

## REFERENCE DOCUMENTS

DFO Bridge Maintenance Standard Operating Procedures, available on-line at:

[http://www.dfo-mpo.gc.ca/oceans-habitat/habitat/modernizing-moderniser/epmp-pmpe/qc/pdf/bridge\\_e.pdf](http://www.dfo-mpo.gc.ca/oceans-habitat/habitat/modernizing-moderniser/epmp-pmpe/qc/pdf/bridge_e.pdf)

BC Provincial Government, MOE: Standards and Best Practices for Instream Works

Available on-line at: <http://www.env.gov.bc.ca/wld/documents/bmp/iswstdsbpsmarch2004.pdf>

## Environmental Protection Plan (EPP) – Checklist

**Note:** This checklist was developed to assist the Contractor in determining and mitigating environmental issues at site. It is considered a generic checklist and it is in the Contractor's best interest to review the PWGSC Environmental Management Plan (EMP) or the Environmental Assessment (EA) as supporting documents in the completion of the site Environmental Protection Plan (EPP).

EPP Framework		Content Requirements	Yes	No	N/A
Project Setting and Site Activities					
Project Description	A brief description of the project and its location is provided.				
Environmental Sensitivities	Sensitive or protected features that could be impacted as a result of the Contractor’s activities are described.				
Site Activities	A scope of work and a list of all construction or related activities to be undertaken during the project are provided.				
Project Schedule and Site Drawings					
Project Schedule	A project schedule is provided, including scheduled shut-downs and restricted work periods due to environmental requirements.				
Site Drawing	One or more site drawings(s) are provided, indicating the site location; site set-up and layout; erosion and sediment controls; in-stream work areas; and environmental sensitivities.				
Potential Environmental Impacts and Controls					
Potential Environmental Issues and Impacts	The potential environmental issues and impacts that may result from the construction activities are described. Environmental Reports (Environmental Assessments; Fish Habitat and Compensation etc) will be provided to the contractor especially with respect to any in-stream work procedures that will be required. For example, in-stream works will impact fish and fish habitat in the surrounding ecosystem. It is the Contractor’s responsibility to ensure the work is completed in a manner that causes the least impact on the ecosystem (see section on Mitigation).				
Permits, Approvals, and Authorizations	List required permits, approvals and authorizations. As applicable, environmental mitigation measures prescribed by regulatory agencies and included in project permits, approvals and authorizations are described. NOTE: DFO, MOE and NWPA approvals and authorizations for in-stream works are PWGSC’s responsibility however, the Contractor must be aware of the requirements of these approvals/authorizations. Permitting for water withdrawal from the waterbody as part of construction activities is part of the Contractor’s responsibility.				
Mitigation Strategies	Procedures, controls or best management practices (BMPs) to prevent or reduce adverse impacts on the environment are provided. All work in BC must adhere to the BC MOE “Standards and Best Practices for Instream Works”.				
Erosion and Sediment Control	Erosion and sediment controls are provided, as appropriate for the jurisdiction.				
Waste Management and Hazardous Materials					

<b>Waste Management and Hazardous Materials</b>	Hazardous materials that will be used and/or stored on site are listed. Expected hazardous and non-hazardous waste materials along with proper handling, containment, storage, transportation and disposal methods are listed. As appropriate for the jurisdiction, estimated waste quantities and specific handling procedures are also provided. For example, re-fuelling of equipment will be conducted at least 100m away from any active drainage courses.			
<b>EPP Implementation</b>				
<b>Site Representative</b>	Name(s) and contact details for the person(s) who will be the Contractor's Site Representative(s) are provided.			
<b>Training and Communication</b>	Training and communication details are provided.			
<b>Monitoring and Reporting</b>	Monitoring and inspection procedures, including a schedule of monitoring activities and reporting procedures are provided. For example, this would include downstream monitoring activities for increased siltation during in-stream works.			
<b>Documentation</b>	Information and/or records that will be maintained relating to the EPP and end environmental matters on the project site are described.			
<b>EPP Update</b>	EPP review and update procedures are provided.			
<b>Environmental Emergency Response Procedures</b>				
<b>Environmental Emergency Response Procedures</b>	Potential incidents that may impact the environment are identified, and emergency response procedures to prevent and respond to incidents are provided. An environmental emergency response contact list is also provided.			



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Project Title	
Project Description	
Project Type	
Comments	

Issued By	Document Type	Yes	No	N/A
<b>PWGSC Responsibility</b>				
<b>Federal</b>				
<b>DFO - Fisheries Act</b> <a href="http://laws.justice.gc.ca/en/F-14/">http://laws.justice.gc.ca/en/F-14/</a>	Under the <i>Fisheries Act</i> , no one may carry out any work or undertaking that results in serious harm to fish that are part of a commercial, recreational or Aboriginal fishery, or to fish that support such a fishery unless authorized under section 35(1) of the Act. (e.g. new bridges that are not clear span; erosion protection works that extend into the river channel in aquatic systems which will impact commercial, recreational or Aboriginal fisheries).			
	Self Assessment Review – DFO <i>Measures to Avoid Harm</i> (formerly known as Notification to DFO). Proponent completes a self assessment review using the DFO <i>Measures to Avoid Harm</i> . Most projects will fall under this category and will require an EEE and a contractor EPP. <ul style="list-style-type: none"> <li>• Clear span bridges</li> <li>• Temporary ford stream crossing</li> <li>• Ice bridges and snow fills</li> <li>• Bridge maintenance</li> <li>• Maintenance of riparian vegetation in existing ROW</li> </ul>			
	Types of waterbodies where DFO review or self assessment is not required are: <ul style="list-style-type: none"> <li>• Roadside drainage ditches</li> <li>• Quarries and aggregate pits</li> <li>• Any other waterbody that does not contain fish at any time during any given year</li> </ul>			
	<b>Section 36 – under this Section of the Fisheries Act the proponent can be FINED resulting from deposition of substances deleterious to fish in waters frequented by fish – this includes release of silt laden waters from construction activities.</b>			

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<b>Transport Canada NWP</b> <a href="http://laws.justice.gc.ca/en/N-22/text.html">http://laws.justice.gc.ca/en/N-22/text.html</a>	Section 5(2) Work Assessment for work resulting in insignificant impacts on navigability.			
	Section 6(4) Formal Approval for existing structures (existing bridges).			
	Minor Works and Waters Order – This is an amendment to the NWP that streamlines the federal review process by establishing classes of waters and works (projects) that do not require an Application or Approval through the NWPP because they are "minor" in nature. These would include such "works" as repairs to riprap (no gryones) or "waters" that are not large enough for vessel traffic (ie. Contact Creek). <a href="http://www.tc.gc.ca/eng/marinesafety/oep-nwpp-minorworks-menu-1743.htm">http://www.tc.gc.ca/eng/marinesafety/oep-nwpp-minorworks-menu-1743.htm</a>			
<b>Indian and Northern Affairs Canada – Indian Act</b>	Approval for activities on lands under their jurisdiction. This was originally addressed under the EA review process and must now must be addressed by the PM or ES personnel under the EEE process (see below).			
<b>Migratory Birds Convention Act (MBCA)</b>	Environment Canada is responsible for implementing the <u>Migratory Birds Convention Act</u> , which provides for the protection of migratory birds through the <u>Migratory Birds Regulations</u> . This must be included and addressed in the EEE where applicable.			
<b>Environmental Effects Evaluation (EEE)</b>	The Canadian Environmental Assessment Act was amended on July 6, 2013 and under the new Act, only projects on the current Regulations Designating Physical Activities, such as the construction of pipelines and mines, will require environmental assessments. While the new act removes the previous requirement for federal departments to conduct EAs of projects identified in the Act and regulations, a new clause applies to PWGSC and all other departments and agencies. This clause, Section 67 of CEAA 2012, states that " departments must not carry out a project on federal lands, or exercise any power or perform any duty or function that would permit a project to be carried out, in whole or in part, on federal lands, or exercise any power or perform any duty or function that would permit a project to be carried out, in whole or in part, on federal lands, unless the department determines that the project is not likely to cause significant adverse environmental effects." As such, PWGSC has developed an Environmental Effects Evaluation report to ensure that the environmental effects of all site work undertaken in the completion of projects are mitigated and/or avoided			



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	completely.			
<b>Species at Risk Act (SARA)</b> <a href="http://www.sararegistry.gc.ca/default_e.cfm">http://www.sararegistry.gc.ca/default_e.cfm</a>	<p>A list of federally-listed species at risk likely to occur at a given subject site must be compiled in order to identify potential impacts &amp; propose mitigation measures for minimizing impacts to these species as a result of project activities. In cases where suitable habitat for a given species exists at/near the project site, mitigation measures are recommended, including avoidance of areas containing said habitat and informing site workers of these issues to prevent incidents.</p>			
<b>First Nations Notifications and Consultations</b> <a href="http://class.nrcan.gc.ca/googledata-donneesgoogle-eng.php">http://class.nrcan.gc.ca/googledata-donneesgoogle-eng.php</a>	<p>Natural Resources Canada has developed an overlay to be used with Google Earth &amp; Google Maps to identify First Nations lands throughout the country. Notifications of projects within 5 km of such lands and/or directly upstream from such lands should be submitted to the relevant First Nations for a determination of their interest in a given project and/or to request any traditional knowledge they may have to offer.</p>			
<b>Provincial –</b> Note one submission package for instream works is sent to FrontCounter BC at MOE who then send off to the appropriate departments for approval/notification/permitting – this does not apply to the archeological.				
<b>Wildlife Act – WLAP – MOE</b> <a href="http://www.qp.gov.bc.ca/statreg/stat/W/96488.01.htm">http://www.qp.gov.bc.ca/statreg/stat/W/96488.01.htm</a>	<p>Wildlife Act – Section 34 – Birds, Nests and Eggs – vegetation clearing should not occur during critical bird nesting periods, which typically occur in the spring and summer. Contact the local WLAP for vegetation clearing timing windows.</p>			
<b>Water Act - Water Stewardship Division - MOE</b> <a href="http://www.qp.gov.bc.ca/statreg/stat/W/96483">http://www.qp.gov.bc.ca/statreg/stat/W/96483</a>	<p>Section 9 – regulates changes in or about a stream and ensure that water quality, riparian habitat, and the rights of licensed water users are not compromised. This is an approval process and takes approximately 140 days. An application fee is also required. Works requiring approval include channel realignment, retaining wall or bank protection stabilization ect.</p>			
<b>Environmental Stewardship Division - MOE</b>	<p>Notification process for such works as replacement and maintenance of culverts and outfalls; temporary stream diversions around a worksite and takes approximately 45 days to receive notification approval. In general, those works requiring a notification are those that do not involve any diversion of water.</p>			
<b>Fish Protection Act – MOE</b> <a href="http://wlopwww.gov.bc.ca/habitat/fishprotectionact/">http://wlopwww.gov.bc.ca/habitat/fishprotectionact/</a>	<p>This Act was passed in 1997 and is reviewed as part of the Water Act under Section 9 when applying for approval.</p>			
<b>Ministry of Forests, Lands and Natural Resources Operations</b>	<p>When completing projects such as quarry pits and new highway alignments, a request is put into the archaeological branch of MFLNSO via the</p>			



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<b>Archaeological</b> <a href="http://www.for.gov.bc.ca/archaeology/requesting_archaeological_site_information/process_steps.htm">http://www.for.gov.bc.ca/archaeology/requesting_archaeological_site_information/process_steps.htm</a> Contact: Hayley Bond (250) 953-3343	EEE process to search the data base. An archaeological assessment may be required on those areas that are previously undisturbed or undeveloped.			
<b>BC Parks</b>	Various permits are required when completing construction activities within the Parks. Please note that all works within <b>150 feet</b> of the centreline of the highway (Right-of-Way) are <b>NOT</b> subject to construction permitting. (this does not include permitting for fish surveys).			
<b>Canada-British Columbia Agreement for Environmental Assessment Cooperation</b> <a href="http://www.ceaa.gc.ca/default.asp?lang=En&amp;n=04A20DBC-1">http://www.ceaa.gc.ca/default.asp?lang=En&amp;n=04A20DBC-1</a>	Most Alaska Highway Projects will not trigger this agreement, as both the Vancouver CEAA office and the Victoria BC Environmental Assessment Office (EAO) have confirmed that the types and scopes of the projects are not described in the <i>BC Environmental Assessment Act – Reviewable Projects Regulation</i> . However, for due diligence, it is recommended that notifications for all Alaska Highway projects be submitted to CEAA ( <a href="mailto:info@ceaa-acee.gc.ca">info@ceaa-acee.gc.ca</a> ) for review and, if necessary, a determination of whether or not CEAA and/or the BC EAO should be involved. Due to the changes in the CEAA legislation this will be addressed under the EEE where possible.			
<b>BC Ministry of Environment – BC Species and Ecosystems Explorer</b> <a href="http://a100.gov.bc.ca/pub/eswp/">http://a100.gov.bc.ca/pub/eswp/</a>	A list of provincially-listed species at risk likely to occur at a given subject site must be compiled in order to identify potential impacts & propose mitigation measures for minimizing impacts to these species as a result of project activities. This process involves conducting a search of the BC Species and Ecosystems Explorer inventory for the specific area of BC containing the proposed project site.			
<b>Consultant Responsibility</b>				
<b>Provincial</b>				
<b>BC Parks</b> <b>Ministry of Forests, Lands and Natural Resources Operations</b> <a href="http://www.env.gov.bc.ca/bcparks/permits/">http://www.env.gov.bc.ca/bcparks/permits/</a>	Permit to Collect Fish For a Scientific Purpose - Regulation Research activities in parks and protected areas, including: collection; monitoring; survey and inventory; and, other research trigger a Park Permit - Ministry of Forests, Lands and Natural Resources Operations is responsible for the administration of fish and wildlife permits. Note that these permits are taking approx 6 months to receive due to recent involvement and subsequent consultation with Treaty 8. Subsection 42(1)(e) – It is the responsibility of the salvage crew to obtain the necessary permit required to complete a fish and amphibian salvage – in conjunction with the BC			



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	Parks permitting.			
<b>Water Act – Regulation's Protection of Habitat - Section 42(1)</b>	Permit to Collect Fish For a Scientific Purpose – Subsection 42(1)(e) – It is the responsibility of the salvage crew to obtain the necessary permit required to complete a fish and amphibian salvage – in conjunction with the BC Parks permitting.			
<p>Note: research projects and inventory projects are under the same Permit and are applied for under the "Application to Collect Fish for a Scientific Purpose".</p> <p><a href="http://www.env.gov.bc.ca/pasb/applications/process/scientific_fish_collect.html#a5">http://www.env.gov.bc.ca/pasb/applications/process/scientific_fish_collect.html#a5</a></p>				
<b>Contractor Responsibility</b>				
<b>Federal</b>	End-of- pipe guidelines for freshwater intake to avoid fish entrainment.			
<b>DFO – End of Pipe Guidelines</b>	End-of- pipe guidelines for freshwater intake to avoid fish entrainment.			
<b>Provincial</b>	Schedule A – Water License Applications – use of water from waterbody for road maintenance.			
<b>Water Act - MOE</b>				

## Relevant Environmental Publications

The below list of documents are those commonly used when determining how to design and advance a project with the potential to impact a waterbody.

Agency	Publications	Summary
<b>DFO</b>	<b>Land Development Guidelines for the Protection of Aquatic Habitat - 1993</b>	This document is a good reference guide for any works that are occurring in or around the water.
	<b>Canada's Fish Habitat Law</b>	Document explaining the fish and fish habitat laws under the Fisheries Act.
	<b>Riparian Revegetation</b>	Information on minimizing, stabilizing and revegetating construction areas.
	<b>Freshwater Intake End-of Pipe Fish Screen Guideline - 1995</b>	Provides guidelines for the contractor to follow to ensure fish screens are used during freshwater intake operations at construction sites.
	<b>Operational Statements</b> Stream Crossings by Roads: <ul style="list-style-type: none"> <li>• Clear Span Bridges</li> <li>• Temporary Ford Stream Crossing</li> <li>• Ice Bridges and</li> </ul>	Fisheries and Oceans Canada has developed a series of Operational Statements to streamline the undertaking of low risk activities. The Operational Statements outline conditions and measures for avoiding harmful alteration, disruption and destruction (HADD) of fish habitat, and applying them will ensure the project complies with subsection 35(1) of the <i>Fisheries Act</i> . You are NOT required to submit a proposal for review by Fisheries and Oceans Canada when you incorporate the measures and conditions outlined in an appropriate Operational Statement into



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	<ul style="list-style-type: none"> <li>Snow Fills</li> <li>Bridge Maintenance</li> <li>Maintenance of Riparian Vegetation in Existing Rights-of Way</li> </ul>	<p>your plans.</p> <p><a href="http://www.pac.dfo-mpo.gc.ca/habitat/os-eo/index-eng.htm">http://www.pac.dfo-mpo.gc.ca/habitat/os-eo/index-eng.htm</a></p>
MOE	<b><i>Fish-stream Crossing Guidebook - 2002</i></b>	Guidelines in protection of fish and fish habitat and the safe passage of fish during construction at/on stream crossings.
	<b><i>Standards and Best Practices for Instream Works - 2004</i></b>	Guide to planning and carrying out the proposed construction activities to comply with relevant legislation, regulations and policies.
	<b><i>A User's Guide to Working In and Around Water - 2005</i></b>	Understanding the regulation under British Columbia's Water Act.
	<b><i>Fish-Stream Identification Guidebook - 1998</i></b>	Assists in providing information on determining fish streams.
	<b><i>The Streamkeepers Handbook</i></b>	A practical guide to stream and wetland care in regards to rehabilitation planting.