



**Forest
Practices
Board**

Audit of Forest Planning and Practices

*Downie Street Sawmills Ltd.
Forest Licence A31102*

FPB/ARC/209

February 2018

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Audit Results

Introduction

The Forest Practices Board (the 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* and the *Wildfire Act*.

As part of its 2017 compliance audit program, the Board randomly selected the Selkirk Natural Resource District as a location for a full scope compliance audit. The Board selected forest licence A31102, held by Downie Street Sawmills Ltd. (Downie), for audit.

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



Rugged topography in Downie's operating area.

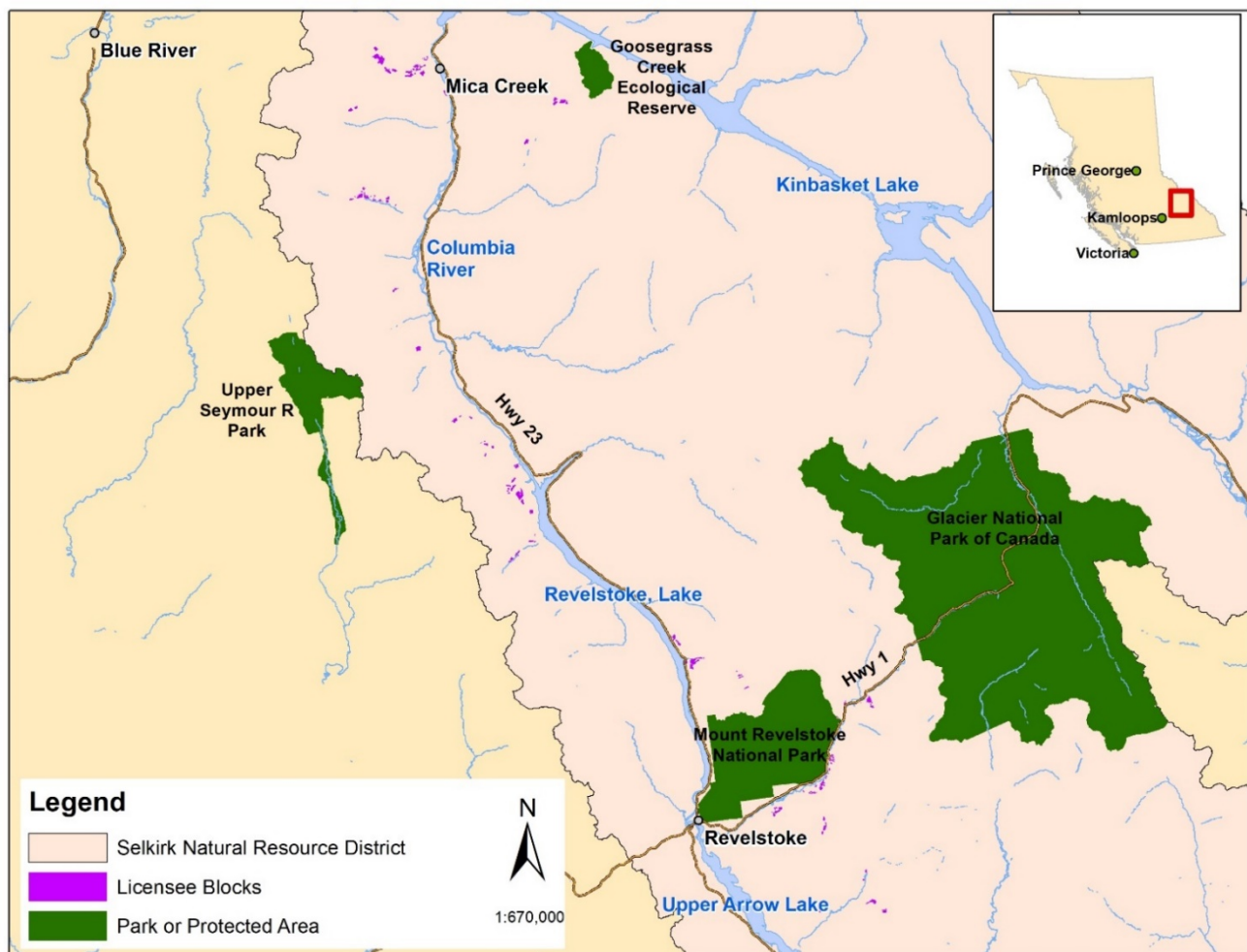
Background

Downie's forest licence A31102 has an allowable annual cut (AAC) of 130 600 cubic metres per year and is located in southeastern British Columbia. During the two-year audit period, Downie harvested approximately 175 000 cubic metres. Most harvesting was done using cable harvesting.

Most of Downie's recent harvesting and road construction operations are located in tributaries of the Columbia River, from 20 kilometres south to 100 kilometres north of Revelstoke. A map of the audit area appears below. The Trans-Canada Highway passes through the southern part of the area, and Mount Revelstoke National Park is adjacent to one of Downie's operating areas.

Two main biogeoclimatic zones dominate the forests of Downie's operating area: the interior cedar hemlock at lower elevations and the Engelmann spruce subalpine fir at higher elevations. These ecosystems are dominated by stands of western hemlock, western red cedar, Engelmann spruce, and subalpine fir. The timber generally has a large percentage of pulp. Most of Downie's operating areas are on steep and mountainous terrain, with some operations on the gentler valley bottoms. As a result, development costs in this area are high relative to other areas of the BC interior.

Map of the Audit Area



Audit Approach and Scope

This was a full scope compliance audit with a two-year timeframe. All activities carried out by Downie in the Selkirk Natural Resource District between October 1, 2015, and October 5, 2017, were subject to audit. The activities included harvesting, roads, silviculture, wildfire protection and associated planning.

Auditors assessed these activities for compliance with the *Forest and Range Practices Act* (FRPA), the *Wildfire Act* (WA), and applicable regulations. Auditors' work involved interviewing Downie staff, reviewing the forest stewardship plan and site plans, assessing silviculture records, and field visits. Sites were accessed by truck and 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, a professional engineer and a chartered professional accountant made up the audit team. The audit team was in the field from October 2-4, 2017.

Planning and Practices Examined

Operational Planning

Downie planned its activities under an approved forest stewardship plan¹ (FSP), which remained in effect until December 2017. Auditors examined the FSP for consistency with legal requirements. These include the the Revelstoke Higher Level Plan Order, which establishes objectives for biodiversity, mature and old forests, caribou and grizzly bear, and government orders for ungulate winter range, visual quality objectives and species at risk. Auditors also reviewed site plans during harvesting, road and silviculture field sampling to ensure that they accurately identified site conditions.

Timber Harvesting

Downie conducted harvesting activities on 34 cutblocks during the audit period. Auditors examined 17 of these cutblocks.

Road and Bridge Construction, Maintenance and Deactivation

During the audit period, Downie constructed 67 kilometres, maintained 592 kilometres and deactivated 11 kilometres of road. Downie maintained 25 bridges and removed one that was severely damaged following a major storm event in the spring of 2017. Downie did not install any bridges.

Auditors examined 35 kilometres of the constructed roads, 350 kilometres of the maintained road and all 11 kilometres of the deactivated roads. Auditors also examined 19 bridges as well as the bridge that was removed.

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 cut blocks. FSPs can have a term of up to five years.

Silviculture Activities and Obligations

Downie planted 36 cutblocks and brushed 26 cutblocks during the audit period. Regeneration delay was due or declared on 28 cutblocks and free growing was due or declared on 38 cutblocks. Downie did not conduct any other silviculture activities within the audit period.

Auditors examined 18 planted cutblocks—9 of them in the field—for compliance with the chief forester's seed transfer guidelines; 4 cutblocks that were brushed; 9 cutblocks where regeneration delay was due or declared; and 19 cutblocks where free growing was due or declared.

Wildfire Protection

Auditors encountered two active work sites and examined licensee compliance with the *Wildfire Act* requirements for fire preparedness on both sites. 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. If the assessment identifies a hazard, it must be abated. Auditors examined fire hazard and assessment obligations on all of the sampled harvesting cutblocks.

Audit Findings

The audit found that Downie's planning and activities generally complied with FRPA and the *Wildfire Act*. Auditors identified an issue related to road construction, which is described below.

Road Construction

During the audit period, Downie constructed multiple roads on steep ground to access several cutblocks. Road designs were prepared that called for end haul construction for some of the road sections to ensure the road was stable. Although some of the end haul was completed, the Board identified four locations where full bench construction was prescribed but not completed. When auditors reviewed these road sections, there was evidence of over steepened fill slopes, some cutslope and fill slope failures, and tension cracks. Auditors consider these road sections unsafe for industrial use.

These road sections are non-compliant with section 72 of the *Forest Planning and Practices Regulation*² (FPPR) because Downie did not ensure that the road sections were structurally sound and safe for use by industrial users. Since the road design and professional recommendations were not followed on four different road sections, this non-compliance is considered significant.

Subsequent to the audit, Downie implemented remediation works for some of the areas of concern identified in the audit. Downie also advised the auditors that it plans to engage a qualified professional to inspect and prepare remediation plans, and stated it will address the road sections of concern in accordance with the plans.

² 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.

Operational Planning

The FSP and site plans were consistent with FRPA requirements. The FSP incorporated requirements of the *Revelstoke Higher Level Plan Order* and the government orders. Downie addressed site-specific resources in the site plans by accurately identifying and prescribing practices for resource features.

Downie refers proposed development to First Nations on an annual basis. It keeps an itemized record of the referral and any comments received.

There were no concerns with operational planning.

Harvesting

Topography in the operating area varies from steep mountainous terrain to gentle ground in the valley bottoms.

Downie maintained natural drainage patterns. Streams were well managed and in-block temporary access structures that crossed streams were rehabilitated and natural drainage was maintained. Reserve zones were established along some streams and harvesting did not infringe on the reserve areas.

Soil disturbance was well managed and not an issue. Downie rehabilitated and planted all temporary access trails. Downie also prepared avalanche assessments for harvesting and road construction activities when operating in avalanche prone terrain.



A stubbed tree used to identify and protect a riparian feature

The FSP commits Downie to maintaining an average of at least seven percent of the total area of the cutblock as wildlife trees over the term of the FSP. At the time of the audit, Downie had retained eight percent of the gross area of cutblocks in the harvest population as wildlife tree patches.

Several cutblocks were in areas along the Trans-Canada Highway east of Revelstoke with important scenic value. For these areas, government had established a visual quality objective of partial retention. Auditors reviewed the visual impact analysis completed by Downie and reviewed the harvesting from the Trans-Canada Highway to confirm the objective was met. There were no concerns with visual quality management.

There were no issues with timber harvesting.

Road and Bridge Construction, Maintenance and Deactivation

With the exception of the road construction issue noted above, road construction primarily used conventional road building methods and roads were well-built and natural drainage patterns were maintained. Road maintenance and deactivation were well done.

The 19 bridges sampled were well maintained. Auditors reviewed inspection records for the bridges and found that all maintenance items had been addressed and found no issues for any of the bridges. The removal of the bridge following the major storm event was completed in a manner that protected the stream bank.

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

Silviculture Activities and Obligations

Downie operates in a very challenging area with difficult access, steep slopes, deep snow and high competition from other vegetation. Downie's silviculture program is well managed and executed. Downie planted all cutblocks with suitable tree species and stock, and all planted stock met the chief forester's seed transfer guidelines. Regeneration delay was achieved and declared within the delay period. The free-growing declaration for all of the free-growing blocks occurred prior to the late free-growing date. Reporting obligations were up to date.

There were no issues with silviculture activities or obligations.



A free growing cutblock in one of Downie's operating areas.

Wildfire Protection

All cutblocks in the harvesting audit sample were evaluated for compliance with the *Wildfire Act*.

Hazard Assessment

Auditors examined the 10 cutblocks that required a hazard assessment for compliance with the *Wildfire Act* requirements. Downie had completed hazard assessments for all 10 cutblocks plus an additional 2 cutblocks where the assessment was not yet required.

Hazard Abatement

It is Downie's standard practice to pile slash and then burn it when it is safe to do. No cutblocks in the audit sample were required to have the fire hazard abated during the audit period. However, Downie abated the fire hazard on five cutblocks by burning the slash piles. The abatement was effective in reducing the fire hazard.

Slash was piled in a manner that would facilitate hazard abatement on the remaining cutblocks.

Active Sites

The two active sites encountered during the audit field work were evaluated. Both operations had an adequate water delivery system (water tank, pump and hose), and adequate hand tools for workers on site.

There were no issues with wildfire protection.

Audit Opinion

In my opinion, except for the road construction issue discussed below, the operational planning, timber harvesting, road construction, maintenance and deactivation, silviculture, and fire protection activities carried out by Downie Street Sawmills Ltd. on forest licence A31102 between October 1, 2015, and October 5, 2017, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act* and related regulations, as of October 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 *Road Construction* section of the report, the audit identified a significant non-compliance related to steep slope road construction.

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.



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Victoria, British Columbia
January 30, 2018

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.



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