



**Forest  
Practices  
Board**

## **Forestry Audit: BC Timber Sales and Timber Sale Licensees**

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*Arrow Lake Field Unit Portion of the  
Kootenay Business Area*

**FPB/ARC/226**

April 2019

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# Audit Results

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## 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 2018 compliance audit program, the Board randomly selected the Arrow Field Unit portion of BC Timber Sales' (BCTS) Kootenay Business Area for audit (see map 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.



View looking north over Whatshan Lake.

## Background

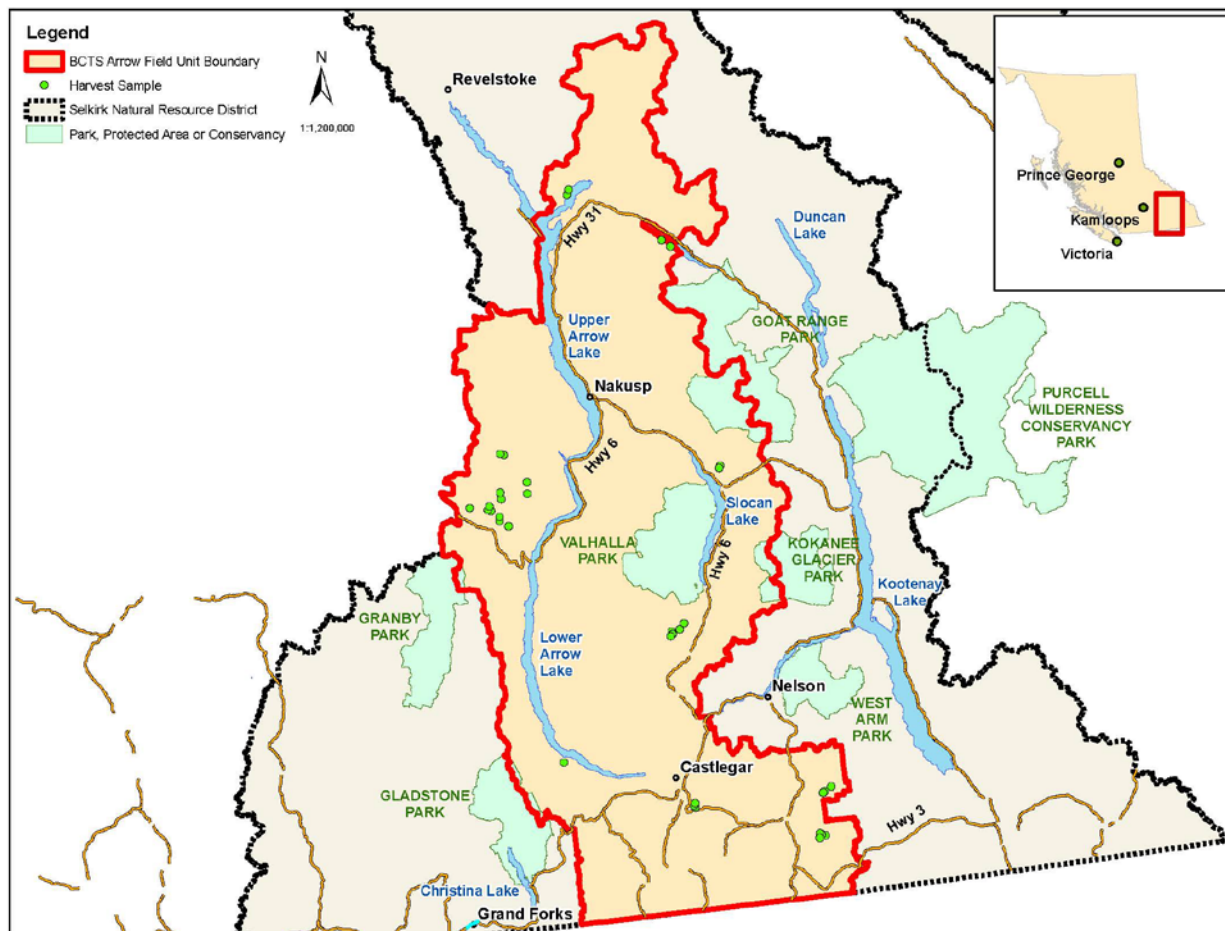
The Kootenay Business area of BCTS is within the Rocky Mountain and Selkirk Natural Resource Districts. The audit focused on BCTS's activities within the Arrow field unit portion of the Selkirk Natural Resource District.

The Arrow Field Unit covers the Arrow Lakes and is approximately 1 350 000 hectares, starting at the US border and stretching north towards Revelstoke. BCTS has several operating areas dispersed throughout the field unit. The communities of Trail, Castlegar, Fruitvale, Nakusp and Rossland are within the field unit.

The administrative and management centre for the business area is the BCTS office located in Nelson. Field teams in Castlegar and Nakusp manage activities in the Arrow Field Unit. Staff prepare operational plans, auction timber sales, issue timber sale licences and fulfill silviculture obligations. 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.

BCTS's allowable annual cut is approximately 158 000 cubic metres in the Arrow timber supply area. The Arrow Field Unit gets additional volume from the Cascadia timber supply unit, as well as partnerships with other licences. Over the past year, timber sale licensees harvested about 260 000 cubic metres from timber sales in the Whatshan Lake, Barnes Creek, Perry Ridge and Beaton Arm areas.

**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, 2017, and June 14, 2018, by BCTS and timber sale licensees, were subject to audit.

BCTS is responsible for operational planning, including preparing forest stewardship plans (FSP)<sup>i</sup> and site plans, silviculture activities, major structure<sup>ii</sup> maintenance and construction, 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. The work included interviewing BCTS staff, reviewing the FSP and site plans, assessing silviculture records and 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*.

One forest professional, one professional engineer, one forest professional/geoscientist-in-training and a chartered professional accountant made up the audit team. The audit team was in the field with BCTS staff from June 11 to 14, 2018.

## Planning and Practices Examined

### BCTS Responsibilities

#### *Operational Planning*

BCTS's most recent FSP (FSP#601) was approved on May 1, 2017, and came into effect on September 15, 2017, when the previous FSP (FSP#31) expired. However, all the activities audited were planned under the older FSP #31. Auditors examined the relevant FSP and stand-level site plans for consistency with legal requirements. During harvesting, road and silviculture field sampling, auditors also confirmed whether site plans accurately identified site conditions.

The Kootenay Boundary Land Use Plan covers the Arrow field unit. The *Kootenay Boundary Land Use Plan Implementation Strategy* was completed in 1997 and the *Kootenay Boundary Higher Level Plan Order* was signed in 2002. The order legally establishes certain provisions within the plan, such as scenic areas with visual quality objectives.

The primary forest values associated with BCTS's activities during the audit period are fish streams, visual quality, community watersheds, domestic watersheds and old growth management areas.

#### *Road and Major Structure Construction, Maintenance, and Deactivation*

During the audit period, BCTS constructed 7.8 kilometres of forest service road, 30 kilometres of road permit road and 4 bridges. It maintained 734 kilometres of forest service road, 51 bridges and 11 major culverts. There were no deactivation activities during the audit period.

Auditors examined all of the road and bridge construction. Auditors also examined maintenance of 293 kilometres of road, 35 bridges and 2 major culverts.



### *Silviculture Obligations and Activities*

BCTS planted 45 cutblocks and brushed 15 cutblocks during the audit period. Regeneration obligations were due or declared on 78 cutblocks and free-growing obligations were due or declared on 104 cutblocks.

Auditors examined 14 planted cutblocks, 8 brushed cutblocks, 16 cutblocks with regeneration obligations due, and 35 cutblocks with free-growing obligations due.

### **Timber Sale Licensee Responsibilities**

#### *Timber Harvesting*

Eleven timber sale licensees harvested 33 cutblocks, covering 1162 hectares, during the audit period. Auditors examined harvesting by 10 timber sale licensees on 29 cutblocks, totalling 1049 hectares.

#### *Road and Major Structure Construction, Maintenance, Deactivation*

Timber sale licensees built and maintained 46 kilometres of road and 1 bridge. There were no deactivation activities during the audit period. Auditors examined 28 kilometres of road construction and the bridge.

#### *Wildfire Protection*

Auditors encountered one active work site and examined timber sale licensee compliance with the *Wildfire Act* requirements for fire preparedness. Timber sale licensees had fire hazard assessment obligations due on 16 cutblocks and abatement obligations due on 4 cutblocks.

Auditors examined fire hazard assessments for all cutblocks where assessments were due and assessed abatement obligations and activities as part of the 29 blocks in the harvest sample.

## **Findings**

The audit found that BCTS's planning and practices complied with FRPA and the *Wildfire Act* as of June 2018.

The audit found that the timber sale licensees' practices complied with FRPA and the *Wildfire Act* as of June 2018, but several licensees' practices for fire hazard assessments require improvement.

### **BCTS Responsibilities**

#### *Operational Planning*

Planning was consistent with the FSP and legal 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 values, including streams and wetlands and areas with visual objectives.

#### *Roads and Major Structure Construction and Maintenance*

##### Construction

BCTS constructed roads according to plan and all documentation was complete, including construction assurance statements for the newly constructed sections. Roads were well built and natural drainage patterns were maintained during and after construction. Road development in the Arrow Field Unit requires careful planning due to the number of small communities throughout the

area. As a result, BCTS oversees road construction to help maintain public commitments and high construction standards, which is different from other business areas where road construction is usually included in the timber sale licence.

BCTS constructed four structures during the audit period. Auditors reviewed all four structures and found all of them to be in compliance with the approved general arrangement drawings and designs. BCTS works in conjunction with the Regional Engineering Group and qualified engineering contractors to initiate, design and install the structures. All documentation was completed to acceptable engineering standards.

### 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. Roads overall were well maintained with natural drainage patterns maintained and culverts functional.

Structures on forest service roads are inspected by government engineers and BCTS is responsible for surface maintenance, including corrective actions recommended by government agencies. The sampled structures were well maintained.

During the field review, a slide was noted on the Sheep Creek FSR that entered Sheep Creek, which is a S2<sup>1</sup> classified stream. Auditors determined that the slide was not a direct result of forest activities and was initiated by a rain on snow event in the late spring. BCTS was aware of the incident and subsequent to the audit, has made repairs to the road.

### *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. Auditors had no concerns with silviculture planning or practices.

## **Timber Sale Licensee Responsibilities**

### *Wildfire Protection*

At the one active harvesting operation encountered, workers were adequately prepared with the appropriate equipment for fighting a wildfire. Auditors had no concerns with the fire preparedness requirements of the *Wildfire Act*.

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.<sup>iii</sup> If the assessment identifies a hazard, it must be abated.

Sixteen cutblocks had fire hazard assessments due during the audit period and auditors received completed fire hazard assessments for 13 of these cutblocks. Of the 13 provided assessments, 2 were missing the risk of ignition and spread, which is a required part of the assessment.

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<sup>1</sup> A S2 stream is a fish-bearing stream with a width of 5 to 20 metres.

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

While most timber sale licensees are completing fire hazard assessments, some 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.

### ***Timber Harvesting***

Harvesting was conducted in accordance with the requirements of legislation and site plans. Sampled blocks included ground based and cable systems and covered a broad range of ecosystems. Wildlife tree retention included patches and dispersed trees representative of the natural stand composition. Auditors had no concerns with timber harvesting.

### ***Roads and Major Structure Construction and Maintenance***

Licensees built short spur roads under road permits to access cutblocks, as well as in-block roads. Licensees generally followed plans and maintained natural surface drainage patterns. Auditors had no concerns with licensee road construction, maintenance 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 Arrow Field Unit, within the Kootenay Business Area, between June 1, 2017, and June 14, 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 *Wildfire Protection* section of the report, which describes an area requiring improvement related to fire hazard assessments.

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  
March 18, 2019



# Appendix 1:

## Forest Practices Board Compliance Audit Process

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### 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 are 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

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<sup>i</sup> 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.

<sup>ii</sup> 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](http://www.for.gov.bc.ca/hth/engineering/documents/publications_guidebooks/manuals_standards/Eng-Manual.pdf)

<sup>iii</sup> 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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