

**Forest Practices and
Planning in the Sustut Valley
North of Smithers, BC**

Special Investigation 960023

FPB/SIR/05

November 2000

Executive Summary

A group of First Nations people who use forested land 200 kilometres north of Smithers, in north-central BC, filed a series of complaints. They were concerned about the impacts of timber harvesting and road construction by two licensees on forest resources in the area.

The Board finds that the licensees' forest harvesting operations met Code (*Forest Practices Code of British Columbia Act* and related regulations) requirements. There was no evidence of unauthorized damage to streamside habitats and no evidence that forest practices on cutblocks caused sediment transportation. However, one licensee's road construction and maintenance activities were inadequate for sensitive local soil conditions. Erosion and drainage from roads caused sediment transportation into the Sustut River, contravening the *Forest Road Regulation*. In response, the Ministry of Forests district issued a stopwork order and a remediation order. The Board finds that the licensee complied with both orders, although it took a full year to complete the remediation work. The Board also finds that government enforcement of the orders was appropriate and effective even though the district manager did not apply disciplinary penalties. Although the unusually fine-textured soils were difficult to detect, the Board finds that the licensee should have identified and avoided the situation before road construction caused environmental problems. Nevertheless, once the problems developed, the licensee had to put major efforts and expense into correcting them. The Board accepts that this had a disciplinary effect.

The Board finds significant deficiencies in both licensees' forest development plans over several years. The plans were incomplete and did not comply with the Code's content requirements. There was inadequate information about stream classifications and about mountain pine beetle management, a serious forest health concern in the area. The Code required licensees to describe management strategies to reduce forest health risks during the terms of the plans. The plans of one licensee in particular did not describe current beetle infestation levels, assess the potential risks or summarize a beetle management strategy, even though the Ministry of Forests had advised the company to do so. The Board finds that submission of that plan for approval did not comply with the Code. The Board also finds that the district manager failed to comply with section 41 of the *Forest Practices Code of British Columbia Act* (the Act) when he approved the licensees' forest development plans. The plans did not have adequate stream classification information and did not describe the extent of the beetle problem or provide a beetle control strategy.

There were also significant deficiencies in the material that the licensees put out for public review and comment. Much important information was either missing or illegible. The complainant considered the plans to be inadequate for public review and comment, and the Board agrees. The licensees acknowledged the brevity of their forest development plans but explained that the plans were never intended to be self-contained documents. The licensees directly contacted the individuals that might be affected by their plans and invited each to meet personally with company representatives to go over any specific concerns. The Board commends both licensees for trying to adapt the public review and comment process to local conditions. However, the licensee's process missed the larger public that needs at least a

minimum level of information in a forest development plan in order to be able to comment effectively. For example, there are 70,000 people living in the communities where the licensees advertised the plans for public review and comment. The licensees' process was commendable as far as it went, but the Board finds that an incomplete and general plan supplemented by personal assistance is not enough. The public is entitled to an adequate opportunity to review and comment on forest development plans. Adequate plans must have enough information, in enough detail, for the public to understand what forest practices are proposed, what measures will be taken to minimize impacts on forest resources and what impacts will result from what is proposed. The Board finds that the licensees' plans for public and agency review were not adequate. Information was missing for forest cover, topography, water, fish, wildlife, forest health and biodiversity. The plans were poorly organized, incomplete and partly illegible. The Board finds that both licensees failed to comply with the Code's provisions for public review and comment.

In addition to findings specific to the complaint, the Board also finds a deficiency in the Code. The Code does not deal effectively with the environmental risks of damage from very fine soils that occur on relatively gentle slopes. Only in community watersheds must assessments be carried out for soil erosion hazard and risk of sediment delivery to streams. Elsewhere, there is no Code requirement to assess the risk of sediment delivery before beginning road construction.

The Board recommends that the licensees develop proactive and efficient long- and short-term strategies that will successfully manage bark beetles in their operating areas; and identify and deal with extraordinary conditions, such as presence of very fine soils, well before new areas are developed. The Board also recommends that the licensees produce well-organized and legible forest development plans that meet the full content requirements of the Code. These plans should include clear explanations that justify departures from standard forest practices.

The Board recommends that, before approving forest development plans, the forest district staff make sure that those plans include all information required by the Code. In approving forest development plans that propose departures from standard forest practices, the district manager should include reasons for approval, and those reasons should be available to the public upon request.

Finally, the Board recommends that the Ministry of Forests ensure that a wider range of problem soil situations (for example, fine-textured soils on gentle terrain) are identified and considered in operational planning, especially outside of community watersheds.

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Background

This special investigation examines a series of complaints made by the An Dsap Wilp Society (the society), a group of First Nations people who use forest land 200 kilometres north of Smithers, in north-central BC. Society members live near Bear Lake at various seasons of the year. They claim traditional territories in the Sustut, Minaret, Bird Flat and Bear Lake areas where they currently hunt, fish and trap.

Two licensees, Takla Track and Timber Ltd. and Rustad Bros. & Co. Ltd. (the licensees), began timber harvesting in 1995 in the Bear Lake/Sustut area. In 1993 and 1994 they constructed local roads and an airstrip, using a BC Railway line for access to the operating area. Society members believed that their interests were adversely affected by the licensees' forest practices. They remain concerned about the impacts of timber harvesting and road construction on forest resources in the area.

In 1996 and 1997, the society filed six complaints¹ and one request for an administrative review of approval of a forest development plan. The complaints cited damage to streamside habitats, lack of enforcement by the Ministry of Forests related to road construction and maintenance, and flawed operational planning. There were seven assertions:

1. that Takla contravened the Forest Practices Code (the *Forest Practices Code of British Columbia Act* and related regulations) by damaging fish streams and riparian² zones in 1995/96
2. that Takla continued to carry out forest practices in contravention of a stopwork order in October 1996
3. that Ministry of Forests district staff failed to enforce a remediation order against Takla
4. that Ministry of Forests district staff carried out inadequate inspection and enforcement of Takla's operations
5. that Takla and Rustad both operated in the absence of approved operational plans³ in September and October 1996
6. that the Ministry of Forests district manager's approval of Takla's 1996 forest development plan was improper because that plan did not meet content requirements of the Code
7. that Takla and Rustad both made 1997 forest development plans available to the public for review and comment when those plans did not meet content requirements of the Code

The Forest Practices Board decided to carry out one special investigation into all seven issues. Furthermore, during a field investigation in May 1997, Board staff saw many trees lying across Minaret Creek, potentially affecting fish habitat. The Board added investigation of that matter to

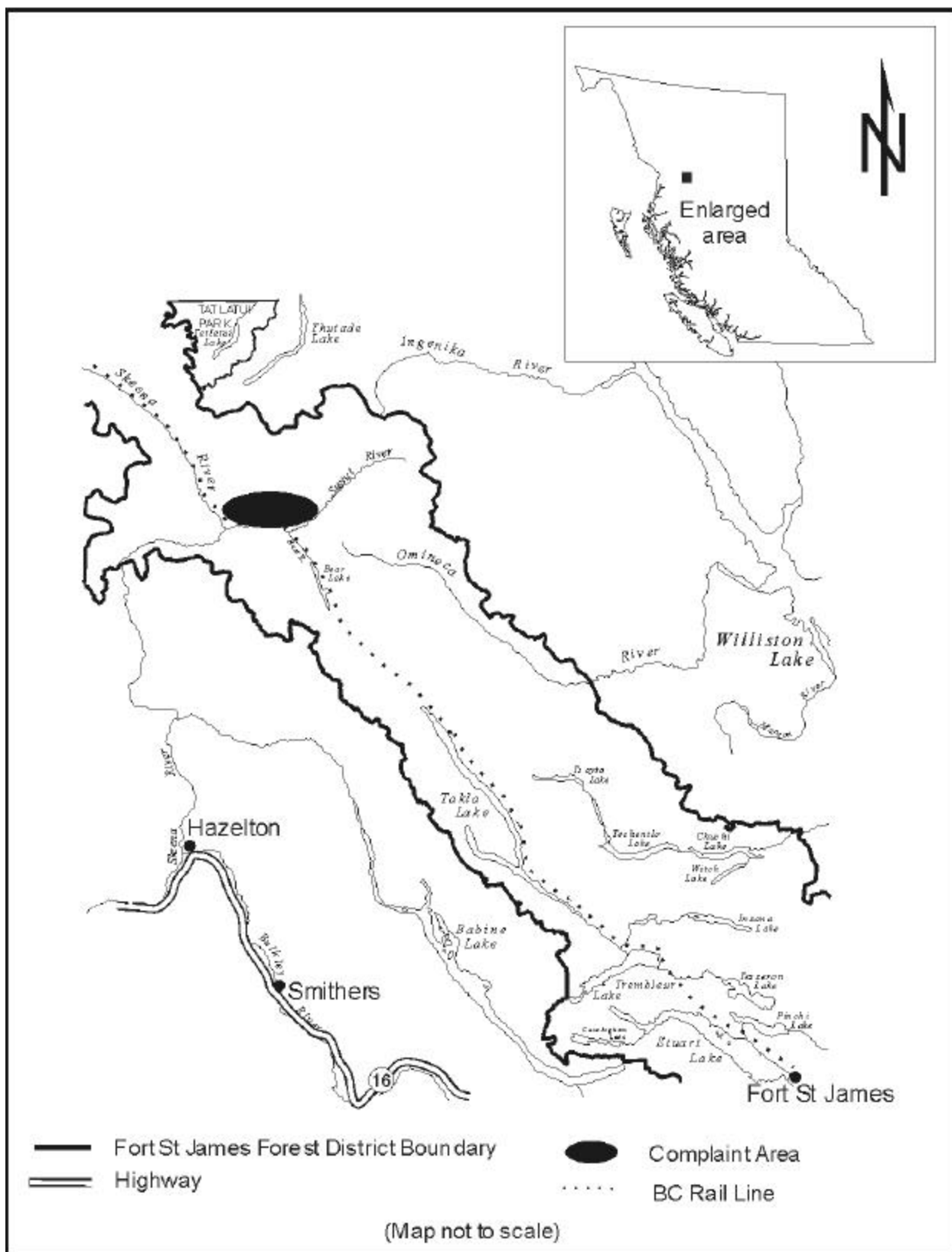
1 Five of the six were investigated; one was not within the Board's jurisdiction.

2 Riparian zones are areas adjacent to streams where forest practices are restricted to retain shade, reduce bank microclimate changes, maintain natural channel and bank stability and maintain important attributes for wildlife.

3 "Operational plans" include forest development plans, logging plans and silviculture prescriptions.

the scope of the special investigation.

Location of Sustut Complaints



Investigation Findings

This report deals with three major investigation issues:

- A. Concerns about riparian habitats
- B. Concerns about road construction
- C. Concerns about operational planning

A. Concerns about riparian habitats

Damage to riparian habitats by Takla's harvesting

Members of the society were in Takla's operating area in May of 1994. When they went into the area again in June and October of 1996, they saw that some trees marked to show boundaries of streamside reserve areas had been cut down. They also saw evidence of road construction across creeks, but culverts were missing so some creeks were obstructed with branches and other logging debris. Society members saw damaged culverts that appeared to have created flooding and allowed sediment transport.

Some of the society's observations were corroborated by government agencies. In late October 1996, Ministry of Environment, Lands and Parks (MELP) staff observed sediment transportation into the Sustut River from the area of Takla's operations. Board staff did not observe this directly, but photographs taken by MELP staff at the time showed a plume of discoloured water entering the Sustut from Takla's operating area. MELP staff determined that the sediment originated from roads constructed by Takla.

The society believed⁴ that Takla had damaged fish-bearing streams by operating machinery in and close to streams while logging in the winter of 1995/96. In the complaint, the society identified five cutblocks north of the Sustut River where it believed that Takla had failed to comply with the Code. The society asserted that Takla had failed to identify streams during planning, failed to restrict machinery use and road construction in riparian areas, and failed to control road surface runoff to prevent sediment transport into streams.

The Board examined the five cutblocks in the field and reviewed the operational plans and permits associated with those blocks. None of the society's assertions was corroborated. The assertion that marked trees had been cut down could not be checked because marked trees could no longer be detected with the passage of time. Observations indicated that practices in stream riparian areas had complied with the Code. There was no evidence that machinery had crossed streams except at designated temporary skid crossings. There was no indication of significant soil disturbance or forest floor displacement on any of the blocks, so forest harvesting operations had probably not created a sediment source. Therefore, the observed

⁴ Complaint faxed to the Board on July 16, 1996, and a letter to Board dated April 17, 1997.

sedimentation was likely to have been caused by something other than harvesting. (As described later in this report, the sedimentation was due to road construction.)

Finding #1

Takla's operations on the five cutblocks identified as problems by the society generally met operational plan commitments and Code requirements. There was no evidence of unauthorized damage to streamside habitats in those blocks and no evidence that forest practices on those blocks contributed to sediment transport to the Sustut River.

Damage to riparian habitats during airstrip clearing

In May 1997, Board staff saw dozens of trees felled across Minaret Creek at the west end of an airstrip. Minaret Creek is fish-bearing, so streamside areas should have been protected from unnecessary disturbance.⁵ Takla explained that the tallest trees had been cleared to improve airstrip safety. Takla also said that it had done the clearing as directed by MELP. Leaving fallen trees in place was presumed by MELP staff to be less damaging than removing them.

MELP staff had initially objected to the location of the airstrip close to Minaret Creek. The Fort St. James Forest District approved the proposal in 1995 but required that the airstrip be located farther from the creek to accommodate MELP concerns. In 1996, Takla applied to remove some tall trees from the end of the runway. Because such work was within a riparian management area along the creek, tree felling required the agreement of MELP.⁶ Takla amended the proposal several times to reflect MELP's concerns. A special use permit was issued in February 1997, with conditions agreed to by both ministries. These conditions included falling trees away from the creek wherever possible. MELP did not want machinery operating within 20 metres of the creek, and required that any trees leaning across Minaret Creek be hand-felled perpendicularly across the creek and left in place. Takla carried out MELP's instructions. As a result, 80 leaning trees were hand-felled across a short length of Minaret Creek and left in place. The trees were cut just prior to the Board's site visit.

The Board finds that the parties made reasonable efforts to minimize the impact of the tree-clearing operation on Minaret Creek. However, no one was aware of the end result. While Board staff, society representatives and the parties were viewing the area, district staff inspected the site and recognized the risk of damage to the riparian area from leaving so many felled trees in place across Minaret Creek.

One month after the problem was observed, government agencies and Takla staff met on site for a field review. Takla hired a consultant who recommended careful removal of the downed trees. That was done in late September 1997 with no observable damage to the riparian area.

⁵ Sections 7 to 15 of the *Timber Harvesting Practices Regulation*, now sections 10 to 12, 15, 20, 22, 23.

⁶ Formerly section 73(3) of the *Operational Planning Regulation*; now section 60(3).

Finding #2

Takla's removal of taller trees in the Minaret Creek riparian area complied with permit conditions set by MELP district staff. Those conditions created a risk of damage to the environment, but remedial action prevented actual damage to the creek.

B. Concerns about road construction

Soil attributes and road construction problems

The complaint area had two unusual soil attributes. First, there were many pockets of extremely fine-textured lacustrine⁷ soils. Such soil is so fine that it remains suspended in water for a long time. Second, there are very few gravel deposits, so materials to protect or armour⁸ the fine, erodable soils are scarce. Difficulties controlling sediment transportation were predictable.

Takla was aware of the presence of fine-textured soils before it started road construction. As the construction began in 1995, problems developed. The *Forest Road Regulation*⁹ requires that road drainage systems minimize sediment transport. Culverts must be kept functional, with outlets protected against erosion. That did not happen.

By February 1996, Ministry of Forests district staff were recommending corrective work to control sediment. Similar problems were noticed again in late March. By May, the federal Department of Fisheries and Oceans (DFO) had become concerned because the Sustut River is a very significant salmon river. DFO identified serious problems with road drainage from Takla's operations. Culverts were damaged and plugged. Inlets and outlets of culverts required protection with erosion-resistant material. Fill was required where culverts had been installed over soft material such as clay and peat. Sediment deposited on bridge decks was being transported into creeks. There were insufficient cross-drains.¹⁰ Road surfaces were not capped with erosion-resistant materials.¹¹ As a result, DFO issued an "inspector's direction"¹² in July that required Takla to correct those problems. Takla tried to correct the problems with standard remedial practices but those were ineffective in the unusual site conditions. Takla then hired a consultant who produced a road drainage improvement plan in August. Takla immediately began to implement it, modifying the recommendations as required to increase effectiveness.

⁷ Lacustrine soils were deposited as sediments from former lakes. They range in size from coarse materials near shore to fine silts and clays under deep, still water.

⁸ Stabilization with erosion-resistant material such as rock, coarse clean gravel or filter fabrics.

⁹ Section 12, now section 13.

¹⁰ A cross-drain culvert is one used to carry ditch water from one side of the road to the other.

¹¹ Erosion-resistant materials were not locally available at the time. Gravel sources were located later at the east end of the operating area.

¹² Failure to comply with such a direction contravenes the federal *Fisheries Act*.

Finding #3

Takla's road construction and maintenance was inadequate for the sensitive local soil conditions. Erosion from roads and road drainage caused sediment transportation from Takla's operations into the Sustut River. Takla failed to comply with the *Forest Road Regulation*.

Takla's compliance with a stopwork order

While Takla was preparing to respond to the DFO inspector's direction, difficulties from completed road construction continued. During July, August and September, Ministry of Forests district inspectors observed the many problems described earlier in this report. As a result, the district issued a stopwork order against Takla on October 2, 1996. The order allowed Takla to carry out corrective work but stopped any new road construction on the main North East Sustut Forest Service Road. That order remained in force until January 3, 1997.

Members of the society saw road construction machinery working on the North East Sustut Forest Service Road in Takla's licence area on several occasions after the stopwork order was issued. New gravel had been placed on the forest service road between October 17 and November 1. Society members saw a contractor, known to be used by Takla, continuing to build the forest service road in apparent contravention of the stopwork order.

The Board determined that Rustad was also doing work on the same forest service road, extending it eastward to access an adjacent forest licence area. The road construction contractor worked for both Takla and Rustad. The Board was satisfied that the road construction work observed by society members after October 2 was being done for Rustad, not Takla. That work did not contravene the stopwork order. As Rustad's operating area had a supply of gravel and did not include the fine-textured lacustrine soils that characterized Takla's area, continued road construction by Rustad did not create additional environmental problems.

Finding #4

Takla complied with the stopwork order. The society mistakenly believed that Rustad's road construction operations were being done by Takla. Rustad was not prohibited from continuing construction along the North East Sustut Forest Service Road.

Appropriateness of district enforcement of Takla's operations

a) District enforcement of a remediation order against Takla

When the Ministry of Forests district manager issued the order to stop any new construction of the North East Sustut Forest Service Road in October 1996, he also issued a remediation order to repair existing road problems. When remedial work took a year to complete, the society concluded that the Ministry of Forests had failed to enforce the order.

Ministry of Forests district staff carried out a complete inspection of the Minaret area in August 1996 and found that, along only 12 kilometres of road, 69 culverts required corrective work (armouring, replacement, cleaning). Culverts were crushed, blocked, and too short for the specific locations where they were installed. In addition, missing culverts and missing waterbars¹³ resulted in a total of 91 problems along the 12-kilometre stretch of road.¹⁴ District staff inspected the area again in late September and found 24 problems along 8 kilometres of the main road. Most surface drainage problems remained uncorrected. Sediment transport and water quality degradation was still occurring. As a result, the district manager issued a remediation order under the Code on October 2, 1996.

The remedial work was to be completed by October 31, 1996, but that did not happen. The order remained in force for a year, until September 30, 1997.

There was a seasonal reason to delay the remediation work. In winter, roads would freeze. Continuing work in wet unfrozen mud would create more environmental damage. It was better to let wet soils freeze before the roads were capped with gravel. Once the extent of the required remedial work became clear, the district manager extended the remediation order and put off final inspections until after spring breakup.

By October 1997, all promised remedial work, plus more, had been completed. Takla had put considerable time, effort and expense into correcting difficult problems. However, the complainant believed that remediation should have been completed in less time. The Board notes that DFO was satisfied with the scope of the remedial work and did not express concern about the work taking more than a year. The Ministry of Forests district staff also believed that it was not unreasonable for the work to take that long. The Board accepts that a year was a reasonable time for the licensee to comply with the remediation order, given the amount of work required and the seasonal constraints on road work. District enforcement by way of extending the remediation order was also appropriate.

Finding #5

Although it took a year to complete the remediation work, Takla put a major effort into correcting more problems than government orders required. Takla complied with the remediation order and district enforcement of the order was appropriate.

b) Overall enforcement of Takla's operations

"Enforcement" involves a range of activities to ensure the Forest Practices Code is followed. These include field monitoring and inspections, making decisions about compliance and non-compliance, and imposing remedial or disciplinary measures.

¹³ A shallow ditch dug across a road at an angle to prevent excessive flow down the road surface and erosion of road surface materials.

¹⁴ An August 13, 1996, inspection of 12 kilometres of road by Ministry of Forests staff revealed 12 locations where waterbars were missing, 39 culverts that needed armouring, 21 poorly placed or missing culverts, 11 damaged culverts and 9 blocked culverts.

The north Sustut area is more than 300 kilometres from the Fort St. James Forest District office. The only access is by air or rail. Nevertheless, district staff inspected Takla's north Sustut operations at least 24 times between October 1995 and September 1997. Many road drainage control problems were identified. Few problems were detected related to harvesting. Given the distance from the district office and the fact that active harvesting by Takla was restricted to winter, the Board concludes that Takla's operations were inspected frequently. The monitoring was appropriate.

As a result of this monitoring, district staff sent letters to Takla identifying problems and recommending corrective actions. Subsequent inspections recorded whether the corrective work had occurred. The problems were always corrected, usually within several weeks of being brought to Takla's attention (the exception was the problems of erosion and sedimentation caused by road construction). The Board confirms that enforcement was generally effective in identifying and correcting non-compliance. Correction of erosion and sedimentation problems took a long time. That was because of seasonal constraints and difficulty in locating gravel, not because of ineffective enforcement.

Remedial measures are used to repair environmental damage. The district manager imposed such remedial measures against Takla by making the remediation order in October 1996.

Disciplinary measures can be imposed to deter unacceptable or negligent practices. If environmental damage is done despite foreseeable risk, disciplinary measures might be appropriate. In the circumstances of this complaint, Takla planned poorly. It knew that there were pockets of fine-textured soils in the Sustut area, so problems such as water discolouration and sediment transportation were foreseeable results of road construction. Nevertheless, Takla used only standard road construction techniques. That resulted in 91 problems¹⁵ along 12 of the 34 kilometres of road constructed and maintained by the company.

The road problems were eventually corrected, but there was no deterrent penalty imposed by government. Takla was only required to stop some road construction and to repair the damage. The Board considered whether deterrent penalties should have been applied, because constructing roads in a way that risked creating foreseeable environmental damage was not appropriate. Takla should have carried out surveys to locate problem soils and then planned to either avoid those locations or to carry out activities in a way that would deal with the problems. Failure to do so was particularly inappropriate in the Sustut situation, which involved a remote, difficult-to-monitor area adjacent to a high-value fish river. Disciplinary measures such as fines could have been considered. The district considered the need for penalties. The district was aware that Takla had spent approximately \$250,000 on consultants and contractors, and utilized considerable company staff time in its effort to understand and then remedy the road problems. Takla was also subjected to investigations by both federal and provincial agencies, including the Board. The district believed that these factors provided adequate deterrence without additional disciplinary penalties.

A remediation order alone does not necessarily provide deterrence. It may simply require a licensee to do what is already legally required. In this case, the remediation order required

¹⁵ See footnote 14 for details.

Takla to ensure that the drainage system intercepted surface and subsurface drainage from cut slopes, drained ditches, controlled ditch erosion, prevented water from being directed onto potentially unstable slopes or soil material and minimized the amount of sediment entering streams. In most cases, simply requiring a licensee to do the things it is already legally required to do does not accomplish the Code's goals of compliance and deterrence.

However, deterrence is just one consideration in administering an administrative penalty such as a fine. Section 117(4)(b) of the Act lists other factors that are relevant, including:

- previous contraventions of a similar nature;
- whether the violation was repeated or continuous;
- whether the contravention was deliberate; and
- the person's cooperativeness and efforts to correct the contravention.

There were no previous similar contraventions. The contravention was not repeated. The portion of road was constructed and the problem situations were created before a contravention was identified. After the problems were identified, the licensee worked to correct the problems. There was no indication that the contravention was deliberate. Takla was cooperative and made major and costly efforts to correct the problem. In such circumstances, the Board agrees that imposing remedial measures without disciplinary measures was appropriate enforcement.

Finding #6

District enforcement of Takla's operations, including the use of a remedial order without additional disciplinary measures, was effective and appropriate.

C. Concerns about Operational Planning

Expiry and extension of Takla's and Rustad's 1995 forest development plans

Society members observed road modification work being carried out toward the eastern end of Takla's forest licence area and the western end of Rustad's area in early October 1996. Takla's and Rustad's 1995-1999 forest development plans had expired on September 29 and August 18 respectively.¹⁶ Neither had been extended or replaced. Society representatives told district staff that both licensees were modifying roads without approved forest development plans.¹⁷

On October 25, the district manager retroactively approved an extension of Rustad's 1995 forest development plan from October 1 to November 30. On October 29, the district manager did the same for Takla. On November 29, both Takla's and Rustad's 1995 plans were extended again to

¹⁶ Although forest development plans show operations over a five-year planning period, they typically have a term of only one year and are replaced every year.

¹⁷ For convenience, the Board refers only to forest development plans. In the fall of 1995, however, road construction could be authorized by a forest development plan or an access management plan. The complainant noted that the forest development plans had expired and that there were no access management plans for the area.

December 20. A replacement 1996 forest development plan was approved for Takla on December 11 and for Rustad on January 7, 1997.

The society believed that doing road work without an approved forest development plan being in effect contravened the Code. The society questioned whether the Code allowed retroactive extensions of forest development plans. The society also asserted that both licensees had failed to amend their forest development plans to comply with the Code at the time of extension.

A licensee can construct or modify a road on Crown land if the road is identified in a forest development plan approved by the district manager and has been authorized by a road permit.¹⁸ The road had been identified in Takla's approved 1995 forest development plan. The plan had expired before the road modification was completed, so the issue was whether work could only proceed while an approved forest development plan remained in effect.

The forest development plan had been approved. The road permit was issued under that approved plan while the plan was still in effect. The road work itself was regulated under the road permit, which was still in effect. In that circumstance, it was not necessary for the forest development plan to also still be in effect. The work was authorized in a valid road permit that complied with an approved operational plan at the time it was issued. Nevertheless, the Board is concerned that staff of the Ministry of Forests seemed unaware that the forest development plans had expired. That suggests lax administration, which does not foster public confidence.

Finding #7

Takla's road construction was authorized by a valid permit that had been issued under an approved forest development plan. The road permit was still in effect when the work was done, although the approved forest development plan was no longer in effect. Carrying out construction after the forest development plan was no longer actually in effect did not constitute non-compliance with the Code.

The Code does not explicitly refer to retroactive approval of a forest development plan, but section 19 of the *Forest Practices Code of British Columbia Act* (the Act) deals with extensions. A district manager can extend the term of the plan for up to one year at the request of a licensee, either before or after a forest development plan expires. The Board accepts that such an extension could also be retroactive.

Finding #8

Retroactive extension of the licensees' forest development plans after they had expired did not constitute non-compliance with the Code.

¹⁸ Section 58 of the *Forest Practices Code of British Columbia Act* (the Act).

If a forest development plan is extended, a licensee must promptly amend the plan if the plan does not comply with current requirements of the Code.¹⁹ The extended plans did not comply with the Code content requirements,²⁰ so they should have been amended. Neither licensee did this, so both failed to comply. However, the plans were replaced a short time²¹ after the extensions occurred so the Board considers the non-compliance not to be significant.

Finding #9

Both licensees failed to comply with the Code as neither amended their 1995-1999 forest development plans to meet Code requirements upon extension. However, the failure to amend was not significant non-compliance in the circumstances.

Content of Takla's 1996 forest development plan

Takla's 1996 forest development plan was approved on December 11, 1996. At that time, a forest development plan did not have to include everything that the Code required. To allow the Code provisions to be phased in, a forest development plan was required only to "substantially meet"²² the content requirements of the Code.²³ The society reviewed Takla's 1996-2000 forest development plan and said it did not show information that was required by the Code such as operable areas, locations of unstable terrain and descriptions of streams and wetlands. There was no dispute²⁴ about whether the plan was missing the information. The issue was whether or not the plan substantially complied with the Code's content requirements without that information. "Substantial compliance" required that a plan meet the Code's content requirements except for minor omissions or defects that would not affect the intent of the legislation.²⁵ The Board considers content to be essential for substantial compliance if omitting such information from the forest development plan might result in damage on the ground.

Takla's 1996-2000 forest development plan did not identify operable areas. "Operable" is not defined in the Code. It is used in various contexts in Code guidebooks – operable in terms of

¹⁹ Section 19(5) of the Act.

²⁰ The Board analyzes the content of the licensees' 1996 forest development plans later in this report and concludes that those plans did not meet the Code's content requirements. The 1995 plans had similar content to the 1996 plans.

²¹ The 1995 plans continued to apply for another 6 weeks for Takla and 10 weeks for Rustad.

²² Section 229(3) of the Act; now, section 230(3).

²³ A district manager can only approve a forest development plan if it meets both of two conditions. The plan must have been prepared and submitted in accordance with the Code (section 41(1)(a) of the Act) and the district manager must be satisfied that the plan will adequately manage and conserve the forest resources of the plan area (section 41(1)(b)). The provision that allowed approval of a plan that only "substantially meets" the Code's content requirements only relaxed the requirement for section 41(1)(a), not the requirement to manage and conserve forest resources.

²⁴ All three deficiencies were specifically mentioned and considered in the district manager's approval letter.

²⁵ This meaning of "substantial compliance" was used by the Forest Appeals Commission in *96/04(b) Forest Practices Board v. Government of British Columbia (MacMillan Bloedel Limited, Third Party; Sierra Club of British Columbia, Intervenor)*, June 11, 1998, p.7.

access, distance to processing facilities and sawlog size—all related to economic factors.²⁶ Such “operability” information would not have identified the low-gradient areas with fine-textured soils or riparian area protection that caused the problems in the Sustut area. Therefore, operability information did not, in the circumstances, have to be included in the forest development plan to substantially comply with the Code’s content requirements.

Takla’s plan also did not incorporate terrain stability assessments or classify streams as required by the Code. Instead, Takla proposed to supply the terrain and stream information later in applications for silviculture prescriptions and road permits.²⁷

Supplying the terrain stability information later was acceptable under the Code in the circumstances.²⁸ The steep slopes that would have required terrain stability assessments would not have covered pockets of fine-textured soils. Those soils were on gently sloping terrain. Terrain stability information was not necessary for substantial compliance in the circumstances.

The pockets of fine soil would have been revealed in a surface soil erosion assessment. However, there appears to be a gap in the Code because it only requires surface erosion assessments within community watersheds. A broader requirement for surface erosion assessments may well have reduced the sediment transportation problems that characterized Takla’s operations in the Sustut Valley.

The need for stream protection in Takla's plan was evident, considering the proximity of the Sustut River, a high-value salmon stream. Stream classification information for all streams crossed by, or downstream from, planned cutblocks and roads was important to ensure adequate management and conservation of water and fish resources. Stream classification information was necessary for substantial compliance in the circumstances of this forest development plan. Takla submitted a plan without comprehensive stream classification information, so the plan did not substantially comply with Code content requirements.²⁹

Finding #10

Takla’s 1996-2000 forest development plan was incomplete and did not substantially comply with the Code’s content requirements. Takla failed to include adequate stream classification information.

²⁶ The Ministry of Forests (but not the Code) also uses the term “inoperable” to describe both economic and environmental constraints – “lands that are unsuited for timber production ... by virtue of their: elevation; topography; inaccessible location; low value of timber; small size of timber stands; steep or unstable soils that cannot be harvested without serious and irreversible damage to the soil or water resources...”

²⁷ *Forest Licence A27823 Takla Track and Timber Ltd. 1996 Forest Development Plan – July 1, 1996 to June 30, 2001*, pp. 1, 5 and 10.

²⁸ The district manager did not require such assessments, and section 30 of the *Operational Planning Regulation* itself only required terrain stability assessments where the forest development plan had indicated a risk of landslides, potentially unstable terrain, slopes steeper than 60 percent or other “indicators of slope instability.” The forest development plan identified no such areas.

²⁹ Section 17 of the *Forest Practices Code of British Columbia Act* and section 15 of the *Operational Planning Regulation*; now sections 17 of the Act and 18 of the regulation, respectively.

There was also a serious forest health concern in the Sustut area that needed to be addressed in forest development planning. Since the early 1980's, there had been a significant spread of mountain pine beetles upstream along the Skeena River. Much of the north side of the Sustut valley had stands composed of 60-70 percent mature lodgepole pine. Those trees are susceptible to beetles and were downwind of beetle-infested areas in the Skeena valley. In response to the risk of beetles spreading up the Sustut valley and into the interior, the district directed licensees to harvest timber in the worst infestation areas in the lower Sustut as soon as operations began in the north Sustut valley. Between 1993 and 1995 the beetles continued to spread significantly, more than doubling the area affected.

Section 29(1) of the *Operational Planning Regulation* required licensees to ensure that their forest development plans "set out, for the area under the plans, the results of any evaluation of forest health factors ... currently causing damage or which may potentially cause damage in the area under the plan." Takla was therefore required to include the results of evaluations, by Takla and the government, of forest health factors. If there were significant risks to forest resources detected, the regulation was ambiguous,³⁰ but the Board considers that Takla, in its forest development plan, was required to include management strategies to reduce those risks during the term of the plan. In the circumstances, there were significant risks to forest resources, so Takla's 1996-2000 forest development plan had to include proposed management strategies to reduce those risks. The plan described the area as "heavily attacked by mountain pine beetle." However, the plan did not describe current infestation levels, assess the potential risks or summarize a beetle management strategy, even though the Ministry of Forests had advised Takla to do so.³¹ There was no beetle baiting strategy, no beetle population maintenance program and no map of beetle distribution. In summary, there was no proactive management strategy described in the plan and no commitment by Takla to manage the risk of mountain pine beetle damage to forest resources. It would have been very difficult for reviewing agencies and the public to determine the extent or location of the mountain pine beetle infestation or how Takla would deal with the problem. The limited forest health information was inadequate, so the plan did not comply with the *Operational Planning Regulation*.

Finding #11

Takla's 1996-2000 forest development plan did not adequately describe the extent of mountain pine beetle infestations, and it did not propose management strategies to deal with mountain pine beetles in the plan area. Takla failed to comply with the Code.

³⁰ At the time, sections 15 and 29 of the *Operational Planning Regulation* could be read as requiring only an evaluation of mountain pine beetles in the plan or as requiring both an evaluation and a beetle management strategy to be included in the plan. Since June 1998, section 13 of the replacement *Operational Planning Regulation* has been clear. A licensee must now record and evaluate the occurrence of detected forest health factors in a forest development plan, but need not include management strategies.

³¹ A letter of February 9, 1996. The letter was acknowledged and included as an appendix to Takla's 1996 Forest Development Plan, but the recommended information was not put into the plan.

District approval of Takla's 1996 forest development plan

Although Takla's 1996-2000 forest development plan did not substantially comply with the Code's content requirements for stream classification or forest health, the district manager approved the plan. The district manager recognized that Takla's forest development plan did not have important stream classification information. However, he believed that urgency to harvest beetle-infested stands outweighed the need for stream classification information in the short term,³² so he agreed to allow Takla to provide stream information later in silviculture prescriptions and road permits.

In approving the forest development plan, the district manager had to determine that the plan had been prepared and submitted in accordance with the Act and regulations.³³ In 1996, a forest development plan had to include substantially³⁴ all of the content requirements of the Code. Takla's 1996 forest development plan did not include essential information on forest health or stream classification, so it was not prepared in accordance with the Code. The district manager did not comply with the Code in approving the 1996 plan.

Finding #12

The district manager failed to comply with section 41 of the Act when he approved Takla's 1996 forest development plan. That plan did not substantially comply with the Code's content requirements. It was missing stream classification information and did not describe the extent of the beetle problem or provide a beetle control strategy.

Adequacy of Takla's and Rustad's 1997 forest development plans for public review

Rustad and Takla closely coordinated their 1997-2001 forest development planning procedures for the complaint area. The same planning forester prepared both of the forest development plans and the plan formats were identical. The plans were both advertised for public review and comment on the same dates, in the same publications,³⁵ with the same review and comment periods. Both plans were approved in October 1997, after this investigation had started.

The society reviewed both licensees' 1997-2001 forest development plans. The society sent detailed letters to both licensees, asserting more than a dozen deficiencies in each plan. The letters stipulated that legends were confusing, topographic information was missing and cultural heritage resources were not adequately identified. Stream, lake and wetland assessment results were not provided. Road construction and deactivation was inadequate, terrain stability information was missing and operability information was missing. Heli-logging was mentioned but no location information provided. Cutblocks were very large (up to 500 hectares in Rustad's

³² The Act, in section 42, provides for forest development plan approval in emergency cases. However, there is no flexibility in plan content even in emergencies.

³³ Section 41(1)(a).

³⁴ The requirement for "substantial" compliance with content requirements was temporary. After June 1997, plans had to meet all of the content requirements of the Code.

³⁵ Newspapers in Prince George, Fort St. James and Smithers (including Houston and Hazelton) and the BC Gazette.

plan, for example). Although there was considerable discussion in both plans about mountain pine beetle control, the plans included no information or maps describing current distribution of the insect. With all of that information missing, the society considered the documents to be inadequate for public review and comment.

The licensees acknowledged the brevity of their forest development plans and explained that the plans were never intended to be self-contained documents. The licensees stressed that very few people were affected by or used the remote and inaccessible areas covered by those plans. The licensees had identified 11 individuals³⁶ who constituted the interested or affected “public” for those particular plans. Each person was sent two or three invitations to contact the licensees about planned forest practices in the area, and each was invited to meet with a company planning forester to discuss questions of specific interest. The company forester responded to specific questions, pulling out background information to supplement and expand upon what was in the forest development plan. The licensees maintained that such “one-on-one” discussion of forest development plans was more effective than the open-house style of public consultation used elsewhere in BC. In addition, the licensees said that some of the local public were not familiar with maps and text and would better understand an oral question and answer process.

The Board commends Takla and Rustad for making an effort to adapt the public review and comment process to local conditions. One-on-one public consultation is highly desirable where that is feasible. The process used could overcome literacy and language barriers and could provide the reviewing public with detailed information on specific matters of individual interest. However, the Board is concerned about the licensees’ public review process. There is a larger public that needs at least a minimum level of information in a forest development plan in order to be able to comment effectively. There are at least 70,000 people living in the communities where the licensees advertised the plans for public review and comment. The licensees’ process is commendable as far as it goes, but the Board finds that an incomplete and general plan supplemented by personal assistance is not enough. The *Operational Planning Regulation* specifies content requirements for forest development plans. That content must be presented in a way that can be understood by the general informed public. With that as a base, personal one-on-one assistance with those who express interest in a review would be a good process.

Licensees must provide persons interested or affected by operations under the plan with adequate opportunity for review and comment.³⁷ Adequate opportunity requires materials that are adequate for public review. forest development plans for public review must include information on all matters required by the Code because there is no provision for public review of partial, draft or summary plans. Adequate plans for public review should have enough information, in enough detail, for the public to understand what forest practices are proposed, what measures will be taken to minimize impacts on forest resources and what impacts will result from what is proposed.

³⁶ These included six First Nations representatives (including the complainant society), two trappers, one hunting guide and two fishing guides.

³⁷ *Operational Planning Regulation*, section 4(1); now 27(1).

A plan must be reasonably organized to allow effective public review. Both Takla's and Rustad's 1997 forest development plans were very brief and general in nature. Maps lacked detail. A reader had to cross-reference text with intricate tables in order to understand what was proposed. The plans were poorly organized.

The Board found that the text, maps and tables together dealt adequately with some required content information. The tables and maps of the plan adequately dealt with:

- location and scheduling of harvest for cutblocks;
- location and state of existing roads and the extent of road construction and modification proposed in each year of the plan;
- road maintenance operations;
- road deactivation operations; and
- lake classification.

Other information was presented in a way that was inadequate for public review and comment. Forest cover was shown on maps but the information was so small that it was mostly illegible. There was a confusing presentation of stream and wetland classification. The text included no classifications at all, stating that streams and wetlands would be classified in the future. Nevertheless, classifications of some streams were included in tables, but there was no way to relate those details back to the maps. Such complications made the information that was included almost incomprehensible. Discussions of forest health differed between the two plans. Bark beetle control strategies were described in a generic sense in both plans, but site-specific beetle distribution and local population trend information was totally absent in Takla's plan. Rustad's plan had a reasonably comprehensive "Beetle Harvest Justification" as an appendix. The one-page, bullet-form justification listed beetle control objectives, management actions to achieve the objectives, and expected results. Rustad's forest health information, although brief, was adequate for public review, but Takla's was not.

Finally, there was insufficient justification for cutblocks larger than 60 hectares.³⁸ The Code sets a general maximum cutblock size of 60 hectares for the area of the complaint, but allows larger blocks if harvesting is being carried out to recover timber that was damaged from insects. The Board considers the limit on cutblock size to be one of the key components of the Act and one that has considerable public interest. When departing from the 60-hectare standard, licensees and government should be able to provide the public with a detailed explanation of the information and reasoning that led to approval of many large cutblocks. In the circumstances of this complaint, the public was told only that larger cutblocks were required "to recover damaged or susceptible timber, or where provisions for biodiversity have been incorporated". There was no additional detail. Rustad proposed cutblocks as large as 555 hectares and Takla proposed cutblocks up to 285 hectares. The plans should have explained precisely why such large cutblocks were necessary, but no details were included.

³⁸ *Operational Planning Regulation*, section 21(2); now 11(1).

The plans did not contain any usable information at all on a number of items that are required under the Code's *Operational Planning Regulation*.³⁹ Even though helicopter yarding was specified in the plan, no information was provided. There was no topographic information (elevation contours). The public requires this kind of information to assess risk of potential problems relating to slope, soil and erosion. Because the Code did not require terrain stability assessments, topographic information was particularly important to the public for understanding whether soil, water and fish resources could be adequately managed and conserved in the plan area.

With some mandatory information missing and other mandatory information difficult or impossible to decipher, the plans were not adequate for public review. The licensees did provide better information to the society upon request, but only after the public review and comment period had expired. Society members and others stood to be adversely affected by the activities proposed in the 1997 forest development plans and needed the opportunity to review and comment on complete, legible plans. The *Operational Planning Regulation* defines the minimum content required in a forest development plan, and the public is entitled to review plans that contain all that the Code requires. By early 1997, both licensees had had two years to gear up to the Code. Putting out inadequate plans for public review was not appropriate.

Finding #13

The forest development plans made available by both Takla and Rustad for public review in 1997 did not adequately present information required by the *Operational Planning Regulation*. Information was missing on forest cover, topography, water, fish, wildlife, forest health and biodiversity. Although company staff made a commendable effort to adapt the public review process to local conditions by discussing specific concerns with local members of the reviewing public, the larger public and reviewing agencies still required a complete plan. The plans were poorly organized, incomplete and partly illegible, and they were not adequate for public review and comment. Both licensees failed to comply with section 4(1) of the *Operational Planning Regulation*.

Conclusions

1. Takla complied with the Code during forest harvesting in the winter of 1995/96 on five cutblocks of concern to the society. Riparian habitats were not damaged by that harvesting.
2. There was a risk of environmental damage from MELP's requirement that Takla leave felled trees in place during clearing beside the Minaret airstrip, but the trees were removed before any damage occurred to the riparian area.

³⁹ *Operational Planning Regulation*, section 15; now less comprehensive as section 18.

3. Takla complied with both a stopwork order and a remediation order issued by the Ministry of Forests district manager in 1996.
4. The Ministry of Forests district staff appropriately monitored and enforced compliance with the remediation order.
5. Despite a foreseeable risk that road construction could cause environmental problems, Takla carried out poor road building and failed to comply with the Code. Those practices had the potential to cause persistent environmental harm.
6. After government agencies had issued stopwork and remediation orders, Takla made a major effort and carried out significant remedial work to correct problems caused by road construction.
7. Ministry of Forests staff enforcement of Takla's Sustut operations was appropriate.
8. There were administrative oversights in the extension of Takla's and Rustad's 1995 forest development plans, but there was no significant non-compliance with the Code. However, the public expects that forest tenures will be adequately administered as well as regulated. Retroactive correction of administrative oversights reduces public confidence in the administration of the Code.
9. Takla's 1996-2000 forest development plan was incomplete and did not substantially comply with the Code's content requirements.
10. The district manager should not have approved Takla's 1996-2000 forest development plan because it did not substantially comply with the Code's content requirements. Further, it did not include stream classification or forest health information that was necessary to satisfy the district manager that the plan would adequately manage and conserve forest resources.
11. Although Takla and Rustad dealt personally and effectively with 11 members of the local public who expressed interest in their 1997-2001 forest development plans, those plans were not adequate for the purposes of review and comment by the larger public, including government agencies. The plans were poorly organized, partly illegible and incomplete. Both licensees failed to comply with the Code requirements for public review and comment.
12. The Code does not deal effectively with the environmental risks of damage from very fine soils that occur on relatively gentle slopes. Only in community watersheds must assessments be carried out for soil erosion hazard and risk of sediment delivery to streams. Elsewhere, there is no Code requirement to assess the risk of sediment delivery before beginning road construction.

Recommendations

In accordance with section 185 of the *Forest Practices Code of British Columbia Act*, the Board makes the following recommendations:

1. Takla should develop proactive and efficient long- and short-term strategies to successfully manage bark beetles in its operating areas. Both strategies should anticipate and control future infestation. The primary objective of such strategies is the protection of forest resources.
2. Takla and Rustad should produce well-organized and legible forest development plans that meet the full content requirements of the Code. The plans should be presented in a way that can be understood by the general informed public. Takla and Rustad should include clear explanations in forest development plans to justify departures from standard forest practices. For example, exceeding maximum cutblock sizes or not adhering to standards for road construction and maintenance would warrant comprehensive explanations in forest development plans.
3. Fort St. James district staff must ensure that forest development plans include all information required by the Code prior to approval. In approving forest development plans that propose departures from standard forest practices, the district manager should include reasons for approval with reference to protection of forest resources. Those reasons should be available to the public upon request.
4. Takla should undertake assessments to adequately identify potential problems in newly accessed areas and develop procedures to deal with them. Standard operating procedures should be developed to deal with extraordinary conditions, such as presence of very fine soils. Those procedures should be implemented well before access is created, and the results should be closely monitored.
5. The Ministry of Forests should implement measures so that a wider range of problem soil situations (for example, fine-textured lacustrine deposits on gently sloping terrain) are identified and considered in operational planning. Assessments of soil erosion hazard and risk of sediment delivery to streams may be required outside of community watersheds to adequately manage and conserve forest resources.

In accordance with section 186 of the *Forest Practices Code of British Columbia Act*, the Board requests that:

- the Fort St. James Forest District advise the Board by February 15, 2001, as to how it has addressed recommendation 3 for the 2001-2005 forest development plans;
- the Deputy Minister of Forests advise the Board by August 15, 2001, as to how the ministry has addressed recommendation 5;
- Takla Track and Timber Ltd. advise the Board, by the date its 2001-2005 forest development plan for Forest Licence A27823 is approved, as to how it has addressed recommendation 2; and by June 15, 2001, as to how it has addressed recommendations 1 and 4; and
- Rustad Bros. & Co. Ltd. or its parent company Canadian Forest Products Ltd. advise the Board, by the date its 2001-2005 forest development plan for Forest Licence A33801 is approved, as to how it has addressed recommendation 2.

Appendix 1 – Chronology

<i>Date</i>	<i>Action or Event</i>
1993	Takla begins to establish transportation infrastructure to provide access to forests on north side of Sustut River.
May 1994	Society reported damage to streams apparently resulting from road construction by Takla Track and Timber Ltd. near block 702.
June 1994	Ministry of Forests (MoF) and Ministry of Environment, Lands and Parks (MELP) staff investigate and conclude that operations are proceeding in an acceptable manner.
Winter 1994	Takla begins harvesting, winter harvesting only.
March 28, 1995	Rustad's 1995 forest development plan for Sustut submitted to MoF.
April 1, 1995	Takla's 1995 forest development plan for Sustut submitted to MoF.
Summer 1995	MoF approves construction of airstrip at Minaret Creek.
June 15, 1995	<i>Forest Practices Code of BC Act</i> comes into force.
August 18, 1995	Rustad's 1995 forest development plan for Sustut approved.
September 29, 1995	Takla's 1995 forest development plan for Sustut approved.
Winter 1995	Takla continues winter harvesting.
February, March 1996	MoF district staff note problems with control of sediment from Takla's road construction.
April 26, 1996	Takla's 1996 forest development plan for Sustut submitted to MoF.
May 18, 1996	MoF issues a remediation order for Takla to repair a fill failure.
May 23, 1996	Department of Fisheries and Oceans staff note problems with control of sediment from Takla's road construction.
June 25, 1996	Society again reports damage to streams, apparently resulting from road construction by Takla Track and Timber Ltd. near blocks 702 and 722.
July, 1996	Department of Fisheries and Oceans issues an inspector's direction to correct sedimentation problems from Takla's road construction.

July 16, 1996	Society files a complaint with the Board.
August 14, 1996	Takla receives a consultant's road drainage improvement plan.
August 18, 1996	Rustad's 1995 forest development plan expires.
September 29, 1996	Takla's 1995 forest development plan expires.
October 2, 1996	MoF district issues a stopwork order, halting new road construction by Takla, and a second remediation order, this one to correct sedimentation problems from Takla's road construction.
October 25, 1996	Rustad's 1995 forest development plan for Sustut extended.
October 29, 1996	Takla's 1995 forest development plan extended.
Winter 1996	Takla continues winter harvesting, including felling trees over Minaret Creek for improved airstrip safety.
November 29, 1996	Takla's and Rustad's 1995 forest development plans extended a second time.
December 11, 1996	Takla's 1996 forest development plan for Sustut approved.
January 3, 1997	MoF lifts stopwork order against Takla concerning new road construction.
January 11, 1997	Rustad's 1996 forest development plan approved.
March 1997	Public review for Takla's and Rustad's 1997 forest development plans end.
May 1997	Board field investigation. Many trees observed felled and left over Minaret Creek.
September 1997	Trees across Minaret Creek removed by Takla.
September 30, 1997	MoF ends remediation order to correct sedimentation problems from Takla's road construction.
October 1, 1997	Takla's and Rustad's 1996 forest development plans for Sustut approved.