

Advice Record – Information to Inform the Summary of Issues

Project: Georgina Island Fixed Link Project

Proponent: Chippewas of Georgina Island First Nation

CIAR No.: 83539

Response requested by: **May 29, 2022**

All comments should be submitted via the **Submit a Comment** feature available on the Project's Canadian Impact Assessment Registry page (Reference #83539 at <http://iaac-aeic.gc.ca/050/evaluations/proj/83539?culture=en-CA>). Letters and forms can be uploaded using this feature. If you have any difficulties submitting this way, please contact the Agency at GeorginaIsland-IleGeorgina@iaac-aeic.gc.ca.

1. Confirm whether your organization would like to participate in the federal impact assessment process for this Project. ☒ Yes ☐ No

If yes, please provide contact details for the person(s) who will be working with the Agency.

Organization: Lake Simcoe Region Conservation Authority	
<i>Primary Contact Details:</i>	
Contact Name: Glenn MacMillan	Telephone: 905-895-1281 x 331
Address: 120 Bayview Parkway, Newmarket, ON, L3Y 3W3	Fax:
Email: g.macmillan@lsrca.on.ca	
<i>Alternate Contact Details (if applicable):</i>	
Contact Name: Rob Baldwin	Telephone: 905-895-1281 x 248
Address: 120 Bayview Parkway, Newmarket, ON, L3Y 3W3	Fax:
Email: r.baldwin@lsrca.on.ca	

2. Identify your organization's contact information for the public. This could be a generic email box or specific to your organization's role on the project (e.g. permits, authorizations, guidance or funding within your organization's mandate.)

Lake Simcoe Region Conservation Authority
120 Bayview Parkway Newmarket, ON
905-895-1281
Regulations@lsrca.on.ca
www.LSRCA.on.ca

3. Will your organization undertake any technical analysis (e.g. effects assessment) related to this Project? Would you be willing to cooperate with the Agency on this analysis?

(considers potential environmental, health, social and economic impacts)

Yes, the LSRCA regularly monitors and studies the health of Lake Simcoe. Part of our objective for our Lake Monitoring program is to assess the current ecological status and identify current and historical environmental trends as well as determine the impact of stressors on the nearshore water quality and biological communities.

The LSRCA is currently in the process of updating the 1981 Shoreline Flood Elevation Study prepared by Marshall Macklin Monaghan. The study currently underway by Baird is considering shoreline hazards, including at wave heights, wave uprush and shoreline flooding. The LSRCA would consider impacts associated with altered water currents, sedimentation, and ice jams/build ups as a result of the potential alteration of water currents resulting from the causeways.

In addition, to offshore and nearshore impacts, the LSRCA would consider impacts related to on shore activities such as impacts to woodlands, wetlands, and wildlife.

4. (a) Based on the Initial Project Description, will your organization be issuing any permits, authorizations or otherwise be involved in the Project in a regulatory manner? ☐ Yes ☒ No

(b) If yes:

- Name the permit, authorization or other function that your organization would provide;
- Provide a short description, including regulatory or legislative authority, of each permit, authorization or other function (please provide links or attach relevant documents to this form);
- Indicate the project component or activity to which the permit or authorization applies;
- Indicate, for each permit, authorization or other function, whether your organization would undertake Indigenous consultation, and if yes, provide a summary overview of the approach, including provision of any participant funding; and
- Indicate, for each permit, authorization or other function, whether your organization would undertake public engagement, and if yes, provide a summary overview of the approach, including provision of any participant funding.

LSRCA's legislation is Provincial and is not applicable to this project.

5. (a) Indicate whether the description of potential effects presented in the Initial Project Description sufficiently characterizes potential project effects as they relate to your organization's mandate.

Potential effects presented in initial project description include fish and fish habitat (fisheries act) aquatic species (SAR) migratory birds (MBCA). Potential direct and indirect impacts to aquatic and wetland habitats around the shallow peninsula of shoals. SWM and application of road salt, changes to aquatic habitats, snow removal and impacts, vehicle re-fuelling, spills management, changes to water flow, lake currents and fish movement, changes to avian, vascular, and mammal SAR and habitat, changes to terrestrial and wetland vegetation (and associated habitat) as a result of the bridge approaches and causeway, impacts to wildlife movement due to the roadway, potential groundwater contamination. In addition to these considerations, the Conservation Authority would highlight the below considerations:

The causeway portions of the link may have more coastal engineering impacts than bridge/pier/pile sections. Considerations should be given to altered currents, flow patterns and sediment deposition patterns to assess the potential for impacts. Specifically, the proposed route of the fixed link is from the southwestern tip of Georgina Island across the channel to the mainland at either the “Bay Vista Property” or “Other GIFN Property” on the mainland (Figure 2 on p. 3 of the Plan), crossing an area commonly referred to as the “Sand Islands” that extend from Georgina Island to approximately halfway across the channel. This area is one of the few sandy substrate habitats in Lake Simcoe and has a dynamic geomorphology. Sand substrates, and sand from the islands, are constantly shifting due to wind and wave action, as well as currents that move in an east-west direction in the channel between the island and the mainland. The shape of the Sand Islands is in constant flux (as can be seen from a series of aerial photographs and satellite images taken over the years) and has more subtle changes on a seasonal and annual basis.

The potential erosion of both the on-shore areas as well as in water erosion around the rock structures/piers should be considered. Potential impacts from back eddy currents and water moving around the causeway as well as restriction if the natural flow and increase current velocities creating can create bottom scour and turbidity.

In addition to impacts to habitat as a result of sedimentation, impacts to the recreational use of Lake Simcoe may be considered. For example, an increase in sedimentation/build up on the leeward side would be significant from the causeway requiring eventual dredging to maintain boating and fishing activities in the channel as well as access to private docks, marinas and waterfront properties.

The impacts of ice pile-up should be assessed and considered as part of future modelling/design stages of the project. The alteration of water currents will change the dynamics of winter ice both on the lake side of the project and in the channel. Ice shoves onto land are common on shores that face a north / north-west direction on Lake Simcoe so it can be expected that significant ice build-up will occur on the western side of the causeways and in the passage under the bridge. On the channel side, ice movements will be altered and may impact the use of these areas for recreational and subsistence activities. In addition, the use of de-icing materials on the bridge and causeway roads may create unsafe ice conditions around the construction that could impact winter recreational and subsistence activities that rely on safe ice conditions.

Consideration for the removal of wetland and woodland for the roadway including impacts to the hydrologic function of the features should be considered. Where feasible these areas should be avoided.

(b) Provide input on whether these effects may be adverse and whether your regulatory instruments (ex. permit, authorization, or other function) could be used to address these effects.¹

Based on a preliminary review of the concept, it is our opinion that the effects could be adverse. Again, we recognize that permissions are not required from the Conservation Authority in this scenario, however, our typical review and approval process would require demonstrating no negative impacts to the natural hazard and natural heritage features as described.

(c) Identify any additional potential effects of the Project that are not described in the Initial Project Description. Where potential effects have been overlooked, are missing or could be better described and presented by the Proponent, provide a concise synopsis for the Summary of Issues. (Where possible, use plain language in your summary.)

¹ Information on effects and direct and incidental effects as well as effects within federal jurisdiction are defined in section 2 of IAA. A link to IAA text can be found here: <https://www.canada.ca/en/impact-assessment-agency/corporate/acts-regulations/legislation-regulations.html>

Potential effects of the project beyond what has been identified in the initial project description include:

1. Impacts to sedimentation and erosion. While identified that sedimentation needs to be considered, we believe there are various aspects to be covered including, the hazards associated with sedimentation and erosion caused by the causeway, the impacts to the recreational aspect of the lake and private properties along the shoreline.
2. Impacts to significant woodlands.
3. Ice impacts (changes in ice from a recreational lake perspective, impacts on ice piling on the causeway and adjacent lands).
4. Impacts on shallow water habitats
5. Impacts to flooding and wave up-rush overtopping as a result of the causeway or roadway and any associated fill placement.
6. Construction methodology (specifically how fill will be brought to the island for construction and stability/suitability of material)

6. Provide any additional comments your organization would like to share with the Agency regarding the Project.

The Conservation Authority recognizes the importance of this project to the Chippewas of Georgina Island First Nation. We would be happy to provide our watershed expertise and work together through the completion and review of the environmental studies to ensure natural hazards are appropriately addressed and the ecological function of Lake Simcoe and surrounding area is maintained.

Glenn MacMillan

Name of Responder



Signature

General Manager, Planning, Development &
Restoration

Title of Responder

May 27, 2022

Date