

**Humpback Whales and Helicopter Log
Drops on the North Coast
Complaint Investigation 040565**



**FPB/IRC/113
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The Investigation

For several years, a Prince Rupert resident (the complainant) has been concerned about the potential effect of dropping logs into the ocean near feeding areas for humpback whales. The complainant asked the Forest Practices Board to investigate whether the *Forest Practices Code of British Columbia Act*, or its regulations (the Code), provided a mechanism to manage such impacts from coastal forestry operations.

This report provides an overview of potential tools in the Code, and its successor, the *Forest and Range Practices Act* (FRPA), to manage forest impacts to humpback whales.

Background

Humpback whale biology, habitat and federal status

The Northern Pacific Humpback Whale is one of several species of whales found in British Columbia. The humpback is a large whale, up to 14 metres in length and weighing from 25 to 40 tonnes. In May 2003, the Committee on the Status of Endangered Wildlife in Canada¹ classified the North Pacific Humpback Whale as threatened.” The North Pacific population is protected under the federal *Species at Risk Act* (SARA). This means that the whales are protected from harassment, killing, harm, or capture. SARA aims to protect species-at-risk from becoming extinct, and ensures that recovery action plans are put in place to conserve them.

However, SARA relies on provincial governments to protect key habitat through provincial legislation. SARA focuses its approach on multi-jurisdictional cooperation, consultation, and stewardship. Ultimately, the federal government has the authority to step in and take emergency action (a so-called safety net) to protect a listed species, or its habitat, that is facing imminent threats to survival or recovery.

In British Columbia, recovery planning for species-at-risk is undertaken by a recovery team appointed by the provincial government. Recovery teams generally consist of provincial and federal agencies and a variety of experts. The team creates a recovery plan which lists both available and missing information about the species; identifies threats to the species and what can be done to reduce those threats; and identifies locations of critical habitat. The plan then sets the goals, objectives and approaches for recovery. The BC government has not set up a recovery team for the North Pacific Humpback Whale.

¹ The Committee on the Status of Endangered Wildlife in Canada determines the national status of wildlife that is suspected of being at risk of being extinct, extirpated, endangered, threatened, or raising special concern. Once listed, measures to protect and recover a listed wildlife species can be developed and implemented.

The mouth of Work Channel (north of Prince Rupert), and the southern portion of Steamer Pass (near Somerville Island) are important feeding areas for humpback whales. Steamer Pass is also a migration route for the whales. In past years, humpback whales have used Work Channel from early summer through to November, when they migrate south for breeding and calving. According to the Department of Fisheries & Oceans Canada (DFO), the local humpback whale population has expanded and the whales are now returning to other former feeding areas. As well, some immature whales have been staying in Work Channel year round.

Effect of log drops on humpback whales

In the North Coast Forest District, some forest companies use helicopters to remove logs from cutblocks on coastal side-hills, and drop them into the ocean for transport. There is no specific research on the effects of log drop operations on humpback whales, but there are studies on humpback whales' reactions to noise from both boats and aircraftⁱ. These studies indicate that whales react to both background noise and individual sounds. The impacts include:

- preventing whales from hearing important sounds (masking);
- causing whales to alter their behaviour; and
- causing temporary hearing loss or tissue damage.

These impacts may interfere with whales' resting, feeding, diving, and coordination. The Northern Pacific Humpback Whale feeds on krill and schooling fish (such as herring), and is very vocal, using feeding calls while hunting in groups. Consequently, there could be effects of noise pollution from helicopters dropping logs near feeding areas.

A more direct concern with helicopter log drops is the risk of striking a whale. There are no records of whales being struck, but humpback whales dive deeply, and whales could be undetectable until the moment they surface near the log drops. Humpback whales have been struck by vesselsⁱⁱ. In addition, logging slash and debris from log drops may interfere with the whales' feeding.

How are log drops regulated?

For forest operations, licensees identify proposed log drop locations in forest development plans, as required by the Code. The administration of a lease or licence of occupation for log drops is the responsibility of the Integrated Land Management Bureau of the Ministry of Agriculture and Lands (MOAL).

There are several ways a licensee can be authorized for a log drop. If the log drop is to be used for less than two weeks, MOAL does not require a licence or permit. However, MOAL advises licensees to contact DFO for advice about areas to avoid, so that they can obtain a

required permit under the federal *Navigable Waters Act* from the Department of Transportation.

For longer use, licensees can apply to MOAL for a lease or licence of occupation on dry-land or aquatic areas. Such tenures do not currently include conditions, although there is no legal reason why they could not do so. MOAL presumes that provincial and federal legislation deals with all relevant issues.

In some areas of the North Coast, BC Timber Sales (BCTS) holds designated use reserves (under section 17 of the *Land Act*) that are issued by MOAL for a number of helicopter drop zones, log handling, and storage areas. Applications for such reserves are referred to DFO prior to MOAL approval. MOAL approvals can include conditions to reflect DFO comments.

When BCTS sells a timber sale that involves a log drop, the licensee can use BCTS' designated use reserves if it also acquires a short term licence from MOAL. MOAL does not refer these licenses to DFO because the BCTS forest development plans (which include information on forest practices) have already been referred. BCTS does include non-binding recommendations, including best management practices, in its timber sale contracts, and those can relate to marine mammals.

Discussion

What are the concerns with current forest practices and whales and what options exist under the Code and FRPA to reduce the potential impacts from log drop operations?

Management concerns with forestry practices and whales

The issue of log drops potentially affecting whales first came to the attention of the Ministry of Forests and Range (MOFR), North Coast Forest District, in the summer of 2001. A whale researcher had observed helicopters dropping logs into the ocean for booming. The researcher was concerned about the effects of noise on whales and contacted DFO. DFO contacted MOFR, which administered the small business timber sales that were using helicopters in the Work Channel area. MOFR agreed to stop or shift helicopter yarding if whales were observed nearby. DFO agreed with that approach as an interim measure, but also suggested that helicopter yarding be allowed only from December through to mid-May, at the mouth of Work Channel, and for five kilometres on either side of it, which is a particularly important feeding area for humpback whales. However, MOFR and DFO never made a formal agreement for a seasonal restriction.

In 2002, DFO commented on a BCTS forest development plan, and again raised the issue of potential conflict between helicopter log drop practices and whales. DFO has no authority to impose conditions on provincial forest practices in advance; it can only act after there has been an apparent contravention of a federal statute. DFO advised that it could prosecute

forest licensees under the federal *Fisheries Act*, if whales were observed showing avoidance behaviour around log drops. Otherwise, DFO could only strongly urge that it be notified of all marine sites proposed for use as short-term log drops.

By 2004, DFO was still concerned with the potential for log drops to disturb migrating whales, and with the impacts of wood storage in whale feeding areas. DFO continues to recommend that storage and log dumps be located at least one kilometre from feeding areas and migration corridors.

Currently, two licensees and the BCTS program harvest the majority of timber in the North Coast Forest District. One of these licensees has been using barges as a landing zone instead of dropping logs into the water. That licensee cited the following advantages:

- providing better control of log quality;
- minimizing wood handling in the water;
- requiring no log storage sites, log dumps, or booming grounds; and
- reducing the amount of woody debris entering the water.



Photos Courtesy of Triumph Timber Ltd.



Helicopter logging using barges

The use of barges also minimizes potential disturbances to whales, so DFO favours barge use as well. However, BCTS operators and the other licensee still use the traditional log drop method because it tends to be less expensive; a helicopter takes more time to place logs on a barge than to drop them into the ocean. On the other hand, log drops require tugboats and additional manpower.

Which Code and FRPA provisions can be used to reduce potential impacts to whales?

In January 2004, the *Forest and Range Practices Act* (FRPA) replaced the *Forest Practices Code of British Columbia Act* (Code). However, the transitional provisions of FRPA state the Code continues to apply to forest practices carried out under an existing forest development plan. Also, licensees and BCTS may continue to operate under amendments to their existing forest development plans until December 31, 2006. In the circumstances of this complaint, provisions in the Code applied. Nevertheless, to assess future management options, the Board examined both the Code and FRPA sections that could be used to direct practices and manage humpback whale habitat.

Forest Practices Code of British Columbia Act

The most applicable provisions under the Code relate to:

- log dump locations identified in forest development plans;
- conditional approval of forest development plans;
- referral of operational plans;
- strategic planning, objectives and standards; and
- provisions for sensitive areas.

Development plan identification of a log drop area

Section 20 of the *Operational Site Planning Regulation* requires that a forest development plan specify the location of any area of water that will be used as a helicopter log drop area. Although the locations are identified on forest development plans, the tenure for such sites is not issued by the MOFR. Nevertheless, inclusion in the plans allow provincial ministries and DFO to comment on log drop locations. Under FRPA, this requirement will be eliminated.

Development plan conditional approvals

Under section 41(5) of the Code, a district manager can attach conditions to the approval of a forest development plan. Therefore, the district manager could attach suitable conditions, if staff decided that measures were required to mitigate the effects of helicopter log drops in the Work Channel area. MOFR provided direction on use of conditions in a bulletin entitled

*Forest Practices Code Section 41(5) - Approving Forest Development Plans After October 15, 1998*². The bulletin advises district managers on what to consider when applying conditions to development plan approvals. Generally, it recommends against attaching conditions that exceed the mandatory forest development plan content requirements set out in the Code. The bulletin also advises against creating a district policy that requires a particular condition to be applied to all forest development plans. However, the bulletin also advises district managers to assess conditions on a case-by-case basis. In this case, when forest practices are proposed within a specific area that is important to humpback whales, it could be appropriate to attach conditions.

Strategic planning - resource management zones and landscape units

Government can set objectives and standards by declaring all or part of a strategic land use plan to be a higher level plan. Sections 3 and 4 of the Code let government declare higher level plans with resource management zones and objectives, and landscape units with landscape objectives. Once a higher level plan is declared, forest development must meet the higher level plan objectives.

Section 1 of FRPA defines 'objectives set by government' to include objectives established or continued under sections 3 to 5 of the Code. Therefore, once established, management zones and objectives are enforceable under FRPA.

The former Ministry of Sustainable Resource Management had drafted a Chatham Sound Coastal Plan, although completion has been deferred since February 2004. The draft plan encompasses areas with significant humpback whale activity, including Steamer Passage and Work Channel. It recommends that activities near the western entrance to Steamer Passage not disturb whales, and that high quality whale watching be maintained. However, it does not deal explicitly with potential effects of forest practices on whales.

Strategic planning - sensitive areas

Section 5 of the Code allows the minister to establish an area of Crown land as a sensitive area and set objectives for it. Under the *Land Act*, Crown land is defined as "land, whether or not it is covered by water, ... vested in the government." That includes marine areas. Sensitive areas have typically been established on dry land, but there is no legal barrier to doing so on provincial land under ocean. The chief forester provided policy direction, in a manual entitled *Higher Level Plans—Policy and Procedures—June 1996*, to MOFR district managers on the designation of sensitive areas. It confirms that sensitive areas may be developed for any Crown land and not just provincial forests. The manual states that the

² December 18, 1998, Forest Practices Code General Bulletin—Number 18 *Forest Practices Code Section 41(5)- Approving Forest Development Plans After October 15, 1998*

sensitive area designation, and related objectives, should be used to manage or conserve small areas of unique, highly sensitive, or locally significant forest resources. The manual notes that sensitive area objectives must be consistent with higher level plans, but it also recommends establishment of sensitive areas before a higher level plan is completed, if the district manager anticipates that the higher level plan will also designate those same areas as sensitive areas.

In conclusion, small marine areas of particular importance for humpback whales could be designated as sensitive areas under the Code to manage the potential impacts of helicopter log dropping.

Forest and Range Practices Act

FRPA contains two key provisions that govern management of wildlife habitat. First, government can set objectives, either through higher level strategic plans or by regulation. Second, FRPA empowers the Minister of Environment to specifically protect wildlife species-at-risk from the impacts of forest practices.

Objectives set by government

FRPA requires forest stewardship plans to address either government objectives prescribed by plans under the Code, or objectives specified by section 149 to 150 of FRPA and its regulations. Section 149 states that government can set objectives for values such as timber, soils, fish, wildlife and resource features. Humpback whales and their habitat could therefore be managed through higher level plans or by section 149 of FRPA.

Species-at-risk

Under section 13 of the *Government Actions Regulation (GAR)*, the Minister of Environment can establish humpback whales either as a species-at-risk or as regionally important wildlife. The minister would have to decide that humpback whales are important to a region of British Columbia, that they rely on habitat that requires special management and that they may be adversely impacted by forest practices.

Once a species is listed as a species-at-risk or regionally important wildlife, portions of its habitat can be protected via regulation. Sections 9 to 11 of GAR allow the minister to identify wildlife habitat features, establish wildlife habitat areas and objectives, and establish general wildlife measures. Habitat features are localized features important to wildlife. Identification of a habitat feature highlights its importance and safeguards the knowledge of its location. This does not in itself provide any specific restrictions or management guidelines, but section 70 of the *Forest Planning and Practices Regulation* provides general protection, by prohibiting those carrying out forest harvesting operations from damaging a habitat feature.

Wildlife habitat areas can be established to meet the habitat requirements of a species-at-risk or regionally important wildlife. Objectives may be established when a habitat area is established or, alternatively, general wildlife measures may be applied to the area. General wildlife measures provide restrictions to mitigate impact to an individual species-at-risk or its habitat.

In this case, humpback whales may need specific management guidelines to protect them and some of their habitat. Government could designate humpback whales as a species-at-risk or regionally important wildlife. If that were done, government could identify specific marine areas as wildlife habitat features or designate such areas as wildlife habitat areas with corresponding guidelines.

Conclusions

The *Forest Practices Code of British Columbia Act* requires the identification of log drops in forest development plans although, under FRPA, there is no such requirement for forest stewardship plans. The Code also allows the Minister of Forests and Range to designate sensitive areas and small marine areas of particular importance for humpback whales.

The *Forest and Range Practices Act* provides another potentially effective mechanism for the management and protection of whale migration routes and feeding areas that may be impacted by forest practices. Government would need to designate humpback whales as a species-at-risk or as regionally important wildlife. Then government could either establish objectives through strategic plans (or regulation), or establish wildlife habitat areas. The establishment of wildlife habitat areas would direct operational planning by forest licensees.

Recommendations

Humpback whales use specific coastal areas for migration, rearing and feeding, and some forestry operations may conflict with these uses. Under both the Code and FRPA, there are provisions to reduce potential impact to whales. Given that the North Pacific Humpback Whale is a threatened species, there is a reasonable basis for the provincial government to consider its designation as species-at-risk, or regionally important wildlife. The federal government has primary jurisdiction in these matters, and DFO has a pivotal role in providing information and enforcing its own federal statutes.

The Board believes that together the provincial and federal governments, acting collaboratively, have sufficient tools to address the needs of humpback whales.

In accordance with section 131 of the *Forest and Range Practices Act*, the Board recommends that:

The Ministry of Environment, Ministry of Agriculture and Lands (Integrated Land Management Bureau) and the Ministry of Forests and Range, engage with the Federal Department of Fisheries & Oceans to examine the habitat needs of the Northern Pacific Humpback Whale, and determine whether mechanisms are needed to protect important coastal habitats where there is a potential for forestry operations, specifically log drops and storage areas, to have negative impacts on the whales migration routes, feeding and rearing areas.

Under section 132 of the *Forest and Range Practices Act*, the Board requests that the Integrated Land Management Bureau report on its implementation of this recommendation by December 15, 2006.

ⁱ Appendix B: Summary of Pertinent Papers on the Impacts of Human Induced Noise on Cetaceans Summary of several pertinent studies of whale response to various manmade noises (in McCauley and Duncan, 2001; Table 3). Department of the Environment and Heritage, Australia Commonwealth of Australia 2004.

ⁱⁱ Limiting Factors and other relevant information on Northern Pacific Humpback Whales can be found at the Species At Risk Public registry found at: http://www.sararegistry.gc.ca/default_e.cfm

Specific reference: COSEWIC 2003. *COSEWIC assessment and update status report on the humpback whale Megaptera novaeangliae in Canada*. Committee on the Status of Endangered Wildlife in Canada. Ottawa. viii + 25 pp.

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