Nation or Department	EIS Guideline Reference	EIS reference	EIS page #	Context and Rationale	Comment (The Proponent is Required to…)
		Public and Indigenous Engagement			
Tataskweyak Cree Nation	Part 1-2.3.Engagement with Indigenous Groups.	5.3.4.2 Tataskweyak Cree Nation		The proponent will make reasonable efforts to integrate Indigenous knowledge into the assessment of environmental effects. We have had minimal contact with proponent on this project and feel that our location, downstream of the project and concerns about the project, translate into a much deeper level of consultation than experienced so far. Our main concern is the water quality downstream of the project. The EIS temporal and spatial boundaries and surface water assessment and cumulative effects assessment do not go far enough to take into account our concerns.	Fully consult with Tataskweyak Cree Nation and where it is necessary change the EIS boundaries and analyses used in the EIS. The temporal boundary must be in the order of 100 years. RAA spatial boundary must include Split Lake. Analyses of water quality must include analysis of baseline floodwater concentrations and loads, not averages as presented in the EIS and trend analysis of current and future trends must be applied in the cumulative effects analysis. Algae blooms in Lake Winnipeg and in Split Lake are getting worse and so is the growth of cyanobacteria. The water quality assessment must include algae and the effects of algae toxins on human and animal health.
		Project Description			
				"The hydraulic profile of the channel will require the lake bottoms to be excavated at the channel inlet and outlet to match proposed channel invert elevations (Appendix 3B, Figure 3B-6). The excavations will be tapered over a distance of 500 m or less from shoreline to meet existing lakebed elevations." p.3.8. The details of the LMOC inlet structure are vague, especially the type of structure of structure that is envisaged by the proponent.	Provide details on the inlet structure including type of structure, inlet invert elevation and full operating range as well as detail drawings of the structure.
			p 3.8		
		Project Justification			
Tataskweyak Cree Nation	Part 2-2.2. Alternative means of carrying out the project	2.4.1- Alternative Flood Protection Infrastructure Considered	p 2.14	" The Assiniboine River and Lake Manitoba Basins Flood Mitigation Study (the Study) (KGS Group 2016a)" was commissioned to identify and evaluate a wide variety of potential flood protection measures. Our concern is that the study of alternatives to the Project was inadequate. For example, the analysis only considered one benefit for the alternative projects and that was the savings that accrue from flood protection measures contemplated for each alternative project. It did not consider	Complete a thorough analysis of the alternative projects by including in the analysis the benefits that would accrue from use of water stored by the alternative projects for agriculture, recreational use and environment.
		Assessment of effects on the Physical Environment and Biophysical Effects Assessment			
	Part 2-7.2.2. the proponent will carry out modelling as required to present and substantiate anticipated changes to groundwater and surface water quality and quantity in all project phases and in all operational scenarios;	6.4.5.2 Surface Water Quality	p.6.169	A critical components of a water quality assessment is missing from the EIS, and that is current trend analyses of the water quality parameters presented in Table 6.4-9 for the watercourses and water bodies listed.	Use trend analysis to portray current trends in water quality parameters listed in Table 6.4-9 for Lake Manitoba, Lake St. Martin and Lake Winnipeg and other listed waterbodies and water courses in the Table.

Tataskweyak Cree Nation	Part 2-7.2.2. the proponent will carry out modelling as required to present and substantiate anticipated changes to groundwater and surface water quality and quantity in all project phases and in all operational scenarios;	6.4.7.7. Changes in local and /or regional Surface Water Quality	p.6.208	"The changes in regional flows due to the operation of the Project will alter the timing of how water is passed through the existing system by diverting high flows from the Fairford and Dauphin rivers to the LMOC and LSMOC. The addition of the outlet channels alters the route for the passage of high flows from Lake Manitoba to Sturgeon Bay but does not change the overall composition or volume of water entering or leaving the system. That is, all flows from the Lake Manitoba basin will enter Sturgeon Bay, with or without the Project "(EIS p.6.208).	Determine the difference in sediment and water quality conditions in Sturgeon Bay that would result from the change in timing of the waters entering Sturgeon Bay pre-project and post project. That is the effect of changes in residence time on the sediment and water quality of water entering Sturgeon Bay during a flood event as it transits from Lake Manitoba.
Tataskweyak Cree Nation	Part 2-7.2.2. the proponent will carry out modelling as required to present and substantiate anticipated changes to groundwater and surface water quality and quantity in all project phases and in all operational scenarios;	7.2.4.3 Change in Fish Passage	p.7.69, p.7.81	"Similarly, flow reductions in the Dauphin River due to operation of the LSMOC will reduce the extent of the outflow plume entering Sturgeon Bay. These reductions, combined with new outflow plumes entering Birch Bay and Sturgeon Bay through the LMOC and LSMOC, have the potential to decrease the number of spawning fish moving up Fairford and Dauphin rivers in spring or fall by diverting some of these fish into the LMOC and LSMOC or other nearby tributaries (e.g., Mantagao River)." p.7.69. "Any sediment plumes will be highly localized and quickly dispersed by waves and currents in the lakes." p.7.81. On what empirical evidence are these statements made? There is no modelling of the plumes in the EIS. The plumes from the EOC are known to have affected the commercial fishery in Lake Winnipeg.	Model the outflow plumes from the Dauphin River and LSMOC. Provide baseline mapping on the nature of the plume from the Dauphin River pre-project for the 5, 10, 20, 50 and 100-year floods. Show the differences in sediment and nutrients and other water quality parameters in the plume compared to the background conditions in the receiving environment. Then provide the expected plumes from the Dauphin River and the LSMOC post-Project for the 5 to 100-year floods.
Tataskweyak Cree Nation	Part 2-7.2.2. the proponent will carry out modelling as required to present and substantiate anticipated changes to groundwater and surface water quality and quantity in all project phases and in all operational scenarios;	Appendix 6D. Existing Conditions for Surface Water.	EIS p.6d.12	High levels of nutrients such as nitrogen and phosphorus can lead to the development of algal blooms in lakes, where the water may appear like thick pea soup and have an unpleasant odour. MSD monitors algal blooms at about 60 beaches across Manitoba for the presence of cyanobacteria, which can produce a toxin called microcystin. Microcystin is produced by some species of cyanobacteria and can be harmful to the liver or nervous system if large amounts of water containing this toxin are swallowed (MCWS 2011). p. 6D.12. The nutrients added to Lake Winnipeg by the Project and the possible encouragement of algae growth and release of toxins are of prime concern to Tataskweyak.	Determine the difference in nutrient and algae conditions in Sturgeon Bay between the pre-Project and post-Project environments. Use trend analysis and the results of the plume models to substantiate your assessment.
			Human Health		

Tataskweyak Cree Nation	7.2.2. Changes to groundwater, surface water, and fluvial morphology the proponent will carry out modelling as required to present and substantiate anticipated changes to groundwater and surface water quality and quantity in all project phases and in all operational scenarios; changes to total suspended solids (TSS), total dissolved solids, turbidity, oxygen level, water temperature, pH, dissolved oxygen, water quality including metals, methyl mercury, nutrients, algae blooms, dissolved/total organic carbon, biochemical oxygen demand (BOD)/carbonaceous biochemical oxygen	9.5.1.2 Engagement and Key Concerns	p.9.188	"This health assessment recognizes the feedback received regarding interests and concerns with respect to Indigenous issues, including: • water quality effects and runoff from farmland • contamination of waterbodies • pathways for contamination from Lake Manitoba to Lake Winnipeg...."p. 190. Human health must consider the presence of blue-green algae in Lake St. Martin, Lake Winnipeg, Nelson River and Split Lake? It is apparent that phosphorus concentrations are increasing in Lake Manitoba. Phosphate attaches to small clay particles in the wash load of the Assiniboine River during floods. Once the Portage Diversion is in use this phosphorus rich flood water can be expected to wash through Lake Manitoba, Lake St. Martin via the channels and on to Lake Winnipeg and Split Lake. This supply of phosphorus encourages the growth of Algae. Our sampling of the Nelson River shows that plant available nitrogen's are used up by the time the water reaches Split Lake. This is encouraging the growth of blue-green algae which can fix nitrogen from the air. Many of these blue-green algae release toxins. This pathway needs to be thoroughly assessed by the Human Health component of the EIS.	Fully assess nutrient transport from Assiniboine River flood waters released by the Portage Diversion through Lake Manitoba, Lake St. Martin, Lake Winnipeg and Nelson River to Split Lake. This analysis must include the effects on algae, especially blue-green algae and the effect of algae toxins on Human Health.
		Cumulative effects			
Tataskweyak Cree Nation	Part 2-7.2.2. the proponent will carry out modelling as required to present and substantiate anticipated changes to groundwater and surface water quality and quantity in all project phases and in all operational scenarios;		p.11.24	"The Project is not expected to affect regional groundwater flows, levels and quality and surface water." p.11.24. Because this conclusion was made without the aid of carbonate aquifer water balance model it is impossible to assess the accuracy of this conclusion.	Compare annual water balances for the pre-and post project conditions of the carbonate aquifer to substantiate this statement.
Tataskweyak Cree Nation	Part 2-7.2.2. the proponent will carry out modelling as required to present and substantiate anticipated changes to groundwater and surface water quality and quantity in all project phases and in all operational scenarios;	11.4.2.1 Identification of Projects Likely to Interact Cumulatively on Surface Water	p. 4.16 and p.11.27	"The temporal boundaries for the assessment are based on the timing and duration of Project activities and the nature of the interactions with each VC. The purpose of a temporal boundary is to identify when an environmental effect may occur in relation to specific Project phases and activities. Temporal boundaries for the Project include the construction phase (estimated as five years) and the operations and maintenance phase, which has no duration to it as the Project is expected to operate in perpetuity and is not expected to be decommissioned." The effects of multiple floods over the next 10, 20, 50, 100 and 200 years on the nutrients and algal growth in Lake Winnipeg's north Basin have not been assessed in the EIS or CEA.	Assess the effects of multiple flood events on the nutrient conditions and algal conditions in Lake Winnipeg over the next 200-years.

Tataskweyak Cree Nation	7.6.3 identify the sources of potential cumulative effects. Specify other projects or activities that have been or that are likely to be carried out that could cause effects on each selected VC within the boundaries defined, and whose effects would act in combination with the residual effects of the project. Water management systems and natural and/or controlled flood events, including flooding that occurred in the Interlake's Region in 2011, should be considered as projects or activities that are sources of potential cumulative effects. This assessment may consider the results of any relevant study	The other projects or physical activities identified for consideration in the cumulative environmental effects assessment for this EIA are listed in Table 11.1-1, referred to as a Project Inclusion List (PIL). Future projects and physical activities were identified from publicly available information and are "certain, planned, or reasonably foreseeable" as per CEAA guidelines. All reasonably foreseeable flood mitigation and water management projects and hydroelectric projects have also been identified in Table 11.1-1 and identified in Figure 11.1-1.	p.11.5	11.1.2.2 Project Inclusion List. In Sections 11.2 through 11.12, each VC includes a table entitled "Interactions with the Potential to Contribute to Cumulative Effects". This table identifies which past, present and future projects effects may interact with the same effects (for the same VC) for the Project. e.g. The cumulative effects assessment for Surface Water is limited to local activities listed in Table 11.4.3. The CEA ignores the effects of the Portage Diversion Project and Lake Winnipeg Regulation. These large projects and their effects must be assessed with the effects of the diversion project. The lack of connection between the projects suggests that the incremental, cumulative effects of development will be missed.	Incorporate into the cumulative affects analysis the effects of the Portage Diversion and Lake Winnipeg Regulation on the Surface Water Environment, Fish and Fish Habitat, Vegetation and Wetlands and other VECs.
Tataskweyak Cree Nation	7.6.3 identify the sources of potential cumulative effects. Specify other projects or activities that have been or that are likely to be carried out that could cause effects on each selected VC within the boundaries defined, and whose effects would act in combination with the residual effects of the project. Water management systems and natural and/or controlled flood events, including flooding that occurred in the Interlake's Region in 2011, should be considered as projects or activities that are sources of potential cumulative effects. This assessment may consider the results of any relevant study	Table 11.1-1 presents the Project and physical activities inclusion list, which identifies other projects and physical activities that might act cumulatively with the Project. Where residual surface water effects from the Project act cumulatively with those from other projects and physical activities (Table 11.4-3), a cumulative effects assessment is undertaken to determine their significance.	p.11.5	Many of the baseline assessments of past and current conditions are not carried forward with any analytical rigor to support a meaningful analysis of future cumulative effects. A critical components of a Cumulative Effects Assessment is not applied in the EIS, specifically trends analysis, to properly assess the cumulative effects of this project combined with the Portage Diversion and Lake Winnipeg Regulation.	Use trend analysis to portray the current trends in hydrology and nutrient and algae levels for Lake Manitoba, Lake St. Martin and Lake Winnipeg. Differentiate conditions between a pre-Portage Diversion and post-Portage Diversion on the hydrology, nutrient levels and resultant algae community for Lake Manitoba and the carry-on effects through the channels in Lake St. Martin and Lake Winnipeg. Then apply these trends to the future effects of the Project on Lake Winnipeg.

Tataskweyak Cree Nation	7.6.2 Effects of the environment on the Project	15.5.2 Effects Analysis and Mitigation	p.15.12	The environmental impact assessment, hydrologic engineering analysis, planning, design and operation of hydraulic structures accounts for possible future effects of climatic variability and change. P. 15.12. • The EIS does not account for the effects of climate change on the Project or Project effects on the environment. Manitoba Hydro (2020) in thier Climate Change Report predict that the amount of precipation falling as rain will increase over the next 30 years and the amount falling as snow will decrese. Therefore, will nutrient supply to Lake Winnipeg increase as runoff increases because more precipitation will fall as rain than snow? How will this affect algae in the lake? These type of questions require answers in the EIS.	Under predicted Climate Change scenarios, assess whether nutrient supply to Lake Winnipeg will change in the next 30 years and the effect of the Project on this dynamic.