

# Appendix F. Fisheries and Oceans Canada Letter of Advice



Fish and Fish Habitat Protection  
Fisheries and Oceans Canada  
Central and Arctic Region  
1028 Parsons Rd SW  
Edmonton, Alberta  
T6X 0J4

Programme de Protection du poisson et de son habitat  
Pêches et Océans Canada  
Région du Centre et de l'Arctique  
1028 rue Parsons Sud-Ouest  
Edmonton, AB  
T6X 0J4

February 5<sup>th</sup>, 2020

*Our file Notre référence*

18-HCAA-01146

Ministry of Transportation Ontario  
Attention: Miao Zhou  
159 Sir William Hearst Avenue  
Toronto, ON  
M3M 0B7

**Subject: MTO – Bridge Installation and Repair, Credit River, Mississauga, ON – Implementation of Measures to Avoid and Mitigate the Potential for Prohibited Effects to Fish and Fish Habitat**

Dear Miao Zhou:

The Fish and Fish Habitat Protection Program (the Program) of Fisheries and Oceans Canada (DFO) received your proposal on August 17, 2018. There are four distinct components to this project related to the widening of the Queen Elizabeth Way (QEW): the installation of a new bridge over the Credit River, the rehabilitation of the existing bridge over the Credit River, the replacement of two culverts that carry Stavebank Creek, and the replacement of a culvert that carries Kenollie Creek. We understand that the project will entail:

- Installation of aquadams on the west (256.7 m<sup>2</sup>) and east (153 m<sup>2</sup>) banks of the Credit River to facilitate the building of a new bridge for the QEW;
- Removal of a decommissioned pipeline from within the footprint of the aquadams;
- Placement of sheet pile cofferdams within the dewatered area and will stay for between 1-2 years;
- Construction of new bridge piers within the isolated areas on the west (11.5 m<sup>2</sup>) and east (1.4 m<sup>2</sup>) banks of the river;
- Installation of rock protection within the isolated areas around the newly constructed west (126 m<sup>2</sup>) and east (56 m<sup>2</sup>) piers;
- Removal, or cutting to bed depth, of sheet piling upon completion of construction;
- Placing rock protection around the west (27.2 m<sup>2</sup>) and east (145.8 m<sup>2</sup>) piers of the existing QEW bridge over the Credit River;

- Replacing a 31.83 m long x 1.22 m wide x 1.22 m high concrete box culvert under Premium Way and a 62.95 m long x 1.22 m wide x 1.22 m high concrete box culvert under the QEW, both carrying Stavebank Creek, with two concrete box culverts that are both 1.8 m wide x 1.2 m high. The first culvert will be 26.88 m long, and the second will be 75.94 m long. The two culverts will meet in a 1.8 m wide x 2.4 m tall chamber. The total length of the culverts and chamber will be 104.63 m. Four 0.5 m wide x 0.9 m long baffles will be placed every 1 m towards the end of the downstream culvert;
- Creation of a 23 m<sup>2</sup> riprap plunge pool at the outlet of the downstream culvert;
- Replacement of a 9 m<sup>2</sup> section, 2 m<sup>2</sup> below the High Water Mark (HWM), of gabion wall at the outlet of the downstream culvert;
  
- Replacing a 73.7 m long x 2.5 m wide x 1.86 m high open footing concrete box culvert carrying Kenollie Creek under the QEW with a 79.3 m long x 3 m wide x 2.1 m high concrete box culvert. Four 0.5 m wide x 1.5 m long baffles will be installed every 1 m towards the culvert outlet;
- Creation of a stone-lined plunge pool at the outlet of the culvert;
- The addition of 17 m (7 m<sup>2</sup> below the HWM) of armour stone wall to an existing gabion wall near the outlet of the Kenollie Creek culvert.

Our review considered the following information:

- Request for Review – August 17, 2018;
- Additional mitigation measures – August 17, 2018;
- Aquatics effects assessment summary table - Rehabilitation of existing QEW Credit River bridge – August 17, 2018;
- Aquatics effects assessment summary table - QEW Credit River bridge twinning – August 17, 2018;
- Summary table of existing fish and fish habitat – August 17, 2018;
- Map of study area – August 17, 2018;
- Photographic record – August 17, 2018;
- Drawing of QEW Credit River impacted areas – August 17, 2018;
- Drawing of QEW River bridge east bound structure rehabilitation August 17, 2018;
- Aquatic constraints within QEW study area – October 24, 2018;
- Minutes from the QEW Credit River bridge progress meeting with Ministry of Natural Resources and Forestry – October 24, 2018;
- Drawing of QEW Credit River impacted areas – October 24, 2018;
- Drawing of QEW Credit River impacted areas with turbidity curtains in red – October 29, 2018;
- Culvert information table – December 11, 2018;
- Drawing of QEW Kenollie Creek culvert – December 11, 2018;
- Drawing of QEW Stavebank Creek culvert – December 11, 2018;

- Drawing of QEW Credit River impacted areas with turbidity curtains in red – December 11, 2018;
- Stavebank Creek and Kenollie Creek culvert and habitat photos – December 11, 2018;
- Summary table of existing fish and fish habitat – December 11, 2108;
- Drawing of Kenollie Creek culvert impacts – December 19, 2018;
- Drawing of Stavebank Creek culvert impacts – December 19, 2018;
- Drawing of Stavebank Creek culvert and area being enclosed – December 19, 2018;
- Drawing of Stavebank Creek culvert impacts – January 4, 2019;
- Email from Andrea Hasler (MTO) to Adam St. Clair-Hughes (DFO) regarding design changes – October 31, 2019;
- Email from Andrea Hasler (MTO) to Adam St. Clair-Hughes (DFO) answering design questions – November 25, 2019;
- Email from Allison Hennyey (MTO) to Adam St. Clair-Hughes (DFO) regarding background information on the project – November 29, 2019;
- Email from Andrea Hasler (MTO) to Adam St. Clair-Hughes (DFO) answering design questions – December 4, 2019;
- Phone conversation between MTO (Andrea Hasler, Chris Barber, & Chris Brown) and DFO (Adam St. Clair-Hughes & Laura Phalen) regarding timing windows and installation/deconstruction of cofferdams – December 17, 2019.

Your proposal has been reviewed to determine whether it is likely to result in:

- the death of fish by means other than fishing and the harmful alteration, disruption or destruction of fish habitat which are prohibited under subsections 34.4(1) and 35(1) of the *Fisheries Act*;
- effects to listed aquatic species at risk, any part of their critical habitat or the residences of their individuals in a manner which is prohibited under sections 32, 33 and subsection 58(1) of the *Species at Risk Act*.

The aforementioned impacts are prohibited unless authorized under their respective legislation and regulations.

To avoid and mitigate the potential for prohibited effects to fish and fish habitat (as listed above), we recommend implementing the measures listed below:

- Plan in-water works, undertakings and activities to respect timing windows to protect fish, including their eggs, juveniles, spawning adults and/or the organisms upon which they feed and migrate;
  - Acceptable timing windows for in-water works on the Credit River are December 15 – January 31 and July 1 – August 15 (extended to August 31 for 2020);
  - No timing window is required for work in Stavebank Creek;
  - Acceptable timing window for in-water works in Kenollie Creek is July 1 – March 31;

- Capture, relocate, and monitor for fish trapped within isolated, enclosed, or dewatered areas;
  - Dewater gradually to reduce the potential for stranding fish;
- Screen intake pipes to prevent entrainment or impingement of fish;
  - Use the code of practice for water intake screens;
- Limit impacts on riparian vegetation to those approved for the work, undertaking or activity ;
  - Limit access to banks or areas adjacent to waterbodies;
  - Prune or top the vegetation instead of grubbing/uprooting;
  - Limit grubbing on watercourse banks to the area required for the footprint of works, undertaking or activity;
  - Remove vegetation or species selectively and in phases;
  - Re-vegetate the disturbed area with native species suitable for the site;
- Salvage, reinstate or match habitat structure (e.g., large wood debris, boulders, instream aquatic vegetation/substrate) to its initial state;
- Restore stream geomorphology (i.e., restore the bed and banks, gradient and contour of the waterbody) to its initial state;
- Replace/restore any other disturbed habitat features and remediate any areas impacted by the work, undertaking or activity;
- Conduct in-water undertakings and activities during periods of low flow, or at low tide;
- Maintain an appropriate depth and flow (i.e., base flow and seasonal flow of water) for the protection of fish and fish habitat;
- Avoid changing flow or water level;
- Avoid obstructing and interfering with the movement and migration of fish;
- Develop and implement an Sediment Control Plan to minimize sedimentation of the waterbody during all phases of the work, undertaking or activity;
  - Conduct all in-water works, undertakings or activities in isolation of open or flowing water to reduce the introduction of sediment into the watercourse (for construction of the new bridge over the Credit River and for the culvert carrying Kenollie Creek);
    - Maintain the natural flow regime for any diversion works;
  - Schedule work to avoid wet, windy and rainy periods (and heed weather advisories);
  - Inspect and maintain regularly the erosion and sediment control measures and structures during all phases of the project;
  - Use biodegradable sediment control materials should be used whenever possible;
  - Remove all exposed non-biodegradable sediment control materials once site has been stabilized;

- Operate machinery on land, or from barges or on ice;
- Use methods to prevent substrate compaction (e.g., swamp mats, pads);
- Monitor the watercourse to observe signs of sedimentation during all phases of the work, undertaking or activity and take corrective action;
- Dispose and stabilize all dredged material above the high water mark of nearby waterbodies to prevent entry in the water;
- Immediately stabilize shoreline or banks disturbed by any activity associated with the project to prevent erosion and/or sedimentation through re-vegetation with native species (seed) suitable for the site;
- Do not deposit any deleterious substances in the water course;
- Develop and implement a response plan to avoid a spill of deleterious substances;
  - Stop work, contain sediment-laden water and other deleterious substances and prevent their further migration into the watercourse;
  - Keep an emergency spill kit on site during the work, undertaking or activity;
  - Report any spills of sewage, oil, fuel or other deleterious material, whether near or directly into a water body;
  - Ensure clean-up measures are suitably applied so as not to result in further alteration of the bed and/or banks of the watercourse;
  - Clean-up and appropriately dispose of the sediment-laden water and deleterious substances;
  - Plan activities near water such that materials such as paint, primers, blasting abrasives, rust solvents, degreasers, grout, poured concrete or other chemicals do not enter the watercourse;
  - Maintain all machinery on site in a clean condition and free of fluid leaks;
  - Wash, refuel and service machinery and store fuel and other materials for the machinery in such a way as to prevent any deleterious substances from entering the water;
  - Dispose all construction, demolition or commercial logging materials waste above the high water mark of nearby waterbodies to prevent re-entry;
- Ensure that machinery arrives on site in a clean condition and is maintained free invasive species and noxious weeds for the duration of construction;
- Have spill kits onsite and drip pans under all non-mobile machinery;
- Machinery shall be operated according to, and construction shall follow, the Ontario Provincial Standard Specifics General Specification for

Environmental Protection for Construction in Waterbodies and on Waterbody Banks (OPSS 182);

- When water is discharged to a watercourse, the water discharged shall be done in a manner that does not cause erosion or other damage to adjacent lands;
- The stone sizing and type will be according to the Ontario Standard Specification for Streambed Materials (OPSS 1005);
- Sheet piling will be removed or cut in such a way as to ensure it does not cause impacts to fish or fish habitat;
- Cofferdams will be monitored, inspected and evaluated and altered/maintained as necessary.

Provided that you incorporate these measures into your plans, the Program is of the view that your proposal will not require an authorization under the *Fisheries Act*, or a permit under the *Species at Risk Act*.

Should your plans change or if you have omitted some information in your proposal, further review by the Program may be required. Consult our website (<http://www.dfo-mpo.gc.ca/pnw-ppe/index-eng.html>) or consult with a qualified environmental consultant to determine if further review may be necessary. It remains your responsibility to remain in compliance with the *Fisheries Act*, avoid prohibited effects on listed aquatic species at risk, any part of their critical habitat or the residences of their individuals, and prevent the introduction of non-indigenous species.

It is also your *Duty to Notify* DFO if you have caused, or are about to cause, the death of fish by means other than fishing and/or the harmful alteration, disruption or destruction of fish habitat. Such notifications should be directed to <http://www.dfo-mpo.gc.ca/pnw-ppe/CONTACT-eng.html> or to the DFO-Pacific Observe, Record and Report phone line.

Please notify this office at least 10 days before starting your project. A copy of this letter should be kept on site while the work is in progress. It remains your responsibility to meet all other federal, territorial, provincial and municipal requirements that apply to your proposal.

If you have any questions with the content of this letter, please contact Adam St. Clair-Hughes at 780-495-5423, or by email at [Adam.St-Clair-Hughes@dfo-mpo.gc.ca](mailto:Adam.St-Clair-Hughes@dfo-mpo.gc.ca). Please refer to the file number referenced above when corresponding with the Program.

Yours sincerely,



Laura Phalen  
A/ Senior Fish and Fish Habitat Biologist

Fisheries and Oceans Canada

CC:

Adam St. Clair-Hughes – Fisheries and Oceans Canada

Andrea Hasler – Ministry of Transportation Ontario

Chris Barber – Ministry of Transportation Ontario

Chris Brown – Ministry of Transportation Ontario

Melissa Laplante – Ministry of Natural Resources and Forestry Ontario

Deborah Crawford – Morrison Hershfield Ltd.