

**LAKE MANITOBA AND LAKE ST. MARTIN OUTLET CHANNELS PROJECT
RESPONSE TO IAAC TECHNICAL INFORMATION REQUESTS**

Question IAAC-38

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Abbreviations and Acronyms

EIS	environmental impact statement
LSMOC	Lake St. Martin outlet channel

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EIS Guideline Reference: 3.2 Project Activities; 7.3.1 Fish and fish habitat

EIS Reference: 7.2.4.2 Permanent Alteration or Destruction of Fish Habitat

Context and Rationale

Section 3.2 of the EIS guidelines requires the EIS to provide a list of project activities, with emphasis on activities with the greatest potential to have environmental effects. Sufficient information will be included to predict environmental effects and address concerns identified by the public and Indigenous groups.

Section 7.3.1 of the EIS Guidelines requires the EIS to include a consideration of how the predicted changes to the environment as a result of the project being carried out will affect fish and fish habitat.

The EIS indicates that final design decisions have not all been made, resulting in information gaps on how the proposed work, undertaking or activity may impact fish and fish habitat. For example, the EIS states:

- Final decisions about what type of machinery are used and whether the excavations will be conducted in-the-wet or in-the-dry has not been made.
- Rock-filled jetties and cofferdams may be built around the excavation areas to protect the work areas from excessive sedimentation and to allow the excavations to be conducted in-the-dry. Alternatively, temporary groins may be built using rock-fill and/or spoil from the excavation to provide the machinery with access to the excavation area if work is to be conducted “in-the-wet”.
- Construction of the culvert and gate system on Creek C and the two unnamed tributaries will isolate upstream habitat from fish in Buffalo Creek.
- This is because fish will not be able to ascend the channel from Sturgeon Bay due to the hydraulic jump and high water velocities at the downstream-most drop structure when the water control structure gates are open and because of the height of the vertical drop at the downstream-most drop structure when the water control structure gates are closed.
- Pool depths upstream of the drop structures will be sufficient to maintain a wetted channel upstream to the next drop structure. Together with the channel geometry and drop structures, baseflows in the LSMOC will limit variations in water levels in the LSMOC when not in use and allow a stationary, lake-type ice cover to form on the channel without freezing to the bottom.

The information provided is not sufficient to make a determination on the predicted changes to the environment, their residual effects and their significance. This information is important for assessing potential effects to fish habitat and death of fish.

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Information Requests

- a) The Agency understands that detailed design has advanced since the EIS was submitted. Provide an updated project design, including an assessment of how these updates may change the assessment of effects to fish and fish habitat.
- b) Provide a discussion of how continued unknowns in project design affect uncertainty in conclusions regarding effects to fish and fish habitat.

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- a) While detailed design has been ongoing since completion of the environmental impact statement (EIS) in August 2019, it has not progressed to a stage that can be made available for re-examination of the environmental assessment at this time. Where detailed design information was not available, assumptions regarding design were provided in the EIS. The assumptions were based on design criteria provided by the engineering teams and it is expected that those criteria will remain unchanged during detailed design. For this reason, the assessment is expected to remain valid during the detailed design phase. Given that a precautionary approach was taken in assessing effects, it is not currently expected that any detailed designs or changes that occur in design will affect the assessment of the significance of effects to Fish and Fish Habitat. Changes in Project design or additional details of Project design that have or will occur, or become available, subsequent to completion of the Project EIS will be taken into consideration in the Application for a *Fisheries Act* Authorization and in development of offsetting measures and any additional mitigation.
- b) As indicated above, a precautionary approach was taken through coordination with Project engineers during the planning and design process to develop an understanding of the breadth of options being examined and to develop mitigation that encompasses the uncertainty of potential effects. Follow up plans include commitments to adaptively manage effects that deviate from predictions provided in the EIS. However, the assessment of effects is robust enough that its conclusions would not change even if additional mitigation measures not proposed in the EIS are developed. As indicated, these details will become part of the *Fisheries Act* Authorization process.