Chapter	Section	Page	EIS Guidelines	Issue	Comment
1	1.4	1.8	1.3, 4.2.2, 7.1.10	"While the Project does not occupy federal lands, the proposed Project crosses lands used for traditional purposes by Lake St. Martin FN, Little Saskatchewan FN, Dauphin River FN, Pineymootang FN and Peguis FN."	**Project crosses and affects lands and WATERS used by MANY more First Nations. Describe the rest of First Nations that use the lands and waters for traditional purposes.** **This includes Poplar River First Nation.** **This includes all of the commmunties that make up Keewatinook Fishers.**
1	1.4	1.8	1.3, 2.3, 4.2.2, 7.1.10	"With the exception of Peguis FN, the FNs in the Project region are signatories to Treaty No. 2, which was signed in August 1871 at Manitoba House."	Unclear about "project region". First Nations indicated as affected by MI and CEAA also include Nations in Treaty 5.
1	1.5.3, 1.5.4	1.11	1.3, Figure 1B-1	"The Indigenous communities of Dauphin River FN, Dauphin River Northern Affairs Community (NAC), Lake St. Martin FN, Pinaymootang FN and Little Saskatchewan FN are located in the Project region and are directly affected by the proposed Project." "The FNs in the Project region currently do not have any land use or community plans in place."	**Unclear about "project region". The "project region" is not defined in chapter 1. Should require size of the area and physical description. Explain why is project region a rectangle. Explain why the project region contains so much land to southeast and northwest but not more of Lake Winnipeg (which will be directly affected by project).**
1	1.5.4	1.11	1.4	"The Indigenous communities of Dauphin River FN, Dauphin River Northern Affairs Community (NAC), Lake St. Martin FN, Pinaymootang FN and Little Saskatchewan FN are located in the Project region and are directly affected by the proposed Project."	**CEAA has a number of listed First Nations as potentially affected by this project.** **Many affected other First Nations should be included in the "project region", as they use the area as ancestral lands/ traditonal territories. See comment above with size/shape of "project region".**

Chapter	Section	Page	EIS Guidelines	Issue	Comment
1	1.5.4	1.11	1.4	"The FNs in the Project region currently do not have any land use or community plans in place."	**Poplar River First Nation has a publically available lands plan** that was not considered here. Poplar River considers itself in the project region. See issue above about "project region" not defined in chapter 1.
1	1.3	1.5-1.7	1.2	"The LMOC will work in concert with the FRWCS to reduce potential flooding effects on Lake Manitoba."	**"If the project is part of a larger sequence of projects, the EIS will outline the larger context." EIS Guidelines for Preparation of EIS LMBLSMC Project.** **Missing description of the larger seqence of projects that the channels will be connected to. This needs to include water control infrastructure in Manitoba, Saskatchewan and Alberta. This needs to include water control infrastructure that water passes through prior to entering channels and after leaving channels. There are water control structures missing, most have federal agreements and funding.**
1	1.7	1.13-1.14	4.2.2	Literature cited/ personal communication	**No literature cited or personal communications about which First Nations communities are impacted by the project. Communities should be engaged if their community, traditional territory, ancestral land is included in the project area.**
1	1.5.2	1.1		Permits	Missing need for Provincial Heritage Permits
1	Appendix 1C	Appendix 1C	4.2.2	"Appendix 1C Standards and Guidelines used in the Assessment of Valued Components"	**No Indigenous knowledge used in the creation of standards and guidelines used in the assessment of valued components in EIS.**
2	2.3.1.1	2.3-2.5		Historic flood	**Missing flooding in Alberta and Saskatchewan that goes in to Manitoba. Missing flooding south of the border that comes down Red River and goes into Lake Winnipeg**

Chapter	Section	Page	EIS Guidelines	Issue	Comment
2	2.3.1.2	2.6-2.9		Historic flood mitigation	**Missing flood mitigation in and around Winnipeg and on Red River (such as Red River Floodway).** **Missing flood mitigation in waterways in Saskathewan and Alberta that connect to water in Manitoba and the Outlet Channels.** **Missing impact from Manitoba Hydro water regulation of Lake Winnipeg that impacts flooding.**
2	2.3.2	2.9	2.1	Needs for the Project	**Does not discuss that research suggests that the 1900s were abnormally cold and wet in Manitoba's climate history. Manitoba now may be entering years of historically normal weather (warmer and drier) and thus channels may not be needed.**
3	3	3.1-3.38 and appendices, maps and figures	1.3	No map size or description of physical regional project area included in the Project Overview chapter	**Include map**, size and description of regional project area in project overview.
3	3.2 3.4.1	3.2 3.6-3.7		Scope of the project Project Components	Power lines need to be included, unless the power supply will be located right next to each structure Number/size/area descriptor of each project component need to be included (example: "several drop structures (pg 3.6) - how many drop structures?; "power lines" (pg 3.7) - how many kilometres of lines?).

Chapter	Section	Page	EIS Guidelines	Issue	Comment
3	3.3.3	3.5		"The Project scope does not include decommissioning of the existing EOC Reach 1."	**As these channels will directly take over the purpose of the emergency outlet channels, this project should include the decomissioning of Emergency Outlet Channels Reach 1 and Reach 3.** **Decomissioning plan required as per the CEAA EIS Guidelines for this project.**
3	3.4.2.5	3.9		"Ongoing alignment optimization planning, financial considerations, environmental considerations, and continued discussions with local landowners, stakeholders and RMs will influence how and where provincial and municipal roads are realigned."	**Discussion also needs to take place with Crown, land users and Indigenous communities.**
3	3.4.2.9	3.10		"Existing trails and other travel routes will not be altered adjacent to the Project footprint area other than as required for Project construction and maintenance purposes."	**Describe how proponent will notify land users about changes to trails.**
3	3.4.2.9	3.10		"After Project construction, access routes not required for on-going maintenance of the LMOC will be decommissioned by contouring, de-compacting and trimming to encourage natural revegetation and will be seeded and/or planted as required."	This sentence should be regarding maintenance and operation. Describe how the proponent will keep public off the access roads that will be permanent going forward.
3	3.4.3.6	3.15		"Temporary Construction Camps and Staging Areas"	Impact of work camps on nearby communities?
3	3.5.2.1	3.18		"ROW clearing will consist of the removal and disposal of trees, shrubs, fallen timber and surface litter from the ROW and temporary access roads, prior to grading."	Timber should offered to First Nations communities. Burning should be avoided.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
3	3.5.2.2	3.18-3.19		"Rock-filled jetties will likely be required and will extend into the lake parallel to most of the excavation area to prevent excessive sediment deposition in the outlet and protect the channel outlet from erosion." "Cofferdams may be constructed to allow dewatering and excavation of the inlet and outlet under dry conditions." "Alternatively, temporary access groins could be constructed within the lake along the edge of the proposed excavation area using rockfill material and/or spoils from the excavation to support excavation in the wet."	**Describe if mouths of outlet channels were studied regarding fish spawning and fish habitat. Impacts of both temporary (construction) and permanent (rock-filled jetties for operation) will impact fish spawning and fish habitat. Describe remediation.**
3	3.5.2 3.5.4.2	3.17-3.27 3.31		Variety of smaller permanent and temporary works and decommisionings.	**Provide studies and plans** for field investigations (vegetation surveys, heritage surveys, land use and occupancy surveys) for all smaller permanent and temporary works (permanent or temporary) such as road re-alignments, new municpal roads to residences, construction camps, access roads, powerlines, staging areas, quarries, drainage, jetties, coffer dams, etc. Provide an area estimate of temporary works. Provide an area estimate of permanent works. Provide decomissioning plans for all temporary works.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
3	3.5.2.11 3.5.2.12	3.23- 3.25		"A detailed Surface Water Management Plan (part of the Water Management Plan in the EMP described in Section 3.7) will be developed to address potential impacts related to surface water movement, to manage the risk of erosion, and will consider reduction of inflows into Birch Creek and Buffalo Creek as a result of the LMOC and LSMOC construction." "An erosion and sediment control plan (Sediment Management Plan) will be developed that will identify temporary and permanent measures to be incorporated during construction until vegetation has been established on disturbed areas."	**Management and environment plans are required** to evaluate the EIS as surface water and water quality is critical concern to First Nations and critical to this project. **Management and environment plans (or drafts of the plans) should be required** to be provided as part of the EIS before the EIS is accepted. Alternatively, CEAA or the proponent should be required to provide a funded review and comment period for each effected First Nation to provide input on the management plans when they are released, and that input must be meaningfully incorporated into the management plans. Plans are missing from EIS
3	3.5.2.13	3.25- 3.26		Revegetation test plots using varying soil thickness and soil amendments are being installed in the Project region and monitored over the summer of 2019 in order to optimize vegetation growth on the channel slopes.	Describe where in the project region revegetation test plots occur. Provide the results of the revegetation test plots in the EIS.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
3	3.5.3.4 3.5.3.5	3.29		Water management and ice management plans	**Water and ice plans should be required** to evaluate EIS as surface water and water quality is of critical concern to First Nations and thus critical to this project. **Surface water and ice included in federal juristiction** related to fish habitat, right to navigation (ice and water), right to fish (summer and winter), right to recreation, etc. **Management and environment plans (or drafts of the plans) should be required** to be provided as part of the EIS before the EIS is accepted. Alternatively, CEAA or the proponent should be required to provide a funded review and comment period for each effected First Nation to provide input on the management plans when they are released, and that input must be meaningfully incorporated into the management plans. Needs to describe how channels will impact ice near channel inlets and outlets.
3	3.5.2.16 3.5.3.7	3.27 3.30		Workforce	**Describe plan to hire local Indigenous persons** as a signficiant component of workforce. Describe **cultural awareness training** workforce (MI employees and contactors) will receive.
3	3.5.4.1	3.31		"Decommissioning of the EOC, Reach 1 (if it is determined to be required) will be addressed in future under a separate appropriate regulatory process."	**Decommissiong of Reach 1 and Reach 3 of the Emergency Outlet Channels is directly related to this project. Decommissioning of Reach 1 and Reach 3 should be included in this project. Decommissioning is a part of the CEAA EIS Guidelines for this project.**

Chapter	Section	Page	EIS Guidelines	Issue	Comment
3	Appendix 3F	9, 11, 12		All references to "…100 m from any waterbodies ordinary highwater mark…")" In reference to removal of woody vegetation, cleared trees and vegetation, spoil piles, overburden and top soil, fueling , equipment maintenance, repair, washing	Work is conducted in areas prone to flooding, storage of materials, clearing of vegetation and activities where hazardous waste or sediments may enter waterbodies should be done at minimum 300m from ordinary highwater mark. Provide verification of "ordinary higher water mark" sources.
3	Appendix 3F	12-19		Section 2.4 Working within or near water	Transport Canada, and Fisheries and Oceans Canada authorizations and MI work plans must take into First Nations right to navigation, travel, fishing, and recreation on ice.
3	Appendix 3F	17-18		"Water quality monitoring shall be required when directed by the Engineer or for in-water work in fish-bearing waterbodies and may be required when working near fish bearing waterbodies or tributaries to fish bearing waterbodies"	**Water quality testing should be among federal requirements.** Water quality testing should also take place in non-fish bearing streams as well, to insure no contaminants, excess nutrients or sediments are entering waterbodies.
3	Appendix 3F	18		"Utilize culvert removal techniques that result in the least amount of impacts to the waterbody and riparian area."	Additionally, **culvert type and design should be chosen dependent on fish species** that may be present or are likely to be present in the waterbody or tributaries to the waterbody.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
3	Appendix 3F	33		"Work shall immediately cease where archaeological or historic artifacts are encountered during construction activities. The discovery shall be reported to the Engineer. a. Work at the location shall be suspended until a Historic Resource Consultant can assess the archaeological or historic artifacts encountered, and mitigation measures are confirmed with the Manitoba Historic Resources Branch."	The proponent is ignoring the Manitoba Heritage Act. **Effected First Nations should be notified and involved if archaeological or historic artifacts are encountered.** Effected First Nations should be meaningfully involved and consulted in mitigation measures undertaken by Manitoba Historic Resources Branch. **A Historic Resources Management Plan should be required for submission, review and comment with the EIS**. Alternatively effected First Nations could be provided adequate funding by CEAA and/or MI to review and comment on the management plan, with the ability to have their input meaningfully integrated into the plan before the project is approved.
3	Appendix 3F	37		"Immediately following construction and decommissioning, all salvaged and stockpiled organics and soils which were set aside during site development shall be spread back over the area from which they originated and shall be seeded."	Re-vegetation plan needed. Plan needs to be included as part of the Channels EIS. Indigenous groups should have sufficient opportunity, funding and time to review and comment on a re-vegetation plan. Re-vegetation should include the planting of trees and shrubs in the proportions prior to clearing of land when possible. Re-vegetation should include the use of medicinal plants, and food plants (such as berry bushes) when possible.
4	4.2.3	4.2		"...the federal Navigation Protection Act…"	Clarify if this project is reviewed under the Navigation Protection Act or Canadian Navigable Waters Act.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
4	4.2.3	4.2		"A listing of legislation pertinent to the construction of the outlet channels and associated works are presented in Chapter 1 (Appendix 1A)."	**Appendix 1A is empty**. Does not contain a listing of legislation pertinent to the Project. **Provide a full listing of federal and provincial legislation** pertinent to the construction and operations of the channels.
4	4.4.1	4.5-4.10		VC are: surface water, fish and fish habitat, vegetation and wetlands, wildlife and wildlife habitat, land and resource use, infrastructure and services, economy, human health, heritage resources, traditional land and resource use, and Indigenous peoples.	**Lack of specific VC. Examples may be specific species at risk, specific birds species nesting in large numbers, specific country foods identified by Indigenous communities, important large game animals identified by Indigenous communities, important furbearers identified by Indigenous communities, important fish species Identified by Indigenous communitites, etc.** **No description of how Indigenous communities had input into the identification and chosing of VCs.**
4	4.4.3.1	4.14		"The spatial boundaries are referred to as the project development area (PDA), the local assessment area (LAA), and the regional assessment area (RAA)."	**The "Project Region" (see numerous references above) is not included here.** Describe how these spatial areas relate to the project region described in chapters 1-3.
4	4.4.4.2	4.16		"Threshold criteria for determining the significance of environmental effects are identified for each VC, beyond which a residual environmental effect would be considered significant. These are generally selected in consideration of provincial and federal regulatory requirements, standards, objectives and guidelines that are applicable to the VC, societal values, or other planning objectives."	**No engagement with Indigenous communities, no identification of traditional knowledge used in determining a threshold for signficant of environmental effects for each VC. These threshold are critical as they determine if environmental effects are "significant". Indigenous communities must have a voice.**

Chapter	Section	Page	EIS Guidelines	Issue	Comment
5	5.2.3.2	5.8	2.2	"Manitoba Infrastructure developed a Project-specific website (https://www.gov.mb.ca/mit/wms/lmblsmoutletsl/index.html) in February 2018 where regularly updated information on the Project was made available."	**Website link not correct**. Leads to "Error 404". Correct website link is "https://www.gov.mb.ca/mit/wms/lmblsmoutlets/index.html" - this needs to be corrected **All 2019 open house materials missing from Manitoba Infrastructure website.**
5	5.3.1.2	5.25-5.26	2.3	"5.3.1.3 Consultation Process for the Project For the proposed Project, Manitoba Infrastructure designed an engagement process that would encourage productive and respectful dialogue between the Manitoba government and the Indigenous peoples." "For communities that are potentially highly impacted by the Project, Manitoba Infrastructure is working on consultation plans and budgets to accommodate community participation."	**As the Project proponent Manitoba Infrastructure as the proponent cannot conduct Crown-Aborignal Consultation.** **At the first Technical Advisory Group (TAG) meeting some communities indicated that Crown Aboriginal Consultation has not occurred. There was confusion between engagement and Crown-Aboriginal Consultation apparent.**
5	5.3.3.2	5.28	2.3	"Following the design and alignment of the Project, Manitoba Infrastructure and INRM identified 31 communities to be engaged by Manitoba Infrastructure and INRM based on geographic area, proximity to the Project, traditional territory, rights-based activities, previous consultations, community protocols and other knowledge of community land use."	**List all 31 identified communities identified by MI and INRM.** Identify each communities degree of engagement up the the point of the EIS. Identify when and how the degree of engagement has changed over time.
5	5.3.4.2	5.49-5.50	4.2.2, 7.1.10	Summary of engagement to-date with Indigenous communities - Poplar River	**Poplar River First Nation should be provided a summary of engagement by MI.** **Poplar River First Nation should be provided a summary of "Consultation" by MI.** No table of Poplar River Comments in Appendix 5.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
5	5.3.4.4	5.59, Appendix 5A Table 5A.23	4.2.2, 7.1.10	Summary of engagement to-date with other Indigenous groups - Keewatinook Fishers of Lake Winnipeg	Keewatinook Spelling (Keewahtinohk)? **Table 5A.23 is not included in EIS Appendix 5A**
5	5.3.4.5	5.60-5.63	7.1.10	"Table 5.3-1 Summary of Indigenous Engagement by VC"	Summary of Indigenous engagement and concern should be by community. This is usual practice. Sources of table content not clear.
5	5.3.3.3	5.8	2.2	"Storyboards produced for public open houses and information sessions and handouts from meetings are posted to the website"	**Open house information from 2014, 2017 and 2018 are all in different webpages and are not linked to each other. Open house information from June 2019 open house is not on website at all.** All open house information needs to be together on one webpage to be easily available to the public. All open house information (including June 2019 open house information) needs to be available to public immediately.
6	6.4.1.2	6.129-6.135		Indigenous Knowledge Gathering	Indigenous knowledge in this chapter is collected from reports only from 2 communities, and two organizations. EIS does not include the Indigenous Knowledge reports. Most of the IK mentioned (other than the few reports) has no reference as to where or when it was collected.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
6	6.4.1	6.139-6.140		Groundwater spatial boundaries of LAA	**No sources. Technical studies are not available.** **Not clear how boundaries are determined.** Example: Groundwater LAA buffer for LMOC is 20km, groundwater LAA buffer for LSMOC is 5km - why difference? Example: Goundwater LAA buffer includes Lake Manitoba shoreline (not clear what "shoreline" includes), a 500m buffer around Fairford River, Lake St Martin and Dauphin River, yet none of Lake Winnipeg shoreline or buffer.
6	6.4.1	6.139-1.141		Surface water spatial boundaries of LAA and RAA	Explain decision about location to cut off LAA in Lake Manitoba and Lake Winnipeg. **No methods or explaination in EIS.** Any water that flows into Lake Winnipeg will make its way north to the Hudson Bay. Explain why RAA does not include waterbodies downstream from Lake Winnipeg
6	6.4.1.6	6.146		"Significance is not determined for groundwater and surface water"	**Significance for groundwater and surface water is necessary.** There are water quality guidelines and baseline water conditions to compare ground water and surface water measurement too. This includes tradtitional knowledge about water flows, water quality, water conditions, etc.
6	6.4.2	6.146-151		Groundwater baseline from: KGS Group 2016b, 2017a, 2017b and 2018	Is baseline in these reports pre or post water regulation and pre or post 2011 and EMOC. EIS ignores baseline pre 2011 Flood. Appears "historical" means from 2016-2018

Chapter	Section	Page	EIS Guidelines	Issue	Comment
6	6.4.2	6.146-151		"Existing conditions are described based on review of existing geotechnical studies performed by the engineering team responsible for conceptual engineering groundwater studies (KGS Group 2016b, 2017a, 2017b and 2018), including groundwater monitoring and sampling, and aquifer tests." "Quality of data consistency varied depending on the section of the PDA, i.e., LMOC or LSMOC: substantially more data were available to characterize groundwater conditions along LMOC compared to LSMOC."	**More complete methods are necessary**. Not enough to refer to other studies being cited. **Studies prior to 2011 flood are needed.** Describe how sampling methods vary between studyes. Describe if sampling methods are comparable between different studies used. Technical reports and studies should be available. Methods should describe which sites have which amounts of data. Additionally sampling should be done to bring all sampling sites up to par with an amount of data to make conclusion with a reasonable amount of confidence.
6	6.4.5.1	6.165-6.166		Surface water baselines appear to be from 2008 to 2018, except for one from 1973. Water levels from 1915.	**No clear time period stated for baseline.** Would have to go into each report listed to determine when water measurements/ studies were conducted. **What time period is the baseline for surface water?** Pre or post water regulation? Pre or post 2011 and EMOC? Surface water baseline studies in this section appear to generally be post 2011 and all post water regulation. Need to use pre 2011 baseline and pre water regulation baselines.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
6	6.4.5	6.165-6.170		Surface water methods	No methods are given for how surface water conditions were gathered in any of the studies or for the proponent's own fieldwork. Only refers reader to studies cited to get methods. Technical studies need to be provided, but relevant methods must be included in EIS. Describe if sampling methods comparable between different studies. Describe the degree of confidence in data collected.
6	6.4.5.2	Table 6.4-9		Table 6.4-9 Summary of Surface Water Quality Parameters for Regional and Local Waterways	**No information in this table on when this data was collected.**
6	6.4.5.2	6.167		"In land areas that were previously inundated during high flow events, overland flooding may have released or transported compounds that can affect water quality in the area. For example, a 1989 study concluded that private wells throughout the Pinaymootang First Nation community were contaminated and not suitable for drinking as they had been impacted during water table rises that likely occurred when the land was flooded, saturating the soil and with it, septic tanks and water wells (LM and LSMRRC 2013). Table 6D.5- 1 in Section 6D.5 of Appendix 6D provides a qualitative summary of existing sources of potential contaminants to surface water in the LAA."	Describe when water quality measurements used by MI in this study were collected. Describe the value in having water quality measurements taken during flood events and during times of normal water levels. EIS requires similar context based on 2011 flood. **Water quality measurements should be taken during flooding events and described in the EIS as well,** as the water quality of flood waters will have a direct route to flow through Lake Manitoba, Lake St Martin and Lake Winnipeg should the channels be built.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
6	6.4.5.2	6.170		"Manitoba Hydro regulates Lake Winnipeg outflow for power production when the wind-eliminated water levels are between elevation 216.71 m asl (711 feet) and 217.93 m asl (715 feet) (Manitoba Hydro 2019). When the lake level rises above elevation 715 feet, Manitoba Hydro is required to initiate maximum discharge from Lake Winnipeg. During periods when the level falls below elevation 711 feet, control of Lake Winnipeg outflow is under the direction of the Province of Manitoba Minister of Sustainable Development."	**No mention of the regulatory requirement which** could be affected by a combination of seasonal factors when channels are operating.
6	6.4.71	6.174-6.175		"The assessment of residual effects on surface water uses information generated for the Project area from 2011 to 2019 from a number of studies conducted by Manitoba Infrastructure, KGS Group, North/South Consultants, Hatch, Stantec, Manitoba Sustainable Development and the Province of Manitoba, as well as relevant historical reports for the region." "Because the EOC is in the existing environment, was used in the past under emergency conditions, and may be used before construction is complete (if an emergency occurs), then, for the purpose of the assessment, the use of EOC is included the EIS existing conditions (without the Project)."	Provide proper reference citations in text for each of these studies so that they can be identified and found in the references section, and/or online. Provide studies listed as appendices to EIS. Existing environment already includes damages from unlicensed emergncy outlet channel. Proponent has made the Emergency Outlet Channels part of the EIS and part of the Project. Does not compare to a baseline of prior to EOC, does not compared to a baseline prior to water regulation in Manitoba. Baseline is from 2011-2019.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
6	6.4.7.7	6.204		"Based on historical and existing surface water quality data for the LAA, and information on the potential effects of high flows on surface water quality obtained from the EOC studies, it is not expected that the operation of the LMOC and LSMOC will alter the surface water quality in the LAA beyond the range of variability already observed in these waterways."	This section does not mention methods, but assumes water quality is being dicussed and measured in relation to non-flooding periods. Flood water is of lower quality than water quality of water in waterbodies due to flow off land (debris, sediments, nutrients). As the channels gives a faster process for water to reach Lake St Martin and Lake Winnipeg, in flood events this poor-quaity water will reach Lake Winnipeg faster, and result in lower water quality in Lake St Martin and Lake Winnipeg. **Emergency Outlet Channels Studies are not available as appendices.** As all this water is flowing from Alberta and Saskatchewan before hitting Manitoba. Flowing through areas of high agricultural and urban uses that contribute excess nutrients, sedimentation and debris.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
6	6.4.7 6.4.8	6.174- 6.212		Project residual effects "geographic extent of the effects is LAA"	This is said in relation to water quality, ice processes, sediment transport, flow and water levels, and drainage. **In reality the geographic extent of effects is much larger.** All water in Lake Winnipeg north basin mixes, so the north basin (the RAA) would be impacted. Impacts across the North Basin were seen by Indigenous fishers already when the emergncy channels operated. All water that flows into Lake St Martin and Lake Winnipeg eventually flows northerward until it reaches Hudson Bay. Any impact on water quality, ice processes, sediment transport and drainage would impact all connected waterbodies.
6	6.4.9	6.212		"The changes to surface water resources due to the construction and operation of the Project are expected to help alleviate flooding and inundation of low-lying areas, which is a desired and positive outcome of the Project. This positive outcome is expected to benefit federal lands in the same manner as other non-federal lands in the area."	Flooding in Lake Winnipeg affects federal lands and reserve lands when every flooding event occurs. See issues with water quality and flood water described previously. This would impact federal lands as well. Including reserve lands.
6	6.4.10.1	6.212- 6.213		"There is a high degree of confidence that the effects on domestic and livestock wells and wetlands (if there are any effects) can be mitigated by the proposed Groundwater Management Plan."	**The proposed Groundwater Management Plan is not submitted with the EIS,** so cannot make the assumption that effects can be mitigated, if there is not yet a plan at all.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
6	6.4.10.2	6.213		"The effect of the Project on regional flows and levels was modelled with a high degree of confidence because as there are over 100 years of inflow data to ensure a large range of flows were assessed." "It will be difficult to quantify effects to flows in the Buffalo Creek system before construction is complete, although the construction and operation of the LSMOC will likely cause a reduction in flows."	100 year baseline may not be accurate. Studies are showing that the 1900s were a climate anomaly (wetter and colder than long term climate record) in Manitoba There is high confidence on regional flows and levels, yet its "difficult to quanitfy effects to flows in Buffalo Creek…". This is contradictory - there is not high confidence then. **Results of modelling not provided - construction is seperate state of project than operation.**
6	6.4.10.2	6.213		"Confidence in the change in flows and levels is high and, therefore, the confidence in direction of the effects on fluvial geomorphology and shoreline geomorphology, sediment transport, debris and water quality is high. The remaining residual effects characterizations, such as magnitude, duration and frequency are discussed qualitatively with moderate prediction confidence."	**No explaination about why the "remaining residual effects characterization..." have moderate prediction confidence.** **Rate of water movement is missing.** **There does not seem to be a recognition in the EIS how flood water flows differ from normal water flow in terms of force of flow, nutrients, debris, sediment, etc. There does not seem to be a recognition that providing a short cut of water flow from Lake Manitoba to Lake St Martin to Lake Winnipeg will likely greatly decrease the passage time of water moving through the system - in terms of negative effects.**

Chapter	Section	Page	EIS Guidelines	Issue	Comment
6 7	General	General			Lack of relation of changes to surface water to fish and fish habitat. Even if surface water effects are negligable because the same water is flowing (just in different patterns). These changes in pattern of ice, water quality, flow, volume, sedimentation, etc all negatively impact fish and fish habitat.
7	7.2.1.2 7.2.1.3	7.5- 7.11		Indigenous communities comments without context.	**Same issue as in chapter 6. Provide comments by Indigenous communtites without context of when or who or which types of communication method was used.** **No citation of community engagement reports. Assume then that there was no MI funded traditonal knowledge studies or engagement reports written by communities that discussed fish and fish habitat.**
General	General	General		Traditional knowledge	**So far in chapters 6 and 7 traditional knowledge has only been used to identify concerns.** **Traditional knowledge should be used in baseline information to assess project changes against, just as the western science is used.**
7	7.2.1.4	7.11- 7.13		Focal fish species	Should add Lake Sturgeon for importance to Indigenous peoples
7	7.2.1.5	7.13- 7.15		"The LAA excludes the entirety of Lake Manitoba, with the exception of Watchorn Bay, because Project effects on fish and fish habitat in this area are expected to be unmeasurable."	Indigenous fishers on Lake Winnipeg have seen negative impacts on fisheries across the north basin due to the Emergency Outlet Channels operation. Can use Traditional Knowledge to predict impacts of Channels across the north basin of Lake Winnipeg

Chapter	Section	Page	EIS Guidelines	Issue	Comment
7	7.2.2.1	7.17-		"Descriptions of the methods used to conduct the fish habitat assessments, bathymetric and substrate surveys, benthic invertebrate surveys, and fish community inventories are provided in the technical reports identified above and listed in the reference section of this assessment."	**No methods are given for fish and fish habitat in EIS.** Not good enough to refer only to techical reports to see methods. No description of whether methods are comparable to each other. Cannot determine confidence in results if no methods are in EIS.
7	7.2.2.1	7.18		"Fish species targeted by the recreational fisheries in all three lakes were identified using professional experience…"	Describe the name and qualifications of individual(s) "professional experience" used.
7	7.2.2.1	7.18		**"Although limited, information on traditional and subsistence fisheries conducted by local Indigenous groups living on or near Lake Manitoba, Lake St. Martin, and the north basin of Lake Winnipeg was provided by communities during engagement by Manitoba Infrastructure for the Project."**	**This information is limited because Manitoba Infrastructure did not fund Indigenous communities to conduct traditional knowledge studies for the project.** **Leaves out Indigenous commerical fishery.**
7	7.2.2.1	7.18-19		Manitoba's "Fish Species at Risk in Manitoba" website (https://www.gov.mb.ca/waterstewardship/fisheries/habitat/sare.pdf)	**Printed in 2002. This reference is 17 years old.** Impacts on waterbodies and species at risk in Manitoba since have been signficant.
7	7.2.2.1	7.18-19		Manitoba Water Stewardship: http://www.gov.mb.ca/waterstewardship/stopais/	**Website link does not work.** Comes up as "Forbidden. You do not have persmission to access /waterstewardship/stopais/ on this server"
7	7.2.2.1	7.18-19		Cary Institute: https://www.caryinstitute.org/educators/teaching-materials/changing-hudson- project/zebra-mussel-fact-sheet	**Website link does not work**. Comes up as "Page not found"
7	7.2.2.1	7.18-19		Ontario's Invading Species Awareness Program: http://www.invading species.com/rusty-crayfish/	**Website link needs to be fixed** to remove spacing between "invading" and "species".

Chapter	Section	Page	EIS Guidelines	Issue	Comment
7	7.2.2.2	7.19-7.26		Fish habitat in RAA	**Missing** discussion of fish habitat in all of the other waterbodies included in RAA. **Missing** discussion of how flood control projects have changed fish habitat as they have been implemented. **Missing** description of vegetation and shoreline in relation to fish habitat. **Missing** consistant description of important of waterbody to fish. **Missing** consistant water quality measurements. **Missing** consistant description of invertebrates.
7	7.2.2.2	7.26-7.33		Fish habitat in LAA	**Missing** consistant description of importance of waterbody to fish. **Missing** consistant description of whether waterbody is important to spawning. **Missing** consistant water quality measurements. **Missing** consistant description of invertebrates.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
7	7.2.2.2	7.34		**"Although primary sources of Traditional Knowledge for the Project area are limited to those Indigenous groups that have been engaged by Manitoba Infrastructure to date (see Section 7.2.1.2) and, therefore, do not necessary include all potentially affected groups or specific information from the LAA, a preliminary list of fish species that are traditionally important for local Indigenous groups has been compiled."**	**This information is limited because Manitoba Infrastructure did not assist Indigenous communities to conduct traditional knowledge fish/ fisheries studies for the project.** **Ignores Indigenous fishery.**
7	7.2.2.2	7.40-7.44		Habitat Use and Life History Characteristics of Focal Species	**Lack of traditional knowledge** used in fish descriptions, habitat use, locations. etc **Lack of citations** for fish distributions and habitat use. **No information about specific locations** of forage fish unlike with the other focal species. **Without descriptions of methods for technical reports, the validity of results in this section cannot be assessed.** **No assessment of population numbers or population trends. No assessment of relative importance in commerical fisheries or subsistance fisheries.** Lake sturgeon should be a focal species

Chapter	Section	Page	EIS Guidelines	Issue	Comment
7	7.2.2.2	7.44-7.46		Fisheries	**Lack of information about Aboriginal Fisheries**, both subsistance and commercial. Does not consistantly give amounts of the "focal species" harvested. **Does not consistantly give an idea of harvest trends of "focal species".** **Does not discuss provincial policy that impacts fisheries** (such as provincial buy back of fishing quotas on Lake Winnipeg). **Does not discuss impact of pollution and contaminantes on Lake Winnipeg and impacts to fishery.**
7	7.2.2.2	7.46		"The preferred habitats, Manitoba distribution, and primary modes of dispersal for each AIS of concern are provided in Appendix 7A, Table 7.2A-16."	Charts and tables should be in EIS, not in appendix.
7	7.2.2.2	7.47		Species at Risk - Mapleleaf mussel and Lake Sturgeon "Although both the above species were historically found within the LAA, there are no recent records of mapleleaf in the LAA and natural occurrences of Lake Sturgeon are rare and transient and restricted to Sturgeon Bay. Consequently, neither species have been assessed further."	Not clear if sampling was done to see if Mapleleaf Mussel or Lake Sturgeon is in LAA or RAA. No traditional or Indigenous knowledge used. Both federal and provincial species at trisk should be assessed. Why used LAA only if these species are located elsewhere and could be affected.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
7	7.2.2.2	7.47-7.48		"No other aquatic species at risk have been found to occur within the LAA to date. Bigmouth buffalo, silver chub, bigmouth shiner, and chestnut lamprey occur in the Red and Assiniboine river systems and south basin of Lake Winnipeg but not in Lake Manitoba, Lake St. Martin, or Sturgeon Bay. Shortjaw cisco are restricted to deep areas (usually greater than 50 m) of larger lakes and, therefore, are likely restricted to the pelagic areas of the north basin of Lake Winnipeg and the narrows separating the north and south basins." "A list of habitat preferences and nearest known occurrence of each the species at risk identified is provided in Appendix 7A, Table 7.2A-17."	Lake Sturgeon occur in project region and RAA Big mouth buffalo have been caught in Delta Marsh by DU so are possibly in Lake Manitoba All of north basin Lake Winnipeg is RAA, so Shortjaw Cisco need to be discussed and assessed. All SARA species that are in species range have species specific fieldwork conducted to determine range and population size in waterbodies impact by the Project. Move chart into body of EIS. Tables and charts should be in EIS, not the appendix.
7	7.2.3	7.48-7.49		Project interactions with Fish and Fish habitat	**Section is extremely short**. Provide more detail on location, timing and degree pf potential project interactions with fish and fish habitat. **Provide table for decommissioning of emergency outlet channels interaction with fish and fish habitat.** **Table 7.2-5 seems like it under reports issues with fish and fish habitat.** Ex: dewatering likely changes fish passage. Ex: earthworks likely alters or destroys fish habitat. Ex: Quarry development likely alters or destroys fish habitat, etc

Chapter	Section	Page	EIS Guidelines	Issue	Comment
7	7.2.4.1	7.49		"This entailed using professional judgement based on an understanding of the potential effect, the habitat use and life history of the focal fish species, and the likely effectiveness of mitigation measures, supported by scientific literature, secondary literature, industry best management practices and regulatory guidelines, as available."	Provide the name and credentials of individuals whose "professional judgement" were used. Provide references and sources to verify.
7	7.2.4.1	7.50		"Avoidance and mitigation measures included those identified in DFO's "Measures to avoid causing harm to fish and fish habitat" https://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/measures- mesures-eng.html, accessed June 22, 2019)"	**Link does not work** Discussion of avoidance and mitigation measures lacking.
7	7.2.4.2	7.51		"Based on preliminary design, the total estimated areas of fish habitat to be permanently altered or destroyed by the excavations are: • LMOC inlet in Watchorn Bay is estimated to be 377,515 m2. • LMOC outlet in Birch Bay is estimated to be 433,887 m2. • LSMOC inlet in Lake St. Martin is estimated to be 521,217 m2. • LSMOC outlet in Sturgeon Bay is estimated to be 434,195 m2."	Describe how proponent will offset permanent habitat loss. Changes in water flows can change erosion of shoreline. Describe how proponent will monitor shoreline of Lake Winnipeg, Lake Manitoba, Lake St Martin and all other waterways in LAA for the lifecycle of the channels to determine erosion of shoreline and thus impact to fish habitat (shoreline habitat and additional turbidity of water due to sediments). Describe in realtion to different flood senarios. Will the proponent be held accountable for unforeseen shoreline erosion, amd loss of fish habitat? How will shoreline erosion be mitigated?

Chapter	Section	Page	EIS Guidelines	Issue	Comment
7	7.2.4.2	7.53		"However, other salmonid species, such as brook trout and Arctic char, require groundwater for spawning. This suggests that regional groundwater inflows to Lake St. Martin could be a reason why Lake St. Martin is such an important spawning area for lake whitefish. A precautionary approach has been taken in this assessment by assessing the potential effects on lake whitefish spawning in Lake St. Martin as a result of groundwater effects. Monitoring will be conducted during operation of the LMOC and LSMOC to determine the validity of this potential pathway to lake whitefish spawning habitat in Lake St. Martin."	**Monitoring after construction is over and habitat is destroyed goes against precautionary approach.** **To follow precautionary approach** monitoring needs to happen before channels are built. This should be done as Lake Whitefish are an important commercial and subsistance species.
7	7.2.4.2	7.55		A culvert and gate system will be constructed on Creek C approximately 1 km upstream of its confluence with Buffalo Creek and similar culvert and gate systems will be constructed on two unnamed headwater tributaries of Buffalo Creek with confluences just downstream of Big Buffalo Lake.	Describe how culverts and gate system impact fish passage, spawning and fish mortality.
7	7.2.4.2	7.50-7.58		Permanent Alteration or Destruction of Fish Habitat	**Lack of use of knowledge from impacts of emergency channel use on Lake Winnipeg.** Lack of use of knowledge from Indigenous fishers and lake users who noticed impacts from operation of emergency channels on Lake Winnipeg.
7	7.2.4.2	7.54		Introduction of Aquatic Invasive Species	Shallow water without water flow may aid in the establishment of invasive species. **Provide plan for keeping channel infrastructure free of invasive species.**

Chapter	Section	Page	EIS Guidelines	Issue	Comment
7	7.2.4.2	7.58		"While it is currently unknown how large the potentially affected areas at the inlets and outlets will be, this change in local hydraulics at the inlet and outlet locations may affect the availability and suitability of habitat in these locations for spawning, rearing, foraging, or overwintering of focal fish species."	How will the proponent adjust its operation of the Channels in relation to affected areas? Any data gained from operation of emergency channels? Describe how loss of fish habitat was estimate earlier in chapter 7 if the availability and suitability of habitat in these locations is unknown.
7	7.2.4.2	7.58		"The Project inherently mitigates effects on fish habitat by creating new fish habitat in the LMOC and LSMOC." "Substrate composition in the LMOC will be primarily till. Over time, aquatic vegetation may become established along the margins of the channel. Otherwise, the channel will provide relatively homogenous, low diversity habitat for fish." "Pool depths upstream of the drop structures will be sufficient to maintain a wetted channel upstream to the next drop structure....Substrates in the channel will be primarily till."	**Homogenous habitat, low quality habitat for fish does not effectively replace fish habitat impacted by the outlet channels.** If the channels are to create fish habitat it needs to be incorporated into channel design (ex: aquatic vegetation, changes in substrata, etc). Describe how water depths upstream and downstream of control structures and LSMOC drop structures will be handled if channel may run dry (drought years) and fish are stranded. No explaination of effect on spawning.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
7	7.2.4.2	7.58		"To limit water velocities at these locations, the LSMOC will have 12 drop structures constructed of rockfill with a sheet pile cut-off at the upstream crest. Pool depths upstream of the drop structures will be sufficient to maintain a wetted channel upstream to the next drop structure."	Not clear if this relates to flood water velocities. **Fish will not be able to pass between each drop structure in the LSMOC.** How will proponent stop commerical and recreational fishers from harvesting fish trapped by drop structures or in shallow channels?
7	7.2.4.2	7.64		"Spiny water flea and zebra mussel veligers cannot disperse upstream because they are poor swimmers or only passively drift downstream or in lake currents."	Describe plan for keeping channel infrastructure free of invasive species.
7	7.2.4.2	7.64		The LMOC and LSMOC will not provide any new connections between waterbodies that are not already naturally connected by Fairford and Dauphin rivers.	Channels create an artifical and direct short cut between water bodies. Channels operate differently than natural water bodies.
7	7.2.4.2	7.64		"Increased access and the presence of the construction workforce will also increase the risk for AIS transfers. However, these vectors of AIS transfer already exists when boaters, anglers, and commercial fishers move between the lakes."	Describe how the proponent will keep anglers, fishers, recreation users out of channels or monitor for transfer of AIS by recreation or commerical users.
7	7.2.4.2	7.66		Sediments transported down the LSMOC into Sturgeon Bay are expected to eventually be transported into the main basin of Lake Winnipeg. This is because wind- and wave-driven sediment re-suspension is generally higher in Sturgeon Bay than in deeper areas of Lake Winnipeg (McCullough et al. 2001).	Wind and wave driven re-suspension of sediments could be a problem in all of Lake Winnipeg, not just Sturgeon Bay.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
7	7.2.4.2	7.66		"These would be sporadic and the effect to fish and fish habitat is expected to be short in duration because any sediment accumulations would be resuspended and removed during the next high wind event on Birch and Sturgeon bays." "Therefore, the residual effects of sediment deposition on fish and fish habitat are expected to be negligible."	Describe results of sedimentation and suspension of sediments from Emergency channel use from both western science and traditional knowledge. Fishers saw changees in water quality (fish habitat) and fish species after emergency channel use.
7	7.2.4.3	7.67		"During operations, a change in fish passage will occur when the water control structures are open."	**Change in fish passage will alos occur when water control structures are open.** Fish may become stranded in water pools between drop structures. Fish may enter into dead-end channels.
7	7.2.4.4	7.74		Project Pathways	Ignores deteriorating water quality in Lake St Martin or Lake Winnipeg due to large volumes of poor quality flood water entering waterways during channel operations. Debris, excess nutrients, sediment, deleterious substances. Missing changes in ecosystem health (and thus fish health and moratility)) due to invasive species.
7	7.2.5.1	7.84		Significance of residual environmental effects from the project	Definition of signficant effect on fish and fish habitat currently only discusses CRA fish species. Needs to also include aquatic species at risk in each of the three bullet points.
7	7.2.5.1	7.84		"Based on the assessment of the proposed effects of the Project on fish and fish habitat, and the proposed avoidance and mitigation measures, the residual effects are predicted to be not significant."	**Not clear on how this decision was made.** Describe how the positive and negative effects balanced out. Describe how much weight each effect was given.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
7	7.25.1	7.84		No consideration about interaction of effects on fish and fish habitat in chapter 7.	No consideration that project-caused permanent alteration or destruction of fish habitat, alteration or disruption of fish passage and change in fish health or mortality can interact. These issues do not happen in independent silos. Interaction effects can cause amplification of negative impacts on fish, stronger negative effects than any one issues may have on its own. **Effects can multiply.**
7	7.2.7	7.85		This assessment has been based on an understanding of the potential interactions between Project activities and components and fish and fish habitat using baseline data collected between 2011 and 2018 to monitor the effects of the EOC. Project-specific baseline data were collected in the small lakes, streams, and drains along the proposed outlet channel routing options and in the immediate vicinity of the channel inlets and outlets in Lake Manitoba, Lake St. Martin, and Lake Winnipeg. One baseline assessment of the overall fish population in Lake St Martin was conducted in 2018. Similar data collection in other lakes and rivers in the LAA was not conducted.	No assessment of effects of activities ore 2011 flood, and no assessment in project region. No assessment of affects beyond RAA. **No description of methods** of data collection have been given in EIS. **No maps and description of data collection locations** were given. **No maps of results were shown in body of EIS** (fish spawning sites, likely areas of sediment accumulation, etc) No use of community-led traditional knowledge in baseline or determination of significance.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
7	7.2.7	7.85		Despite the gaps, data were available from most waterbodies in the LAA and are considered adequate for describing the existing aquatic environment, identifying potential interactions and identifying the avoidance and mitigation measures that would be necessary to limit potential effects on fish and fish habitat. However, additional data will be required, prior to construction, to address potential changes to the Project coming out of detailed design and to ensure that the baseline is adequate for an effective aquatic effects monitoring program.	**"Considered adequate" by whom?** Provide name and credentials. How is the information in the EIS "considered adequate" if additional data collection is needed to ensure a proper baseline for monitoring? This EIS should contain all information for a baseline adequate for an effective aquatic monitoring program. **If more data is needed, describe when it will be collected.** How will additional data, monitoring programs and potential changes to the project be reviewed by CEAA, DFO, Indigenous groups and the public? Will Indigenous groups and the public have access to additonal data, reports and monitoring results collected by the proponent? Potential changes to the Project plus gaps in data could result in increased effects and risk to fish and fish habitat.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
7	7.2.7	7.85		"Changes in lake levels due to the Project have been predicted by using water balance models and are considered sufficiently accurate for the assessment of these changes on fish and fish habitat." "Hydraulic modeling to predict the potential change in hydraulic conditions... have not been conducted. Hydraulic conditions in the LMOC and LSMOC ... have not been modeled nor have hydraulic conditions at, and downstream of, the water control structures and drop structures. Therefore, assessment of the potential effects of changes to the hydraulic conditions ... based on professional judgment using the information available."	**Adequate hydraulic modeling as not been conducted.** **"Considered sufficiently accurate" by whom? Provide name and credentials.** **"Based on professional judgement" by whom? Provide name and credentials.** Judgement based on a lack of modelling should be described as having poor confidence in results.
7	7.2.7	7.85		Similarly, modeling of groundwater flow pathways and conductivity has not been conducted. Predictions of potential effects of the Project on groundwater/surface water interactions are instead based on field data collected from groundwater wells located in the expected zone of groundwater influence, an understanding of the topography and surficial geology of the area, an understanding of the conceptual dimensions, locations and depths of the proposed outlet channels, and professional judgment."	**Modelling of groundwater flow pathwas has not been conducted.** Judgement based off of a lack of modelling should be described as having poor confidence in results. "and professional judgement" by whom? Provide name and credentials. Map of groundwater wells required, with data over time from these wells.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
7	7.2.8	7.86		Measures identified in these plans will mitigate, manage and monitor most of the potential environmental effects on fish and fish habitat during the construction and operation phases of the Project.	EMP, CEMP, OEMP, AEMP all need to be available for review and comment by CEAA, Indigenous groups and public. **Monitoring results need to be publically accessible** on a website separate from Manitoba Infrastructure government website. This website needs a commitment to be operation for lifecycle of this project. **Monitoring needs to be ongoing for lifecycle of project.** Monitoring should be done in partnership with Indigenous communities and commerical fishers.
9	9.2.2.1	9.19		Table 9.2-3	Not all reports used in chapter 9 are cited with name and date. **No link to find reports.** The information provided does not give enough information to find each report or describe how many reports were used in total. **Does not describe which sets of data were used in which analyses.**

Chapter	Section	Page	EIS Guidelines	Issue	Comment
9	9.2.2.1	9.19-9.23		No Indigenous sources in Table 9.2-3 No Indigenous sources in Table 9.2-4 No Indigenous sources as part of "Key Person Interviews" No field studies done.	No Indigenous knowledge, interviews, or community-led engagement or studies (funded by proponent) contributed to section 9, according to the methods section. Describe how Indigenous knowledge was incorporated into section 9. Many resources users (hunters, trappers, fishers, gatherers, recreation users, etc) in this area are Indigenous but no information is gathered from them. **No description of methods in the methods section.** Cannot verify the accuracy or relevance of methods without description of methods.
9	9.2.2.2	9.23		"resource use (i.e., hunting, trapping, fishing, mining/aggregates, forestry, and groundwater and surface water use [including major aquifers and water quality, groundwater and surface water supply, flowing wetlands and springs, use of water resources)"	**Resource use by industry, personal, commercial and traditional use should be separated out.** **Winter conditions and winter resource use is missing.** **Resource use is missing:** gathering (such as berry picking, medicinal plants, etc), recreation, navigation
9	9.2.2.2	9.27		Designated lands	This section needs to make clear that Ecological reserves are protected lands. This section needs to make clear that wilderness parks are protected lands. Manitoba Crown lands in project region, PDA, RAA and LAA should be listed.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
9	9.2.2.2	9.28		The Project outlet channels will affect both Lake Manitoba and Lake Winnipeg, both “Scheduled Waterbodies” under the federal Navigation Protection Act (NPA).	Will the channels project be evaluated under NPA or CNWA?
9	9.2.2.2	9.44		Commercial, subsistence and recreational fishing take place in the LAA and RAA in Lake Manitoba, Lake St. Martin, Dauphin River, Mantagao River, Sturgeon Bay and some tributaries to Lake Manitoba, Lake St. Martin and Sturgeon Bay.	**Missing Lake Winnipeg** and other tributaries to Lake Winnipeg. Indigenous commercial fishers should be engaged.
9	9.2.2.2	9.44		"Lake Manitoba is commercially harvested for suckers, carp, walleye, and yellow perch. Commercial fish species harvested in Lake Winnipeg include walleye, sauger, lake whitefish, and some suckers and northern pike (see Chapter 7)."	Break down catch in Lakes Winnipeg and Manitoba into summer and winter fisheries like Lake St Martin was in the EIS text.
9	9.2.2.2	9.45		"Commercial fishing on Lake Manitoba remains a major source of income for some residents in the RMs of Grahamdale, West Interlake and Indigenous communities. The Ashern Fisheries Co-operative Ltd. acts as a regional marketing agent for the Freshwater Fish Marketing Corporation."	Left out other fishers associations and co-ops, like Keewatinook Fishers of Lake Winnipeg, Grand Rapids Fishers Co-op, etc. Out of date re the Freshwater Fish Marketing Coorporation.
9	9.2.4.1	9.55		"The assessment of change in commercial fishing considered the effects from disruption to commercial fishing activities and the potential to damage equipment (e.g., boats, nets)."	Also need to assess impact on infrastructure such as docks, harbours
9	9.2.4.1	9.55		"The assessment of Project effects considers excavation of channels, the change in access, which can alter the fisher’s access to lakes and the presence of the channels, which can interfere with fisheries."	Also needs to assess impacts to navigation re fishing in winter and summer. Debris, different water flow when channels are open. Issues with frazzle ice, differences in ice thickness in winter (especially during freeze up and thaw).
9	9.2.4.2	9.63		"Permanent access to the LSMOC will be via the proposed LSM Access Road (formerly a 19.5 km winter road) that extends northward from the existing forestry road (Idylewild Road) to the LSMOC channel inlet and the Emergency Outlet Channel (Reach 1)."	The Lake St Martin Access Road should be included in Channels EIS. All roads should be on EIS maps.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
9	9.2.4.2 9.2.4.5	9.63 9.91		"A new distribution line will cross provincial Crown Land in unorganized territory resulting in a degradation effects to Crown land. Manitoba Hydro will be responsible for constructing the distribution line for the Project." "Construction of a new distribution line as part of the LSMOC would have its own disturbance and nuisance effects associated with it. The route of the distribution line is expected to cross provincial Crown land in unorganized territory. A third party, Manitoba Hydro, will construct the distribution line for the Project."	Have not seen detailed description of route, information, re the distribution line in the channels EIS. Provide needed information on this part of the project (field surveys, engagement with Indigenous peoples, maps,etc). Distribution line pathway needs to be included in PDA. Have seen no/little info on distribution line route in impacts to water, impacts to fish, mentions in mitigation plans, etc.
9	9.2.4.5	9.92		"During construction activities, terrestrial furbearers may leave an area because of sensory and habitat disturbance, which could result in a temporary decline in trapping productivity….The presence of the channels could result in negative local effects on some wildlife populations in moving from one area to another that may lead potentially to overharvesting in a particular area."	This is also true of fish and fisheries. Desired aquatic species may move out of an area due to sensory and habitat disturbance (blasting, excavation, bridge and culvert installation). Fish may be attracted to channel outlet or pulled into channel inlets when channels are in operation. This may limit access to fish (becuase of no go zones at channel outlets or removal of fish pull down channels) or may lead to over harvesting if fish aggregate at mouth of channels where fishers can reach them. Also need to include negative impacts of sedimentation and re-suspension of sediments in the water during excavation of channels, creation of channel inlets and outlets, bridge and culvert work. Describe compensation for loss in trapping productivity.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
9	9.2.4.5	9.92		The creation of new channel outlets related to construction could result in a restriction in hunter/outfitter access.	Also need to include results in restriciton to fisher access in Watchorn Bay, Sturgeon Bay, Lake St Martin, any other waterbody impacted by construction of channel, road, bridge, distribution line, etc.
9	9.2.4.5	9.91-9.92		Project pathways: Construction: Hunting, Trapping, and Fishing	**Does not include impacts to fishing.** See above comments to add. Not adequate in current form.
9	9.2.4.5	9.94		Project pathways: Construction: Groundwater and Surface water use	**Does not discuss surface water use at all.** Project pathways for construction on surface water needs to be included.
9	9.2.4.5	9.94		Project pathways: Operation and Maintenance: Hunting and Trapping	**Fishing has disappeared from this section.** Add fishing into this section or make fishing its own section. Regardless project pathways of negative impacts on fishing needs to be discussed.
9	9.2.4.5	9.95		Project pathways: Operation and Maintenance: Groundwater and Surface Water Use "In general, groundwater and surface water use, quality and quantity will not be affected under normal conditions of operation of the Project."	**Surface water use will be impacted by channels.** There will be areas in Watchorn Bay, Sturgeon Bay and Lake St Martin at Channel inlets and outlets that public and Indigenous groups cannot use for recreation, navigation, fishing, etc when channels are either open and closed. When channels are open water flow, currents, debris in water, sedimentation, etc. from flood water will impact water quality and safety when using water for recreation, navigation, fishing, etc. Project pathway of negative impacts on surface water during operation of channels needs to be addressed.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
9	9.2.4.5	9.97		Mitigation: Commerical Fishing	No plan to replace fishing habitat permanently altered destroyed by Channels with equivalent fish habitat accessible to commerical fishers. No plan to reclaim temporarily altered or destroyed by Channels. **Water management plan must be public and available for comment and review by Indigenous fishers before CEAA gives approval for Channels project.** No understanding that Lake Winnipeg north basin fishers are Indigenous.
9	9.2.4.5	9.98		Mitigation: Groundwater and Surface Water	**Water management plan must be public and available for comment and review by Indigenous groups before CEAA gives approval for Channels project.** **No mitigation listed for negative impacts on surface water beyond having a water management plan.**
9	9.2.4.5	9.100-9.101		Project residual effects: Construction: Commerical Fishing "Access to these commercial fish lakes will be negligibly affected by the Project. The physical area removed (temporarily) from fish harvesting (i.e., the inlet and outlet areas) will be negligible in proportion to the overall sizes of Lake Manitoba (1.4%), Lake St. Martin (0.2%), and Lake Winnipeg (0.1%)." "As such, the residual effect is considered low due to small area for commercial fisheries affected, limited to the LAA, medium-term in duration, infrequent, and reversible (short-term)."	It is not the area removed from harvesting that is necessarily important. If an area is particularily abundent for fish habitat then removing a small portion of lake from access for commerical fishing may have a disproportionately large impact on fishers, fish and fish habitat. No detail on spawning areas affected. Study of effect of 2011 flood on fishery is needed.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
9	9.2.4.5	9.103		Project residual effects: Construction: Groundwater and Surface Water	**No mention of project residual effects on surface water.** Only discusses groundwater. Need to rank project residual effects on surface water.
9	9.2.4.5	9.106		Project residual effects: Operation and Maintenance: Commerical Fishing "No residual effects on commercially fished areas would be expected from the channels during the operation and maintenance phase because habitat alteration from channel construction would have already occurred."	Ongoing lack of access at channel inlets and outlets regardless of whether channels are opened or closed. When channels are open fish may be attracted to water flow from channels and aggregated in areas at channel outlets closed to fishers. When channels are open fish may be pulled down channels into next lake. During and after channel operation fishers may be impacted by floodwater (debris, sedimentation, re-suspension of sediment, poor water quality (on fish health), different currents and impacts on fish location,etc. During and after channel operation fishers' equipment, infrastructure and access may be impacted by debris from floodwater - boats, docks, nets, motors, etc.
9	9.2.4.5	9.107-9.108		Similarly, it is anticipated that the aggregate/quarries developed for the Project not needed for operations would be reclaimed if required.	Quarries affect access to land for exercise of Aboriginal rights. No compensation or mitigation has been included in EIS.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
9	9.2.4.5	9.107-9.108		Project residual effects: Operation and Maintenance: Groundwater and Surface Water "With the implementation of the standard mitigation measures described above, residual effects on groundwater and surface water use during Project operation and maintenance are expected to be low in magnitude, long-term in duration, limited to the PDA, regular continuous, and irreversible because seepage could continue."	No discussion of negative residual effects on surface water, only discusses groundwater. Impact on surface water would be on the RAA, not PDA, as surface water mixes continuous in waterbodies. Impact on surface water during flood events when channels are open would be medium to high in magnitude.
9	9.2.5.1	9.110		"A significant effect on land and resource use, not including agricultural land use, is one that results in: • wide degradation, restriction or disruption of present land and resource uses to a point where these activities and production cannot continue at or near baseline levels or cannot be adequately compensated" "Project effects on resource use, including hunting, trapping, fishing, mining/aggregates, forestry, and groundwater and surface water have been considered and reduced through the application of mitigation measures and are of low to moderate magnitude. The Project will not degrade, restrict or disrupt any of these land and resource uses to a point where they cannot continue at or near baseline levels."	Resource use will be disrupted to the point where they cannot continue at any point where access is restricted due to the channels. This includes the PDA and area near the inlet and outlet channels. Provide compenstation plan for resource users who currently use this land to hunt, trap, fish, etc. No acknowledgement of land lost to roads, quarries, construction of new infrastructure, etc. Poor quality floodwater and high water levels may act cumulatively with many pressures on Lake St Martin and Lake Winnipeg and have a detrimental impact on fisheries, and fisher equipment and infrastructure. Provide compensation plan if flood events through the channels negatively impact fishers' equipment, infrastructure or ability to catch quotas.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
9	9.2.7	9.112		"Through a process of extensive public engagement and Indigenous engagement undertaken for the Project (i.e., open houses, stakeholder meetings, KPIs), there is good understanding of the issues and concerns related to land and resource use which have been addressed in the EIS."	Indigenous community-led projects funded as part of engagment by Manitoba Infrastructure would have given the proponent a more complete understanding of impacts on resource use in the PDA, LAA and RAA. No Indigenous knowledge was referenced in section 9. Indigenous engagement is not public open houses or stakeholder meetings. Rights bearers who are Indigenous are not stakeholders. Indigenous engagment has been inadequate. No engagement of Poplar River First Nation has been undertaken by the proponent.
9	9.2.8	9.112-9.113		"Potential monitoring for land and resource use will include: • monitoring of groundwater wells in the vicinity of the channel to determine if potable water supply changes with the construction phase of the Project and post Project phase No other follow-up and monitoring programs for land and resource use are proposed for the Project."	**Monitoring programs** need to include monitoring for surface water quality when channels are both open and closed with comparison to baseline study. **Monitoring needs to occur for fish and fish habitat** to ensure no negative impacts on fish or fisheries. **Monitoring needs to occur to survey fishers' equipment and infrastructure** after each time channels are used to determine if compensation is needed due to damage caused by debris, sedimentation or vegetation carried by flood waters. **A resource use monitoring plan** by the proponent is needed with an Indigenous review and comment period**.** **Monitors should be Indigenous community members** that are trained appropriately. Monitoring plan results must be posted publicly on a non-government website**.**

Chapter	Section	Page	EIS Guidelines	Issue	Comment
9	9.6.1	9.206		"Ground disturbance associated with operation and maintenance, specifically shoreline erosion, is not anticipated to occur beyond historically high or low water levels so the Project adds no new effects in this regard."	Past events and historically high or low water levels are being used to anticipate future flood effects. In 2011 all historic high water data was surpassed. All shoreline erosion and water levels were surpassed. Predictive modelling taking climate change into account, with full modelling of the watershed and ecosystems involved in this project region, should be used for conclusions in the EIS. The channels will change flood water flow in Lake St Martin and into Lake Winnipeg. Flooding changes water flow quantum and rates through water systems and infrastructure leading to the Channels. This may cause shoreline erosion in areas where it was previous uncommon, and thus result in loss of land and associated hertiage resources, or uncover previously unknown sites.
9	9.6.1.1	9.207		Provincial Regulations and Policy	Paragraph under the Heritage Resources Act leaves out that permits are needed under the Act.
9	9.6.1.2			"Traditional knowledge (TK)—including information about existing conditions, potential effects and mitigation measures—has also been provided by Indigenous groups through Project-specific studies."	**Only 3 project specific TK studies** regarding resource use were done. There are 27 impacted Indigenous communities. See CEAA listing in EIS Guidelines and additions to that list. sEach community should be provided engagement funding to complete community-led traditional knowledge studies, and to review proponent materials as per the CEAA Guidelines This is not enough traditional knowledge incorporated into this chapter.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
9	9.6.1.4	9.211		Map of PDA, LAA and RAA for heritage resources	There is no PDA, LAA or RAA map for the distribution line that needs to be built to operate the Lake St Martin Channel. This area needs predictive modelling for heritage assessment as there will be ground disturbance associated with the new distribution line and associate roads, quarries, temporary stockpile sites, right of way, etc. (Note maps are not comlete as per CEAA Guidlines.) Territories of potentially affected First Nations left out of assessment.
9	9.6.1.4	9.211-9.212		"It is unlikely that the Project will affect additional heritage resources throughout operation and maintenance because of permanent take up of lands used for channel construction and associated works. Operations may reduce the likelihood of flooding that can restrict access to cemeteries; this phase is indefinite because the Project is expected to be a permanent installation for mitigating floods."	This statement leaves out the construction phase of the project. Flood modelling is absent, so basis for conclusion is missing. Flooding is an extreme weather event. See CEAA Guidelines regarding any conclusion not data and science based. **No Indigneous content here.** Appears to refer only to colonial heritage resources.
9	9.6.1.5	9.212		An HRIA is not completed or approved by HRB for the Project and, therefore, potential residual effects on heritage resources are possible.	**This plan is required by Manitoba Law.** CEAA Guidelines require listing of any permits, reguations, Manitoba requirements in EIS. The HRIA is supposed to include both heritage resources and Indigenous sites. Further work needed for the HRIA to be complete.
9	9.6.2.1	9.214-9.215		Methods	The methods section only describes sources of information. It provies no methods about how field or desktop studies were conducted. Unable to verify accuracy and adequacy of information without methods.
9	9.6.2.1	9.214-9.215		Sources of Information	**No Indigenous, community-led engagement projects to provide information** on Indigenous areas of heritage resources, ceremony sites, sacred sites, gathering sites, important ecological sites, etc.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
9	9.6.2.2	9.216		"Indigenous peoples likely began to occupy the region by 7,000 to 8,000 years ago, soon after Glacial Lake Agassiz drained but there is little evidence of their presence here, likely due to a limited number of archaeological surveys having been previously conducted in the RAA." No field studies completed for channels project, nor is there enough previous complete studies prior to channels project. Desktop and literature review only for channels project.	**Use predictive modelling** to determine which areas in RAA, LAA and project region have likelihood of Indigenous heritage resources. Conduct archeology and field studies based on predictive modelling in areas with likelihood of heritage resources. Relationships or patterns of Indigenous sites are important. A multiplier is usually applied to any identified site in a relationship to other Indigenous sites. **Studies of all islands in** the water affected by the Channels project are outstanding and have been suggested to the proponents. Islands are often locations of Indigenous sites. No information at this stage about the potential effects of operation on these islands. **Funding is necessaryfor Indigenous communitites to conduct community-led traditional knowledge surveys** to provide information on heritage resources, ceremonial sites, sacred sites, important ecological sites, etc.
9	9.6 9.63	9.206 9.219		"with respect to Aboriginal peoples, an effect of any change that may be caused to the physical and cultural heritage; – the current use of lands and resources for traditional purposes; or any structure, site or thing that is of historical, archaeological, paleontological or architectural significance." "Construction and operation and maintenance phases Project-related transportation within the LAA have no effect on heritage resources it does not include ground-disturbing activities."	The proponent seems to only consider heritage resource as physical and built objects There does not seem to be consideration of sacred sites, gathering sites, or important Indigenous historical sites on the land, despite the CEAA 2012 definition in section 9.6.2.1 **The Channels are within the LAA and construction and maintenance after a significant flood event do involve ground disturbing activities. The proponent has not fulfilled this CEAA requirement.**

Chapter	Section	Page	EIS Guidelines	Issue	Comment
9	9.6.3	9.219		Table 9.6-5 - construction "Project-related transportation within the LAA (movement of trucks, equipment, bulk materials, supplies, and personnel within the LAA)" "Reclaimation" "Construction and operation and maintenance phases Project-related transportation within the LAA have no effect on heritage resources it does not include ground-disturbing activities."	Active sacred or gathering sites (not just cemetaries) may be impacted by **project-related transportation**. This is not reflected in table 9.6-5. **Active sacred or gathering sites and cemetaries may be impacted by construction of outlet channels in the LAA and RAA.** Changes in water flow may cause erosion in areas previously unaffected. Surface water use will be impacted by Channels. There will be areas at Channel inlets and outlets that public and Indigenous groups cannot access for recreation, navigation, fishing, etc. Active sacred or gathering sites and cemetaries may be impacted by **reclaimation**, as it may involve backfilling, grading, seeding, transport of materials, etc.
9	9.6.3	9.219		Table 9.6-5 operations and maintenance "Operation and maintenance of the outlet channels (normal operational conditions when the outlet channels and associated infrastructure [e.g., water control structures] are either gates open or gates closed)" "Operation, maintenance, and reclamation of quarries" "Construction and operation and maintenance phases Project-related transportation within the LAA have no effect on heritage resources it does not include ground-disturbing activities."	Thorough flood modelling missing. Access - temporary or permanent loss is not assessed for these sites. **Active sacred or gathering sites (that are not necessarily cemetaries) may be impacted by operation of outlet channels.** Changes in water flow may cause erosion in areas previously unaffected. No column in Table 9.6-5 to recognize this. Active sacred or gathering sites (that are not necessarily cemetaries) may be impacted by activities associated with quarries (noise, traffect, blasting, flood lights, etc). No column in Table 9.6-5 to recognize this. Cannot limit impacts re Indigneous Peoples to LAA. See CEAA EIS Guidelines.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
9	9.6.4.1	9.221		"This will be determined by a preconstruction HRIA, which will also innumerate how many heritage resources will interact with the Project."	**Methods, scope, results of HRIA should be completed before project can be approved by CEAA.** HRIA should be shared with affected Indigenous communities, for comment and updating. **Indigenous knowledge missing for the EIS.** **Proponent funded commuity-led engagement studies** including traditional knowledge would provide more information on heritage resources for the project.
9	9.6.4.1	9.221		"The EMP will include a Cultural and Heritage Resources Protection Plan developed to specifically deal with potential effects. It will include the following measures:..."	**The Cultural and Heritage Resources Protection Plan** needs to be reviewed and commented on (with funding by proponent or CEAA) by affected Indigenous communities before the project is approved by CEAA. **This plan should be a required part of EIS.** **The Cultural and Heritage Resources protection plan** needs language and action informing affected Indigenous communities when heritage resources are found, and working with communities to determine what actions will be taken regarding the heritage resource. Manitoba Heritage Act governs aspects of archeological finds, especially any burial sites. See CEAA Guidelines regarding provincial requirements, or requirements of any other government. Check Heritage Canada requirements.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
9	9.6.4.1	9.221		"The EMP will include a Cultural and Heritage Resources Protection Plan developed to specifically deal with potential effects. It will include the following measures:..."	An archaeologist and Indigenous elder should be onsite when any clear of vegetation or digging occurs. Not all heritage resources will be identifiable by a lay person, engineer or a non-Indigenous person.
9	9.6.4.1	9.222		HRB's response the Petch 2017 reports (Tsukamoto 2019) indicates that no Project-specific heritage resource baseline data are currently available. Therefore, except for the effect on the "Fairford Trail, potential effects on heritage resources are unknown until a preconstruction HRIA of the PDA is conducted under a valid permit. An HRIA will use predictive modelling to indicate locations of high heritage potential and examine and test those locations for heritage resources. If heritages resources are discovered at any of those locations, assessment by systematic testing will determine whether the resources are intact or disturbed. Intact resources, if required by HRB, will be mitigated through scientific salvage excavation."	Indigenous Peoples, Elders and knowledge holders must be part of idenfication and assessment of sites known by communities. The information included in the HRIA and subsequent study results needs to be included to the largest extent possible in the EIS (some will need to be confidential). This information needs funded review and comment by Indigenous communities who have used this land in the past, and present. **Engagement funding from proponent for community led traditional knowledge gathering should be required.** HRIA should be of PDA, RAA and LAA.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
9	9.6.4.1	9.222		"However, approval of a completed HRIA and any subsequent mitigations of heritage resources will indicate that there are no residual effects on heritage resources."	Cannot assess heritage resources without identifying them first. Current low numbers are due to very little archeological study. **If any heritage resources or Indigenous sites are lost due to construction there is a residual effect.** See CEAA Guidelines. **Sacred sites, gathering sites, cultural sites are all heritage resources and cannot be moved.** Should any sites be identified by communities as affected, they will be residual effects on heritage resources. **If any heritage resources must be moved from its resting place there will be a residual effect on heritage resources.**
9	9.6.5.1	9.225		"Based on the assessment of the proposed effects of the Project on heritage resources and the proposed mitigation measures, the residual effects are considered not significant."	Not able to make this conclusion without traditional knowledge from affected communities, no field studies, no appropriate baseline study, no consideration of non-material heritage resources. Cannot assess heritage resources without identifying them first. The current low number is due to very little archaeological studies.
9	9.6.7	9.225		"Prediction confidence is high based on the low number of previously recorded archaeological sites within the PDA and LAA, the low number of cemeteries within the PDA and LAA, past land uses within the PDA and LAA have disturbed a major portion of the landscape, and the results of the desktop assessment within the PDA and LAA."	Prediction confidence would be low without traditional knowledge from affected communities, no field studies, no appropriate baseline study, no consideration of non materials heritage resources. Proponent should identify # of studies, # of sites, since 1950 in the project region, PDA, RAA and LAA in order to do predictive modelling. There is no basis for this conclusion.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
11	11.7.2.1	11.2-11.3		In accordance with the the Canadian Environmental Assessment Agency Guidelines for the Project (Chapter 7, Section 7.6.3), a cumulative effects assessment is required for a VC only where the Project may result in adverse residual effects on that VC; if a VC would not be affected by the Project or would be affected positively, then it may be omitted from the cumulative effects assessment. Cumulative effects were not assessed for heritage resources (from Chapter 9, Section 9.6). A preconstruction heritage resources impact assessment of the PDA will be conducted and submitted to the Manitoba Historic Resources Branch (HRB).	**HRIA should be public, submitted to CEAA** as per CEAA Guidelines, and based on study and field work. No Indigenous territory in Canada has low numbers of sites. **Heritage Resources must be included in list of VCs with cumulative effects.** As described in Chapter 9 for Heritage Resources, there has been no project-specific heritage reources studies as of yet, extremely limited community-led traditional knowledge studies aided by the proponent, and self-admitted limited studies described in literature review. Not enough evidence to conclude negligable impacts on heritage resources or that the PDA, LAA or RAA has few heritage resources.
11	11.7.2.2	11.3-11.7		Table 11.1-1 Recreation and tourism Other provincial parks and protected areas in or adjacent to RAA	**See CEAA guidelines.** Full listing of crown land deisgnations in PDA, RAA, LAA, etc required. Other provincial parks and protected areas in or adjacent to RAA - Kinwow Bay Wilderness Park (protected), Asatiwisipe Aki Traditional Use Planning Area (protected), parts of Fisher Bay Provincial Park are protected, Lake Francis WMA, Delta Marsh WMA, Marshy Point WMA, Hibre WMA, Peonan Point WMA,

Chapter	Section	Page	EIS Guidelines	Issue	Comment
11	11.7.2.2	11.3-11.7		Table 11.1-1 Water regulation for hydro power Other water regulation connected to Lake Manitoba, Lake St Martin and Lake Winnipeg. Includes water from Alberta, Saskatchewan and the United States.	See CEAA Guidlines re inclusion of both north and south basins of Lake Winipeg. Manitoba Hydro Dams on Winnipeg River that provide water regulated in Lake Winnipeg: Great Falls Dam, McArthur Falls Generating Station, Pine Fall Generating Station, Pointe du Bois Hydroelectric Dam, Seven Systems Generating Station, Slave Falls Generating Station
11	11.7.2.2	11.3-11.7		Table 11.1-1 Water regulation for hydro power Other water regulation connected to Lake Manitoba, Lake St Martin and Lake Winnipeg. Includes water from Alberta, Saskatchewan and the United States.	Manitoba Hydro Dams in northern Manitoba that use water regulated in Lake Winnipeg: Kettle Generating Station, Jenpeg Generating Station, Kelsey Generating Station, Limestone Generating Station, Long Spruce Generating Station, Wuskwatim Generating Station, Keeyask Generating Station Manitoba dams that control water flowing into Lake Manitoba: Grand Rapids dam, Lake St Martin and Lake Winnipeg Fairford Water Control Structure on Lake Manitoba

Chapter	Section	Page	EIS Guidelines	Issue	Comment
11	11.7.2.2	11.3-11.7		Table 11.1-1 Flood control Other flood mitigation works connected to Lake Manitoba, Lake St Martin and Lake Winnipeg. Includes water from Alberta, Saskatchewan and the United States	Reach 3 of Emergency Outlet Channel Fairford Water Control Structure on Lake Manitoba Water control structures on Red River (flowing into Lake Winnipeg) including Winnipeg Floodway Water control structures for the Assiniboine River (flowing into Lake Manitoba and Lake Winnipeg) including the Portage Diversion and Lake of the Prairies/Shellmouth Dam Water control structures in Saskatchewan Water control structures in Alberta Water control structures on Red River in North Dakota and Minnesota.
11	11.7.2.2	11.3-11.7		Table 11.1-1 Flood control Other flood mitigation works connected to Lake Manitoba, Lake St Martin and Lake Winnipeg. Includes water from Alberta, Saskatchewan and the United States	No mention to date of the Praire Provinces Water Management Agreement, which dictates how much water comes into Manitoba. Proponent is ignoring water control structures connected to or whose water will flow through and to LMOC and LSMOC. See CEAA guidelines re cumulative assessment and all connected projects and infrastructure. NOTE: These connected structures have federal funding, regulations, and agreements.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
11	11.7.2.2	11.3-11.7		Table 11.1-1 Residential and communities First Nations missing. Needs to consider reserve location and traditional territory.	First Nations bordering RAA and listed as affected by CEAA: Poplar River FN, Berens River FN, Bloodvein FN, Misipawistik CN, Sandy Bay FN, Ebb and Flow FN, O-Chi-Chak-Ko-Sipi FN, Skownan FN First Nations listed as affected by CEAA: Hollow Water FN, Black River FN, Brokenhead ON, Sagkeeng FN, Norway House, Keeseekoowenin OFN, Fox Lake CN, Tatskweyak CN, York Factory CN
11	11.7.2.2	11.3-11.7		Table 11.1-1 Resource Use	Proponent needs to include all potentially affected First Nations in its assessment of resource use, and obtain the information and date to undertake assessment. See CEAA Guidelines list of First Nations and any added since it was issued in 2018. All potentially affected First Nations are in the Project Region. **Table leaves out gathering of medicinal and or country foods.** Commerical fishing on Lake Manitoba, Fisher River, other tributaries into Lake Manitoba, Lake Winnipeg other water bodies in and around the RAA and project region should be included.
11	11.7.2.2	11.3-11.7		Table 11.1-1 Requires Heritage Resources	Use of land by Indigenous peoples for gathering sites, sacred sites, cultural sites, ceremonial sites, etc…see above.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
11	11.7.2.3	11.7-11.8		Regional Context	With the history of water regulation/flood control in Manitoba and the impacts of water-related projects on Indigenous communities and the environment the section of regional context needs to be more fulsome. See CEAA Guidelines re cumulative assessment to include all connected water and flood infrastructure. The regional context requires mapping to show all connected infrastructure which directs water to the Channel project. Also needs to be made clear that water is entering the system in Manitoba from Alberta, Saskatchewan and the United States. There is federal government responsibility for much of the water regulation infrastructure in Canada, including becaue the water moves between jurisdictions.
11	11.7.2.4	11.8		"In Sections 11.2 through 11.12, each VC includes a table entitled “Interactions with the Potential to Contribute to Cumulative Effects”."	Incorrect. There is no section 11.2. VCs start on 11.8 and go to 11.20. Fix this.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
11	11.10.2.1	11.26-11.27		Table 11.4-3	Past, Present and future projects/physical activities - **Missing impacts from all hydro-related water regulation** (generating stations, reservoirs, etc) **and flood control infrastructure.** These projects are in Manitoba, Saskatchewan and United States and all impact the Lake Winnipeg watershed as the water flow and infrastructure are connected. Maps and diagrams are insufficient re connected infrastrucutre and cummulative assessment of these elements. See CEAA guidelines. Past and Present Physical Activities needs to include construction of Reach 1 and Reach 3 Emergency Outlet Channels and operation of Reach 1. See CEAA Guidlines re cumulative assessment of past, existing and potential future projects.
11	11.10.2.1	11.26-11.27		Table 11.4-3	If the reclaimation of Reach 1 and Reach 3 of Emergency Outlet Channels are not part of this EIS (which they should be), then they need to be included in Future Projects or Physical Activities, and have their cumulative effects assessed

Chapter	Section	Page	EIS Guidelines	Issue	Comment
11	11.11.1	11.30		Table 11.5-1	Past, Present and future projects/physical activities - **Missing impacts from all hydro-related water regulation** (generating stations, reservoirs, etc) and **flood control infrastructure.** These projects are in Manitoba, Saskatchewan and United States and all impact the Lake Winnipeg watershed as the water is connected. Past and Present Physical Activities needs to include construction of Reach 1 and Reach 3 Emergency Outlet Channels and operation of Reach 1. If the reclaimation of Reach 1 and Reach 3 of Emergency Outlet Channels are not part of this EIS (which they should be), then they need to be included in Future Projects or Physical Activities, and have their cumulative effects assessed
11	11.11.1	11.30		Table 11.5-1	Missing impact of Province of Manitoba Individual Quota Entitlement buy back program for commerical fishers on Lake Winnipeg (who are primarily Indigenous). Given baseline is post the 2011 flood, then potential continued changes in quotas, ownership of quotas by Indigenous fishers, and potential impact on spawning, water quality, and other impacts on abiltiy to fish need to be assesed in social economic EIS section. Given most commercial fishers in the north Basin of Lake Winnipeg are Indigenous the CEAA EIS Gudelines regarding social economic impacts, and possible impacts on Aboriginal rights to fish. NOTE - more than one area of the EIS guidelines apply and are not fulfilled.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
11	11.14.1	11.52		Table 11.8-1	Past, Present and future projects/physical activities - Missing impacts from all hydro-related water regulation (generating stations, reservoirs, etc) and flood control infrastructure. These projects are in Manitoba, Saskatchewan and United States and all impact land and resource use in the Lake Winnipeg watershed as the water is connected. Past and Present Physical Activities needs to include construction of Reach 1 and Reach 3 Emergency Outlet Channels and operation of Reach 1. If the reclaimation of Reach 1 and Reach 3 of Emergency Outlet Channels are not part of this EIS (which they should be), then they need to be included in Future Projects or Physical Activities, and have their cumulative effects assessed Missing impact of Province of Manitoba Individual Quota Entitlement buy back program for commerical fishers on Lake Winnipeg (who are primarily Indigenous).
11	11.11	11.29-11.35		Fish and fish habitat	Missing impacts of surface water on fish and fish habitat. Fish and fish habitat does not operate in a silo.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
11	11.14.5.3	11.58-11.59		Hunting and trapping	Missing gathering as resource use. This and other sections of this area of the EIS appears to be ignoring the CEAA Guidelines requiring the use of an ecosystem approach for the EIS. Watersheds are also not incorporated. Missing that channels degrade and destroy (take up) habitat of animals hunted and trapped - decrease in resource areas available to hunters and trappers. Hunting and trapping do not happen in a silo. Missing that channels divide habitat and ecosystems of animals hunted and trapped in half by blocking ecosystems causing a decrease in resource available to hunters and trappers. Hunting and trapping do not happen in a silo.
11	11.14.5.3	11.60		Groundwater and Surface Water Use	Only discusses groundwater and does not discuss surface water. Include surface water.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
11	11.17.7	11.61		"The existing land base in the RAA has been partially modified through agricultural conversion and industrial and residential development that has occurred over the past two hundred years….Through the expropriation process, landowners will be compensated for the permanent land loss and current land uses, such as industrial activity, consumptive and non-consumptive recreational use and resource use, including agricultural land use, would be able to continue at or near baseline levels after construction is completed. As such, the cumulative effects on land and resource use are not significant."	We note that despite the CEE Guidelines the proponent has not taken an approach to show both costs and benefits in the EIS. Rights holders, crown lands, and traditional lands are ignored in this conclusion. The focus on agricultural lands ignores the lands of the potentially affected Indigneous peoples. Nor is there any reference to compensation for loss of access to crown lands and resoures, loss of trapping access, gathering access, or impacts on the Indigneous subsistence of commerical fishery. Regardless of whether landowners are compensated, others who use land and waters (and are not "owners" of those land and waters) have been impacted signficantly by over 200 years of land and resource use modification. Regardless of how much the channels project contributes, the cumulative effect of development and land use change over the last 200 years is significant.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
10	10.2.1.2	10.4		"Of these 31 communities, twelve Indigenous communities located on Lake Manitoba, Lake St. Martin and Lake Winnipeg have used or are currently using land within and adjacent to the Project area to exercise Aboriginal and Treaty Rights."	Project crosses and affects lands and WATERS used by MANY more First Nations. Describe the rest of First Nations that use the lands and waters for traditional purposes. This includes Poplar River First Nation. Proof of the proponent's statement (only 12 of the affected First Nations use land within and adjact to the Project Area to exercise their rights will need to be provided) as it is not accurate. Which First Nations. Definition of exercise of aboriginal and treaty rights needed from proponent, needs also to include water use, all seasons.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
10	10.2.1.4	10.13		"Current use is defined as extending back from the present time to within the last 25 years (or one generation); therefore, information regarding existing conditions with associated temporal details is limited to 1992 to present and into the reasonably foreseeable future. Twenty-five years was chosen as the temporal boundary for considering effects of a change in the environment on Indigenous people because knowledge about traditional practices or locales may be lost or may not be passed on to younger members of the community if it goes unused for a generation"	People live longer than 25 years, and may pass on knowledge of land and resource use knowledge from greater than 25 years to current generations. National standards, used by First Nations used across Canada, and contained and accepted in federal regulatory filings about Manitoba projects, do not use 25 years. The proponent will need to provide their source for this definition. See CEAA Guidelines as to degree of fact and science based or traditional knowledge based conclusions. See CEAA Guidelines about using assumptions as basis for EIS conclusions, and comparative steps required. Given the admitted shortage of data for TRLU conclusions in this EIS and the proponent thinking that only 25 years exercise of rights is valid, a detailed explanation is needed. Provide an independent resource to validate 25 years as current use in TLRU studies. Alternatively, living memory should be used.
10	10.2.1.6	10.15		"The subjective nature of describing and understanding the importance of effects on current use of lands and resources for traditional purposes means that selected thresholds might not evenly apply across Indigenous groups and circumstances. Indigenous groups themselves may have differing views on the meaning of significance that reflect oral history traditions and holistic understandings of natural phenomena."	Describe input from Indigenous groups into the significance threshold for TLRU. Provide basis for this assumption, as per CEAA Guidelines. Funded community-led engagement by the proponent with more of the impacted Indigenous communities may have helped in inform thresholds for impacts on TLRU.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
10	10.2.2.3	10.15		"Existing conditions for TLRU are derived from Project-specific TK studies and Indigenous engagement programs associated with the Project and the EOC. In addition, information was gathered through a review of publicly available literature containing TLRU information for Indigenous groups engaged on the Project to provide context on the nature and extent of current use by these Indigenous groups. Additional TK studies, land use and management plans, and academic resources are anticipated to become available in the future as products of Manitoba Infrastructure's ongoing engagement program and other sources."	What EOC studies is the proponent referring to? The proponent did not access the public lands plan for Poplar River First Nation. See EIS Guidelines. TLRU data from other projects should not be used without consent from the First Nation. TLRU from other projects may not be collected fulsomely for the Channels project area (as it was not the purpose) and thus may be an inaccurate picture of TLRU in the Channels project area.If the proponent adequately funded community led engagement for the Channels project they would have higher quality and more accurate information to base this chapter upon. List which Indigenous communities and which projects TLRU was collected from both for this project and past projects. Usual practice in Manitoba for large public works projects is that the First Nation and Indigenous EIS focused plans are IN the EIS.
10	10.2.2.3	10.15		"This assessment is based on information available prior to filing, and as a result, such forthcoming studies have not been incorporated into this assessment, although in cases where studies are anticipated they are mentioned."	Proponent needs to include all potentially affected First Nations in its assessment of resource use, and obtain the information and date to undertake assessment. See CEAA Guidelines list of First Nations and any added since it was issued in 2018.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
10	10.2.3	10.48		"The data used to inform residual effects of the Project relies on information available from TK assessments (completed by Manitoba Métis Federation, Interlake Reserves Tribal Association, Fisher River Cree Nation, and Dauphin River First Nation), the literature review, Indigenous groups' comments and responses during the Indigenous engagement program throughout the assessment process (see Chapter 5), the results of other VC assessments, past project experience, and professional judgment."	The EIS should not be accepted as complete until all studies are completed and all affected Indigenous groups have received adequate opportunity, funding and time to complete community-led studies. Usual practice in Manitoba is for the Indigenous studies to be in the EIS. See CEAA guidelines re contents of EIS and Indigenous Knowledge.
10	10.2.3	10.48		"In many cases, species assessed by the vegetation, wildlife, and fish and fish Habitat VCs were selected based on their status as species of management concern, rather than their traditional use potential"	Engagement by the proponent with Indigenous communities prior to chosing VCs or writing the EIS could have led to using species of plants and animals important to Indigenous people as VCs or focal species. The proponent should go back to Indigenous communities and fund community-led engagement that includes which plants and animals used for traditional purposes should be included as VCs. The CEAA Guidelines stipulates that the proponent should have taken similar steps.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
10	10.2.4.4	10.50		"This effect pathway may occur within the LAA as the channel creates clearings and gaps in undisturbed habitat. However, this effect pathway is not anticipated to occur beyond the PDA within the RAA."	This effect on wildlife will occur beyond the PDA and the LAA. The distribution line proposed by this project is not part of the PDA or the LAA. The disturbution line is a permanent linear feature that requires clearing and construction. It will fragment, destroy and degrade habitat around it. The distribution line needs to be included in the PDA, RAA and LAA for wildlife and all other VCs for this project. The impacts of the distribution line needs to be assessed to the same extent as the channels, road re-alignment, bridge building, etc.
10	10.2.4.4	10.51		"Specifically, wildlife movement can be directly affected by Project infrastructure, through access roads and road realignments that create physical barriers or fragment migration corridors, or indirectly affected by sensory disturbance hindering terrestrial and aquatic wildlife's ability to move throughout the landscape during Project construction and operations (see Chapter 8, Section 8.3 for a more detailed discussion on wildlife movement)."	Wildlife movement can also be directly affected by the planned distribution line supplying power to the Lake St Martin gate. Wildlife movement is affected by construction, the infrastructure will permanently affect wildlife movement. Wildlife movement may also be directly effected by Reach 1 and Reach 3 of the current emergency channels. The decomissioning of both Reaches should be part of this EIS.
10	10.2.4.4	10.5		"The Project could also lead to changes in the distribution and abundance of fish in Lake St. Martin and Dauphin River, which support fishing activities, through changes in fish access during construction, such as dewatering or water diversion."	The Channels Project could lead to changes in many other water bodies, not just the two listed. Changes in Fisher River, Lake Manitoba and Lake Winnipeg, among other water bodies. Flood events with infrastructure in place could affect fish, fish habitat and fishing in other water bodies.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
10	10.2.4.4	10.52		"These Indigenous groups indicated that the operation of the EOC resulted in fish stranding and fish kill, which impacted the availability of fish for sustenance fishing."	This was not mentioned in Chapter 7 about fish and fish habitat. Information regarding the Emergency Outlet Channels by Indigenous groups should be added to all chapters to form a complete picture of effects of a very similar project on plants, animals and environment. CEAA guidelines re cumulative effects requires this. Describe why this information was not included in chapter 7 on fish mortality.
10	10.2.4.4	10.53		"The Project could lead to a change in landscape and species diversity. Vegetation removal and grading during channel construction and operation can change plants in the PDA permanently. Land clearing for other Project features such as construction staging areas will be temporary because these areas will be reclaimed. The installation of a power distribution line will result in modification and loss of native vegetation."	Proponent needs to be clear about effects on landscape, species diversity and vegetation throughout the EIS. Will also change land outside the PDA, even LAA permanently. The planned distribution line is not part of the PDA or LAA according to Project maps.
10	10.2.4.4	10.54		"Project-specific environmental management plans and monitoring programs will be developed and implemented to mitigate potential Project-related effects to wildlife."	EIS needs to include all plans for Indigenous groups to review and comment on. Alternatively the proponent needs to provide additonal time and funding for Indigenous groups to review and comment on plans. Management plans, monitoring plans must be public. See CEAA Guidelines. The project should not be approved before comments on plans submitted by Indigenous groups are meaningfully included.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
10	10.2.4.4	10.54		"A schedule of construction and Project activities will be made available to all Indigenous groups and Northern Affairs Communities engaged on the Project, so that areas and time periods of activity can be avoided."	Describe how this schedule and any updates to the schedule will be communicated to the people of each community. This should include by letter, email, phone, flyer, radio and band office, or any other method prefered by members of Indigenous communities. Communication should not just be to Chief and Council.
10	10.2.4.4	10.54		"Opportunities will be provided for interested Indigenous groups to harvest traditionally used plants prior to construction of the outlet channels."	This does not mitigate the temporary or permanent loss of Indigenous plants and gathering areas. The proponent should map where traditionally used plants occur before constructure and commit to restoring and replanting these plants in the same locations and habitat post construction. Areas where access is restricted or habitat is permanetly destroyed should have the equavelnt plants planted elsewhere in appropriate habitat.
10	10.2.4.4	10.55		"Disturbed lands such as in areas vulnerable to erosion and sedimentation and will be seeded and/or planted in accordance to the Revegetation Plan. The Revegetation Plan will be completed as part of the Construction Environmental Management Program (CEMP) by MI."	EIS needs to include all plans for Indigenous groups to review and comment on. Alternatively the proponent needs to provide additonal time and funding for Indigenous groups to review and comment on plans. See CEAA Guidelines. The project should not be approved before comments on plans submitted by Indigenous groups are meaningfully included. **Proponent needs to provide list of ALL missing plans to all parties.**

Chapter	Section	Page	EIS Guidelines	Issue	Comment
10	10.2.4.4	10.55-10.56		The EMP will be developed that include objectives for restoration of natural conditions, erosion protection, sediment control, non-native and invasive plant species management, and wildlife habitat	Describe restoration (how and where). This EIS content does not fulfill EIS Guidelines or principles. EIS needs to include all plans for Indigenous groups to review and comment on. Alternatively the proponent needs to provide additonal time and funding for Indigenous groups to review and comment on plans. Regardless, the project should not be approved before comments on plans submitted by Indigenous groups are meaningfully included.
10	10.2.4.4	10.54-10.56		Mitigation	Including decommissioning and reclaimation plans for Reach 1 and Reach 3 of the Emergency Outlet Channels could provide mitigation in the RAA and would reduce impacts to land, water, plants, animals and resource users. See Cumulative Effects section in CEAA Guidelines.
10	10.2.4.6	10.63		"Project-specific environmental management plans and monitoring programs will be developed and implemented to mitigate potential Project-related effects to wildlife."	EIS needs to include all plans for Indigenous groups to review and comment on. Alternatively the proponent needs to provide additonal time and funding for Indigenous groups to review and comment on plans. All plans need to be publically available and public comment is needed. Regardless, the project should not be approved before comments on plans submitted by Indigenous groups are meaningfully included.

Chapter	Section	Page	EIS Guidelines	Issue	Comment
10	10.2.4.6	10.63		"• Detailed recording and mapping of spiritual or cultural sites will be developed in partnership with Indigenous groups, leading to a decision made about the relative importance of the site and potential mitigations strategies."	Describe how the proponent will accommodate groups who do not want to disclose exact locations of spiritual and/or cultural sites. See CEAA policies. Describe how the proponent will protect and keep confidential the locations of spiritual and/or cultural sites. This includes keeping data confidential from public, contractors and other government departments. Describe who makes decisions about "relative importance". Describe the protocol for the proponent to ask consent of Indigenous groups for disclosure of spiritual and/or cultural sites to contractors, other governmental departments, etc if needed. See CEAA Guidelines
10	10.2.4.6	10.63-10.64		Mitigation	The proponent needs to share a plan for discovering unforeseen cultural sites, spiritual sites, sacred sites, heritage resources, etc… This is a necessary plan to include in the EIS. This plan should include at least one archeologist and Indigenous person on construction site at all times while blasting, clearing and digging is happening. Not all sites or objects of importance to Indigenous groups are identifiable by non-Indigenous peoples. This plan should include notification to Indigenous communities if any sites or objects are found, and include Indigenous people in decision making regarding the site or object. See CEAA Guidelines.