



**Forest
Practices
Board**

Forestry Audit

*BC Timber Sales and Timber Sale Licence Holders
Skeena Business Area
Coast Mountains Resource District*

FPB/ARC/161

February 2014

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Audit Results

Background

As part of the Forest Practices Board's 2013 compliance audit program, the BC Timber Sales (BCTS) program and timber sale licence (TSL) holders in the Coast Mountains Resource District portion of the Skeena Business Area were randomly selected for audit.

The Skeena Business Area within the Coast Mountains Resource District conducts operations in the Kalum, North Coast, Nass, Pacific and Cascadia timber supply areas (TSAs) and Tree Farm Licences 1 and 41. The district includes the communities of Terrace, Prince Rupert, Kitimat, Stewart, New Aiyansh and Port Edward, as well as several villages (see map on page 2).



Planning of forestry operations in the North Coast TSA is guided by the *Central Coast Land and Resource Management Plan* (CCLRMP), which follows an ecosystem-based management (EBM)ⁱ approach to resource management. Planning in the southern portion of the Nass TSA is guided by the *Nass South Sustainable Resource Management Plan* (SRMP) (2012) and planning in the Kalum, Cascadia and Pacific TSAs is guided by the *Kalum Sustainable Resource Management Plan* (2006). All the plans listed above strive to balance social, economic and environmental values.

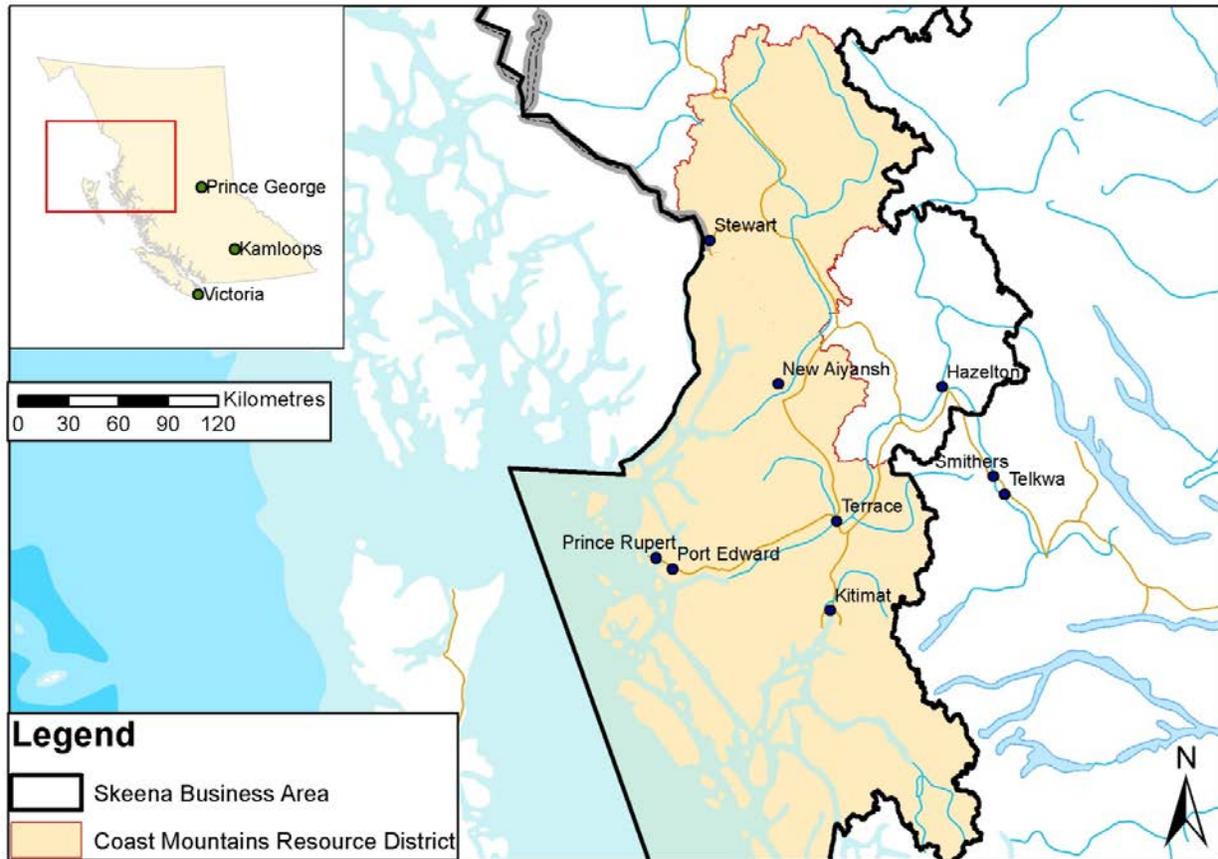
BCTS auctions Crown timber to registrants in the BCTS program. It also prepares operational plans and issues timber sale licences and road permits to successful bidders. Licensees must fulfill licence, permit and operational plan obligations, including timber harvesting and road work within cutblocks.

Within the Coast Mountains Resource District, BCTS has an allowable annual cut of 738 244 cubic metres per year. During the two-year audit period, approximately 255 000 cubic metres of timber was harvested by TSL holders, a significant portion to salvage blowdown (trees uprooted by the wind) resulting from a 2010 storm event.

Two professional foresters, one professional engineer, one professional geologist and a chartered accountant made up the audit team. Field work was carried out from June 10 to 14, 2013.

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

BC Timber Sales Skeena Business Area and Coast Mountains Resource District



Audit Approach and Scope

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

BCTS is responsible for operational planning, including preparing forest stewardship plansⁱⁱ (FSPs) and site plans,ⁱⁱⁱ silviculture activities, major structure^{iv} construction and maintenance, 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 timber sales.

These activities were assessed for compliance with *Forest and Range Practices Act* (FRPA), the *Wildfire Act* (WA) and related regulations. All activities, planning and obligations for the period June 1, 2011, to June 14, 2013, were included in the scope of the audit.

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

Planning and Practices Examined

BCTS Responsibilities

Operational Planning

BCTS planned its activities under two FSPs; the *North Coast Forest Stewardship Plan for BC Timber Sales in the Skeena Business Area* (North Coast FSP) and the *BCTS Kalum Forest Stewardship Plan for BC Timber Sales in the Skeena Business Area* (Kalum FSP). Both FSPs were examined for consistency with legislative requirements.

Road and Major Structure Construction, Maintenance and Deactivation

During the audit period, BCTS maintained 1025 kilometres and deactivated 4 kilometres of road, installed 3 major structures (1 bridge and 2 major culverts) and maintained 197 major structures. BCTS did not construct any roads during the audit period.

Auditors examined 496 kilometres of maintained roads, all deactivated road, the installation of 1 bridge and 1 major culvert, and the maintenance of 113 major structures.

Silviculture Obligations and Activities

BCTS planted 23 cutblocks, spaced 1 cutblock and brushed 18 cutblocks. Regeneration obligations were due on 63 cutblocks and free-growing obligations were due on 96 cutblocks.

Auditors examined 6 planted cutblocks, 2 brushed cutblocks, 8 cutblocks with regeneration obligations due and 47 cutblocks with free-growing obligations due.

Timber Sale Licensee Responsibilities

Timber Harvesting

Thirty-five cutblocks in 18 TSLs were fully or partially harvested during the audit period. Harvesting was split evenly between cable and ground-based systems. The majority of the harvesting was in the Kalum TSA.

Auditors examined harvest activities on 24 cutblocks in 13 TSLs.

Road Construction, Maintenance and Deactivation

Timber sale licensees constructed 58 kilometres of road and had maintenance obligations on all of the constructed roads.

Auditors examined 39 kilometres of road construction and maintenance.

Fire Protection

Auditors examined compliance with the WA on active operations on two cutblocks in two TSLs.

Auditors examined fire hazard and abatement activities and obligations on all of the harvested cutblocks in the harvest sample population.

Findings

Auditors found that the planning and field activities undertaken by BCTS complied in all significant respects with the requirements of FRPA, WA and related regulations, as of June 14, 2013.

For 23 of the 24 cutblocks assessed, the planning and field practices undertaken by TSL holders complied in all significant respects with the requirements of FRPA, WA and related regulations, as of June 14, 2013.

Auditors identified a significant non-compliance related to road construction. The non-compliance involved a poorly deactivated winter road resulting in failure to maintain natural drainage patterns, as discussed in the In-block Road Construction section below.

In-Block Road Construction

TSL holder Long Shot Holdings Ltd. constructed a road in one of two cutblocks on TSL A78679. This cutblock was only partially harvested by 2012, when the TSL holder ceased logging and declared bankruptcy. The roads within the cutblock had been constructed during the winter, and were not fully deactivated when the operator left the site, resulting in natural drainage patterns not being maintained. Section 39 of the *Forest Planning and Practices Regulation*^v (FPPR) requires licensees to maintain natural surface drainage patterns both during and after road construction. Although no slope failures or siltation were observed, natural drainage patterns were not maintained on eight crossings and debris was piled in the creek channels. As this was a pervasive issue on this cutblock, this non-compliance is considered significant.

Subsequent to the audit, Long Shot Holdings Ltd. transferred TSL A78679 to another operator to monitor the road during fall freshet, complete the harvesting and then deactivate the road.

Operational Planning

The North Coast and Kalum FSPs were consistent with FRPA, WA and related regulations, which provide strategic and operational guidance to BCTS operations in the area. BCTS's site plans were consistent with the FSPs and legislative requirements.

BCTS operates in 36 distinct operating areas covering 35 different landscape units (LUs) within the Coast Mountains Resource District and many of the LUs and operating areas are shared with other licensees. This requires effective and efficient coordination with other licensees to ensure accurate data is used when planning and conducting analysis.

To support clear and ongoing communication with other stakeholders, BCTS generates maps on an annual basis showing proposed and existing forestry activities across its operating areas and refers these maps to interested parties, including First Nations, for comments and feedback.

In its site plans, BCTS accurately identified resource values such as streams and wetlands, community watersheds, visually sensitive areas and cultural or heritage sites, and prescribed management practices for them.

Harvesting

Harvesting was conducted in accordance with legislative requirements and site plan obligations. Most harvesting focused on salvaging blowdown north of Kitsumkalum Lake and east of Terrace, resulting from a 2010 major storm event. In several instances, TSL holders left standing timber and/or felled and bucked timber on site. This is an allowable practice under the 'take or pay' policy,^{vi} since the TSL holder pays stumpage on the timber that is not removed.



Wildlife tree patch around wetland.

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

Wildlife trees were retained mostly in patches. There were instances where some retained trees had blown down, but it was not a common occurrence.

One cutblock contained an area with excessive soil disturbance, which was later rehabilitated.

Roads and Major Structures

Road Construction

In-block roads were constructed by the TSL holder and accounted for all new road construction.

With the exception of the one cutblock discussed above, the audit found:

- Natural drainage patterns were maintained.
- There were no instances of cut or fill slope failures and subgrades were stable.
- Roads were in approximately the same location as mapped.
- There were no instances of excessive erosion of road surfaces.

Due to the rocky conditions, grass seeding was seldom carried out.

Road Deactivation

All deactivated roads appeared stable.

Road Maintenance

The audit found that roads were generally well maintained:

- Natural drainage patterns were maintained.
- Bridges were well signed, well armoured and well maintained.



Road maintained and warning signs clearly visible indicating road and bridge were closed beyond this point.

BCTS has a well-documented tracking system in place for all forest service roads. No issues or items of non-compliance were identified with respect to road maintenance. Numerous road systems, in particular within the coastal operating areas, are heavily brushed in and inaccessible. Many of these road corridors were reviewed from helicopter and appeared to be stable with drainage systems functioning.

All 53 kilometres of in-block roads were required to be maintained by the TSL holder. There were no issues with road maintenance on the in-block roads.

Major Structure Installation

No issues were identified with the bridge and major culvert installation. BCTS had professional designs completed and letters of assurance on file.

Major Structure Maintenance

Structures are inspected on a scheduled basis by regional engineering staff and reports are forwarded to the BCTS office. Major structures on roads that are being used have been well maintained. Many of the bridges, especially throughout the coastal areas, are unsafe for industrial use, but are inaccessible due to older slide tracks across the road corridor or heavy brush.

Silviculture Activities and Obligations

There are many geographical and logistical hurdles in this area relating to long distances and difficult access; nevertheless BCTS carried out silviculture treatments as needed in a timely fashion. The silviculture activities audited included planting, brushing, regeneration delay and free-growing obligations.

All cutblocks examined for planting met the seed transfer guidelines and chief forester's guidance on seed transfer. Planting densities are resulting in adequate stocking and all blocks examined used at least two species, with many using three.^{vii}

Brush competition with coniferous regeneration is a significant issue in this area. The auditors noted that BCTS did a good job of addressing brush concerns. All 18 brushed cutblocks in the population were manually treated. Many past brushing treatments were observed in the free-growing sample, which enhanced the auditors' confidence in the brushing treatments.

Free growing cutblock.



Records for two additional cutblocks were examined in the BCTS office as a way to confirm that record keeping was sufficient and RESULTS^{viii} was updated. Overall, the 'regeneration due' obligation was judged as low risk and the sampled blocks met requirements for regeneration delay.

Most auditing effort was spent on free growing site visits. All cutblocks met or exceeded minimum requirements. The condition of the free growing blocks is indicative of a well-managed silviculture program that is consistently achieving the free-growing requirements. The juvenile tree performance in sampled blocks appears good.

In the interior portion of the operating area, dothistroma needle blight on lodgepole pine was noted in many blocks. However, it did not threaten achievement of free-growing status on any of the audited blocks due to the presence of other crop tree species and the lack of severity of dothistroma symptoms in most of the cutblocks. BCTS is aware of the dothistroma and continues to monitor the situation.

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.

Audit Opinion

In my opinion, except for the in-block road construction issue discussed below, 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 Coast Mountains Resource District portion of the Skeena Business Area between June 1, 2011, and June 14, 2013, complied in all significant respects with the requirements of the *Forest and Range Practices Act* (FRPA), the *Wildfire Act* (WA) and related regulations, as of June 2013.

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.

As described in the In-block Road Construction section of this report, the audit identified a situation of significant non-compliance related to the failure to maintain natural drainage patterns.

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
January 10, 2014

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 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.

ENDNOTES

ⁱ Ecosystem Based Management (EBM) is an adaptive approach to managing human activities that seeks to ensure the coexistence of healthy, fully functioning ecosystems and human communities. Commitments for EBM emerged from the Land and Resource Management Planning processes which began in 2001 for the North Coast. Full implementation of EBM is planned for 2014, once a governance framework, human well-being policies and initiatives, conservation measures, adaptive management systems and flexibility provisions are in place, as defined by the Joint Land and Resource Forum. The guiding principles of EBM implementation are detailed in the *Coast Information Team Ecosystem-Based Management Planning Handbook* (March 2004) at: <http://www.citbc.org/c-ebm-hdbk-fin-22mar04.pdf>.

For more information, the latest implementation update report can be found at:

http://archive.ilmb.gov.bc.ca/slrp/lrmp/nanaimo/central_north_coast/docs/EBM_Implementation%20Update_report_July%2031_2012.pdf

ⁱⁱ A forest stewardship plan (FSP) is a key planning element in the *Forest and Range Practices Act* 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.

ⁱⁱⁱ A site plan is a site-specific plan signed and sealed by a registered forest professional. The site plan is designed to identify resource values and define what a free-growing stand will be on that site and is required to be completed prior to the harvesting of a cutblock. However, it is not an operational plan under the *Forest and Range Practices Act* (FRPA) and does not require review or approval by government to be implemented.

^{iv} 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

^v Section 39 of the *Forest Planning and Practices Regulation*:

Natural surface drainage patterns

- 39** (1) If an authorized person constructs a road, a temporary access structure or a permanent access structure on an area, the person must maintain natural surface drainage patterns on the area both during and after construction.
- (2) Despite subsection (1), if it is not practicable for an authorized person to maintain natural surface drainage patterns during the construction of a road, a temporary access structure or permanent access structure, the person must ensure that the altered surface drainage pattern is compatible with the original natural surface drainage pattern by the earlier of

- (a) the end of the construction, and
- (b) the next freshet.

^{vi} The current policy, referred to as 'take or pay,' removes mandatory species and log grade utilization (cut and remove) requirements. This policy, which came into effect in 2003, enables licensees to extract any logs of value to them within the cutting authority areas, subject to FRPA. It also enables the licensee to leave uneconomical lower quality wood when the cost of falling, yarding, trucking and milling exceeds the value of the end product (i.e., lumber and chips).

^{vii} On coastal operations BCTS typically planted amabilis fir, sitka spruce, western red cedar and minor amounts of western hemlock and coastal lodgepole pine.

On interior operations BCTS typically planted hybrid white spruce, subalpine fir, lodgepole pine and minor amounts of western hemlock.

^{viii} The RESULTS (Reporting Silviculture Updates and Land status Tracking System) application tracks silviculture information by managing the submission of Openings, Disturbances, Silviculture activities and Obligation declarations as required by the Forest and Range Practices legislation.



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