



Approved Work Practices (AWP) for Helicopter Log Drop Sites in Marine Waters of British Columbia

The objective of this *Approved Work Practices (AWP)* document is to describe the applicable conditions and measures to incorporate for a **helicopter log drop operation** to avoid negative impacts to fish, fish habitat and marine mammals.

This AWP document applies to the construction, operation and decommissioning of a helicopter log drop facility in the marine waters of British Columbia. This AWP document does not cover blasting, pile-driving, or any physical modifications to the seabed or shoreline of the marine waters.

The foreshore, intertidal and subtidal areas within and adjacent to helicopter log drop sites can provide important habitat for a variety of aquatic organisms, including fish and marine mammals. Potential effects to fish, fish habitat and fisheries within and adjacent to helicopter log drop operations may include:

- 1) Reduced or degraded water quality from the introduction and decomposition of wood debris (foreshore and seabed);
- 2) Reduced or degraded water quality via the potential introduction of deleterious substances such as sewage, sediment and hydrocarbons.
- 3) Shading or smothering of marine animals and vegetation from booms, camps and submerged woody debris;
- 4) Physical alteration and disruption of intertidal and subtidal fish habitat from grounding logs, woody debris and accidental debris fall from helicopters;
- 5) Disrupting critical life history stages of fish and marine mammals from noise, wood debris and in-water activities; and
- 6) Disrupting commercial, recreational and subsistence fisheries (fish and shellfish) due to blocked access, habitat impacts and contamination.

Fisheries and Oceans Canada (DFO) is responsible for protecting fish and fish habitat under the *Fisheries Act* as well as marine mammals under the *Marine Mammal Regulations*. The *Fisheries Act* prohibits the harmful alteration, disruption or destruction (HADD) of fish habitat unless it has been authorized by DFO, while the *Marine Mammal Regulations* prohibit the disturbance of marine mammals unless authorized.

DFO is also responsible for protecting aquatic species under the *Species at Risk Act (SARA)* which prohibits the killing, harming, harassing, capturing, harvesting, or destruction of critical habitat of a species that is listed as threatened or endangered. To ensure that your project(s) is compliant with SARA, you should consult the SARA web-site for the most up to date information: <http://www.dfo-mpo.gc.ca/species-especes/act-loi/act-loi-eng.htm>.

You may proceed with your helicopter log drop project without a DFO review if you can meet the conditions and apply the measures outlined in the following sections:

- **Siting Criteria Conditions;**
- **Debris Management Plan Conditions;**
- **Measures to Protect Fish and Fish Habitat; and**
- **DFO Project Review Application Form (PRAF).**

Note: *If you cannot meet all of the conditions identified within this AWP, your project may result in a violation of subsection 35(1) of the Fisheries Act. If this is the case, this AWP may not be applicable to your project. To determine the necessary level of DFO review, please refer to Appendix A.*



Other considerations: You are required to comply with all municipal, provincial, and/or federal legislation that applies to the work being carried out in relation to this AWP document.

You must notify DFO 10 working days before starting your onsite operations by filling out and sending the DFO PRAF and required project information directly to the appropriate DFO Referral Centre (Appendix A). A copy of this AWP document and your DFO PRAF must be at the work site and available upon request.

For additional information on broader log handling issues, please consult the *Guidebook, Environmentally Sustainable Log Handling Facilities in British Columbia* (<http://www-heb.pac.dfo-mpo.gc.ca/publications/pdf/274124.pdf>).

Siting Criteria Conditions

1. Locate helicopter log drop sites and associated log storage areas at least **100 meters away** from the mouth of any anadromous fish-bearing stream.
2. Locate helicopter log drop sites and associated log storage areas at least **100 meters away** from tidal flats, salt marshes, shellfish harvest areas, and eelgrass beds.
3. Locate helicopter log drop sites such that all portions of the enclosed area are located in at least **30 meters depth** at chart datum.
4. Locate short term log storage areas such that all portions of the enclosed area are located in at least **20 meters depth** at chart datum.
5. Locate float camps and fuel barges in areas with at least **12 meters depth** at chart datum.
6. Locate log drop sites, log storage areas, float camps, and barges to avoid negative impacts to First Nations traditional food gathering sites, and fishing activities (web link to listing of First Nations by Region <http://www.gov.bc.ca/arr/treaty/regional.html>).

Debris Management Plan Conditions

Prepare a Debris Management Plan that includes, at a minimum, the following elements:

1. Limb logs (removing branches and crowns) as much as practicable on land before transfer into water.
2. Avoid free-fall or violent dropping of logs into water.
3. Minimize the duration of in-water log storage to reduce the potential deposition of bark and wood debris in the marine environment.
4. Manage debris in a manner that minimizes bark loss and wood debris accumulations. This may include having a support vessel available for the collection and disposal of floating debris resulting from operational activities.
5. Brief crews on the Debris Management Plan prior to commencement of operations, and ensure copies are available onsite.
6. Dispose of all generated debris at an appropriate upland location, such that there are no negative impacts to aquatic habitats (marine and/or freshwater).
7. Maintain a daily log book of the debris management measures taken to reduce, remove and monitor wood debris in marine and foreshore areas.



8. Within 60 days of the closure of operations, provide the appropriate DFO Referral Centre with an electronic copy of the following information:
 - A cover page which clearly states **Monitoring Report** and identifies the date of the original submission, contact information, the location of the project and if available the DFO File #;
 - The dates and specifics of operations conducted including an estimate of species and total volume of wood (watered) at each drop site;
 - The status of site decommissioning;
 - A summary of any issues that had the potential to impact fish, marine mammals or fish habitat and how they were addressed; and
 - A brief summary of the Debris Management Plan effectiveness.

Measures to Protect Fish and Fish Habitat

A. Species Specific Mitigation Measures

Marine Mammals:

1. In-water operations must be temporarily suspended if dolphins, porpoises or whales approach to within **500m** of the heli-log drop site at any time.
2. Vessels operating near whales, dolphins and porpoises should be cautious, slow down, keep clear of the animals' path and not approach or be positioned within **400m**. If a vessel is unexpectedly within **100m** of a dolphin, porpoise, or whale, stop immediately and allow the animal(s) to pass.

Herring:

1. If the helicopter log drop is constructed or operated outside of the least risk work window for herring (<http://www.pac.dfo-mpo.gc.ca/habitat/timing-periodes/tp-map-carte-eng.htm>), and in an area known to be frequented by herring, a qualified monitor must be available for this entire period to monitor herring presence and implement appropriate mitigation measures to avoid harming herring, spawn and larvae. This may include the temporary suspension of in-water operations to allow herring spawn to hatch and disperse.

B. General Operation Mitigation Measures

1. Avoid situating flight paths over tidal flats, salt marshes, eelgrass and shellfish beds.
2. Do not situate flight paths over active marine mammal haul-outs and rookeries.
3. Enclose all log drop sites with a ring of double boom sticks.
4. To prevent boom sticks (for log drop and booming areas) from collapsing onto the shoreline, keep boom sticks offshore with stiff legs and/or anchors. If anchors are required, anchor lines, chains or cables should be employed such that excess line does not collect on the bed of the water body or form loops that may ensnare marine mammals. If concrete anchors are used, they are to be pre-cast and cured away from water before use to prevent seepage of potentially toxic substances.
5. Equip float camps and fuel barges with appropriate fuel storage and sewage containment or treatment facilities to prevent discharge of deleterious substances into the water.
6. Keep an emergency spill kit and spill response plans on-site at all times.
7. Engage local First Nations and stakeholder groups (example: Pacific Prawn Fisherman's Association, Marine Fishing Vessel Owner's Association, etc.) who may be affected by helicopter log dump operations on project design and operations prior to initiation in order to avoid potential impacts on their use of the fisheries resource. Documentation of this process is recommended.



Appendix A - DFO Notification, Request for Project Review or Request for Authorization

When **all** conditions / measures of this AWP **can** be met, only Notification to DFO is required. If this is the case follow the instructions provided in Section 1 of the DFO PRAF (<http://www.pac.dfo-mpo.gc.ca/habitat/steps/praf/index-eng.htm>) and include the following additional information with your submission:

- Site specific Debris Management Plan (attach report)
- Map sheet showing site plan layout (reference in DFO PRAF Section 18 and attach report)

When **all** conditions / measures of this AWP **cannot** be met you must complete all sections of the DFO PRAF. If this is the case do one of the following:

1. Notification: Professional Reliance (minor variance from AWP)

If, in the opinion of a qualified professional, impacts to fish and fish habitat can be avoided by applying alternate conditions / mitigation measures to those laid out in this AWP, you may proceed with Notification only. Ensure that you clearly identify **all** conditions / measures of this AWP that cannot be met, describe the potential impacts to fish and fish habitat and outline **in detail** all additional measures that are being proposed to minimize or eliminate potential impacts.

2. Request for Project Review:

If the conditions / mitigation measures laid out in this AWP cannot be met and impacts to fish and fish habitat cannot be avoided by other means, a DFO review under the habitat protection provisions of the *Fisheries Act* may be required. To initiate a project review, complete the DFO PRAF and include additional information with your submission as described on the DFO Working Near Water webpage (<http://www.pac.dfo-mpo.gc.ca/habitat/know-savoir-eng.htm>). Based on the information you provide, DFO will determine if your proposal is likely to harm fish or fish habitat. **You should plan to submit your request for project review as soon as possible.**

3. Request for *Fisheries Act* Authorization

Harm to fish and fish habitat cannot be avoided and a *Fisheries Act* Authorization is requested. Follow the instructions provided on the DFO Working Near Water webpage: (<http://www.pac.dfo-mpo.gc.ca/habitat/know-savoir-eng.htm>). **You should plan to submit your request for project review as soon as possible.**

Note: In all cases ensure that you fill out the appropriate sections of the DFO PRAF by summarizing information in the space provided **and** attaching all relevant reports to your submission (<http://www.pac.dfo-mpo.gc.ca/habitat/steps/praf/index-eng.htm>). For a detailed explanation of how to fill out the DFO PRAF see: <http://www.pac.dfo-mpo.gc.ca/habitat/steps/praf/guide-eng.pdf>.