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**Resource Values Assessment: Riparian Management Areas**

**State of Knowledge:**

- Since the early 1990s, British Columbia has implemented measures to conserve the ecological values associated with riparian areas, which are lands adjacent to wetlands or bodies of water such as swamps, streams, rivers or lakes.
- These measures include establishing riparian management areas under the *Forest and Range Practices Act*, to:
  - Minimize or prevent impacts of forestry and range uses on stream channel dynamics, aquatic ecosystems, and water quality of all streams, lakes, and wetlands.
  - Minimize or prevent impacts of forestry and range use on the diversity, productivity, and sustainability of wildlife habitat and plant communities adjacent to streams, lakes, and wetlands with reserve zones, or where high wildlife values are present.
- Riparian management areas include both the area dominated by continuous high moisture content and adjacent upland vegetation that exerts an influence on it.
- Riparian ecosystems contain many of the highest value non-timber resources in the natural forest. Riparian areas frequently contain the highest number of plant and animal species found in forest, and provide critical habitats, home ranges, and travel corridors for wildlife. They maintain ecological linkages throughout the landscape, and are considered a fine filter approach to managing biodiversity.
- Streamside vegetation protects water quality, stabilizes streambanks, regulates stream temperatures, and provides a continual source of woody debris to the stream channel.
- The majority of fish food organisms come from overhanging vegetation and bordering trees while leaves and twigs that fall into streams are the primary nutrient sources that drive aquatic ecosystems.
- Streams with substantially modified riparian areas lack complexity and structure with high erosion and mobility potential.

**Current condition:**

- The level of retention depends on the width of a stream or the area of a wetland or lake, and riparian management areas can range from 10 metres to greater than 100 metres. The riparian management area may consist of a reserve and/or a management zone. Currently small fish-bearing streams <1.5 m do not have a reserve zone.
- Consistent with the Cariboo Chilcotin Land Use Plan certain streams have been classified as Critical Fish Habitat, requiring enhanced levels of riparian management to protect sensitive fisheries values

**Risks:**

- Reducing the size of riparian management areas can affect ecosystem resilience and limit options to respond to unforeseen and changing environmental conditions such as those associated with climate change.
- It can lead to habitat fragmentation and a reduction in connectivity.
- Potential deterioration of terrestrial and aquatic habitat, and water quality could increase risk to fish, fish habitat and listed species, and this could lead to intervention by federal statute.
- Loss of riparian areas could increase the instability of the streams putting infrastructure and productivity of forests at risk.

**SUPPORTING DOCUMENTS:**

BC Ministry of Forests and Range, 2008. <http://www.for.gov.bc.ca/code/>

Ministry of Forests and Ministry of Environment. 1995. *Forest Practices Code Biodiversity Guidebook – September 1995*

Ministry of Forest and Ministry of Environment. 1995. *Forest Practices Code Riparian Management Area Guidebook – December 1995*

Rex, J., D. Maloney, E. MacIsaac, H. Herunter, P. Beaudry, and L. Beaudry. 2011. Small stream riparian retention: the Prince George Small Streams Project. B.C. Min. For. Range, For. Sci. Prog., Victoria, B.C. Exten. Note 100. URL: [www.for.gov.bc.ca/hfd/pubs/Docs/En/En100.htm](http://www.for.gov.bc.ca/hfd/pubs/Docs/En/En100.htm)

Slaney P.A. and D. Zaldokas. 1997. Fish Habitat Rehabilitation Procedures, Watershed Technical Circular No. 9. Watershed Restoration Program, BC Ministry of Environment, Lands and Parks

Figure 1. Riparian management area showing the application of a management zone and a reserve zone along the stream channel or wetland/lake margin.

