



**Forest  
Practices  
Board**

## **Gilpin Creek Debris Slide**

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*Complaint Investigation #110983*

**FPB/IRC/181**

May 2012

# Table of Contents

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**Introduction**.....1  
    The Complaint.....1  
    Background.....1

**Discussion**.....2

**Conclusions** .....5

**Recommendations**.....5

# Introduction

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## The Complaint

In the spring of 2011, water from a trough located above Gilpin Creek, on the Overton-Moody Range Unit near Grand Forks, was released onto an unstable slope. The ground was saturated and a debris slide occurred, sending a significant amount of soil into Gilpin Creek. A local guide-outfitter found the slide and complained to the Forest Practices Board about the location and operation of that trough. The complainant was also concerned that some new fencing, built to block cattle access to the creek, was not wildlife friendly and that it posed a potential danger to deer and wild sheep.

## Background

The Overton-Moody Range Unit is located just east of Grand Forks. In 2009, the Board reported on an earlier complaint about the management of the range unit by the Ministry of Forests, Lands and Natural Resource Operations (MFLNRO) and the rancher holding the range tenure.<sup>1</sup> A key issue was damage to Gilpin Creek caused by cattle seeking water. To avoid further damage, the ministry and tenure holder added two water troughs and fencing above Gilpin Creek to divert cattle away from the creek.

Currently, cattle are allowed to graze on the area around the new troughs for approximately one month of the year, after which the animals are removed. The water trough system consists of an intake pipe running from a small dam to the trough; the trough; and an outlet pipe that drains excess water from the trough back into Gilpin Creek. The water troughs worked without any apparent problems through the 2010 grazing season.

In the fall of 2010, the rancher disconnected the intake pipe for the winter. Later, for the trough in question, someone reconnected the inlet pipe but did not reconnect the outlet. Water flowed into the trough and out onto the ground. The ground became saturated and, in the early spring of 2011, a debris slide into Gilpin Creek occurred (see photos 1 and 2). A considerable volume of soil slid into Gilpin Creek, some of which was transported down the creek and deposited in the stream bed.



*Photo 1. The slide and the outflow pipe running down to the creek.*

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<sup>1</sup> Cattle Grazing on the Overton-Moody Range Unit. FPB/IRC/160 November 2009.

Following the 2011 slide, ministry staff confirmed with a contractor for the rancher that this trough had been deactivated. The rancher had not reactivated the troughs when the slide occurred.

It is not known who reconnected the intake pipe to the water trough, but the issue is still under investigation by the Compliance and Enforcement section of MFLNRO. The Board's interest is in whether any changes to the trough and nearby fences are necessary to protect the stream from further damage, and wildlife from potential harm.



*Photo 2. The slide extends into Gilpin Creek.*

## Discussion

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The trough-building was implemented as a range improvement, resulting from concerns expressed over the years about cattle damage to sections of Gilpin Creek. Refer to the November 2009 Board report [Cattle Grazing on the Overton-Moody Range Unit](#) for more detail on this issue.

### *Are changes necessary for the water trough?*

The guide-outfitter was concerned about the location and operation of the water trough that led to the debris slide. He also asserted that the ministry did not invite stakeholder consultation before the water troughs were installed. In response, staff of MFLNRO said they consulted with the Ministry of Environment's (MOE's) wildlife and parks staff about the location of the troughs.

Section 51(1) of the *Forest and Range Practices Act* (FRPA) requires a person to obtain authorization before constructing a range development, including a cattle-watering trough. The local MFLNRO district manager approved the water troughs in August 2009, but specified that the troughs must have either a float valve or a return pipe into the creek to prevent overflow and site degradation.

The trough above the slide area had a gravity-fed intake system from a small dam in the creek upslope and a return pipe as required (photo 3). The trough is



*Photo 3. Trough showing intake and outflow pipes.*

approximately 15 feet from the edge of the slope down to Gilpin Creek (photo 4).

The placement of the water trough was intended to prevent cattle from entering Gilpin Creek. Though evidence of previous damage is still evident, it appears that installing the troughs was successful in this regard. The Board saw no evidence that cattle had gone into the creek at the point of concern. However, the potential for damage from trough overflow was recognized before the troughs were installed, which is why an outlet pipe running down to the creek was installed as part of the overall system.



*Photo 4. The trough is in upper left. Gilpin Creek is to the right of the photo.*

The trough itself seems to be functioning as intended, human error aside. But in terms of whether changes are needed to avoid future problems, the options are either to move the trough further from the slope edge or to modify it. MFLNRO staff and the licensee explained that moving the trough further away from the creek would require bringing equipment in to dig up the currently buried intake pipe, adding more pipe and digging a new trench for the pipe. However, if the overflow was the result of vandalism, moving the trough would not necessarily alleviate the problem, and soil damage might still occur from overflow further back, if not discovered quickly.

The range licensee advised the Board that for the 2011/2012 winter he disconnected the intake pipe from its source at the dam and removed new fitting adapters for the intake on the trough, which he expected would prevent the intake from being either accidentally or intentionally re-connected before the system was set up for use again later in 2012.

**Finding:** The design and placement of the water trough appears reasonable. The rancher has modified the trough to avoid accidental connection of the intake pipe.

#### *Are changes necessary for the fences?*

The guide-outfitter was concerned that new fences near the water troughs were a danger to wildlife because of the barbed wire and the fence height. He would like the fences to be lower, made of smooth wire and moved away from the gully edge of the creek.

As part of the range improvements in 2009, fences were constructed near the new water troughs to restrict cattle access to Gilpin Creek (photos 5 and 6). Four-strand barbed wire was used with loose vertical supports and a raised lower strand to facilitate wildlife getting under the fence. In the August 2009 approval letter for the range improvements, the MFLNRO district manager stated that fences should be constructed to wildlife standards supplied by the MOE. MFLNRO

staff said that they consulted with MOE wildlife and parks staff about the fences.

In 2008, MOE provided guidance for wildlife-friendly fences to MFLNRO. The criteria included smooth top wires and a greater distance between the first and second strand to reduce the chance that deer jumping the fence will get their hind legs tangled in the fence. Fence height was specified not to exceed 42 inches. However, this guidance applied to the larger range unit and did not specify exactly where these fences should be located. MOE staff explained that they did not intend that the criteria be applied everywhere on the range.



*Photo 5. New fence with water trough in the distance.*

The fences around the troughs have a flexible bottom wire for wildlife, but do not meet the MOE criteria for the top wires. On this point, both government range staff and the licensee feel that a smooth wire fence at this site would be pushed down or damaged by either cattle or wildlife. The gates are open for the approximately 11 months of the year when cattle are not using the area, but it is not clear whether wildlife use the gates and the guide outfitter feels that the gates should be wider.



*Photo 6. New fence near the water trough.*

In the Board's opinion a wildlife expert should assess the location and construction of the fences and decide whether modifications are necessary. Such modifications could include wooden top rails, caution tape or snow fencing to make the fences more visible to wildlife.

**Finding:** The fences are not wildlife friendly as set out by MOE criteria. Modifications may be necessary.

## Conclusions

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1. The water trough design and placement appear to be reasonable. The rancher has taken measures to avoid a further accident.
2. The fencing near the water troughs does not meet MOE standards for wildlife friendly fencing.

## Recommendations

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Under section 131(2) of the *Forest and Range Practices Act*, the Board makes the following recommendation:

The Ministry of Environment should assess the fences that were installed near the water troughs in 2009 to determine whether any modifications to make them more wildlife friendly are necessary.

Under section 132, the Board requests that the Ministry of Environment advise the Board in writing of its findings by October 31, 2012.



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