Table 1 : ECCC's comments[1] on IAAC's draft Environmental Assessment report for the Timiskamingue Dam-Bridge of Quebec Replacement Project.

Comment reference number	Reference in the draft EA report	Text of the draft Environmental Assessment report	Proposed amendment to the text of the draft report	Environment and Climate Change Canada (ECCC) Comments
ECCC-01	Section 2.1.3 Table 2 (refer to p. 15)	• Closing the gates of the new dam-bridge; • Installing turbidity curtains downstream and upstream; • Drilling, demolition, and dismantling of all elements of the existing dam-bridge (blasting may be required, at a minimum); • Final development and restoration work.	• Closing the gates of the new dam-bridge; • Installing turbidity curtains downstream and upstream; • Drilling, demolition, and dismantling of all elements of the existing dam-bridge except for retaining walls (blasting may be required, at a minimum); • Final development and restoration work.	In response to ECCC's question IAAC-1-21, the proponent clarified that "PSPC intends to maintain existing retaining walls as it did for the Ontario dam." The text should specify that the retaining walls will not be dismantled.
ECCC-02	Section 5.1.2 Altered Water Quality (refer to p. 33)	The proponent is committed to characterizing excavated or disturbed soils and sediments. Contaminated soils and sediments will be transported to a specialized site.	The proponent is committed to characterizing excavated or disturbed soils and sediments that have been drained in a watertight settling basin to reduce water content. Contaminated soils and sediments will be transported to a specialized site.	ECCC recommends specifying that the excavated sediments must first be drained in a watertight basin. The water from this basin must also be treated to prevent any release of contaminants into the surrounding environment.
ECCC-03	Section 5.1.2 Altered Water Quality (refer to p. 33)	Lastly, the proponent plans to establish a baseline and monitor water quality, including via turbidity measurements.	Lastly, the proponent plans to establish a baseline and monitor water quality, including via turbidity measurements in order to ensure compliance with the criteria described in the *Recommendations for the management of suspended solids (SS) during dredging activities (MDDELCC and ECCC, 2016)*.	ECCC recommends that the DFO reference be corrected in the French version. ECCC recommends adding this reference. In response to question IAAC-1-100, the proponent committed to following the protocol and criteria set out in the Recommendations for the management of suspended solids (SS) during dredging activities (MDDELCC and ECCC, 2016). It should be noted that the criteria in this document concerning SS are the same as those of the CCME WQG referenced in the conditions document.
ECCC-04	Section 5.1.3 Cofferdam and Turbidity Curtains (refer to p. 38-39)	Treat the water from the cofferdam enclosure before returning it to the aquatic environment to minimize sediment inputs (e.g., vegetation buffer area, settling pond, drainage ditch, Envirobags, spillway bowl, combination of several methods).	Treat the water from the cofferdam enclosure before returning it to the aquatic environment to minimize sediment inputs (e.g., vegetation buffer area, settling pond, drainage ditch, Envirobags, spillway bowl, combination of several methods) and petroleum hydrocarbons.	ECCC recommends adding petroleum hydrocarbons as proposed by the proponent
ECCC-05	Section 5.1.3 Concrete Plan (refer to p. 39)	N/A	N/A	ECCC is of the view that this key measure should be added: Treat all concrete contact water. Any water that comes into contact with concrete must be managed so that its discharge does not adversely affect aquatic life (pH and TSS) and, consequently, fish habitat. In this context, the 60-m distance alone does not provide sufficient protection.

[1] ECCC's comments were originally drafted in French. In the event of any discrepancy between the French and English versions, the French version shall prevail.

ECCC-06	Section 5.1.3 Need for and Requirements of Follow-Up (refer to p. 39)	During the construction phase, implement, in consultation with Environment and Climate Change Canada, a program to monitor water quality downstream of the Project to ensure that:	During the construction phase, implement, in consultation with Environment and Climate Change Canada and Indigenous group, a program to monitor water quality downstream of the Project to ensure that:	ECCC recommends including Indigenous groups, as mentioned during the targeted consultation sessions.
ECCC-07	Section 5.2 Birds, Including Special-Status Species (refer to p 40)	IAAC is of the opinion that the Project is not likely to cause significant adverse effects on birds, taking into account the implementation of the main mitigation measures and the monitoring and follow-up programs recommended.	N/A	This statement contradicts the information provided in Section 5.2.3: IAAC does not recommend any follow-up or monitoring program. The Agency should clarify the text to avoid any confusion regarding the implementation of a monitoring and follow-up program for migratory birds as part of the project. Consistent with our final advice, ECCC recommends that a monitoring program be implemented for migratory birds.
ECCC-08	Section 5.2.2 Analysis of Potential Effects and Proponent's Proposed Mitigation Measures (refer to p 41)	The proponent is of the view that the main effects of the Project on birds involve the permanent and temporary loss of habitat, bird mortality, noise and the risk of spills of hazardous materials such as hydraulic oil and other hydrocarbons.	The proponent is of the view that the main effects of the Project on birds involve the permanent and temporary loss of habitat, bird mortality, sensory disturbances caused by noise, dust, and light, and the risk of spills of hazardous materials such as hydraulic oil and other hydrocarbons.	On page 43, it is indicated that the proponent considers sensory disturbances (resulting from noise, dust, and light) as an effect of the project, and not only noise. ECCC recommends that all sensory disturbances be considered an effect, and that measures be implemented to avoid or mitigate these disturbances.
ECCC-09	Section 5.2.2 Sensory Disturbances (refer to p.43)	According to the proponent, the work is unlikely to affect birds in the wetlands bordering Gordon Creek. However, Environment and Climate Change Canada has reservations about this analysis.	N/A	In its final advice, ECCC expressed concerns regarding the proponent's assessment of the effects of disturbance on migratory birds. However, the placement of the ECCC citation within the report suggests that ECCC has concerns specifically about the effects of the project on birds using wetland areas along Gordon Creek, which alters the intent of ECCC's comment in its final advice. We recommend that the text be revised to accurately reflect ECCC's position.
ECCC-10	Section 5.2.3 IAAC Analysis and Conclusions on Residual Effects (refer to p. 43)	IAAC acknowledges that the Project will have limited temporary effects on Long Sault Island, which will be revegetated at the end of construction. IAAC points out that, to comply with the prohibitions set out in the *Migratory Birds Regulations*, the proponent will have to carry out clearing operations outside the nesting period.	IAAC acknowledges that the Project will have limited temporary effects on Long Sault Island, which will be revegetated at the end of construction. IAAC points out that, to comply with the prohibitions set out in the *Migratory Birds Regulations (2022)*, the proponent will have to carry out clearing operations outside the nesting period.	ECCC recommends using the full name of the regulation, as designated by Justice Canada, namely *Migratory Birds Regulations, 2022*.
ECCC-11	Section 5.2.3 Determining Key Mitigation Measures (refer to p. 45)	Establish and delineate, under the direction of a qualified person, the setback distances around nests and residences whose presence is probable or confirmed as identified above, within which the activity will not take place when these nests are protected under MBCA and its regulations or SARA. When establishing setback distances, the Guidelines to avoid harm to migratory birds - Establishing buffer zones and setback distances from Environment and Climate Change Canada should be taken into account.	N/A	ECCC recommends that, once the protection distance has been established, monitoring be conducted to verify that the defined buffer is indeed sufficient to prevent disturbance to nests. The determination of the protection distance should not remain theoretical; it must be validated in the field to ensure its effectiveness. ECCC further recommends that this validation (monitoring) of the protection measure's effectiveness be explicitly reflected in the conditions.

ECCC-12	Section 5.2.3 Determining Key Mitigation Measures (refer to p. 45)	Carry out a complementary survey before the deconstruction of the existing dam-bridge, and implement measures (e.g., install exclusion nets on the structure) to prevent birds from accessing the structure before the start of the nesting period and no later than before the work begins on the existing dam-bridge and until the end of the deconstruction works.	N/A	ECCC recommends that it be specified that regular monitoring of the measures be conducted to ensure that they remain in place and function as intended for the entire duration during which their implementation is required. For instance, a failure of exclusion devices could result in the entanglement of birds, potentially leading to mortality or trapping birds on the incorrect side of the devices. In the event that a failure is identified, corrective measures must be implemented without delay, thereby emphasizing the importance of conducting regular monitoring.
ECCC-13	Section 5.2.3 Need for and Requirements of Follow-Up (refer to p. 45)	IAAC does not recommend any follow-up or monitoring programs.	N/A	The proponent has committed to conducting noise monitoring in areas sensitive to bird nesting, with an alert threshold set at 10 dB above the baseline level. ECCC considers that monitoring is required to establish when the alert threshold is exceeded and to inform the identification of any additional measures that may be necessary to mitigate noise-related effects on migratory birds, as applicable. This consideration is of particular importance during the nesting period. ECCC is also of the opinion that a monitoring program should include the elements outlined in our previous comments regarding nest protection zones and exclusion netting.
ECCC-14	Section 5.3.1 Bat (refer to p. 46)	SART also reported hearing bats, including juveniles, within cracks in the structure of the existing dam-bridge. **However**, Environment and Climate Change Canada considers this inventory to contain technical and interpretive errors, rendering it insufficient to accurately reflect baseline conditions.	N/A	The term “however” is not appropriate in this context, as ECCC did not question the fact that bats were detected within the bridge structure, but rather the proponent’s assertion that the report submitted by SART does not provide substantiated evidence of bat activity within the existing dam-bridge structure. Please remove the word “however” or replace it with “furthermore” to avoid any misinterpretation of ECCC’s position.
ECCC-15	Section 5.3.3 Determining Key Mitigation Measures (refer to p. 48)	IAAC considers the following mitigation measures to be essential to ensure that the Project does not cause significant adverse environmental effects on turtles and bats at risk.	N/A	ECCC considers that noise monitoring and control measures should also be included in this section to minimize potential disturbance to the maternity colony present in the old building located near the project site.
ECCC-16	Section 5.3.3 Need for and Requirements of Follow-Up (refer to p. 49)	IAAC does not recommend any monitoring or follow-up programs.	N/A	The text is inconsistent with Condition 5.2.2, which requires monitoring of the presence of turtles within the project area. The measures identified for turtles shall require ongoing monitoring, in particular to ensure that barriers or other exclusion devices are functioning properly. The proponent had planned for monitoring to be conducted, for example to confirm that no turtles become trapped in the barriers and to allow for relocation measures should a turtle be found on the construction side. While the implementation of additional exclusion measures, and at additional locations, shall reduce the likelihood of a turtle being present on

				the construction side, this possibility shall not be entirely eliminated. ECCC considers that monitoring is not only relevant, but essential to ensure the effectiveness of the proposed measures. Monitoring is also relevant and required for bats, should they be present on the existing bridge and if exclusion measures are installed, in order to: 1. ensure the proper functioning of the exclusion netting (or other devices); 2. where compensation measures are implemented, ensure their effectiveness and implement additional measures as required.
ECCC-17	Section 5.5.1 Air Quality (refer to p. 53)	The Project is located in a sparsely populated and not highly industrialized region. Air quality in the region is mainly influenced by emissions from the RYAM13 plant, which include various airborne contaminants, such as sulphur dioxide (SO2)14 and fine particulate matter (PM2.5)	N/A	ECCC considers it necessary to acknowledge that the RYAM facility emits additional atmospheric contaminants in quantities exceeding those identified in the report. In particular, nitrogen oxides (NOx) and volatile organic compounds (VOCs) are emitted at levels of up to 193.85 tonnes per year and 607.37 tonnes per year, respectively.
ECCC-18	Section 5.5.1 Air Quality (refer to p. 53)	According to the data, the local air quality is considered poor between 17% and 41% of the time. CAAQS values were only exceeded for annual PM2.5 concentrations16.	Based on the available data for the 2008–2019 period, the local air quality is considered poor between 17% and 41% of the time. CAAQS values were only exceeded for annual PM2.5 concentrations16.	ECCC recommends identifying the period of the data used to characterize air quality and suggests that the text be reworded, to provide greater precision.
ECCC-19	Section 5.5.2 Changes to Surface Water Quality (refer to p. 56)	Once the existing dam-bridge would be closed and the turbidity curtain would be installed, the sediments in the area between the cofferdam and the existing dam-bridge would be characterized so that their quality can be determined and can be managed according to their level of contamination.	Once the existing dam-bridge would be closed and the turbidity curtain would be installed, the sediments in the area between the cofferdam and the existing dam-bridge would be characterized so that their quality can be determined and can be managed according to their level of contamination. The proponent has also committed to characterizing the excavated sediments on both sides of the cofferdam for the anchoring of the structure.	ECCC recommends clarifying the proponent's commitment to characterizing the excavated sediments at the locations where trenches are planned, on both sides of the cofferdam.
ECCC-20	Section 5.5.2 Changes to Surface Water Quality (refer to p. 56)	Once the existing dam-bridge would be closed and the turbidity curtain would be installed, the sediments in the area between the cofferdam and the existing dam-bridge would be characterized so that their quality can be determined and can be managed according to their level of contamination. Contaminated sediments would be transported to an appropriate disposal site.	Contaminated and uncontaminated sediments would be transported to an appropriate disposal site, following dewatering in a sealed basin, where they will be placed according to their level of contamination, if applicable.	ECCC recommends specifying that the management of contaminated and uncontaminated sediments will be carried out in a terrestrial environment, as proposed by the proponent. The text should be reworded accordingly.
ECCC-21	Section 5.5.3 Changes to Surface Water Quality (refer to p. 59)	IAAC recognizes that the proponent has committed to sampling sediments and soils likely to be resuspended and to managing them according to the level of contamination.	IAAC recognizes that the proponent has committed to sampling sediments and soils likely to be excavated or resuspended and to managing them according to the level of contamination.	ECCC recommends specifying that the excavated sediments must also be characterized and managed in a terrestrial environment, based on their level of contamination.
ECCC-22	Section 5.5.3 Determining Key Mitigation Measures (refer to p.60)	Prior to construction, develop a dust management plan and, during construction, implement appropriate and feasible mitigation measures.	N/A	The Agency specifies under Condition 6.5.1 that "potential contaminants of concern, including $PM_{2.5}$," should be identified in collaboration with the relevant parties for the development of air quality monitoring. This information is not reflected in the report.
ECCC-23	Section 5.5.3	Prior to construction, develop and implement a follow-up program, in consultation with Environment and Climate Change Canada and Health Canada, which makes it possible to verify the	N/A	Monitoring should include potential contaminants of concern, including $PM_{2.5}$, in order to reflect the wording of Condition 6.5.1, as noted in our previous comment

	Need for and Requirements of Follow-Up (refer to p.61)	effectiveness of the mitigation measures in addressing the environmental effects of emissions of fine particulate matter (PM2.5) in the air on human health, at the nearest human receptors.		
ECCC-24	Section 6.3.2 Determination of Key Mitigation Measures (refer to p.104)	• Implement the following mitigation measures to prevent accidents and malfunctions that may result in adverse effects within federal jurisdiction, where applicable: ○ Establish fire and spill prevention plans. ○ Limit refuelling and maintenance of vehicles and equipment to designated areas. ○ Use secondary containment systems to store hazardous materials.	N/A	ECCC recommends specifying that these activities, as well as the general storage of materials, should be conducted at a distance greater than 30 m from the shoreline of all watercourses. The proponent had made this commitment.
ECCC-25	Appendix C Key Mitigation Measures and Monitoring requirements Fish and Fish Habitat (refer to p.167)	• During the construction phase, implement, in consultation with Environment and Climate Change Canada, a program to monitor water quality downstream of the Project to ensure that:	• During the construction phase, implement, in consultation with ~~Environment and Climate Change Canada~~ the competent authorities, a program to monitor water quality downstream of the Project to ensure that:	ECCC recommends replacing "ECCC" with "the competent authorities," as several federal authorities are involved in the measures outlined in this section.
ECCC-26	Appendix C Key Mitigation Measures and Monitoring requirements Fish and Fish Habitat (refer to p.167-168)	○ Project activities do not exceed the Canadian Council of Ministers of the Environment's Canadian Water Quality Guidelines for the Protection of Aquatic Life;	○ Project activities do not exceed the Canadian Council of Ministers of the Environment's Canadian Water Quality Guidelines for the Protection of Aquatic Life as well as the MELCCFP surface water quality criteria for the protection of aquatic life for contaminants for which no CCME guidelines are available;	As the CCME Environmental Quality Guidelines (EQGs) do not cover all contaminants, ECCC recommends adding the following: "surface water quality criteria for the protection of aquatic life (provincial criteria) for contaminants for which no CCME guidelines are available." This is the case, for example, for petroleum hydrocarbons, for which monitoring is planned for the waters within the cofferdam enclosure.
ECCC-27	Appendix C Key Mitigation Measures and Monitoring requirements Cofferdam and turbidity curtains (refer to p.169)	• Treat water from the cofferdam enclosure before returning is to the aquatic environment to minimize sediment inputs (e.g., vegetated buffer zones, settling basins, filter trenches, ''Envirobags'', weir tanks, or a combination of methods).	• Treat water from the cofferdam enclosure before returning is to the aquatic environment to minimize sediment inputs (e.g., vegetated buffer zones, settling basins, filter trenches, ''Envirobags'', weir tanks, or a combination of methods) and petroleum hydrocarbons.	The proponent has committed to analyzing petroleum hydrocarbons as part of the management of waters within the cofferdam.
ECCC-28	Appendix C Key Mitigation Measures and Monitoring requirements Concrete Plan (refer to p.169)	• All mobile concrete plants and concrete mixer washing stations must be located at least 60 meters from the shoreline.	N/A	As noted above, ECCC considers that any water that comes into contact with concrete should be managed in such a manner that its discharge does not result in adverse effects on aquatic life quality (pH and TSS). Given that a distance of 60 metres alone does not provide this level of protection, ECCC recommends adding a mitigation measure to address this issue.

ECCC-29	Appendix C Key Mitigation Measures and Monitoring requirements Effects of Accidents or Malfunctions (refer to p.176)	○ Limit refuelling and maintenance of vehicles and equipment to designated areas. ○ Use secondary containment systems to store hazardous materials.	• Implement the following mitigation measures to prevent accidents and malfunctions that may result in adverse effects within federal jurisdiction, where applicable: ○ Establish fire and spill prevention plans. ○ Limit circulation, parking, refuelling and maintenance of vehicles and equipment to designated areas and at a minimum of 30 m from all watercourses ○ Avoid the storage of hazardous residual materials within 30 m of all watercourses. ○ Use secondary containment systems to store hazardous materials.	ECCC recommends specifying that a distance of at least 30 m from all watercourses must be maintained for these activities, as well as for the storage of materials.