



**Forest
Practices
Board**

Audit of Forest Planning and Practices

*McLeod Lake Mackenzie Community Forest
Limited Partnership
Community Forest Agreement K2M*

FPB/ARC/219

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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* and the *Wildfire Act*.

As part of its 2018 compliance audit program, the Board randomly selected the Mackenzie Natural Resource District as a location for a full scope compliance audit. The Board selected community forest agreement (CFA) K2M, held by McLeod Lake Mackenzie Community Forest Limited Partnership (MLMCF) 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.



Timber harvesting west of Williston Reservoir in the Dastaiga operating area. Skid trails have been rehabilitated and slash piles have been burned.

Audit Results

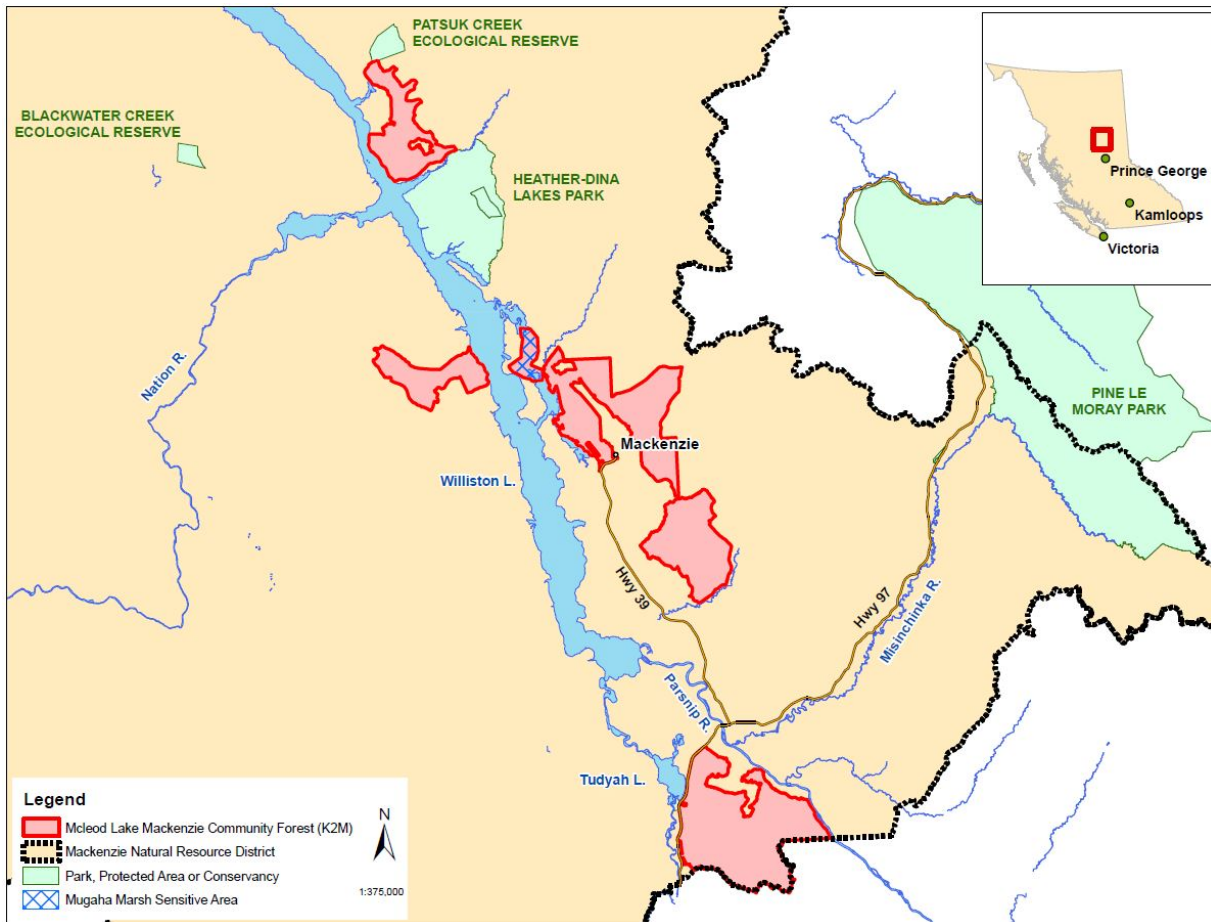
Background

CFA K2M has an uplifted allowable annual cut of 80 000 cubic metres per year to allow for the harvest of beetle-infested timber. MLMCF harvested approximately 108 000 cubic metres during the two-year audit period. The activities audited are located in five operating areas near the community of Mackenzie (see map below). MLMCF's planning and practices are managed out of their office in Mackenzie.

The MLMCF is jointly operated by the District of Mackenzie and the McLeod Lake Indian Band. The community forest extends from the Parsnip River in the south, past Mackenzie and north to the Nation Arm of Williston Lake. The terrain is gentle to rolling, containing mature forests of mixed stands of Engelmann spruce, white spruce, sub-alpine fir and lodgepole pine. MLMCF focused primarily on salvaging bark-beetle-infected stands during the audit period.

MLMCF operations fall within the area covered by the Mackenzie Sustainable Resource Management Plan, which delineates specific areas for agriculture land development, the Mugaha Marsh sensitive area, and establishes spatial old growth objectives and non-spatial biodiversity objectives.

Map of Audit Area



Audit Approach and Scope

This was a full scope compliance audit with a two-year timeframe. Activities carried out by MLMCF in CFA K2M between September 1, 2016, and September 11, 2018, were subject to audit. The activities included operational planning (involving the preparation of a forest stewardship plan (FSP)ⁱ and site plans), harvesting, roads, major structure¹ construction and maintenance, silviculture and wildfire protection.

Auditors assessed these activities for compliance with the *Forest and Range Practices Act* (FRPA), the *Wildfire Act*, and applicable regulations. Auditors' work involved interviewing MLMCF staff, conducting an office review of operational plans and silviculture records, and conducting field visits using a truck and a 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*.

One forest professional, a professional engineer and a chartered professional accountant made up the audit team. The audit team was in the field on September 10 and 11, 2018.

Planning and Practices Examined

Operational Planning

MLMCF planned its activities under the *McLeod Lake Mackenzie Community Forest, Community Forest Agreement K2M Forest Stewardship Plan #2 2016-2021*, which government approved in 2016 and remains in effect until November 2021.

Auditors examined the FSP for consistency with legal requirements, including content requirements, and consistency with objectives set by government.

Auditors also assessed whether site plans accurately identified site conditions during harvesting, road and silviculture field sampling.

Timber Harvesting

MLMCF conducted harvesting activities on 24 cutblocks during the audit period. Auditors examined all 24 of these cutblocks.

Road and Major Structure Construction, Maintenance and Deactivation

During the audit period, MLMCF constructed 24 kilometres and maintained 100 kilometres of road. MLMCF constructed two bridges and did not maintain any bridges nor deactivate any roads or bridges.

Auditors examined all 24 kilometres of the constructed road, 66 kilometres of the maintained road and both of the constructed bridges.

¹ 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 arch or open bottom arch with a span greater than 2.13 metres.

Silviculture Activities and Obligations

MLMCF planted 24 cutblocks and had 20 cutblocks with regeneration obligations due during the audit period.

Auditors examined 17 of the planted cutblocks in the field and all 24 cutblocks for compliance with the chief forester's seed transfer guidelines. Auditors also examined 11 of the cutblocks with regeneration obligations due.

Auditors examined all of the above cutblocks for compliance with annual reporting requirements

Wildfire Protection

MLMCF had no active operations during the field audit, so were not examined for compliance with requirements for fire preparedness.

MLMCF abated fire hazards on 26 cutblocks and had 33 cutblocks with fire hazard assessments due during the audit period. Auditors examined 21 of the abated cutblocks and 7 of the cutblocks with fire hazard assessments due.

Findings

Operational Planning

The FSP and site plans were consistent with FRPA requirements. The FSP incorporated the requirements of government orders and notices. MLMCF addressed site-specific resources in the site plans by accurately identifying and prescribing practices for resource features.

MLMCF met government order requirements by avoiding activities in established old growth management areas, agriculture settlement areas and the Mugaha Marsh sensitive area.

MLMCF works in partnership with the McLeod Lake Indian Band and keeps them apprised of all community forest activities. It keeps an itemized record of meetings and any comments received.

There were no concerns with operational planning.

Timber Harvesting

Topography in the operating areas is generally gentle to rolling and MLMCF uses conventional ground-based harvest systems.

Streams and riparian areas were well managed, MLMCF excluded them from harvest areas, or retained streamside vegetation and/or established machine-free zones along their perimeter.

MLMCF minimized soil disturbance by operating in winter on a snowpack.

In one cutblock near the Nordiques Cross Country Ski Trails, MLMCF accommodated recreational interests by consulting with the ski club prior to development and coordinating activities to minimize disruptions and impacts to the trail system.

Harvesting practices conformed to site plans and there were no issues with timber harvesting.

Road and Major Structure Construction and Maintenance

MLMCF's roads were well constructed and maintained.

The terrain is generally low risk with respect to any stability issues. The majority of road construction was undertaken during the winter months with minimal soil disturbance, utilizing existing road networks where possible. Auditors found that MLMCF's roads were well drained and stable.

Few stream crossings were noted during the field reviews. Where streams were crossed, MLMCF installed culverts of suitable dimension.

While MLMCF has maintained the roads under permit and they are all low risk, they do not have a comprehensive system for tracking the roads. However, all the roads are well mapped and MLMCF inspects the roads periodically during the year and documents the inspections. MLMCF stated it plans to develop a comprehensive road maintenance tracking system in the near future.

MLMCF's bridges were well constructed. It kept comprehensive bridge records and made inspection, general arrangement drawings and assurance documentation available to the audit team.

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

Silviculture Activities and Obligations

MLMCF's silviculture program was well managed and executed. It planted all cutblocks with suitable tree species and stock, met regeneration requirements and met the chief forester's seed transfer guidelines.

All annual reporting obligations were up-to-date.

There were no issues with silviculture activities or obligations.

Wildfire Protection

MLMCF had no active operations, so the auditors did not inspect fire preparedness.

Hazard Assessment and Abatement

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 a licensee identifies a fire hazard, they must abate it.

Auditors found MLMCF had completed hazard assessments within the required timeframes for all seven cutblocks sampled and all of the assessments met content requirements.

It is MLMCF's standard practice to pile slash and then burn it when it is safe to do. Auditors found that MLMCF met abatement requirements in all 21 of the cutblocks sampled.

In unabated cutblocks, MLMCF piled slash in locations where they can safely abate it when conditions become suitable to do so.

Since MLMCF operates within wildland urban interface areas,² it has included fuel treatment prescription stocking standards in its FSP, for the purpose of reducing fuel loading and wildfire risk

² MLMCF created a wildland-urban interface area to allow flexibility to manage forested land near the community of Mackenzie with the primary objective of reducing fire hazards. Treatments associated with fuel management are not always consistent with forest management objectives. The stocking standards provide a mechanism to deviate from standard timber management objectives where they are not consistent with managing fire hazards.

when harvesting in the areas. Auditors found that MLMCF had incorporated the standards into its site plans where required and effectively implemented them by establishing deciduous species to serve as fuel breaks, monitoring the stands to assess whether maximum coniferous stocking levels were exceeded and spacing coniferous trees where stocking thresholds were exceeded.

Auditors found that MLMCF met its hazard assessment and abatement obligations.

Audit Opinion

In my opinion, the operational planning, timber harvesting, road and bridge construction, road maintenance, silviculture, and fire protection activities carried out by McLeod Lake Mackenzie Community Forest Limited Partnership on community forest agreement K2M, between September 1, 2016, and September 11, 2018, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act* and related regulations, as of July 2018. There is no opinion provided for road deactivation or bridge maintenance or deactivation.

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.

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 the *Forest and Range Practices Act* and the *Wildfire Act*.



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

Victoria, British Columbia
October 31, 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*. Compliance audits examine forest or range planning and practices to determine whether or not they meet FRPA and / or *Wildfire Act* requirements. The Board conducts about 10 compliance audits annually. Most of these are audits of agreement holders. The Board also audits the government's BC Timber Sales Program (BCTS).

Selection of Auditees

To begin with, auditors randomly select an area of the Province, such as a natural resource 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, auditors choose the auditee(s) that best suits the selected risk and priorities. The audit selections are not based on past performance.

For example, in 2016, the Board randomly selected the Dawson Creek portion of the Peace Natural Resource District as a location for an audit. After assessing the activities within the area, it was noted that there were two community forest agreements that had not yet been audited by the Board. As the Board strives to audit an array of licence types and sizes each year, these two community forest agreements were selected for audit.

For BCTS audits, a district or timber supply area within 2 of the 12 business areas in the province is selected randomly for audit. Only those areas that have not been audited by the Board in the past five years are eligible for selection.

Audit Standards

The audits are conducted in accordance with auditing standards developed by the Board. These standards include 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 and 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. For smaller audits, the sample will include the full population.

Auditors' work includes interviewing licensee staff, reviewing applicable plans, assessing features from helicopters and measuring specific features like riparian reserve zone width using ground procedures. The audit teams generally spend three to five days 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 significant practice that, although in compliance with FRPA or the *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, 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 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 copy of the draft report for review and comment before it is submitted to the Board.

The Board reviews the draft report 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 reviews representations from parties that may potentially be adversely affected, makes any necessary changes to the report, and decides if recommendations are warranted. The report is then finalized and released: first to the auditee and then to the public and government seven days later.

ENDNOTES

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.



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