

# **Streamside Protection, Sediment Control and the Pacific Water Shrew**

**Complaint Investigation 060699**



**FPB/IRC/119**

**August 2006**

# Table of Contents

---

<b>Executive Summary .....</b>	<b>1</b>
<b>The Investigation.....</b>	<b>2</b>
Background .....	2
Discussion .....	3
1. <i>Are riparian areas being managed appropriately?</i> .....	3
2. <i>How does the current riparian management compare to species at risk standards?</i> .....	4
3. <i>Are the licensee's erosion and sediment control activities appropriate?</i> .....	5
<b>Conclusion.....</b>	<b>7</b>

## Executive Summary

---

In January 2006, the Board received a complaint that a woodlot was not adequately protecting streamside areas and water quality given the possibility that an endangered species, the Pacific water shrew, may be present.

The mouse-like Pacific water shrew is extremely rare. It lives in moist, streamside forests with intact forest floors. It eats insects, and clean water is important for insect production. A recent wildlife survey on the woodlot found no Pacific water shrew, although the habitat was good. Pacific water shrews are hard to catch. Despite not being found, they may still be present on the woodlot.

The Board examined whether the woodlot's streamside areas are being managed appropriately; how the woodlot's current streamside management compares to government guidance about Pacific water shrew habitat (as if a formal wildlife habitat area were established), and; whether erosion and sediment controls on the woodlot are appropriate.

The Board found that streamside areas are being managed according to Code requirements and are appropriate. Current streamside management on the woodlot comes close to what government recommends for a wildlife habitat area for Pacific water shrew, although no wildlife habitat area is established. Erosion and sediment control activities on the woodlot are appropriate.

## Commentary

Early on in this investigation, Board staff suggested the complainant and licensee meet on the woodlot to share ideas and concerns about rare species and forest practices. That discussion has turned into a more cooperative relationship between the participants, who plan a joint field day during the summer of 2006. The Board encourages the participants to continue to develop a supportive relationship of shared knowledge and mutual understanding. To assist, the Board is organizing a short seminar at the woodlot for the complaint participants, other local woodlot licensees and environmental interests about effective erosion and sediment control techniques. In this way, the Board hopes to promote public awareness and ever-improving forest practices that may help to sustain many organisms dependent on aquatic and riparian habitats, including the Pacific water shrew.

# The Investigation

---

In January, 2006, the Alouette Field Naturalists complained to the Board about forest practices on a woodlot. The complainant was concerned that the woodlot was not adequately protecting streamside (riparian) areas and water quality given the possibility that an endangered species, the Pacific water shrew, may be present. The complainant wants the woodlot managed to “species at risk” standards<sup>1</sup>. Assuming that Pacific water shrew may be present, the Board examined the woodlot’s management of riparian areas, as well as its erosion and sediment control activities.

## Background

Woodlot W0007 covers 276 hectares of Crown land located immediately east of Kanaka Creek Regional Park in Maple Ridge. The woodlot is managed by the BCIT Forest Society (the licensee) to aid the British Columbia Institute of Technology’s forestry program. The licensee is a separate legal entity from the institute; the school is not a subject of this investigation.

The mouse-like Pacific water shrew is endangered and extremely rare. In Canada, it has only been found in British Columbia’s lower mainland. Habitat for the shrew includes moist, well-canopied riparian forest along slow-moving streams, with an intact forest floor and decomposed woody debris. The Pacific water shrew eats insects, and clean water is particularly important for insect production.



Pacific Water Shrew (photo by Chris Schmidt)

In the summer of 2005, the complainant participated in a wildlife study aimed at finding Pacific water shrew in the Kanaka Creek watershed. The study area included highly suitable habitat in the part of Woodlot W0007 nearest Kanaka Creek Regional Park, but the study crew did not find any Pacific water shrew. However, that does not prove that the shrew is not present on the woodlot, as the animal is very rare and difficult to live-trap.

---

<sup>1</sup> The complainant is referring to the Identified Wildlife Management Strategy under both the Forest Practices Code and the *Forest and Range Practices Act*. See <http://www.env.gov.bc.ca/wld/identified/index.html>.

While on the woodlot, the study crew saw a sediment-control (silt) fence that was letting fine sediment into a small stream. The crew also saw what it considered inadequate protection of a streamside area. Neither the crew nor its supervisor discussed these problems with the licensee or returned to the site, but the observations were later recorded in the study report. This prompted the complainant to contact the Board.

This is the second Board investigation involving Woodlot W0007. In 2004, the Board investigated the adequacy of planning and forest practices on the woodlot. In that case, the Board found that forest development planning and approval complied with Forest Practices Code requirements, but that the licensee had incorrectly classified several fish streams prior to building a nearby road. This put water values and fish habitat at risk, though no actual damage was confirmed. The licensee promptly corrected its mistake and took steps to improve its practices in future.

## Discussion

The Board investigated the complainant's concern under the *Forest Practices Code of British Columbia Act* and regulations (the Code).<sup>2</sup> Code requirements for woodlots are found in the Code Act and the *Woodlot Licence Forest Management Regulation*.

The Board examined:

- Are riparian areas being managed appropriately?
- How does the current riparian management compare to species at risk standards?
- Are the licensee's erosion and sediment control activities appropriate?

### **1. Are riparian areas being managed appropriately?**

The Code sets out required widths of riparian reserves and management zones that depend on presence or absence of fish and on the width of the streams. Riparian reserves and management zones range from 20 to 50 metres wide and are intended to minimize or prevent the impact of most forest practices on stream channels, aquatic ecosystems, water quality, wildlife habitat and the vegetation adjacent to a stream. Riparian reserves can be logged under only limited circumstances, but licensees have discretion over logging in riparian management zones.

Board staff reviewed the licensee's plans, and visited several riparian areas where the licensee had recently logged or built roads. The licensee's plans described several

---

<sup>2</sup> In January 2004, the *Forest and Range Practices Act* (FRPA) replaced the Code as British Columbia's forest practices legislation. FRPA will be phased in over a transition period ending on December 31, 2006 (with government authorized to extend the period until December 31, 2007). The transitional provisions of FRPA state the Code continues to apply to forest practices carried out under a forest development plan. This continues until there is an approved forest stewardship plan under FRPA, at which point the requirements of FRPA apply.

streamside reserves that met, and in some cases exceeded, Code requirements for riparian protection. These areas will not be logged; some extend the full length of the streams within the woodlot and include both fish- and non-fish bearing streams. In addition, the licensee has committed to log no more than 50 percent of the basal area of trees within riparian management zones. Retaining more than half the basal area surpasses the “best management practice” recommended by the Code’s *Riparian Management Area Guidebook*.



Tree retention in a riparian management zone of a small fish stream.

On the ground, the licensee has complied with Code requirements for riparian reserves, and has left additional discretionary reserves as shown on its plans. Board staff did not measure the basal area of trees left within logged riparian management zones, but saw that the licensee had retained a substantial number of trees in those zones. Overall, the retained trees have remained standing, although in two locations, the wind had caused some streamside trees to fall down. At one location, the

licensee left the downed trees on-site to avoid further disturbance. At the other, the downed trees were logged, but in a way that did not disturb the stream banks or forest floor.

**The licensee’s management of riparian areas is appropriate.**

## **2. How does the current riparian management compare to species at risk standards?**

The complainant is concerned that management of the woodlot will not adequately protect the habitat of the Pacific water shrew (should it be found there). The complainant wants the woodlot managed to “species at risk” standards.

Although the Code requires riparian reserves and management zones, it also anticipates that these will not always be adequate to protect those species that are particularly sensitive to forest disturbance. Pacific water shrew is such a species, and is listed by government as “identified wildlife,” meaning that government could establish a wildlife habitat area (WHA) to further protect its habitat. To date, no Pacific water shrew has been detected on the woodlot, so no WHA has been established for them. Therefore, the licensee has no legal obligation to manage the woodlot specifically for Pacific water shrew.

Nevertheless, the licensee’s forest development plan states that its riparian management strategy is designed to protect habitat for aquatic and riparian animals. Government’s

*Accounts and Measures for Managing Identified Wildlife*<sup>3</sup> provides a standard to assess how well the licensee's plans and activities approach government's guidance for Pacific water shrew if a WHA were to be established. The following analysis compares the provincial criteria for a Pacific water shrew WHA to the licensee's actual riparian management nearest Kanaka Creek Regional Park.

	Wildlife Habitat Area	Woodlot Practice
<b>Size</b> (of suitable habitat)	5 to 45 hectares extending the length of the stream.	About 12 hectares reserved over the woodlot length of several streams.
<b>Width of streamside reserve</b> (no logging)	30 metres each side (60 metres total width)	Variable – Minimum 20 metres each side, but 50+ metres in places; total width varies from 40 to 100+ metres
<b>Outer management zone</b> (partial logging)	45 metres wide with 70% basal area retention.	20 to 30 metres wide with 50%+ basal area retention.
<b>Roads</b>	No roads unless no option.	Area is crossed by one road.

The woodlot's approach to riparian management may entail a somewhat higher risk to Pacific water shrew in some respects, but is likely lower risk where the streamside reserves are wider than that recommended. In any event, it remains speculative whether Pacific water shrew are present on the woodlot. The licensee is not required to apply the WHA criteria—government has not established a WHA on the woodlot.

**The licensee's current riparian management does not have to meet the standard of a Pacific water shrew WHA, nevertheless it comes close.**

### ***3. Are the licensee's erosion and sediment control activities appropriate?***

While on the woodlot, the shrew study crew saw a silt fence letting fine sediment into a small stream and observed what it considered inadequate protection of a streamside area.

The complainant could not identify which streamside area the study crew considered to be inadequate, or the exact location of the compromised silt fence. However, a study crew member explained that the sites were located along an abandoned road next to a fish

<sup>3</sup> BC Ministry of Water, Land and Air Protection, 2004, Pacific Water Shrew (*Sorex Bendirii*) in *Accounts and Measures for Managing Identified Wildlife—Accounts V*. 2004. BC Ministry of Water, Land and Air Protection, Victoria, BC. Accessed June 2006 at: [http://www.env.gov.bc.ca/wld/identified/documents/Mammals/m\\_pacificwatershrew.pdf](http://www.env.gov.bc.ca/wld/identified/documents/Mammals/m_pacificwatershrew.pdf)



stream. That road is actually a recreational trail located on part of a decades-old railway bed that is not used for woodlot activities.<sup>4</sup>

In the late 1990s, part of the old railway bed was the site of a provincial watershed restoration project intended to improve the stream's condition. Although the licensee uses silt fences elsewhere on the woodlot, it does not recall ever having placed a silt fence along the trail. It did install a silt fence where the trail and its road intersect; that fence is still in place, was properly installed, was effective, has served its purpose, and could now be removed. Ultimately, the origin and condition of the silt fence seen by the study crew could not be determined.



Although in apparent disrepair, this silt fence was properly installed, was effective, and could now be removed. The fallen section was cut to allow horses to cross. If cut prior to site stability, the fence would not have been effective. However, it appears the fence was cut after site stability was achieved; there was no evidence of silt or sediment deposited below the cut section.

Adjacent to the recreational trail is a cutblock that was harvested pre-Code, in 1994, so current Code requirements for a riparian reserve would not apply. Nevertheless, the licensee said some streamside trees had been reserved, some of which have since fallen down. This may be the area the study crew considered inadequate; the licensee has agreed to check that area for soil erosion.

Silt and sedimentation could impact water quality and condition of the forest floor, thus affecting the Pacific water shrew and other aquatic and forest organisms. The Code's *Woodlot Licence Forest Management Regulation* requires, during road-building or

maintenance, that ditch erosion be controlled, that the amount of sediment entering a stream, or its effect on other forest resources be minimized, and that certain exposed soils be re-vegetated to prevent erosion.

Board staff reviewed the licensee's erosion and sediment control practices on a day with heavy rains. The licensee had routinely seeded disturbed soils with grass, its roads were capped with crushed rock, and silt fences, sediment-trapping ditch blocks, and road-water "run-outs" were in place and mostly functional. Although sheets of water were seen draining from the roads, no dirty water was present on the roads, in the ditches or in the streams. Sediment control structures require diligent maintenance to remain effective and

---

<sup>4</sup> Further along, the woodlot does use part of the old railway bed as a road. It is within the riparian reserve zone of a fish stream, and was recently rebuilt. It would not have made sense for the licensee to cause additional disturbance by building a new road outside that riparian area. If an observer was not aware of the road's history, it might appear that the road was inappropriately located; it is not.



ready for the next storm event. In this case, most of the licensee's sediment control structures were effective, but several needed the trapped sediments removed or minor repair to ensure that water would be detained.

**The licensee's erosion and sediment control activities are appropriate.**

## **Conclusion**

---

The licensee's management of riparian areas is appropriate. The licensee's riparian management does not have to meet the standard of a Pacific water shrew WHA, nevertheless it comes close. The licensee's erosion and sediment control activities are appropriate.



[Home](#) > [Media Room](#) > [News Releases](#) > [News Releases 2006](#) > Two Fraser Valley Woodlots Investigated by Forest Practices Board

## NEWS RELEASE

For Immediate Release  
August 2, 2006

### Two Fraser Valley Woodlots Investigated by Forest Practices Board

VICTORIA – Investigations of two woodlots in Maple Ridge for forest management practices, following complaints from the public, have now been completed, the Forest Practices Board reported today.

The investigation of the 276-hectare BCIT Forest Society woodlot near Kanaka Creek concluded that the woodlot's streamside management, and erosion and sediment control activities are appropriate. The investigation of Blue Mountain Woodlot Limited's 400-hectare woodlot on Blue Mountain concluded that a government-created recreation strategy should be finished to help resolve recreational use conflicts at the woodlot.

"Our investigation of the BCIT Forest Society woodlot determined that management meets, and sometimes exceeds, legal requirements for streamside protection. A public concern was whether woodlot activities would protect habitat for Pacific water shrew, a species at risk. The woodlot is not obliged to manage for Pacific water shrew, nonetheless, it currently comes close to what government could require," said board vice-chair Geoff Battersby.

"At Blue Mountain, our investigation found that competing recreational uses and population growth around Maple Ridge are indeed stressing the land," he said, "and while the woodlot manager has no authority to restrict recreational use on Crown land, the Ministry of Tourism, Sports and the Arts can and should work with recreational users to finalize and implement the recreational management plan that was initiated in 2003."

Both woodlots are part of the 4,400-hectare Blue Mountain provincial forest, which has seen a substantial increase in recreational traffic as the population of the Fraser Valley has expanded.

The Forest Practices Board is an independent public watchdog that reports to the public about compliance with the Forest and Range Practices Act (FRPA) and the achievement of its intent. The board's main roles under FRPA are:

- Auditing forest practices of government and licence holders on public lands.
- Auditing government enforcement of FRPA.
- Investigating public complaints.
- Undertaking special investigations of forestry issues.
- Participating in administrative appeals.
- Providing reports on board activities, findings and recommendations.

-30-

**Helen Davies**

**Communications**

Forest Practices Board

Phone: 250-356-1699 or 1-800-994-5899

[Higher Contrast](#)

[Email this Page](#)

[Print this Page](#)

Text Size - 0 +

#### Recreational Impacts in a Woodlot

The Board received a complaint that a woodlot was not adequately protecting streamside areas and water quality, given the possibility that an endangered species, the Pacific water shrew, may be present.

#### Download Full Report - BCIT Forest Society

A resident in the Fraser Valley complained that a local woodlot owner was allowing motorized and non-motorized recreational vehicles to damage the habitat of cutthroat trout, coastal tailed frogs and red-legged frogs. The complainant felt strongly that the habitat for these non-threatened, but sensitive, species should be protected from such damage.

#### Download Full Report - Blue Mountain