



**Forest
Practices
Board**

Forestry Audit: BC Timber Sales and Timber Sale Licensees

*Dawson Creek Timber Supply Area Portion of the
Peace-Liard Business Area*

FPB/ARC/224

February 2019

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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*.

As part of its 2018 compliance audit program, the Board randomly selected the Dawson Creek Timber Supply Area (TSA) portion of BC Timber Sales' (BCTS) Peace-Liard Business Area for audit. A map of the audit area appears on page 3.

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



BCTS operations in the Dawson Creek TSA are typically on moderately rolling terrain.

Background

The Dawson Creek TSA covers about 2.3 million hectares in Northeastern BC and is bounded by the Peace River to the north and the Alberta border to the east. To the west are the Hart Ranges and to the far south lie the Front Ranges, both of which are characterized by the mountainous terrain and steep valleys of the Rocky Mountains. About 60 percent of the TSA is predominantly coniferous-leading stands and about 40 percent is predominantly deciduous-leading stands.

The TSA provides important habitat for grizzly bear, elk, mule deer, moose, caribou, bighorn sheep, mountain goat, trumpeter swan, northern goshawk, fisher and bull trout. It also provides a wide range of natural resources, including timber, forage for grazing, medicinal plants, minerals, oil and gas.

reserves, and recreation and tourism amenities. The TSA and adjacent parks also provide opportunities for numerous outdoor motorized and non-motorized recreational activities.

The main communities within the TSA are Dawson Creek, Chetwynd, Tumbler Ridge and Hudson's Hope. Five First Nations have traditional territories that overlap the Dawson Creek TSA, and two have reserves within the TSA.

BCTS manages its activities in the district from Dawson Creek, where staff prepare operational plans, auction timber sales, and issue 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.

The allowable annual cut for the TSA is 1 860 000 cubic metres, including 882 000 cubic metres from deciduous leading stands. The BCTS allocation is 401 186 cubic metres. During the two-year audit period, BCTS harvested approximately 550 000 cubic metres from 28 cutblocks.

Audit Approach and Scope

This was a full scope compliance audit with a two-year timeframe. All activities carried out between June 1, 2016, and June 7, 2018, by BCTS and timber sale licensees in the Dawson Creek TSA were subject to audit.

BCTS is responsible for operational planning, including preparing forest stewardship plans (FSP)¹ and site plans, silviculture activities, major structure² maintenance, construction and deactivation, 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.

Auditors assessed these activities for compliance with FRPA, the *Wildfire Act*, and applicable regulations. Auditor's work included interviewing BCTS staff, reviewing the FSP and site plans, assessing silviculture records as well as site visits with BCTS staff to review field practices. Sites were accessed by truck and by helicopter.

The standards and procedures used to carry out this audit are set out in the Board's *Compliance Audit Reference Manual, Version 7.1, July 2016*.

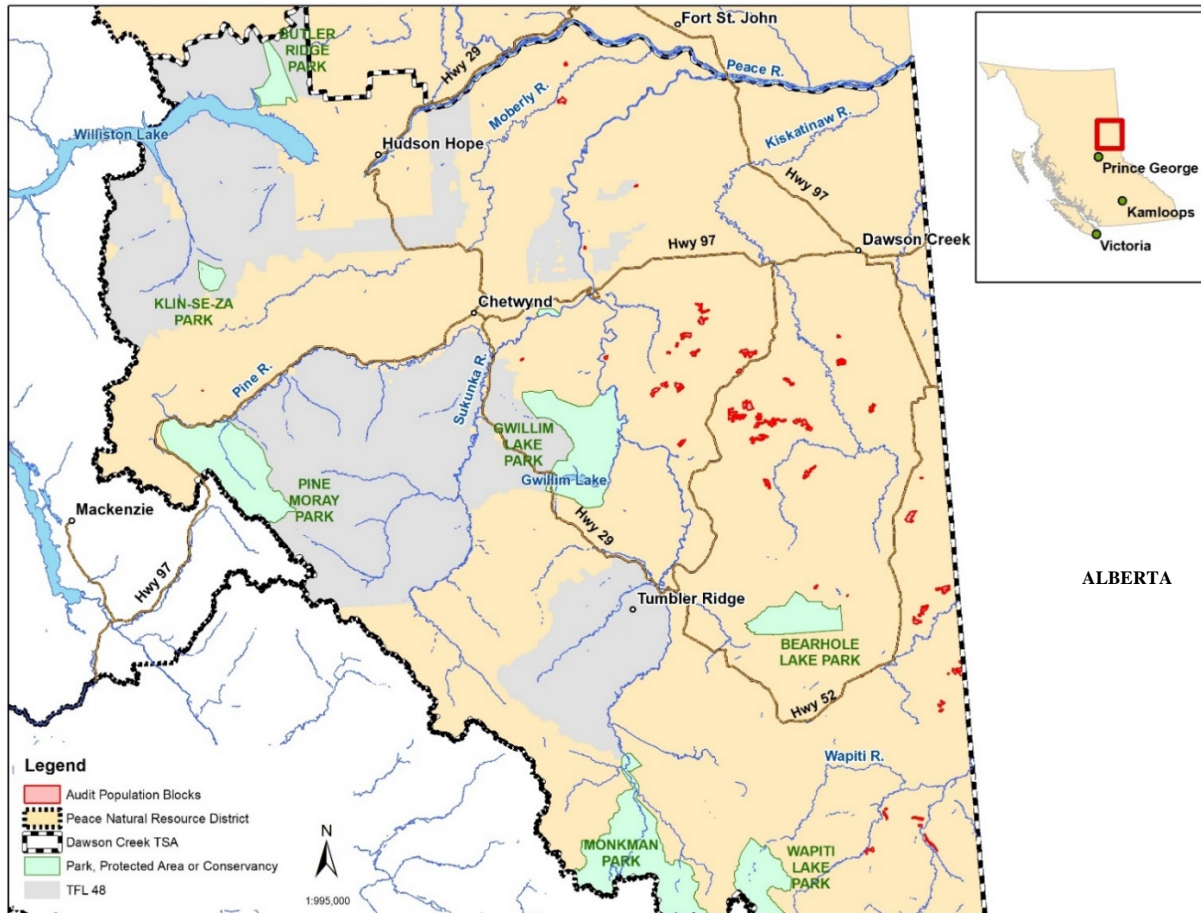
Two forest professionals, one professional engineer/forester, and a chartered professional accountant made up the audit team. The audit team was in the field with BCTS staff from June 4 to 7, 2018.

¹ 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 cut blocks. FSPs can have a term of up to five years.

² 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.

Map of the Audit Area



Planning and Practices Examined

BCTS RESPONSIBILITIES

Operational Planning

BCTS planned its activities under a FSP that was approved in 2007 and extended until October 2018. A new FSP was being circulated for review and comment at the time of the audit. The 2007 FSP and stand-level site plans were examined to ensure they met legal requirements. Auditors also considered site plans during harvesting, road and silviculture field sampling to ensure that they accurately identified site conditions.

The Dawson Creek Land and Resource Management Plan received final approval in 1999. It provides broad direction to guide resource development. Government has issued legal orders for managing wildlife (elk, moose, mule deer, mountain goat, caribou and big horn sheep), visuals and old growth.

Road and Major Structure Construction, Maintenance and Deactivation

During the audit period, BCTS maintained 79 kilometres and deactivated 6 kilometres of forest service road. BCTS maintained 4 bridges and removed 1 bridge. BCTS did not construct any roads or bridges.

Auditors examined all of these roads and bridges.

Silviculture Obligations and Activities

BCTS planted 76 cutblocks and brushed 45 cutblocks. Regeneration obligations were due or declared on 36 cutblocks and free-growing obligations were due or declared on 87 cutblocks.

Auditors examined 23 planted cutblocks, 6 brushed cutblocks, 9 cutblocks with regeneration obligations due or declared, and 41 cutblocks with free-growing obligations due or declared.

TIMBER SALE LICENSEE RESPONSIBILITIES

Timber Harvesting

During the audit period, 14 timber sale licensees harvested 28 cutblocks, covering 1,289 hectares. Auditors examined harvesting by 9 licensees on 16 cutblocks, totalling 671 hectares.

Road and Major Structure Construction, Maintenance and Deactivation

Timber sale licensees constructed 107 kilometres and maintained 39 kilometres of road. They did not deactivate any roads or construct or remove any bridges or major structures. Auditors examined 54 kilometres of constructed road and 34 kilometres of maintained road.

Wildfire Protection

There were no active work sites during the audit field work. Auditors examined fire hazard assessment and abatement activities and obligations on the 16 cutblocks in the harvest sample.

Findings

The audit found BCTS and timber sale licence holders' planning and practices generally complied with FRPA and the *Wildfire Act* as of June 2018.

The audit identified an area requiring improvement related to BCTS's bridge maintenance, an unsound practice for two timber sale licence holders for excessive soil disturbance, and an area requiring improvement for timber sale licence holders for not completing fire hazard assessments.

BCTS RESPONSIBILITIES

Operational Planning

Planning was consistent with the FSP and legislative requirements. The FSP 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.

Auditors found no issues with operational planning.

Road and Major Structure Maintenance and Deactivation

Road Maintenance

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. Auditors found road maintenance to be well done.

Bridge Maintenance

Auditors examined maintenance of four bridges, but only one was accessible by vehicle. The accessible bridge was constructed in 2006 on a forest service road, but was never used for industrial purposes. Although this bridge has been inspected by BCTS staff, it was never included in the Ministry's corporate bridge registry and has not been inspected by regional engineers. BCTS inspections indicate that the bridge has structural defects and will need to be replaced prior to industrial use.

Section 75ⁱ of the *Forest Planning and Practices Regulation* (FPPR) requires BCTS to either correct the known defects, close or remove the bridge, restrict traffic loads and/or place signs on each bridge approach, stating the maximum load capacity. Auditors found that BCTS had not completed any of these steps for the accessible bridge. Section 77ⁱⁱ of the FPPR requires a licensee that builds a structure to retain all records, including as-built drawings, until the bridge is removed. BCTS cannot locate those records for this bridge. This non-compliance is considered an area requiring improvement, as this issue is not pervasive and the road ends just 400 metres past this bridge.

Deactivation

The deactivated roads were signed and adequately barricaded. Culverts were removed and natural drainage was maintained. The one bridge that was deactivated was well done. The stream banks were protected and exposed soil was grass seeded to minimize the risk of erosion and sediment entering the stream.

Other than the one bridge discussed above, auditors found no issues with road or major structure maintenance or deactivation.

Subsequent to the audit, BCTS staff told the auditors the accessible bridge has been inspected by the regional engineer, included in the Ministry's corporate bridge registry and the bridge load rating signage has been changed to 5 tonnes.

Silviculture Activities and Obligations

BCTS planted cutblocks with suitable tree species and stock within the required timeframes. It monitored and tended its plantations to ensure it met free-growing requirements. Cutblocks contained the range of healthy, well-spaced, acceptable trees required to meet free-growing requirements within the required periods. BCTS met its regeneration, free growing and annual reporting requirements.

There were no concerns with silviculture planning or practices.



A regenerated cutblock in the Dawson Creek TSA

TIMBER SALE LICENSEE RESPONSIBILITIES

Soil Disturbance – TSL A89924 held by JB Bassett Contracting Ltd., and TSL A89929 and TSL A89931 held by Jeffery Lee Bassett



An example of localized site disturbance caused by skidding outside of seasonal or soil condition restrictions. Also note the fire hazard was abated on this block by burning slash piles.

Soil disturbance is disturbance to the soil in the net area to be reforested, resulting from the construction of temporary access structures or from 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 regulated.

On one cutblock in each of the three timber sales noted above, auditors observed several localized areas with high levels of soil disturbance. In addition, for all three cutblocks, skidding occurred outside of seasonal or soil condition restrictions specified in the site plans. Although the site disturbance

on the standard unit as a whole may be in compliance with legislation, this level of localized site disturbance is considered an unsound forest practice.

Wildfire Protection

All cutblocks in the harvesting audit sample were evaluated for compliance with the *Wildfire Act*. However, auditors did not assess the fire preparedness requirements of the *Wildfire Act* because there were no active sites during the field visits, due to spring breakup.

The *Wildfire Act* 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.

Fire hazard assessments were required to have been completed on 11 cutblocks. Auditors requested these 11 fire hazard assessment from the timber sale licensees and received just 5. Of the 5 completed assessments, only 1 was completed within the time frame required by legislation.

It is the standard practice of all the timber sale licensees to pile slash and then burn it when it is safe to do so. No cutblocks in the audit sample were required to have the fire hazard abated during the audit period. However, licensees abated the fire hazard on six cutblocks by burning the slash piles. The abatement was effective in reducing the fire hazard. Slash was piled in a manner that would facilitate hazard abatement by burning on those cutblocks where abatement had not occurred but harvesting had been completed.

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.

BCTS staff stated they have adjusted their business process and now require all timber sale licence holders to submit completed fire hazard assessments to BCTS staff prior to finalizing the timber sale.

Harvesting



Typical topography in BCTS's operating area. Slash is piled to facilitate abatement, culverts are removed and vegetation is retained along riparian features.

Harvesting was conducted in accordance with the requirements of legislation and site plans. Harvesting targeted pine leading stands and all harvesting used ground-based systems. Natural drainage patterns were maintained and wildlife tree retention objectives were achieved. Vegetation is retained around riparian features, which help maintain their ecological value.

With the exception of soil disturbance issue noted above, auditors found no issues with harvesting.

Road Construction and Maintenance

Licensees built in-block roads and short spur roads to access cutblocks. Culverts were functional and licensees maintained

natural surface drainage patterns. In addition, the licensees “seasonally” maintained most in-block roads by cross ditching and removing stream culverts soon after harvesting and hauling had finished.

Auditors found no issues with licensee road construction or maintenance.

Audit Opinion

In my opinion, the operational planning, timber harvesting, road construction, maintenance and deactivation, silviculture, and fire protection activities carried out by BC Timber Sales and its timber sale licensees in the Dawson Creek Timber Supply Area portion of the Peace Liard Business Area, between June 1, 2016, and June 7, 2018, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act* and related regulations, as of June 2018.

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 *Soil Disturbance* section of the report that describes an unsound forest practice.

Without further qualifying my opinion, I draw attention to the *Bridge Maintenance* and *Wildfire Protection* sections of the report, which describe two areas requiring 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 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 the *Wildfire Act*.



Christopher R. Mosher CPA, CA, EP(CEA)
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Victoria, British Columbia
January 21, 2019

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*. Compliance audits examine forest or range planning and practices to determine whether or not they meet FRPA and / or *Wildfire Act* requirements. The Board conducts about 10 compliance audits annually. Most of these are audits of agreement holders. The Board also audits the government's BC Timber Sales Program (BCTS).

Selection of auditees

To begin with, auditors randomly select an area of the Province, such as a natural resource 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, auditors choose the auditee(s) that best suits the selected risk and priorities. The audit selections are not based on past performance.

For example, in 2016, the Board randomly selected the Dawson Creek portion of the Peace Natural Resource District as a location for an audit. After assessing the activities within the area, it was noted that there were two community forest agreements that had not yet been audited by the Board. As the Board strives to audit an array of licence types and sizes each year, these two community forest agreements were selected for audit.

For BCTS audits, a district or timber supply area within 2 of the 12 business areas in the province is selected randomly for audit. Only those areas that have not been audited by the Board in the past five years are eligible for selection.

Audit Standards

The audits are conducted in accordance with auditing standards developed by the Board. These standards include 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 and 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 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. For smaller audits, the sample will include the full population.

Auditors' work includes interviewing licensee staff, reviewing applicable plans, assessing features from helicopters and measuring specific features like riparian reserve zone width using ground procedures. The audit teams generally spend three to five days in the field.

Evaluating the Results

The Board recognizes that compliance with the requirements of FRPA and the *Wildfire Act* 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 legal 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 *Wildfire Act* requirements.

Unsound Practice – where the auditor identifies a significant practice that, although in compliance with FRPA or the *Wildfire Act*, 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, these events 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 more non-compliance events.

If a significant breach of the legislation 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, Natural Resource Operations and Rural Development.

Reporting

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

The Board reviews the draft report 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 reviews representations from parties that may potentially be adversely affected, makes any necessary changes to the report, and decides if recommendations are warranted. The report is then finalized and released: first to the auditee and then to the public and government seven days later.

ENDNOTES

i Forest Planning and Practices Regulation - Section 75 - Structural Defects

A person who maintains a road must do one or more of the following if a structural defect or deficiency occurs on a bridge that is part of that road:

- (a) correct the defect or deficiency to the extent necessary to protect
 - (i) industrial users of the bridge, and
 - (ii) downstream property, improvements or forest resources that could be affected if the bridge fails;
- (b) close, remove or replace the bridge;
- (c) restrict traffic loads to a safe level;
- (d) place a sign, on each bridge approach, stating the maximum load capacity of the bridge.

ii Forest Planning and Practices Regulation - Section 77 - Retaining information

- (1) A person who builds a bridge or major culvert for the purpose of constructing or maintaining a road must do all of the following:
 - (a) prepare or obtain
 - (i) pile driving records,
 - (ii) for new materials used to build the bridge or major culvert, mill test certificates, in-plant steel fabrication drawings, and concrete test results,
 - (iii) soil compaction results, and
 - (iv) other relevant field and construction data;
 - (b) prepare as-built drawings of the bridge or major culvert;
 - (c) retain the information referred to in paragraphs (a) and (b) until the earlier of the date that
 - (i) the bridge or major culvert is removed, and
 - (ii) the person is no longer required to maintain the road.
- (2) Subject to subsection (3), a person responsible for maintaining a road must retain a copy of inspection records for a bridge or major culvert associated with the road for at least one year after the bridge or major culvert is removed from the site.
- (3) Unless the road has been deactivated, a person must submit to the district manager or the timber sales manager, as applicable, the documents, drawings and records described in subsections (1) and (2) in respect of a road if the person is no longer required to maintain the road because the district manager or timber sales manager
 - (a) cancelled the road permit, road use permit or special use permit for the road, and
 - (b) does not require the road to be deactivated.

iii Wildfire Act - Hazard assessment and abatement - 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.”

Wildfire Regulation - Hazard Assessment - 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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