

Harvesting and Road-Building on a Maple Ridge Woodlot

Complaint Investigation 040550



FPB/IRC/109

June 2005

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The Investigation

On July 5, 2004, the Blue Mountain-Kanaka Creek Conservation Group (the complainant) submitted a complaint to the Forest Practices Board about the adequacy of planning and forest practices on Woodlot Licence W0007, in Maple Ridge. The complainant is concerned that woodlot activities will harm domestic water supplies and scenic views in the area. The complainant referred to a stream that was incorrectly classified, and a road that was built without proper approval. According to the complainant, the amount of timber cut in the watershed is too high. It wants clearcutting and road-building stopped, and any plans to expand the woodlot dropped.

The allocation of forest tenures, including possible expansion of the woodlot and control of the licensee's rate of forest harvesting, is a *Forest Act* matter and is not within the Board's jurisdiction to investigate. Therefore, the Board considered the protection of water resources, whether a stream was correctly classified, the protection of scenic views, and the licensee's road-building practices, all of which are matters under the *Forest Practices Code of British Columbia Act* (the Code). In addition, the Board considered the appropriateness of government's enforcement of the Code for road construction.

Background

Woodlot W0007 covers 276 hectares on Crown land. Since 1985, about 35 hectares of the woodlot have been logged. The Ministry of Forests (MOF) is considering expanding the woodlot into adjacent unallocated Crown land in the Blue Mountain Provincial Forest.

The woodlot is managed by a private society, the British Columbia Institute of Technology Forest Society (the licensee) for income, training and research purposes to aid the BC Institute of Technology (BCIT) forestry program. Although the licensee is affiliated with BCIT, BCIT is not a subject of the complaint; the licensee is a separate legal entity with authority to use the school's name. There is no reporting relationship between the BCIT school administration and the BCIT Forest Society.

In December 2002, the MOF district manager approved the licensee's 2002-2009 forest development plan (FDP). The plan included 2.8 kilometres of road construction and 5 cutblocks, totalling 30.5 hectares. None of those cutblocks are to be clearcut. The licensee started building the roads in October 2003.

In December 2003, while building one of the roads, the licensee realized that it had incorrectly classified several streams as non-fish streams. The licensee stopped building the road, removed two unsuitable culverts it had installed, stabilized the disturbed areas to prevent erosion, and reported its mistake to MOF. The licensee then revised its plans to ensure the road crossings would be suitable for fish streams.

MOF initially determined that the licensee's road-building activities complied with the Code. Subsequently, MOF revised that determination and decided that the licensee had not complied, because it had built the road alongside a stream without a required approval. MOF fined the licensee \$345. Soon after, the licensee resumed building the road, and installed appropriate crossings on the fish streams.

Relevant Legislation

The Board investigated the complainant's concerns related to forest planning, forest practices and enforcement under the *Forest Practices Code of British Columbia Act* and regulations (the Code)¹². Code requirements for woodlots were found in the Code Act (the Act) and the *Woodlot Licence Forest Management Regulation* (WLFMR).

Discussion

1.0 Water Resources

The complainant questions whether assessments were adequate to ensure protection of water resources. In particular, it believes that groundwater remains at substantive risk of contamination and decline.

A watershed assessment considers the characteristics of the watershed and the effect of past and proposed forest practices on water quality, quantity and timing of water flow. The Code did not require the woodlot licensee to complete a watershed assessment, but an existing assessment might be applicable. However, in this case, there was no existing assessment.

The Board went on to consider the circumstances in which it would be prudent to commission a watershed assessment anyway. Those standards are set out in the Code's *Coastal Watershed Assessment Procedure Guidebook*. It states that a watershed assessment is most useful where at least 20 percent of a watershed was logged during the past 25 years, and where a significant amount of landslides, riparian harvesting or stream channel problems have, or are expected to occur. None of those criteria applied in this case, so the Board considers that no further watershed assessment was necessary for FDP approval.

Nevertheless, the Code did require the licensee to specify measures to protect water quality in its FDP. The FDP included such measures: streamside tree retention, sediment control, and supervision of forest practices. The licensee's FDP also described proposed cutblocks, roads, and streams, as required. The Code does not require that all streams present on the

² The Board has similar authority under the new *Forest and Range Protection Act*, however, the new Act does not apply to the circumstances of this complaint.

ground be described in an FDP; small streams need not be identified until more detailed planning occurs.

Unstable ground can affect water quality. The complainant believes that a terrain assessment should have been conducted to determine whether slope failures or soil erosion might damage water values. If harvesting was proposed on a sensitive slope (typically one over 60 percent gradient and unstable or potentially unstable), the licensee was required to complete a terrain stability field assessment. In this case, no harvesting was proposed on sensitive slopes, so no terrain stability field assessment was required.

In considering whether to approve the FDP, the MOF district manager considered potential impacts to water. Both a Ministry of Water, Land and Air Protection (MWLAP) water specialist and a MWLAP habitat biologist had recommended that the licensee take additional actions to reduce the risk to water values. The district manager noted that, in response, the licensee had modified its streamside strategies and FDP text to address those concerns. The district manager also considered public concerns about water quality and groundwater supply, the licensee's response, and the local knowledge and experience of MOF staff.

The district manager knew that the area was not heavily harvested in recent years and that the terrain was generally stable. In addition, the district manager noted that the licensee proposed substantial protection of trees in the woodlot's riparian areas. He concluded that the proposed timber harvesting and road-building would not threaten water resources in the area.

Following approval of the FDP, the district manager continued to discuss concerns about water management with the complainant, as expansion of the woodlot was being considered. These discussions resulted in MOF hiring a consultant to assess the hydrology of the surrounding area, including the woodlot. In May 2004, the MOF consultant concluded that the potential of forest harvesting to affect either surface or ground waters in the area was very low to low.

The MOF consultant's report did not satisfy the complainant. It believed that groundwater remains at substantive risk of contamination and decline. Therefore, the complainant hired its own consultant to review the MOF report. That consultant concluded the MOF report provides inadequate assurance because it is neither spatial nor related to a specific harvest plan (as watershed assessments typically are).

However, relative to Woodlot W0007, the complainant's report identifies that only the lower 20 percent of the woodlot contributes to shallow groundwater supply, the water of greatest concern to the complainant. The consultant noted that groundwater supply is likely to increase after forest harvesting, not decline as the complainant expects. Furthermore, the consultant told the Board that contamination of shallow-source groundwater is more likely

to occur from land uses on the property from which the water is extracted than from activities on the woodlot.

Forest development planning and approval complied with Code requirements for protection of water resources. That, plus the additional work done by both MOF and the complainant's consultant, satisfies the Board that protection of water resources was adequately assessed. Woodlot activities are unlikely to adversely affect groundwater quality or supply.

2.0 Stream Classification

The complainant maintained that the licensee's 2002-2009 FDP incorrectly classified a fish stream, even though the licensee was aware of the correct (and more restrictive) stream classification in 2001.

The fish stream of concern was incorrectly classified in the licensee's approved FDP. However, at the FDP level of planning this is not an unusual circumstance. An FDP is a rather broad plan, with preparation largely an office-based exercise that often precedes the field work necessary to classify streams. Only where stream classifications were already "known"³ did the licensee have to identify and describe the classifications in its FDP.

In May 2001, a MWLAP biologist noticed that the stream of concern to the complainant was incorrectly classified on a licensee map. The biologist advised MOF and the licensee of the correct classification. However, the biologist, who was also a designated environment official (DEO), never formally made the information "known" for the purpose of the WLFMR. While it would have been prudent of the licensee to revise the classification in its subsequent FDP, there was no requirement to do so.

To assess the potential for impact on the ground, the Board reviewed a subsequent, and more detailed, site plan for the cutblock proposed adjacent to the stream. The site plan correctly classified the stream and applied the proper protective buffer. Therefore, the incorrect classification in the FDP had no on-the-ground consequence.

However, the problem of incorrect stream classification arose again in relation to a recently built road. The complainant was aware that Heaps Road was built without proper approval, and that the road crossed several streams. This led the complainant to question whether the licensee had adequately protected aquatic values during construction of the road.

In 2002, the licensee employed a professional biologist to train and supervise a summer crew hired to classify streams on the woodlot, including those near the proposed Heaps Road. However, in spring 2003, the licensee discovered that its staff had independently

³ "known" refers to information made available to the woodlot licensee by a district manager or designated environment official at least four months before an FDP is submitted for approval. (WLFMR June 2002)

replaced the biologist's supervision with its own. It happened that some of the resulting stream records were lost, and many of the reported stream classifications were incorrect. It is not known if the licensee's staff was aware of the standard stream classification procedures contained in the Code's *Riparian Management Area Guidebook* and *Fish-stream Identification Guidebook*. In any event, the licensee instructed its staff to obtain correct stream classifications during the summer of 2003. There is no record that shows the licensee's staff did so before building Heaps Road.

On December 24, 2003, the licensee wrote a letter to MOF reporting that it had crossed streams with Heaps Road that "might not be classified correctly." Soon after, the licensee hired another professional biologist to determine the correct stream classifications. That biologist, using the appropriate guidebook procedures, confirmed that several fish streams had been incorrectly considered as non-fish streams. Some of these fish streams had been crossed during construction of Heaps Road.

The licensee's failure to correctly classify streams led to non-compliance with a series of Code provisions intended to protect aquatic values. First, WLFMR section 43(1) required the licensee to determine the riparian class of streams before a road was built. This ensures that roads are properly located, and that the correct size and type of stream crossings are installed at the best time, to minimize impact on aquatic values. Given that classification errors were confirmed in December 2003, the licensee failed to comply with WLFMR section 43(1).

Second, a short section of Heaps Road was built within the riparian management area of a small stream. The licensee did not prepare a required road layout and design for that section of road (section 60(1) of the Act) and did not get district manager approval to build the road within the riparian area (section 44(2) of the WLFMR). A road must be located outside a riparian management area unless the district manager decides that no other option is practical, or that locating the road elsewhere would create a higher risk of sediment delivery to the stream.

Because some streams were not correctly classified as fish streams, road work took place without following timing windows and measures, which ensure that impacts on aquatic resources such as fish and water quality are minimized. The licensee also (initially) failed to provide the required bottomless structures at the fish stream crossings, which would maintain habitat and provide safe fish passage (section 49(1)h of the WLFMR).

To its credit, when the licensee realized it had incorrectly classified some of the streams, it stopped work, removed the round pipe culverts it had installed in the fish streams, set up sediment control measures, reported the problem to MOF, and hired a consulting biologist to re-assess the streams. In September 2004, after it had prepared a remediation plan, the licensee installed fish-passable bottomless culverts, and added logs to the fish streams to improve fish habitat.

With the changes made to the site, the Board cannot determine if the original pipe culverts restricted fish passage or damaged fish habitat. However, the consulting biologist who was on-site in December 2003, soon after the original stream crossings were removed, noted sediment below the road in the two fish streams in question. According to the biologist, the sediment originated at the road and adversely affected a total of 250 metres of good and moderate quality fish habitat.

The licensee had a general obligation under its FDP to control sediments, and a further requirement under section 49(1)c(v) of the WLFMR to “minimize” the amount of sediment entering any stream during road construction (some release of sediment is inevitable during most in-stream operations). The licensee used hay bales to control sediment movement at some stream crossings, which may or may not have been effective. A severe rainstorm during road construction may have caused sediment accumulation downstream. Giving the benefit of the doubt, the Board accepts that the licensee complied with WLFMR section 49(1)c(v).

However, the fact remains that aspects of road-building related to fish stream crossings and road location did not comply with the Code. To improve future compliance, the licensee has replaced its original staff and intends to refine its activities to promote compliance. The licensee took responsibility for its conduct by reporting itself to MOF and took corrective actions to mitigate its mistakes. Nonetheless, the licensee’s non-compliance was significant. Its road-building practices for Heaps Road altered and potentially harmed fish habitat, and generally increased the risk of damage to aquatic values.

The licensee did not correctly classify several streams which led to a number of on-the-ground consequences that elevated the risk of damage to fish and water resources. The licensee’s non-compliance was significant; its road-building practices were not adequate to protect aquatic values. However, the licensee acted promptly to correct the problems.

3.0 Scenic Views

The complainant is concerned that visual quality will not be protected.

A woodlot FDP must identify and describe known scenic areas. In 1999, the MOF district manager listed the area (near the woodlot) visible from a highway as a known “scenic area.” The licensee’s 2002-2009 FDP illustrates the portions of the woodlot visible from the highway and a nearby lake, and indicates that four of the five proposed cutblocks are within that scenic area.

The WLFMR also required that a woodlot licensee show in its FDP how established visual quality objectives for scenic areas will be achieved. However, government has not established visual quality objectives for the scenic area affected by the woodlot. With no legal objectives, the licensee decided to check whether its proposed cutblocks would be

visible from either the highway or the lake and concluded that none of its proposed cutblocks would be visible from either viewpoint.

In approving the licensee's 2002-2009 FDP, the district manager considered a 1999 MOF district policy concerning visual assessments. It outlined standards to meet recommended visual quality classes for scenic areas in the Chilliwack Forest District. The policy specified that computer simulation was a preferred method of assessment, but that hand-drawn sketches could be acceptable, depending on visual sensitivity. The licensee's FDP indicated that none of the cutblocks would be visible from a scenic viewpoint. Hand-drawn assessments submitted with the FDP indicated that the two cutblocks most likely to be visible from a nearby lake, would not be visible.

Again, a guidebook provided an objective way to assess the suitability of what was done. The *Visual Impact Assessment Guidebook* states that freehand sketching is appropriate where accurate representation of the proposed operation is not critical. The guidebook suggests that sight-line plots be used to increase sketch reliability and accuracy. On balance, the Board considers that additional visual impact assessment at the FDP planning level would have been redundant.

At the subsequent, and more detailed, site plan level, the licensee again considered visual impacts. Once more, this time using photographs in addition to sight-line plots, the licensee predicted no cutblock would be visible from the known viewpoints. However, the complainant's concern about visual quality extends also to the appearance of the woodlot in the local neighbourhood. The Board reviewed four of the licensee's cutblock site plans. In three, the licensee opted to reduce the cutblock area from that proposed in its FDP, thus retaining additional trees. In one, the added retention would specifically protect a view from a nearby trail. In the fourth cutblock, the licensee purposely altered a road location to improve its appearance.

Three of the five proposed cutblocks are now harvested. A subsequent visit by Board staff indicated that the harvested areas are not visible from either the scenic viewpoints or nearby roads.

The Board is satisfied that visual quality was adequately considered and protected.

4.0 Government Enforcement of the Code

In addition to the complainant's concerns, the Board considered government's enforcement of the Code related to the licensee's road-building practices.

Code enforcement should reflect the risk to forest resources resulting from potential or actual non-compliance. MOF considered Heaps Road low-risk, meaning an inspection might occur only after higher-risk areas were sufficiently inspected. MOF told the Board that, had

the licensee's FDP identified the streams near Heaps Road as fish-bearing, the risk would have been rated high, increasing the priority for inspection.

In the circumstances, MOF did not inspect road-building on the woodlot until after the licensee wrote its December 2003 letter to MOF's operational staff, self-reporting a potential problem with stream classifications. Soon after, the MOF operational staff advised MOF's enforcement staff that there might be a problem with compliance on the woodlot. However, enforcement staff was not given the licensee's self-reporting letter, was not familiar with the woodlot, and had no prior experience with enforcement of the Code on woodlots.

MOF enforcement staff reviewed operational files and inspected the woodlot on January 15, 2004. From the inspection, it appeared that some of the streams crossed by Heaps Road may have gone unnoticed during planning. Most of the streams were close to the locations shown on the licensee's FDP map, but some did not appear on the map at all. MOF recognized that some of these streams were probably fish streams, and that sediment had entered them at the road crossings. Consequently, MOF planned to investigate possible contraventions of the Act, the *Operational Site Planning Regulation* (OSPR), and the *Timber Harvesting and Silviculture Practices Regulation* (THSPR).

However, the regulations of interest to MOF did not apply to woodlots. Section 3 of the WLFMR excludes woodlots from several Code regulations and replaces those with similar provisions of the WLFMR itself. This was not known to the enforcement staff, who had only recently been assigned responsibility for enforcement on woodlots.

MOF admitted that it did not investigate the correct regulation, but pointed out that the error made little difference in the circumstances. MOF contends that the correct subject matter was investigated because sections of the OSPR and THSPR are very similar to those in the WLFMR. Although correct, it is not a complete answer to the problem. The licensee was building road and the typical regulation for that would be the *Forest Road Regulation*, but the *Forest Road Regulation* was not considered by MOF.

In mid-March, MOF concluded that the licensee was "in compliance with all relevant legislation, plans and agreements." This was not correct. As described previously, the licensee's failure to correctly classify the streams near Heaps Road led to a series of failures to comply with the Code, and placed fish habitat and water quality at an elevated risk of harm. MOF had overlooked the applicable requirements of the Code's WLFMR, and thus wrongly concluded that the licensee was in compliance.

Furthermore, during its investigation, MOF determined that several streams in the area of Heaps Road were "previously unidentified." Under section 51(2) of the Act, a licensee must stop or modify its practices, and promptly advise the district manager, whenever a previously unidentified resource feature (which includes a stream) is detected after forest

practices have begun. MOF decided the licensee's December 2003 self-reporting letter about wrongly classifying streams fulfilled the licensee's obligations under section 51(2).

That too was not correct. The licensee built the road across the streams in October or November 2003. Instead of stopping work and advising the district manager promptly, the licensee carried on with its road-building activities, not advising MOF until late December. In the Board's opinion, this did not comply with section 51(2) of the Act.

MOF began a second investigation of Heaps Road in April 2004, after realizing that the licensee did not obtain district manager approval of a road layout and design for the short section of road that was built within a stream's riparian management area. MOF noted that there was no apparent damage to the stream, and that the licensee's subsequent remediation plan satisfied the requirement for a road layout and design (although the district manager had never approved that design). MOF ticketed the licensee \$345—the amount prescribed by regulation. At this point, MOF concluded its investigation.

In summary, MOF ranked inspection of the woodlot appropriately, based on the information provided in the FDP. When the licensee self-reported a compliance problem, MOF responded with a timely inspection and investigation, but focussed on the wrong regulations and incorrectly concluded that the licensee was in compliance with the Code. A second investigation by MOF revealed a procedural contravention and resulted in a prescribed fine. However, MOF never addressed the licensee's more serious non-compliance, which placed fish habitat and water quality at an elevated risk of harm.

In response to the Board investigation, MOF has revised how risk-ratings for its inspections are determined, will stress the importance of streams during those inspections, will ensure that its enforcement staff has appropriate training, and will ensure that "draft" findings for investigations are discussed by senior enforcement staff before being finalized.

Government's enforcement of the Code regarding the licensee's road-building practices was not appropriate. However, MOF has taken steps to improve the future effectiveness of its enforcement program.

Conclusions

1. Forest development planning and approval complied with Code requirements for protection of water resources. That, plus the additional work done by both MOF and the complainant's consultant, satisfies the Board that protection of water resources was adequately assessed. Woodlot activities are unlikely to adversely affect groundwater quality or supply.
2. The licensee did not correctly classify several streams, which led to a number of on-the-ground consequences that elevated the risk of damage to fish and water

resources. The licensee's non-compliance was significant; its road-building practices were not adequate to protect aquatic values. However, the licensee acted promptly to correct those problems.

3. The Board is satisfied that visual quality was adequately considered and protected.
4. Government's enforcement of the Code regarding the licensee's road-building practices was not appropriate. However, MOF has taken steps to improve the future effectiveness of its enforcement program.



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NEWS RELEASE

For Immediate Release
June 14, 2005

Woodlot road-building did not comply with code

VICTORIA –The BCIT Forest Society incorrectly classified fish streams in a Maple Ridge woodlot, which contravened the Forest Practices Code, the Forest Practices Board reported today. The board notes that, upon realizing its mistake, the society came forward to report the violation, and took appropriate corrective action to mitigate any potential damage to fish habitat.

The board also found the Ministry of Forests did not enforce government legislation appropriately in this case.

The board investigated a July 2004 complaint by the Blue Mountain-Kanaka Creek Conservation Group, who believed that the BCIT Forest Society (the licensee) was harming domestic water supplies and scenic views in the area. The board investigated the complaint, and government enforcement of road building on the woodlot.

“The key finding is that the licensee incorrectly classified several fish streams prior to building a road near the streams. This put water values and fish habitat at risk, although no actual damage could be confirmed,” said board chair Bruce Fraser. “To its credit, the licensee took prompt remedial action when it realized its mistake. Apart from the road-building problem, the licensee’s forest practices adequately protected water resources and scenic views.”

The board also found that the Ministry of Forests did not appropriately enforce road-building practices on the woodlot. “After the licensee reported the problem, ministry investigators considered the wrong regulations, and incorrectly concluded that the licensee had complied with the code,” said Fraser. “The ministry has assured the board that it has since corrected the enforcement problems.”

The Forest Practices Board is an independent public watchdog that reports to the public about compliance with the Forest and Range Practices Act (FRPA) and the achievement of its intent. The board’s main roles under FRPA are:

- Auditing forest practices of government and licence holders on public lands.
- Auditing government enforcement of FRPA.
- Investigating public complaints.
- Undertaking special investigations of forestry issues.
- Participating in administrative appeals.
- Providing reports on board activities, findings and recommendations.

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This news release and more information about the board are available on the Forest Practices Board Web site at www.fpb.gov.bc.ca or by contacting:

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