

Instream Flow Risk Management Framework - March 2011

	Low Risk	Low to Moderate Risk	Moderate to High Risk	High to Unacceptable Risk
<u>Fish presence</u>	Project impact boundaries are above fish bearing waters.	Fish are present, but no SARA ¹ or Provincially managed species of concern ² present within project impact boundaries.	Fish are present, but no SARA ¹ or Provincially managed species of concern ² present within project impact boundaries.	Anadromous fish populations and habitats within project impact boundaries and with potential for management concern; Or SARA ¹ species are present; Or Provincially managed species of concern ² present.
<u>Fish habitat criteria</u>	Instream Flow Requirements (IFR) ³ met. If IFR is not met, then see next column(s) for additional supporting information that may be required.	IFR ³ met, or Modified through detailed assessment, and Proposed flow regime not likely to cause HADD ⁵ . Fish passage and entrainment mitigated.	IFR not met, unless Modified through detailed assessment, and Proposed flow regime likely to cause HADD ⁵ . Fish passage and entrainment mitigated.	IFR not met, and Proposed flow regime likely to cause HADD ⁵ for any of above. Fish passage and entrainment may or may not be mitigated.
<u>Supporting Information Requirements</u>	IFR developed using either coarse filter ^{4a} or detailed assessment. ^{4b} Detailed assessment of fish-bearing status. Monitoring: Compliance, effectiveness.	IFR developed using either coarse filter ^{4a} or detailed assessment. ^{4b} Detailed assessment of fish-bearing status. Detailed fish and fish habitat assessment in all affected reaches. Monitoring: Compliance, effectiveness, 1 ^o and 2 ^o production.	IFR developed with detailed assessment. ^{4b} Detailed assessment of fish-bearing status. Detailed fish and fish habitat assessment in all affected reaches. Habitat compensation, financial security required. Detailed impact assessment required ⁸ . Monitoring: detailed plan; long term; including compliance, effectiveness, compensation, 1 ^o and 2 ^o production.	DFO will request that the proponent redesign/relocate their project to mitigate an unacceptable HADD. If the proponent decides to continue with their project as proposed then the same supporting information as the previous column will be required.
<u>Risk of a flow related impact to fish habitat</u>	No Flow HADD	Likely No Flow HADD	Potentially Acceptable Flow HADD⁶	Unacceptable Flow HADD⁷

1. SARA species includes those listed under Schedule I of the *Species at Risk Act*

2. Determined by the Province of British Columbia.

3. All IFRs include ramping of flows during start up or shut down procedures.

4. Provincial/Federal Instream Flow Requirements (IFR) refers to the minimum instream flow that must be released and resulting from the two tiered review process for proposed run of river hydro projects as detailed in

a) "Development of Instream flow thresholds as guidelines for reviewing proposed water uses", Hatfield, T et al. (2003); or

b) "Assessment methods for aquatic habitat and instream flow characteristics in support of applications to dam, divert, or extract water from streams in BC", Lewis, A et al (2004)

5. Harmful alteration, disruption or destruction of fish habitat.

6. Acceptable Flow HADD – Defined as a HADD that occurs on habitats that are non critical or not limiting to the capacity of the habitat to produce fish. Suitable habitat compensation must be able to be developed and constructed.

7. Unacceptable Flow HADD – Defined as a HADD that has an unacceptable level of risk associated with the viability and potential success of the mitigation and compensation measures on fish habitat both within the diversion reach and downstream of the tailrace. Stream flow alteration would pose an unacceptable risk to fish population(s). Mitigation and Compensation options are not feasible. CEAA review would conclude that the project is likely to cause significant adverse environmental effects on fish and fish habitat.

8. Environmental assessment pursuant to the *Canadian Environmental Assessment Act* will also be required.