



# MEMORANDUM

**TO** Parks Canada Agency - Highway Engineering Services,  
McElhanney Consulting Services Ltd.

**DATE** September 2017

**CC**

**FROM** Golder Associates Ltd.

**PROJECT No.** 1777229\_TM0007\_ Rev 0

## GLACIER NATIONAL PARK – TRANSCANADA PHASE 2 – BEAVER VALLEY PONDING (KM 5.9 TO 7.0) BIA MITIGATION SUMMARY

### Introduction

A summary of commitments made related to the construction phase of the TransCanada Highway (TCH) Phase 2 – Beaver Valley Ponding site between km 5.9 to 7.0, described in the approved Basic Impact Analysis (BIA) is provided in Table 1. All TCH kilometer (km) markers in this document are measured from the east boundary of GNP (TCH km 0.0).

The Project involves excavation of landslide material from the recurring East Gate Landslide (EGLS) and transportation of material through the Phase I portion of the project along the old highway right of way to the Phase II ponding site construction area. Phase I of the project (km 4.5 to km 5.9) was assessed under a separate BIA (Parks Canada Agency (PCA) 2015 a) and includes an approved excavation site located between km 5.5 and 5.9 as a fill source for the Phase 2 Project. The approved BIA includes activities for the Phase 2 ponding site (i.e. TCH km 5.9 to 7.0). Construction restriction periods and site specific restrictions are also provided. Specific mitigations associated with each commitment should be referenced in the BIA, Parks Canada Best Management Practices, and Project Specifications as they are developed for activities covered under this BIA.

**Table 1: Construction commitments, restriction periods and site specific restrictions.**

Component	Description	Site or Period Specific Restriction	Associated Dates	BIA Page Reference
Aquatic & Fish	All equipment arriving on site that is to be used within a watercourse or riparian area is required to be decontaminated prior to use on this Project as per the PCA Decontamination Program.	Least Risk Window: August 20 - 31	DFO Self Assessment: October 2017  DFO Request for Review: Submitted November 2017  QEP: During all instream activities	<ul style="list-style-type: none"> <li>■ Table 15 (pg. 53)</li> <li>■ Section 8.3 (pg. 53-54)</li> <li>■ Appendix G (Whirling Disease Protocol)</li> </ul>
	Before construction commences, the engineering design consultant will finalize the proposed construction details, including the footprint and culvert replacement designs associated with the Project. The finalized construction details and design will be required for completion of the DFO Self-Assessment and Request for Review.			
	The Contractor will employ the services of a Qualified Environmental Professional (QEP) to advise and monitor construction activities that occur within or adjacent to watercourses. Activities such as			



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	<p>culvert installations and road widening work adjacent to watercourses require the oversight of a QEP. The QEP will oversee a fish salvage of the watercourse prior to commencement of instream activities. The QEP will advise the Contractor on proper erosion and sediment control and spill and contaminant introduction measures and the installation of these measures.</p> <p>A DFO Self-Assessment will be completed and a Request for Review will be submitted prior to the installation of culvert extensions on Culverts 1 and 2 at Tributary 3 (at km 6.08 of the TCH) depending on the details of the final design. Preserving the potential for downstream connectivity and fish passage through the longer culvert is mandatory; therefore, the culvert shall be sized and installed appropriately (i.e., with proper gradient) such that flows are maintained or improved.</p>			
	<p>Information on any rare plants occurrences documented as a result of the summer 2017 surveys will be provided to the MRG FU and MRG FU will provide feedback on how to proceed. Any mitigation resulting from rare plant occurrences and discussions with the MRG FU, such as transplanting, will occur prior to tree clearing in September 2017</p>	n/a	August - September 2017	<ul style="list-style-type: none"> <li>■ Section 8.4 (pg. 55-57)</li> </ul>
	<p>Wetland compensation is required for permanent loss of 199 m<sup>2</sup> or 0.02 ha of riparian swamp at a proposed ratio of 3:1. Compensation will include wetland restoration and enhancement and PCA will investigate restoration and enhancement options within GNP. Following the identification of potential compensation sites, PCA and their consultant will complete an assessment of the candidate sites to prioritize the best option for restoration or enhancement.</p>	n/a	Fall 2017 – Spring 2020	<ul style="list-style-type: none"> <li>■ Appendix C (Beaver Valley Wetland Rapid Functional Assessment)</li> </ul>



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	Wetland restoration or enhancement sites will be outlined and documented in an addendum to this BIA following additional investigation and field surveys.			
	A restoration plan is required for several sections of the Project. This restoration plan will be prepared and submitted to MRG FU for approval at least two weeks in advance of restoration activities	n/a	Spring 2020	
	Appropriate native shrub staking will be carried out as per MRG Planting Criteria (BMP) after the stabilization of the west-facing slope and around culvert extensions by the Contractor to accelerate site re-vegetation and reclamation. A detailed planting plan (including species and source of materials) will be prepared by the contractor and submitted to the MRG FU for approval.	n/a	Spring 2020	
Wildlife & Habitat	QEPs will complete pre-disturbance surveys during construction in the amphibian breeding period to assess the Project footprint for amphibian presence and habitat. All amphibian habitat will be flagged along the route. If eggs, tadpoles or toads are found, the Field Unit MRG FU, through the ESO, will be notified to develop an avoidance or mitigation plan that may require amphibian salvage, if necessary.	April 1 – August 31 (Table 15, pg. 53)	Within one week of construction	<ul style="list-style-type: none"> <li>■ Table 15 (pg. 53)</li> <li>■ Section 8.5 (pg. 57-59)</li> </ul>
	If vegetation clearing will occur during the breeding bird period (April 1 to August 31), pre-clearing nest surveys and bat roost surveys will be completed by a Qualified Environmental Professional to reduce the risk of impacting active nests and bat roosts.		No more than one week before tree clearing; between April 1 and August 31.	