



**Forest
Practices
Board**

Forestry Audit: BC Timber Sales and Timber Sale Licensees

*Stuart Nechako Business Area
Vanderhoof District*

FPB/ARC/195

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Audit Results

Introduction

The Forest Practices Board is the public's watchdog for sound forest and range practices in British Columbia. One of the Board's roles is to audit the practices of the forest industry to ensure compliance with the *Forest and Range Practices Act* (FRPA) and the *Wildfire Act* (WA).

As part of its 2016 compliance audit program, the Forest Practices Board randomly selected the Vanderhoof Natural Resource District portion of BC Timber Sales' (BCTS) Stuart-Nechako Business Area for audit. A map of the audit area appears on page 2.

This report explains what the Board audited and the results. Detailed information about the Board's compliance audit process is provided in Appendix 1.



A recently harvested cutblock southwest of Finger-Tatuk Park.

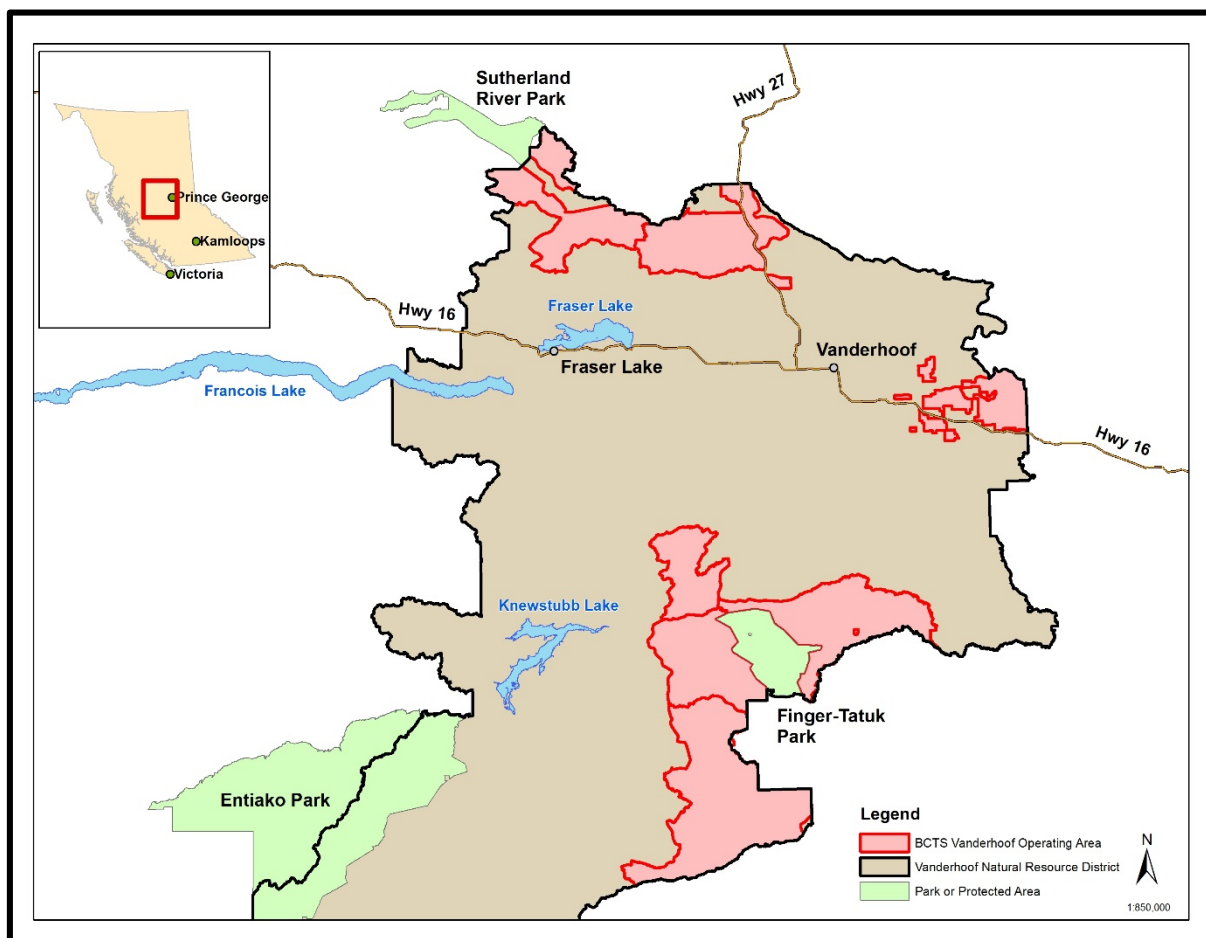
Background

The Stuart-Nechako Business Area of BCTS encompasses the Fort St. James and Vanderhoof Natural Resource Districts. The administrative and management centre for the business area is the BCTS timber sales office located in Vanderhoof. The audit only focused on BCTS's activities within the Vanderhoof Natural Resource District.

The Vanderhoof District covers approximately 1.4 million hectares and contains the communities of Vanderhoof and Fraser Lake. Vanderhoof is the geographic centre of the province and is surrounded by the Northern Interior Plateau's low-rolling and upland terrain, forested with spruce and pine. The salvage of mountain pine beetle damaged timber has been a priority during the last several years. The district has many lakes, including Fraser, Knewstubb and Francois Lakes, and also includes Finger-Tatuk, Entiako and Sutherland River Provincial Parks.

BCTS manages its activities from its office in Vanderhoof, where staff prepares operational plans, auctions timber sales and issues timber sale licences and road permits. Successful bidders are awarded a timber sale licence and must fulfill licence, permit and operational plan obligations, including timber harvesting and road work, within cutblocks. BC Timber Sales' apportionment from the Prince George Timber Supply Area is about 511 300 cubic metres and about 817 000 cubic metres was harvested by licensees during the audit period, in order to salvage mountain pine beetle damaged timber.

Map of the Audit Area



Audit Approach and Scope

This was a full scope compliance audit with a one-year timeframe. All activities carried out between June 1, 2015, and June 24, 2016, by BCTS and timber sale licensees, were subject to audit.

BCTS is responsible for operational planning, including preparing forest stewardship plans (FSPs)ⁱ and site plans, silviculture activities, major structureⁱⁱ maintenance and construction, and some 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.

Auditors assessed these activities for compliance with FRPA, the WA, and applicable regulations. Auditor's work included reviewing the FSP and site plans, assessing silviculture records and site visits with BCTS staff to review field practices.

The standards and procedures used to carry out this audit are set out in the Board's *Compliance Audit Reference Manual, Version 7.0, September 2012*.

Two forest professionals, one professional engineer, and a chartered professional accountant made up the audit team. The audit team was in the field with BCTS staff from June 20 to 24, 2016.

Planning and Practices Examined

BCTS Responsibilities

Operational Planning

BCTS planned activities in its 2006 FSP, which remains in effect until December 2016. The FSP and stand-level site plans were examined to ensure that they met legislative requirements. During harvesting, road and silviculture field sampling, auditors also confirmed whether site plans accurately identified site conditions.

There are no higher level plan orders covering the Vanderhoof District. Relevant government orders (e.g., *Government Action Regulation* orders for mule deer and caribou, and biodiversity, scenic and agricultural development orders) were either referenced in, or form part of, the FSP.

The primary forest resources associated with BCTS's activities during the audit period are fish streams and cultural heritage features. In addition, many roads and cutblocks are located in areas where the risk of the establishment or spread of invasive plants is high.

Road & Major Structure Construction, Maintenance, Deactivation

During the audit period, BCTS built 3.7 kilometres of forest service road, and had maintenance obligations on 326 kilometres of forest service road, 15 bridges and 3 major culverts. BCTS deactivated 33 kilometres of road and did not install any new structures during the audit period.

Auditors examined all 3.7 kilometres of road construction, 149 kilometres of road maintenance, 10 bridges, 1 major culvert and 11 kilometres of deactivated road.

Silviculture Obligations and Activities

BCTS planted 48 cutblocks and brushed 37 cutblocks, but did not site prepare any cutblocks during the audit period. Regeneration obligations were due or declared on 39 cutblocks and free-growing obligations were declared or due on 78 cutblocks. Auditors examined 12 planted cutblocks, 7 brushed cutblocks, 14 cutblocks with regeneration obligations, and 22 cutblocks with free-growing obligations.

Timber Sale Licensee Responsibilities

Timber Harvesting

Nine timber sale licensees harvested 38 cutblocks, covering 3896 hectares. Auditors examined harvesting by all 9 of the licensees on 21 cutblocks, totalling 2707 hectares.

Road Construction, Maintenance and Deactivation

Timber sale licensees constructed 59 kilometres of road and had maintenance obligations on 24 kilometres of road. They constructed 2 new bridges and deactivated 5 bridges and 90 kilometres of road.

Auditors examined 34 kilometres of road construction and 10 kilometres of road maintenance, both of the new bridges, 4 of the deactivated bridges and 47 kilometres of the deactivated road.

Fire Protection

Auditors encountered one active work site and examined the licensee's compliance with the WA requirements for fire preparedness. Licensees had fire hazard assessment obligations on 21 cutblocks and abatement obligations on 10 cutblocks. Auditors examined fire hazard assessments on 7 cutblocks and abatement obligations on all 10 cutblocks, and assessed whether there were any overdue abatement obligations for the cutblocks examined for planting, brushing and regeneration obligations.

Findings

The audit found that BCTS's planning and practices complied with FRPA and the WA as of June 2016.

The audit found that the timber sale licensees' practices complied with FRPA and the WA as of June 2016, but also found that several licensees' fire hazard assessment practices require improvement.

BCTS Responsibilities

Operational Planning

Planning was consistent with the FSP and legislative requirements. The FSP met the legal content requirements and addressed the legal orders that apply to forest practices in the audit area.

BCTS addressed site-specific resources in the site plans by accurately identifying and prescribing practices for resource features, including streams and wetlands and cultural heritage features. For

example, to protect and preserve cultural heritage resources, the government requires a licensee to specify results and strategies in their FSP to mitigate the potential impacts that may be caused by forest practices. In its FSP, BCTS commits to engaging in information sharing with First Nations and conducting archaeological assessments to identify any potential cultural heritage features, evaluating the potential impact of planned activities and modifying the planned activities, where necessary, to protect or conserve the feature. The site plans reflected these commitments.

Road Construction, Maintenance and Deactivation

Construction

BCTS constructed roads using conventional cut and fill methods on relatively flat ground. Roads were well-built and natural drainage patterns were maintained on completed road sections.

BCTS did not construct any bridges during the audit period.

Maintenance

BCTS has a system for risk-rating road sections and assigning an inspection frequency ranging from twice per year for very high-risk roads to once every three years for low-risk roads. The sampled forest service roads that BCTS is responsible for have been adequately maintained to retain the structural integrity of the road prism. All of the culverts examined were functional and water was managed to maintain natural drainage patterns. BCTS grass seeded and monitored its roads in areas where the risk of the establishment of invasive plants is high.

Structures on forest service roads are inspected by government engineers and BCTS is responsible for surface maintenance. The 11 bridges and culverts sampled were well maintained. Auditors reviewed inspection records and found that all maintenance items had been attended to and found no issues for any of the structures.

Deactivation

BCTS completed and implemented a deactivation prescription. BCTS maintained natural drainage patterns and ensured the road prism was stable.

No road construction, maintenance or deactivation issues or concerns were noted.

Silviculture Activities and Obligations

BCTS planted cutblocks with suitable tree species and stock within the required timeframes.

BCTS monitored and tended its plantations to ensure free growing requirements were met. Cutblocks contained the range of healthy, well-spaced, acceptable trees required to meet free-growing requirements within required time frames.

BCTS is meeting its current regeneration, free-growing and annual reporting requirements. There were no concerns with silviculture planning or practices.

Timber Sale Licensee Responsibilities

Wildfire Protection

At the single active harvesting operation encountered, workers were adequately prepared with the appropriate equipment for fighting a wildfire. The fire preparedness requirements of the WA were met.

The WA requires licensees to assess the fire hazard at specified intervals, including an assessment of the fuel hazard and its associated risk of a fire starting or spreading. Furthermore, the licensee must provide a copy of a fire hazard assessment to an official when requested.ⁱⁱⁱ If the assessment identifies a hazard, it must be abated.

Auditors requested fire hazard assessment on seven cutblocks. Four licensees conducted formal fire hazard assessments, but not until after the auditor had requested them, which was after the specified interval had passed. The remaining three had not been completed and are overdue.

Auditors found that licensees normally abated fire hazards within the required time frame and did not observe any overdue abatement obligations.

While licensees are abating the fire hazard as a standard practice, they cannot demonstrate that they have been diligent in assessing the hazard, which is a non-compliance with legislation. This non-compliance is not considered significant, since fire hazards are being abated in an effective and timely manner. As a result, this is an area requiring improvement.

Harvesting

Harvesting was conducted in accordance with the requirements of legislation and site plans. Soil disturbance was well managed and within limits, and natural drainage patterns were maintained. Riparian and cultural heritage features were accurately identified and protected. No harvesting concerns were noted.

Road and Bridge Construction, Maintenance and Deactivation

Licensees built short spur roads to access cutblocks, as well as in-block roads. Licensees maintained natural surface drainage patterns and grass seeded exposed soils to minimize surface erosion and to control invasive plants. In addition, the licensees rehabilitated all in-block roads after harvest, by de-compacting and re-contouring the road prism, covering them with slash and installing access barriers and warning signs. These roads are now ready to be planted. There were no concerns with licensee road construction, maintenance or deactivation.

Licensees constructed two bridges during the audit period. The licensees prepared the required documentation for the bridge installations, and both bridges met safety and environmental requirements. For the four bridges removed during the audit period, auditors found the licensees had protected the stream channels by not disturbing them during removal, seeding the channel banks and installing access barriers and signs. For one stream crossing, the licensee identified a more suitable crossing location than the one in the site plan, reducing the length of road construction required and lowering potential stream impacts. In this case, the licensee conferred with BCTS, conducted the applicable resource assessments and prepared the required

documentation to support a site plan amendment. There were no concerns with licensee bridge construction or deactivation.

Audit Opinion

In my opinion, the operational planning, timber harvesting, road construction, deactivation and maintenance, silviculture, and fire protection activities carried out by BC Timber Sales and its timber sale licensees in the Vanderhoof Natural Resource District, within the Stuart-Nechako business area, between June 1, 2015, and June 24, 2016, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act* and related regulations, as of June 2016.

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 that are detected but not considered worthy of inclusion in the audit report.

Without qualifying my opinion, I draw attention to the *Wildfire Protection* section of the report, which describes an area requiring improvement related to fire hazard assessment.

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 including adherence to the auditor independence standards and the ethical requirements, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with FRPA, and WA.



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Victoria, British Columbia
October 24, 2016

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.

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 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 2010, the Board randomly selected the Mackenzie district as a location for an audit. After assessing the activities within that area, we discovered that a large licensee 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, and we knew that some of the licence area is very remote, the new licence holder was selected for audit.

For BCTS audits, a district within 1 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 Canadian 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 from the timber harvesting population and all road sections constructed from 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 fieldwork 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 week in the field.

Evaluating the Results

The Board recognizes that compliance with the many requirements of 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 FRPA and WA requirements.

Unsound practice – where the auditor identifies a significant practice that, although found to be in compliance with FRPA or WA, is not considered to be sound management.

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 generally worthy of reporting. However, in certain circumstances, events that are considered not significant non-compliance may be reported as an area requiring improvement.

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, Lands and Natural Resource Operations.

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.

ⁱ 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 its FSP BCTS is 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 cut blocks. FSPs can have a term of up to five years.

ⁱⁱ Major structure includes bridges and major culverts.

- Bridge means a temporary or permanent crossing structure with a span length equal to or greater than 6 metres or an abutment height of 4 metres or greater.
- Major culvert has a pipe diameter of 2 metres or greater or is a pipe or open bottom arch with a span greater than 2.13 metres.

http://www.for.gov.bc.ca/hth/engineering/documents/publications_guidebooks/manuals_standards/Eng-Manual.pdf

ⁱⁱⁱ Section 7 (1) of the Wildfire Act states "In prescribed circumstances and at prescribed intervals, a person carrying out an industrial activity or a prescribed activity on forest land or grass land or within 1 km of forest land or grass land must conduct fire hazard assessments."

Section 11(3) of the *Wildfire Regulation* states "Subject to subsection (3.1) of this section, the prescribed intervals, at which persons described in section 7 (1) of the Act must conduct fire hazard assessments, are

- (a) 6 month intervals during the period during which the persons, in any area other than the area described in subsection (2), are carrying on the industrial activity or the prescribed activity, and
- (b) the shorter interval between the most recent 6-month interval and the date on which the activity ceases for an expected period of 6 months or more."



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