



**Forest  
Practices  
Board**

## **Harvesting Impacts on Natural Range Barriers near Sharpe Lake**

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*Complaint Investigation #15016*

**FPB/IRC/200**

March 2016

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# Introduction

## The Complaint

The owners of a ranch at Sharpe Lake (the complainants), south of Bridge Lake in the 100 Mile House District (Map 1), filed a complaint with the Board asserting that harvesting by West Fraser Limited (West Fraser) impacted management of livestock on their range tenure. Specifically, they were concerned that harvesting removed a natural range barrier and that, despite their continued efforts, West Fraser was not meeting a legal obligation to mitigate the breach.



Map 1. Complaint location.

## Background

The complainants own a livestock operation at Sharpe Lake, near Bonaparte Lake, with a Crown range tenure that permits grazing of 1882 animal unit months.<sup>1</sup> As Map 2 shows, they rely on an existing fence and a residual timber barrier to separate the summer pasture from the spring/fall pasture and the home ranch. Between 2008 and 2014, a significant area of mountain pine beetle-attacked stands was harvested by both West Fraser and Interfor Corp. (Interfor), with West Fraser doing the most harvesting.

In 2006, in anticipation of upcoming salvage harvesting, the complainants sent a letter and map to the Ministry of Forests, Lands and Natural Resource Operations (FLNR) district office and several licensees (including West Fraser<sup>2</sup>) suggesting a plan was needed to facilitate logging in areas that would require fencing to mitigate barrier breaches. The map identified the location and condition of existing fences in the complainants' tenure area, and where new fencing would be required.

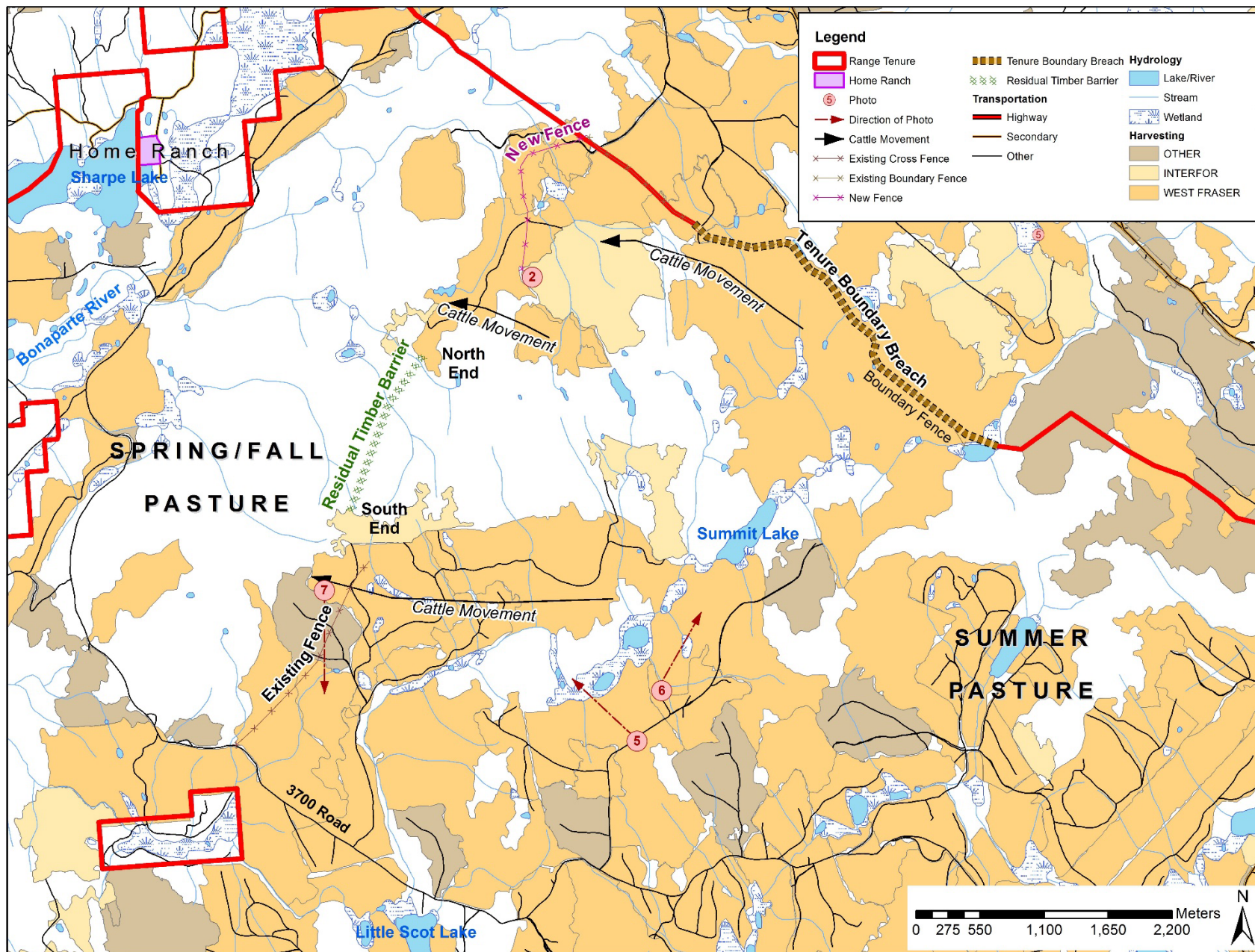
A natural range barrier is defined in the *Forest and Range Practices Act* (FRPA) Bulletin 21 as "...a river, rock face, dense timber or any other naturally occurring feature that stops or significantly impedes livestock movement to and from an adjacent area."<sup>i</sup> Section 18 of the *Forest Planning and Practices Regulation* (FPPR) requires a licensee to propose measures in its forest stewardship plan (FSP) to mitigate breaches of natural range barriers.<sup>ii</sup> Section 48 of FRPA requires the licensee to carry out the measures stated in its FSP.

British Columbia has about 1500 range tenures that authorize livestock grazing on Crown forest and range land. They all have a defined boundary, and many have internal boundaries dividing the tenure into smaller pastures. Ranchers are required to manage the grazing of different pastures within their range tenure according to a grazing schedule in their range use plan. The guidance in the complainants' grazing schedule identifies that livestock should not be on the spring/fall range before September 26. Range users generally rely on a combination of natural and built barriers to prevent or restrict livestock movement. As noted, the complainants relied on a fence and a residual timber barrier.

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<sup>1</sup> An animal unit month (AUM) is the quantity of forage consumed by a 450-kg cow (with or without calf) in a 30-day period.

<sup>2</sup> Interfor was not operating in the area at this time.



Map 2. Range tenure area showing harvest by licensee.

In 2010, West Fraser, the complainants and FLNR agreed harvesting had created a breach of the natural timber barrier along the northern boundary, between the complainants' range tenure and the neighbouring tenure (Map 2). FLNR initially approved a brush fence, and the complainants successfully appealed so West Fraser built a new wire fence in 2010.

Over time, the large amount of salvage harvesting had removed a significant portion of timber between the complainants' summer and spring/fall pastures. Various parties, including West Fraser, Interfor, FLNR and the complainants, attempted to control livestock movement by adding to sections of an existing fence extending from 3700 Road.

However, the complainants believed all of West Fraser's harvesting combined to effectively remove the natural range barrier between the pastures within their range tenure, and that forage and easy access in the new cutblocks encouraged livestock to leave the summer pasture as much as a month early and move toward the spring/fall pasture and home ranch.

The complainants asked West Fraser to put in a wire fence across the cutblocks and through the residual timber. West Fraser refused, saying it did not agree its harvesting removed a natural range barrier. The complainants contacted the Board in 2010, and were advised to monitor the impacts of the harvesting for a few seasons to determine if a range barrier had been breached. West Fraser agreed to install fencing if monitoring indicated it was warranted.

The complainants and FLNR separately monitored livestock movement in 2010. The complainants reported 75 head of livestock had moved onto the spring/fall pasture one month early, in August 2010, and made a similar report in 2012. In August 2010, FLNR staff found livestock were moving into cutblocks closer to the spring/fall pasture and the home ranch, but there was no clear evidence that livestock were getting all the way through the remaining forest at that time. FLNR did not do any further monitoring.

Currently, livestock are not moving onto the spring/fall pasture ahead of schedule in large numbers. However, the complaints believe livestock will start coming through on the south and north ends of the residual timber barrier. In fact, in 2006, the complainants were issued a non-compliance notice by FLNR for livestock being on the spring/fall pasture in early September, a few weeks early. This illustrates that range licensees are held accountable for meeting the terms of their range use plans. It does not however, reflect on the function of the residual timber barrier at that time. In the 2006 case, livestock appear to have accessed the spring/fall pasture through a recent cutblock and the existing fence from the 3700 Road did not extend as far as it currently does.

Despite the 2006 incident, FLNR district staff told the Board that the complainants' concerns about the natural range barrier here are not a significant management issue for this range tenure. They said ranchers have a variety of options to control livestock movement within their range tenure, including fences and riders on horseback.

In 2013, Interfor harvested three cutblocks adjacent to West Fraser's cutblocks. Interfor consulted with the complainants and, while it did not admit to breaching a natural range barrier, it agreed to install 1800 metres of fence, applying the costs against the appraisal for one of its cutblocks.

All parties—West Fraser, Interfor, the complainants and FLNR—agreed that the best location for the fence was in an adjacent West Fraser cutblock. Interfor built the fence in September 2014. West Fraser decided



that no additional fence was required in that location, although it agreed to add 300 metres to the existing fence at the south end of the residual timber barrier, extending from 3700 Road.

FLNR supported all of the additional fencing because it was concerned livestock would damage the Bonaparte River, where it flows through the home ranch and spring/fall pasture. Sections of the river upstream and downstream from the range tenure are designated as critical fish habitat.

The Board received the complaint in July 2014, and conducted a field investigation of the site in September 2014 while Interfor was building the new fence north of the residual timber barrier. Although the complainants had agreed to the location, they did not believe the new fence would fully mitigate the impacts to the natural range barrier that previously kept livestock on the summer pasture. And, while satisfied with the response by Interfor, the complainants said West Fraser has not done enough, and continue to pursue options to finance the fencing of the residual timber barrier.

The investigation examined compliance with the FRPA requirement to mitigate removal of natural range barriers, and whether the cumulative effect of harvesting was considered during planning of the salvage harvesting. For the purposes of this report, the remaining timber between the new fence near the north boundary and existing fence near 3700 Road is referred to as the residual timber barrier, although there is no consensus on whether it is a true barrier to livestock.

## Investigation Results

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The Board investigated the following questions.

1. Is West Fraser complying with the measures in its FSP to mitigate breaches of natural range barriers?
2. Was the cumulative impact of forest harvesting on potential natural range barriers considered across the range tenure?

### Is West Fraser complying with the measures in its FSP to mitigate breaches of natural range barriers?

West Fraser's 2007 FSP for FL A20001/20002 (extended in 2012) includes the following measure to address mitigation of impacts to natural range barriers:

If a natural range barrier is removed or rendered ineffective as a result of forest practices carried out under this FSP, drift fences and/or cattle-guards will be constructed in appropriate areas as required, to replace the original effect of the natural range barrier.

The term drift fence was not defined in the FSP. However, according to West Fraser and FLNR district staff, it could be a pile of debris, a log bundle or a wire fence. The FSP also did not identify who would determine if a barrier had been removed or rendered ineffective. West Fraser referred its proposal for timber harvesting in the Sharpe Lake area to the complainants in 2008. Harvesting began in 2009.

West Fraser and the complainants agreed that harvesting along the north boundary of the complainants' range tenure breached a natural range barrier. However, while the complainants believe a further breach occurred with the progressive harvesting between the summer and fall/spring pastures, West Fraser

disagrees. West Fraser believes that there has not been enough timber removed to constitute a breach of a natural range barrier, or, if the remaining timber is not holding livestock back, then it never was a range barrier. West Fraser also holds the view that it has less responsibility in this case because other licensees, most recently Interfor, have harvested in what was traditionally its operating area.

Monitoring by the complainants and FLNR show that livestock movement patterns have changed, likely as a result of logging. However, the route taken by the livestock when they moved early onto the fall/spring pasture in 2010 and 2012 is not known. In its special investigation of natural range barriers, the Board reported that it may take several years following timber harvesting to assess livestock movement patterns and determine the impact of forest harvesting on natural range barriers.<sup>iii</sup> This situation appears to be anticipated in section 48 of FRPA, as the requirement to mitigate a natural range barrier breach continues after an FSP has expired.

Despite a lack of agreement on whether a natural range barrier was breached, it is clear that a large amount of mountain pine beetle salvage harvesting, by more than one licensee, impacted the range tenure over a relatively short period of time.

### **South End of the Residual Timber Barrier**

The south end of the residual timber range barrier ends at recent cutblocks harvested by both West Fraser and Interfor. The existing fence from the 3700 Road is tied into a rock outcrop (Photo 1), and does not extend into the harvested area.

Although West Fraser advised the complainants it did not acknowledge an obligation under FRPA to mitigate a natural range barrier, it plans to add 300 metres of wire fence to the existing fence in 2016. The complainants will then build up to another 300 metres of fence extending it to the south end of the residual timber barrier.



**Photo 1.** Existing fence tied into a rock bluff.



## North End of Residual Timber Barrier

At the north end of the residual timber barrier, Interfor constructed 1800 metres of fence in a West Fraser cutblock following consultation with the complainants and FLNR (Map 2, Photo 2). This fence does not extend to the end of the cutblock, but it is tied into the timber (Photo 3) to reduce the risk that livestock will get around it, and to compensate for the fact it does not run the full length of the cutblock. The length of fence built by Interfor was determined by the appraisal cost allowance for its adjacent cutblock.

While Interfor did consult with the complainants about the fence, the complainants say that the fence should extend from the north boundary to the residual timber barrier and continue through it. They maintain that West Fraser is responsible for completing the fencing. West Fraser believes no additional fencing is required at the north end.

Board staff inspected the north end of the residual timber barrier, close to where the new fence ends. In the Board's view, the recent harvesting has created a possible route for livestock to reach this area, and they would not be impeded by the stand of timber at this location because it is relatively open (Photo 4). The livestock could then gain access to the unfenced part of the West Fraser cutblock and from there access the spring/fall pasture. The Board did not see livestock in the residual timber barrier during the field inspection, but the complainants reported seeing livestock at this location and said it would only be a matter of time before the herd would learn to move through the forest here.



**Photo 2.** New fence built by Interfor.



**Photo 3.** New fence tied into timber.

The view of the licensees that a natural range barrier was not breached at this site may be influenced by the FLNR forest district position that breaches of natural range barriers between range tenures—not between pastures within the range tenure—are the main concern to avoid mixing of herds of livestock. However, the Board’s interpretation of the FRPA requirement is that if a natural range barrier is breached between pastures within a tenure, mitigation is required, regardless of whether livestock movement can be managed in other ways.

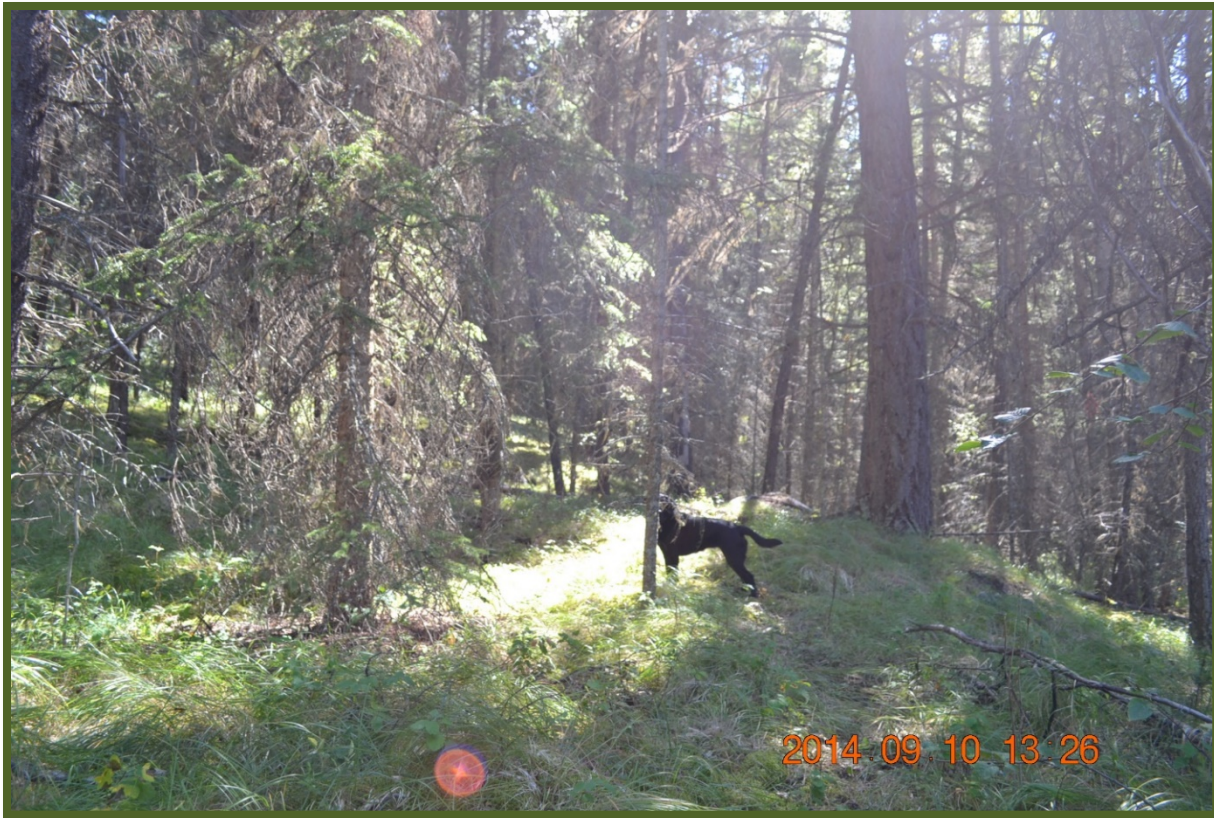
## Summary

West Fraser and Interfor agreed to fencing to mitigate impacts from their harvesting. Interfor built additional fencing on the north end of the residual timber barrier in 2014, and West Fraser and the complainants agreed to complete fencing at the south end up to the residual timber barrier, in 2016. Despite this, the fencing would continue to be incomplete at the north end of the residual timber barrier.

As well, the complainants said that fencing should continue through the residual timber barrier to connect the north and south fences. The Board agrees that, at the north end, the residual timber is likely not an effective barrier. It is logical to conclude that if West Fraser harvesting impacted the natural range barrier between the range tenures at the north boundary, it would also have an impact on movement between the pastures within the complainants’ tenure. This situation was exacerbated with the Interfor harvesting. At the south end of the residual timber barrier, the terrain is rocky with a dense pine forest and it appears less likely that livestock will move through after the existing fence from the 3700 Road is completed.

In the Board’s opinion, evidence on the ground supports the complainants’ assertion that the natural range barrier between pastures was breached, at least at the north end of the residual timber barrier, in addition to the initial tenure boundary breach. This evidence includes the extent of harvesting creating new access for livestock between pastures, evidence of changes in livestock movement, and the open nature of the remaining forest stand in some areas. The current fencing at the north end of the residual timber barrier will likely not stop livestock from eventually accessing the fall pasture through the open forest stand, south of the fence. More fence may be required to prevent livestock accessing the spring/fall pasture.





**Photo 4.** Showing relatively open Douglas-fir stand adjacent to West Fraser harvesting north of the residual timber barrier.

## Finding

The combined effect of harvesting in the range tenure likely caused a breach of the natural range barrier between the summer and spring/fall pastures. Recent fence construction by Interfor may not be sufficient to mitigate the effects of harvesting. While West Fraser mitigated a breach between range tenures on the north boundary of the range tenure, and committed to fencing at the south end of the residual timber barrier (although it does not acknowledge a barrier breach), it has not taken any mitigation action at the north end of the residual timber barrier between pastures within the range tenure. The full extent of actions required to mitigate the apparent breach will take time and monitoring to become obvious.

## **Was the cumulative impact of forest harvesting on potential natural range barriers considered across the range tenure?**

This complaint highlights the effect that harvesting by more than one licensee on a range tenure can have on natural range barriers. As noted previously, in 2006 the complainants sent a letter to FLNR and several licensees, including West Fraser, indicating that there was a potential for breaches of natural range barriers if harvesting occurred, and suggesting that planning be done to mitigate any breaches. The accompanying map identified specific locations where existing fences would require mending, and where new fencing would be needed to mitigate breaches of natural range barriers. The location of the new fencing included the residual timber barrier.

The Board examined whether any planning occurred to consider or minimize impacts to natural range barriers across the range tenure area. The Board found there was no strategic planning by West Fraser, Interfor or FLNR to consider how the cumulative harvesting by all licensees over time would affect natural range barriers. Instead, the licensees considered impacts to natural range barriers, and consulted with the complainants regarding what mitigation measures may be necessary, on a cutblock-by-cutblock basis. Under FRPA, there is no requirement for licensees to coordinate planning and FLNR no longer has a formal role in harvest development planning for major licensees.

In its special investigation on natural range barriers, the Board commented that a more coordinated approach to addressing range barriers may be necessary where there are multiple licensees in the same area. Such an approach could have helped avoid the current situation at Sharpe Lake.

In this case, much of the harvesting occurred in the summer pasture (Map 2 and photos 5 to 7), with most of it being done since 2008 by West Fraser and Interfor. Harvesting by other licensees occurred several years earlier. The complainants explained that new forage and easy access in cutblocks encourages livestock to move into the recently harvested areas. There is also a general downhill slope toward the spring/fall pasture, so the livestock are encouraged to drift into those pastures. The range barrier between the summer pasture and the spring/fall pastures is not simply one residual stand of timber. The larger forested landscape was likely a deterrent to livestock movement even where the timber was relatively permeable, because of low forage availability. Livestock may avoid forested areas where forage is not available. With the extensive salvage harvesting, the complainants say that the remaining stands are not large enough to keep livestock from moving through to access the new cutblocks with good forage.



**Photo 5.** Looking northwest from the summer pasture, an example of harvesting between the pastures (see Map 2)





**Photo 6.** Looking north to Summit Lake, showing salvage harvest cutblocks. (See Map 2)



**Photo 7.** Looking south to summer pasture near the existing fence. (See Map 2)



## Finding

The complainants were proactive in identifying to licensees and government that natural range barriers may be impacted by future harvesting of the range tenure. However, West Fraser, Interfor and FLNR did not follow-up with planning to mitigate the cumulative impact of the salvage harvesting on the natural range barriers. As a result, no one other than the complainants anticipated that the remaining timber might gradually be reduced to a size where it is no longer an effective range barrier.

## Conclusions

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The Board investigated the following questions.

1. Is West Fraser complying with the measures in its FSP to mitigate breaches of natural range barriers?
2. Was the cumulative impact of forest harvesting on potential natural range barriers considered across the range tenure?

The Board found that West Fraser complied with the measures in its FSP to mitigate breaches of natural range barriers where the complainants and West Fraser agreed a breach occurred. However, in regard to the north end of the residual timber barrier within the range tenure, West Fraser said the fence built by Interfor mitigated the impacts of harvesting by both licensees. West Fraser committed to fencing elsewhere, but not to the extent requested by the complainants. In the Board's opinion, based on the evidence on the ground, a breach likely occurred between pastures within the range tenure. To clearly determine if the existing or planned fencing will be sufficient, or if additional fencing may be required to address this breach, monitoring will be required.

The Board found that multiple licensees had been harvesting in this area with no coordinated planning at the landscape level to consider cumulative impacts on natural range barriers. This emphasizes the need for a more coordinated approach to address cumulative effects on range barriers when multiple licensees are involved. If extensive harvesting is anticipated across the landscape, the Board encourages direct government involvement to help coordinate effective planning, mitigation and monitoring of range barriers.

Finally, this investigation highlights many of the findings in the Board's 2015 special investigation report *Mitigation of Forestry Impacts to Natural Range Barriers*.<sup>iv</sup> Specifically, it reinforces the need for (1) clear and verifiable measures in operational plans to support effective mitigation of natural range barriers, (2) modifications to the appraisal system to provide licensees and range users with sufficient time to identify and mitigate impacts, and (3) further guidance on the application of section 48 of FRPA (i.e., where on a range tenure it is meant to apply and what values it is intended to mitigate). In the report, the Board made three recommendations to government to address these issues. Government has accepted the Board's recommendations, stating that work is already underway to develop better guidance for licensees and range tenure holders.

## Recommendations

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In accordance with section 131(3) of the *Forest and Range Practices Act*, the Board makes the following recommendation:

The Ministry of Forests, Lands, and Natural Resource Operations should facilitate a process between West Fraser and the complainants to collect and record detailed information on livestock movement to confirm whether a natural range barrier has been breached and to determine the appropriate mitigation required to be implemented by West Fraser. The Board suggests that such monitoring of livestock by the complainants occur over at least a two-year period, commencing at the start of the next grazing season.

In accordance with section 132 of FRPA, the Board requests a response from FLNR to this recommendation by May 31, 2016.

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<sup>i</sup> FLNR. February 17, 2009. FRPA General Bulletin Number 21. Managing Section 48 of the FRPA – “Natural Range Barriers”. [www.for.gov.bc.ca/ftp/hth/external/!publish/web/frpa-admin/frpa-implementation/bulletins/frpa-general-no-21-managing-section-48-of-the-frpa-natural-range-barriers-feb-18-2010.pdf](http://www.for.gov.bc.ca/ftp/hth/external/!publish/web/frpa-admin/frpa-implementation/bulletins/frpa-general-no-21-managing-section-48-of-the-frpa-natural-range-barriers-feb-18-2010.pdf)

<sup>ii</sup> B.C. Reg. 14/2004. Forest Planning and Practices Regulation. [www.bclaws.ca/civix/document/id/complete/statreg/14\\_2004](http://www.bclaws.ca/civix/document/id/complete/statreg/14_2004)

<sup>iii</sup> FPB/SIR/42. February 2015. Mitigation of Forestry Impacts to Natural Range Barriers.

<sup>iv</sup> FPB/SIR/42. February 2015. Mitigation of Forestry Impacts to Natural Range Barriers. [www.bcfpb.ca/sites/default/files/reports/SIR42-Natural-Range-Barriers\\_0.pdf](http://www.bcfpb.ca/sites/default/files/reports/SIR42-Natural-Range-Barriers_0.pdf)



**Forest  
Practices  
Board**

PO Box 9905 Stn Prov Govt

Victoria, BC V8X 9R1 Canada

Tel. 250.213.4700 | Fax 250.213.4725 | Toll Free 1.800.994.5899

For more information on the Board, please visit our website at: [www.bcfpb.ca](http://www.bcfpb.ca)