

Our non-profit society has the mission to examine the relationship between land management activities and ecological consequences within watersheds and to help create long term, science-based watershed management based on stewardship values and principles. Our response to the Discussion Paper, Forest and Range Practices Act Improvement Initiative is based upon observing problems in the management practices in our watershed and based upon some of those experiences, we detail some necessary changes to BC's Forest and Range Practices Act.

The Duhamel Creek Watershed, that is located 10 km east of Nelson BC on Kootenay Lake with an area of 57 km², is designated as a Community Watershed. The watershed supports an estimated residential population of 1100 along with a range of commercial and varied recreational uses. Importantly, the watershed provides interconnection for a diverse wild animal population as a pass to the Lemon Creek watershed on Slocan Lake.

Since the 1970s, timber has been removed through clear cut logging. More recently, wood supply has been augmented through harvest of trees located within Old Growth Management Areas (OGMAs) previously designated to protect biodiversity. In addition to forestry, the Duhamel watershed has also become a destination for many varieties of recreational activities including camping, hunting, and motorized recreation, which are enjoyed by local residents and visitors alike.

The beautiful chain of small lakes in the upper section of the watershed is of particular interest to recreationalists. The Ministry of Forests, Lands and Natural Resource Operations and Rural Development (FLNRO) supports camping at a Recreation Site situated at the upper lakes. The road network provides access for all these and other (e.g., mining) activities. Used by many, there is shared responsibility for oversight and maintenance of this watershed's roads by FLNRO, the Ministry of Transportation and Infrastructure (MoTI), and the Kalesnikoff Lumber Company, the forest tenure holder in the Duhamel Creek watershed.

The Problem



Figure 1. Pictures from Duhamel Watershed: forest tenures clear cut and example landslide

In recent decades, the Duhamel Creek watershed has experienced numerous landslides and, at times, elevated levels of turbidity, affecting water quality for domestic consumption and raising concern for public safety in the creek's alluvial fan. Many of these sedimentation events can be directly related to the roads and the challenge of monitoring the many kilometres of the road network. In a notable case, due to uncertain responsibility the maintenance of the main line road is acknowledged to be lacking. The most recent wildfire in 2015 burned the northeastern corner and affected a large tract of Old Growth Management Area (Figure 2). In response to these actual and other potential community impacts, the

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Duhamel Watershed Society (DWS) has been engaging industrial and government interests in the watershed in an effort to better address the ongoing risks from the roads and the consequences from clear cut tenures.

Finally, we are concerned with the evolving impact from climate change. In recent years, we are noting a shift in the pattern of rainfall throughout the year where longer periods of dry, hot weather occur in summer that is stressing some species of trees and lowering the flow of creeks, likely exacerbated by clear-cut areas.

Solutions

For these reasons, it is essential that there be improvements in forestry management that ensure that we develop and retain resilient ecosystems in our watersheds(9,13). In addition, transitioning from the obsolete practice of using toxic herbicides and pesticides that have long term and inadvertent consequences to the health and biodiversity of the ecosystems is of crucial importance (5). Emerging studies demonstrate the urgency to utilize forests for sequestering carbon, and this can be better accomplished through adopting practices that preserve old growth forests and through better planning that encourages selective harvesting(6,8,11).

Changes to forestry management must be collaborative with all stakeholders, including First Nations.

We commend Kalesnikoff Lumber Company for developing the capability to produce ‘Mass timber’ engineered wood products(3) and for collaborating with local governments to develop an alternative timber harvesting practice that combines logging and wildfire protection(14). It is our belief that changes in forestry practice that ensure resilient ecosystems can still provide good local jobs as demonstrated in Collins Wood Products forests and in some community forests (1, 2, 4).

Question 1: How should the Province identify opportunities and priorities for adapting forest management to a changing climate, such as mitigating the effects of beetle infestations, drought and fire?

Add the direction: “without unduly reducing the resilience of ecosystems” to timber and other ‘use’ objectives and remove the obsolete limitation “without unduly reducing the supply of timber from British Columbia's forests” from all FRPA legal objectives and from the Government Actions Regulation.

Question 2 What factors should be considered in the planning of forest operations to reduce the risks of wildfire around your community?

Refer to Trail Times article (14), *Company to collaborate on logging near Nelson: Logging will include wildfire protection.*

Question 3. A vital step in landscape-level planning is understanding what is important to the public. Based on what is important to you or your community, what information on the condition of resource values such as species-at-risk habitat do you think is necessary to support the planning process?

Old Growth Management Areas (OGMA) provide the means to identify and protect at the landscape-level biodiversity and old growth forests. In our experience within our watershed the OGMA over time has become fragmented and reduced through re-assignment of ‘equivalent’ areas of age and species trees. To the credit of our forest tenure holder there has been an attempt to find an appropriate alternative replacement for logged areas that formerly were OGMA. In any case, some OGMA’s that remain, as shown in figure 2, are reduced and fragmented in spots with narrow arms and so rendering less resilient.

We recommend that the purpose of OGMA be expanded and better managed with more vigorous oversight when changes are to be made. For example, another criteria for defining and maintaining OGMA's should be to identify interconnections between sensitive areas and/or for wildlife corridors.

In the case of Duhamel Creek watershed there is opportunity to provide a more contiguous connection along the length of the watershed as a corridor for wildlife to the Lemon Creek watershed and Slocan Lake.

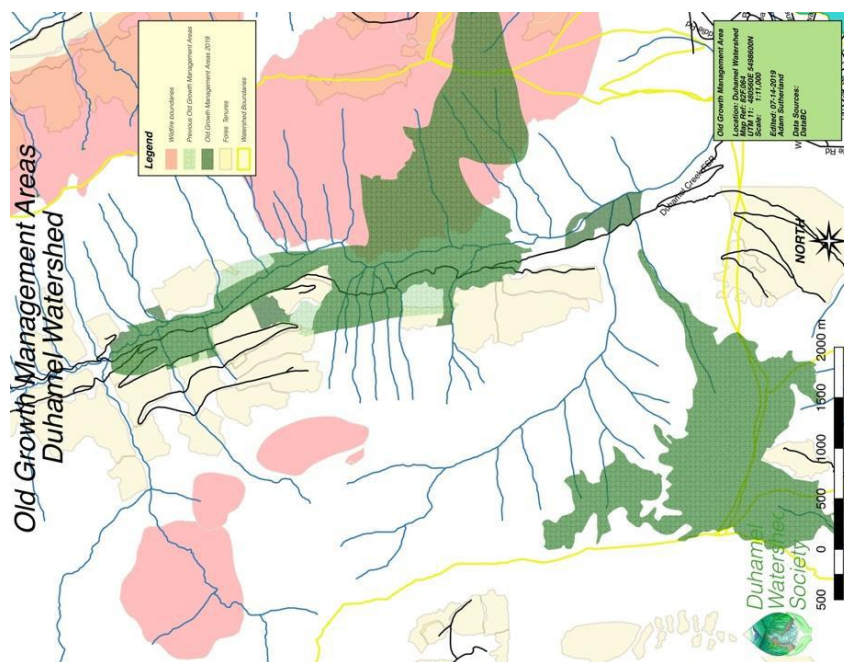


Figure 2. Duhamel Watershed: Illustration of Fragmentation of Old Growth Management Areas (Legend: OGMA's - green (light green removed), Wildfire - red, Forest tenures - beige)

Question 4 How would you like to be involved in the planning process?

The planning process must engage the public as collaborators through the application of procedural justice from social justice theory, as explained in a study by Lauer et al (5). Procedural justice can be a powerful mechanism that can influence equity engagement, particularly to enhance outcomes when used during public engagement. Procedural justice includes two complementary yet distinct dimensions: Process Control versus Decision Control. In Process Control the public is provided opportunities to become invested in creating solutions, as often is the case currently during planning. Whereas, Decision Control only exists when the public is able to exert “influence over outcomes,” generally not the case currently. In the study by Lauer, they demonstrated that Decision Control is critically needed to give people a sense of satisfaction with outcomes:

“The opportunity to participate (by voicing opinions) did not significantly affect satisfaction on its own. Instead, satisfaction was significantly improved only *when stakeholders believed their input had helped shape decisions*. These results suggest the Process Control and Decision Control elements of procedural justice do not independently relate to satisfaction... but are instead hierarchical. public engagement processes in Social & Ecological Systems management ... should not merely provide opportunities for stakeholders to be present and comment on decisions. *Instead, effective engagement requires that stakeholders are meaningfully engaged and feel that their participation is valued and influential.*”

Question 5. Resource roads are a valuable asset in the province as they provide access for the forest industry, ranchers, other resource users, and the public for commercial and recreation purposes.

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Yet, these same road networks are costly to maintain and have potential negative impacts on wildlife, water quality and fish habitat. What values do you believe are important to consider when planning new roads, road use and maintenance, and deactivation in your area?

We have become acutely aware of how roads through the building, usage, and consequences from the lack of maintenance can affect the ecosystem resilience.

Duhamel watershed has a tremendous amount of recreational activity over the roads and the roads are used intensively during periods of resource extraction. In 2015 the forest tenure holder brought to our attention that buried cribbing structures on the main line road was cause for some concern. A site review of the cribbing structures at three locations along the main line road showed that they were perched on a very steep slope high above the creek bottom. Research into past history revealed that the cribbing (large cedar logs) holding the road in place was installed an estimated 100 years ago.

Duhamel Watershed Society pursued consultation with MoTI, FLNRO, and the forest tenure holder, Kalesnikoff Lumber Company, and it was confirmed by all that the situation was indeed precarious, particularly for industrial, continuous traffic. No responsibility was accepted to engage in finding a solution for the reason that the repair was very expensive and there was no budget available. KLC hired an engineering consultation and confirmed that the cribbing section of the road was not strong enough to bare intense industrial traffic. That concern resulted in the installation of rigging mats that would distribute the weight of fully loaded logging trucks during the period of logging activity.

Now it is four years later and the three sections of cribbing on the main line road are still needing maintenance. If, or more likely when, there is cribbing failure who will be taking responsibility? It is important for communities to be heard. Our watershed shows many cumulative effects of human activities and there is little or nothing allocated specifically in large enough amounts of funding to remediate the effects.

We propose that some portion of the stumpage fees go into a maintenance fund dedicated primarily to the long-term maintenance and deactivation of roads. We further propose that the regional district be given authority to help identify and prioritize where the maintenance fund be applied. We also suggest that the forest tenure holders be bonded to provide insurance for times of unexpected disaster.

Question 8 What additional values should be considered in FRPA that will allow us to manage forest and range practices in a better way?

We recommend that riparian zones must be retained for the smaller flows. Too often in our watershed smaller riparian zones have been ignored and completely clear cut. Instead, allocate coverage of forest in large enough size around the riparian zone to avoid blow downs.

Question 9. What ways should the Province strengthen government oversight and industry accountability regarding forest and range activities to better address the challenges of climate change and the interests of all British Columbians?

We concur with the province's recent Professional Reliance Review's recommendation that the practice of compliance certification by professionals be ended. "The determination of compliance with legal requirements is a government function that should not be delegated" (Recommendation 92, relates to FRPA s.16(1.01), (1.2)). Further, reform of Professional Reliance should include recommendations 17 through 22 in the Organizing for Change submission and all other FRPA-related recommendations in the 2018 Professional Reliance Review.

We appreciate the opportunity to give feedback on FRPA changes. Note that we also have joined the Organizing for Change in support of the recommendations in their submission. If you have questions about this submission please contact us at info@duhamelwatershedsociety.com or 250-505-2355.

Sincerely,

Adam Sutherland, President
Duhamel Watershed Society

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