

# **Audit of Timber Harvesting, Road Construction, Maintenance and Deactivation**

**Carrier Lumber Ltd.  
Non-Replaceable Forest Licence A70174**



**FPB/ARC/92**

**July 2007**

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## Board Commentary

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In summer 2006, the Forest Practices Board conducted a limited scope compliance audit of Carrier Lumber Ltd. Carrier holds a non-replaceable forest licence to harvest 300,000 cubic metres of timber infested by the mountain pine beetle within the Prince George Forest District (see map on page 2).

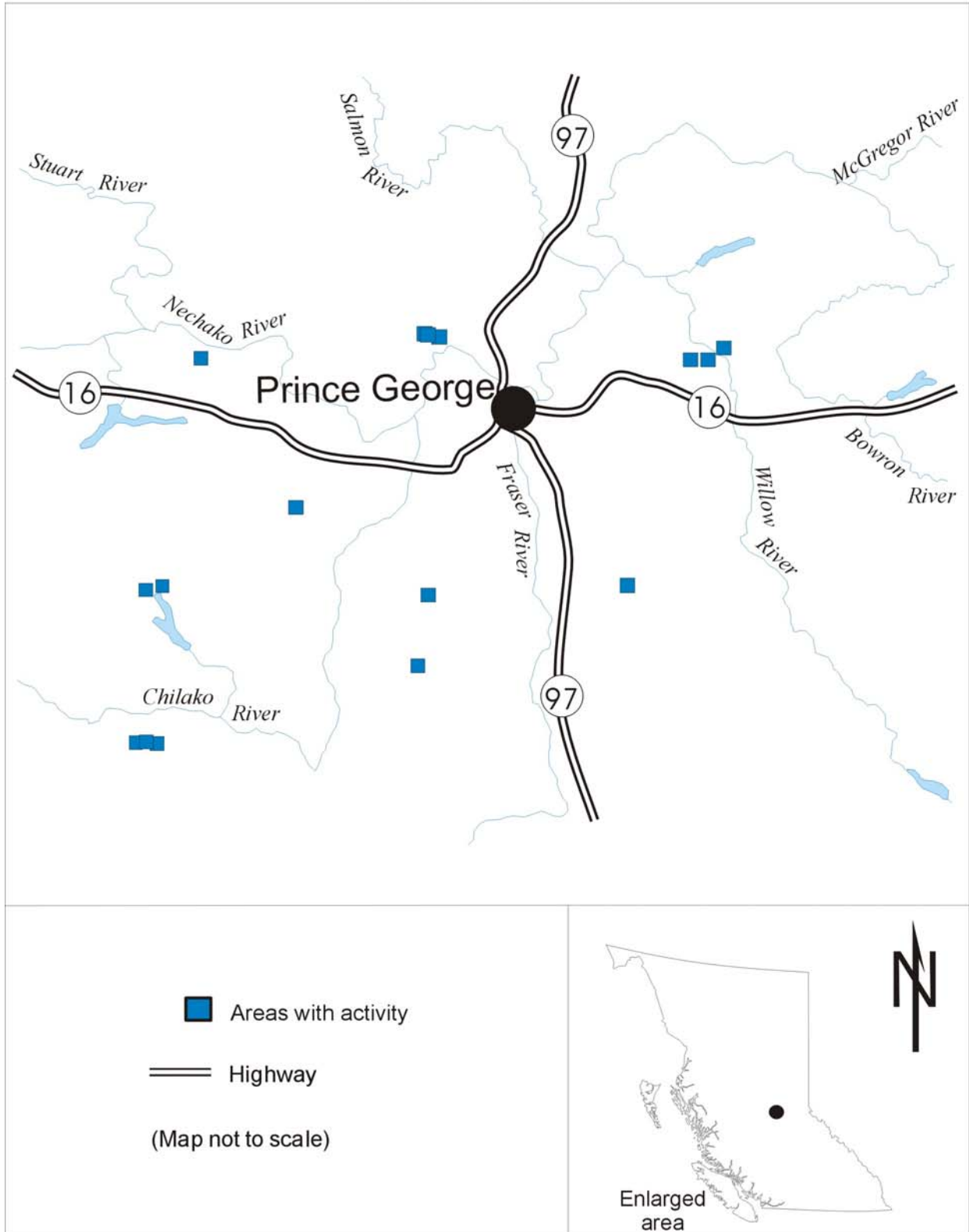
The mountain pine beetle epidemic continues in the interior of the province, including the area audited. In response to this epidemic, Carrier focussed its harvesting activities on the salvage of infested stands.

The audit found that planning and practices undertaken by Carrier Lumber Ltd. complied with legislative requirements in all significant respects while harvesting beetle infested stands. However, the audit identified a bridge that was not built as designed; therefore bridge construction practices should be improved.

Subsequent to the audit, Carrier has identified and implemented several modifications to their internal environmental management system with respect to bridge construction. These modifications include a specific bridge pre-work meeting, a requirement to photo document the construction of the bridge and a procedure for more accurate measurement of the diameter of logs used in bridge construction.

The Board recognizes the measures that Carrier has taken to improve their bridge construction practices and encourages Carrier to continue to use these measures.

# Prince George Limited Scope Audit Carrier Lumber Ltd.



# Audit Results

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## Background

As part of the Forest Practices Board's 2006 compliance audit program, the Board selected two<sup>1</sup> non-replaceable forest licences in the Prince George forest district for audit. This audit report is for Carrier Lumber Ltd.'s (Carrier) non-replaceable forest licence (NRFL) A70174.

The Board randomly selected the Prince George forest district for a multi-licence limited scope audit in 2006. Carrier was selected as one of the two largest and active NRFL's within the district, and not on the basis of location or past performance. Information about the Board's compliance audit process is provided in Appendix 1.

Non-replaceable forest licences provide a licensee with the right to harvest a specified volume of timber from a timber supply area within a certain timeframe.

Under NRFL A70174, the provincial government committed 300,000 cubic metres of timber to Carrier, for harvesting activity aimed at stands infested by the mountain pine beetle.

The Board's audit fieldwork took place from July 10-13, 2006.



Figure 1: Carrier cutblock southwest of Prince George forest district

## Audit Approach and Scope

The Board conducted a "limited scope" audit which means that only harvesting, road activities and associated planning were examined. Harvesting and road activities that took place between July 1, 2005, and July 13, 2006, were included in the scope of the audit.

In accordance with the *Carrier Lumber Ltd. Forest Licence Compensation Act*, Carrier's activities are subject to the laws governing forest licences that were in effect on March 28, 2002. Therefore, Carrier's activities were assessed for compliance with the *Forest Practices Code of British Columbia Act* (the Code) and related regulations as they were on March 28, 2002.

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<sup>1</sup> The other non-replaceable forest licence in the Prince George forest district selected for audit was Chunzoolh Forest Products Limited. This audit report can be viewed at <http://www.fpb.gov.bc.ca/audits/ARC85/ARC85.pdf>.

The Board's audit reference manual, *Compliance Audit Reference Manual, Version 6.0, May 2003*, and the addendum to the manual for the 2006 audit season, set out the standards and procedures that were used to carry out this audit.

## Planning and Practices Examined

### Planning

As part of a legal settlement between Carrier and the Province of British Columbia, forest planning and practices are managed in a coordinated effort between Carrier and British Columbia Timber Sales (BCTS) in Prince George. BCTS is responsible for preparing forest development plans and amendments for all proposed harvesting and road building under the licence. Carrier is responsible for preparing silviculture prescriptions and cutting permits for approved blocks. Carrier is also responsible for all road activities, timber harvesting and silviculture.

This unique arrangement meant that BCTS' 2000-2005 forest development plan for the Prince George timber supply area was the guiding document for all of Carrier's activities. The Board reviewed the plan and applicable amendments to ensure that it complied with legislated requirements.

### Harvesting

The Board audited all 23 cutblocks, totaling 1,763 hectares. The cutblocks ranged in size from 12 to 370 hectares with an average size of about 77 hectares. The approximate location of activities is shown on the map on page 2.

### Roads

During the audit period, Carrier:

- constructed 12.5 km of road;
- deactivated 8.7 km of road;
- maintained 34.3 km of road;
- removed 3 log bridges; and
- constructed 2 portable steel bridges and 1 log stringer bridge.

Auditors examined all of these activities.

## Findings

The audit found that the planning and field activities undertaken by Carrier on NRFL A70174 complied in all significant respects with the requirements of the Code and associated regulations in effect on March 28, 2002.

## Bridge Construction

During the audit period, Carrier constructed a six metre log bridge on a road that accessed one cutblock. The road was deactivated after harvesting was completed. The bridge was designed to carry a 100 tonne load—however, as constructed, it could only safely support a 75 tonne load. A professional forester or engineer did not certify that the bridge was built in general conformance with the design drawings and specifications, therefore Carrier did not comply with section 13(1)(o) of the *Forest Road Regulation*.

Fortunately, the trucks that hauled timber over the bridge were typical highway logging trucks and the load capacity of the bridge was not exceeded. As a result there was no risk to human safety. However, had the bridge been built in another location where heavier vehicles were used, the consequences to personal safety could have been significant. Therefore, this is an area that requires improvement.

## Audit Opinion

In my opinion, the timber harvesting; road construction, maintenance and deactivation; and the associated operational planning carried out by Carrier Lumber Ltd. on non-replaceable forest licence A70174 for the period July 1, 2005, to July 13, 2006, complied in all significant respects with the requirements of the *Forest Practices Code of British Columbia Act* and the related regulations as of March 28, 2002.

In reference to compliance, the term “in all significant respects” recognizes that there may be minor instances of non-compliance that either may not be detected by the audit, or are detected but not considered worthy of inclusion in the audit report.

Without qualifying my opinion, I draw attention to the bridge construction section of this report, which describes bridge construction practices that require improvement.

The *Audit Approach and Scope* and the *Planning and Practices Examined* sections of this report describe the basis of the audit work performed in reaching the above conclusion. The audit was conducted in accordance with the auditing standards of the Forest Practices Board. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with the Code.



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July 5, 2007

# Appendix 1: Forest Practices Board Compliance Audit Process

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## Background

The Forest Practices Board conducts audits of government and agreement-holders for compliance with the *Forest Practices and Range Practices Act* (FRPA) and the *Wildfire Act* (WA). The Board has the authority to conduct these periodic independent audits under section 122(1) of FRPA and section 68(1) of WA. Compliance audits examine forest planning and practices to determine whether or not they meet FRPA and WA requirements.

Most of the *Forest Practices Code of British Columbia Act* (the Code) was repealed on January 31, 2004, and replaced with FRPA. The transitional provisions of FRPA state that the Code continues to apply to forest practices carried out under a forest development plan, until there is an approved forest stewardship plan, at which point the requirements of FRPA apply.

The Board audits agreement holders who have forest licences or other tenures under the *Forest Act* or the *Range Act*. The Board also audits government's British Columbia Timber Sales (BCTS) program. Selection for audit, of both areas and licensees or agreement-holders to be audited, is made randomly to ensure a fair, unbiased selection.

## Audit Standards

Audits by the Board are conducted in accordance with the auditing standards developed by the Board. These standards are consistent with generally accepted auditing standards.

The audits determine compliance with the Code, FRPA and WA, based on criteria derived from those Acts and related regulations. The criteria reflect judgments about the level of performance that constitutes compliance with each requirement.

The standards and procedures for compliance audits are described in the Board's *Compliance Audit Reference Manual*.

## Audit Process

### Conducting the Audit

Once the Board randomly selects an audit licensee and area, all activities carried out during the period subject to audit are identified (such as harvesting or replanting, and road construction or deactivation activities). Items that make up each forest activity are referred to as a population. For example, all sites harvested form the timber harvesting population and all road sections constructed form the road construction population.



A separate sample is then selected for each population (e.g., the cutblocks selected for auditing timber harvesting). Within each population, more audit effort (i.e., more audit sampling) is allocated to areas where the risk of non-compliance is greater.

Audit field work includes assessments of features using helicopters and ground procedures, such as measuring specific features like riparian reserve zone width. The audit teams generally spend one to two weeks in the field.

## **Evaluating the Results**

The Board recognizes that compliance with the many requirements of the Code, FRPA and WA, is more a matter of degree than absolute adherence. Determining compliance, and assessing the significance of non-compliance, requires the exercise of professional judgment within the direction provided by the Board.

The audit team, composed of professionals and technical experts, first determines whether forest practices comply with legislated requirements. For those practices considered to not be in compliance, the audit team then evaluates the significance of the non-compliance, based on a number of criteria, including the magnitude of the event, the frequency of its occurrence and the severity of the consequences.

Auditors categorize their findings into the following levels of compliance:

***Compliance*** – where the auditor finds that practices meet Code, FRPA and WA requirements.

***Not significant non-compliance*** – where the auditor, upon reaching a non-compliance conclusion, determines that one or more non-compliance event(s) is not significant and not worthy of reporting. Therefore, this category of events will not be included in audit reports.

***Significant non-compliance*** – where the auditor determines a non-compliance event(s) or condition(s) is or has the potential to be significant, and is considered worthy of reporting.

***Significant breach*** – where the auditor finds that significant harm has occurred, or is beginning to occur, to persons or the environment as a result of one or many non-compliance events.

If it is determined that a significant breach has occurred, the auditor is required by the *Forest Practices Board Regulation* to immediately advise the Board, the party being audited, and the Minister of Forests and Range.

## **Reporting**

Based on the above evaluation, the auditor then prepares a draft audit report. The party being audited is given a draft of the report for review and comment before it is submitted to the Board.

Once the auditor submits the draft report, the Board reviews it and determines if the audit findings may adversely affect any party or person. If so, the party or person must be given an opportunity to make representations before the Board decides the matter and issues a final report. The representations allow parties that may potentially be adversely affected to present their views to the Board.

The Board then reviews the draft report from the auditor and the representations from parties that may potentially be adversely affected before preparing its final report. Once the representations have been completed, the report is finalized and released, first to the auditee, and then to the public and government.