



**Forest Practices in the Leet Creek
Watershed, near Kaslo, BC**

Complaint Investigation 070771

FPB/IRC/140

July 2008

Table of Contents

Executive Summary	1
The Complaint	3
Background	3
Discussion	5
1. Did the public review conform to legal requirements and was it effective?	5
2. Was the area of the amendment too large and were the silviculture systems for that area appropriate?	7
3. Was the district manager's approval of the fdp amendment reasonable?	8
4. Were the forest practices sub-standard?	10
5. Was MFR's monitoring and enforcement effective?	18
Resolution Efforts	19
Conclusions	19

Executive Summary

On May 14, 2007, Valhalla Wilderness Society (the complainant) submitted a complaint about Meadow Creek Cedar Limited's (the licensee) forest planning and practices in the Leet Creek watershed, located south of Kaslo. As well, the complainant was concerned about the Ministry of Forest and Range's (MFR) approval, monitoring and enforcement of the licensee's harvesting and road building practices.

Following an initial field trip to visit the site, one of the licensed domestic water users (a second complainant) also submitted a complaint.

Both complainants had the following questions:

1. Did the submission and approval of an amendment to the licensee's forest development plan (FDP) meet legislative requirements, as well as public needs?
2. Was the area covered by the licensee's FDP amendment too large, and were the proposed silviculture systems appropriate for this large of an area?
3. Was the district manager's approval of the FDP amendment reasonable?
4. Were forest practices in the area covered by the FDP sub-standard?
5. Was the MFR's monitoring and enforcement of the licensee's forest practices effective?

The Board concluded that, although this FDP amendment met the legal requirements for public consultation, the licensee's efforts were nevertheless ineffective. Further, although most forest practices met the legislative requirements, the licensee had been maintaining a forest service road (FSR) for log hauling without the proper authority and had also been inadequately maintaining two log culverts. However, none of the non-compliances caused environmental damage.

On the other hand, although the complainants asserted the amendment was too large and the silviculture systems were not appropriate, the Board found otherwise. The Board also determined that the district manager's approval of the amendment was reasonable and that MFR's enforcement of it was effective.

In the end, the complaint was partially resolved, as the licensee took steps to remediate many of the problems identified by the complainants. However, a total resolution could not be reached. The complainants wanted the licensee to commit to a more effective public consultation process, while the licensee wanted members of the public to come to it first before going to MFR or the Board.

The Board notes that effective consultation is dependent on the efforts and relationships of the individuals involved. Under the *Forest and Range Practices Act*, members of the public must now make their own effort to stay informed; must focus only on substantial matters if their input is going to influence forest planning; and must follow up with forest companies at the site plan stage to ensure that their comments have been satisfactorily addressed. For effective public consultation to succeed, licensees and professionals need to be proactive in identifying, and diligent in responding to, concerns that interested parties bring to them.

The Complaint

On May 14, 2007, Valhalla Wilderness Society (the complainant) submitted a complaint about Meadow Creek Cedar Limited's (the licensee) forest planning and practices in the Leet Creek watershed, located south of Kaslo. As well, the complainant was concerned about the Ministry of Forest and Range's (MFR) approval, monitoring and enforcement of the licensee's harvesting and road building practices. Following an initial field trip, one of the licensed domestic water users (a second complainant) also submitted a complaint.

The complainants had the following questions:

1. Did the submission and approval of an amendment to the licensee's forest development plan (FDP) meet legislative requirements, as well as public needs?
2. Was the area covered by the licensee's FDP amendment too large, and were the proposed silviculture systems appropriate for this large of an area?
3. Was the district manager's approval of the FDP amendment reasonable?
4. Were forest practices in the area covered by the FDP sub-standard?
5. Was the MFR's monitoring and enforcement of the licensee's forest practices effective?

Background

In 1989, the licensee commissioned a hydrologist to examine the potential impact of a harvesting proposal in the Leet Creek watershed. The hydrologist recommended that the licensee not build a road in the winter, as snow would inhibit proper placement of culverts, and that a "proper" (not temporary) road should be built.

In 1993, the licensee made an agreement with the Fletcher-Leet Creek Water Alliance to work closely with the group on its future logging plans, to notify water licensees immediately if there was a water problem, and to suspend operations during adverse weather conditions. The agreement started a 15-year history of consultation and active participation in forest planning in the Leet Creek watershed.

In 2003, the licensee said that it was not anticipating further cutting in the area for 20 to 30 years. However, the licence changed ownership and, by July 2006, the licensee had new staff that did not know about the licensee's previous commitments or the 1989 hydrology work.

The new staff found that there were no cutting permits available for harvesting during the 2006/2007 winter. However, the FDP did contain one approved cutblock in the Fletcher Face/Leet Creek area. The staff examined that proposed cutblock and the area around it. They found the forest in a state of decline, containing pockets where 10 to 70 percent of the timber had been damaged by winter wind and ice. Staff also found four species of bark beetle in the

damaged timber. In order to salvage the damaged timber, the licensee proposed five cutblocks totalling about 140 hectares. In addition, the licensee identified reserve areas outside the cutblocks in order to protect water in Leet Creek.

In Fall 2006, the licensee hired a geotechnical engineer to review all areas in cutblocks or on roads, on or above areas of unstable terrain, in preparation for an amendment to the FDP. The engineer concluded that, if logging was done according to plan, there would be a low likelihood of slope instability.

The licensee advertised an amendment to its FDP in a local newspaper and contacted domestic water licensees (water users), using names provided by MFR.

However, before the licensee had the opportunity to contact the second complainant, he had read the FDP advertisement in the newspaper. The second complainant wrote a letter to the licensee on November 6, 2006, expressing his concerns about the FDP and requesting a field trip to review the proposed harvest area.

The second complainant was unavailable in November, so his wife referred the licensee to another water user, who agreed to review the area in the second complainant's stead. On November 16, 2006, the licensee met with the second water user and explained the plans for winter logging. On November 20, 2006, the licensee responded in letters to the concerns of the water users. The licensee invited the complainant to contact him if there were any concerns with the development, and offered to organize a field trip for that week. However, the field trip was cancelled because there was too much snow.

On November 23, 2006, the licensee submitted its amendment for approval. The licensee intended to salvage harvest blow-down and ice and snow damaged timber to prevent endemic populations of Douglas-fir, spruce and pine bark beetle from building to epidemic levels.

The district manager approved the amendment on November 27, 2006.

Discussion

1. Did the public review conform to legal requirements and was it effective?

Both complainants asserted that the harvesting proposal covered too large an area for the limited amount of blowdown timber. They also thought that the amendment warranted another opportunity for the public to review and comment because there were changes made to it during the public review and comment period. The second complainant also asserted that the licensee should have given them more opportunity to conduct a field review and to provide further input on the amendment.

With regard to the public review, the Board asked three questions:

1. Did the opportunity for review and comment comply with the *Forest and Range Practices Act* (FRPA)?
2. Did the final amendment change significantly enough from the advertised amendment to warrant a second public review and comment period?
3. Was the licensee's approach to providing opportunity for review and comment effective?

1.1 Did the opportunity for review and comment comply with FRPA?

Due to forest health risks, on October 3, 2006, the licensee requested and was granted a 30-day review and comment period, rather than the standard 60-day period. The review and comment period lasted a total of 32 days, from October 18, 2006, to November 20, 2006.

The district manager approved the shortened public review and comment period because the stand was deteriorating, and an expanding bark beetle population was threatening surrounding stands. The licensee committed to directly contacting all potentially impacted people about the amendment. The district manager considered this approach superior to the more general approach of only advertising the amendment in the newspaper.

A district manager can allow a reduced review and comment period if the plan or amendment is an "expedited major salvage operation," which the amendment was.

The amendment met the regulatory requirement for the shortened review and comment period.

1.2 Did the final amendment change significantly enough from the advertised amendment to warrant a second public review and comment period?

The complainants assert that the approved amendment and subsequent harvest were much different from what was advertised and, therefore, that a new review and comment period was warranted.

One complainant asserted that cutblocks 2 and 4 were clearcut, but had been advertised as selective logging. The amended FDP designated cutblocks 1, 3 and 5 as clear-cut and cutblocks 2 and 4 as selective logging. The site plans are consistent with the FDP advertising; cutblocks 2 and 4 were harvested by selective logging, not clearcut.

The Board reviewed and compared the advertised amendment with the approved amendment. There were no significant differences between the initially advertised amendment and the approved amendment.

The advertised amendment was not significantly different from what was approved, so there was no need to provide further opportunity for review and comment.

1.3 Was the licensee's approach to providing opportunity for review and comment effective?

The original licence holder had consulted with the complainants beyond what the law required, inviting interested residents on field trips and soliciting suggestions. However, this consultation happened well before logging actually occurred, and the new licensee's staff did not consult to the same degree before commencing harvesting.

The Board considers eight factors¹ to be necessary for effective public involvement. In this case, the following three factors were missing:

1. Public involvement should occur early, while plans are in the information stage and can still be changed;
2. Sufficient time needs to be allowed for comment; and
3. A licensee should continue communicating and engaging with the public throughout the lifetime of the forest activities in question.

The previous licensee had scheduled field trips so that the residents could field review logging proposals and make suggestions. The water users expected that practice to continue, but it did not. The licensee contacted the public on November 14, 2006, when the field work and mapping was complete, then submitted the amendment on November 23, not even two weeks later. Upon receiving comment back, the licensee responded to the water users by letter. Once these response letters were written, the licensee had no further contact with two of the three water users until the complainants complained to MFR and the Board in May 2007.

The licensee did have more contact with the third water user, a woodlot owner, while attempting to negotiate a road-use agreement with him. It updated the woodlot owner on

¹ The Board has two published bulletins that are relevant to public consultation:

- *Board Bulletin, Volume 3 – Opportunity for Public Consultation under the Forest and Range Practices Act;* and
- *Board Bulletin, Volume 7 – Forest Stewardship Plan Review: A Public Responsibility.*

events regarding the cutting permit and on road condition before start up and after completion of operations.

The second complainant wanted to be notified before there was active logging. He said he did not know that logging had begun until April 2007. At that point, he took the precaution of boiling his drinking water.

The licensee was aware that, at one point, there was an elevated contamination risk for water users and even became concerned that the natural diversion of Leet Creek might wash out a switchback on the main haul road, causing eroded soil to spill into Leet Creek. However, the licensee did not alert the water users to this risk.

The Board notes that effective consultation is dependent on the efforts and relationships of the individuals involved. Under FRPA, members of the public must now make their own efforts to stay informed; must focus only on substantial matters if their input is going to influence forest planning; and must follow-up with forest companies at the site plan stage to ensure that their comments have been satisfactorily addressed. For effective public consultation to succeed, professionals need to be proactive in identifying, and diligent in responding to, concerns that interested parties bring to them.

The previous licensee's public consultation efforts were effective but, although the new licensee complied with legal requirements for public review and comment, its consultation efforts were not. The new licensee did not provide an appropriate amount of time for meaningful public consultation to occur, so there was little opportunity for comment. As well, the licensee did not continue communication with the public after the amendment was approved.

2. Was the area of the amendment too large and were the silviculture systems for that area appropriate?

The complainants suspect that the amendment was proposed due to the economic needs of the licensee, rather than the need to protect forest health. They believe the amendment was submitted and approved only to provide cash flow at a critical time for the licensee. In support of their theory, the complainants questioned why the cutblocks were not logged in the summer. They also asserted that the area and amount of timber the licensee was cutting were both too large.

Season of harvest

Timing of harvest is at the discretion of the licensee. A significant factor for such a decision is how it protects forest values. In this case, the licensee concluded that winter logging would salvage damaged timber to protect surrounding stands from bark beetle attack; protect the soil from disturbance; provide a winter harvesting opportunity; and provide the licensee with cash flow.

The licensee considered reasonable factors in choosing the season of harvest.

Harvest level and silvicultural system

The complainants doubted that the extent of beetle damage warranted the size of the proposed harvest. As well, they asserted that, rather than using clear-cut and group-selection silviculture systems, the licensee could have used a single-tree selection silviculture system. This would have limited the harvesting to the dead and damaged trees in an already heavily-cut area.

On a walk through part of the area, an MFR field review confirmed there was damage to timber. Although that particular field review was more focused on examining the protection of the domestic water source than confirming of the extent of the winter damage, it confirmed that there were, “extensive pockets of snow-damaged, leaning timber and windthrow.” The licensee had stated that the damage was extensive, and a timber cruise confirmed that there were higher than normal levels of damage in all the proposed cutblocks.

There were areas of extensive damage, so the area proposed for salvage was reasonable.

The licensee decided to clearcut areas with higher levels of damage as well as some areas where the steep topography required cable yarding. The rest of the area had small pockets of damage throughout, and the licensee planned a small-opening group selection silviculture system to salvage the pockets of damaged timber. In most cases, and especially on sloping topography, other timber was only removed to create access trails to reach the pockets of damaged timber.

Where there were larger pockets of damaged timber and/or damaged timber required cable yarding, clearcutting was appropriate. The other areas were designated for small-opening group selection harvesting. Therefore, the silviculture systems were appropriate for the circumstances.

3. Was the district manager’s approval of the FDP amendment reasonable?

The complainants believed that the approval of the amendment was not reasonable because the area laid out in the amendment was too large given the extent of the damage; water users were not notified of significant changes to the FDP amendment; and harvesting for forest health reasons was an excuse to get cheap timber.

The first two issues were examined in more detail in the two sections above. Forest health is dealt with in this section and in section 4.

Before the district manager could approve the amendment, he had to be satisfied that it would adequately manage and conserve the forest resources in the area to which it applied. That determination was discretionary. The standard the Board uses in evaluating discretionary decisions is not whether the decision was the best one, but whether it is consistent with sound

forest practice, if it achieved the intent of legislation and it was based on an adequate assessment of available information.

The district manager said he had three key concerns with the amendment: whether it adequately addressed:

1. public review and comment;
2. control of bark beetles; and
3. domestic water use.

Public review and comment

If a licensee agrees to contact affected parties, a district manager will usually grant approval for a shortened review period, if there is a forest health problem with the forest in question. In this case, the licensee did contact water users after requesting the shortened review and comment period. The district manager noted that public concerns focused on the appropriateness of planned prescriptions, protection of water quality, and operational requirements. However, he considered the licensee's responses to these public concerns to be appropriate, and was satisfied that the licensee had sufficiently addressed them.

Control of Bark Beetles

MFR staff noted evidence of beetle build-up as they did their fieldwork, and informed the district manager that the beetle population could increase in the area. The FDP amendment was intended to allow salvage of dead and infested Douglas-fir and spruce trees before beetles could build up to epidemic levels, and it identified an area in cutblock 3 to be clearcut due to mountain pine beetle (MPB) infestation. The district manager was satisfied that the proposed bark beetle management was appropriate.

Domestic Water Use

The licensee had talked to the water users and had also brought in a qualified professional to study the drainage area. The study determined that an equivalent clearcut area (ECA²) was 35 percent of the Leet Creek drainage. When logging can increase ECAs above 20 percent, it raises a red flag for the district manager to consider the effects of harvest on water. To mitigate this, the licensee proposed implementing riparian reserve and riparian management zones that far exceeded the legislated requirements,³ so as to minimize the risk to domestic water users.

Harvesting to control bark beetles and the salvaging of timber is sound forest management, if executed promptly and responsibly. In this case, the licensee and MFR staff provided the

² Equivalent clear-cut area (ECA) is the area that has been harvested, cleared burned or otherwise defoliated, with consideration given to the silvicultural system, regeneration growth, and location within the watershed.

³ Leet Creek is an S6 stream that required no riparian reserve zone and a 20-metre riparian management zone. In addition to the 20-metre riparian management area the licensee implemented a 30-metre riparian reserve.

district manager with information indicating control and salvage of timber was necessary to manage forest health. In terms of public review and comment, the district manager considered whether the interested parties had an opportunity to provide comment, and he concluded that they did. Lastly, the licensee proposed appropriate measures to minimize risks to domestic water. These factors are consistent with sound forest planning, and illustrate that the decision was based on an adequate assessment of available information.

When the licensee's final submission came in, the district manager concluded that all three of the concerns had been appropriately addressed. Satisfied that the forest resources were being managed and conserved, the district manager approved the FDP amendment.

The district manager's approval of the FDP amendment was reasonable because it considered appropriate factors, and it was based on an adequate assessment of available information.

4. Were the forest practices sub-standard?

The complainants assert that a number of the licensee's forest practices were inadequate. The complainants asked the Board if there is a standard to determine the adequacy of forest practices under FRPA.

A licensee is free to implement any practice, including best management practices, as long as the practice does not contravene FRPA. However, rather than requiring licensees to meet best management practices, the government designed the legislation to allow licensees to implement forest practices to meet their business needs, subject to broad standards outlined by FRPA and its regulations. For example, a person carrying out road construction or maintenance must not cause a landslide that has a material adverse effect on values such as soils, fish, wildlife or water. It is up to the licensee to meet that general requirement. If a licensee needs a road for the short term, it can risk-manage and choose to build a temporary road to a lower standard. A licensee is free to build an inexpensive road, maintain it and deactivate it, so long as the road does not cause a serious landslide.

The Board examined whether the licensee's practices complied with FRPA. Specifically, the investigation examined concerns with:

1. road maintenance
2. blocked or inadequate culverts and diverted water
3. large slash piles and collapsed slash piles
4. damage to trees and seedlings
5. high stumps and bark beetle
6. decked logs in creek reserve
7. log deck in a riparian management zone

4.1 Road maintenance

The complainants were concerned about five specific issues with road maintenance on these permanent roads.

4.1.1 The Woodbury Fletcher Connector

The licensee did some ditching and some widening on a portion of the Woodbury Fletcher Connector. In the spring freshet, the snow melt draining from the road scoured the ditch line, eroded a cut slope and most likely caused the cut slope to slump. Sediment was deposited in a ravine but did not reach a fish-bearing stream or a water intake for domestic water use.

The slide did not have a negative effect on forest values as listed in FRPA.

4.1.2 Rock blasting

The licensee also blasted some rock to reduce a hump in the Woodbury Fletcher Connector Road. The area was mapped as potentially unstable, but there is no requirement to assess terrain stability for maintenance on a road and the licensee did not do an assessment.

No slide occurred and there was no damage to the environment.

4.1.3 Fletcher Forest Service Road emergency maintenance

In early 2007, when the licensee started to use the Fletcher FSR, it found that a culvert had been crushed and that eleven others were plugged. The road is one of the most sensitive in the district. It climbs through unstable slopes directly above Highway 31, south of Kaslo. The licensee cleaned out a ditch and unplugged the culverts from the highway to kilometre 1.1 as an emergency measure to protect the road and the highway below, even though it had no authorization to do so at the time. To maintain the stability of the slopes, the woodlot licensee's road-use permit required maintenance in either the fall or spring, depending on operational needs. The permit included several specific requirements for maintenance. During the time of active logging and hauling, the licensee met all the woodlot licensee's road-use permit criteria without having an agreement with the woodlot owner.

Maintaining the forest road without authorization was non-compliance with section 79(1) of the Forest Planning and Practices Regulation but was required to meet the standard in the road permit and correct drainage problems in a timely manner to prevent environmental damage.

4.1.4 Drainage from road surface into Leet Creek

The main haul road surface was draining directly into Leet Creek at the lower crossing, a location where the licensee is responsible for maintenance.

The crossing is at a dip in the road surface. There was no sediment control on the ditch before the crossing because the road sits on bedrock, and the ditch is too shallow for such a structure at this location. The road had been recently graded and crowned to drain the road surface before

the crossing. Still, some water could puddle in the dip in the road and muddy water from the road surface did drain into Leet Creek at this location.

A person doing maintenance must not deposit a harmful substance in a stream that is licensed for human consumption. The licensee had been actively hauling and maintaining the road, which would presumably have increased the amount of muddy water entering the creek. The complainant provided photographs showing erosion; a rill (narrow and shallow incision into soil resulting from erosion) drained a puddle in the low spot of the road directly into the outfall of the culvert. Therefore, sediment in the water would have entered the creek. However, the amount would likely have been insignificant in comparison to the amount of water in the creek. The nearest water intake is approximately one and a half kilometres downstream, so any sediment would likely settle out before it reached the water intake. Further, domestic water users should have a robust sediment filter. The licensee reports that it has now filled the dip in the road with shale rock so that surface run-off will not pool at the crossing.

Although there was some drainage from the main haul road surface into Leet Creek, it was inconsequential.

4.1.5 Hauling during spring break-up

The complainant asserted that the licensee had hauled during spring break-up, causing ruts in the road and berms of soil on the edges of the running surface of the road. The licensee hauled timber on the FSR during the spring of 2006. The licensee logged on frozen ground or snow pack. Log hauling concurrent with falling and yarding required trucks to traverse through spring break-up conditions further downslope. That hauling resulted in 15 to 20 centimetre ruts in parts of the road that were thawing. The licensee used a bulldozer to plough the snow and mud into banks at the edge of the road surface. As the snow melted, the mud was left in berms on the edges of the road prism. The licensee noted that it stopped hauling whenever it rained.

The legislation has no specific restriction against rutting a road or leaving mineral soil in small roadside berms. Further, the complainant did not report, and the Board did not observe, any environmental damage from these maintenance practices.

In summary, the licensee's ditching of the Woodbury Fletcher Connector likely resulted in a slide, and the licensee carried out unauthorized road maintenance through the woodlot in order to haul. The work was necessary to maintain the stability of the slopes and to haul timber, and none of these non-compliances resulted in a negative effect on forest resources. The other road maintenance concerns met the legislative requirements.

4.2 Blocked or inadequate culverts and diverted water

The complainant asserted that water was diverted at two places. Licensees must maintain natural surface drainage patterns, ensure culverts are an adequate size, and keep drainage systems functional.

The first location of concern was about 30 metres above the upper crossing of Leet Creek, in mature forest. This is a natural diversion of Leet Creek that has occurred at least since 1989. At the time of the Board's field inspection, the stream split into two sub-surface flows after cascading over bedrock. One flow remained subsurface, passing underground at the upper Leet Creek culvert location; leaving the culvert dry. After passing under the road right-of-way, the water came to the surface again just off the clearing width in the gully that contains Leet Creek.

The old road cut intercepted the other subsurface flow about 50 metres down the road from the upper crossing. The stream ran down the ditch about 150 metres, bypassing the gully that contains Leet Creek, and flowed off the end of a switchback into terrain that had been mapped as potentially unstable.

The licensee reported that, during the freshet, the water intercepted by the road cut was close to breaching the ditch and threatening to scour down the road surface and enter Leet Creek at the dip in the road at the lower crossing. To prevent that from occurring, the licensee deepened and widened the ditch to ensure the water continued to flow off the end of the switchback.

The second complainant pointed out that the 1989 hydrology report showed this naturally occurring diversion. He thinks that the licensee should have known about it and done pre-emptive work. On the other hand, since 1989 there has been no reported problem with drainage on this section of road.

Deepening the ditch did not divert the stream so technically the licensee complied with the provision in FRPA that prohibits a person from diverting water onto potentially unstable slopes; but the ditch work probably increased sedimentation. The Board did not find any connection between the diverted stream and Leet Creek, so it is unlikely that maintenance resulted in sediment in Leet Creek.

Following the complaint, on May 28, 2007, the MFR regional hydrologist inspected the diversion of Leet Creek. He confirmed that the diversion was natural. He recommended returning the water to the Leet Creek gully by installing a new culvert where the road intercepted it and installing a larger culvert on the lower crossing to accommodate the increased flows.

Since then, the licensee has established a culvert at the location of the diverted flow. This culvert drains the flow of water back into the Leet Creek gully. The licensee did not enlarge the culvert at the lower crossing of Leet Creek.

The second asserted diversion was on the spur road that leads into cutblock 3. There was no diversion of surface flow during the Board's field visit. The road intercepted some subsurface drainage, but most of that water drained back under the road prism where it had been intercepted.

Before construction, the licensee hired a geotechnical engineer to examine this road location because it went through, and above, an area described on operational maps as potentially unstable. The engineer prescribed a temporary winter road built out of loose material to allow water to remain below the surface. The licensee built the road as prescribed.

There was an unreported diversion of surface flow observed during the Board's field visit. Snow meltwater drained down two shallow gullies onto a new temporary winter road, that had been built through a plantation, into the lower portion of cutblock 4. The licensee had used two log culverts to pass these seasonal surface flows under the road prism. Each culvert consisted of a bundle of logs placed in the road prism, perpendicular to the road alignment. Previously, the complainants had noted these culverts and said that they were passing significant flows of water. Both log culverts were passing some water at the time of the field visit, but neither contained the full flow. Significant flows of water were spilling over ditch blocks to scour the ditch line and alter the natural drainage pattern. Most likely this was occurring because the field trip happened at the height of snow melt at that elevation.

A licensee must maintain natural surface drainage patterns and must ensure that culverts are functioning properly. If a person installs a culvert that cannot handle peak flow, it is to be removed before high flow begins.

This area drains into Woodbury Creek, not Leet Creek, so there were no detectable impacts to the domestic water source from these minor diversions. MFR did not document this as non-compliance or perform any enforcement actions to correct the problem. The licensee reports that it has now removed the culverts, re-contoured the road, and restored the natural drainage patterns affected by this road.

Two log culverts were inadequate and did not comply with the applicable regulations, however, there was no impact to the domestic water sources on Leet Creek.

4.3 Large slash piles and collapsed slash piles

The complainant was concerned about the large slash piles and slash piles placed next to standing timber.

The harvested area contained large slash piles on landings and some other piles had been built on the fill of the road prism on temporary winter roads. As the snow melted, the slash piles of the road prisms collapsed onto the edge of the standing timber.

There is no specific forest practices legislation regulating the size of slash piles, where they can be built, or how they need to be maintained. However, the *Wildfire Regulation* requires the licensee to modify piles in a way that abates fire hazard between April and October.

At the time of the Board's field investigation, the fire-weather conditions were not high enough for the piles to be considered a fire hazard. The licensee reported that it had removed

the slash piles next to standing timber, but it remains unknown whether the licensee modified the large piles in the middle of landings to abate the fire hazard after the Board's field inspection.

As long as the slash and piles did not cause a fire hazard during fire season, the practice met the legislative requirements.

4.4 Damage to trees and seedlings

The complainant asserts that the licensee destroyed free growing trees, damaged trees on the side of the road, and bulldozed seedlings on a landing.

The licensee had constructed a 300 metre spur road through an older free growing cutblock to cutblock 4—destroying some free growing trees. However, the approved FDP showed the location of the road, and therefore tree damage was authorized by the district manager. In any event, the licensee has re-contoured the road and has planted it.

Where the woodlot owner had been authorized to maintain the road, he had allowed trees to grow up to the edge of the road surface. The licensee's unauthorized snow ploughing and maintenance activities scarred the trees, but only trees on the edge of the road surface were damaged. Following the complaint, the licensee removed the damaged trees on this section of the road.

A person who maintains a road must maintain the integrity of the clearing width for snow removal. In the Board's view, damaging some trees in the clearing width is justified if that is required for snow removal.

An old landing in the woodlot provided a pullout for trucks on the same section of road. The licensee used that landing for snow removal by pushing snow over the bank. The area between the pullout and the fill slope had been mounded and planted, so ploughing the snow over the bank destroyed a number of the regenerating trees and the mounds that they were planted on. The licensee has since re-mounded and planted the old landing. Again, the trees were within the road right-of-way. Therefore, in the Board's view, destruction of the seedlings was justified to remove snow.

Mature trees were damaged and young trees and seedlings were destroyed during the licensee's operations. However, such destruction was operationally required and the areas have since been replanted.

4.5 High stumps and bark beetle

The complainants were concerned that the tree stumps were too high and believe that leaving high stumps encourages bark beetle infestations.

The licensee started harvesting in January 2006, when snow had accumulated and it was difficult to cut the trees and leave short stumps. There is no contravention for leaving high stumps. MFR has a take or pay policy, whereby licensees can leave stumps as high as they wish, so long as they pay for any extra volume left on stumps.

On the first harvest inspection, MFR compliance and enforcement staff (C&E) noted that the stumps were quite high. The concern continued on subsequent inspections. On March 6, 2007, and again on March 26, 2007, the licensee requested an exemption from the stump height requirements in the cutting permit document. On April 10, 2007, the district manager refused to issue such an exemption because:

...leaving two-metre high stumps in this location and this timber type is not adequately showing good stewardship of the land. My staff as well as [the licensee's] staff endeavoured to issue this permit in a timely manner because of the forest health factors outlined by [the licensee]. Approving an exemption at this time to leave two-metre stumps would exacerbate any forest health issues we were trying to alleviate with the timely issuance of the permit.

It is my understanding that many of the stumps left within the now harvested blocks are greater than 30 centimetre stumps allowed ...I would like [the licensee] to submit to me by May 15, 2007, a plan on how forest health issues will be dealt with within these cutting permits.

On April 20, 2007, the licensee submitted a plan to survey and map areas where the stumps were high and then monitor those areas for bark beetle. The plan stated that if MFR and the licensee decided it was necessary, they would debark high stumps between August 15 and September 30, 2007.

MFR forest health staff and the licensee inspected the cutblocks in May and July. The most effective timeframe for a debarking treatment is between the end of July and mid-August. The licensee debarked stumps between July 25 and August 10, 2007.

There is no legal prohibition against leaving high stumps. Even so, MFR encouraged the licensee to carry out a debarking operation and the licensee did so.

4.6 Decked logs in a creek reserve

Fifty metres after the upper crossing of Leet Creek, the FSR enters cutblocks 1 and 2. The FSR forms the boundary between the two cutblocks. The licensee piled a deck of logs outside of the two cutblocks on the fill slope and lower clearing width of the road, within 15 metres of Leet Creek. The complainant asserted that the pile encroached on a riparian reserve zone required by the land use plan for the area.

The Kootenay Boundary Higher Level Plan Order contains measures to reduce the timber-harvesting impacts on streams licensed for human consumption. That order required licensees to prescribe measures to safeguard water when doing activities within a 30-metre stream-side management zone of an S6 stream licensed for domestic consumption.

Leet Creek is a licensed S6 stream. Both cutblocks 1 and 2 are at least 50 metres from Leet Creek, so the licensee's site plans did not describe any activities in the stream-side management zone. At the upper crossing of Leet Creek, the culvert was dry, as the stream was sub-surface. Some logs had been yarded down the road and decked outside of the cutblock, approximately 15 metres from the dry culvert. Decking had been done on frozen soils and removal of the logs had not disturbed the sub-surface channel, the dry stream bank, or the fill slope of the road.

Since decking had occurred on frozen soils and did not disturb the fill slope, the stream bank, or the stream channel, measures had been taken to safeguard water quality. Although these measures had not been set out in the site plans, piling the logs within 15 metres of Leet Creek was consistent with the higher level plan.

4.7 Log deck in a riparian management zone

The licensee also temporarily stored a pile of logs on the road right-of-way, on the outside of a switch back between cutblocks 1 and 4. The complainant asserted that the licensee had piled these logs in a riparian area.

The log storage area is an old landing that is a receiving area for snow meltwater. It is drained by two culverts, but there are no defined stream channels. Water flows in the spring freshet, but the channel is not a stream; it is a non-classified drainage (NCD).

There is no riparian management area required for an NCD. The Board visited the site at the height of the spring freshet. The area contained ponded and flowing water. However, it was not a wetland because it was smaller than one-quarter of a hectare. Logs had been removed and there was no damage done to the area.

Decking the logs on the old landing complied with forest practices legislation.

5. Was MFR's monitoring and enforcement effective?

The complainants asserted that MFR did not adequately monitor the licensee, nor enforce the legislation.

Enforcement activities generally begin with monitoring and inspections. If problems are discovered, there are a number of tools to promote compliance. These tools escalate in severity through written compliance notices, stop-work orders, administrative penalties (fines), and prosecution. To assess effectiveness, the Board considered if, and how, MFR monitored the harvesting operations; what MFR did when they found a problem; and whether the response would reasonably deter further non-compliance.

Before harvesting began, MFR rated the cutblocks as very high priority for inspection. MFR did at least eight harvest inspections over four months, including two that were immediate responses to public complaints.

Between January 25 and April 19, 2007, MFR did five inspections of the cutblocks. Those inspections found:

1. high stumps and high slash loading
2. a crushed culvert (still passing water)
3. heavy rutting on some skid trails
4. 15-20 cm ruts in the road
5. yarding and hauling shut down in response to weather and road conditions

MFR noted problems with the road and soil conditions in early March. Both the licensee and MFR agreed that the licensee would monitor the operation more frequently, so the licensee monitored the road and logging daily in March and April.

On April 28, 2007, the complainants reviewed the cutblocks. On April 29, 2007, the second complainant e-mailed the district manager and requested a response to the issues he had with the licensee's logging in Leet Creek. On April 30, 2007, an MFR C&E officer did a harvest inspection and documented many of the concerns that the complainants had expressed in their field inspection two days previously.

On May 8, 2007, C&E staff met with the licensee for another harvest inspection. The licensee agreed to:

- monitor the Woodbury/Fletcher connector;
- replace damaged signs;
- remove logs decked on the road right-of-way;
- redirect Leet Creek to its original channel; and
- scatter debris piled near standing timber.

The C&E inspector noted that the logs next to Leet Creek had been removed. Finally the inspector noted that the logs piled at the 7.5 kilometre mark had been piled on an old landing, rather than a riparian area.

On May 8, 2007, the complainants sent a report of their April 28, 2007, field trip to the district manager and sent a copy to the licensee.

MFR assessed the risk that the operations posed; planned to inspect the operations frequently; did inspect the area frequently; found non-compliances; and instructed the licensee to correct problems. MFR staff did not identify the non-compliance with the two log culverts on the road into cutblock 4. Overall, it is the Board's opinion that MFR's monitoring and C&E response was appropriate with regard to assessing risk, as well as with the forest practices that were observed.

Resolution Efforts

Both complainants thanked the licensee for the efforts that it made to remediate the problems associated with these harvesting operations and recognize the licensee's effort as a partial resolution to the complaint. Although the second complainant does not see much harvest opportunity left in the Leet Creek drainage, he would like the licensee to commit to providing a more effective public consultation process in the future, should more development occur. On the other hand, the licensee points out that communication is a two-way process. It would like people who are concerned about its logging practices to come directly to it first, rather than going to MFR or to the Board.

Conclusions

1. Did the submission and approval of the FDP amendment meet the legislative requirements and the needs of the public?

The public review and comment period met the legislative requirements, but the public consultation was ineffective and did not meet the needs of the local public.

2. Was the area covered by the forest development plan amendment too large, and were the silviculture systems appropriate for this area?

The area was not too large and the silviculture systems were appropriate for the circumstances.

3. Was the district manager's approval of the FDP amendment reasonable?

Yes.

4. Were the forest practices sub-standard?

Most forest practices done by the licensee met legislated requirements. The licensee failed to comply with the law by doing maintenance on a forest road without authorization, but that maintenance was required to clear snow in order to haul. Two log culverts were inadequate but did not cause environmental harm.

5. Was the MFR's monitoring and enforcement effective?

Yes.