



**Forest
Practices
Board**

**Forestry Audit: British Columbia
Timber Sales
Cariboo-Chilcotin Business Area
(Quesnel Field Unit)**

FPB/ARC/106

May 2009

Table of Contents

Board Commentary..... 1
 Background..... 3

Audit Approach and Scope..... 4

Planning and Practices Examined 4
 BCTS Responsibilities 4
 Timber Sale Licence Holders’ Responsibilities 5

Findings 5
 Silviculture Obligations – BCTS Responsibility 6
 Site Disturbance – Timber Sale Licence Holder’s Responsibility..... 6

Audit Opinion 7

Appendix 1: Forest Practices Board Compliance Audit Process..... 9

Board Commentary

In July 2008, the Board conducted a compliance audit of forest planning and practices of the British Columbia Timber Sales' (BCTS) program and timber sale licence holders, in the Cariboo-Chilcotin Business Area's Quesnel Field Unit, located in the Quesnel Forest District (see map on page 2).

The audit assessed over 300 cutblocks and over 500 kilometres of road activities and obligations, as well as operational planning of the BCTS program.

While the audit found that BCTS and timber sale licence holders met almost all legislated requirements, it identified a significant non-compliance for exceeding the seedling transfer limits, specified in the *Chief Forester's Standards for Seed Use, April 1, 2007*, in eight cutblocks. The non-compliance is considered significant because it demonstrates a flaw in BCTS' silviculture management system, which may affect seedling growth or increase the susceptibility of seedlings to frost, insects or disease.

The Board acknowledges that climate change in British Columbia may alter expected future seedling growth and encourages BCTS to use this opportunity to compare the growth of seedlings that exceeded the seedling transfer limits, in effect at the time of planting, to those that were within the limits.

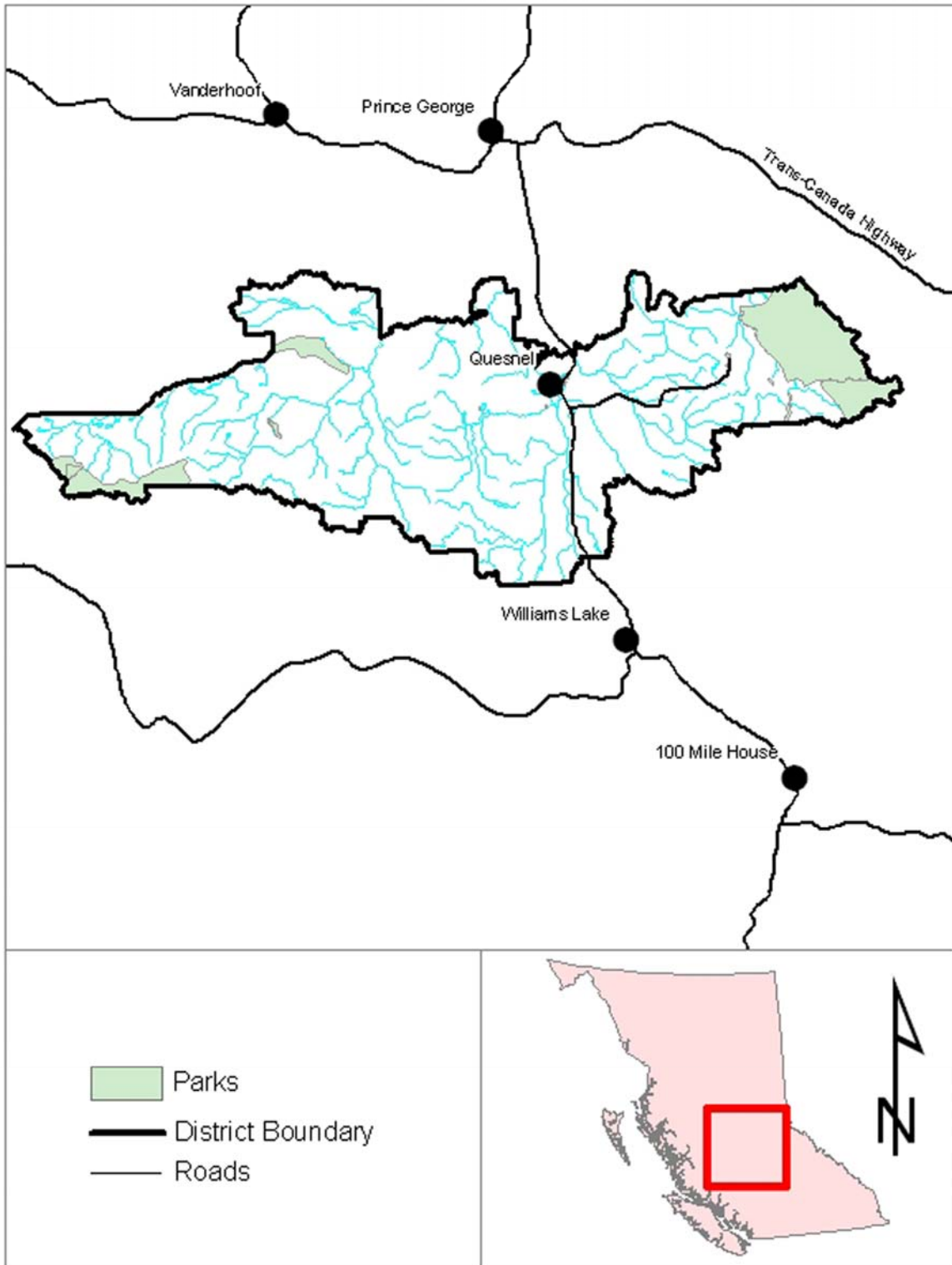
Subsequent to the audit, BCTS informed the Board that they are using an updated version of seedlot management software and have reviewed their contract administration procedures to address seedling transfer issues.

As well, BCTS plans to seek approval for those areas that were outside the transfer limits in effect at the time of planting, but will fall within the limits that came into effect April 1, 2009. For the remainder, BCTS has scheduled additional surveys to evaluate seedling growth and health. The Board requests that BCTS provide the survey results by November 30, 2010, along with an action plan for future monitoring.

The Board also notes that the audit identified six cutblocks where harvesting by timber sale licence holders caused excessive soil disturbance in localized areas. While technically in compliance with legislation, because the disturbance was averaged over the entire cutblock area, the disturbance was avoidable. The Board encourages timber sale licence holders to take greater care when operating in areas where soils are susceptible to disturbance.

The Board acknowledges BCTS's commitment to emphasize the importance of soil management to timber sale licence holders.

Audit of BCTS Forest Planning and Practices Quesnel Field Unit



Background

As part of the Forest Practices Board's 2008 compliance audit program, the British Columbia Timber Sales (BCTS) program and timber sale licence (TSL) holders in the Cariboo-Chilcotin Business Area's Quesnel Field Unit, located in the Quesnel Forest District, were selected for audit. Forestry activities were administered by the BCTS Cariboo-Chilcotin Business Area office located in Williams Lake.

BCTS is an independent organization within the BC Ministry of Forests and Range that develops Crown timber for auction. BCTS offers timber for sale to registrants in the BCTS program, prepares operational plans and issues timber sale licences and road permits. Successful bidders are awarded timber sale licences and must fulfill licence, permit and operational plan obligations, including those that apply to timber harvesting and road work within cutblocks.

The Cariboo-Chilcotin Business Area's Quesnel Field Unit was selected randomly, and not on the basis of location or past performance. Additional information on the compliance audit process is provided in Appendix 1.

The provincial government committed 939,029 cubic metres per year of timber to BCTS timber sale licences in the Quesnel Forest District for timber harvest. Due to the extent of the current mountain pine beetle infestation, harvesting has been primarily focused on the salvage of pine damaged by the beetle.



The Board's audit fieldwork took place from July 28 to 31, 2008.

Higher Level Plans¹

The *Cariboo-Chilcotin Land-Use Plan* (CCLUP) provides strategic guidance for BCTS' operations. Cabinet endorsed parts of the CCLUP as a higher level plan on January 23, 1996, requiring operations to be consistent with those portions of the CCLUP.

Endorsed objectives established in the CCLUP take precedence over government objectives set out in the *Forest and Range Practices Act* (FRPA)² and the *Forest Planning and Practices Regulation* (FPPR). As an example, the CCLUP sets landscape level objectives for the conservation of biodiversity and wildlife habitat.

Audit Approach and Scope

The audit examined both BCTS' and TSL holders' obligations and activities.

BCTS is responsible for operational planning, including preparing forest stewardship plans (FSP)² and site plans,³ silviculture, and most road construction, maintenance and deactivation outside of cutblocks.

Timber sale licensees are responsible for timber harvesting, fire protection, and most road construction, maintenance and deactivation within cutblocks.

These activities were assessed for compliance with the *Forest and Range Practices Act* (FRPA),⁴ the *Wildfire Act* (WA) and related regulations, as well as certain transitional elements of the *Forest Practices Code of British Columbia Act* (the Code). All activities, planning and obligations for the period July 1, 2007, to July 31, 2008, were included in the scope of the audit.

The Board's audit reference manual, *Compliance Audit Reference Manual, Version 6.0, May 2003*, and the addendum to the manual for the 2008 audit season, set out the standards and procedures that were used to carry out this audit.

Planning and Practices Examined

BCTS Responsibilities

Planning

The CCLUP, parts of which were endorsed by Cabinet as a higher level plan on January 23, 1996, contains the strategic goals and objectives that are to be addressed in operational plans.

BCTS conducted activities during the audit period under two operational plans. The first, its 2007 to 2011 forest stewardship plan, has one major amendment and three minor amendments. The 2007 FSP applies to 22 of 62 cutblocks in the active harvest population. The second, its January 2002 to December 2006 forest development plan (FDP)⁵, applies to 40 of 62 cutblocks in the active harvest population.

The Board audited the FSP and FDP to ensure compliance with applicable legislation and for consistency with higher level plan objectives.

Site level plans were examined to determine consistency with FSP and FDP objectives. The Board audited 43 of 62 cutblocks for compliance with targets for wildlife tree patches and enhanced retention.

Harvesting, road and silviculture activities were examined for compliance with site level plans.

Road Construction, Maintenance, Deactivation and Bridge Maintenance

The Board audited 6.3 of 9.4 kilometres of new road construction, 45 of 343 kilometres of road maintenance, and 12 of 27 bridges maintained by BCTS.

BCTS did not construct any bridges or deactivate any roads during the audit period.

Silviculture

BCTS planted 76 cutblocks during the audit period, of which 9 were audited to assess planting compliance and 24 were audited to assess compliance with seed transfer guidelines. In addition, the Board audited 1 of 3 cutblocks for burning activities, 2 of 13 cutblocks for site preparation activities, 3 of 16 cutblocks for brushing activities, 1 of 1 cutblocks for spacing activities and 17 of 81 cutblocks for free-to-grow establishment.

Timber Sale Licence Holders' Responsibilities

Timber Harvesting

Sixty-two cutblocks totaling approximately 3,500 hectares were harvested under 34 timber sales during the audit period. The Board audited 43 of the cutblocks, representing 66 percent of the area harvested.

Road Construction and Deactivation

The Board audited 80 of 113 kilometres of new road construction and 49 of 69 kilometers of road deactivation by TSL holders.

Fire Protection

The board audited 5 of 9 active industrial sites and 16 of 86 blocks with burning obligations due during the audit period for compliance with the *Wildfire Act* and the Wildfire Regulation.

Findings

The audit found that, with one exception, the planning and field activities undertaken by BCTS and TSL holders complied, in all significant respects, with the requirements of FRPA, WA and related obligations under the Code, as of July 2008. The exception was a finding of significant non-compliance related to silviculture obligations.

Silviculture Obligations – BCTS Responsibility

BCTS is responsible for ensuring that harvested areas are re-planted with a sufficient number of well-spaced and desirable seedlings, grown from suitable genetic sources. The chief forester of BC provides direction on seed use, including transfer limits for seedlings.

The audit found several instances where the seedlings planted did not comply with the *Chief Forester's Standards for Seed Use, April 1, 2007*. In 8 of 24 cutblocks audited, including 12 seedlots, the seedlings planted did not comply with seed transfer limits, representing 237,754 seedlings, or 15 percent of the seedlings planted in these cutblocks. In one of those instances, a non-preferred tree species was planted. Deviations from seedling transfer limits were primarily due to errors arising from seedlot management software, resulting in longitude and latitude transfer issues, and to exceeding elevation transfer limits without obtaining appropriate authorization.

This represents a non-compliance with the *Forest and Range Practices Act*, section 31 and *Forest Planning and Practices Regulation*, section 43 (4), or the *Forest Practices Code of British Columbia Act*, sections 69.1 (4) (b), 70 (4) (c) and the *Timber Harvesting and Silviculture Practices Regulation*, section 38 (4), depending on when the site plan was approved.

This non-compliance is considered significant because it demonstrates a flaw in BCTS' silviculture management system, which was designed to ensure adherence to seedling transfer limits. Exceeding the seedling transfer limits may affect seedling growth or increase the susceptibility of seedlings to frost, insects or disease.

Site Disturbance – Timber Sale Licence Holder's Responsibility

Soil disturbance is the modification to soil structure in the net area to be reforested resulting from the construction of temporary access structures, or gouges, ruts, scalps or compacted areas created during forestry activities. Without rehabilitation, disturbed sites often have reduced soil productivity and may not provide optimum growing conditions for new trees. For that reason, maximum allowable amounts of soil disturbance are set in regulation.⁶

The audit found excessive soil disturbance on portions of 6 of 43 cutblocks, caused when TSL holders operated heavy machinery on wet soils. In all six cutblocks, the maximum allowable soil disturbance was exceeded in portions of their standard units.⁷ Disturbed areas ranged in size from 1 to 10 hectares. The standard units ranged in size from 4 to 100 hectares. Since only a small proportion of each standard unit had excessive soil disturbance, these practices comply with legislation, as disturbance is averaged over the entire standard unit. However, this type of disturbance is avoidable by restricting the timing of harvesting activities to periods when soil moisture is lower, and is, therefore, a practice that requires improvement.

Audit Opinion

In my opinion, except for the silviculture obligations discussed below, the operational planning; timber harvesting; road construction, maintenance and deactivation; silviculture and protection activities carried out by BCTS and timber sale licence holders in the Cariboo-Chilcotin Business Area's Quesnel Field Unit, between July 1, 2007, and July 31, 2008, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act*, and related regulations, as well as certain transitional elements of the *Forest Practices Code of British Columbia Act*, as of July 2008.

As described in the *Silviculture Obligations* section of this report, the audit identified a situation of significant non-compliance related to the failure to use suitable genetic seed sources.

Without further qualifying my opinion, I draw attention to the *Soil Disturbance* section of this report, which describes a practice requiring improvement.

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.

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 FRPA, WA and the Code.



Christopher R. Mosher CA, CEA(SFM)
Director, Audits

Victoria, British Columbia
March 3, 2009

Appendix 1: Forest Practices Board Compliance Audit Process

Background

The Forest Practices Board conducts audits of government and agreement-holders under the *Forest and Range Practices Act* (FRPA), section 122, and the *Wildfire Act* (WA). Compliance audits examine forest or range planning and practices to determine whether or not they meet FRPA and / or WA requirements. (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 or range stewardship plan, at which point the requirements of FRPA apply.)

Selection of auditees

The Board conducts about eight or nine compliance audits annually. Most of these are audits of agreement holders. The Board also audits the government's BC Timber Sales Program (BCTS). This section describes the process for selecting agreement holders to audit.

To begin with, auditors randomly select an area of the Province, such as a forest district. Then the auditors review the forest resources, geographic features, operating conditions and other factors in the area selected. These are considered in conjunction with Board strategic priorities (updated annually), and the type of audit is determined. At this stage, we choose the auditee(s) that best suits the selected risk and priorities. The audit selections are not based on past performance.

For example, in 2007, the Board randomly selected the Robson Valley Timber Supply Area as a location for an audit. After assessing the activities within that area, we discovered that two licensees had recently closed operations due to financial problems. As the Board has expressed concern in the past about financially strapped companies failing to meet outstanding obligations, such as reforestation, and road maintenance, the audit focused on the status of the outstanding obligations of these two licences.

For BCTS audits, a forest district within one of the 12 business areas within the province is selected randomly for audit.

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

Audit Process

Conducting the Audit

Once the Board randomly selects an area or district and determines the scope of audit to be conducted and the licensee(s) to be audited, 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 as well as 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 auditor's draft report 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.

¹ A higher level plan is a forest resource management objective that is established as legally binding by a written order. The objective applies to a resource management zone, landscape unit, sensitive area, recreation site, recreation trail, or interpretive forest site. Higher level plans are a provision of the *Forest Practices Code of British Columbia Act* that give direction to operational plans.

² A forest stewardship plan (FSP) is a key planning element in the FRPA framework and the only plan subject to public review and comment and government approval. In FSPs licensees are required to identify results and/or strategies consistent with government objectives for values such as water, wildlife and soils. These results and strategies must be measurable and once approved are subject to government enforcement. FSPs identify areas within which road construction and harvesting will occur but are not required to show the specific locations of future roads and cutblocks. FSPs can have a term of up to 5 years.

³ A site plan is a site-specific plan that is required in place of a silviculture prescription as of December 17, 2002, except where there is already an existing silviculture prescription. The site plan contains many of the same elements as a silviculture prescription and is designed to identify resource values and define what a free-growing stand will be on that site. However, it is not an operational plan under the Code and does not require review or approval by government to be implemented.

⁴ Most of the *Forest Practices Code of British Columbia Act* (the Code) was repealed on January 31, 2004, and replaced with the *Forest and Range Practices Act* (FRPA). The transitional provisions of FRPA state that the Code continues to apply to forest practices carried out under a forest development plan. This continues until there is an approved forest stewardship plan, at which point, the requirements of FRPA apply. Therefore, although FRPA came into effect prior to the audit period, the legislated forest practices requirements that applied to the auditee were the requirements of the Code.

⁵ A forest development plan (FDP) is an operational plan under the Forest Practices Code that provides the public and government agencies with information about the location of proposed roads and cutblocks for harvesting timber over a period of at least five years. The plan must specify measures that will be carried out to protect certain forest resources prescribed by regulation. It must also be consistent with any higher level plans. Site-specific plans are required to be consistent with the forest development plan.

⁶ Soil disturbance limits are, unless specified otherwise in an approved forest stewardship plan, 5 percent for areas containing sensitive soils and 10 percent for those areas not containing sensitive soils.

⁷ A standards unit (SU) is in part an area of land, contained within a cutblock that is under a site plan and is subject to the same soil disturbance limits. A SU should contain areas with the same management objectives, be in the same general geographic location, have similar site and stand conditions, have the same target stand strategies and have the same treatments and standards. While a SU may contain minor variations in site conditions, the key consideration is the appropriateness of applying the same treatment regime and standards to all the treatment areas contained within. Under the *Forest Planning and Practices Regulation*, Section 35 (3), soil disturbance limits are set for each standards unit contained within a cutblock.



**Forest
Practices
Board**

PO Box 9905, Stn Prov Govt
Victoria, BC, Canada V8X 9R1

Tel. 250.387.7964 | Fax 250.387.7009 | Toll Free 1.800.994.5899

For more information on the Board, please visit our website at: www.fpb.gov.bc.ca