



Audit of Forest Planning and Practices

*Troll Resort Ltd.
Occupant Licences to Cut L43043 and L48493*

FPB/ARC/136

March 2012

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Audit Results

Background

As part of the Forest Practices Board's 2011 compliance audit program, the Board randomly selected the Quesnel District as the location for a full scope compliance audit. Within the district, the Board selected occupant licences to cut (OLTC)ⁱ L43043 and L48493, held by Troll Resort Ltd. (Troll).

The OLTCs were awarded under the *Forest Act*, but because they are contained within the Troll Mountain Controlled Recreation Area (CRA)ⁱⁱ, designated under the *Resort Timber Administration Act* (RTAA) and the *CRA Regulation*, they are administered by the Ministry of Forests, Lands and Natural Resource Operations, Resort Development Branch. While forest practices are not administered under the traditional legislative framework, the licensee still must meet the requirements of the *Forest and Range Practices Act* (FRPA), *Wildfire Act* (WA) and related regulations for OLTCs.

Troll Ski Resort has been family owned and operated since 1972. In 2010 the resort was incorporated into the Troll Mountain CRA in order to streamline and integrate provincial review and application processes and to recognize that any land use decision that may be made in relation to the CRA is for long term all season resort development purposes.



Aerial view of Troll Mountain Resort in the summer.

Troll is located 45 kilometres east of Quesnel on Highway 26, also known as the Barkerville Highway, in an area called Pinegrove (see map on page 3). The OLTCs fall within the area covered by the Cariboo-Chilcotin Land Use Plan (CCLUP).ⁱⁱⁱ

Over the past two years, approximately

14 000 cubic metres of timber was harvested from the OLTCs to address forest health and safety concerns and to enhance skiing opportunities. Harvest mainly focused on lodgepole pine and balsam stands that have been attacked by bark beetles.

The Board's audit fieldwork took place on August 9 and 10, 2011.

Additional information about the Board's compliance audit process is provided in Appendix 1.

Objectives set by Government

In addition to objectives set by government under the *Forest and Range Practices Act* (FRPA) and related regulations, objectives for forest stewardship in the OLTCs are also guided by the

CCLUP, which provides direction from government on how to manage public lands and resources within the plan area. The provisions of the CCLUP regarding zones, objectives, targets and strategies were declared to be a higher level plan in January 1996.

Although not legally binding, the Quesnel Sustainable Resource Management Plan (QSRMP)^[i] provides the spatial reference and detailed objectives needed to implement the CCLUP over the long term. The QSRMP was approved in February 2007 and includes the Troll CRA within the Lightning Landscape Unit and the E4 Resource Management Zone, which has been designated as an Enhanced Resource Development Zone with objectives defined for visual quality, grizzly bears, old growth and fisheries.

Audit Approach and Scope

The Board conducted a full scope compliance audit, which includes all harvest, road, silviculture, and protection activities, and associated planning, carried out between August 1, 2009, and August 10, 2011. These activities were assessed for compliance with FRPA, WA and related regulations.

The Board's *Compliance Audit Reference Manual, Version 6.0, May 2003*, and the addendum to the manual for the 2011 audit season, set out the standards and procedures that were used to carry out this audit.

Planning and Practices Examined

An operating agreement (OA)^{iv} between Troll and the Crown serves to regulate activities within the Troll CRA. While the OA does not require Troll to complete a forest stewardship plan (FSP), it does require that Troll complete a resort master plan (RMP).^v Similar to a FSP, the RMP identifies environmental and cultural values within the CRA and serves as a linkage between the CCLUP, QSRMP objectives and stand level planning. Harvest plans identify stand level resources that may be affected by forest activities and may prescribe practices to protect them. OLTCs provide Troll with the authority to harvest timber from Crown land within the CRA. Harvest plans, the RMP and OA were evaluated to assess consistency with legislative requirements, including consistency with the CCLUP and QSRMP.

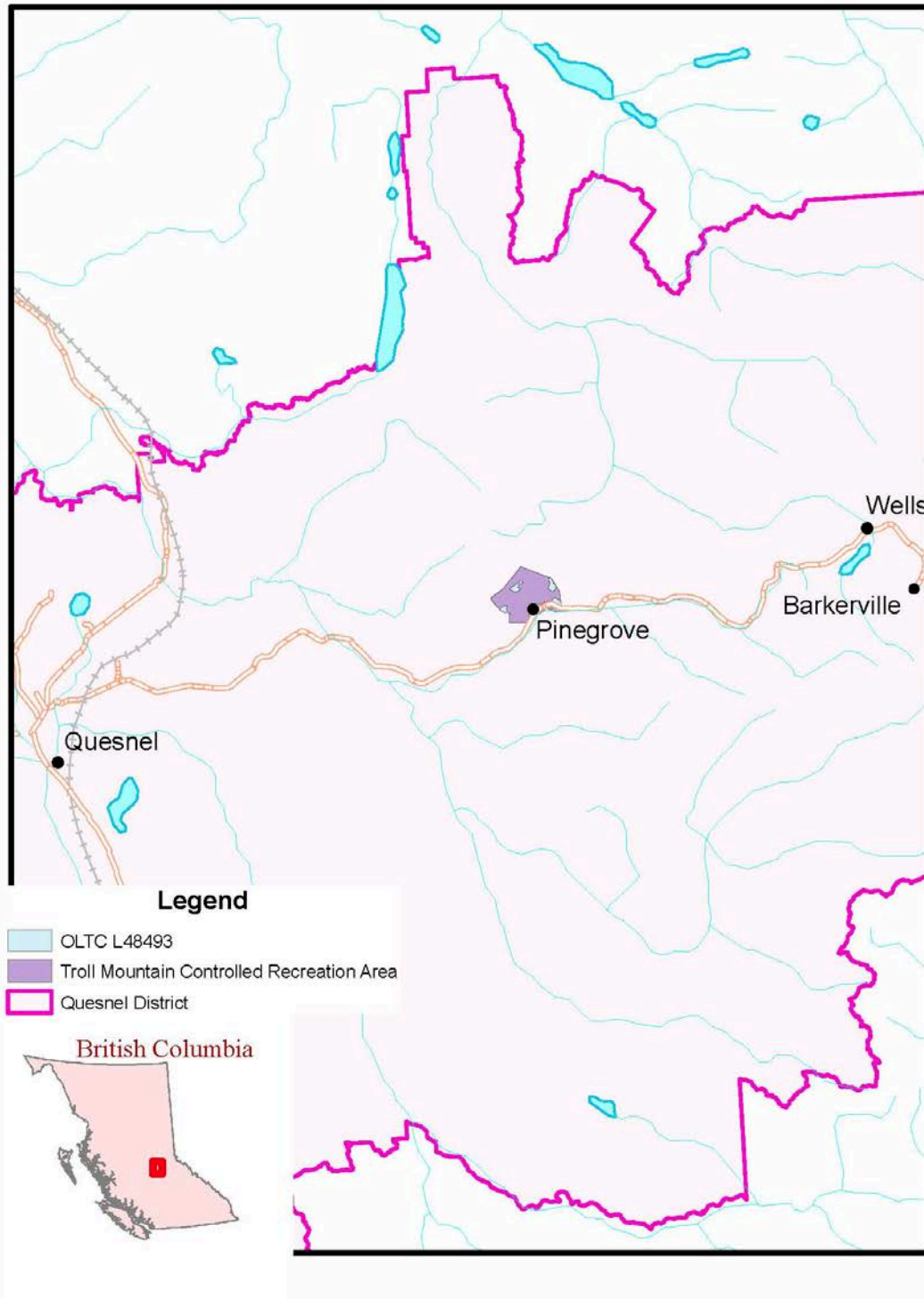
During the two-year period covered by the audit, Troll harvested three small patches of timber under L43043 and three larger cutblocks under L48493, with a gross area of 87.8 hectares, using ground-based harvest systems. The audit examined all of the harvested areas.

Troll used existing roads to access the cutblocks and did not construct or deactivate any roads during the audit period. Troll maintained 16.9 kilometres of road, used to haul logs from the two OLTCs. Troll was not responsible for the construction or maintenance of any bridges or major culverts. The audit examined all of the maintained roads.

Consistent with legislation,^{vi} Troll was not obligated to, nor did they conduct silviculture activities, therefore no silviculture activities were audited.

There were no active operations during the field audit, so the field components of the fire preparedness requirements of the WA were not audited. Slash loading and slash piled in preparation for disposal were reviewed on the three cutblocks that had been harvested during the audit period.

Map of the Troll Mountain Controlled Recreation Area Subject to Audit



Findings

The audit found that the planning and field activities undertaken by Troll complied in all significant respects with the requirements of FRPA, WA and related regulations, as of August 2011.

Riparian Management

Overall, riparian features were adequately protected by excluding them from harvest areas where practical, retaining forest cover in riparian management areas and establishing machine-free zones adjacent to streams and wetlands.

However, in one instance, the audit found inadequate riparian management and soil erosion control practices near Pinegrove Creek, which is potentially fish bearing.^{vii} Along the upper portions of Pinegrove Creek, Troll had deposited a small amount of soil and logging debris into the stream; constructed cross-ditches with unstable cut slopes; had not installed drainage or erosion controls on bladed skid trails; and did not grass seed exposed mineral soil in close proximity to the stream.

Although the impacts to Pinegrove Creek are not significant and the fish habitat is marginal, this is considered an area requiring improvement to ensure this practice does not occur elsewhere.

Operational Planning

The Troll Resort Master Plan (RMP) was consistent with the objectives and strategies from FRPA, CCLUP and the QSRMP. Harvest plans were consistent with the RMP and accurately identified resource features associated with the audited cutblocks. The generic environmental protection measures contained in FRPA, the *Forest Planning and Practices Regulation*, the OLTCs and the OA provided for adequate protection of resource features encountered during harvest activities.

Harvesting

All harvesting was conducted to address fire, wind and insect damaged trees. The audit found that harvesting performed by Troll was conducted in accordance with requirements of legislation and was consistent with harvest plans.

Sound soil conservation practices were demonstrated by minimizing the area occupied by permanent roads, by using temporary access structures where practical and by commonly grass seeding areas with exposed mineral soil. Troll conducted harvest operations during favorable weather to keep soil disturbance low, which was a challenge as the window of operability on sensitive soils was restricted to a brief period in the summer because there were no opportunities for harvesting during the winter ski season.

Roads

Troll used existing roads to avoid constructing additional permanent access structures. Roads were located on stable terrain and were well maintained with adequate drainage and erosion control measures in place to minimize the risk of soil erosion.

Silviculture

FRPA does not impose any reforestation obligations under an OLTC. The licences were used to clear land to enhance skiing opportunities and improve safety within the CRA, focusing on salvaging fire, wind and insect damaged trees.

Protection

Piling and disposal of slash was effective, as any increased fire hazard from logging had been safely abated or is scheduled for abatement when conditions are suitable.

The audit found that a few slash piles were located against standing timber in order to keep ski runs clear of slash until the next opportunity for disposal. Troll plans to pull the slash away from the standing timber for burning, when conditions are suitable.

Troll did not document fire hazard assessments; however their abatement activities were conducted in a manner that does not increase the risk of fires from starting and, if one should start, would not increase the fire behavior or fire suppression associated with the fire.

Audit Opinion

In my opinion, the operational planning; timber harvesting; road construction, and maintenance; and fire hazard abatement activities carried out by Troll Resort Ltd. on occupant licences to cut L43043 and L48493, between August 1, 2009, and August 10, 2011, complied in all significant respects with the requirements of the *Forest and Range Practices Act*, the *Wildfire Act* and related regulations, as of August 2011. No opinion is provided regarding fire-fighting equipment requirements, road deactivation or silviculture practices.

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 *Riparian Management* section of the 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 CA, EP(EMSLA)
Director, Audits

Victoria, British Columbia
February 15, 2012

ⁱ An Occupant Licence to Cut (OLTC) provides a resort operator with authority to remove Crown timber from a CRA. OLTCs are issued pursuant to section 47.4 of the Forest Act, and specify the terms and conditions by which the timber can be removed from the CRA.

ⁱⁱ A controlled recreation area (CRA) is the area of Crown Land that encompasses the recreation infrastructure and activity areas, the area covered by the real estate development, and a reasonable buffer area that is directly related to the safe and orderly development of an all seasons resort. A CRA applies to an operating agreement and gives the Developer certain rights to control the activities that occur within the CRA.

ⁱⁱⁱ The Cariboo-Chilcotin Land Use Plan can be found at:

http://ilmbwww.gov.bc.ca/slrp/lrmp/williamslake/cariboo_chilcotin/cariboo.html

^[i] The Quesnel Sustainable Resource Management Plan can be found at:

<http://ilmbwww.gov.bc.ca/slrp/srmp/north/quesnel/index.html>

^{iv} An operating agreement (OA) is an agreement used for resorts, including alpine ski resorts, which do not include base area development. The agreement sets out the terms and conditions governing the development of the resort, including the rights to acquire OA tenures and fee simple dispositions. The OA acts as a licence of occupation under the *Land Act* for purposes of a Controlled Recreation Area (CRA).

^v A resort master plan (RMP) forms an integral part of the terms and conditions of an operating agreement. It is a detailed plan that sets out the phased and orderly recreation and real estate development, if any, that is to occur within the resort area. It provides technical and management information necessary to support the sustainable development of the resort. It should in part include a discussion of the project's goals and objectives and a detailed site inventory and analysis. A RMP must appropriately address all environmental, cultural, social and economic considerations within the CRA and may be subject to review under the *Environmental Assessment Act* before it is approved. Approval of the master plan represents the province's approval of the land use decision. The Troll Resort Master Plan can be found at: [Troll Resort Master Plan](#)

^{vi} There are no requirements under Troll's operating agreement, its occupant licences to cut, nor are there any requirements under forest legislation to conduct silviculture activities or to establish a free growing stand of timber. Therefore there were no silviculture activities subject to this audit.

^{vii} The fish-bearing status of Pinegrove Creek is uncertain. It is currently classified as an S3 fish bearing stream. However, a fish barrier, where the stream crosses Hwy 26, prevents fish from migrating upstream to the reach subject to audit. No fish surveys have been conducted above the barrier to determine the presence of fish. Without confirming the presence of fish above the barrier, the potential that this portion of the stream may contain fish remains.

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. (The transitional provisions of FRPA state that the Code continues to apply to forest practices carried out under a forest development plan, until there is an approved forest or range stewardship plan, at which point the requirements of FRPA apply.)

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 forest 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 2007, the Board randomly selected the Robson Valley Timber Supply Area as a location for an audit. After assessing the activities within that area, we discovered that two licensees 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, the audit focused on the status of the outstanding obligations of these two licences.

For BCTS audits, a forest 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 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 field work 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 to two weeks in the field.

Evaluating the Results

The Board recognizes that compliance with the many requirements of the Code, 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 Code, FRPA and WA requirements.

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 auditor's draft report 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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For Immediate release
Mar. 7, 2012

Quesnel ski hill's forest practices pass audit

VICTORIA – An audit of forest planning, harvesting and road practices at family-owned Troll Resort Ltd., found that the resort met the requirements of provincial forestry legislation, according to a report released today.

“The board includes all types and sizes of forest licences in its audit program,” said board chair Al Gorley. “In this case, the ski hill harvested trees on public land in a controlled recreation area as part of its operations, and the board decided to check if it was meeting the legal requirements.”

Troll Resort is a ski hill within the Troll Mountain controlled recreation area, located 45 kilometres east of Quesnel on Highway 26. Over the past two years, Troll harvested approximately 14,000 cubic metres of timber from occupant licences to cut L43043 and L48493. These harvests were conducted to address forest health and safety concerns, and to enhance skiing opportunities.

Audit field work took place on Aug. 9 and 10, 2011.

The Forest Practices Board is B.C.'s independent watchdog for sound forest and range practices, reporting its findings and recommendations directly to the public and government. The board audits forest and range practices on public lands and appropriateness of government enforcement. It can also make recommendations for improvement to practices and legislation.

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More information can be obtained by contacting:

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