

**Lake Manitoba and Lake St. Martin
Outlet Channels Project**

**Response to the Agency's Draft
Environmental Assessment Report and
Potential Conditions**

May 8, 2024



**LAKE MANITOBA AND LAKE ST. MARTIN OUTLET CHANNELS PROJECT
RESPONSE TO IAAC DRAFT ENVIRONMENTAL ASSESSMENT REPORT AND POTENTIAL
CONDITIONS**

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Acronyms / Abbreviations

AEMP	Aquatic Effects Monitoring Plan
AIS	aquatic invasive species
the Agency	Impact Assessment Agency of Canada
CAMP	Coordinated Aquatic Monitoring Program
CEA	cumulative effects assessment
dEAR	draft Environmental Assessment Report
DRFN	Dauphin River First Nation
EIS	Environmental Impact Statement
EMO	Emergency Management Organization
EOC	Emergency Outlet Channel
FPDI	First Peoples Development Inc.
ha	hectare
HRIA	Heritage Resource Impact Assessment
IR	Information Request
IRTC	Interlake Reserves Tribal Council
ISC	Indigenous Services Canada
KFN	Kinonjeoshtegon First Nation
LAA	local assessment area
LMFN	Lake Manitoba First Nation
LMOC	Lake Manitoba Outlet Channel
LSMOC	Lake St. Martin Outlet Channel
PDA	Project development area
PR	Provincial Road

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the Project	Lake Manitoba and Lake St. Martin Outlet Channels Project
RAA	regional assessment area
ROW	right-of-way
SWMP	Surface Water Management Plan
TSS	total suspended solids
WCS	Water Control Structure

1. INTRODUCTION

On April 8, 2024, the Impact Assessment Agency of Canada (the Agency) issued a public invitation for comments on its draft Environmental Assessment Report (dEAR) and Potential Conditions for the proposed Lake Manitoba and Lake St. Martin Outlet Channels Project (the Project) by May 8, 2024. This document provides Manitoba Transportation and Infrastructure's response to this request to review and comment on the dEAR.

A key context to consider in the review of this submission is the purpose of this Project, which is designed to mitigate the effects of flooding. The Project is located in a watershed that spans a large portion of the province, which has implications to current management practices, options, and how best to engage with Indigenous groups and others that experienced past flooding. Areas around Lake Manitoba and Lake St. Martin are currently vulnerable, as demonstrated by the experience of the 2011 and 2014 floods. The Project will only operate during flood conditions, with recognition that it also supports base/riparian flows. The design objective is to manage floods by reducing the elevation of water on Lake Manitoba and Lake St. Martin to the extent possible. Existing flood protection infrastructure in southern Manitoba would continue to operate according to established operating guidelines.

Floodwaters from Lake Manitoba would flow towards Lake Winnipeg with or without the Project. Lake Winnipeg is a regulated waterbody with levels managed by Manitoba Hydro under license. The Lake's large size and volume contribute to Project effects being virtually undetectable further downstream, such as along the Nelson River.

The Project is uniquely designed to respond to largely unpredictable flooding events that differ in detail for each event. These events inundate land and introduce sediments and contaminants. The timing, spatial extent, and volume of water for any given flood can range widely, with the recorded historical record offering a range of possibilities. The Project would be effective at managing floods by allowing more water to move in a shorter period of time than before, thereby reducing the degree of land inundation along the lake shores. The reductions in inundated land would also serve to mitigate introductions of sediments and contaminants. Project operational response, out of necessity, would occur in "real-time" with equally required prompt and proactive key operational decisions. Manitoba Transportation and Infrastructure understands these challenges and has designed a Project that fulfills the objective of providing effective flood mitigation.

Manitoba Transportation and Infrastructure acknowledges the important role that Indigenous groups and others such as the Rural Municipality of Grahamdale have in developing and operating this Project in a complex and changing environment. Manitoba Transportation and Infrastructure believes that improved outcomes will continue to be influenced by ongoing engagement with Indigenous groups to further improve understandings and confidence in the many measures proposed to be implemented to address and monitor potential Project effects.

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Manitoba Transportation and Infrastructure, as proponent of the Project, has compiled the following response to the Agency's invitation for comments. Comments on key topics are provided to clarify information and offer insight for the Agency to consider in its preparation of the final Environmental Assessment Report and Potential Conditions. In some instances, Manitoba Transportation and Infrastructure is offering alternate language for consideration by the Agency. Manitoba Transportation and Infrastructure has not provided comments on some items that are being assessed under a parallel regulatory process (e.g. HADD estimates associated with *Fisheries Act* Authorization).

This response is organized as follows:

- Section 2 Comments on Potential Conditions:
 - Potential Condition (replicates, for reference, relevant text)
 - Comment Topic (statement of issue)
 - Rationale (explains basis of comment and proposed wording changes)
 - Proposed Condition Wording Changes (suggested alternate wording)
- Section 3 Comments on draft Environmental Assessment Report
 - Location Reference (text section)
 - Environmental Assessment Report Text (replicates or paraphrases, for reference, relevant text)
 - Suggested Change or Clarification (suggested alternate wording)
- Section 4 Closure

2. COMMENTS ON POTENTIAL CONDITIONS

There are several Potential Conditions where Manitoba Transportation and Infrastructure has proposed an adjustment to the text to better reflect what has been previously stated regarding the Project and/or to address the technical feasibility and effectiveness of the proposed measures. Table 2.1 identifies those Potential Conditions and associated sub-conditions, summarizes the specific topic where adjustments are proposed, provides supporting rationale explaining how the proposed modification would be a more effective mechanism to address the issue at hand, and provides proposed rewording if required. If rewording is proposed, the new words are underlined and the replaced words are retained but struck out.

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Table 2.1 Comments on Potential Conditions

Potential Condition	Comment Topic	Rationale For Proposed Wording Changes	Proposed Condition Wording Changes
<p>CONDITION 3.13 (INCLUDING 3.13.2) <i>“Potential Condition 3.13 - The Proponent shall, in consultation with relevant authorities, identify and implement measures to mitigate adverse impacts to the underlying bedrock aquifer from the Designated Project. In doing so, the Proponent shall:</i></p> <ul style="list-style-type: none"> • <i>Potential Condition 3.13.2 - install filters at passive pressure relief wells, reverse drains, sediment trenches and any other sites of potential connection between the bedrock aquifer and surface water environments.”</i> 	<p>Manitoba Transportation and Infrastructure requests that the Agency consider revising the condition to delete the requirement for the filter on exposed bedrock areas in the channel.</p>	<ul style="list-style-type: none"> • The purpose of the filter material is to prevent migration of fines from till into the channel. The filter also protects against migration of contaminants from the channel into the groundwater aquifer if groundwater pressures change from discharge (upgradient flows from the aquifer into the channel) to recharge conditions (downgradient flows from the channel into the aquifer). • There are specific locations in the proposed channels where discrete areas of bedrock will be exposed during excavation of the channel and will remain exposed when construction is complete. These locations are at and near the water control structures (which will be founded directly on bedrock) and drop structure DS-4 in the Lake St. Martin Outlet Channel (LSMOC). The exposed bedrock will function as a reverse drain, as these areas are in areas of groundwater discharge; Therefore, the current design does not include a filter. • The inclusion of the filter in these areas, although technically feasible, would increase potential groundwater impacts and cost during construction. Inclusion of the filter in these areas also introduces the risk of erosion of the rip rap and filter in these high velocity areas, along with potential release of sediment. Therefore, Manitoba Transportation and Infrastructure would like to limit the instances where these methods are applied. 	<p>Proposed rewording of Condition 3.13.2 would be to: “install filters at passive pressure relief wells, reverse drains, sediment trenches, and at other sites <u>where unanticipated connections between the bedrock aquifer and surface water environments occur through the layer of till during construction.</u>”</p>
<p>CONDITION 3.16 (INCLUDING 3.16.1, 3.16.1.1, 3.16.1.2 & 3.16.1.3) <i>“Potential Condition 3.16 - The Proponent shall mitigate the adverse effects on fish and fish habitat related to the transport of sediment from the outlet channels into the receiving environment during commissioning and operation. In doing so, the Proponent shall:</i></p> <ul style="list-style-type: none"> • <i>Potential Condition 3.16.1 - remove construction-related sediment, including fine sediment, from the outlet channels prior to commissioning. The Proponent shall, once construction of the outlet channels is completed and prior to beginning sediment removal within the outlet channels, provide to the Agency and Fisheries and Oceans Canada:</i> <ul style="list-style-type: none"> - <i>Potential Condition 3.16.1.1 - an updated estimate of the amount of construction-related sediment present in the outlet channels</i> - <i>Potential Condition 3.16.1.2 - the sediment removal methodology; and</i> - <i>Potential Condition 3.16.1.3 - expected amount of construction-related sediment to be removed.”</i> 	<p>Manitoba Transportation and Infrastructure has concerns about implementing the various sub-conditions of Potential Condition 3.16.1 once construction of the outlet channels is completed, as the sediment removal activities will be carried out concurrently during the construction process, and not as a separate, subsequent activity.</p>	<ul style="list-style-type: none"> • The proposed sediment control measures were described in Manitoba Transportation and Infrastructure’s response to Information Request (IR) IAAC-R3-1g-ii and will be part of the construction specifications to manage sediment. They will be applied throughout construction and are particularly critical during in-water excavation (inlets, outlet, removal of in-land plugs), and during production and placement of limestone armouring rock and rip rap. • The sediment removal methodology, the expected amount of construction-related sediment to be removed (relative to the predicted amounts used in the sediment commissioning modeling), and the updated estimates of the amount of construction-related sediment present in the outlet channels available to be mobilized during initial commissioning will be provided to the Agency and Fisheries and Oceans Canada as construction progresses with final results prior to commissioning. 	<p>Proposed rewording of Condition 3.16.1 would be: “remove construction-related sediment in the channels, including fine sediment, <u>using appropriate sediment control measures from the outlet channels prior to commissioning.</u> The Proponent shall, <u>as construction progresses and prior to commissioning once construction is complete</u> once construction of the outlet channels is completed and prior to beginning sediment removal within the outlet channels, provide to the Agency and Fisheries and Oceans Canada:”</p>

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<p>CONDITION 3.17 (INCLUDING 3.17.2) <i>“Potential Condition 3.17 - The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Fisheries and Oceans Canada, and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on fish and fish habitat. The Proponent shall implement the follow-up program during all phases of the Designated Project. As part of the follow-up program, the Proponent shall monitor:</i></p> <ul style="list-style-type: none"> <i>Potential Condition 3.17.2 - substrate composition, distribution of aquatic macrophytes and benthic invertebrate community species composition and abundance at the inlets and outlets of the outlet channels, shoals in the south and north basins of Lake St. Martin, Sturgeon Bay, near McBeth Point, at the southeast shore of Reindeer Island in Lake Winnipeg, and along a transect in the Lake St. Martin Narrows”</i> 	<p>Manitoba Transportation and Infrastructure has concerns about the prescriptive scope of Potential Condition 3.17.2 to effectively "determine the effectiveness of the mitigation measures".</p>	<ul style="list-style-type: none"> The Aquatic Effects Monitoring Plan (AEMP) includes monitoring of substrate composition, benthic invertebrates and aquatic plants; however, monitoring is targeted to specific habitats where changes of specific attributes of aquatic habitat may occur. As the AEMP will be reviewed and modified based on further discussions with regulators and Indigenous groups, less prescriptive wording is recommended so that monitoring may be targeted to specific attributes of concern (e.g., monitoring of the deposition of fine sediment on rocky shoals targets the suitability of these areas as spawning habitat; monitoring of aquatic plants in areas with Project-related concentrations of suspended sediment determines whether water clarity is reduced to the extent that plant health is negatively affected). Monitoring of substrate at McBeth Point and potentially other nearby locations is proposed to specifically address concerns from commercial fishers with respect to sediments accumulating in fishing nets and the program therefore should focus on attributes and locations identified by the commercial fishers. 	<p>Proposed rewording of Potential Condition 3.17.2 would be: <u>“relevant attributes of fish habitat which may include substrate composition, distribution of aquatic macrophytes and benthic invertebrate community species composition and abundance at <u>locations where changes to habitat may occur, including:</u> the inlets and outlets of the outlet channels; shoals in the south and north basins of Lake St. Martin, Sturgeon Bay, near McBeth Point, at the southeast shore of Reindeer Island in Lake Winnipeg; and along a transect in the Lake St. Martin Narrows”</u></p>
<p>CONDITION 3.18 (INCLUDING 3.18.1, 3.18.1.1, 3.18.1.2, 3.18.1.3, 3.18.2, 3.18.3 & 3.18.4) <i>“Potential Condition 3.18 - The Proponent shall develop, prior to construction and in consultation with Indigenous groups and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on fish and fish habitat from changes to groundwater quantity. As part of the follow-up program, the Proponent shall:</i></p> <ul style="list-style-type: none"> <i>Potential Condition 3.18.1 - install, prior to construction, a network of monitoring wells equipped with continuous data loggers, at a minimum in the following locations:</i> <ul style="list-style-type: none"> <i>Potential Condition 3.18.1.1 - for the Lake Manitoba Outlet Channel, wells around the water control structures, well pairs near surface water features along the outlet channel, and wells in the recharge area northeast of the outlet channel;</i> <i>Potential Condition 3.18.1.2 - for the Lake St. Martin Outlet Channel, wells around the water control structures, Big Buffalo Lake Complex, artesian springs along Big Buffalo Creek, and Lake Winnipeg; and</i> <i>Potential Condition 3.18.1.3 - for each monitoring location referenced in condition 3.18.1.1 and 3.18.1.2, install monitoring wells in the bedrock aquifer, the deep till, the shallow till, and the upper peat layer;</i> <i>Potential Condition 3.18.2 - monitor groundwater quantity continuously at the locations referred to in condition 3.18.1;</i> <i>Potential Condition 3.18.3 - monitor for incidents of basal heave; and</i> <i>Potential Condition 3.18.4 - identify the levels of change to groundwater quantity monitoring pursuant to condition 3.18.2 that would require the Proponent to update the groundwater modelling presented in Appendix IAAC-R2-03-1 of the Final Round 2 Information Request Responses (Canadian Impact Assessment Registry Reference Number 80148, Document reference number 188) and implement any modified or additional mitigation measures.”</i> 	<p>Manitoba Transportation and Infrastructure requests that the Agency consider rewording to clarify that the springs are located <i>near</i> Lake Winnipeg (i.e., not in). Also, the wording should clarify that the multiple wells at the same location are only required for understanding groundwater interaction with wetlands. For wells used for understanding impacts on domestic wells around the Lake Manitoba Outlet Channel (LMOC) Water Control Structures (WCSs) these type of paired wells are not required.</p>	<ul style="list-style-type: none"> While the Potential Conditions are consistent with the planned follow up monitoring, it is recommended that the wording should be clear on the intent. Additional wording would add clarity regarding the specific location of the monitoring. At the LMOC the potential effects of groundwater changes near Reed Lake and Clear Lake with be monitored with paired wells at different elevation. This will assist in understanding the changes in upward flow to these lakes. The wells located around the WCS at the LMOC are to monitor potential groundwater changes during operation that may affect water used by domestic wells. The monitoring wells are required to be in the bedrock aquifer used by domestic wells. Paired wells to understand the impact on fish habitat at the surface are not required at this location. 	<p>Propose rewording Potential Condition 3.18.1.2 is as follows: “for the Lake St. Martin Outlet Channel, wells around the water control structure, <u>in the vicinity of</u> Big Buffalo Lake Complex, artesian springs along Big Buffalo Creek, and <u>near</u> Lake Winnipeg; and”</p> <p>Proposed rewording of Potential Condition 3.18.1.3 is as follows: “for each monitoring location referenced in condition 3.18.1.1 and 3.18.1.2, <u>where wells are used for monitoring wetlands,</u> install monitoring wells in the bedrock aquifer, the deep till, the shallow till, and the upper peat layer;”</p>

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<p>CONDITION 3.19 (INCLUDING 3.19.1) <i>“Potential Condition 3.19 - The Proponent shall develop, prior to construction and in consultation with Indigenous groups, Fisheries and Oceans Canada, Environment and Climate Change Canada and other relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and determine the effectiveness of the mitigation measures as it pertains to adverse environmental effects of the Designated Project on fish and fish habitat due to changes in surface water quality and quantity. The Proponent shall implement the follow-up program during all phases of the Designated Project. As part of the follow-up program, the Proponent shall:</i></p> <ul style="list-style-type: none"> <i>Potential Condition 3.19.1 - monitor, at a minimum, the parameters outlined in Table 2 of the Surface Water Management Plan within Attachment 4.1 of the Proponent’s Response to Information Requests Round 1 (Canadian Impact Assessment Registry Reference Number 80148, Document reference number 147) including field parameters, general chemistry, substrates, sediment, carbon parameters, total and dissolved metals (including mercury and methylmercury), hydrocarbons, pesticides, and total and dissolved nutrients at a minimum two years post-commissioning and to capture seasonal variability and effects after a minimum number of outlet channel operations and a range of magnitudes of floods, including any new record floods;”</i> 	<p>Manitoba Transportation and Infrastructure requests a wording change for the Surface Water Management Plan (SWMP), in terms of temporal scope, as the longer-term monitoring (e.g., post-operation) is carried out under the AEMP, and not the SWMP, as addressed in Potential Condition 3.19.2.</p>	<ul style="list-style-type: none"> The SWMP addresses effects at the construction site, primarily during construction including locations near active construction along the LMOC and LSMOC, while the AEMP addressed effects during and after commissioning in a larger area to determine potential effects to water quality, fish and fish habitat. Therefore, the specific parameters, spatial extent and duration of monitoring described in the two plans are different. The specific monitoring details and adaptive management measures for both plans will be developed in more detail (e.g., list of monitoring parameters, specified detection limits, and sampling frequency) prior to Project construction. 	<p>Proposed rewording of Potential Condition 3.19.1 is as follows: “monitor, at a minimum, the parameters outlined in Table 2 of the Surface Water Management Plan within Attachment 4.1 of the Proponent’s Response to IRs Round 1 (Canadian Impact Assessment Registry Reference Number 80148, Document reference number 147) including field parameters, general chemistry, substrates, sediment, carbon parameters, total and dissolved metals (including mercury and methylmercury), hydrocarbons, pesticides, and total and dissolved nutrients at a minimum two years post-commissioning and to capture seasonal variability <u>until mitigation measures during Project construction are complete and demonstrated to be effective.</u>”</p>
<p>CONDITION 3.19.2 <i>“Potential Condition 3.19.2 - monitor, at a minimum, the parameters outlined in Section 3.3.4 of the draft Aquatic Effects Monitoring Plan contained within Attachment 4.1 of the Proponent’s Response to Information Requests Round 1 (Canadian Impact Assessment Registry Reference Number 80148, Document reference number 147) during commissioning and every water control structure gate opening or at a revised frequency that takes into account a range of magnitudes of floods, including any new record floods, as determined as part of the development of the follow-up program pursuant to condition 2.5.3;”</i></p>	<p>Manitoba Transportation and Infrastructure requests additional wording to provide the list of selected parameters to reflect the site-specific considerations set out in the AEMP.</p>	<ul style="list-style-type: none"> The AEMP provides specific criteria for the sampling of select parameters at locations or during periods where they are likely to be elevated, as follows: “parameters including, pesticides, hydrocarbons, cyanobacteria cell counts, microcystin, and <i>Escherichia coli</i> will be included during the summer sampling season when concentrations are expected to be the highest. Samples will be collected at sampling stations on the upper Fairford and Dauphin Rivers and at Birch Creek at its confluence with Lake St. Martin to provide a measure of background conditions when the channels are not in operation. When the channels are in operation, samples will also be collected at the outlets of the LMOC and LSMOC. Hydrocarbon and pesticide parameters are listed in Appendix 2, Table 2-4.” Focusing the sampling of selected parameters to selected sites and times that are most likely to be affected will provide a more effective and efficient program. 	<p>Proposed rewording is as follows: “monitor, at a minimum, the parameters outlined in Section 3.3.4 of the draft Aquatic Effects Monitoring Plan contained within Attachment 4.1 of the Proponent’s Response to IRs Round 1 (Canadian Impact Assessment Registry Reference Number 80148, Document reference number 147) during commissioning and every water control structure gate opening or at a revised frequency that takes into account a range of magnitudes of floods, including any new record floods, as determined as part of the development of the follow-up program pursuant to condition 2.5.3. <u>The suite of parameters monitored during a given sampling season and location shall take into consideration the site-specific considerations set out in the AEMP.</u>”</p>

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<p>CONDITION 3.19.3 <i>“Potential Condition 3.19.3 - conduct the monitoring referred to in condition 3.19.1 and 3.19.2 at the following locations: Watchorn Bay, Birch Creek, Birch Bay, Fairford River, Lake Manitoba Outlet Channel, Goodison Lake, Pineimuta Lake, Lake St. Martin, Lake St. Martin Narrows, Lake St. Martin north basin, Dauphin River, Big Buffalo Lake, Buffalo Creek, Lake St. Martin Outlet Channel, Sturgeon Bay near the Lake St. Martin Outlet Channel outlet, at the mouth of Sturgeon Bay, along the east shore of Sturgeon Bay, Berens Island, Berens River inlet, Pigeon Bay, Sandy Bar, Black Island, Hecla Island, Goldeye Creek, Fisher Bay, McBeth Point, Reindeer Island, Cross Lake, Split Lake, Fairford River, Dauphin River, and near field, mid field, and far field monitoring locations to capture the extent of the sediment plume in Birch Bay and Sturgeon Bay taking into account different wind scenarios.”</i></p>	<p>Manitoba Transportation and Infrastructure notes that the locations listed in the Potential Condition appear to apply to the sites listed in the dEAR (Section 6.1.3 Follow up and Monitoring) that apply to surface water quantity monitoring, and this same section lists different sites for surface water quality monitoring. In addition, the Potential Condition links the sediment plume monitoring to the detailed surface water quality parameters.</p>	<ul style="list-style-type: none"> • The proposed changes are provided to more closely reflect the description in Section 6.1.3 of the dEAR (Follow up and Monitoring), where the list of monitoring locations in the current Proposed Condition was applied to surface water quantity monitoring, and another separate list of locations was applied to surface water quality monitoring. This second list is proposed as a new Condition specific to surface water quality, including the references to Conditions 3.19.1 and 3.19.2, the surface water quality parameters. • A third new Condition is proposed to focus on the sediment plume monitoring. The dEAR notes that Fisheries and Oceans Canada had raised separate concerns with respect to a sediment plume from either the LSMOC or the LMOC. Appropriate parameters for monitoring the effects of the plume include total suspended solids (TSS) and turbidity and are addressed in Section 3.5 of the AEMP. • In terms of surface water quantity, it should be noted that additional monitoring stations beyond proposed in the LAA are not required to adequately monitor water quantity in these rivers and lakes to determine effects of the Project. Project flows and lake levels will be managed through hydrometric monitoring and operating guidelines. Manitoba Transportation and Infrastructure provides continuous flood information through the Manitoba Hydrologic Forecast Centre (available at https://www.gov.mb.ca/mti/floodinfo/index.html). Information available on the website includes a forecast information map, forecasts/reports, river levels and flows, lakes information, operations of structures, and various other maps and resources. Relevant reports include information on the rivers (Fairford River, Dauphin River), lakes (Lake Manitoba, Lake St. Martin, Lake Winnipeg, and operating structures (Fairford River Water Control Structure). These will provide data in the Project local assessment area (LAA) and regional assessment area (RAA) to supplement Project monitoring and facilitate overall flood operation. Background and operational information of the LMOC and LSMOC will be added to the Manitoba Hydrologic Forecast Centre site when the channels are commissioned and available for operation. • It should also be noted that Lake Winnipeg water levels are subject to provincial regulation and managed by Manitoba Hydro under the Lake Winnipeg Regulation licence and Project-related changes to Lake Winnipeg will be limited mainly to areas close to the LSMOC Outlet. Manitoba Hydro monitors and reports on water quantity information affected by their operations for hydroelectric generation, which includes Lake Winnipeg and other locations downstream of the Project. Information on the Manitoba Hydro websites (available at https://www.hydro.mb.ca/corporate/operations/water-levels/ and https://www.hydro.mb.ca/corporate/operations/water-levels/hydrological-data/) include: water levels and other near real-time hydrologic data from various hydrometric gauging stations managed by Manitoba Hydro, Water Survey of Canada and the Province of Manitoba that provide information on water level, water temperature, air temperature, wind direction, wind speed, wind gust, precipitation, relative humidity, and atmospheric pressure. 	<p>Suggested rewording is to split the Condition into three separate Conditions that address surface water quantity and surface water quality, as follows:</p> <p>Potential Condition 3.19.3 - conduct <u>water quantity</u> the monitoring referred to in condition 3.19.1-3.19.2 at for the following locations: Watchorn Bay, Birch Creek, Birch Bay, Fairford River, Lake Manitoba Outlet Channel, Goodison Lake, Pineimuta Lake, Lake St. Martin, Lake St. Martin Narrows, Lake St. Martin north basin, Dauphin River, Big Buffalo Lake, Buffalo Creek, Lake St. Martin Outlet Channel, Sturgeon Bay near the Lake St. Martin Outlet Channel outlet, at the mouth of Sturgeon Bay, along the east shore of Sturgeon Bay, Berens Island, Berens River inlet, Pigeon Bay, Sandy Bar, Black Island, Hecla Island, Goldeye Creek, Fisher Bay, McBeth Point, Reindeer Island, Cross Lake, Split Lake, Fairford River, and Dauphin River, and near field, mid field, and far field monitoring locations to capture the extent of the sediment plume in Birch Bay and Sturgeon Bay taking into account different wind scenarios.”</p> <p>Potential Condition 3.19.4 - conduct the monitoring referred to in condition 3.19.1 and/or 3.19.2, as applicable, at for the following locations: <u>Watchorn Bay, Birch Creek, Birch Bay, LMOC, Lake St. Martin Narrows, Lake St. Martin north basin, Big Buffalo Lake, Buffalo Creek, LSMOC Sturgeon Bay near LSMOC outlet, at the mouth of Sturgeon Bay, along the east shore of Sturgeon Bay north to McBeth Point and Reindeer Island, Fairford River, Dauphin River, and monitoring locations for water quality informed by potentially affected Indigenous groups.</u></p> <p>Potential Condition 3.19.5 – conduct near field, mid field, <u>and far field monitoring locations to capture the extent of the sediment plume in Birch Bay and Sturgeon Bay taking into account different wind scenarios.</u></p>

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Potential Condition	Comment Topic	Rationale For Proposed Wording Changes	Proposed Condition Wording Changes
		<ul style="list-style-type: none"> In terms of surface water quality, as noted for Potential Condition 3.19.1, the SWMP addresses effects primarily at the construction site and as noted for Potential Condition 3.19.3 sampling further away from the Project, for longer time periods, will be conducted under the AEMP. The AEMP identifies monitoring sites on the inflows to Lake St. Martin, including the Fairford River and the inlet to the LMOC, several sites on Lake St. Martin and at the outflows of Lake St. Martin on the Dauphin River and at the mouth of the LSMOC. Changes to water quality beyond the outflow of the LSMOC are not expected; however, the revised AEMP will include additional sampling sites at the mouth of Sturgeon Bay to confirm that no effects are extending into Lake Winnipeg. This approach to sampling appears to address the concerns of Indigenous groups that were noted in the dEAR that the Project's design would expedite the transmission of contaminants to downstream environments and that increased nutrient loading including from agriculture and cattle feedlot runoff would result in changes to surface water. These concerns are based on the input of substances from upstream agricultural areas being transported downstream and the proposed additional monitoring in Sturgeon Bay would address these concerns. It should also be noted that the Province of Manitoba and Manitoba Hydro have been collecting surface water quality data under the Coordinated Aquatic Monitoring Program (CAMP), and water quality has been monitored by Manitoba Water Stewardship since 1975 and is currently monitored annually under CAMP. The CAMP website (http://www.campmb.com/) provides annual mean concentrations for important water quality parameters in that affect aspects such as drinking water and algae, including total phosphorus, total nitrogen, chlorophyll a, TSS, conductivity, Secchi disk depth, dissolved oxygen, and <i>Escherichia coli</i>. 	
<p>CONDITION 3.19.4 <i>"Potential Condition 3.19.4 - conduct substrate and bathymetric surveys to refine elevation and roughness estimates for key features such as the Dauphin River inlet and the Lake St. Martin Narrows, and repeat the surveys when the reported flow at hydrometric station WSC 05LM006 in the Dauphin River diverges more than 5% from the flow calculated from the rating curves used in the hydraulic model."</i></p>	<p>Manitoba Transportation and Infrastructure's interpretation of the intent of this condition is to assess the relationship between the lake levels and flow data for potential changes in morphology at the Dauphin River inlet and the Lake St. Martin Narrows that may result in the need for adjustments to the rating curves. However, Manitoba Transportation and Infrastructure has concerns regarding the requirement that a 5% divergence between reported and modeled flows will trigger substrate and bathymetric surveys, and potentially updated modeling.</p>	<ul style="list-style-type: none"> Manitoba Transportation and Infrastructure is of the opinion that 5% divergence is too stringent to facilitate effective management and proposes that the trigger be revised to a 10% deviation based on daily averages over a single open-water operational period. While deviations in the rating curve may be indicative of larger system-wide changes or modeling inaccuracies they are more likely due to local/short-term condition changes, such as wind events, a change in morphology, or ice impacts. Manitoba Transportation and Infrastructure's interpretation of the intent of this condition is to assess the relationship between the lake levels and flow data for potential changes in morphology at the Dauphin River inlet and the Lake St. Martin Narrows that may result in the need for adjustments to the rating curves. The increase from 5% to 10% would provide a more reasonable range for assessing trends in the data as the variability of the existing water level data for the Lake St. Martin north basin and flow data for the Dauphin River used to develop the rating curve is already greater than 5%. Manitoba Transportation and Infrastructure further considers that assessing the data over an entire operational period will be more reflective of the entire range of flows for the flood event and will allow Manitoba Transportation and Infrastructure to better target any future field surveys. 	<p>The following rewording of Potential Condition 3.19.4 is proposed: "conduct substrate and bathymetric surveys to refine elevation and roughness estimates for key features such as the Dauphin River inlet and the Lake St. Martin Narrows and repeat the surveys when the reported flow at hydrometric station WSC 05LM006 in the Dauphin River deviates more than <u>5 10</u> % from the flow calculated from the rating curves used in the hydraulic model <u>based on daily averages over a single open-water operational period.</u>"</p>

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Potential Condition	Comment Topic	Rationale For Proposed Wording Changes	Proposed Condition Wording Changes
		Manitoba Transportation and Infrastructure will evaluate rating curve performance on an ongoing basis during operation, which is standard practice at other operating structures such as the Fairford River Water Control Structure, Portage Diversion and Red River Floodway.	
<p>CONDITION 6.4 (INCLUDING 6.4.1, 6.4.2 & 6.4.3)</p> <p><i>“Potential Condition 6.4 - The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to contamination of country food as it relates to real and perceived effects from the Designated Project on the health of Indigenous peoples. As part of the development of the follow-up program, the Proponent shall determine in consultation with Indigenous groups, the vegetation, fungi, and wildlife species, including fish, and their components, that shall be monitored, the locations where the monitoring shall be conducted, the contaminants to be monitored and the timing and frequency of the monitoring. In doing so, the Proponent shall:</i></p> <ul style="list-style-type: none"> • <i>Potential Condition 6.4.1 - monitor methylmercury in fish species and other contaminants of potential concern in country food other than fish;</i> • <i>Potential Condition 6.4.2 - implement modified or additional measures if monitoring identifies an increase in a contaminant of concern beyond what was predicted during the environmental assessment; and</i> • <i>Potential Condition 6.4.3 - notify Indigenous groups pursuant to the communication and engagement plan referred to in condition 7.1.”</i> 	<p>Manitoba Transportation and Infrastructure has concerns about the scope and ability of Potential Condition 6.4 to effectively manage the proposed monitoring program.</p>	<ul style="list-style-type: none"> • In terms of selecting the parameters to monitor, Manitoba Infrastructure and Transportation recommends that there should be a reasonable potential for a pathway of effect to the Project before monitoring occurs. Concerns raised by Indigenous groups included the potential for mercury methylation and bioaccumulation in fish as a result of water level fluctuations. The AEMP therefore currently proposes to monitor total mercury in fish as the majority of mercury in fish tissue is in the methylated form and monitoring of total mercury is therefore more protective of human consumers. <p>The rewording of Potential Condition 6.4.3 is suggested to provide the mechanism by which contaminants linked to the Project, which may arise due to an unanticipated event (e.g., a spill) can be addressed. In addition, monitoring is linked to country foods rather than a broad range of biota in order to provide a targeted and relevant program for local consumers of country foods.</p>	<p>Proposed wording changes are as follows:</p> <ul style="list-style-type: none"> • “Potential Condition 6.4 - The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment as it pertains to contamination of country food as it relates to real and perceived effects from the Designated Project on the health of Indigenous peoples. As part of the development of the follow-up program, the Proponent shall determine in consultation with Indigenous groups, the country foods, vegetation, fungi, and wildlife species, including fish, and their components, that shall be monitored, the locations where the monitoring shall be conducted, the contaminants to be monitored and the timing and frequency of the monitoring. In doing so, the Proponent shall: • Potential Condition 6.4.1 – monitor methylmercury in fish species and other <u>country foods that could be affected by increases in methylmercury in the aquatic environment</u> contaminants of potential concern in country food other than fish; • Potential Condition 6.4.2 - implement modified or additional measures if monitoring identifies an increase in methylmercury; • <u>Potential Condition 6.4.3 - implement monitoring of additional contaminants in country foods if a pathway of effect linked to the Project is identified (e.g., hydrocarbon spill); and</u> • Potential Condition 6.4.4 - notify Indigenous groups pursuant to the communication and engagement plan referred to in condition 7.1.”

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Potential Condition	Comment Topic	Rationale For Proposed Wording Changes	Proposed Condition Wording Changes
<p>CONDITION 7.1 (INCLUDING 7.1.3) <i>“Potential Condition 7.1 - The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a communication and engagement plan for each Indigenous group to share information on the adverse environmental effects of Designated Project activities as they relate to the current use of lands and resources for traditional purposes. The Proponent shall implement and maintain the communication plans during all phases of the Designated Project and shall review the plans every two years and update them as needed. As part of the communication plans, the Proponent shall:</i></p> <ul style="list-style-type: none"> <i>Potential Condition 7.1.3 - provide in-community training sessions, at the request of Indigenous groups, on how to deal with flooding scenarios, including how to use flood mitigation supplies and tools.”</i> 	<p>Manitoba Transportation and Infrastructure has concerns about the jurisdictional responsibilities associated with Potential Condition 7.1.3.</p>	<ul style="list-style-type: none"> Indigenous Services Canada (ISC) is responsible for funding and working with Indigenous communities to mitigate against, prepare for, respond to, and recover from emergencies, including flooding. On an as-needed basis, Manitoba Transportation and Infrastructure currently provides flood forecasts for local governments, including Indigenous communities through ISC, to assist them in their preparation and response to flood events. The Manitoba Emergency Management Organization (EMO) is a division within Manitoba Transportation and Infrastructure whose role is to support Manitoba government departments and local authorities as they respond to large-scale emergencies and disasters impacting their areas and regions. Manitoba EMO also works closely with ISC, who (based on current understanding) is responsible for coordinating in-community training sessions and providing tools and resources to prepare for and respond to an emergency event. Manitoba Transportation and Infrastructure can share information such as tools, guidelines, contract templates/agreements with ISC and Indigenous communities to better assist Indigenous communities with their planning and response to emergency. Practical training related to installation of proprietary products such as tiger tubes are typically provided by suppliers, not by Manitoba Transportation and Infrastructure. Other flood preparation works such as the design and construction of dikes, including sandbag dikes, are site-/infrastructure-specific and ISC and Indigenous communities can hire engineering consultants to design and assist with construction/installation. 	<p>Proposed rewording of Potential Condition 7.1.3 is as follows: “provide in-community training sessions, at the request of Indigenous groups and Indigenous Services Canada, provide flood forecasting and assist ISC with in-community training sessions by providing information on Manitoba Transportation and Infrastructure’s planning and preparedness to support flood preparedness and response in Indigenous communities on how to deal with flooding scenarios, including how to use flood mitigation supplies and tools.”</p>
<p>CONDITION 7.16 (INCLUDING 7.16.1, 7.16.1.1, 7.16.1.2 & 7.16.2) <i>“Potential Condition 7.16 - The Proponent shall facilitate, during all phases of the Designated Project, the safe movement of ungulates and furbearers through the Designated Project area. In doing so, the Proponent shall:</i></p> <ul style="list-style-type: none"> <i>Potential Condition 7.16.1 - install and maintain, at locations determined in consultation with Indigenous groups and relevant authorities:</i> <ul style="list-style-type: none"> <i>- Potential Condition 7.16.1.1 - wildlife crossing structures over the outlet channels; and</i> <i>- Potential Condition 7.16.1.2 - breaks or sloped areas at spoil piles;</i> <i>Potential Condition 7.16.2 - design and construct the outlet channels in a manner that allows ungulates and furbearers of importance to Indigenous groups to cross safely when not using the wildlife crossing structures pursuant to Potential Condition 7.16.1.1.”</i> 	<p>Manitoba Transportation and Infrastructure has concerns about the specific requirement to install wildlife crossing structures to facilitate wildlife crossing the channels.</p>	<ul style="list-style-type: none"> As described in the response to IR IAAC R3-02 and IAAC-R3-06, several design changes have been made to enhance wildlife movement across the channels at select locations, and Manitoba Transportation and Infrastructure is committed to meeting with Indigenous groups to optimize the designs to facilitate wildlife movement in a practical and cost-effective way. The success of the proposed measures to facilitate wildlife movement will be monitored as part of the Wildlife Monitoring Plan, which includes adaptive management measures requiring actions to address results. As these current proposed measures are expected to provide wildlife with the opportunity to cross without structures over the outlet channels, it is requested that this specific requirement not be included. 	<p>Proposed rewording of Condition 7.16.1 is as follows:</p> <ul style="list-style-type: none"> “install implement and maintain, at locations determined in consultation with Indigenous groups and relevant authorities: methods to facilitate wildlife crossing structures over the outlet channels; and, including breaks or sloped areas at spoil piles;”

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Potential Condition	Comment Topic	Rationale For Proposed Wording Changes	Proposed Condition Wording Changes
<p>CONDITION 8.2 (INCLUDING 8.2.5) <i>“Potential Condition 8.2 - The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a chance find protocol that the Proponent shall apply in the event that any previously unidentified structures, sites or things of historical, archaeological, paleontological or architectural significance or non-forensic human remains are discovered within the Designated Project area by the Proponent, or brought to the attention of the Proponent by another party during any phase of the Designated Project. As part of the chance find protocol the Proponent shall:</i></p> <ul style="list-style-type: none"> <i>• Potential Condition 8.2.5 - have a qualified individual, who is a registered archeologist under Manitoba’s Heritage Resources Act, and selected in consultation with Indigenous groups, conduct an assessment at the location of the discovery; and”</i> 	<p>Manitoba Transportation and Infrastructure is concerned about the definition of the term “registered archaeologist in Potential Condition 8.2.5, and the selection process.</p>	<ul style="list-style-type: none"> • As written the condition is not technically correct. There is no provincial registry of archaeologists under <i>The Heritage Resources Act</i> or maintained by the Manitoba Historic Resources Branch. The Historic Resources Branch issues permits to professional archaeologists to undertake archaeological investigations and has set out qualifications for archaeologists to hold permits. In order to be issued a Heritage Permit, an archaeologist must hold a Masters or Ph.D. in archaeology and have a minimum of three-years’ experience in the region for which they are applying for a permit. • With respect to the requirement to consult with Indigenous groups in the selection of a professional archeologist, Manitoba Transportation and Infrastructure must comply with the Government of Manitoba Procurement Policy in completing any hiring. Therefore, Manitoba Transportation and Infrastructure can obtain advice and input from Indigenous groups on the selection of a professional archaeologist, but Indigenous groups are not able to participate in the hiring process and the hiring decision must be made by a government official. 	<p>Proposed rewording is as follows: “have a <u>professional archaeologist qualified individual, who is a registered archeologist under to hold a provincial Heritage Permit to Search for or Excavate a Heritage Object</u> under <u>Manitoba’s The Heritage Resources Act</u>, and selected in consultation with Indigenous groups <u>and in accordance with the Government of Manitoba’s procurement policy</u>, conduct an assessment at the location of the discovery; and”</p>
<p>CONDITION 8.10 (INCLUDING 8.10.1, 8.10.2, 8.10.3 & 8.10.4) <i>“Potential Condition 8.10 - The Proponent shall develop, prior to construction and in consultation with Indigenous groups and relevant authorities, a follow-up program to verify the accuracy of the environmental assessment and to determine the effectiveness of all mitigation measures for effects to any structures, sites, or things of historical, archaeological, paleontological, or architectural significance or physical or cultural heritage resources due to erosion along the Lake St. Martin Narrows and the islands within Lake St. Martin. The Proponent shall implement the follow-up program during all phases of the Designated Project. As part of the implementation of the follow- up program, the Proponent shall:</i></p> <ul style="list-style-type: none"> <i>• Potential Condition 8.10.1 - identify shoreline locations along the Lake St. Martin Narrows and islands within Lake St. Martin at risk for shoreline erosion;</i> <i>• Potential Condition 8.10.2 - identify cultural heritage resources of importance to Indigenous groups in these areas at risk for erosion;</i> <i>• Potential Condition 8.10.3 - monitor the locations identified in condition 8.10.1 and the resources identified in condition 8.10.2 for increased erosion attributable to the Designated Project, including through bathymetry. If the results of the surface water follow-up program referred to in 3.20 indicate changes to water quantity or quality attributable to the Designated Project, the Proponent shall develop and implement additional monitoring; and</i> <i>• Potential Condition 8.10.4 - develop and implement modified or additional mitigation measures to protect these resources if the results of the monitoring referred to in condition 8.10.3 shows adverse effects to physical and cultural heritage attributable to the Designated Project.”</i> 	<p>Manitoba Transportation and Infrastructure is concerned about the wording of Potential Condition 8.10.3 regarding a requirement to implement additional monitoring if there are changes in water quantity or quality.</p>	<ul style="list-style-type: none"> • The primary goal of the Project is to better manage water levels on Lake St. Martin, which will definitely result in changes to water levels at Lake St. Martin Narrows and the islands within Lake St. Martin. Although Manitoba Transportation and Infrastructure anticipates that the predicted lower water levels will be a benefit to protecting any existing heritage resources, a more appropriate trigger for additional monitoring and/or mitigation measures would be if erosion occurs that can be attributed to the Project. 	<p>Proposed rewording is as follows: “monitor the locations identified in condition 8.10.1 and the resources identified in condition 8.10.2 for increased erosion attributable to the Project, including through bathymetry. If the results of the surface water follow-up program referred to in 3.20 indicate changes to water quantity or quality erosion attributable to the Designated Project <u>is observed</u>, the Proponent shall develop and implement additional monitoring; and”</p>

3. COMMENTS ON DRAFT ENVIRONMENTAL ASSESSMENT REPORT

Table 3.1 provides, for selected parts of the draft Environmental Assessment Report, clarifications and, for some, suggested alternative text. For each such part, the relevant section number is identified, and relevant text is replicated or summarized.

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Table 3.1 Clarification Comments on draft Environmental Assessment Report

Location Reference	Environmental Assessment Report Text	Suggested Change or Clarification
Executive Summary	The Lake Manitoba and Lake St. Martin Outlet Channels Project (the Project) would consist of two new outlet channels, each approximately 24 kilometres long, which would be supplemental to the greater flood protection infrastructure throughout the Assiniboine River and Lake Manitoba drainage basins.	<ul style="list-style-type: none"> Restate text from Section 3.1 of the dEAR related to the goal of the Project, that is to reduce the effects of flooding on communities surrounding Lake Manitoba and Lake St. Martin by supplementing existing water management infrastructure. The Project is intended to mitigate existing regional adverse effects to local communities (including to Indigenous peoples' current use of lands and resources for traditional purposes; physical and cultural heritage; and sites or things of historical, archaeological, paleontological, or architectural significance).
Glossary	Dewatering: Removal or draining groundwater or surface water from a riverbed for construction site by pumping or evaporation.	<ul style="list-style-type: none"> Replace "a riverbed for" with "an area within a".
	Sediment Plume: Water having a having a total suspended solids concentration above 5 micrograms per litre increase over background, as defined by the Proponent for this Project.	<ul style="list-style-type: none"> To keep consistency with Manitoba Transportation and Infrastructure's filed information, the unit should be milligrams per litre.
Introduction (pg. 1) - EAR	The Lake Manitoba and Lake St. Martin Outlet Channels Project (the Project) would consist of two new outlet channels, each approximately 24 kilometres long, which would be supplemental to the greater flood protection infrastructure throughout the Assiniboine River and Lake Manitoba drainage basins.	<ul style="list-style-type: none"> Restate text from Section 3.1 of the dEAR related to the goal of the Project, that is to reduce the effects of flooding on communities surrounding Lake Manitoba and Lake St. Martin by supplementing existing water management infrastructure. The Project is intended to mitigate existing regional adverse effects to local communities (including to Indigenous peoples' current use of lands and resources for traditional purposes; physical and cultural heritage; and sites or things of historical, archaeological, paleontological, or architectural significance).
	The LMOC and LSMOC are designed to divert over 17 billion cubic metres of floodwater per year as needed. The Project would be operated according to the guidelines defined by the Proponent to maintain water levels in Lake Manitoba and Lake St. Martin within existing target ranges recommended by the 2003 Lake Manitoba Regulation Review Advisory Committee and the 2013 Lake Manitoba, Lake St. Martin Regulation Review Committee. There are no plans to expand or decommission the Project.	<ul style="list-style-type: none"> The Project will increase the amount of time that Lake Manitoba and Lake St. Martin remain within the target ranges but will not prevent all future exceedances of the target range. Reword as: "In response to major flooding on Lake Manitoba and Lake St. Martin, the LMOC and LSMOC are designed to divert over 17 billion cubic metres of floodwater per year as needed. The Project would be operated according to the guidelines defined by the Proponent to maintain when water levels in Lake Manitoba and Lake St. Martin within exceed existing target ranges recommended by the 2003 Lake Manitoba Regulation Review Advisory Committee and the 2013 Lake Manitoba, Lake St. Martin Regulation Review Committee. There are no plans to expand or decommission the Project."
2.1 Project Location and Temporal and Spatial Boundaries (pg. 8) - EAR	The LSMOC is designed as an alternative to the existing Emergency Outlet Channel (EOC) and would repurpose part of the EOC Reach 3.	<ul style="list-style-type: none"> The LSMOC is not being built as an alternative to the EOC, which was built under emergency flooding circumstances, but as a permanent replacement.
2.2 Project Components (pg. 13) - EAR	The LSMOC ROW would also include maintenance access roads constructed on top of both containment dykes along their entire length.	<ul style="list-style-type: none"> The LMOC will also include two maintenance roads within the right of way on both sides of the channel. In addition to the two maintenance roads, LSMOC has a construction road along the entire length of the outside drain.
Table 2 Key Project Components of the Lake Manitoba and Lake St. Martin Outlet Channels (pg. 14) - EAR	The LSMOC base would intersect the bedrock aquifer and receive marginal flows from groundwater contributions.	<ul style="list-style-type: none"> The LSMOC will only intersect the bedrock in discrete areas.
Table 2 Key Project Components of the Lake Manitoba and Lake St. Martin Outlet Channels (pg. 15) - EAR	The inlet and outlet would be constructed in the wet, enclosed by a double turbidity curtain. The base and side slopes would consist of native till materials. Riprap would line a portion of the inlet and outlet side slopes from the outlet channel proper to the shoreline to account for wave action.	<ul style="list-style-type: none"> The successful contractor may develop other specific approaches (i.e., they may or may not decide to construct in the wet) that may meet or exceed the explicit requirements to manage potential sediment effects from activities in the construction site.
2.3.2 Operation Phase: Operation and Maintenance. (pg. 19) - EAR	The LMOC and LSMOC are planned to supplement and work in conjunction with existing flood protection infrastructure.	<ul style="list-style-type: none"> The Operating Guidelines for the Project allow the outlet channels to operate independently of other structures.
3.2.2 Views Expressed (pg. 26) - EAR	The Interlake Reserves Tribal Council noted that they were not engaged in identifying preferred or alternative means of carrying out the Project and that a number of their member First Nations would prefer to see the LSMOC go around Lake St. Martin.	<ul style="list-style-type: none"> Manitoba Transportation and Infrastructure is obliged to consult with First Nations and initiated consultation with the seven First Nations that are members of Interlake Reserves Tribal Council (IRTC) directly through Chief and Council. Manitoba Transportation and Infrastructure received band council resolutions from Lake Manitoba First Nation (LMFN), Dauphin River First Nation (DRFN) and Kinonjeoshtegon First Nation (KFN) stating that IRTC would represent them in the consultation in 2019. Following the receipt of these band council resolutions Manitoba Transportation and Infrastructure has consulted with DRFN, LMFN and KFN through IRTC.

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Location Reference	Environmental Assessment Report Text	Suggested Change or Clarification
5.1 Biophysical Environment (pg. 37) - EAR	The LMOC traverses mainly relatively intact mineral wetlands and spruce-dominated peatlands, whereas the LSMOC contains a variety of habitat types. Habitat types present in the LAA and RAA, such as mixed forest and wetlands, provide suitable habitat for bird species listed under the Migratory Birds Convention Act, 1994 and species at risk listed under SARA including critical habitat for the eastern whip-poor-will, red-headed woodpecker, piping plover, little brown myotis, northern myotis, northern leopard frog, and snapping turtle.	<ul style="list-style-type: none"> LMOC traverses agricultural areas with mixed wood, whereas the LSMOC traverses conifer forests and peatlands. This statement should be revised to: "...1994 and species at risk listed under <i>Species at Risk Act</i> (SARA) including critical habitat for the eastern whip-poor-will, red-headed woodpecker, piping plover, little brown myotis, and northern myotis..." For piping plover, no specific areas of critical habitat are identified in the recovery strategy, but there could be suitable habitat in the Lake Winnipeg and Lake Manitoba basins. Volume 3, Section 8.3.4.2 of the EIS states that "Potential breeding habitat for piping plover may exist in the RAA on Lake Winnipeg and Lake Manitoba where appropriate beaches and water conditions exist¹. Piping plover was not observed during 2016 baseline surveys² and there are no breeding records within the RAA^{3,4}. In 2006, a federal recovery strategy was developed that provides guidance aimed at halting and reversing population decline of piping plover, expanding the species' current distribution, and identifying critical habitat⁵. The recovery strategy identifies Lake Winnipeg and Lake Manitoba as basins that have the potential to provide critical habitat for piping plover¹." Northern leopard frog and snapping turtle are listed as 'special concern' and therefore do not have recovery strategies or critical habitat.
6.1.1 Proponent's Assessment of Environmental Effects Predicted Effects Regional Flow and Water Levels (pg. 44) -EAR	States that the Proponent noted a maximum 5 cm rise of Lake Winnipeg and 4 cm rise at Cross Lake and characterized downstream effects as negligible.	<ul style="list-style-type: none"> Characterization of "negligible" is based on the existing variability in lake levels in these areas, as explained in the EIS and in responses to IRs (e.g., IAAC-R1-65 and IAAC-R2-22). For example, long-term variability in Lake Winnipeg is 1.65 m; wind-eliminated water level on Playgreen Lake (at the north/downstream end of Lake Winnipeg) typically changes by 50 to 60 cm in a given year, and the wind-affected water level on Playgreen Lake can increase or decrease by 30 cm within a 24-hour period.
6.1.1 Proponent's Assessment of Environmental Effects pg. 47 - EAR	States that for the LSMOC, the Proponent predicted that the sediment plume would extend into Sturgeon Bay, with potential sediment accumulation in nearby beaches.	<ul style="list-style-type: none"> Modeling does not predict deposition greater than 2 mm in thickness beyond the outlet of the LSMOC. Manitoba Transportation and Infrastructure does not anticipate sediment accumulation on nearby beaches in Sturgeon Bay.
6.1.1 Proponent's Assessment of Environmental Effects pg. 48 - EAR	States that Proponent expected that the outlet channels would promote movement of water and suspended sediments in Lake St. Martin, thereby reducing sediment deposition area by 50 percent during operation.	<ul style="list-style-type: none"> This statement is incorrect. Manitoba Transportation and Infrastructure has not stated that for the sediment mass balance in the system, it will be reducing the sediment deposition area by 50 percent during operation.
6.1.3 Agency Analysis and Conclusion Analysis of the Effects (pg. 53) - EAR	Has included additional monitoring locations including Fisher Bay, Berens Inlet, Cross Lake, and Split Lake in the follow-up and monitoring program to verify EA predictions.	<ul style="list-style-type: none"> Through the engagement process that Manitoba Transportation and Infrastructure has had with Indigenous groups located in areas downstream of the Project, and through various rounds of IR responses (e.g., IAAC-R1-65, IAAC-R1-69, IAAC-R2-22, IAAC-R3-06, IAAC-R4-01), concerns and uncertainties have been expressed about potential downstream effects to surface water quality. Additional monitoring locations in downstream areas (e.g., Fisher Bay, Berens Inlet, Cross Lake, and Split Lake) in the follow-up and monitoring program will not serve to verify Environmental Assessment predictions, as it would be difficult to attribute any Project-related changes at these locations among all of the other potential sources of water quality changes. A monitoring network has been established to facilitate the management of surface water quality before it moves into these downstream areas.
6.1.3 Agency Analysis and Conclusion Analysis of the Effects (pg. 53) - EAR	Note that the Proponent discussed re-watering mitigation measures for the areas downgradient of the outlet channels, but these were deemed infeasible, and the effects remain unmitigated.	<ul style="list-style-type: none"> The primary rationale for excluding rewatering measures was based largely on Fisheries and Oceans Canada policy regarding the transfer of aquatic invasive species (AIS) species which are currently in all lakes surrounding the Project. Effects to these areas are being addressed through the wetland compensation plan.
6.2.2 Views Expressed Federal Authorities (pg. 67) - EAR	Natural Resources Canada highlighted that to the west of the LMOC a downward vertical gradient would be established that would permit infiltration downwards through the till, a condition that was seasonal prior to the Project would be permanent due to the Project. Under these conditions, the potential for surface infiltration to reach the groundwater wells would be a function of the thickness and competence of the overlying till.	<ul style="list-style-type: none"> This interpretation is incorrect. The presence of the channel and associated pressure relief wells and reverse drains post-Project will not result in a downward vertical gradient that would permit infiltration downwards through the till. The passive depressurization will reduce the upward vertical gradient, which may result in a loss of flowing artesian conditions (groundwater discharge above ground) at locations near the pressure relief wells situated at various points along the channel and the water control structure. Artesian conditions (groundwater discharge above the bedrock aquifer) will remain post-Project, which mitigates the potential for surface infiltration reaching depths in the aquifer that existing groundwater wells draw from.
6.2.3 Agency Analysis and Conclusion (pg 70) -EAR	The Agency recognizes that a spring site east of Reed Lake would cease due to the construction and operation of the Project with a small effect on the flow to Birch Creek.	<ul style="list-style-type: none"> This is located in an undeveloped area that is now remnant Crown land that was purchased as part of the Project. Artesian flow at this site is not continuous and already ceases during winter and during summer/fall in years with low precipitation (drought) – i.e., within the natural variability.

¹ Environment Canada. 2007. Addendum to the final recovery strategy for the piping plover (*Charadrius melodus circumcinctus*) in Canada re: identification of critical habitat. SARA Recovery Strategy Series. Environment Canada, Ottawa, ON. 30 pp.

² EEI (EcoLogic Environmental Inc.). 2017b. Lake Manitoba outlet channels: wildlife technical report. Prepared for M. Forster Enterprises, Winnipeg, MB.

³ eBird. 2019. eBird: An online database of bird distribution and abundance (species maps). Available at: <https://ebird.org/map>. Accessed June 2019.

⁴ MB BBA (Manitoba Breeding Bird Atlas). 2019. Species and effort maps. Available at: <https://www.birdatlas.mb.ca/mbdata/maps.jsp?lang=en>. Accessed September 2018.

⁵ Environment Canada. 2006. Recovery strategy for the piping plover (*Charadrius melodus circumcinctus*) in Canada. SARA Recovery Strategy Series. Environment Canada, Ottawa, ON. vi + 30 pp.

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Location Reference	Environmental Assessment Report Text	Suggested Change or Clarification
6.2.3 Agency Analysis and Conclusion Changes in groundwater quantity, levels and flow paths. (pg. 73) - EAR	States that groundwater levels will be maintained above the top of the bedrock aquifer at a minimum.	<ul style="list-style-type: none"> Maintaining groundwater levels above the top of bedrock at the water control structures (both the LMOC and LSMOC) and drop structure DS-4 in the LSMOC will not be possible. These components will be constructed where the top of bedrock is at a higher natural elevation and will be exposed during construction (approximately 300 m in total length). Active depressurization by pumping will draw water levels below the top of bedrock for construction; however, post construction the water level will rise and be above the top of the bedrock during operation. During construction, surface water at these locations will consist only of precipitation that falls within the work zone limits. This water is not anticipated to pose a contamination risk to the groundwater aquifer and will be subject to monitoring and dewatering in accordance with the SWMP.
6.3.1 Proponent's Assessment of Environmental Effects (pg. 75) - EAR	The LMOC traverses relatively intact wetlands, agriculture-hayland/pasture areas and upland forest areas as shown in Figure 8, whereas the LSMOC traverses a variety of wetland habitat types and upland forest areas, as noted below in Table 6.	<ul style="list-style-type: none"> The LMOC inhabits a higher capacity of mineral wetlands (Class I, II, III, IV, V), whereas the LSMOC inhabits a higher capacity of peatlands.
6.3.1 Proponent's Assessment of Environmental Effects pg. 77 - EAR pg. 80 - EAR	Table 6 Estimated Loss of Upland and Wetland Wildlife Habitat in the Project Development Area, Local Assessment Area and Regional Assessment Area. Table 7 Estimated Loss of Wetland Types in the Project Development Area, Local Assessment Area and Regional Assessment Area.	<ul style="list-style-type: none"> The amount of wetland loss reported in Tables 6 and 7 is based on desktop mapping from the EIS. The area of wetland loss has since been revised using further desktop evaluation and field assessment. Wetland loss based on the additional desktop and field assessment is expected to be 1,122.8 ha.
6.3.1 Proponent's Assessment of Environmental Effects Changes to Wildlife Habitat (pg. 79) - EAR	The Proponent noted—there were a limited number of mitigation measures that could apply to reduce Project effects to wildlife movement, particularly when WCS are open, however, the Proponent has committed to several wildlife crossing locations, including primarily at inlets, outlets, bridge crossing locations, WCSs and at the LSMOC between the first drop structure and Lake Winnipeg.	<ul style="list-style-type: none"> Manitoba Transportation and Infrastructure has not committed to wildlife crossing locations at the inlet and outlets (both channels), or at some point between the first drop structure and Lake Winnipeg on the LSMOC. As noted in the response to IR IAAC-R3-06 b iv: "From a technical engineering perspective, the potential wildlife crossing locations identified along the Project development areas (PDAs) would need to avoid areas where larger-sized rock (i.e., riprap) would be applied, as these were identified as being less permeable for wildlife movement. These locations are primarily at the inlet, outlet, bridge crossing locations, WCSs and at the LSMOC between the first drop structure and Lake Winnipeg. Potential crossing locations would be best aligned with armoured sections (i.e., approximate maximum size of 100 mm diameter rock) of the channels."
6.3.3 Agency Analysis and Conclusions Mitigation Measures (pg. 87) - EAR	Determining speed limits on Designated Project roads, that take into account the potential for collisions with wildlife. Post these speed limits on Designated Project roads and require all persons to abide by these speed limits.	<ul style="list-style-type: none"> Manitoba Transportation and Infrastructure is not the traffic authority on Municipal roads. In addition, Manitoba Transportation and Infrastructure does not have the ability to restrict construction traffic below posted speed limits on Provincial Roads and Highways except in a designated construction work zone. Manitoba Transportation and Infrastructure will, however, post Project-specific speed limits on the LSM Access Road (between the quarry and right-of-way [ROW]) and within the PDA to manage construction traffic speeds and reduce the potential for collisions with wildlife. Manitoba Transportation and Infrastructure also commits to posting temporary wildlife crossing signs in the PDA, as well as on municipal roads that will be used by construction traffic pending approval from the Rural Municipality of Grahamdale, who is the traffic authority.
7.1.1 Proponent's Assessment of Environmental Effects (pg. 92) - EAR	The diversion of water from the rivers to the channels during high flood events could reduce the availability and suitability of the rivers as migratory corridors and spawning areas for focal fish species.	<ul style="list-style-type: none"> Noting that higher flows will still occur; low flows are not affected, and no measurable effects to fish movement are anticipated.
7.1.1 Proponent's Assessment of Environmental Effects Change in Fish Health and Mortality (pg. 96) - EAR	State that no AIS occur in Sturgeon Bay or Lake Winnipeg and no AIS have been identified within.	<ul style="list-style-type: none"> This is incorrect. AIS are currently present in Lake Winnipeg, Lake St. Martin and Lake Manitoba. Zebra mussels are present in all three lakes and spiny waterflea are present in Lake Winnipeg.
7.1.1 Proponent's Assessment of Environmental Effects (pg. 96) - EAR	Commissioning of the LMOC and LSMOC is expected to result in a pulse of sediment from the newly constructed channels and dust on the armouring materials, and from scour of areas in proximity to the inlet and outlets.	<ul style="list-style-type: none"> Inlets and outlets are designed to prevent erosion and scour from flows experienced during commissioning or subsequent operation.
7.1.2 Views Expressed Federal Authorities (pg. 97) - EAR	State that the Project would facilitate the transport of AIS via equipment used in multiple water bodies during construction, and by recreational activities of additional anglers in the construction workforce or those accessing previously inaccessible waterbodies.	<ul style="list-style-type: none"> The Project is not providing access to inaccessible water bodies. All of these waterbodies are currently accessible (i.e., no change over current conditions). The environmental management program plans include measures for cleaning and decontaminating equipment, as necessary, to prevent the spread of AIS.
7.1.2 Views Expressed Federal Authorities (pg. 97) - EAR	State that the potential magnitude of [increasing AIS spread] is high due to the substantial alteration of physical habitat and disruption of aquatic food webs that would occur in the event of the introduction of AIS.	<ul style="list-style-type: none"> It is incorrect to attribute high potential to the Project as AIS are already present.
7.1.3 Agency Analysis and Conclusion Permanent Alteration or Destruction of Fish and Fish Habitat (pg. 105) - EAR	The Agency anticipates that the likelihood that the Project will notably increase the risk of AIS dispersal in the LAA and RAA is low.	<ul style="list-style-type: none"> Zebra mussels are already present in Lake St. Martin. As noted in the response to IR IAAC-R3-01, on May 26, 2023, the province of Manitoba announced the establishment of new control zones to help prevent the spread of AIS (https://www.manitoba.ca/stopais/spread/controlzone.html#mb). This includes the designation of a new Lake Manitoba/Fairford River/Lake St. Martin control zone to control the spread of zebra mussels.

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7.1.3 Agency Analysis and Conclusion (pg. 105) – EAR	States that changes in fish habitat will occur due to changes in flow patterns in the Fairford and Dauphin rivers . . . and that the flows within the Fairford and Dauphin rivers will remain unchanged during spring and fall.	<ul style="list-style-type: none"> Flow patterns in these rivers are only changing when the channels are operated to manage flood conditions.
7.1.3 Agency Analysis and Conclusion (pg. 106) - EAR	Note that a change in fish passage is possible due to changes in attraction flows from the operation of the LMOC and LSMOC, both in alteration of the flow rates of the Fairford and Dauphin rivers.	<ul style="list-style-type: none"> The Project is only reducing from peak floods – i.e., flow patterns will be very similar to current conditions, given existing variability.
7.1.3 Agency Analysis and Conclusion (pg. 106) - EAR	The Agency notes that it is not possible to prevent fish from entering the outlet channels, and mitigations to alleviate the effects to spawning fish populations are not possible.	<ul style="list-style-type: none"> The channels are being operated so that eggs can hatch and drift regardless of where fish spawn, which is a form of mitigation.
7.1.3 Agency Analysis and Conclusion Change in Fish Health and Mortality (pg. 108) - EAR	The Agency notes that the frequency of drawdown and rebound of water levels in the north and south basins of Lake St. Martin will expose shorelines and nearshore wetland areas to potentially higher production of methyl mercury and therefore potentially higher risk of methyl mercury bioaccumulation in fish populations within the lake.	<ul style="list-style-type: none"> Manitoba Transportation and Infrastructure disagrees with this conclusion – the area exposed to wetting/drying will be less with the Project because it is reducing the magnitude of flooding. This is explained in previous text from the dEAR as follows: <ul style="list-style-type: none"> On Page 6.185 of the dEAR it states: “Under the current operating conditions without the outlet channels, Lake St. Martin is above the top of its desired operating range 24.4% of the time; with the operation of the outlet channels, the amount of time that Lake St. Martin is above the top of its desired operating range changes to 5.2%, which is a decrease of 19.2% (Appendix 6K; Manitoba Infrastructure 2019b).” On page 7.77 of the dEAR it states: “This potential effect was raised during consultation of the Project with provincial regulators and is particularly relevant where extensive areas of terrestrial habitat are flooded. However, operation of the LMOC and LSMOC will result in a net reduction in flooded terrestrial habitat in Lake Manitoba and Lake St. Martin during high-water periods. Consequently, the Project has the potential to reduce, not increase, the uptake of methylmercury in fish. However, the magnitude of this potential benefit is expected to be negligible”
7.1.3 Agency Analysis and Conclusion (pg. 108) - EAR	The Agency notes that effects related to the drawdown and rebound of water levels in Lake St. Martin north basin related to the hydraulic model and LSMOC design updates to account for head loss at the Lake St. Martin Narrows have not been considered in the Proponent’s assessment of effects.	<ul style="list-style-type: none"> An assessment was made of the potential implications to EIS conclusions of any potential changes to water level and flows at the Narrows, and conclusions remain as stated. Water levels in the north basin will remain within normal historic range during floods.
7.1.3 Agency Analysis and Conclusion Permanent Alteration or Destruction of Fish and Fish Habitat (pg. 109) - EAR	Requirement to prevent discharges that would be deleterious to fish or fish habitat, in accordance with the pollution prevention provisions of the Fisheries Act and taking into account the Canadian Council of Ministers of the Environment’s Canadian Environmental Quality Guidelines for the Protection of Aquatic Life and MWQSOG Tier III for fish and other aquatic life, whichever is most protective of fish and fish habitat.	<ul style="list-style-type: none"> The Project is mitigating the effects of large regional flooding that currently occur and associated adverse effects to surface water quality.
7.1.3 Agency Analysis and Conclusion Permanent Alteration or Destruction of Fish and Fish Habitat (pg. 110) - EAR	Requirement to operate the outlet channels in a manner that does not impede fish passage, spawning and egg incubation in Fairford and Dauphin Rivers during spring and fall spawning periods.	<ul style="list-style-type: none"> Lake Manitoba will supply baseflow in the LMOC which will in turn supply baseflow in the LSMOC; therefore, no impact would be expected on the Dauphin River, even during drought conditions. It is anticipated that baseflow would be provided at all times in both channels when not in use for flood operation.
7.2.1 Proponent’s Assessment of Environmental Effects Habitat Loss or Alteration (pg. 113) -EAR	The Proponent identified that edge effects, fragmentation, and altered wetland function would persist through operations.	<ul style="list-style-type: none"> To clarify, changes through operations are only associated with the channels within the ROW. Permanent changes are not expected in camp or staging areas, as these will be decommissioned/ rehabilitated when no longer required.
7.2.1 Proponent’s Assessment of Environmental Effects Habitat Loss or Alteration (pg. 114) - EAR	The anticipated wetting of the landscape up-gradient and drying of the landscape down-gradient due to channel construction would result in the indirect loss or alteration of suitable wetland habitat for migratory birds along both outlet channels.	<ul style="list-style-type: none"> The wetting of areas upgradient of the channels is not anticipated, particularly at the LMOC. The outside drains are designed to transfer overland flow and flow from existing ditches/ drainage networks originating upstream of the channels directly into the lakes. The responses to IR IAAC-R1-07 and IAAC-R1-92 describe mitigation (drains) to reduce wetting up of soils in upgradient areas.
7.2.1 Proponent’s Assessment of Environmental Effects (pg. 115) - EAR	The Proponent noted 73.4 hectares (ha) of Class II wetlands in the PDA would be directly affected by the Project but determined that these wetlands have lower suitability breeding habitat in wet years (less than 10 percent of the time) compared to Class III, IV, and V wetland habitat.	<ul style="list-style-type: none"> Based on updated (2023) mapping and area calculations area there are 72.6 ha of Class II wetlands in the PDA.
7.3.1 Proponent’s Assessment of Environmental Effects Change in Movement (pg. 126) - EAR	Anticipated reduced water levels affecting wetlands and wetland habitat loss around Reed Lake, Clear Lake and Watchorn Bay, and PR 239 sub-watersheds, may affect the movement and distribution of northern leopard frog and snapping turtle in the PDA and LAA.	<ul style="list-style-type: none"> The statement should read: “anticipated reduced water levels affecting wetlands and wetland habitat loss around Reed Lake, Clear Lake and Watchorn Bay, and Provincial Road (PR) 239 sub-watersheds, may affect the movement and distribution of northern leopard frog and snapping turtle in the PDA and LAA.” For clarity, Volume 3, Section 8.3.6 of the EIS says: “Reduced marsh and shallow open water wetland abundance, partial wetland loss near Watchorn Bay, at Reed and Clear Lake, and altered wetland water levels in the intersection of the LMOC with PR 239 sub-watersheds could affect the distribution of wetland dependent wildlife such as waterfowl, marsh birds (e.g., least bittern, yellow rail), and northern leopard [sic] in the LAA” in the Change in Habitat section.

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7.4.1 Current Use of Lands and Resources for Traditional Purposes Availability and Quality of Resources for Current Use (pg. 135) - EAR	The Proponent indicated that the loss of wetlands along the LMOC would be largely minimized through wetland offsetting and compensation; however, only 0.1 ha of the 768.5 ha of wetlands removed for the construction of the LSMOC would be offset.	<ul style="list-style-type: none"> To clarify, the direct impact to peatlands in the LSMOC area is 769 ha, which is being offset under the Boreal Wetlands Conservation Codes of Practice. There are no peatlands in the LMOC area that are directly/ indirectly impacted. Manitoba Transportation and Infrastructure is not aware of a reference to only 0.1 ha to be offset.
7.4.1.1 Proponent's Assessment of Effects (pg. 135) - EAR	The Proponent committed to several crossing locations for the LMOC at inlets, outlets, bridge crossing locations, and WCSs and one crossing location for the LSMOC between the first drop structure and Lake Winnipeg.	<ul style="list-style-type: none"> To clarify, the current commitment was to discuss the site-specific access needs of Indigenous groups using the local area and install access if/where it would provide a tangible benefit to access. Access across the LMOC and LSMOC would be provided at the WCS (which is combined as a bridge structure), and across the LMOC at the three new road bridges. There are currently no crossing structures proposed at the inlets, outlets, or between the first drop structure and Lake Winnipeg.
7.4.1.3 Agency Analysis and Conclusions for Current Use Availability and Quality of Resources for Current Use (pg. 144) - EAR	The Proponent originally committed to rewatering of the Birch Creek and Big Buffalo Lake Complex to mitigate the loss of wetlands due to the Project; however, this is no longer being proposed as the Proponent has stated upon further investigation, rewatering is economically unfeasible.	<ul style="list-style-type: none"> The rewatering options considered included those that were economically feasible. However, once a requirement was included to consider issues associated with zebra mussel transfer to local watersheds, as per Fisheries and Oceans Canada policy, these options became unfeasible.
7.4.1.3 Agency Analysis and Conclusions for Current Use Availability and Quality of Resources for Current Use (pg. 144) - EAR	The Agency understands that the Proponent will be required to offset for any harmful alteration, disruption, or destruction of fish and fish habitat as a part of the Fisheries Act authorization required for the Project. While this offsetting may offset potential effects to fish and fish habitat, it would not likely occur within the LAA. This could in turn result in an increased effort and travel distance required by Indigenous peoples to successfully fish.	<ul style="list-style-type: none"> This is incorrect – some offsetting works will likely occur in the LAA.
7.4.1.3 Agency Analysis and Conclusions for Current Use Availability and Quality of Resources for Current Use (pg. 145) - EAR	No additional [wetland] mitigation or offsetting outside of the requirements for compensation as per The Water Rights Act have been identified and adverse residual effects to species of cultural importance that rely on wetlands, such as moose, beaver, muskrat, otter, and wetland birds are anticipated.	<ul style="list-style-type: none"> The direct impact to peatlands in the LSMOC area is 769 ha, which are being offset under the Boreal Wetlands Conservation Codes of Practice.
7.4.2.1 Proponent's Assessment of Effects (pg. 152) - EAR	The Proponent predicted that effects to cultural and spiritual sites within the RAA would be adverse and would occur through Project construction and operation.	<ul style="list-style-type: none"> Effects are predicted to be largely limited to the PDA, except for potential sensory disturbances to sites visited in the LAA. No effects beyond the LAA are predicted.
7.4.2.2 Views Expressed (pg. 153) – EAR	Black River First Nation, Dauphin River First Nation, The Interlake Reserves Tribal Council, Little Saskatchewan First Nation, Norway House Cree Nation, Peguis First Nation, and Pinaymootang First Nation expressed concerns that Project-related flooding could impact burial sites, and Bloodvein First Nation, Dakota Tipi First Nation, and Peguis First Nation indicated that past flooding has disturbed burial sites and churches.	<ul style="list-style-type: none"> The purpose of the Project is to reduce flooding and the effects to shoreland sites.
7.4.2.2 Views Expressed Indigenous Groups (pg. 154) – EAR	Noted that IRTC identified 393 cultural sites within the RAA and expressed concerns that these sites were not considered by the Proponent in the analysis of effects to physical and cultural heritage and development of mitigation measures.	<ul style="list-style-type: none"> As noted in response to IR IAAC-R4-03, Manitoba Transportation and Infrastructure did consider this information, in terms of pathways of Project effects, and most sites are not predicted to be impacted by the Project. Only two are within 250 m of the Project and potentially affected by Project construction activities. The rest are recorded at considerable distance from the PDA and not anticipated to be directly subject to physical disturbance due to the Project. Measures have been developed to address Project effects, including to sites directly impacted by construction, and those visited in adjacent areas during construction and operation.
7.4.2.2 Views Expressed (pg. 154) - EAR	[Indigenous groups] indicated that there is a lack of direct Indigenous input in the development of policies and procedures within the HRPP and indicated concerns that the Proponent has not planned for the involvement of Indigenous groups in archeological work and monitoring, including during excavations, or in the hiring and selection of Project archeologists.	<ul style="list-style-type: none"> Manitoba Transportation and Infrastructure has established a Heritage Resource Group with Indigenous groups and has proposed measures to address these concerns and provided opportunities for review and feedback on Environmental Management Program plans such as the Heritage Resource Protection Plan.
7.4.2.3 Agency Analysis and Conclusions for Physical and Cultural Heritage and Sites of Significance (pg. 158) – EAR	The Agency understands that many sites of significance are within the LAA and RAA, and therefore were not captured in the Heritage Resource Impact Assessment (HRIA).	<ul style="list-style-type: none"> The HRIA focused on areas where there will be direct Project effects. There are no pathways of effect to sites within the RAA. In many cases, the Project may be mitigating ongoing effects caused during larger flooding events.

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7.4.1.2 Views Expressed (pg. 142) - EAR	Fisher River Cree Nation further noted that the proposed access road occurs in an area containing excellent moose habitat and calving grounds and that the Proponent underestimated potential effects to moose populations by basing their conclusions on the viability of moose in the RAA rather than in a more localized area.	<ul style="list-style-type: none"> The Lake St. Martin Access Road is not part of the Project but was considered through the cumulative effects assessment.
7.5.1.1 Proponent's Assessment of Effects (pg. 169) - EAR	The Proponent predicted that beyond the PDA, Project-related concentrations of atmospheric contaminants would remain below the Canadian Ambient Air Quality Standards. ³	<ul style="list-style-type: none"> Manitoba Transportation and Infrastructure indicated in responses to IRs (e.g., IAAC-R1-02) that "there is potential for short-term (1-hour NO₂ and 24-hour PM_{2.5}) concentrations to exceed the Canadian Ambient Air Quality Standards within the PDA and along areas within the immediate vicinity of the PDA."
7.5.1.1 Proponent's Assessment of Effects (pg. 169) - EAR	The Proponent predicted that adverse effects to the atmospheric environment would be negligible and would not result in residual effects to Indigenous peoples' health.	<ul style="list-style-type: none"> Manitoba Transportation and Infrastructure stated that adverse effects to the atmospheric environment range from negligible to moderate depending upon the contaminant that is emitted by the Project.
7.5.2.1 Proponent's Assessment of Effects (pg. 176) - EAR	The Proponent indicated that project-related activities during construction and operations could create changes to employment status and income in Indigenous groups may affect community well-being and social cohesion. Further, increased employment opportunities may result in some individuals leaving school early to seek employment on the Project. Project-related spending may affect Indigenous-owned businesses in the region through increased demand for labour, goods, and services. This may result in increased operational costs through wage inflation and higher employee turnover.	<ul style="list-style-type: none"> It should be noted that, as described in the EIS and responses to Information requests, the Project also provides positive economic benefits to Indigenous groups.
8.3.3 Agency Analysis and Conclusions (pg. 219) - EAR	Given the significant extent of concerns raised and input shared by Indigenous groups, the Agency acknowledges that there is uncertainty in the Proponent's conclusions related to cumulative effects.	<ul style="list-style-type: none"> The assessment of cumulative effects followed applicable federal guidance and precedence. Many comments from some parties reflect regional issues and history that do not always reflect matters attended to in a project cumulative effects assessment (CEA). Also, acknowledgment and consideration of regional historical change was made, such as in EIS Volume 1, Section 2.3 and the Appendix to IAAC-R1-124, Regional Historical Overview.
9.2 Potential Adverse Impacts of the Project on Section 35 Rights (pg. 232) - EAR	The Agency notes that wetland offsetting and compensation as per Manitoba's The Water Rights Act would only require compensation for 0.1 ha of the 768.5 ha of wetlands removed for the construction of the LSMOC.	<ul style="list-style-type: none"> To clarify, there are only 0.1 ha of mineral wetlands that are directly impacted by the Project in the LSMOC, and an additional 769 ha of peatlands. There are 239 ha of mineral wetlands directly impacted in the PDA (Class III, IV, and V) and 769 ha of directly impacted peatlands. These are two separate values and are being offset in two separate ways. While Manitoba Transportation and Infrastructure is exempt from all required compensation under the <i>Water Rights Act</i>, it has adopted a no net-loss policy and has chosen to offset for Class III, IV, V wetlands. The WRA only requires compensation for Class III. The 769 ha of directly impacted peatlands are being offset under the Boreal Wetlands Conservation Codes of Practice.
9.2.1 Hunting, Trapping, and Fishing Rights (pg. 236) - EAR	While this offsetting may offset potential effects to fish and fish habitat, offsetting is likely to not occur within the LAA.	<ul style="list-style-type: none"> This is incorrect - offsetting measures have been proposed for the LAA.
Appendix C: Summary of the Crown Consultation with Indigenous Groups (pg. 311) - EAR	The Agency recommends that the Proponent consider the purposeful inclusion of Indigenous groups in the economic benefits of the Project, including training, employment, and contracting opportunities.	<ul style="list-style-type: none"> Manitoba Transportation and Infrastructure has developed and presented this information in response to IRs. For example, the response to IR IAAC-R3-06 states that "Manitoba Transportation and Infrastructure is also coordinating with Manitoba Economic Development and Training, Indigenous Services Canada, and First Peoples Development Inc. (FPDI) to identify Project labour force requirements, procurement requirements and anticipated schedules, which could assist in the development of training opportunities for Indigenous groups to support potential employment as part of construction and environmental monitoring activities. Provincial and federal funding is available to support this type of training and ongoing coordination with provincial, federal, and FPDI representatives will help to identify and develop applicable training for the Project. This is all to facilitate opportunities for Indigenous groups to have a trained and ready workforce to participate in the Project. Discussions with FPDI are ongoing and anticipated to continue as a means of facilitating training opportunities for Indigenous groups and to increase opportunities for more technical and skilled positions, in addition to cleaning, cooking, or other services."
Appendix C: Summary of the Crown Consultation with Indigenous Groups (pg. 313) - EAR	The Agency understands that as part of Project approval, the Proponent will develop <u>both a Construction Environmental Management Program</u> that includes management plans for surface water, groundwater, access management, and wildlife monitoring, and that mitigations for potential impacts to the atmospheric environment minimize impacts to air quality as well as impacts from dust deposition, vibration and noise.	<ul style="list-style-type: none"> The statement should read that the Proponent will develop "both a Construction <u>and an Operation</u> Environmental Management Program"

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<p>Appendix C: Summary of the Crown Consultation with Indigenous Groups (pg. 333) - EAR</p>	<p>The Agency agrees that there is uncertainty regarding how Indigenous knowledge and views were incorporated in the assessment of effects of the Project to heritage resources and sites of significance, and intangible aspects of cultural heritage. The Agency understands that many sites of significance are within the LAA and RAA, and therefore were not captured in the HRIA of the PDA completed in 2021.</p>	<ul style="list-style-type: none"> • Manitoba Transportation and Infrastructure obtained information regarding historical resources and sites of significance for Indigenous groups, as well as intangible aspects of cultural heritage through the Indigenous consultation and engagement process for the Project, submissions to the Agency Project registry by Indigenous groups, and a review of publicly available sources. • Consultation and engagement activities included correspondence, meetings, workshops, community meetings, surveys and the funding of Project-specific reports and studies (Traditional Knowledge and Use Studies, Community Consultation Reports, Socio-economic and Well Being Reports, and Rights Impact Assessments). • The HRIA was conducted in conformity with federal and provincial regulations including CEAA 2012, the CEAA Project Guidelines (2018) the Manitoba <i>Heritage Resources Act</i> and direction from the Manitoba Historic Resources Branch. Information shared by Indigenous groups was reviewed to determine if there were pathways of likely effect from the Project. The HRIA focusses on sites where physical disturbance or removal will occur (i.e., in the PDA). No direct effects on heritage resources and sites of significance, and intangible aspects of cultural heritage are anticipated beyond the PDA. • Indirect Project effects to heritage resources and sites of significance, and intangible aspects of cultural heritage within the LAA or RAA were assessed in Chapter 10 of the EIS for the Project as well as responses to IRs, including IAAC-R1-122, IAAC-R2-29, IAAC-R3-06, IAAC-R3-07, and IAAC-R4-01. • Manitoba Transportation and Infrastructure intends on continuing to discuss those sites in the LAA where Project activities may result in sensory disturbance to experiences associated with visiting sites in this area.

4. CLOSURE

This submission represents Manitoba Transportation and Infrastructure's response to the Agency's public invitation to comment on the dEAR and potential conditions. Comments provided on key topics are intended to help clarify Manitoba Transportation and Infrastructure's interpretation of the dEAR and potential conditions and offer additional insight for Agency consideration. The potential alternate language offered by Manitoba Transportation and Infrastructure is based on sound rationale that, wherever possible, is supported by study and scientific data.

Manitoba Transportation and Infrastructure acknowledges the importance and value that Indigenous groups, the Rural Municipality of Grahamdale and others have provided in the refinement of the Project, working to balance interests and the common goal of effective flood mitigation in the Province of Manitoba. Manitoba Transportation and Infrastructure will continue to engage with Indigenous groups, the Rural Municipality of Grahamdale and others to assure that commitments are met as outlined in regulatory submissions to the Agency, and subsequent regulatory requirements.

Manitoba Transportation and Infrastructure appreciates the Agency's willingness to consider the current submission as it moves towards development of a final EAR and conditions. Manitoba Transportation and Infrastructure looks forward to being provided the opportunity to continue to advance this Project which is designed to lessen the effects of flooding on Lake Manitoba and Lake St. Martin as part of Manitoba's flood management network.