



**Forest
Practices
Board**

Audit of Forest Planning and Practices

*Selkirk Natural Resource District
Woodlot Licence W0436*

FPB/ARC/191

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Introduction

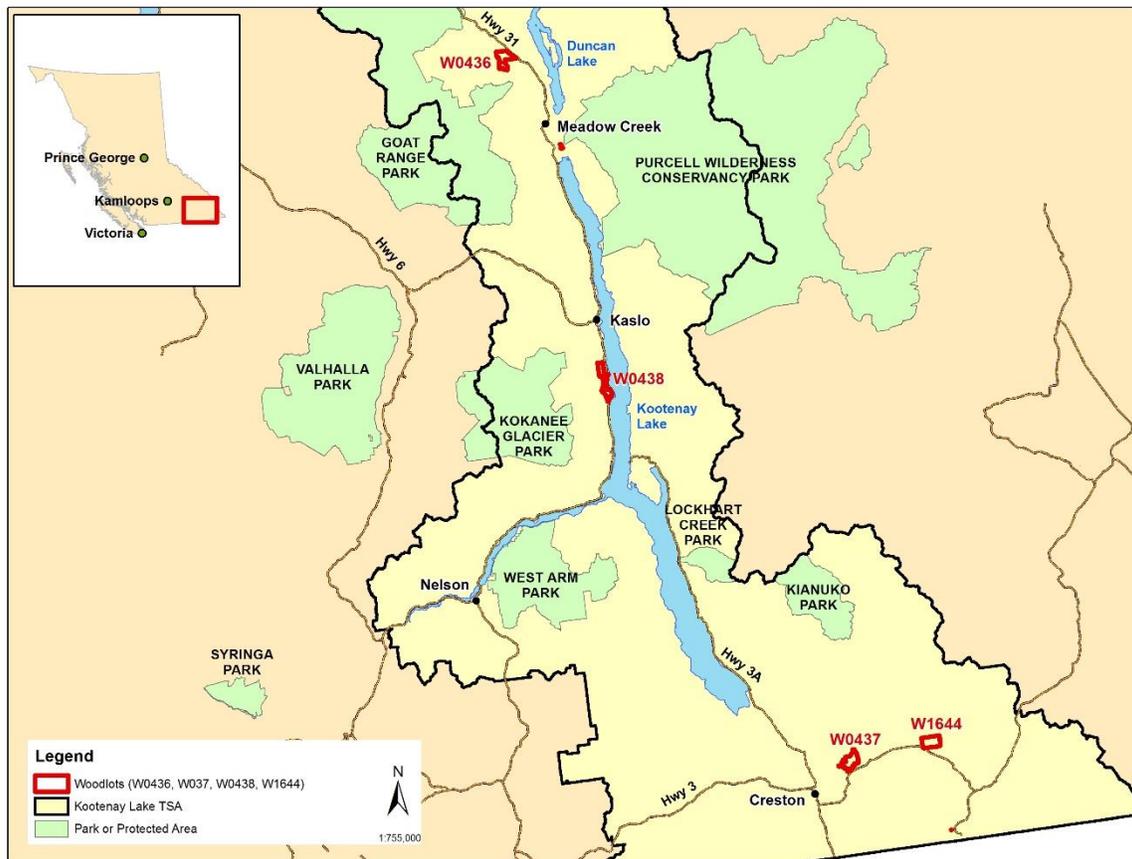
The Forest Practices Board is the public's watchdog for sound forest practices in British Columbia. One of the Board's roles is to audit the practices of the forest industry to ensure compliance with the *Forest and Range Practices Act* and the *Wildfire Act*.

As part of the Forest Practices Board's 2015 compliance audit program, the Board randomly selected the Kootenay Lake TSA portion of the Selkirk Natural Resource District as the location for a full scope compliance audit. Within the district, the Board selected four woodlot licences for audit: W0436, W0437, W0438 and W1644.

The individual woodlot licences were selected based on the level of harvest activity occurring between September 2013 and September 2015, and not on past performance. The Board selected two woodlot licences with a timber harvest of greater than 7000 cubic metres and two with a harvest less than 5000 cubic metres since September 2013. Two of the woodlots are located near the community of Creston, one near Kaslo and the other near Meadow Creek, as shown in Figure 1.

This report explains what the Board audited and the findings for woodlot W0436. Results for the other woodlots are reported separately. Detailed information about the Board's compliance audit process is provided in Appendix 1.

Figure 1. Location of Woodlot Licences W0436, W0437, W0438 and W1644



Audit Results

Background

Woodlot licence W0436 is held by Duncan Stanley Lake and Yvonne Boyd and was awarded in 1987. The woodlot is located 14 kilometres north-west of Meadow Creek, west of Highway 31. The woodlot has a total area of 606 hectares, including 596 hectares of Crown land and 10 hectares of private land. The woodlot licence provides an allowable annual cut of 1619 cubic metres per year. During the two-year audit period, the licensee harvested about 4120 cubic metres of timber.¹

Audit Approach and Scope

This was a full scope compliance audit with a two-year timeframe. All harvesting, road, silviculture, and protection activities, carried out between September 1, 2013, and September 22, 2015, were included in the scope of the audit. All associated planning was also examined. Auditors assessed these activities for compliance with the *Forest and Range Practices Act (FRPA)*, the *Wildfire Act (WA)*, and applicable regulations, in particular, the *Woodlot Licence Planning and Practices Regulation (WLPPR)*.

The standards and procedures used to carry out this audit are set out in the Board's *Compliance Audit Reference Manual, Version 7.0*, (September 2012).

Two professional foresters and a chartered professional accountant made up the audit team. Fieldwork took place on September 22, 2015.

Planning and Practices Examined

Operational Planning

Auditors examined the approved woodlot licence plan (WLP),ⁱ which covers the period 2009-2018.

The audit team evaluated site plans² and pre-harvest maps through office reviews and fieldwork to ensure that they accurately identified site conditions and met legal requirements.

Timber Harvesting

The licensee harvested timber from one cutblock during the audit period, which the auditors field reviewed.

¹ Although most woodlots have a relatively small allowable annual cut, it is possible for woodlot holders to harvest up to 120 percent of their five-year cut control cycle in just one or two years, creating the appearance of a larger than actual allowable annual cut.

² A site plan is not a legal requirement for woodlot licences. A site plan identifies the approximate locations of cutblocks and roads, is consistent with legislation, and identifies how the intended results or strategies described in the woodlot licence plan apply to the site.

Road Construction, Maintenance and Deactivation

The licensee had maintenance obligations for 10 kilometres of road and 2 bridges during the audit period, of which auditors examined 9.3 kilometres of road and 1 bridge. The licensee did not construct or deactivate any roads or bridges during the audit period.

Silviculture Activities and Obligations

The licensee had regeneration delay obligations due on one cutblock and free-growing obligations due on three cutblocks during the audit period. No silviculture activities were conducted during the audit period. Auditors examined all of the cutblocks with obligations due.

Fire Protection Activities

No fire hazard assessment or abatement obligations were due during the audit period and auditors conducted a fire tool inspection on the one active operation.

Findings

The audit found that, except for bridge maintenance and annual reporting, the activities complied with FRPA and the WA. The two activities with issues are discussed below.

The audit also identified an area requiring improvement related to riparian practices.

Bridge Maintenance

The WLPPR requires a woodlot licensee who constructs a bridge or maintains a road to ensure that a bridge associated with the road is structurally sound and safe for use by industrial users. If a structural deficiency occurs, the licensee must either correct the deficiency or restrict traffic loads to a safe level and place load restriction signs on each bridge approach.

The licensee was issued a road permit for the Matt Creek Road in 1999 to access a portion of the woodlot. The road crosses Meadow Creek at 0.6 kilometres, using a wooden bridge constructed in 1988, with a 15-year design life. As recommended by a professional engineer, the licensee performed some structural upgrades to the bridge in 2002 to make it safe for industrial use and used the bridge to transport logs and heavy equipment in 2003.

Auditors found damage to the bridge deck and curb logs from snow cat traffic within the past year, and rot in the bridge's sub-structure, both of which are potential safety hazards. The licensee had not posted any load restriction or bridge approach signs nor assessed the bridge for load-bearing strength. The road accesses three other forest tenures. One of those licensees used the road during the audit period and it is likely that other industrial traffic may use the road in the future. The licensee told the auditors it monitors planned industrial traffic and informally communicates with other road users regarding potential road hazards. Without a formal notification system, the risk that another licensee may use the road without being aware of the bridge hazard is elevated, making it more important to post load rating and hazard signs. Because the licensee had not properly identified the bridge deficiency, it created a safety hazard and this is considered a significant non-compliance with the WLPPR sections 61 and 64.ⁱⁱ

Subsequent to the audit, the licensee has posted bridge approach and load limit signs (5000 kilogram) to warn road users of the potential hazard. However, it did not conduct a qualified load rating and cannot assure the posted load limit is accurate.

Annual Reporting

The WLPPR requires that a licensee, before May 31 of each year and in the form specified by the minister, report information to the government for activities that occurred during the previous reporting period, regarding harvest and silviculture activities and forest cover changes. Reporting using RESULTSⁱⁱⁱ is the manner specified by the minister for annual report submissions and the [Results Information Submission Specifications \(RISS\) for Woodlot Licensees \(November 20, 2012\)](#) is the specified form.

Auditors found that the licensee did not submit annual reports on time for three of the four cutblocks audited. The licensee had not reported achievement of free-growing milestones until two years after determining free growing. Auditors also found the licensee did not conform to RISS standards for all four cutblocks because the licensee reported stocking standards that did not match those in the WLP; did not report forest cover updates for all cutblocks; reported forest cover updates unsupported by survey information; reported information that did not match silviculture surveys; did not report activities in all standards units; and did not submit spatial information for all cutblocks.

The licensee is in non-compliance with the WLPPR, section 76,^{iv} because it did not meet submission deadlines or specification requirements. These practices are pervasive and do not provide assurance of good silviculture practices and therefore are considered a significant non-compliance.

Subsequent to the audit, the licensee has hired a professional forester to update and correct the annual reporting issues.

Riparian Practices

When planning for timber harvesting, the licensee located the southern boundary of a cutblock along a stream. The licensee classified the stream as an S3 in its WLP, which means the stream is fish-bearing and requires a 20-metre reserve zone for protection. Prior to harvesting, the licensee observed several fish barriers downstream from the cutblock and re-classified the stream as a non-fish bearing stream, believing the stream could not contain fish due to the barriers. However, auditors found the licensee had not collected sufficient information to support the re-classification, such as measuring stream widths or conducting a fish inventory to confirm fish absence. Because the licensee did not adequately support the re-classification, the stream should have been treated as



Timber harvested within the RRZ of the S3 stream.

an S3 stream, consistent with the WLP. The licensee did not prescribe a reserve zone in the site plan. During the field inspection, auditors found that the licensee felled trees up to the stream edge along a 40-metre section.

Consistent with the WLPPR, the licensee's WLP states trees must not be cut, modified or removed within a riparian reserve zone. Because the licensee could not demonstrate that the stream was non-fish bearing and had harvested trees in the riparian reserve zone, it is non-compliant with the WLPPR.^v However, the potential for damage to fish or fish habitat is low because the incursion was small and the stream channel was left intact. While minimal harm may have resulted from the non-compliance, this practice elevated the risk of harm to fish or fish habitat and should not be repeated. This is considered an area requiring improvement.

Operational Planning

The WLP and site plans for W0436 were consistent with legislated requirements and the site plans were consistent with the WLP.

Timber Harvesting

The auditors observed that the cutblock was harvested as planned, and no concerns were noted, with one exception regarding riparian practices as described above.

Auditors otherwise found good harvesting practices. Soil disturbance was minimized and below the limits required by regulation. In addition, an S6 stream within the cutblock was protected in a reserve, the licensee maintained natural drainage patterns, rehabilitated temporary skid trails and did not disturb stream banks. The licensee retained wildlife trees in patches and individual stems and met the obligations in the WLP. Patches were adjacent to and within cutblocks.

Road Construction, Maintenance and Deactivation

Other than the bridge maintenance issue noted above, auditors did not identify any issues with road maintenance.

Auditors found that culverts were adequately sized and installed at all stream crossings, and were frequently used for cross drainage. There was no evidence of siltation or road failures and the running surfaces were stable.

Silviculture Activities and Obligations

There were no concerns identified with any of the silviculture obligations, however, the auditors found issues with the licensee's annual reporting, as discussed above.

Fire Protection Activities

The licensee complied with the *Wildfire Act*. Auditors conducted a fire tool inspection on the one active operation and found the licensee met requirements. On the active cutblock, slash was piled in locations where it could be burned when safe to do so. There were no outstanding abatement obligations on the woodlot.

Audit Opinion

In my opinion, except for the issues identified below, the operational planning, timber harvesting, road maintenance, silviculture, and fire protection activities carried out under woodlot licence W0436, held by Duncan Stanley Lake and Yvonne Boyd, between September 1, 2013, and September 22, 2015, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act* and related regulations, as of September 2015. There is no opinion provided for road construction 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.

As described in the *Bridge Maintenance* section of the report, the audit identified a significant non-compliance.

As described in the *Annual Reporting* section of the report, the audit identified a significant non-compliance.

Without further qualifying my opinion, I draw attention to the *Riparian Practices* section of this 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. Such an audit includes examining sufficient forest planning and practices to support an overall evaluation of compliance with FRPA, and WA.



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

Victoria, British Columbia
May 9, 2016

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 considered to not 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.

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- i A **Woodlot Licence Plan** is a key planning element in the *Forest and Range Practices Act* framework and the only plan for woodlots subject to public review and comment and government approval. In WLPs, licensees are required to identify results and strategies or alternative performance requirements consistent with government objectives for values such as water, wildlife and soils, except under prescribed circumstances. These results, strategies and performance requirements must be measurable and once approved are subject to government enforcement. WLPs identify areas within which road construction and harvesting may occur, be avoided or be modified, but are not required to show the specific locations of future roads and cutblocks. WLPs can have a term of up to ten years.
- ii **WLPPR Section 61**
Unless exempted under section 78 (1), a woodlot licence holder 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.
- WLPPR Section 64**
Unless exempted under section 78 (1), a woodlot licence holder who builds a bridge for the purpose of constructing or maintaining a road must do one or more of the following if a structural defect or deficiency occurs:
- (a) correct the defect or deficiency to the extent necessary to protect
 - (i) industrial users of the bridge, and
 - (ii) downstream property, improvements or forest resources that could be affected if the bridge fails;
 - (b) close, remove or replace the bridge;
 - (c) restrict traffic loads to a safe level;
 - (d) place a sign, on each bridge approach, stating the maximum load capacity of the bridge.
- iii 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. Data submitted under the Electronic Submission Framework (ESF) is explicitly linked to associated spatial information, thereby ensuring consistency in the geographic information. More information is available at: <https://www.for.gov.bc.ca/his/results/index.htm>
- iv **WLPPR Section 76**
- (2) The chief forester may specify the form of, and the information to be included in, an annual report required under subsection (3).
 - (3) A woodlot licence holder must, on or before May 31 each year, submit to the minister, in accordance with the requirements of subsection (2), an annual report respecting activities completed within the reporting period.
- v **WLPPR Section 39**
- (1) A woodlot licence holder must not cut, modify or remove trees in a riparian reserve zone, unless it has been specified in a woodlot licence plan or it is limited to one of the following purposes:
 - (a) felling or modifying a tree that is a safety hazard, if there is no other practicable option for addressing the safety hazard;
 - (2) A woodlot licence holder who fells, tops, prunes or modifies a tree under subsection (1) may remove the tree only if the removal will not have a material adverse affect on the riparian reserve zone.



**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