



Mississippi Valley Conservation

File: W10-69

August 13, 2010

Dave Ryan, City of Ottawa
2155 Roger Stevens Drive
Ottawa, ON
K0A 2T0

Dear Mr. Ryan,

**RE: Application Made Under Ontario Regulation 153/06 to replace the culvert under the Trans Canada Trail and remove beaver dams within the Upper Poole Creek Wetland, as part of the creation of the Hazeldean Drain. Letter of Advice to Mitigate Impacts to Fish and Fish Habitat
Goulbourn, City of Ottawa**

Mississippi Valley Conservation (MVC) has reviewed the proposal of replacing a culvert under the Trans Canada Trail and removing beaver dams from within the Upper Poole Creek Provincially Significant Wetland, as described in the Engineers Report "Petition for Drainage Works Hazeldean Road Municipal Drainage and Watercourse Management Plan" (August 2010).

As detailed in our Level II agreement with the Department of Fisheries and Oceans (DFO), MVC is responsible for the evaluation of the impact of proposed works on fish habitat within our watershed.

The harmful alteration, disruption or destruction of fish habitat is prohibited unless authorized by DFO pursuant to Section 35(2) of the *Fisheries Act*. In keeping with DFO's "Policy for the Management of Fish Habitat", no such authorizations are issued unless acceptable measures for habitat loss are developed and implemented by the proponent.

Often physical impacts on fish habitat can, for the most part, be mitigated by specific modifications or actions incorporated into the project design and construction procedures. In addition to the measures and construction methods set out in the project proposal, the following mitigative measures, if incorporated into the project, are intended to alleviate any potential harmful impacts to fish and fish habitat:

General Recommendations

- No in-water work should occur from March 15 to June 30 to protect local fish populations during their spawning and nursery periods.
- All materials and equipment used for the purposes of site preparation and project completion should be operated and stored in a manner that prevents any deleterious substances (e.g. petroleum products, silt, debris, etc.) from entering the water.
- No machinery should enter the water except the clean arm and bucket of the machinery. Any part of machinery that enters or comes in contact with the water should be clean of all grease, oil, dirt or debris.

Culvert Work

- The culvert should be designed to accommodate fish passage: The culvert should be embedded at least 10% of the culvert diameter below the upstream and downstream channel invert, as referenced in the report. Where appropriate, culverts should be backfilled with clean imperted substrate material matching the existing upstream and downstream bottom type and gradient.
- Only clean material free of fine particulates should be placed in the water.
- All in stream work should be completed *in the dry* by de-watering the work area and diverting and/or pumping flows around cofferdams placed at the limits of the work area.



- Existing stream flows should be maintained downstream of the de-watered work area without interruption, during all stages of the work. There should be no increase in water levels upstream of the de-watered work area.
- Fish should be removed from the work area prior to de-watering and released alive immediately downstream.
- Flow dissipaters and/or filter bags, or equivalent, should be placed at water discharge points to prevent erosion and sediment release.
- Silt or debris that has accumulated around the temporary cofferdams should be removed prior to their withdrawal.

Beaver Dam and Obstruction Removal

- Breaching of the beaver dam should be carried out in a manner that minimizes downstream sediment load.
- Breaching of the beaver dam should occur during low flow conditions and on days when rain is not expected.
- Only a small portion of the dam should be pulled back at one time to allow the water from the beaver pond to be released slowly. As water levels decrease, the size of the opening may be increased to allow complete drainage of the retention area.
- Areas downstream of the beaver dam should be monitored during breaching activities to determine whether damage to the channel and adjacent properties receiving additional water volumes are occurring.
- Fish that become trapped in isolated pools as a result of beaver pond de-watering should be relocated to the main channel of the watercourse.
- Materials removed from the beaver dam should be disposed of in an appropriate manner by placing it outside of the 5m natural buffer and tapering the fill to existing grades.
- Sediment and erosion control measures, as referenced in the permit W10-69, should be left in place until all disturbed areas have been stabilized.

If the work is carried out as per the above mitigative measures as well as our understanding of the project, it will not be considered as contravening Section 35(1) of the *Fisheries Act* which reads:

“No person shall carry on any work or undertaking that results in the harmful alteration, disruption or destruction of fish habitat.”

If the proposed construction method is modified MVC should be contacted before the start of work to obtain any further/additional advice regarding the potential impact and mitigative measures with respect to fish habitat.

Please note that this letter of advice does not release the proponent of the responsibility of obtaining any other permits that may be required under federal, provincial or municipal legislation.

If you have any other questions please contact the undersigned.

Yours truly,



Kelly Stiles
Aquatic Biologist