



**Forest
Practices
Board**

Forestry Audit: BC Timber Sales and Timber Sale Licensees

*Strait of Georgia Business Area
South Island Natural Resource District*

FPB/ARC/207

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Table of Contents

Audit Results	1
Introduction.....	1
Background	1
Audit Approach and Scope	2
Planning and Practices Examined	3
Findings.....	4
Audit Opinion	6
Appendix 1: Forest Practices Board Compliance Audit Process	7

Audit Results

Introduction

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

As part of its 2017 compliance audit program, the Board randomly selected the South Island Natural Resource District portion of BC Timber Sales' (BCTS) Strait of Georgia Business Area for audit. A map of the audit area appears on page 2.

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



Overlooking the Two Rivers Arm of Sproat Lake.

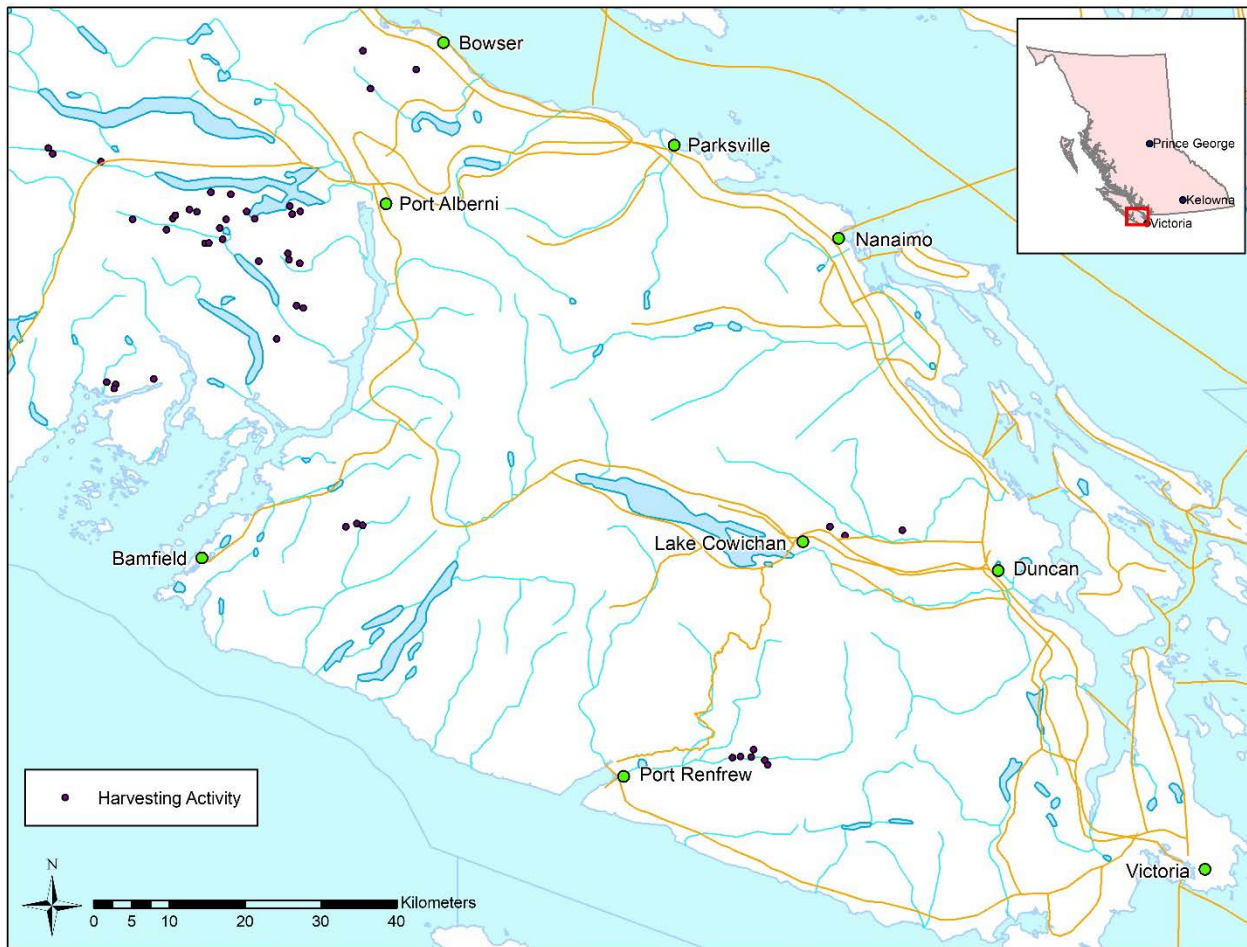
Background

The one million hectare South Island Natural Resource District covers the lower third of Vancouver Island. About one-third of the district is private land, which is mostly on the east side of the island. Thirty-six First Nations have traditional territory within the district.

The district lies within BCTS's Strait of Georgia business area, based in Campbell River. A field team in Port Alberni manages activities in the district. Staff prepares operational plans, auctions timber sales and issues timber sale licences and road permits. Successful bidders are awarded a timber sale licence and must fulfill licence, permit and operational plan obligations, including timber harvesting and road work, within cutblocks.

BCTS's allowable annual cut is about 496 000 cubic metres of timber from the district. Over the past two years, timber sale licensees harvested about 260 000 cubic metres from timber sales in the Port Alberni, Port Renfrew, Bowser and Lake Cowichan areas.

Map of Audit Area



Audit Approach and Scope

This was a full scope compliance audit with a two-year timeframe. All activities carried out between June 1, 2015, and June 2, 2017, by BCTS and timber sale licensees, were subject to audit.

BCTS is responsible for operational planning, including preparing forest stewardship plans (FSP)ⁱ and site plans, silviculture activities, major structureⁱⁱ maintenance and construction, and some road construction, maintenance and deactivation outside of cutblocks.

Timber sale licensees are responsible for timber harvesting, fire protection, and most road construction, maintenance and deactivation within cutblocks.

Auditors assessed these activities for compliance with FRPA, the WA, and applicable regulations. This work included 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*.

Two forest professionals, one professional engineer, and a chartered professional accountant made up the audit team. The audit team was in the field with BCTS staff from May 29 to June 2, 2017.

Planning and Practices Examined

BCTS Responsibilities

Operational Planning

Due to a legacy of changing operating areas and consultation timelines, BCTS planned its activities in nine FSPs, three of which were in effect at the time of the fieldwork. Auditors examined the FSPs and stand-level site plans for consistency with legal requirements and government orders regarding old growth, wildlife and karst. During harvesting, road and silviculture field sampling, auditors also confirmed whether site plans accurately identified site conditions.

Roads and Bridges: Construction, Maintenance, and Deactivation

During the audit period, BCTS built 2.7 kilometres of forest service road, 5 bridges, 5 culverts and 1 ford. It maintained 621 kilometres of forest service road, 258 bridges, 58 culverts, and 1 ford.¹ BCTS deactivated 11 kilometres of road and 2 bridges during the audit period.

Auditors examined all 2.7 kilometres of road construction, 5 constructed bridges, 3 culverts and 1 ford. Auditors also examined 270 kilometres of road maintenance, the maintenance of 89 bridges and 36 culverts, and deactivation of 7 kilometres of forest service road and 2 bridges.

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, and 35 cutblocks with free-growing obligations.

Timber Sale Licensee Responsibilities

Timber Harvesting

Licensees harvested 45 cutblocks totalling 1080 hectares during the audit period. Auditors examined 40 cutblocks, totalling 924 hectares.

Road Construction, Maintenance, Deactivation

Timber sale licensees constructed 36 kilometres of road, 1 bridge and 3 fords. Auditors examined 28 kilometres of road construction and the bridge and fords.

Fire Protection

Auditors encountered three active work sites and examined licensee compliance with *Wildfire Act* requirements for fire preparedness. Fire hazard and assessment obligations were examined on all of the cutblocks in the harvest population.

¹A ford is a crossing designed and built with rock to allow vehicles to drive through a shallow, non fish-bearing stream.

Findings

BCTS Responsibilities

Road Construction

HB 1000 road

During the field portion of the audit, BCTS was in the process of building this steep and twisty road to access a timber sale. The plan called for a section of full bench and end haul construction to ensure the road was stable, however it was not fully achieved on a 27-metre section. The section is located just before a tight switchback where trucks will have to swing wide. The switchback itself was designed at a 23 percent gradient, but was constructed at a 29 percent gradient. The tight radius would require trucks to drive on the outside of the road over the aforementioned end haul section, and this is a significant safety concern.

These issues are non-compliant with section 72 of the *Forest Planning and Practices Regulation*ⁱⁱⁱ (FPPR) because BCTS did not ensure that the HB1000 road was structurally sound and safe for industrial users when it was constructed. This finding is considered significant.

Subsequent to the audit fieldwork, BCTS engaged a qualified professional to inspect and prepare a plan to correct the situation. The road section of concern has been rebuilt in accordance with that plan. BCTS also reviewed the situation with its staff and contractors and is confident that the situation is unlikely to be repeated.

Operational Planning

Planning was consistent with the FSPs and legal requirements. The FSPs met the legal content requirements and addressed the legal orders that apply to forest practices in the audit area. BCTS addressed site specific resources in the site plans by accurately identifying and prescribing practices for resource features. For example, where windthrow assessments indicated that windthrow could be expected after harvesting, pruning or tree crown modification was prescribed in the site plans.

Roads and Bridges: Construction, Maintenance and Deactivation

Construction

All sampled structures were constructed according the general arrangement designs and signed off by a qualified registered profession. There were no concerns with bridge construction.

Other than the road construction issues discussed above, there were no other road construction issues.

Maintenance

Government engineers are responsible for inspecting structures on forest service roads and BCTS is responsible for surface maintenance. The 89 bridges and 36 culverts sampled were well maintained. Auditors reviewed inspection records and found that all maintenance items had been attended to and found no issues for any of the structures.

Many of the forest service roads were maintained to a wilderness road standard and were heavily brushed-in. However, none had structural issues and drainage structures were functional.

Deactivation

BCTS had a professional engineer assess the two deactivated structures to ensure the works were completed in a safe manner with minimal damage to the environment. The auditors had no concerns with road or structure deactivation.

Silviculture Activities and Obligations

BCTS planted cutblocks with suitable tree species and stock within the required timeframes. BCTS monitored and tended its plantations to ensure free-growing requirements were met. Cutblocks contained the range of healthy, well-spaced, acceptable trees required to meet free-growing requirements within required time frames. BCTS is meeting its current regeneration, free-growing and annual reporting requirements. There were no concerns with silviculture planning or practices.

Timber Sale Licensee Responsibilities

Maintenance of Natural Drainage – TSL A79535 held by Lawrence Edward Spencer

This timber sale is located in the Hill 60 area of Lake Cowichan. The site plan identified a number of S6 streams below a spur road. A five-metre machine-free zone was prescribed for these streams to maintain stream bank integrity and to protect water quality. During harvesting operations, a machine crossed the S6 streams on a temporary crossing made up of logs, disturbing the stream banks and altering natural drainage patterns. BCTS staff discovered the situation and compliance and enforcement staff were involved. The licensee attempted to repair the damage by cleaning debris from the creeks and ditching the creek channels with an excavator.

Board staff visited the timber sale on June 1, 2017, and it was apparent that attempts had been made to re-establish channels. Some debris had been removed and disturbed areas had been seeded with grass. Wood used for the temporary crossing remained in one stream and natural surface drainage patterns had not been maintained in another stream.

The licensee did not comply with section 39 (1) of the FPPR^{iv} because it did not maintain natural surface drainage patterns. The licensee also did not comply with section 55 (1) of the FPPR^v because it did not mitigate disturbance and protect the stream channel. These non-compliances are considered significant because the machine-free zones on the S6 streams were designed to achieve the site plan objective of maintaining stream bank integrity and protecting water quality.

Subsequent to the audit, the licensee stated it has restored natural drainage patterns. With respect to the machine work in the five-metre machine-free zones, the licensee also stated that it altered its practices to prevent similar issues in the future. After falling, it re-flagged the creeks and painted stream numbers at roadside to ensure operators were aware of the location of streams.

Harvesting

Harvesting was conducted in accordance with the requirements of legislation and site plans. Soil disturbance was well managed and within limits, and natural drainage patterns were maintained. Riparian and cultural heritage features were accurately identified and protected.

With the exception of the cutblock noted above, no harvesting concerns were noted.

Roads and Bridges: Construction and Maintenance

There were no concerns with roads and bridges constructed and maintained by timber sale licensees.

Wildfire Protection

At the three active operations encountered, workers were adequately prepared with the appropriate equipment for fighting a wildfire and licensees prepared fire hazard assessments as required. The fire preparedness requirements of the WA were met.

Audit Opinion

In my opinion, except for the road construction and natural drainage issues noted below, 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 South Island Natural Resource District, within the Strait of Georgia business area, between June 1, 2015, and June 2, 2017, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act* and related regulations, as of June 2017.

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 *BC Timber Sales Responsibility – Road Construction* section of the report, the audit identified a significant non-compliance related to the safety of new road construction.

As described in the *Timber Sale Licensee Responsibility – Maintenance of Natural Drainage* section of the report, the audit identified a significant non-compliance related to the maintenance of natural surface drainage patterns and the disturbance of stream channels and banks.

The *Audit Approach and Scope* and the *Planning and Practices Examined* sections of this report describe the basis of the audit work performed in reaching the above conclusion. The audit was conducted in accordance with the auditing standards of the Forest Practices Board, including adherence to the auditor independence standards and the ethical requirements, which are founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with FRPA, and WA.



Christopher R. Mosher CPA, CA, EP(CEA)
Director, Audits

Victoria, British Columbia
November 6, 2017

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.

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

Not significant non-compliance – where the auditor, upon reaching a non-compliance conclusion, determines that one or more non-compliance event(s) is not significant and not generally worthy of reporting. However, in certain circumstances, events that are considered not significant non-compliance may be reported as an area requiring improvement.

Significant non-compliance – where the auditor determines a non-compliance event(s) or condition(s) is or has the potential to be significant, and is considered worthy of reporting.

Significant breach – where the auditor finds that significant harm has occurred, or is beginning to occur, to persons or the environment as a result of one or many non-compliance events.

If it is determined that a significant breach has occurred, the auditor is required by the *Forest Practices Board Regulation* to immediately advise the Board, the party being audited, and the Minister of Forests, Lands, 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 draft of the report for review and comment before it is submitted to the Board.

Once the auditor submits the draft report, the Board reviews it and determines if the audit findings may adversely affect any party or person. If so, the party or person must be given an opportunity to make representations before the Board decides the matter and issues a final report. The representations allow parties that may potentially be adversely affected to present their views to the Board.

The Board then reviews the draft report from the auditor and the representations from parties that may potentially be adversely affected before preparing its final report. Once the representations have been completed, the report is finalized and released: first to the auditee and then to the public and government.

ⁱ A forest stewardship plan (FSP) is a key planning element in the FRPA framework and the only plan subject to public review and comment and government approval. In its FSP BCTS is required to identify results and/or strategies consistent with government objectives for values such as water, wildlife and soils. These results and strategies must be measurable and once approved are subject to government enforcement. FSPs identify areas within which road construction and harvesting will occur but are not required to show the specific locations of future roads and cut blocks. FSPs can have a term of up to five years.

ⁱⁱ Major structure includes bridges and major culverts.

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

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

ⁱⁱⁱ Section 72 FPPR:

Roads and associated structures

72 A person who constructs or maintains a road must ensure that the road and the bridges, culverts, fords and other structures associated with the road are structurally sound and safe for use by industrial users.

^{iv} Section 39(1) FPPR

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.

^v Section 55(1) FPPR

Stream crossings

55 (1) An authorized person who builds a stream crossing as part of a road, a temporary access structure or permanent access structure must locate, build and use the crossing in a manner that

(a) protects the stream channel and stream bank immediately above and below the stream crossing, and
(b) mitigates disturbance to the stream channel and stream bank at the crossing.

(2) An authorized person who builds a stream crossing as part of a temporary access structure must remove the crossing when it is no longer required by the person.



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