



Investigation Report: Harvesting beside Beech Creek,
Comox Lake Community Watershed

Owner: TimberWest Forest Corporation

Investigation #: IN0703

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1.0 INTRODUCTION

It is alleged that TimberWest Forest Corp, as registered owner of Managed Forest # 8 and 65, contravened section 18 of the Private Managed Forest Council Regulation by failing to retain sufficient trees along a section of Beech Creek in cutblock CW500. This resulted from the logging of the cutblock by helicopter during October 2005.

2.0 BACKGROUND

Chronology of Significant Events

On July 27, 2005

I had a telephone conversation with John Philips, Manager Forestry Programs, in response to his e-mail of July 25, 2005 requesting that I call him concerning an issue with TimberWest's lands in the Comox Lake area. In this conversation Mr Philips informed me that during helicopter logging of a cutblock at Beech Creek a reserve zone had not been left on one side of Beech Creek but that additional trees had been retained on the opposite bank. Apart from this information I did not get an indication of the nature and extent of the issue. I agreed to make a joint site inspection once operations had been completed. It was left with Mr Philips that he would contact me to firm up a suitable date.

On November 17, 2005

I completed inspection of the site with John Phillips, Manager Forestry Programs. A helicopter reconnaissance was made of the upper Beech Creek catchment, cutblock CW 500 and lower Beech Creek to its junction into Comox Lake. I observed that within cutblock CW500 a riparian buffer had been left on one side along one section of Beech Creek. TimberWest provided me a copy of the logging plan, on-site photographs and a verbal rationale for their logging plan. I noted this in an inspection file I wrote based on site review information provided to me by TimberWest. I noted that I did not observe any environmental harm and that TimberWest would have had to apply for variance to Council.

On May 21, 2007

BC Tapwater Alliance filed a complaint alleging that TimberWest had violated section 18 and possibly section 17 of the Council Regulation by logging beside Beech Creek.

On May 29, 2007

TimberWest confirmed that the complaint concerned cutblock CW 500 and that they would be undertaking a site inspection to assess current conditions on the cutblock.

On June 12, 2007

TimberWest submitted a site review summary report of cutblock CW500 to council office. This report outlined rationale for the logging and the current environmental condition on the cutblock. The report stated that there were no indications of environmental hazard to drinking water quality or fish habitat.

On June 19, 2007

I acknowledged receipt of the site review summary report and informed TimberWest that an investigation into a potential contravention of sections 3, 17 and 18 of the Council Regulation was being initiated.

On July 24, 2007

Shawn Hamilton and Associates provided their inspection report titled CW500 Block Assessment Beech Creek.

3.0 SCOPE

The investigation was concerned with determining whether TimberWest may have contravened the *Private Managed Forest Land Act* or regulations through its activities on cutblock CW 500. The investigation was triggered by the BC Tapwater Alliance allegations concerning TimberWest's harvesting of an unspecified cutblock in Beech Creek.

In preparing this report I have drawn from my own observations of the site, the facts and opinion provided in the Shawn Hamilton and Associates report, and information provided by TimberWest.

4.0 LOCATION and OWNERSHIP

The Beech Creek watershed is located on the north side of Comox Lake. Beech Creek drains directly into Comox Lake (2200 ha), approximately 9 km upstream of the outlet of the lake (Figure 1, Hamilton report). It is part of the Comox Lake community watershed supplying the Puntledge water supply area.

TimberWest owns 81% of the 1660 hectare Beech Creek watershed through its holdings in Managed Forests 8 and 65. The previous owner, Crown Zellerbach, logged the majority of catchment area during the 1970s.

The subject cutblock CW 500 is located on a steep section of Beech Creek approximately one kilometre upstream from its junction with Comox Lake. The logging plan shows cutblock CW 500 is 5.2 hectares in area and is located on a south-facing slope of Beech Creek. Slopes on the cutblock range from 45-90%. Beech Creek, where it flows through the block, has an average channel width of 14.6 metres and a channel gradient of 14%.

5.0 ALLEGATION

From my review of the facts outlined in Mr. Hamilton's report it appears that the owner has contravened section 18 the Private Managed Forest Land Council Regulation as during harvesting sufficient trees along a 200 m section on one side of Beech Creek were not retained.

Contravention of Section 18

The relevant provision of Section 18 in the Council Regulation states:

Retention of trees adjacent to large streams

1. If an owner carries out timber harvesting activities in a cutblock adjacent to a stream whose stream channel is at least 3.0 m wide, the owner must, on each side of every 100 m of that stream that is adjacent to the cutblock, retain at least 20 trees that are selected in accordance with subsections (2) and (4).
2. For the purposes of subsection (1), the owner must select trees sequentially in accordance with the criteria set out in paragraphs (a) to (f), until a total of at least 20 trees have been selected:
 - (a) all trees that are:
 - (i) within 10 m from the edge of the stream channel,
 - (ii) 30 cm or more in diameter,
 - (iii) necessary to maintain the same proportion of coniferous to deciduous trees as in the pre-harvest stand, and

- (iv) necessary to maintain the same range of sizes, for both coniferous and deciduous trees, as in the pre-harvest stand;
- (b) all trees that are
 - (i) within 10 m from the edge of the stream channel,
 - (ii) 20 cm or more in diameter, and
 - (iii) necessary to maintain the same proportion of coniferous to deciduous trees as in the pre-harvest stand;
- (c) all trees that are
 - (i) within 20 m from the edge of the stream channel,
 - (ii) 30 cm or more in diameter,
 - (iii) necessary to maintain the same proportion of coniferous to deciduous trees as in the pre-harvest stand, and
 - (iv) necessary to maintain the same range of sizes, for both coniferous and deciduous trees, as in the pre-harvest stand;
- (d) all trees that are
 - (i) within 20 m from the edge of the stream channel,
 - (ii) 20 cm or more in diameter, and
 - (iii) necessary to maintain the same proportion of coniferous to deciduous trees as in the pre-harvest stand;
- (e) all trees that are
 - (i) within 30 m from the edge of the stream channel,
 - (ii) 30 cm or more in diameter,
 - (iii) necessary to maintain the same proportion of coniferous to deciduous trees as in the pre-harvest stand, and
 - (iv) necessary to maintain the same range of sizes, for both coniferous and deciduous trees, as in the pre-harvest stand;
- (f) all trees that are
 - (i) within 30 m from the edge of the stream channel,
 - (ii) 20 cm or more in diameter, and
 - (iii) necessary to maintain the same proportion of coniferous to deciduous trees as in the pre-harvest stand

The elements of the contravention that must be established are:

- That TimberWest Forest Corporation is the owner of the land where the alleged contravention occurred;
- That the land where the alleged contravention occurred is private managed forest land;
- That the owner harvested the cutblock during the period that the *Private Managed Forest Land Act* was in force (i.e. after August 1, 2004); and
- That the harvesting was not conducted in a manner that retained sufficient trees beside Beech Creek as required by regulation.

TimberWest Forest as owner

At no time has the owner's representatives disputed that TimberWest Forest Corporation is the owner of the land. It is submitted that TimberWest Forest Corporation is the owner of the land.

Area is private managed forest land

It is submitted that the cutblock CW 500 is private managed forest land.

Owner responsible for timber harvesting

Timber West have stated that the harvesting took place in October 2005. This is within the period that the *Private Managed Forest Land Act* applies.

Mr. Hamilton reports that the stream has resident cutthroat trout and that there are not any anadromous fish present as steep falls downstream of the cutblock prevent fish passage. As the section of Beech Creek within the cutblock is a fish stream and has an average width of 14.6 metres, it is classified as a large stream. Section 18(1) of the Council Regulation requires that trees must be retained on each side of the stream for every 100 metre section according to the selection criteria in section 18(2). My own observations and section 6.1 and Photo 1 of the Hamilton report provides evidence that no trees were retained on the left bank of Beech Creek for an approximate 200 metre section. Mr. Hamilton also mentions in section 6.1 that a stump count by TimberWest indicates that there were sufficient number of trees prior to harvesting that could have been left to meet the regulation requirement.

TimberWest has not disputed that insufficient trees were left, and that the cutblock was planned for logging by helicopter to avoid any further new road construction. Previous road construction upstream of the cutblock had caused some instability issues. An application for exemption from the tree retention requirement for large streams (section 18) under section 3 was not made before harvesting commenced.

Environmental Impacts

In considering environmental impacts is a matter of whether there has been any environmental harm caused by harvesting trees along one the bank of Beech Creek. There are two basic questions concerning the removal of these trees

1. Has it caused harm to fish habitat?
2. Has it caused a reduction in water quality?

Mr. Hamilton's report provides his professional opinion on these questions.

Stream bank stability

This is addressed in sections 6.2 and 6.3 of Mr Hamilton's report in detail. Salient relevant points made by Mr Hamilton include:

- Although trees growing on the channel banks were harvested along the left bank of Beech Creek there was very little evidence of stream bank instability.
- The banks of Beech Creek are stable due to the nature of the bank material.
- The removal of trees growing on the edge of the stream bank will not result in a significant change in bank erosion during or since harvesting.
- No measurable downstream impacts to water quality or fish habitat would have occurred.

Fish habitat

This is addressed in sections 6.3 and 6.3.2 of Mr Hamilton's report in detail. Salient relevant points made by Mr Hamilton include:

- The section of Beech Creek channel within the Block is classified as semi-alluvial.
- Large woody debris (LWD) present is functioning to store sediment within the channel.
- There are two logjams within the cutblock section that were substantial enough to have sediment deposits upstream. (Hamilton report photos 5 and 6 show the two logjams).
- Trees were retained along the right (west) bank during recent harvesting on the west side of the Creek (Photo 6). These trees have the potential to provide some future LWD input to the stream. This LWD input may be sufficient to maintain sediment storage in the channel.

- The loss of stored sediment would mean a reduction in potential spawning habitat. This however would probably not affect fish production since I doubt that spawning habitat is limiting in this section of Beech Creek.

Further Mr. Hamilton states that the effect that this potential loss of rearing habitat may have on overall fish production of Beech Creek is not significant for two reasons:

1. Beech Creek is over 10 kilometers long and much of this habitat, which is mostly located upstream of the Block, is lower gradient and therefore probably more productive than the section of Beech Creek within the Block; and
2. The potential loss of the two log jams may not have a measurable effect on fish densities in the Block since fish will likely be washed down from upstream reaches on a continual basis.

He also states that the riparian trees prior to harvesting provided some nutrient input and shading. This will be lost until trees grow back. In his opinion, this impact is not significant within the watershed context. It is his opinion that downstream water quality and fish habitat will not be significantly affected if the logjams fail and the sediment that is currently stored in the channel is flushed downstream. This conclusion is based on the opinion that the volume of sediment stored upstream of the logjams is small in relation to the natural sediment transport in Beech Creek.

Water Quality

The water licence holder has not complained to Council office that there was a reduction in water quality resulting from the harvesting of the cutblock. The harvesting has not resulted in any disturbance that has caused any quantity of sediment to enter Beech Creek. As mentioned above Mr. Hamilton reports that the stream bank remains undisturbed and is stable. Based that on this information it seems that any sediment contribution into the creek from harvesting is immeasurable and negligible in relation to the natural sediment inputs upstream in Beech Creek. It is therefore highly unlikely that the water quality was affected.

6.0. ADMINISTRATIVE REMEDY CONSIDERATIONS

The *Private Managed Forest Land Act* empowers the Council to establish one or more administrative remedies if the Council determines that the owner has contravened a requirement of the Act or regulations. Specifically the Council may impose penalties under sections 25, 26, and remediation orders under section 27 of the Act.

Consent agreement

The Council may enter into a consent agreement if the owner agrees to the alleged contravention. The agreement may include provisions for:

1. Carry out remedial measure specified;
2. Take measures to prevent occurrence of a similar contravention from occurring in the future; and
3. Agree to pay a penalty not greater than \$5,000.

If Council were to entertain a consent agreement it should be mindful that there is a limited need and scope for remediation work on the cutblock itself. TimberWest reforested the block in 2006 and have burnt the slash piles. This will ensure prompt reforestation and contribution to hydrological recovery. Standard Operating Procedures should be reviewed to ensure that situations requiring exemptions from the council regulation are covered and that staff are aware of the procedure.

Financial Penalty

The maximum penalty that may be imposed for a contravention of the Act or regulation is \$25,000. The council may decide to not levy a penalty if it considers the contravention trifling. When determining the amount of a penalty under section 26(5) the Council must consider it must consider all of the following:

- (a) any previous contravention of a similar nature by the person if the contravention was the subject of
 - (i) a determination under this section in the previous 10 years, or
 - (ii) a consent agreement under section 25 in the previous 12 months;
- (b) the gravity and magnitude of the contravention;
- (c) whether the contravention was repeated or continuous;
- (d) whether the contravention was deliberate;
- (e) any economic benefit derived by the person from the contravention;
- (f) the person's cooperation and efforts to remedy the contravention;
- (g) the person's efforts to prevent the contravention;
- (h) whether relevant forest management objectives specified in Division 1 of Part 3 are being achieved despite the contravention.

When evaluating the above factors the council should consider the following:

- TimberWest has not had any previous contraventions of this nature.
- The reach of Beech Creek in question is not considered to be highly productive fish habitat and there has not been a loss of potential spawning habitat.
- The impact or loss of in-stream habitat is low and immeasurable.
- The stream bank remains stable, there is still a potential source of woody debris contribution from standing trees retained on the opposite bank.
- Water quality has not been affected.
- There is evidence that TimberWest deliberately intended to harvest the cutblock as shown by the logging plan.
- Council should consider that if TimberWest had applied for an exemption from section 18 prior to logging would it have been granted.
- TimberWest may have recovered additional volume by harvesting trees that should have been retained but this may be partially offset by retaining more trees than required on the opposite bank.
- Timber West has been fully cooperative; initially by reporting the event to Council, and by then cooperating with the investigation, providing information on the circumstances, and in taking reforesting the cutblock.

Remediation Order

If Council decides to issue a remediation order under section 27(2) then it should consider that there is a limited need and scope for remediation work on the cutblock itself. TimberWest reforested the block in 2006, which will ensure prompt reforestation and contribution to hydrological recovery. Road deactivation work is also been carried out on the road system of upper Beech Creek. Timber West may want to review Standard Operating Procedures to ensure that situations requiring exemption from the Council regulation are covered and that staff is aware of the procedure.

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Executive Director

July 23, 2007