



**Forest
Practices
Board**

Forestry Audit: BC Timber Sales and Timber Sales Licence Holders

*Okanagan-Columbia Business Area
Okanagan Shuswap Natural Resource District*

FPB/ARC/199

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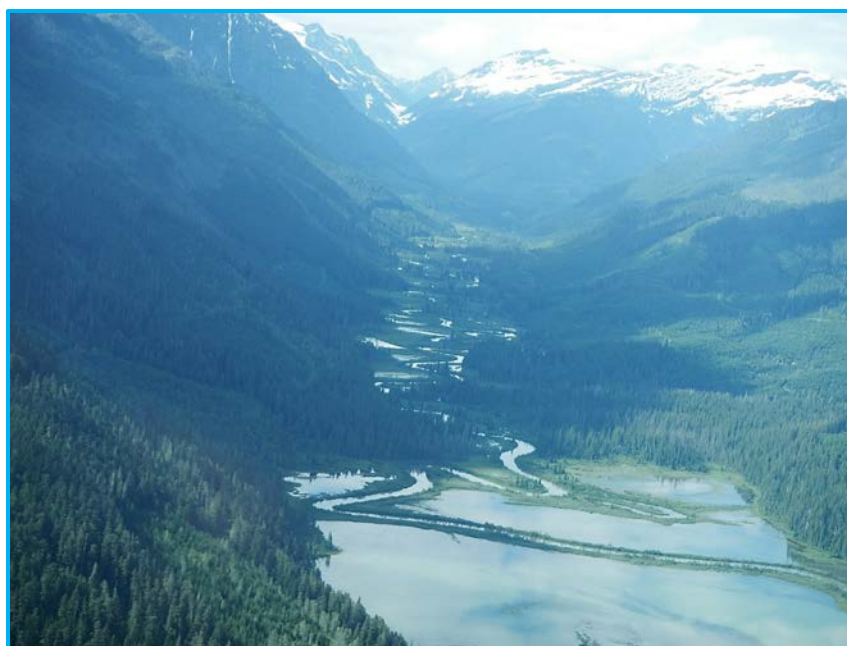
Audit Results

Introduction

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

As part of its 2016 compliance audit program, the Forest Practices Board randomly selected the Okanagan Shuswap Natural Resource District portion of BC Timber Sales' (BCTS) Okanagan-Columbia Business Area for audit. A map of the audit area appears on page 3.

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



Seymour River at the north end of the Okanagan Shuswap Natural Resource District.

Background

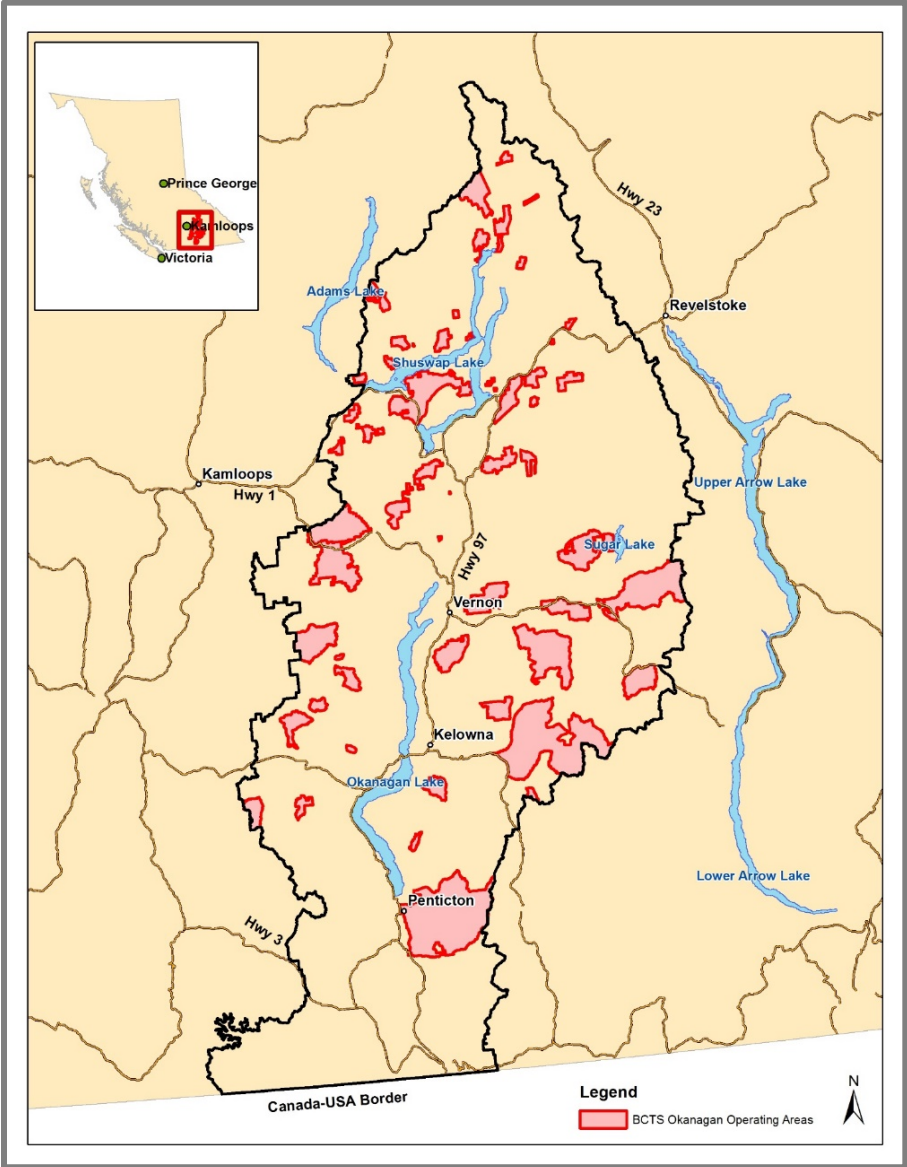
The Okanagan-Columbia Business Area of BCTS encompasses the Okanagan Shuswap Natural Resource District and a portion of the Selkirk Natural Resource District. The administrative and management centre for the business area is the BCTS timber sales office located in Vernon. The audit only examined BCTS's activities within the Okanagan Shuswap Natural Resource District.

The district stretches from the United States border in the south, to the Seymour River/Shuswap Lake in the north, and includes the cities of Salmon Arm, Vernon, Kelowna and Penticton. It is approximately 320 kilometres long by 140 kilometres wide, covering approximately 2.25 million hectares, and is the second most populated area in BC. Roughly 1.4 million hectares is forested and 73 percent of that area is designated for timber harvesting. The district is ecologically complex with

seven biogeoclimatic zones ranging from wet interior hemlock/cedar forests to semi-arid sagebrush forests. Notable features include Adams, Shuswap, Mabel and Okanagan Lakes, and the Upper Seymour, Eagle and Similkameen Rivers.

BCTS manages its activities in the district from Vernon, where staff prepare operational plans, auction timber sales, and issue timber sale licences and road permits. Successful bidders are awarded a timber sale licence and must fulfill licence, permit and operational plan obligations, including timber harvesting and road work within cutblocks. BCTS has a volume apportionment of 604 047 cubic metres per year from its 54 operating areas. During the audit period, which extended from June 1, 2015, to June 10, 2016, BCTS harvested approximately 625 000 cubic metres from 117 cutblocks.

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, 2015, and June 10, 2016, 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 the *Forest and Range Practices Act* (FRPA), the *Wildfire Act*, and applicable regulations. Auditor's 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*.

Three 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 June 6 to 10, 2016.

Planning and Practices Examined

BCTS Responsibilities

Operational Planning

BCTS planned activities in its 2006 FSP, which remained in effect until December 2016. The FSP and stand-level site plans were examined to ensure they met legislative requirements. Auditors also considered site plans during harvesting, road and silviculture field sampling to ensure that they accurately identified site conditions.

The Okanagan Shuswap Land and Resource Management Plan (OSLRMP) covers the Okanagan Shuswap Natural Resource District. The OSLRMP provides direction for a balanced land use strategy through the management of the Crown land and resources within the plan area. The plan includes general management direction that applies to the entire plan area, resource management zones with specific objectives and strategies, and almost 50 new protected areas.

A land use plan order for basic and enhanced coarse woody debris, recreation areas, trail corridors, tourism areas and general management objectives for four wildlife species was signed on February 6, 2007. Objectives specified by the land use plan order were included in the FSP. Government orders for managing mule deer, moose and mountain goat were also included or referenced in the FSP.

Road & Major Structure Construction, Maintenance, Deactivation

During the audit period, BCTS constructed 50.3 kilometres, maintained 2067 kilometres and deactivated 33 kilometres of forest service road. BCTS installed 6 new bridges and maintained 84 bridges and major structures.

Auditors examined 47 kilometres of constructed road, 775 kilometres of maintained road and 32 kilometres of deactivated road. Auditors also examined all 6 bridges that were installed and the maintenance of 37 bridges and 5 major culverts.

Silviculture Obligations and Activities

BCTS site prepared 52 cutblocks, planted 91 cutblocks and brushed 12 cutblocks during the audit period. Regeneration obligations were due or declared on 93 cutblocks and free-growing obligations were due or declared on a further 162 cutblocks.

Auditors examined 14 site-prepared cutblocks, 53 planted cutblocks, 3 brushed cutblocks, 12 cutblocks with regeneration obligations due or declared, and 40 cutblocks with free-growing obligations due or declared.

Timber Sale Licensee Responsibilities

Timber Harvesting

Thirty-one timber sale licensees harvested 117 cutblocks, covering 3202 hectares. Auditors examined harvesting by 25 licensees on 31 cutblocks, totalling 1109 hectares.

Road Construction, Maintenance, Deactivation

Timber sale licensees constructed and maintained 23 kilometres of road and rehabilitated 65 kilometres. Licensees did not deactivate any road, or construct any bridges or major structures during the audit period. Auditors examined 6 kilometres of constructed road and 26 kilometres of rehabilitated road.

Wildfire Protection

Auditors encountered two active work sites and examined the licensee's compliance with the *Wildfire Act* requirements for fire preparedness. Auditors also examined fire hazard assessment and abatement activities and obligations on the 31 cutblocks in the harvest sample.

Findings

The audit found BCTS's planning and practices, with the exception of silviculture reporting, complied with FRPA and the *Wildfire Act* as of June 2016. The issue with silviculture reporting is discussed below.

The audit found that the timber sale licensees' practices complied with FRPA and the *Wildfire Act* as of June 2016, but also found that several licensees' lack of fire hazard assessments is an area requiring improvement.

BCTS Responsibilities

Silviculture Activities and Obligations

BCTS plants cutblocks with suitable tree species and stock, and is meeting its regeneration and free-growing obligations. No concerns were noted regarding site preparation or brushing practices. BCTS's silviculture files were complete and activities were well documented.

However, section 86 of the *Forest Planning and Practices Regulation* (FPPR)ⁱⁱⁱ requires BCTS to accurately report all silviculture activities in a timely manner. Close to 20 percent of the Reporting Silviculture Updates and Land Status Tracking System (RESULTS)^{iv} entries had some type of minor error. Minor errors include data entry errors or late submissions, which is non-compliant with the legislation.

As the reporting errors in RESULTS are pervasive, this is considered a significant non-compliance.

Subsequent to the audit, BCTS has told the Board it is implementing a monthly review of its silviculture data to compare and correct any deficiencies between its system and the RESULTS data base. BCTS is confident this change will eliminate the type of reporting errors identified in the audit. Corporately, BCTS is also moving to a new data management system, which will aid in the organizations data management efforts.

Operational Planning

Planning was consistent with the FSP and legislative requirements. The FSP addressed the legal orders that apply to forest practices in the audit area.

BCTS addressed site-specific resources in the site plans by accurately identifying and prescribing practices for resource features, including streams, wetlands, recreation and visuals.

There were no issues with operational planning.

Road Construction, Maintenance and Deactivation

Construction

Road construction primarily used conventional cut and fill construction methods on relatively flat ground, and roads were well-built by contractors. Natural drainage patterns were maintained on completed road sections.

Government engineers reviewed the new bridge designs and documentation was complete. All structures were built to standard and had no structural, safety, environmental or maintenance issues.

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. Auditors sampled a number of high risk road segments to ensure inspections had been completed and recorded. The forest service roads that BCTS is responsible for have been adequately maintained to retain the structural integrity of the road prism. Culverts were functional and water was managed to maintain natural drainage patterns.

Bridges on forest service roads are inspected by government engineers and BCTS is responsible for surface maintenance. The bridges sampled were well maintained.

Deactivation

Roads were adequately deactivated.

There were no issues with road or major structure construction, maintenance or deactivation.

Timber Sale Licensee Responsibilities

Wildfire Protection

At the two active harvesting sites encountered, workers were adequately prepared with the appropriate equipment for fighting a wildfire. The fire preparedness requirements of the *Wildfire Act* were met.

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. The licensee must provide a copy of a fire hazard assessment to an official when requested.^v If the assessment identifies a hazard, it must be abated.

Auditors requested fire hazard assessment on 11 cutblocks, but only 3 were provided.

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

While licensees are abating the fire hazard as a standard practice, they cannot demonstrate that they have been diligent in assessing the hazard, which is a non-compliance with the *Wildfire Act*. Auditors do not consider this non-compliance significant, since fire hazards are being abated in an effective and timely manner. As a result, this is an area requiring improvement.

Just before the audit field work took place, BCTS altered its internal procedures to require that the timber sales licensees have assessed, recorded and submitted their fire hazard assessment forms to BCTS.

Harvesting

Harvesting was conducted in accordance with the requirements of legislation and site plans. Soil disturbance was well managed and within limits. Natural drainage patterns were maintained and individual tree retention objectives were met. There were no issues with harvesting.

Road Construction, Maintenance and Deactivation

Licensees built in-block roads and short spur roads to access cutblocks. Culverts were functional and licensees maintained natural surface drainage patterns. In addition, the licensees rehabilitated all in-block roads after harvesting by de-compacting and re-contouring the road prism, covering them with slash, and installing access barriers and warning signs. Licensees did not build or maintain any bridges. There were no issues with licensee road construction, maintenance or rehabilitation.

Audit Opinion

In my opinion, except for the silviculture reporting issue identified 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 Okanagan Shuswap Natural Resource District portion of the Okanagan-Columbia Business Area, between June 1, 2015, and June 10, 2016, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act* and related regulations, as of June 2016.

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 *Silviculture Activities and Obligations* section of the report, the audit identified a significant non-compliance related to reporting.

Without further qualifying my opinion, I draw attention to the *Wildfire Protection* section of the report, which describes an area requiring improvement.

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



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

Victoria, British Columbia
February 8, 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*. Compliance audits examine forest or range planning and practices to determine whether or not they meet FRPA and/or *Wildfire Act* 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 Natural Resource 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 1 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 *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 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 *Wildfire Act* requirements.

Unsound Practice – where the auditor identifies a significant practice that, although found to be in compliance with FRPA or *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, 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.

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 FSPs licensees are required to identify results and/or strategies consistent with government objectives for values such as water, wildlife and soils. These results and strategies must be measurable and once approved are subject to government enforcement. FSPs identify areas within which road construction and harvesting will occur but are not required to show the specific locations of future roads and cut blocks. FSPs can have a term of up to five years.

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 **86 Annual reports**

(1) In this section and in section 86.1:

"**location**" means the approximate location;

"**reporting period**", in respect of the year in which the report referred to in subsections (2) to (5) is to be furnished, means the 12 month period beginning on April 1 of the immediately preceding calendar year.

(2) Repealed. [B.C. Reg. 104/2008, s. 1 (a) (ii).]

(3) Before June 1 of each year, an agreement holder must report to the district manager

(a) for each area in which timber harvesting was completed during the reporting period and to which section 29 of the Act applies or to which section 44 (4) of this regulation applies, the following information:

- (i) the area in which the harvesting occurred;
- (ii) the amount of area that was harvested;
- (iii) an update of the forest cover inventory;
- (iv) the location and approximate size of all associated wildlife tree retention areas,

(b) the location of any resource feature or wildlife habitat feature in or contiguous to a cutblock or road of which feature the holder is aware during the reporting period if

-
- (i) the holder has not, in a previous reporting period, reported the resource feature or wildlife habitat feature, and
 - (ii) the order establishing the resource feature or wildlife habitat feature requires the location of the resource feature or wildlife habitat feature to be reported under this section,
 - (c) the pertinent information about seeds used during the reporting period to grow seedlings planted by the holder in cutblocks on the land to which the agreement pertains,
 - (d) an update of the forest cover inventory for each area in which during the reporting period
 - (i) the requirements for the regeneration date have been met,
 - (ii) the requirements for the regeneration date have not been met but the regeneration date has passed,
 - (iii) a free growing stand has been declared under section 97 or 97.1 of this regulation or the requirements of section 46.11 (2) (b) of this regulation have been met, or
 - (iv) a free growing stand has not been established, but the free growing date has passed, and
 - (e) a summary of any silviculture treatments that were carried out during the reporting period.

^{iv} 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.

^v 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.”



**Forest
Practices
Board**

PO Box 9905 Stn Prov Govt

Victoria, BC V8X 9R1 Canada

Tel. 250.213.4700 | Fax 250.213.4725 | Toll Free 1.800.994.5899

For more information on the Board, please visit our website at: www.bcfpb.ca