as related to its role in the ecosystem, without consideration how changes to that VC may affect use of lands or resources by Indigenous peoples. The use of the land can be expressed in the following terms: subsistence practices; places where transmission of cultural knowledge occurs, including language, sense of self and place within the community; ceremonies/events; traditional routes (e.g. waterways, landmarks,	a. Provide an analysis of the potential for the activities over the life-cycle of the Project to result in significant adverse effects to current use of land and resources for traditional purposes. The analysis should consider tangible and intangible values of uses, for both project-specific effects, and for any cumulative environmental effects b. Provide a significance determination on the current use of lands and resources for traditional purposes considering the unique circumstances of each Indigenous group by applying the criteria and methodology described in the Agency’s guidance - <i>Determining whether a designated project is likely to cause significant adverse environmental effects under CEAA 2012.</i> c. If the details requested above cannot be provided at the time of response, provide a discussion of known information gaps, related uncertainty with regards to potential effects (assessment predictions) and proposed mitigation measures. Describe monitoring and follow-up programs, including the role of Indigenous groups that will be implemented to: validate the predictions of the assessment; confirm the effectiveness of mitigation measures; and respond to any unanticipated effects identified during monitoring.

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	the EIS – June 1, 2020 Norway House Cree Nation – Written Submission on the EIS – June 16, 2020 Pimicikamak Okimawin – Written Submission on the EIS – June 19, 2020 TAG Meeting June 25-26, 2020			portages); sacred sites (e.g. cultural landscapes); and habitation sites. The EIS Guidelines state that regardless of the approach chosen by the proponent to consider uncertainty (quantitative or qualitative), sources and nature of uncertainty should be clearly described to justify the stated level of confidence in the results of the assessment. Information about the proponent’s assessment of significance is required to understand the conclusions regarding the effects of the Project on current use of land and resources for traditional purposes.	
Cumulative Effects					
IAAC-124		7.6.3 Cumulative Effects Assessment	4.4.3.2 11.1.2.2 Table 11-1-1	The EIS Guidelines require the proponent to identify and justify the spatial and temporal boundaries for the cumulative effect assessment for each VC selected. The boundaries for the cumulative effects assessments are expected to be different for each VC considered, taking into account VC-specific context and potential effects. The EIS Guidelines indicate that the cumulative effects boundaries will generally be larger than the boundaries for the corresponding project effects. Temporal boundaries have not been identified for cumulative effects. Section 11.1 indicates that they are considered in 4.4.3.2 of the EIS, which indicates that temporal boundaries for the Project include the construction (estimated as five years) and the operations and maintenance phase, which has no duration as the Project will operate in perpetuity. The Proponent has not	a. Describe and provide a rationale for the temporal boundaries of the cumulative effects assessment for each VC. b. Discuss the reasoning for the selection of spatial boundaries for the cumulative effects assessment for each VC. Present a justification for the use of the same spatial boundaries in the cumulative effects and project effects assessments.

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				described the temporal boundaries for the cumulative effects assessment of each VC. If the temporal boundaries for the cumulative effects assessment for each VC are in perpetuity (i.e. the entire duration of the Project's operation phase), that must be clearly stated. The proponent has indicated that the RAA selected for the assessment of environmental effects is also the area to be used for the cumulative effects assessment of each VC. No rationale for this selection of spatial boundary for the cumulative effects assessment is provided. Clarification and justification of spatial and temporal boundaries of the cumulative effects assessment is required to understand the potential significance of cumulative effects of the Project.	
IAAC-125		7.6.3 Cumulative Effects Assessment	11.1.2.2	The EIS Guidelines require the proponent to present an assessment of the cumulative effects of the Project for each VC for which there are residual effects from the Project. The EIS indicates that the table of projects that may contribute to cumulative effects "identifies which past, present and future projects effects may interact with the same effects (for the same VC) for the Project." The statement above does not allow for consideration that two different effects to the same VC may change the significance of the cumulative effects to that VC. For example, project A has an effect on water quality that may not have been determined as significant and Project B has an effect on water quantity that may not have been significant. However, together, change in water quality from one project and the change in water quantity from the other project may interact cumulatively with the Project in a manner that results in significant effects to fish and fish habitat. Clarification is required to understand if or how different kinds of changes to the environment and environmental effects to the same VC were considered in the cumulative effects assessment or if the effects were considered one-to-one in a narrow approach.	a. Provide an assessment across different/multiple effects pathways between the projects and their cumulative effects on the respective VC's. Conduct analysis for each VC and update the significance determination and mitigation as necessary.

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IAAC-126		7.6.3 Cumulative Effects Assessment	11.0	The EIS guidelines require the proponent to follow the approach for cumulative effects assessment outlined in the <i>Technical Guidance for Assessing Cumulative Environmental Effects under the Canadian Environmental Assessment Act, 2012</i> which requires the assessment to include all of the following: - any assumption or conclusions based on professional judgement should be clearly identified and described. - limitations imposed by data and other types of uncertainty should be clearly described. This involves outlining how these limitations affected the choice of methodology and assumptions. - Using various approaches and knowledge to address data limitations. Outside of a few exceptions, the assessment of cumulative effects in the EIS is largely qualitative throughout the assessment for each VC and as such, professional judgement appears to have been applied throughout. The use of professional judgement has not been identified or described sufficient to justify determine significance of cumulative effects in most instances. Sources of data used and limitations in data available have not been described. This information is required to support full understanding in the confidence of the assessment of cumulative effects of the Project.	a. Clearly identify the use of professional judgement in the assessment and justify its use in the cumulative effects assessment for each VC. b. Summarize the data used in the cumulative effects assessment for each VC, the limitations of this data, and the approaches used to address data limitations.
IAAC-127	Tataskweyak Cree Nation – Written Submission on the EIS – June 10, 2020 Peguis First Nation – Written Submission on	7.6.3 Cumulative Effects Assessment	11.1.2.2 Table 11.1-1 Figure 11.1-1 11.1.2	The EIS Guidelines require that past, present, and reasonably foreseeable future projects be considered throughout the cumulative effects assessment. Section 7.6.3 of the EIS Guidelines states that water management systems and natural and/or controlled flood events, including flooding that occurred in the Interlakes Region in 2011, should be considered as projects or activities that are sources of potential cumulative effects. The EIS presents a list of existing water control structures in the Interlake Region but does not demonstrably consider the effects of integrated water management systems in the province. In Section 11.1.2.2, the proponent has indicated that “the environmental	a. Provide an updated cumulative effects assessment that considers water management systems and natural and/or controlled flood events that occurred in the Interlake Region in 2011 as projects or activities that are potential sources of cumulative effects. i. Discuss the integrated water management system in Manitoba that affects the Interlake Region. For each project, indicate where there is federal and/or provincial authority over the management of each. The Portage Diversion, the FRWRCS and the Lake Winnipeg Regulation must be included.

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	the EIS – June 11, 2020 Little Saskatchewan First Nation – Written Submission on the EIS – May 25, 2020 Norway House Cree Nation – Written Submission on the EIS – June 16, 2020 Pimicikamak Okimawin – Written Submission on the EIS – June 19, 2020 Misipawistik Cree Nation - Written Submission on the EIS – May 22, 2020			effects of other past and present projects or physical activities that have been carried out are reflected in the existing environment within the RAA. Such effects were also considered in the existing conditions for the Project-related environmental effects assessment for each VC within the local assessment area (LAA)". In table 11.1-1 and figure 11.1-1, the proponent has identified reasonably foreseeable flood mitigation, water management, and hydroelectric projects. However, the table and figure do not include any flood mitigation, water management and hydroelectric projects upstream of the Project feeding in to Lake Manitoba or on Lake Manitoba, and only includes the emergency outlet channel on Lake St. Martin. Additional information is required to understand the cumulative effects of the integrated water management system in Manitoba on the Interlake Region and interactions of these effects with residual Project effects.	ii. Describe the continued effects of past flooding in the Interlakes Region. iii. Confirm the full extent of reasonably foreseeable future water management activities that may result in effects in the Interlakes Region. iv. Describe the potential interaction between the effects of the Project and the effects of past, present, and reasonably foreseeable water mitigation infrastructure affecting Lake Manitoba, Lake St. Martin, Lake Winnipeg, and the Nelson River and any reasonably foreseeable flood mitigation, water management, and hydroelectric projects. v. Present a discussion of potential interactions due to accidents and malfunctions that may occur in relation to the Project such as overtopping of the outlet channels. b. If these have been considered in the cumulative effects assessment, provide additional information on how these events and structures were considered.
IAAC-128	TAG meeting June 25-26, 2020	7.6.3 Cumulative Effects Assessment	Chapter 3 - Appendix 3D Section 11.1.2	The EIS Guidelines require that past, present, and reasonably foreseeable future projects be considered throughout the cumulative effects assessment. Section 7.6.3 of the EIS Guidelines states that water management systems and natural and/or controlled flood events, including flooding that occurred in the	a. Assess cumulative effects, including existing water regulation and seasonal and multi-year patterns, on the quality and quantity of fish habitat in the Fairford River.

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			Section 7.2.4.3 Changes in fish passage	Interlakes Region in 2011, should be considered as projects or activities that are sources of potential cumulative effects. Appendix 3D of the EIS indicates that water level simulations that were used to evaluate impacts of the proposed operating guidelines assumed that the fish ladder would be removed from the Fairford River Water Control Structure to increase outflow capacity. DFO has indicated that they are in discussions with the proponent to replace the fish ladder as part of the compensation for the Emergency Outlet Channel project. Removal of the FRWCS fish ladder may have significant impacts on fish as it would prevent fish passage between Lake Manitoba and Lake St. Martin (described in Section 7.2.2.2 of the EIS). Further, as described in section 7.2.4.3 of the EIS, to mitigate potential changes in attraction flows in the Fairford River and Dauphin River, MI plans to utilize the fish ladder within the Fairford River Water Control Structure to maintain upstream fish passage in spring. If MI plans to remove this fish ladder, it cannot be used as a mitigation measure for potential project effects to fish passage. Additional information is required to understand the cumulative effects of removal of the FRWCS fish ladder and interactions of these effects with residual Project effects.	b. Assess cumulative effects from removal of the fish ladder from the FRWCS on the passage of fish through the Fairford River. c. Revise the description of mitigation measures and assessment of potential project effects to fish passage to account for the fact that the fish ladder within the FRWCS will be removed or clarify how MI will maintain fish passage within the Fairford River Water Control Structure if this fish ladder is removed. d. Describe the cumulative effects of removal of the fish ladder on traditional use of the lands by Indigenous people and potential mitigations, accommodations and follow-up on the effects. Describe how Traditional Knowledge was used in the assessment.
IAAC-129		7.6.3 Cumulative Effects Assessment	11.1.2.4	The EIS Guidelines require the proponent to present a determination of the significance of the cumulative effects and develop a follow-up program to verify the accuracy of the assessment or to dispel the uncertainty concerning the effectiveness of mitigation measures for certain cumulative effects. The EIS indicates that Manitoba infrastructure does not view the implementation of additional cumulative effects management measures as necessary and no monitoring or follow-up specific to cumulative effects is described. Information is required to support full understanding of the potential monitoring and management of cumulative effects.	a. Provide a justification of the position that implementation of additional cumulative effects management measures are not necessary. Include a discussion of the potential sources of cumulative effects that are within the care and control or influence of the proponent. b. Describe components of a monitoring and follow-up program that will address uncertainty in cumulative effects assessment and describe adaptive management within the care and control of the proponent for each VC, should unanticipated cumulative effects be detected.

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IAAC-130	Dauphin River First Nation, Lake Manitoba First Nation and Kinonjeoshteg on First Nation – Written Submission on the EIS – May 25, 2020 Pinaymootang First Nation– Written Submission on the EIS – June 1, 2020 Sagkeeng First Nation – Written Submission on the EIS – June 1, 2020 Sandy Bay Ojibway First Nation– Written Submission on	7.6.3 Cumulative Effects Assessment 9. Follow-up and Monitoring Programs	Wildlife Human Health 9.5 11.11 12.11 Traditional Land and Resource Use 9.2 11.12 12.13	The EIS Guidelines require the proponent to present an assessment of the cumulative effects of the Project for each VC for which there are residual effects from the Project. The EIS Guidelines require that past, present, and reasonably foreseeable future projects be considered throughout the cumulative effects assessment. The EIS Guidelines direct the proponent to prepare a follow-up program to verify the accuracy of the effects assessment and to determine the effectiveness of the measures implemented to mitigate the adverse effects of the Project. As stated in the EIS Guidelines, the associated monitoring program is to ensure that proper measures and controls are in place in order to decrease the potential for environmental degradation during all phases of project development, and to provide clearly defined action plans and emergency response procedures to account for human and environmental health and safety. Information Requests issued by the Agency have identified the need for modelling and updated effects assessments, which may affect conclusions regarding the residual effects of the Project and thereby have implications for the cumulative effects assessment. A cumulative effects assessment that takes into account the most up to date information on the residual effects of the Project, is required in order to support a full understanding of potential cumulative effects of the Project, including effects to Indigenous peoples.	a. Where changes to the assessment of residual Project effects have been identified, as a result of additional studies, modelling, updated assessments of effects completed as a result of responding to Information Requests, or as part of the planning and design of the Project, provide a discussion of these effects relative to the cumulative effects assessment undertaken and update the conclusions of the cumulative effects assessment as necessary, including mitigation measures, determining significance and presenting a follow-up program to verify the accuracy of the assessment and/or to dispel the uncertainty concerning the effectiveness of mitigation measures for certain cumulative effects. Ensure the scope of the cumulative effects assessment includes: i. A comparison of the future scenario with the Project and without the Project ii. With respect to Indigenous peoples, assessment of effects of any changes to the environment on health and socio-economic conditions, physical and cultural heritage, the current use of lands and resources for traditional purposes, or any structure, site or thing that is of historical, archaeological, paleontological or architectural significance. iii. With respect to current use of lands and resources for traditional use, a focus on the cumulative effects on the relevant activity as identified in the residual effects assessment (e.g. hunting, fishing, trapping, plant harvesting).

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	the EIS – June 1, 2020 Norway House Cree Nation – Written Submission on the EIS – June 16, 2020 Pimicikamak Okimawin – Written Submission on the EIS – June 19, 2020				
IAAC-131		7.6.3 Cumulative Effects Assessment	11.15	The EIS Guidelines require the proponent to present an assessment of the Project’s cumulative effects, defined as changes to the environment due to the Project combined with the existence of other past, present and reasonably foreseeable physical activities. The EIS Guidelines require the assessment of the environmental effects of accidents and malfunctions that may occur in relation to the Project. Accordingly, the environmental effects of accidents and malfunctions must be considered in the assessment of cumulative environmental effects if they are likely to result from the designated project in combination with other physical activities that have been or will be carried out. The EIS describes that the breach or overtopping of the outlet channels could result in effects that extend beyond the PDA during flood operations and could act cumulatively with the upgrade of the Lake St. Martin access road, PTH 6 rehabilitation and nearby quarries and borrow sites. However, the potential effects to VCs are not described. Further information is required to understand potential cumulative effects to VCs associated with overtopping of outlet channels.	a. Describe the potential cumulative effects to VCs due to upgrade of the Lake St. Martin access road, PTH 6 rehabilitation and nearby quarries and borrow sites if they were to interact with a breach or overtopping of the outlet channels.

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IAAC-132	Norway House Cree Nation – Written Submission on the EIS – June 16, 2020 Pimicikamak Okimawin – Written Submission on the EIS – June 19, 2020	7.6.3 Cumulative Effects Assessment		The EIS Guidelines require that past, present, and reasonably foreseeable future projects be considered throughout the cumulative effects assessment. The EIS acknowledges that past and present activities have resulted in the loss of habitat for species at risk and SOCC such as eastern whip-poor-will, red-headed woodpecker, and boblink. The EIS attributes the loss of habitat to agriculture, residential development, resource use, and transportation corridors. Other flood control infrastructure, including the FRWCS was not included in the reasons for the loss of wildlife habitat. The EIS also reports a decline in waterfowl productivity in Lake St. Martin and Lake Pineimuta since operation of the FRWCS began due to the increased variability and higher water levels despite not predicting an effect on Delta Marsh due to small changes in water levels. This assessment does not appear to consider seasonal and multi-year patterns. These concerns are extended to the cumulative effects to the quality and quantity of riparian habitat and the relationship to declining moose populations. Furthermore, Indigenous groups raised concerns surrounding the effects of water regulation on riparian wetlands in this region and regarding cumulative effects from existing water regulation infrastructure and the Project on increased spread of aquatic invasive species to the Nelson River. Degradation of wildlife habitat and wildlife populations over time from with respect to the cumulative effects of water regulation in the region impacts traditional use of the lands by Indigenous people.	a. Provide an updated cumulate effects assessment for the loss of habitat for eastern whip-poor-will, red-headed woodpecker, and bobolink, that includes existing water regulation infrastructure. b. Provide a discussion about what is known of the cumulative effects of flood control infrastructure, including the existing FRWCS, on wildlife habitat in the RAA. c. Provide an assessment of cumulative effects, including existing water regulation and seasonal and multi-year patterns, on the quality and quantity of riparian habitat for migratory birds, moose, and their populations. d. Describe cumulative effects of water regulation on the spread of invasive aquatic species. Include an assessment on the Nelson River. e. Describe the cumulative effects of water regulation in the region on traditional use of the lands by Indigenous people and potential mitigations, accommodations and follow-up on the effects. Describe how Traditional Knowledge was used in the assessment.
IAAC-133	TAG Meeting June 25-26, 2020	7.6.3 Cumulative Effects Assessment		The EIS Guidelines require an assessment of the cumulative effects on each VC selected by comparing the future scenario with the Project and without the Project. Effects of past activities (activities that have been carried out) will be used to contextualize the current state of the VC.	a. Discuss how loss and alteration of wetlands from the construction and operation of the Project may affect the level of flood protection on Lake St Martin and Lake Manitoba. Discuss how any adverse effects identified will be mitigated.

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				The Proponent indicates that that the Project will result in the direct loss of operational wetlands and that there may be effects to wetlands along both channels, for up to 500m perpendicular to the channels. Not only does wetland loss potentially contribute to increased flooding events (frequency and intensity), but also the increased use of water regulation infrastructure. Studies and reports such as Pomeroy, 2014 and KGS Group, 2016a were mentioned during the TAG meeting June 25-26, 2020 to describe that wetlands play an important role in protecting against flooding by moderating water flow through watersheds. There has been an increasing trend in loss of wetlands through anthropogenic activities (agricultural drainage, infrastructure development, etc.) and how wetland restoration has been used in flood mitigation developments. Loss of wetlands may contribute cumulatively to the direct loss from the Project on how water will need to be regulated now and in the future. For example, loss of wetlands in contributing watersheds such as the Assiniboine River may contribute to additional pressure on water regulation infrastructure such as the Portage Diversion and subsequently downstream into Lake Manitoba, the proposed Project, and beyond. Further information is required to understand the cumulative effects of loss and alteration to wetlands to water management and proposed flood mitigation.	b. Provide an assessment of how the Project will be operated and perform over its lifetime in the context of continued loss of wetlands in the surrounding watersheds, including watersheds that contribute to the upstream need for water management infrastructure and flood mitigation. c. Provide information about how Indigenous groups will be consulted in the development of wetland offsetting/compensation plans and what opportunities for participation in the implementation of these plans will be extended to Indigenous groups. Provide details of these plans with both a spatial (where wetland offsetting/compensation will occur) and temporal (when the work will be done and the timeframe that it will require to be deemed successful) description. d. Provide details of when monitoring and follow-up plans for wetland offsetting/compensation can be expected.
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ⁱ Related information sources include written submissions from Indigenous groups, the public, and federal authorities as well as discussions during the Project's Technical Advisory Group meetings which were available at the time of preparation for this Information Request Round 1 Package 2. These source documents are publicly available on the Canadian Impact Assessment Registry. This reference list is not intended to be an exhaustive list of sources of information related to a given information request.