

# AUDIT OF FOREST PLANNING AND PRACTICES

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Nak'al Koh Timber Limited  
Non-Replaceable Forest Licence A89836  
Mackenzie Natural Resource District

SEPTEMBER 2024  
FPB/ARC/267



**Forest  
Practices  
Board**

BC'S INDEPENDENT  
WATCHDOG FOR  
SOUND FOREST &  
RANGE PRACTICES

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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 forest practices for compliance with the *Forest and Range Practices Act* (FRPA) and the *Wildfire Act*.

As part of its 2023 compliance audit program, the Board randomly selected the Mackenzie Natural Resource District as the location for a full-scope compliance audit. Within the district, the Board selected Nak'al Koh Timber Limited's (Nak'al Koh) non-replaceable forest licence (NRFL) A89836 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.



Figure 1. Forests typical of the audit area, south of Philip Lakes.

## Background

NRFL A89836 has a 10-year term and an allowable annual cut of 50 000 cubic metres. The NRFL is within the Mackenzie Timber Supply Area (TSA) in the Mackenzie Natural Resource District in northeastern BC.

The town of Mackenzie is the largest settlement within the TSA; other settlements include Germansen Landing, Manson Creek, and Kwadacha. Nak'al Koh's forest operations occur in the southwestern portion of the Mackenzie TSA, west of Williston Lake and near Philip Lakes (see Figure 2).



The forests in the TSA are in the transition zone between the sub-boreal regions of BC's central interior and the boreal forests in the northeast portion of the province. Nak'al Koh's operating areas are mainly in the sub-boreal spruce, boreal white and black spruce, and Englemann spruce-subalpine fir biogeoclimatic zones. Major tree species are white spruce, lodgepole pine, subalpine fir, trembling aspen and black spruce. The forests support many wildlife species including caribou, moose, mule deer, elk, grizzly, black bear, mountain goats, stone sheep, wolves and coyotes. Rivers and lakes in the area provide opportunities for fishing and recreation.

This audit took place within the territories of the Doig River First Nation, Halfway River First Nation, McLeod Lake Indian Band, Nak'azdli Whut'en, Takla First Nation, Tsay Keh Dene First Nation and West Moberly First Nation. The Forest Practices Board recognizes the importance of their historical relationship with the land that continues to this day.



Figure 2. Map of the audit area

## Audit Approach and Scope

This was a full-scope compliance audit, and all activities carried out between January 1, 2020, and September 29, 2023, were eligible for audit. The audit period was extended to three years and eight months to examine most forest activities Nak'al Koh undertook. These activities included operational planning (forest stewardship and site plans), timber harvesting, wildfire protection, silviculture, road construction and deactivation, and maintenance of roads and major structures.<sup>1</sup>

Auditors assessed these activities for compliance with FRPA, the *Wildfire Act* and associated regulations. They interviewed Nak'al Koh's staff, reviewed plans and internal policies, examined records and visited sites to review field practices.

The audit team, comprised of one forest professional, one forest professional/geoscientist and a professional agrologist, was in the field with Nak'al Koh staff from September 25 to 29, 2023.

The standards and procedures for this audit are set out in the Board's *Compliance Audit Reference Manual, Version 7.1, July 2016*.

## Planning and Practices Examined

### Operational Planning

Nak'al Koh plans its forestry activities through Forest Stewardship Plan (FSP) A89836, number 773, which commenced on June 24, 2019, and has a term of 5 years.

Nak'al Koh operates within the area covered by the Mackenzie Land and Resource Management Plan (November 2000). In addition, the *Order Establishing Non-Spatial Landscape Biodiversity Objectives in the Mackenzie Forest District* (April 9, 2009; amended September 23, 2010) and *Spatial Land Use Objectives for part of the Mackenzie Forest District Area* (September 23, 2010) apply to the area. FSP 773 aligns the objectives in the orders and the directions in the land and resource management plan with Nak'al Koh's forestry activities.

Auditors examined the FSP and stand-level site plans for consistency with legal requirements. During harvesting, road and silviculture field sampling, auditors also confirmed whether site plans accurately identified conditions on the ground.

### Timber Harvesting

Auditors examined 12 of the 13 cutblocks Nak'al Koh harvested during the audit period.

### Road and Bridge Construction, Maintenance, and Deactivation

Nak'al Koh constructed 58.5 kilometres of road,<sup>1</sup> constructed 1 bridge, and deactivated 4 bridges during the audit period. Auditors examined 30.4 kilometres of road construction and all bridges.

### Silviculture Obligations and Activities

Nak'al Koh planted 10 cutblocks and declared a regeneration delay on 2 of them. Auditors examined all 10 cutblocks.

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<sup>1</sup> For audit purposes, roads constructed before the audit period are considered to be under 'maintenance' while roads built during the audit period are considered to be under 'construction'.

## Wildfire Protection

Fire hazard assessments were required for all 13 cutblocks harvested during the audit period. Auditors requested records of fire hazard assessments for all 13 cutblocks. Auditors assessed fire hazard abatement on all 11 cutblocks with abatement due during the audit period. Nak'al Koh did not have any active operations during the field audit and thus auditors did not examine fire preparedness.

## Findings

The audit found that Nak'al Koh's planning and practices generally complied with FRPA and the *Wildfire Act* as of September 2023. However, the audit identified opportunities for improvement in seed transfer, silviculture reporting and fire hazard assessment, as described below.

### Operational Planning

The FSP and site plans were consistent with FRPA requirements and legal objectives. Nak'al Koh addressed site-specific resources in the site plans by accurately identifying and prescribing practices for resource features, including riparian areas, soil conservation, wildlife and biodiversity objectives. Auditors had no concerns with Nak'al Koh's operational planning.

### Timber Harvesting

All harvest activities audited were consistent with site plans. Soil disturbance was generally low and well within disturbance limits. Riparian features were well managed, and natural drainage patterns on temporary access roads were maintained. Auditors found Nak'al Koh's harvesting activities met the requirements of legislation and the FSP and conformed to site plans.

### Road and Major Structure Construction and Deactivation

#### Road Construction

The auditors found that road prisms were stable, natural drainage patterns were maintained, drainage systems were functioning and no negative impacts on forest resources were observed. Auditors had no concerns with road construction.

#### Bridge Construction

The one bridge constructed met all the planning, design and construction requirements.

#### Bridge Deactivation

At the four sites where bridges were deactivated, stream channels and banks were well protected, and no negative impacts were discernible. There were no issues with bridge deactivation.

## Silviculture

### Seed Transfer

Section 43(4)<sup>ii</sup> of the *Forest Planning and Practices Regulation (FPPR)* requires a person who plants trees while establishing a free-growing stand to use only seed registered, stored, selected and transferred in accordance with the standards established by the chief forester.

The *Chief Forester's Standards for Seed Use*<sup>2</sup> in effect when the trees were planted required the seed used to originate from the same seed planning zone in which they were planted. Nak'al Koh did not conform to this standard on five cutblocks and did not comply with section 43(4).

In consideration of how this may affect seedling performance, the auditors looked at amendments to the chief forester's standards that occurred during the audit period, as the chief forester may amend the standards to reflect research on site compatibility and how it may affect seedling performance. After the seedlings were planted the chief forester amended the standards to remove the seed planning zone requirements and replace them with the requirement to use seed originating from sites that are ecologically compatible with the area of use, as defined in the climate-based seed transfer (CBST) standards.<sup>3</sup> The seed in question was used on sites that were ecologically similar to the standards but did not completely match the CBST standards as Nak'al Koh used the seed in transitional ecologic sites. This disparity raises some uncertainty as to how these seedlings will perform in the long term.

Furthermore, Nak'al Koh was not diligent in selecting the seed as it did not consider the CBST standards and any alignment with these standards was coincidental. However, because the auditors found that the seedlings were healthy at the time of the audit and Nak'al Koh has a plan in place to monitor these plantations and address any performance issues that may arise, this non-compliance is considered an area requiring improvement.

### Regeneration Obligations

The auditors found that Nak'al Koh met regeneration obligations. Stocking standards were achieved on the two cutblocks declared regenerated. Auditors had no concerns with regeneration obligations.

### Silviculture Reporting

Section 86(3) of the FPPR requires agreement holders to report activities completed in the period beginning April 1 of the immediately preceding calendar year before June 1 of each year. Nak'al Koh did not report the completion of planting activities on 3 of 10 cutblocks sampled within the required time. This is a non-compliance with section 86(3) of the FPPR. Because planting was reported on time on most of the cutblocks, this non-compliance is considered an area requiring improvement. Before the field audit, Nak'al Koh reported activities on the three blocks.

### Planting

All plantings sampled were in good health and vigour and auditors had no concerns with Nak'al Koh's planting activities.

## Wildfire Protection

### Fire Hazard Assessments

Section 7(1) of the *Wildfire Act* requires a person carrying out an industrial activity like timber harvesting to conduct fire hazard assessments. This includes an assessment of the fuel hazard and the risk of starting or spreading fire. In addition, section 11(4)b of the *Wildfire Regulation* indicates a person required

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<sup>2</sup> Seed transfer is one of the foundations of effective reforestation to ensure that trees planted are genetically adapted to the environments in which they grow. This is fundamental in meeting reforestation objectives and sustainable forest management in BC. Seed transfer policy is used to support seed movement with minimum risk of poor adaptation of regenerating stock to its planting site. The chief forester establishes seed transfer standards in [The Chief Forester's Standards for Seed Use](#).

<sup>3</sup> [Climate-based seed transfer](#) (CBST) is a science-based methodology and framework that uses climate variables to match seed sources to climatically suitable planting sites. CBST also includes the use of "assisted migration" as a climate change adaptation strategy, where deliberate movement of tree species and seeds to planting sites that will be most suited to them in predicted future climates.

to conduct a fire hazard assessment must provide a copy of a fire hazard assessment to an official when requested.

Auditors found that Nak'al Koh did not complete fire hazard assessments for 12 of the 13 cutblocks harvested during the audit period. This is a non-compliance with section 7(1) of the *Wildfire Act*. However, auditors found that Nak'al Koh effectively abated fire hazards in all of the 11 cutblocks that were due for abatement during the audit period. This non-compliance is therefore considered an area requiring improvement.

### Fire Hazard Abatement

Nak'al Koh abated fire hazards effectively and on time, and auditors had no concerns with fire hazard abatement.

## Audit Opinion

In my opinion, the operational planning, timber harvesting, road and major structure construction, maintenance and deactivation, silviculture and fire protection activities carried out by Nak'al Koh Timber Limited on Non-Replaceable Forest Licence A89836 between January 1, 2020, and September 29, 2023, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act*, and related regulations, as of September 2023.

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.

Without qualifying my opinion, I draw attention to the report's *Seed Transfer*, *Silviculture Reporting*, and *Fire Hazard Assessment* sections, which describe areas requiring improvement.

The *Audit Approach and Scope* and the *Planning and Practices Examined* sections of this report describe the basis of the audit work to reach 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 the *Forest and Range Practices Act* and the *Wildfire Act*.



Daryl Spencer, RPF  
Auditor of Record  
Kelowna, British Columbia  
August 22, 2024



# Appendix 1: Forest Practices Board Compliance Audit Process

## Background

The Forest Practices Board conducts periodic audits of government and licensees to determine compliance with Parts 2 to 5 of the *Forest and Range Practices Act* (FRPA), and Parts 1 and 2 of the *Wildfire Act*, and associated regulations and standards.

### Selection of Auditees

The number, type and scope of audits to be conducted each year are established by the Director of Audits in accordance with the Board's strategic priorities and budget. Once a licence has been audited, it is removed from the audit selection pool for five years.

The Board randomly selects districts or timber supply areas (TSAs) from each of the three natural resource areas of BC (North, South and Coast). The auditors then review the forest resources, geographic features, activities and operating conditions in the district or TSA selected, as well as past Board audits in that district or TSA. These factors are considered in conjunction with the Board's operational and strategic priorities and the type of audit is determined. At this stage, the Board chooses the auditee(s) that best suits the selected risk and priorities. This is considered a qualified random approach of selection.

In addition, each year, the Board randomly selects 1 of the 31 BCTS field units for audit.

## Audit Standards

The audits are conducted in accordance with auditing standards developed by the Board and described in the Board's *Compliance Audit Reference Manual*. The standards are based on Canadian generally accepted auditing standards and relevant ethical requirements. This includes those pertaining to independence, as published by the Chartered Professional Accountants of Canada, and consistent with the *Canadian Standards on Assurance Engagements* (CSAE) 3001, the *Conformity assessment – Requirements for bodies providing audit and certification of management systems* (ISO 17021-1:2011), and the *CPA Code of Professional Conduct* (CPABC Code – June 2015).

## Audit Process

### Conducting the Audit

Once the Board selects an operation (licence or BCTS field unit) for audit, the next step is to determine the scope of the audit (timeframe, activities). For the timeframe, the Board normally examines activities that took place over a two-year time period up to the start of the audit field work (i.e., looking back two years). This is referred to as the audit period.

For a full-scope compliance audit, all activities carried out during the audit period are identified, which may include harvest, silviculture, fire protection and road related activities. These activities form the population.

From the population, the auditors select a sample of each activity to examine in the field. Generally, auditors will concentrate sampling on the areas of the auditee's operations where the risk of impacts to forest resources is deemed to be high. This is called the *inherent risk*. It can be a function of site conditions, natural circumstances, and the particular forest or range practices involved. Proportionally more sampling occurs where the inherent risk is high because the higher the risk, the higher the likelihood of a significant non-compliance or failure to achieve specified results.

For smaller audits, the sample will include the full population. Auditors also consider factors such as geographic distribution and values potentially affected by activities to ensure an adequate sample size. Auditors' work includes interviewing licensee staff, reviewing the auditee's applicable plans, and reviewing applicable legal orders, observations, inspections, and assessments in the field.

### Evaluating the Results

The Board recognizes that compliance with the requirements of FRPA and the *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 legal 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 practice that complies with FRPA or the *Wildfire Act*, but may adversely affect a forest resource.

***Areas Requiring Improvement (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. In certain circumstances, these events 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 more non-compliance events.

If a significant breach of the legislation has occurred, the auditor is required by the *Forest Practices Board Regulation* to immediately advise the Board, the party being audited, and the responsible minister(s).

## Reporting

Based on the above evaluation, the auditor then prepares a draft audit report. The auditor provides the party being audited with a copy of the draft report for review and comment before it is submitted to the Board.

The Board reviews the draft report and may make recommendations and/or a commentary on the audit findings. The Board must, prior to publishing a report or recommendation, consider whether or not it may adversely affect a party or person. The Board must give any affected party or person the opportunity to review, rebut or clarify the information before the Board publishes its report. The final report is released; first to the auditee and then to the public and government seven days later.

## ENDNOTES

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<sup>i</sup> Major structures include 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.
- A major culvert has a pipe diameter of 2 metres or greater or is an open bottom arch with a span greater than 2.13 metres.

<sup>ii</sup> *Forest Planning and Practices Regulation - Use of seed - Section 43*

(1) In this section, "transfer" means the process by which seed is selected and used, based on the origin of the seed and its genetic suitability for the site on which trees grown from the seed are to be planted.

(4) Unless an alternative is approved under subsection (6), a person who plants trees while establishing a free growing stand must use only seed registered, stored, selected and transferred in accordance with the standards, if any, established by the chief forester.



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