



**Forest
Practices
Board**

Forestry Audit: BC Timber Sales and Timber Sale Licence Holders

*Kootenay Business Area
Rocky Mountain District*

FPB/ARC/147

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Board Commentary

This audit examined the activities of the BC Timber Sales (BCTS) program and the timber sale licence (TSL) holders in the Rocky Mountain District. Numerous natural resources support a wide range of interests in the district—including recreation, wildlife, trapping, guide-outfitting, fish and tourism—creating challenges for BCTS and timber sale licensees that carry out forestry activities in the area.

Overall, the audit found that BCTS and the timber sale licensees complied with the *Forest and Range Practices Act* and the *Wildfire Act*. BCTS effectively addressed the resource interests while facing the challenge of managing dispersed and fragmented operating areas.

Of note, the BCTS and TSL holders' activities within the Mark Creek Community Watershed were found to be well done. It was apparent that care was taken in the management of the operations within the watershed, as roads and bridges were well constructed and potential sediment sources were well managed, and the Board would like to acknowledge the effort.

Audit Results

Background

As part of the Forest Practices Board's 2012 compliance audit program, the BC Timber Sales (BCTS) program and timber sale licence (TSL) holders in the Rocky Mountain District portion of the Kootenay Business Area were selected for audit.

The district includes the Cranbrook and Invermere Timber Supply Areas (TSAs) and covers 2.6 million hectares. It is bounded by the Rocky Mountains to the East, the Purcell Mountains to the west, and stretches from the small hamlet of Parson in the north to the United States border in the south (see map on page 4). The area provides a wide range of front- and back-country recreational opportunities, contains significant water resources, including the Columbia and Kootenay Rivers, and features an abundance of lakes and smaller rivers.

BCTS has an allowable annual timber harvest volume of 270 000 cubic metres and auctions Crown timber to registrants in the BCTS program. BCTS prepares operational plans and issues timber sale licences and road permits to successful bidders. Licensees must fulfill licence, permit and operational plan obligations, including timber harvesting and road work, within cutblocks.

During the two-year audit period, approximately 425 000 cubic metres were harvested by TSL holders, primarily to address mountain pine beetle infestations.

A professional forester, a professional forester/agrologist, a professional engineer and a chartered accountant made up the audit team. Field work was carried out from August 20 to 23, 2012.

Additional information about the Board's compliance audit process is provided in Appendix 1.

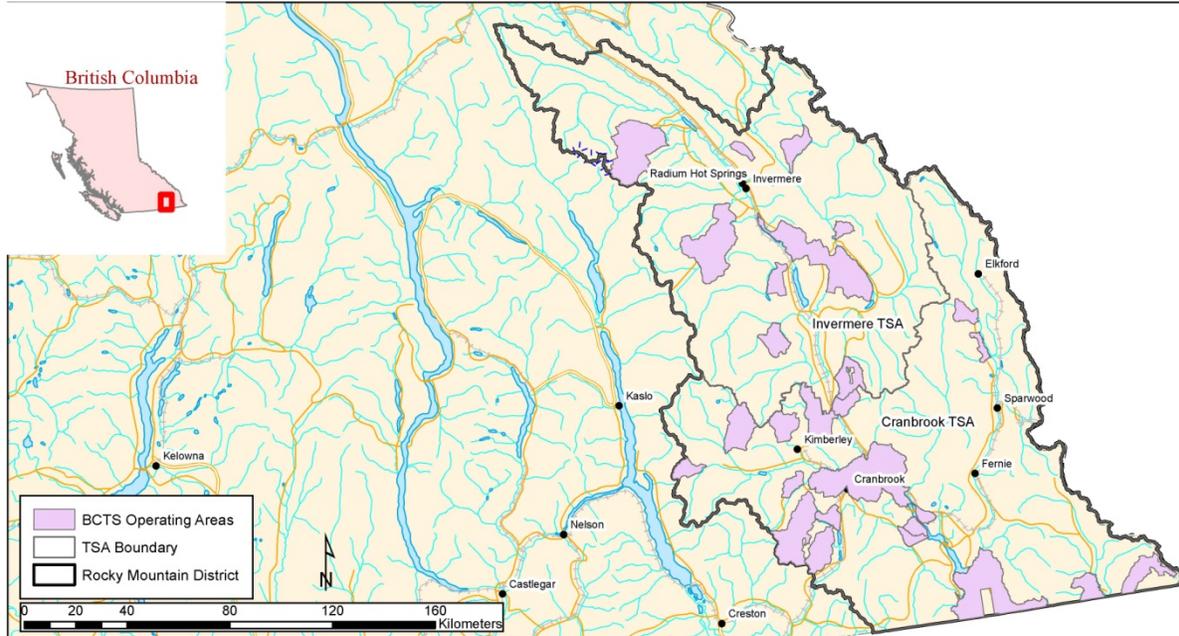


Objectives Set by Government

Government objectives set out in the *Forest and Range Practices Act (FRPA)* and the *Forest Planning and Practices Regulation* provide strategic and operational guidance to BCTS operations in the area, which is also subject to the *Kootenay Boundary Higher Level Plan Order (KBHLPO)*.

The KBHLPO guides management of public lands and resources, providing for the creation of resource management zones and objectives. KBHLPO legal requirements and objectives apply to

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a broad landscape but have limited application for specific harvesting blocks or roads within the audit area. Key objectives of the order include:

- biodiversity emphasis assigned by landscape unit;
- retention targets for old and mature timber;
- caribou retention zones (revised several times since 2002);
- special management for streams licensed for domestic use; and
- scenic areas.

As well, BCTS conducts its operational planning under the *Forest Stewardship Plan for BC Timber Sales in the Rocky Mountain Forest District (FSP)*¹ approved on September 15, 2006 and expiring on September 15, 2016. The FSP establishes measurable and verifiable results and strategies that are consistent with FRPA objectives and the KBHLPO.

Audit Approach and Scope

The audit examined both BCTS' and timber sale licensees' obligations and activities using a combination of detailed field reviews and aerial overviews.

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 cutblocks. FSPs can have a term of up to five years.

BCTS is responsible for operational planning, including preparing FSPs and site plans, silviculture activities; bridge 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.

These activities were assessed for compliance with FRPA, the *Wildfire Act* and related regulations. All activities, planning and obligations for the period August 1, 2010, to August 23, 2012, 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 2012 audit season, set out the standards and procedures that were used to carry out this audit.

Planning and Practices Examined

BCTS Responsibilities

Operational Planning

The FSP and stand level plans were examined to ensure that they were consistent with legislative requirements. Landscape level legal requirements and objectives were assessed by reviewing analysis completed by BCTS planners. Stand level plans were evaluated during harvesting, road and silviculture field sampling to ensure that they accurately identified site conditions.

Road Construction, Maintenance, Deactivation

During the audit period, BCTS constructed 25.4 kilometres, maintained 556 kilometres and permanently deactivated 19.3 kilometres of road. BCTS also constructed 2 bridges and maintained 54 bridges.

Auditors examined all of the newly constructed roads, 233 kilometres of maintained roads and 16 kilometres of permanently deactivated roads. The Board also examined both of the bridges that were constructed and 33 of the maintained bridges.

Silviculture Obligations and Activities

BCTS site-prepared 7 cutblocks, planted 87 cutblocks and brushed 1 cutblock. Regeneration obligations were due on 93 cutblocks and free-growing obligations were due on 172 cutblocks.

The audit examined 4 site-prepared cutblocks, 14 planted cutblocks, 1 brushed cutblock, 30 cutblocks with regeneration obligations due and 55 cutblocks with free-growing obligations due.

Timber Sale Licensee Responsibilities

Timber Harvesting

Twenty-six timber sale licences were fully or partially harvested during the audit period. The sales included 80 cutblocks, with most harvesting conducted using ground-based systems.

The Board audited harvest activities on 25 cutblocks.

Road Construction, Maintenance and Deactivation

Timber sale licensees constructed 26.5 kilometres of road and permanently deactivated 2.8 kilometres of road during the audit period.

The Board audited 14.7 kilometres of road construction and 1.8 kilometres of permanently deactivated road.

Fire Protection

Fire preparedness was audited for compliance with *Wildfire Act* on two active operations. Fire hazard and abatement activities and obligations were examined on 23 of the harvested timber sales.

Findings

The audit found that the planning and field activities undertaken by BCTS and by the TSL holders complied, in all significant respects, with the requirements of FRPA, , the *Wildfire Act* and related regulations, as of August 2012.

Operational Planning

Planning activities were consistent with the FSP and legislative requirements.

BCTS operates in 36 distinct operating areas covering 35 different landscape units (LUs) and many of the LUs are shared with other licensees. Planning within shared LUs requires effective and efficient coordination with other licensees to ensure accurate data is used when planning and conducting analysis. The auditors feel that BCTS effectively coordinated activities and shared data with other licensees.

BCTS generates maps on an annual basis, showing proposed and existing forestry activities across their operating area and refers them to interested parties, including First Nations, for comments and feedback. This ensures clear and ongoing communication with other stakeholders.

The FSP was consistent with legislated requirements, and incorporated FRPA and KBHLPO objectives. Planning at both the landscape and stand level was consistent with the FSP.

BCTS addressed site specific resources in the site plans by accurately identifying and prescribing practices for resource features including streams and wetlands, community watersheds, visually sensitive areas and cultural or heritage sites.

Harvesting

Harvesting was conducted in accordance with legislative requirements and site plan specifications.

The majority of logging targeted mountain pine beetle (MPB) infected stands and most harvesting was conducted using ground-based systems.

Soil disturbance appeared to be below the limit set in the site plan (SP) at the block level although there were small localized instances of high disturbance within the block. BCTS often

put commitments into the SP and TSL document requiring TSL holders to rehabilitate and grass seed excavated trails and permanent access structures to conserve the productivity and hydrological function of the soils. This practice exceeds what most licensees require, though rehabilitation had not yet occurred on all sites.

Riparian management included establishing wildlife tree patches around wetlands or creeks, retention of merchantable and non-merchantable timber adjacent to streams where appropriate, and maintaining the integrity of wetlands with adequate buffers.

Wildlife tree retention objectives specific to ecosystem types and the LU were established in the FSP. Wildlife trees were retained in groups and as individual stems. There were instances where some individual retained stems had blown down, but these were not pervasive.

Roads and Bridges

There were no concerns with road construction, maintenance and deactivation, or bridge construction and maintenance.

New construction consisted of roads built within cutblocks (in-block roads) and main haul roads. Many of the in-block roads were seasonally deactivated following harvesting.

New bridge construction was managed extremely well. Qualified registered professionals supervised the installation and certified the bridge once it was installed.



Riparian feature managed with forested buffer.

The audit found that roads were generally well maintained.

- Natural drainage patterns were maintained.
- Exposed cutbanks, fill slopes and running surfaces were grass seeded especially where there was a possibility of sediment entering streams.
- Bridges were well signed, well armoured and well maintained.
- No evidence of excessive surface or ditch line erosion was noted.

One road section exhibited an area of ongoing instability. BCTS was aware of this and had made attempts to stabilize the running surface and maintain drainage from the upslope seepage. BCTS is currently assessing the road section to determine if it should be fully rehabilitated rather than continuing with the ongoing maintenance.

Silviculture Activities and Obligations

Auditors noted that BCTS actively managed silviculture activities and obligations and considered their overall performance to be very good. The silviculture activities audited

included site preparation, brushing, planting, and regeneration delay and free-growing obligations.

All site prepared cutblocks observed met the prescription requirements and activities did not appear to have resulted in excess soil disturbance.

BCTS has developed a good system for seedlot selection and monitoring compliance with the Chief Forester's Seed Transfer Guidelines. Planting densities being utilized by BCTS are resulting in adequate crop trees through to regeneration delay and free growing in the majority of blocks. Where issues are identified, such as frost kill or animal damage, BCTS is scheduling fill-planting activities.

Brushing practices on the cutblock reviewed were good. Brush was knocked to ground, no damage was noted on crop trees and fire hazard was not considered to be an issue.

BCTS is diligent in achieving regeneration delay and free growing within the allotted timeframe. However, when updating the provincial Reporting Silviculture Updates and Land status Tracking System (RESULTS), there were a few minor reporting errors and a few instances where some information, such as seedlots planted, was missing. Subsequent to the audit, these minor errors were corrected.

Fire Protection Activities

Two active operations were evaluated at the time of the field inspection. Both sites had sufficient fire tools and a functional water delivery system on site.

Operators used the appropriate fire weather station to determine the correct fire danger class, logging debris was piled in a manner to facilitate burning and, where burning had taken place, it was effective. Broadcast burning was not conducted.

BCTS developed an Emergency Response Plan (ERP) template for TSL holders to complete and forward to the Southeast Fire Centre. The ERP contains relevant information such as contact details and location of operations. BCTS only confirms that the TSL holder completed a fire hazard assessment on high risk sites. BCTS ensures debris piles are disposed of on all sites by inserting a mandatory debris disposal clause in the TSL Licence document. TSL deposits are not fully returned until debris disposal has been confirmed.



Debris piled to facilitate disposal.

Community Watershed Management

BCTS operates in six community watersheds, but only the Mark Creek Community Watershed (MCCW) had harvesting and road construction activities occur during the audit period. A hydrological assessment was completed for the development in the MCCW.

Auditors found that harvesting boundaries were well away from the major creeks and roads and bridges were well constructed and maintained. BCTS minimized the potential for road induced sediment delivery to streams by using silt fencing and cascading sediment ponds along ditch lines adjacent to the channels, and by grass seeding exposed soil. BCTS had several emergency spill response stations located throughout the watershed stocked with spill response supplies.

Overall, the management of operations within MCCW was well done.



Stream crossing in the Mark Creek Community Watershed.

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 Licence Holders in the Rocky Mountain District portion of the Kootenay Business Area between August 1, 2010, and August 23, 2012, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act* and related regulations, as of August 2012.

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.

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, and WA.



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Victoria, British Columbia
November 19, 2012

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 8 or 9 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 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 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.

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.

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.



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