



**Forest
Practices
Board**

Meadow Creek Cedar Ltd.

**Forest Practices and Government
Enforcement**

Complaint Investigation 110998

FPB/IRC/182

May 2012

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Board Commentary

In May 2011, a resident of Meadow Creek, BC filed a complaint with the Forest Practices Board regarding the forestry practices of Meadow Creek Cedar Ltd. (MCC). The Board investigated and found that some of MCC's roads, harvesting and silviculture activities did not comply with legislation. In addition, some silviculture, protection and road construction practices were considered unsound. MCC did not implement recommendations provided in professional reports, including silviculture prescriptions and road engineering reports. This created unacceptable environmental and management risks, which, in the Board's view, undermine public confidence in the industry and the professionals who work in it.

MCC's allowable annual cut accounts for just 0.1 percent of the total provincial cut, therefore, the findings of this investigation should not be considered indicative of the forest industry. In its ongoing audits and investigations the Board rarely finds licensees who do not strive to comply with the law and when it does, the licensee nearly always brings its forest practices into compliance.

In recent years, many forest management decisions have been moved outside the regulatory framework and, therefore, outside the direct control of government officials and into the hands of licensees. In making these decisions, licensees use professionals to plan, advise and carry out complex tasks, and to balance the interests of their employers and the public.

However, it is the licensee, not the professional forester, who ultimately decides how to address government objectives, and, under the *Forest and Range Practices Act* (FRPA), government has committed to hold licensees accountable through its compliance and enforcement activities. In this instance, MCC exercised its discretion and decided not to implement some plans, prescriptions and recommendations made by its professional foresters and professional engineers. This resulted in unsound forest practices that put forest resources at unnecessary risk.

Government tried to encourage MCC to improve its forest practices but, after five years, there was little sign of improvement and government has only now suspended the forest licence. In instances such as this, where there is a continuous and prolonged contravention of a licensee's obligations and continuing evidence of unsound forest practices, government needs to be able to act much sooner. Failure to do so undermines public confidence in FRPA, and the ability of government, tenure holders and the professionals who work for them, to manage the forest resource competently. Failure to address unsound practices before damage results leads to remediation, rather than prevention.

Finally, the Board is concerned that natural landslides and the lack of road maintenance and management in the Healy Creek drainage place the integrity of Healy Creek and downstream fisheries resources at risk. Government and MCC have been unable to agree on how to address these issues. However, continued inaction will increase the likelihood of damage to fish habitat in Healy Creek and the Lardeau River.

Background

In May 2011, a resident of Meadow Creek filed a complaint with the Forest Practices Board. The complaint was made following a series of public meetings where residents expressed growing concerns that road construction and maintenance practices, harvesting practices and silviculture activities were eroding the long-term viability of a local forest licence held by Meadow Creek Cedar Ltd. (MCC).

The complainant asserted that MCC did not construct and maintain roads in a reasonable manner, did not conduct harvesting and silviculture activities in a sustainable manner, and that government did not appropriately enforce forestry legislation.

The Board investigated:

1. the degree to which MCC is meeting its forestry obligations as a forest tenure holder, and
2. the appropriateness of government enforcement regarding MCC.

MCC operates under forest licence A30171,¹ at the north end of Kootenay Lake in the Selkirk District.² The licensee has many operating areas: from the Coffee Creek and Fletcher Creek drainage in the south; the Lardeau-Trout Lake area to the northwest; and the Duncan Lake and River drainage to the northeast (see map on page 3). The topography is similar to the coast, with steep side-slopes and narrow valley bottoms.

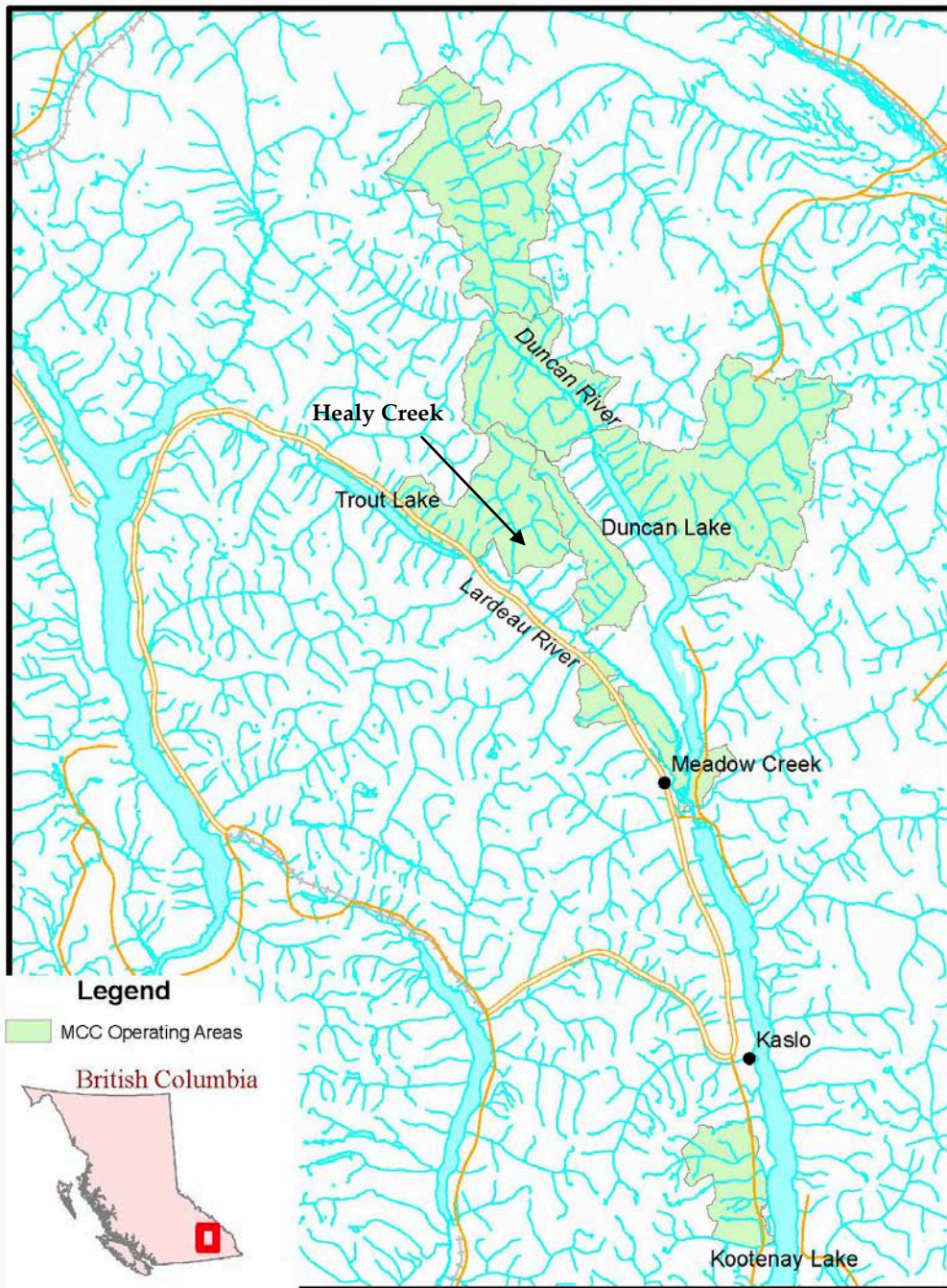
In 2005, a new company purchased MCC, taking on the obligations and opportunities of the forest licence and a sawmill. The new owner employed a new manager and staff for the woodland operations.

The Ministry of Forests Lands and Natural Resource Operations (MFLNRO) considers MCC a high-risk forestry operation, partly due to difficult topography, but also due to MCC's many forestry-related infractions.

¹ Allowable Annual Cut for FL A30171 is 96 513 cubic meters.

² Formerly Kootenay Lake Forest District.

Overview Map of Meadow Creek Cedar's Operating Areas



Discussion

The investigation examined whether the licensee is fulfilling its forestry obligations as a forest tenure holder, and also examined government enforcement of the licensee's practices. That involved assessing:

1. compliance of MCC's forestry activities with legislation,
2. the soundness of MCC's forest practices, and
3. the appropriateness of government's enforcement.

Did the licensee comply with forestry legislation?

The investigation reviewed operational planning, road and bridge construction and maintenance, harvesting, silviculture and protection obligations and activities conducted between July 2009 and July 2011 (the "review period"). MCC was required to comply with the *Forest and Range Practices Act (FRPA)*, *Wildfire Act (WA)* and their associated regulations, as well as legal orders concerning use of Crown land including the Kootenay Boundary Higher Level Plan Order (KBHLPO). The KBHLPO establishes broad objectives for:

- biodiversity and associated mature and old forest objectives
- caribou and grizzly bear habitat
- green-up
- consumptive use streams
- enhanced resource development zones for timber
- fire maintained ecosystems
- visual resources
- social and economic stability

The objectives of the KBHLPO are incorporated into the licensee's forest stewardship plan (FSP).

Planning and Practices Examined

The investigation examined MCC's operational planning and practices related to harvesting, roads and bridges, silviculture and fire.

MCC conducts its operational planning under the Meadow Creek Cedar Ltd. Forest Stewardship Plan,³ approved on November 15, 2007. The FSP was examined for compliance with FRPA's planning requirements.

³ 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 cutblocks. FSPs can have a term of up to five years.

During the review period, MCC harvested, or partially harvested, 36 cutblocks. The Board rated these cutblocks for risk, using information provided by the licensee. Four cutblocks were high risk, 16 were moderate risk and 16 were low risk. The investigation examined harvesting practices on 18 of those cutblocks, focusing on stream protection, soil disturbance and wildlife tree retention.

MCC constructed 67 kilometres of road during the review period, of which 43 kilometres of road construction and 2 road sections designed and signed off by an engineering professional were investigated. In addition, MCC was responsible for maintaining 454 kilometres of road, of which 434 kilometres were wilderness roads with no industrial activity. The investigation examined 218 kilometres of maintained roads.

MCC did not permanently deactivate any road sections or construct any bridges during the review period, but the investigation examined 17 of 19 existing bridges.

MCC conducted silviculture activities or had silviculture obligations on 132 blocks, which included planting, regeneration and free growing obligations.⁴ No brushing, site preparation or other silviculture treatment activities occurred during the review period. The investigation examined 73 blocks: 38 by office review and 35 by office and field review.

There were two active harvesting operations during the review period and both were investigated for compliance with the *Wildfire Act* and regulations.

Results

Planning

FRPA requires the licensee to prepare operational plans, including a forest stewardship plan (FSP)⁵ and site plans (SP),⁶ consistent with the legislation and any applicable legal orders. The FSP was consistent with legislated requirements and the KBHLPO. All cutblocks had accompanying site plans (SP), consisting of a map and text.

⁴ Derived from information supplied by the licensee and verified through file reviews, MFLNRO consultations and the RESULTS (Reporting Silviculture Updates and Land status Tracking System) application.

⁵ A forest stewardship plan is the only plan subject to public review and comment and government approval. Licensees are required to identify results and/or strategies consistent with government objectives for values such as water, wildlife and soils in FSPs. These results and strategies must be measurable and, once approved, are subject to government enforcement. FSPs also identify broad forest development units within which road construction and harvesting will occur, but need not show the specific locations of future roads and cutblocks.

⁶ The site plan is a document that identifies how the intended results or strategies described in the forest stewardship plan apply to the site (cutblock).

Harvesting

Small streams (S4 & S6)⁷ occurred within blocks and larger (S3) streams were adjacent to the blocks. The FSP commits to having all streams assessed by a qualified professional. Such



Skidding across S4 stream, altering stream channel flow.

assessment determines the level of retention required in riparian management zones along each stream. In general, MCC adequately managed streamside areas by establishing wildlife tree patches around creeks and locating block boundaries outside of the riparian management zones. However, MCC failed to identify or classify streams in two cutblocks. In one, the S6 stream was managed appropriately. In the other cutblock, two S4 streams flowed into an S3 stream. Skidding occurred across these two creeks. In one of the creeks this caused a change in channel flow and disturbance to the stream bed. That did not comply with sections 39 and 57 of the *Forest and Planning and Practices Regulation* (FPPR) (failure to maintain natural

surface drainage patterns, and conducting a primary forest activity in a manner that is likely to destroy, damage or harmfully alter fish habitat).

Wildlife Tree Retention

MCC's FSP specified targets for wildlife tree retention ranging from 0 to 7 percent. MCC met those targets by retaining wildlife trees in patches, in groups and as individual stems. Wildlife tree patches averaged 10 percent of cutblocks, ranging from 0 to 37 percent.

Road Construction

All non-engineered road construction complied with forest practices legislation. Yarding had damaged some culverts, reducing their effectiveness, and some road sections had large tension cracks, indicating a weakness in the structural integrity of the road. However, these were not widespread.

Road Maintenance

Of the 218 kilometres of road investigated, approximately 20 kilometres were active. MCC is required to protect the structural integrity of road prisms and to ensure that drainage systems



Wildlife tree retention dispersed across cutblock.

⁷ An S3 stream is fish bearing and 1.5 - 5 m. wide; an S4 stream is also fish bearing, but less than <1.5 m. wide; an S6 stream has no fish and is <3.0 m. wide.

remain functional. Several road sections had plugged culverts, small failures, tension cracks, erosion and plugged ditches. Although such deficiencies were minor, MCC had not recently inspected many of these roads and was unaware of the potential problems.

Road maintenance was of particular concern in Healy Creek, a 20-kilometre long drainage off the Lardeau River. In 2008, government removed most of the drainage from the operable forested landbase and placed it into a “no-harvest area” to conserve habitat for mountain caribou. Healy Creek flows into the Lardeau River, and both Healy and Lardeau contain rearing habitat for Gerrard rainbow trout (the world’s largest), bull trout and Kokanee salmon. In addition to fish habitat values, the Healy Creek watershed is used for heli-skiing, mining and backcountry recreation.

Within the no-harvest area, MCC holds a road permit requiring it to maintain 25 kilometres of roads, and silviculture obligations on 300 hectares of previously harvested cutblocks until the stands are considered free growing (free of competition from other vegetation).

The investigation found several natural landslides originating above the road and continuing across the road corridor of the Healy Mainline, some reaching Healy Creek. Any sediment entering Healy Creek could adversely affect the downstream spawning and rearing habitats. MCC has asked MFLNRO to release it from all road maintenance and free growing obligations in the no-harvest area. Government used its prerogative to remove this area from the timber harvesting land base and MCC feels that government should now accept responsibility for these obligations. The ministry refuses to do so until MCC deactivates the road, which involves removing all bridges and culverts and stabilizing the road. MCC maintains that government should cover the cost of deactivation, which is currently more than the company can afford. However, while the parties debate payment for road deactivation, the risk of potentially high environmental consequences increases.

Bridges

The investigation identified no significant concerns with bridge maintenance. Two structures will need a load-rating review before industrial use, but both are currently inaccessible and do not pose a safety hazard. However, since 2004, MCC has not completed any formal bridge inspections and there is no bridge maintenance program or tracking system in place.

Silviculture

The investigation revealed 67 instances of non-compliance or minor reporting errors in MCC’s silviculture program. Thirty-five related to the Chief Forester’s Standard for Seed Use.⁸ The remaining 32 were mostly minor reporting errors, but there were eight major non-compliances: failure to meet free growing (1), not reporting forest cover inventory (3) and failure to meet the allowed regeneration delay (4).

⁸ 14 were minor and 21 were major non-compliances.

Protection (Fire Preparedness)

The *Wildfire Act (WA)* and *Forest Fire Prevention Regulation (FFPR)* require that a licensee carrying out operations that may start a fire must determine the fire danger class, impose work restrictions, keep appropriate hand tools on site and have an adequate fire suppression system in place.

The investigation found that MCC complied with this legislation, except that one harvesting operation did not have an adequate fire-suppression system. This is in contravention of section 6(3)b(ii) of the FFPR.

MCC completed hazard assessments at the same time it completed waste surveys for cutblocks. The licensee avoided broadcast burning due to liability and inherent risk of escapes. Debris was piled to facilitate burning although, in a few instances, the piles were close to standing timber, risking damage to those stands when the piles are burned.

Findings

The investigation found several of Meadow Creek Cedar Ltd.'s forestry activities failed to comply with legislation.

- Skidding occurred across one stream, altering the natural drainage pattern and damaging fish habitat.
- There were 67 failures to comply, or minor reporting errors, in the silviculture program. Individually the failures and errors were not significant, but cumulatively they are a major concern.

Were planning and practices sound?

The Board encourages sound forest practices that warrant public confidence, so the investigation considered whether practices were not only consistent with the legal requirements, but also if the plans fostered sound forest management and were implemented as intended. There were three areas where MCC complied with the law, but carried out forest practices that the Board considered unsound.

Soundness of forest practices was evaluated by:

- using individuals with expertise and experience in specific fields;
- applying observations of standard industry practices seen throughout the province during Board audits and investigations;
- using existing guidebooks such as the engineering and silviculture manuals;
- examining research and scientific publications; and
- reviewing professional reports.

Determining the soundness of forest practice requires assessment of planning, implementation of those plans, and the appropriateness of activities carried out under those plans. Plans evaluated include forest stewardship plans; site plans; archaeological, visual and terrain assessments; road designs and drainage plans.

Under FRPA, forest practices are result-oriented with limited government oversight and reliance on professionals. FRPA, tied as it is to professional reliance, entails some risk. The soundness of forest practices is largely dependent on following plans and prescriptions prepared by professionals and following best management practices. Successful implementation of a plan is contingent on the willingness and ability of a licensee to follow the plan. Most licensees usually implement plans as written, although minor modifications are common.

The investigation found three areas considered unsound forest practice (rehabilitating excavated trails, construction of engineered roads, and silviculture practices) and one area of poor practice (administrative controls).

Excavated Trails



Excavated trails prescribed for rehabilitation.

Rehabilitation of excavated trails is normally prescribed to maintain productivity of the forest land base and to reduce the risk of slope failures due to channelling of water. MCC's site plans specified trail rehabilitation on 11 cutblocks. For one of those blocks, a geotechnical report had specifically recommended rehabilitation of excavated trails. MCC did not rehabilitate the excavated trails on any of the 11 cutblocks. Several other cutblocks were supposed to be cable harvested, but were conventionally logged using excavated trails on steep slopes, which also were not rehabilitated.

Engineered Roads

The investigation found that recommendations contained in qualified professionals' prescriptions for the two engineered road sections were not followed. Both of these road sections had started to fail. Road failure increases the risks of contravening section 37 of the FPPR, which requires that licensees ensure a primary forest activity not cause a landslide that has a material adverse effect.

One engineered section is above an S3 fish-bearing stream. There are numerous road failures, with some sediment reaching the creek. The potential for further environmental impacts on the creek is high.

The other engineered road section was originally planned on potentially unstable terrain. The location was reviewed by a professional engineer,



Engineered road construction causing erosion and sedimentation into a fish bearing stream.

who prepared a terrain stability assessment (TSA) for the road. Subsequently, the road location was moved about 40 metres down slope, outside of the area covered by the TSA, but still on potentially unstable terrain. That new location was not reviewed by a qualified professional and none of the recommended construction techniques one might expect, such as full bench end-haul, were incorporated in the construction. There are now unstable areas along sections of the road corridor due to over-steepened slopes, poor drainage installations and improper fill placement. A portion of the road at the start of the section has failed to the point where the remainder of the road and a cutblock, where the site plan and terrain stability assessment prescribed rehabilitating excavated trails, are no longer accessible.

Silviculture

There were poor reforestation and brush control practices that increased the risk of not achieving free-growing stands within the required timeframe. A licensee is required to identify dates for two milestones: regeneration (when a new crop of trees has become established at a required density) and free growing (when the new trees are large enough to overcome



competition from other vegetation). In MCC's case, the harvested area must be regenerated within 4 to 7 years, and free growing must be achieved within 20 years of the harvest start date.

The investigation found that MCC's seedling purchase strategy and seed handling techniques resulted in high mortality on several blocks. MCC often purchases other licensees' surplus seedlings on the open market. This lowers the cost but results in late planting and poor stock handling, increasing mortality and

complicating adherence to the Chief Forester's Standards for Seed Use. Some of the mortality was due to late planting (i.e., in July), which resulted in drought kill. Other mortality resulted from poor stock handling, such as thawing frozen seedlings for planting, refreezing excess seedlings and then thawing them a second time for late planting. MCC declared areas as having met regeneration delay the same year as the planting, but there was a high risk of plantation failure and usually there was no follow up survey⁹ to determine whether planted seedlings actually survived.

The second poor practice involved brush control by the licensee. MCC has not brushed areas for the past five years, even though many of its operating areas are subject to dense shrub growth after harvesting. Brush competition restricts seedling growth and increases seedling mortality. Brushing allows seedlings to reach free growing status; not doing so may prevent stands from reaching free growing status within the required period, but such delay will not be apparent for

⁹ Typically, a licensee does a follow up survey 2 years after regeneration.

several years. There is no legislated requirement for a licensee to monitor stands or carry out a silviculture treatment. However, monitoring and active management of harvested areas, including applying treatments to overcome brush competition or low stocking, is essential if free growing is to be achieved in a reasonable time. The long-term sustainability of the forest resource is at risk if a plantation fails or silviculture treatments are not applied to ensure that stands achieve free growing.

Administrative Controls

There was a lack of administrative controls and inconsistent record keeping by the licensee. For example, there was no formal road or bridge maintenance program or tracking system to ensure roads were structurally sound and drainage systems were functional. There were also inconsistencies between government (Reporting Silviculture Updates and Land Status Tracking System (RESULTS)¹⁰ and Forest Tenure Administration(FTA)¹¹) and licensee databases.

MCC's forest professional sent three letters to company management expressing concerns about the soundness of forest practices. The letters outlined specific concerns about:

- the silviculture program, including seedling orders, surveys, planting and brushing activities, and
- road construction not following the recommendations of a terrain field assessment and construction recommendations which pose issues of safety for the loggers, a potential high risk to a creek and the fisheries values the creek provides, and not meeting the appraised engineering cost estimate.

There was no indication that MCC addressed any of those concerns.

Findings

- Recommendations and commitments in geotechnical assessments, SP's and notification letters by a qualified professional were not followed or addressed, placing the environment at increased risk, and
- Silviculture practices increased the risk of stands not reaching free growing, risking the long-term productivity of the forest resource.

¹⁰ The RESULTS application tracks silviculture information by managing the submission of Openings, Disturbances, Silviculture activities and Obligation declarations as required by the legislation.

¹¹ FTA is a Web-based system that supports government business requirements including: recreation, harvest, road and range tenures management; permit issuance; map reporting and processing; and linkage to other corporate systems.

Was government enforcement appropriate?

The complainant also identified a concern with government's enforcement¹² section (C&E) in overseeing MCC's operations. The investigation considered the following:

- Did C&E appropriately risk rate operations?
- What does C&E enforce?
- Did C&E adequately inspect MCC operations?

Did C&E appropriately risk rate operations?

The investigation found that cutblocks and roads in the Selkirk District are adequately risk rated. However, the current legislation impedes the effectiveness of C&E's risk rating process. Under FRPA, government is not involved in the planning or approval of operational plans, and has limited knowledge of proposed forestry activities and their associated risk. There is little information available for assessing risk; usually only general information submitted by the licensee such as cutting permit and appraisal submissions. Site-specific documents such as site plans and professional reports that highlight the inherent risks of a site do not have to be, and usually are not, provided to government staff.

Government recognizes this problem. A ministry guidance memo in December 2008¹³ states, "this lack of site level information, combined with lack of routinely available assessments and the corresponding measures that are planned to protect the identified values creates a very difficult situation to conduct defensible, effective and efficient risk assessment." A district manager can request site-level information from licensees. However, the guidance memo also states that blanket requests should not be made to address a systematic issue like risk assessment or appraisal analysis. Regardless, government must risk rate as accurately as possible so that inspections are directed to those areas with the highest risk. Requests for assessments and site plans for critical areas would not be overly onerous, since most information is in electronic format and can be transferred quickly and efficiently.

The Selkirk District staff recognized this difficulty and developed a risk-rating system to try and compensate for it. Tenures and engineering staff initially conduct risk rating at the time of cutting permit or road permit issuance. They forward that to C&E for review and further adjustments to the risk ratings are made based on experience, client history, non-forestry risks, site risks, operational priorities and local knowledge. Fortunately, C&E staff in the Selkirk District have worked there for several years and are familiar with licensees, topography and individual operators so they can apply a reasonable level of professional subjectivity to the risk rating.

¹² Refer to C&E home page for more information <http://www.for.gov.bc.ca/hen/>

¹³ https://icw.for.gov.bc.ca/hen/risk_compliance/interim.htm

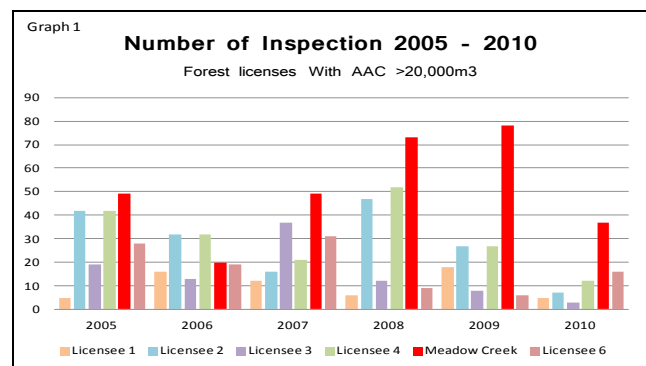
What does C&E enforce?

C&E enforces compliance with legislation including the *Forest Act*, *FRPA*, the *Wildfire Act*, related regulations, and compliance with commitments and obligations in FSPs. However, it is difficult for C&E to enforce the FSP, since it usually lacks the site-specific detail needed to enforce results and strategies. C&E does not enforce commitments or recommendations contained in plans and reports prepared by professionals, such as site plans; archaeological, visual and terrain assessments; road designs and drainage plans, even though these documents identify how the intended results or strategies described in the FSP apply to the site and meet the principle of sound forest management.

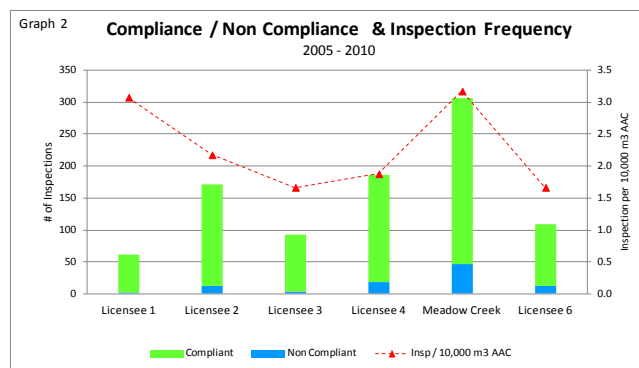
Did C&E adequately inspect MCC operations?

The investigation reviewed the number of inspections carried out over the past several years for forest licensees with an allowable annual cut (AAC) of over 20 000 cubic metres within the former Kootenay Lake Forest District (Graph 1). Between 2005 and 2010, there were 185, 132, 166, 199, 164 and 80 respectively. Between 2006 and 2009, the number of inspections on MCC's operations steadily increased. Inspections of MCC's operations accounted for 33 percent of all inspections in the district between 2005 and 2010, although the licensee accounted for just 23 percent of the district's AAC.

The investigation also reviewed the number of inspection per cubic metre (m³) of AAC. Graph 2 shows the total inspections by forest licensee over the same period, and the number of inspections per 10 000 m³ of AAC. MCC has the greatest number of inspections of all licensees (306) and also the highest number of inspections



per 10 000 m³ of AAC (3.2).



In 2010, there was a 50 percent decline in inspections across all licensees. That was due to an increase in inspection of non-forestry activities. In 2007, the natural resource agencies initiated a Resource Management Coordination¹⁴ (RMC) project throughout BC. The RMC directed C&E resources to monitoring and enforcement across natural resource agencies to activities that have the

¹⁴ As of October 2010, the natural resource sector agencies include: Ministry of Agriculture; Ministry of Energy and Mines; Ministry of Environment; and Ministry of Forests, Lands and Natural Resource Operations. Prior to October 2010 the natural resource sector agencies included: Ministry of Energy, Mines and Petroleum Resources; Ministry of Environment; Ministry of Forests and Range; Integrated Land Management Bureau; Ministry of Transportation and Infrastructure; and Ministry of Tourism, Culture and the Arts.

highest risk to the Crown's land and resources. The project was fully implemented in 2010. This resulted in a reduction in the number of inspections of forestry operations, as C&E staff were assigned to other inspection priorities. Given fewer forestry inspections, the Board believes it is essential that inspections are directed to the highest risk forestry activities.

Since April 2006, C&E has issued 46 compliance notices¹⁵ and district staff made 5 determinations¹⁶ against MCC:

- failure to construct a road in accordance with a road layout and design¹⁷ (2008)
- self reported trespass (2008)
- failure to report forest cover on 21 cutblocks (2009)
- failure to report silviculture and forestry obligations on 14 cutblocks (2010)
- failure to meet regeneration delay on 6 cutblocks (2012)

There are also 11 ongoing investigations.¹⁸

The minister or the minister's delegate may suspend a forest licence for failure to comply with FRPA. Although MCC had many contraventions and penalty determinations since 2006, the district manager considered that only the failure to meet regeneration delay constituted valid grounds for suspension. Government responded in February 2012 by suspending FL A30171.

Findings

- C&E appropriately risk rated all forestry activities, even though government policy limits information available to C&E for use in such risk rating.
- C&E inspection, monitoring and subsequent enforcement actions were not effective in improving MCC's operations, as the company continued to violate legislated requirements.

¹⁵ Compliance actions are used when an official has reasonable grounds to believe a contravention has occurred, or may be about to occur, but in situations where enforcement actions are not warranted. Compliance actions include warning tickets and compliance notices.

¹⁶ When an official determines that legislation requirements have been contravened and a formal sanction is warranted. Enforcement actions include violation tickets, monetary penalties, remediation orders, licence suspension, licence cancellation, timber sale disqualification and orders to vacate. Parties subject to enforcement actions have an avenue to appeal the action.

¹⁷ This determination was made for violation under the former *Forest Practices Code of British Columbia Act*.

¹⁸ Specific details of investigations are not shared publicly, or with the Board, prior to a determination being made.

Conclusions

Several aspects of MCC's roads, harvesting, protection and silviculture activities did not comply with FRPA. There were also instances where the licensee's operations complied with legislation, but were unsound forest practices. It is notable that MCC did not implement many of the recommendations contained in professional reports. In addition, the poor performance of MCC's silviculture program may result in failure to achieve free-growing obligations in the future.

Government, as the trustee of public lands, needs to assess forest practices of tenure holders and be prepared to take action when harm (environmental or otherwise) may occur. C&E enforcement of MCC's operations was appropriate and the Board acknowledges government's decision to suspend the forest licence.

C&E risk rated forestry activities, even though government policy discourages C&E from requesting information from licensees. Risk rating must be as accurate as possible so that the limited inspections are directed to those areas with the highest risk. Requests for assessments and site plans for high risk or perceived critical areas would not be overly onerous on licensees since most information is in electronic format and can be transferred quickly and efficiently. C&E does not enforce commitments or recommendations contained in plans and reports prepared by professionals. As a result, C&E did not address some unsound practices that posed a high risk to the environment, due to MCC not following recommendations in professional reports, in a timely manner.

The lack of road maintenance in the Healy Creek drainage places the integrity of Healy Creek and downstream resources at risk. Maintaining or deactivating roads in the Healy Creek drainage is costly and will affect other resource users in the area. However, inaction will increase the likelihood of road failures affecting not only the rearing habitat of Gerrard rainbow trout, Bull trout and Kokanee salmon in Healy Creek, but also in the Lardeau River.

Practice of Professional Forestry

FRPA assumes the tenure holder will seek and utilize the advice of professionals as it applies to the management of public land. The success of reliance on professionals depends on licensees' willingness to accept and follow the guidance of professionals. In this case, the licensee frequently did not follow plans or reports prepared by professionals. The Board notes that a professional forester who identified concerns about the soundness of forest practices left the company once it was clear the licensee was not following his advice or addressing his concerns.

Failure to implement plans prepared by professionals raises two questions. First, did a professional forester oversee the implementation of the plan and did they do so in accordance with the *Foresters Act* and the ABCFP Code of Ethics? Second, did MCC remove registered foresters from any active role in advising, supervising or assessing the impact of forestry activities, and if they did, were they violating the *Foresters Act*? These questions are outside of the scope of this investigation, but may require further examination by government and the Association of BC Forest Professionals.

Recommendations

In accordance with the *Forest and Range Practices Act*, the Board is making the following recommendations:

1. MCC, or the government if MCC's licence is still suspended, should employ a qualified professional to review roads where construction did not follow the engineering designs and, if necessary, prepare a mitigation strategy for those roads.¹⁹
2. Government should assess the potential environmental risk of the roads in the Healy Creek drainage and coordinate a maintenance/deactivation strategy involving all resource users.
3. Government should examine its policies to ensure it has the ability to act quickly where there is an imminent high risk to the environment or a forest resource, whether or not a negative impact has occurred.
4. Government should explore its options, including intervention under section 77 of FRPA, for ensuring outstanding silviculture obligations on FL A30171 are met and free growing is achieved within the timelines specified in MCC's FSP.

The Board requests that government advise it of the steps taken, or planned, to address these recommendations by December 31, 2012.

¹⁹ A professional engineer has stated that remediation work has been completed on the engineered road section above the fish bearing creek. However, due to snow covering the ground this has not been confirmed.



**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.fpb.gov.bc.ca