

Managing the Riparian Zone

Riparian zones are the last line of defence to buffer water bodies from the effects of our activities on the land. Significant benefits can be achieved when riparian zone management occurs in combination with best management practices for soil and water.

The most effective riparian zone consists of native trees, shrubs, and herbaceous plants. Proper design and management not only increases their effectiveness, but will also discourage the growth of undesirable plant species.

The recommended width of the riparian zone depends on the slope, soil type, and adjacent land use activity. The width of a natural, undisturbed and functioning riparian zone required to protect a river may be much larger.

In order to effectively maintain natural vegetation within the riparian zone the area should be inspected periodically and restored as needed.



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What Can I Do to Help?

As a landowner with a watercourse on your property there are many steps that you can take to improve riparian zone health:



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- ❖ Incorporate best management practices for soil and water on your property beyond the riparian zone such as grassed waterways and cover crops
- ❖ Avoid operating machinery within 15 meters of a watercourse
- ❖ Respect the crown land reserve of 15 meters along all water bodies and maintain permanent riparian areas next to the watercourse
- ❖ Plant native trees and shrubs in the riparian zone to improve diversity and to provide habitat for wildlife
- ❖ Obtain a copy of the technical manual *Best Management Practices for Riparian Zones* from the Agrifoods Branch
- ❖ Contact your local Agrifoods Branch to discuss possibilities for riparian zone restoration work
- ❖ Contact the Newfoundland and Labrador Department of Environment and Conservation for up-to-date environmental legislation and regulations

Where Can I Learn More?

Department of Natural Resources, Agrifoods Branch

Land Resource Stewardship Division
P.O. Box 2006
Cornerbrook, NL
A2H 6J8
Phone (709) 637-2081

Department of Environment and Conservation

Water Resource Management Division
4th Floor Confederation Building W
PO Box 8700
St. John's NL
A1B 4J6
Phone: (709) 729-2563
www.gov.nl.ca/env/water

Island Nature Trust

P.O.Box 265
Charlottetown, PEI
C1A 7K4
Phone: (902) 892-7513
Email: plover@islandnaturetrust.ca
www.islandnaturetrust.ca
projects@islandnaturetrust.ca

Online resource:

WetKit Agriculture
www.wetkit.net/modules/3

Best Management Practices for Riparian Zones in Newfoundland and Labrador



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A technical manual for riparian zone management will be available in October 2006.

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*Aussi disponible en français

What is a Riparian Zone?

The riparian zone is land adjacent to streams, rivers, lakes, ponds, and wetlands. These are transitional lands, with no definite boundaries, between the body of water and more upland areas. Included in this area are streambanks, the floodplain and plant and animal communities. Riparian zones are characterized as being ecologically diverse with both water-loving and upland plants.

Riparian zones are primarily recognized for their ability to offer a buffer between watercourses and surrounding land use practices such as agriculture, forestry, road construction, and land development.

In many communities in Newfoundland and Labrador, riparian zones have been largely altered for human use. The remaining buffer zones are generally much narrower than natural riparian zones.

The Benefits of Riparian Zones

Riparian Zones:

- ❖ Filter sediment, nutrients, agricultural chemicals and other pollutants from surface runoff
- ❖ Protect streambanks from erosion
- ❖ Provide food, water, and cover for many species of terrestrial animals
- ❖ Provide shade, food, and reduce stream water temperature for fish and other aquatic organisms
- ❖ Provide leaf litter and woody debris to the stream
- ❖ Provide travel corridors for a wide variety of wildlife
- ❖ Decrease flood severity

Riparian Zones and Agriculture

Examples of environmental benefits include, but are not limited to the following:

Runoff/Flood Protection. A well-managed riparian zone will reduce flood severity. The vegetation and soil in the riparian zone create a sponge-like effect and soak up the excess water, nutrients and chemicals. The riparian zone also stores water on the flood plain reducing the peak flows downstream and maintains a more constant water level in the stream.

During flood events, runoff velocity is reduced due to the increased friction the vegetation provides.

Reduced Streambank Erosion

Riparian zone vegetation stabilizes streambanks and reduces erosion therefore minimizing stream channel movement. This is especially true with deep-rooted woody vegetation.

Healthier Livestock. To ensure compliance with Canada's *Fisheries Act*, livestock are not allowed to access watercourses. Livestock are healthier when fenced out of riparian areas. They are less susceptible to disease such as mastitis and foot-rot. An alternative water source will ensure improved water quality and healthier livestock.



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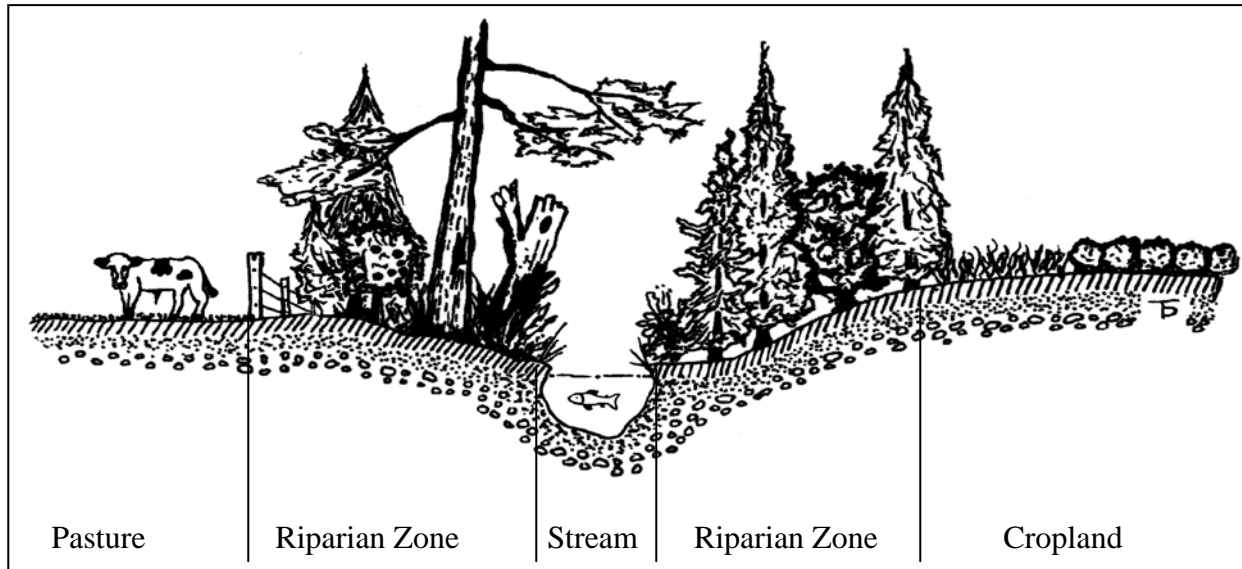
Riparian Zones and Wildlife

Riparian vegetation attracts wildlife, and provides habitat for aquatic, terrestrial and, amphibious wildlife. Some of these species are rare and depend on riparian areas for survival. These areas provide travel corridors which create important connections between habitat types.

Riparian zones help to reduce the amount of silt entering the stream from surface runoff. Silt settles on stream bottoms and covers gravel spawning sites for fish. Silt also carries nutrients and other contaminants such as pesticides which negatively impact fish and other aquatic life.

Canopy cover and overhanging vegetation help to reduce water temperature which is necessary for fish health. This is especially important during the hot summer months.

Leaf litter and other organic debris that falls into the stream provide food for aquatic organisms. Large woody material that falls into the stream provides habitat for aquatic, amphibious and terrestrial life.



Artwork by Todd Dupuis courtesy of Bedeque Bay Environmental Management Association

Figure 1. A forested riparian zone along a permanent stream.

We all live downstream
~David Suzuki