

2012 Nadina District FREP Summary: Riparian

Riparian assessments help determine if forest and range practices are effective at maintaining the structural integrity and function of stream ecosystems and other aquatic resource features over both the short and long term.

This report summarizes key findings within the Nadina District and provides recommendations to improve on-the-ground resource management practices and decision making.

Key Findings:

- 72 streams sampled from 2006 to 2011: 23 in cutblocks and 49 adjacent to cutblocks.
- Sample profile for period included: 19 S6 streams, 17 S4 streams, 35 S3 streams, and 1 S2 stream.
- 81% of S6→S4 streams had some retention of dominant and codominant stems in their riparian zones.
- 93% of streams sampled had undisturbed channel beds, and 85% of streams had intact channel banks, indicating the majority of streams had adequate retention and buffering to avoid direct physical damage to the stream
- 79% of RMA vegetation was sufficiently protected from windthrow (ie. windthrow <5%).
- 4% of streams assessed were characterized as “not properly functioning”, and 25% “properly functioning with impact”.
- Where logging was identified as an impact to streams, the most frequently cited reasons for riparian impacts were, (in descending order): (1) low retention, and (2) windthrow. Old logging and machine disturbance at stream crossings were noted as minor contributors.
- The “properly functioning” streams had an average of 22.9 m treed RMA, with the “not properly functioning” streams an average of 7.9 m treed RMA (3 streams in sample).
- The introduction of fine inorganic sediment had **not been minimized** on 71% of the streams, which was largely due to logging, roads and natural events.



Recommendations for Continued Improvement of Riparian Management:

- Place 10 m wide riparian buffers on all S4 streams and perennial S6 streams that deliver water, alluvial sediments, organic materials, nutrients, invertebrates and (or) large woody debris downstream to fish-bearing areas (reduced treed buffer widths contributed to streams not properly functioning, as shown above)
- Retain, at minimum, all non-merchantable trees and smaller vegetation and as many other windfirm trees as possible within the first 10 m on intermittent and ephemeral S6 streams that are directly connected to fish-bearing areas
- Limit the introduction of debris resulting from low retention (and resultant blowdown) into channels
- Minimize fine sediment delivery to channels from the roads and stream crossings throughout the life of the entire road life cycle
- Following well-established best management practices concerning fine delivery to streams and stream crossings (see *Forest Road Engineering Guidebook*; *Erosion and Sediment Control Practices for Forest Roads and Stream Crossings*; and the *Fish-stream Crossing Guidebook*).

