



**Forest
Practices
Board**

Audit of Range Planning and Practices

*Thompson Rivers Natural Resource District
Range Agreements for Grazing RAN077495 and
RAN077496*

FPB/ARC/204

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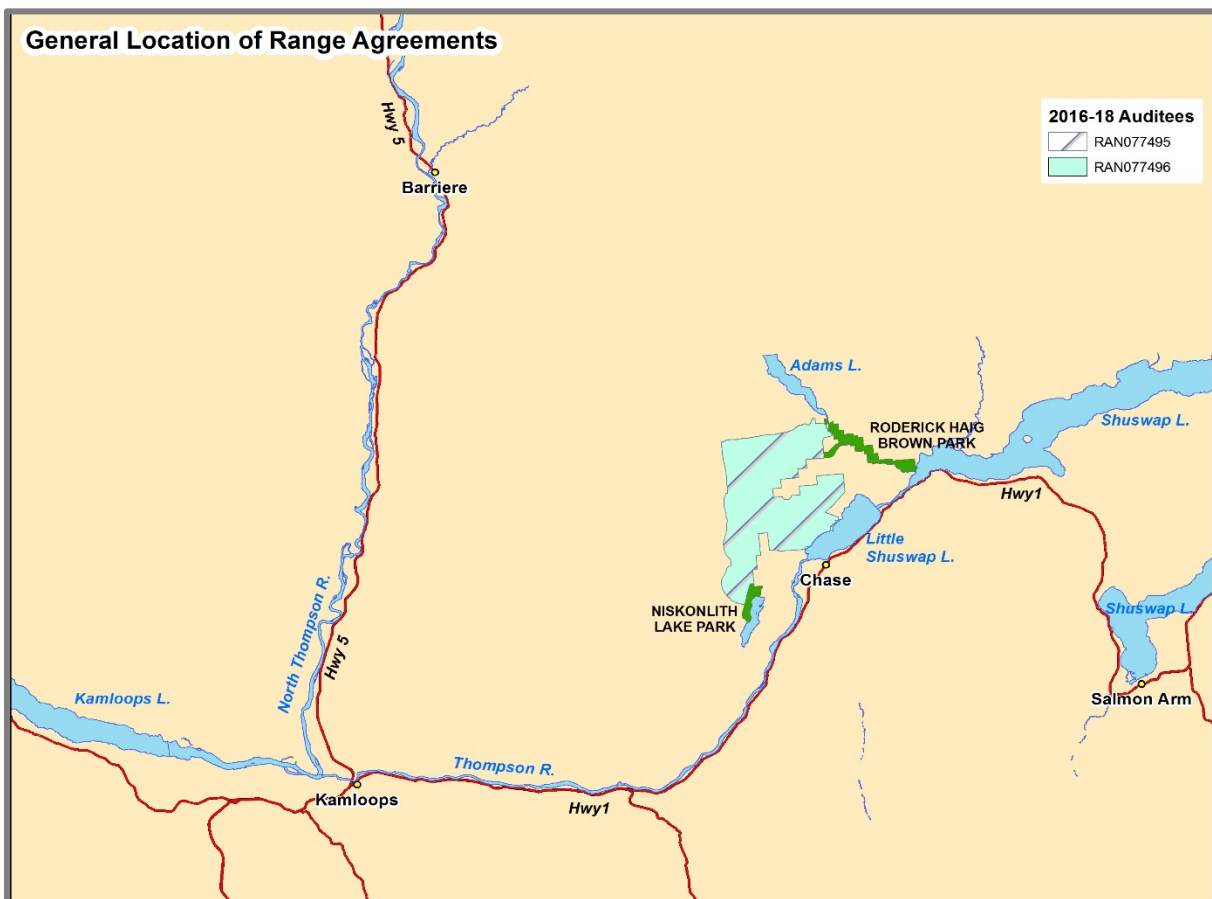
Introduction

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 planning and practices of range agreement holders to ensure compliance with the *Forest and Range Practices Act* (FRPA).

As part of the Forest Practices Board's 2016 compliance audit program, the Board randomly selected the Thompson Rivers Natural Resource District as the location for a full scope compliance audit. Within the district, the Board selected five range agreements for grazing based on their geographic location. This is the audit report for two of those agreements, RAN077495 and RAN077496. These overlapping tenures are located north of Chase (see map below). Results for the other three range agreements are reported separately.

This report describes what the Board audited and the findings for each range agreement. Detailed information about the Board's compliance audit process is provided in Appendix 1.

Map of Range Agreement Areas Audited



Below are definitions of common terms used in the audit report.

Animal unit month (AUM): This is the quantity of forage consumed by a 450 kilogram cow (with or without calf) in a 30-day period. Because bulls consume more forage than cows, they account for 1.5 AUMs for each 30-day period of grazing.

Assessment of riparian areas: FRPA requires range agreement holders to ensure range practices protect riparian areas – areas adjacent to classified streams, lakes and wetlands. Riparian vegetation adjacent to other non-classified waterbodies, like a seepage, are not included in FRPA's definition of *riparian area*.

Range readiness criteria: These criteria in the range use plan (RUP) are used to determine when Crown range is ready for grazing to begin. These criteria were not assessed because the audit took place towards the end of the grazing season.

Audit Results – RAN077495 & RAN077496

Background

RAN077495 and RAN077596 are held by Barry Shaw. These range agreements are each 10 717 hectares and located 2.3 kilometres northwest of Chase (see map on page 1). As these agreement areas have identical geographic boundaries and are held by the same range agreement holder, they were assessed as a single unit during the field audit.

The range agreements have a combined total of 930 AUMs authorized for grazing between May 16 and October 15. They are managed as a single pasture, with private land located through the central portion of the agreements.

Audit Approach and Scope

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*. Auditor's work involved interviewing the range agreement holder and ministry staff, reviewing the RUP and maps, and examining the majority of activities undertaken in the field within the two-year audit period of September 1, 2014, to September 16, 2016.

A professional agrologist/forester, a biologist and a chartered professional accountant made up the audit team. Fieldwork took place on September 12 and 16, 2016.

Planning and Practice Requirements Examined

The audit examined range planning and practices for compliance with FRPA and the *Range Planning and Practices Regulation* (RPPR). This included an examination of:

- Compliance with RUPs and any amendments (including maps and the grazing schedule, which identifies the period of use, number of livestock and AUMs authorized for grazing).
- Records maintained by range users (if applicable) and the Ministry of Forests, Lands and Natural Resource Operations (FLNRO).

- Compliance with range practice requirements on the range agreement areas, with a focus on requirements to protect riparian areas, upland areas, drinking water quality, licenced waterworks, fish habitat and maintenance of range developments. (Note: auditors did not assess compliance with range readiness criteria).

Audit Findings

Required Content of the Range Use Plan

The approved RUP includes all required content. The plan is valid from January 1, 2012, to December 31, 2016.

Compliance with the Range Use Plan and Practice Requirements

Auditors found that the range agreement holder generally met the requirements of the RUP, including the grazing schedule, stubble heights, actions to establish or maintain desired plant communities, and actions to address issues identified by FLNRO's minister.

The range agreement holder met FRPA's requirements to protect fish habitat and upland condition and to maintain range developments.

Protecting Water Quality

Section 33(1) of the RPPR requires a range agreement holder to protect water used for drinking by ensuring material that is harmful to human health is not deposited in or transported to water diverted for human consumption.ⁱ The range agreement holder knew of an area of concern regarding cattle utilizing a water source near a domestic water intake within his tenure and directed the auditors to this location. Auditors found potentially harmful material at several locations 405 metres to 455 metres above a licensed domestic intake (i.e., faecal pats were found within the stream and below the high water mark). The range agreement holder was aware of the presence of the domestic water intake downstream and that his cattle continuously used this area as a water source. He was also aware of the water licence holder's long-standing concern regarding the cattle in the stream and their impact on drinking water quality. Water and faecal samples confirmed the presence of total coliforms, which exceed BC drinking water standards,ⁱⁱ both at the point of livestock access and at the water intake. E.coli and faecal coliforms were also found to exceed drinking water standards where cattle had access to the stream, but not at the water intake itself. Total coliform counts along the riparian area cattle were accessing as a water source ranged from 310 to 990 colony forming units (CFU) per 100 millilitres and greater than 72 CFU per 100 millilitres¹ at the water intake. E.coli was measured at 47 to 370 CFU per 100 millilitres for the accessible area and less than 1 CFU per 100 millilitres at the intake (limit is no faecal coliform or E.coli).

As material harmful to human health was deposited in water diverted for human consumption, this non-compliance is considered significant.

Subsequent to the audit, the range agreement holder stated he is working with ministry staff to secure funding in 2017 to mitigate the concerns identified.

¹ To be considered potable water by the *Drinking Water Protection Act* and *Drinking Water Protection Regulation* there should be no total coliforms detectable per 100 millilitres in a single sample in a 30-day period; however, where more than one sample is taken in a 30-day period, ninety percent of the samples are to have no detectable total coliform bacteria per 100 millilitres and no sample may contain more than 10 CFU per 100 millilitres.

Riparian Areas

The requirement to protect riparian areas was generally met; however, there were two areas of concern.

Auditors noted approximately 50 metres of riparian area was non-functional, which is a non-compliance with FRPA's requirements to protect riparian areas.ⁱⁱⁱ

This section of riparian area also had a historical water development (dugout) installed (see Figure 1).

Documentation regarding who installed the dugout, or when, could not be located. This site was identified as a range development on the RUP map. An additional 200 metres of riparian area was deemed to be functional, but at risk. Overall, these riparian segments represent only a small portion of the approximately three kilometres of riparian areas assessed, thus this is considered an area requiring improvement.



Figure 1. Livestock watering area 455 metres above licensed domestic water intake. Auditors determined the riparian area was non-functional.

Audit Opinion

In my opinion, except for the water quality issue discussed below, the range planning and practices carried out by Barry Shaw on range agreements RAN077495 and RAN077496, between September 1, 2014, and September 16, 2016, complied in all significant respects with the requirements of the *Forest and Range Practices Act* and the *Range Planning and Practices Regulation*, as of September 2016. No opinion is provided regarding range readiness criteria.

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 *Protecting Water Quality* section of the report, the audit identified a situation of significant non-compliance.

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

The *Audit Approach and Scope* and the *Planning and Practices Requirements 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 range planning and practices to support an overall evaluation of compliance with FRPA.



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Victoria, British Columbia
February 28, 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 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 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 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.

ENDNOTES

ⁱ *Range Planning and Practices Regulation: Protecting Water Quality*

- 33 (1) A range agreement holder who carries out a range practice must ensure that the range practice does not cause material that is harmful to human health to be deposited in, or transported to, water that is diverted for human consumption by a licensed waterworks.
- (2) A range agreement holder who carries out a range practice that could have a material adverse effect on a licensed waterworks must ensure that the range practice does not
- (a) damage the licensed waterworks, or
 - (b) alter the vegetation, soil or terrain around the licensed waterworks, if the alteration could materially increase the risk of subsequent damage to the licensed waterworks.
- (3) If satisfied that it is not practicable, given the circumstances or conditions applicable to a particular area, the minister may exempt a range agreement holder, in relation to that area, from subsection (1) or (2).

ⁱⁱ *BC Drinking Water Protection Regulation:*

- 2 The prescribed water quality standards for potable water are set out in Schedule A.

ⁱⁱⁱ *Range Planning and Practices Regulation: Riparian areas*

- 30 A range agreement holder must not carry out a range practice if it would result in a material adverse affect on the ability of the riparian area to
- (a) withstand normal peak flow events without accelerated soil loss, channel movement or bank movement,
 - (b) filter runoff,
 - (c) store and safely release water, and
 - (d) conserve wildlife habitat values in the area.



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