



## FISHERIES ACT S. 35(2) AUTHORIZATION

PATH File #: 08-HPAC-PA1-0004

CEAR Ref #: 08-01-44436

---

---

### AUTHORIZATION FOR WORKS OR UNDERTAKINGS AFFECTING FISH HABITAT

---

---

#### Authorization issued to:

Name: Emergency Management British Columbia ("the Proponent")  
Contact: Ann Griffin, Project Manager  
Address: 2<sup>nd</sup> Floor, 525 Fort Street, Victoria, BC, V8W 9J1  
Telephone: 250-953-4098  
Facsimile: 250-953-4081

---

#### Location of Project:

The project is located in the Fraser River at Harrison Bar, at the confluence with the Harrison River near the town of Chilliwack, B.C.

Latitude/Longitude: 49°13'56" / 121°55'54"

UTM Zone 10: N 5453820, E 577796

---

#### Valid Authorization Period:

The valid authorization period for the harmful alteration, disruption or destruction of fish habitat associated with the works or undertakings described below is from January 12, 2009 to March 15, 2009.

The valid authorization period for the other conditions of the Authorization are as set out below.

---

#### Description of Works or Undertakings:

The works/undertaking is the excavation of up to a maximum of 155,000 cubic metres of riverbed sediment from the riverbed of the Fraser River at Harrison Bar, and the construction of an access bridge to the site. Construction of the temporary access bridge will require pile driving in the wetted portion of Minto Channel and the excavation of approximately 300 cubic metres of riverbed sediment from Foster Bar. These works will result in the harmful alteration, disruption or destruction of juvenile rearing and high bar refuge fish habitat.

The work area is more specifically shown in the detailed project plan and addendum prepared by Nova Pacific Environmental, attached as **Appendix A** and **B**, respectively.

---

---

### Conditions of Authorization:

1. EMBC (“the Proponent”) confirms that all plans, specifications and operating regimes relating to this Authorization have been duly prepared and reviewed by appropriate professionals working on behalf of the Proponent. The Proponent acknowledges that they are solely responsible for all design, safety and workmanship aspects of all of the works and operations associated with this Authorization.
2. The conditions of this Authorization notwithstanding, should the above works or undertakings, based on interim monitoring data or other information, appear, in the opinion of Fisheries and Oceans Canada (“DFO”), likely to cause greater impacts to fish and fish habitat than previously contemplated, DFO may direct the Proponent, and their agents and contractors, to modify, suspend or alter works and activities associated with the Project to avoid or mitigate adverse impacts to fisheries resources. DFO may also direct the Proponent and its agents, and contractors, to carry out at the Proponent’s expense any works or activities deemed necessary by DFO to avoid or mitigate further adverse impacts to fisheries resources. In circumstances where DFO is of the view that greater impacts may occur than were previously contemplated, DFO may also modify or rescind this Authorization. If the authorization is to be changed, the Proponent will be given an opportunity to discuss any proposed modifications or rescission.
3. The Proponent shall ensure that all works associated with the project and the project site are carried out in full compliance with the *Fisheries Act* and all other applicable legislation, guidelines, and best management practices.
4. The Proponent shall ensure that all work is carried out in such a manner as to prevent any harmful alteration, disruption or destruction of fish habitat beyond those authorized herein. Section 35 of the *Fisheries Act* prohibits harmful alteration, disruption or destruction of fish habitat unless specifically authorized by the Minister of Fisheries and Oceans.
5. This Authorization is not an authorization for the destruction of fish by any means. Section 32 of the *Fisheries Act* prohibits the destruction of fish unless authorized by the Minister of Fisheries and Oceans Canada.
6. This Authorization does not permit the deposit of a deleterious substance of any type, including sediment, in water frequented by fish. Subsection 36(3) of the *Fisheries Act* prohibits the deposit of any deleterious substances into waters frequented by fish.
7. This Authorization does not permit the blockage of fish migration or passage. Access for fish must be maintained between areas upstream and downstream of the works authorized herein.
8. Adam Silverstein, Fisheries and Oceans Canada at 604-666-2855, shall be notified prior to commencement of the project and again two days before its completion. DFO Fishery Officers and Habitat personnel shall be allowed access to the work site for the purpose of inspecting riparian areas along the haul road, the temporary bridge across Minto Channel and haul road, and the

---

extraction site during the work period of this Authorization, and the monitoring period related to this Authorization.

9. The outer limits of the area to be excavated, as shown on the detailed plan in **Appendix B**, must be clearly identified by staking on the gravel bar prior to commencement of work. These boundary limits must remain clearly marked until all work has been completed. A qualified surveyor shall be required to re-survey the excavation site, on completion of the project, in order to establish the post-excavation profile of the gravel bar and determine the exact volume of riverbed sediment excavated.
10. Gravel removal shall be limited to the extent and elevations shown on the detailed plan in **Appendix B** unless reviewed and approved by DFO staff. The extraction will tie into the existing bar elevation at the upstream and downstream ends to ensure flow conveyance during freshet and prevent fish stranding.
11. The extraction will retain high bar habitat where possible and create characteristics of other productive habitat types, primarily shallow bar edge habitat, open nook, cut bank and proximity to riparian vegetation. The excavation will extend the period when fish have access to wetted habitat within the channel and complex banks will be dug and large woody debris added to provide areas of refuge at varying depths. As the project is situated in a zone of recurrent, annual sediment deposition, subsequent freshets are expected to recruit new sediment to the site to restore high-elevation rearing habitat for juvenile fish and stabilize the site.
12. The volume of riverbed sediment extracted from Harrison Bar shall be limited to 155,000 cubic metres. The volume of riverbed sediment extracted from Foster Bar for access purposes will be limited to 300 cubic metres.
13. All excavation shall be completed in the dry at water levels that ensure the work area is isolated from flowing water. Excavation and pile installation machinery must not be operated within wet areas of the Fraser River. Should the water level rise during the valid Authorization period and risk flooding the work area, all equipment must be moved to higher ground until water levels recede.
14. Best management practices to contain sediment shall be applied and maintained during all project activities. It is the Proponent's responsibility to ensure that turbidity and sediment levels are kept within limits set forth in the BC Approved Water Quality Guidelines for the Protection of Aquatic Life.
15. All access and haul roads are to be maintained in such a way that minimizes riparian disturbance and disruption to fish and fish habitat.
16. There must not be any removal or destruction of riparian vegetation within the high water wetted perimeter of the Fraser River.
17. On completion of the excavation, all roads that have become compacted as a result of the works must be scarified and contoured to match the surrounding natural bar topography. All material and

---

debris excavated by the operation must be removed from the site within the valid Authorization period. On completion of the work, the entire area comprising the excavation site and access road must be returned to as natural a condition as possible.

18. Best management practices for handling, storage and use of deleterious substances shall be applied in accordance with appropriate legislation and guidelines. It is the Proponent's responsibility to prevent deleterious substances from entering any waters frequented by fish.
  
19. An appropriate spill prevention, containment, and cleanup contingency plan for hydrocarbon products (e.g., fuel, oil, hydraulic fluid, lubricants), and other deleterious substances (i.e., substances harmful to fish) that may be used in association with the project, shall be in place prior to works and activities commencing at the project site. Appropriate containment and clean up materials shall be available onsite throughout the course of works and activities on the project. At least one person onsite during any excavation works must have specific training in spill containment. Any spill of a deleterious substance within the high water wetted perimeter of the Fraser River must be reported to the Provincial Emergency Program (24 hour telephone) at 1-800-663-3456.

**Monitoring:**

20. All works and activities associated with the project that have the potential for adverse impacts to fish, fish habitat and water quality shall be monitored by an appropriately qualified individual(s), deemed satisfactory by DFO (the "environmental monitor"). The environmental monitor shall, in consultation with, and at the discretion of DFO, monitor compliance of the work with the *Fisheries Act*, and other applicable environmental legislation, guidelines, and best management practices; and compliance with the terms and conditions of this Authorization. The foregoing notwithstanding, the authority of the environmental monitor is subject always to the discretion of DFO. DFO does not delegate any authority under the *Fisheries Act* to the environmental monitor. The environmental monitor does not have the authority to change, modify, or revise, either the project or the terms and conditions of this Authorization.
  
21. The environmental monitor should have written authority to modify or halt any project activity as required to achieve compliance with this Authorization. The Proponent shall provide the environmental monitor and any contractors working at the project site with a copy of this Authorization and a copy of this Authorization shall be retained onsite at all times. The Proponent shall provide DFO with the name of the monitor and contact phone number.
  
22. The environmental monitor shall, within 60 days of project completion, provide to DFO a report detailing, but not be limited to, the following information:
  - a. A summary of the works and activities carried out, including photographs of the project area before, during, and after completion of the works.
  - b. Commentary on the works and activities conducted at the project site from an environmental perspective (e.g., whether or not fish were observed in proximity to the site, changes in water level).

- 
- c. Identification of any environmental issues or impacts that arose or occurred (e.g., fuel spill) and details of specific mitigatory measures put in place to address environmental issues and impacts.
23. The Proponent shall conduct a monitoring program (the “Monitoring Program”) at the extraction site and appropriately selected reference sites, as detailed in the 2004 Letter of Agreement between the Province of BC and DFO (**Appendix C**). The Monitoring Program shall be conducted or overseen by an appropriately qualified biologist who is acceptable to DFO. The Monitoring Program includes pre-extraction monitoring that was required for the environmental assessment prior to issuing of this Authorization.
24. The Monitoring Program shall consist of the following:
- a. Topographic and/or bathymetric surveys shall be conducted after peak river discharge in 2008 but prior to sediment removal; immediately following sediment removal; and following the earlier of either a freshet with a peak daily flow of over 8,766 cubic metres per second (major freshet) or the freshet of 2011. Surveys are intended to assess the volume of gravel removed and the morphological impacts of the removal; therefore, the survey area shall be chosen in consultation with DFO to extend beyond the removal area to cover the area of potential morphological impact. Survey points within the survey area shall be chosen, at the discretion of the surveyor(s), to provide a sufficiently dense set of points to produce a detailed drawing of the area with 1 metre contours. The accuracy of the topographic survey points shall be  $\pm 0.04$  metres horizontally and vertically. The surveyor(s) shall tie the survey into hubs that will remain in place for the duration of the monitoring period. All elevations shall be local geodetic elevations. The surveyor(s) shall provide DFO with an appropriately scaled contour drawing of the survey area, including survey point locations, and an electronic copy of the survey data within 60 days of completing each survey.
  - b. Surface sediment sampling using the Wolman or photographic method shall be conducted within the extraction area and one reference area. Sampling shall occur before commencement of the project, after the first freshet following gravel extraction, and after the first of either a major freshet ( $>8,766$  cubic metres per second) or the freshet of 2011.
  - c. Benthic invertebrate sampling shall be conducted five times over the duration of the Monitoring Program. Sampling is to occur at four locations each time: within, or as proximal as possible to the extraction area, and at three appropriately chosen reference areas. Two sampling episodes shall occur prior to project activities and at least one month apart. Following gravel extraction, three sampling episodes shall occur: 1) post-freshet in June/July 2009, 2) at least one month later in August/September 2009, and 3) after the earlier of either a major freshet in 2010 or the freshet of 2011. At least one post-project sampling episode shall be conducted during the same month as one of the pre-project sampling episodes.
  - d. Fish sampling shall be conducted four times over the duration of the Monitoring Program. For each episode, sampling will consist of up to 5 beach seines in each available habitat type in the project area. Two sampling episodes shall occur prior to project activities and at least one month apart. Post-project sampling shall occur in the same months of 2009.
  - e. Habitat mapping of Harrison Bar shall be carried out two times after completion of project activities: 1) during freshet in 2009 when discharge is approximately 5,000 cubic metres per second and, 2) after freshet in 2009 when discharge is approximately 2,500 cubic metres per second.

---

25. Annual results of the Monitoring Program shall be submitted in report format to DFO by the 31 of December of each year of the Monitoring Program. The report shall include, but not be limited to, observations, photographs, raw data, data analyses, and recommendations. A final report of the Monitoring Program shall be submitted to DFO prior to 31 December 2011.

**Authorization:**


The holder of this Authorization is hereby authorized under the authority of Section 35(2) of the *Fisheries Act*, R.S.C., 1985, c.F.14, to carry out the work or undertaking described herein.

This Authorization is valid only with respect to fish habitat and for no other purposes. It does not purport to release the applicant from any obligation to obtain permission from or to comply with the requirements of any other regulatory agencies.

Failure to comply with any condition of this Authorization may result in charges under the *Fisheries Act*.

*This Authorization form should be held on site and work crews should be made familiar with the conditions attached.*


Date of issuance: Jan 9/08


Approved by:   
Mr. Adam Silverstein

Title: Regional Manager  
Environmental Assessment and Major Projects  
Pacific Region  
Fisheries and Oceans Canada

Emergency Management British Columbia acknowledges that Fisheries and Oceans Canada has consulted with them regarding the terms of this Authorization, and confirms that they have reviewed and understand the terms of this Authorization, and agree to the terms contained therein.

Executed by an authorized signatory of Emergency Management British Columbia on the 09 day of JAN, 2009, in the presence of:

  
Witness (signature)  
Ann Griffin  
Name (print)  
Manager, EMBC  
Title

Per:   
Authorized signatory  
GLEN THOMPSON  
Name (print)  
DIRECTOR, EMBC  
Title

