



Riparian Area Practices

Beneficial Categories



Background

Riparian areas are transitional lands that are adjacent to streams, rivers, lakes and wetlands. The vegetation and soils in these areas are strongly influenced by the presence of water. These areas are considered some of the most profitable and valuable of all landscape types, and they are also very vulnerable. Riparian areas provide essential services to the surrounding environment and ecosystem including filtering and trapping runoff, recharging groundwater, slowing soil erosion along banks, supporting biodiversity and wildlife habitat, and producing abundant forage for livestock during the growing season. Compared to upland areas, riparian vegetation is different. Riparian areas stay greener longer and they are capable of producing more forage than uplands. Because of these differences and importance to the landscape, riparian areas need to be managed differently. Managing riparian areas differently can have many positive impacts on an operation such as:

- Increased land productivity
- Flood zone buffer
- Increased drought protection
- Filtering and buffering to maintain water quality
- Good stewardship of shared resources such as water, fish and wildlife
- Healthy productive riparian areas alongside grazing demonstrates to the general public that grazing is compatible with these areas

There are multiple ways to manage riparian areas. All streams, rivers, wetlands and lakes are different and part of different landscapes and ecosystems that will require unique management. However, sustainable agriculture requires that soil and water quality be maintained, which includes maintaining riparian areas.

How to Identify a Riparian Area

There are three key ways to identify riparian areas:

- 1) There is lots of water present, seasonally or regularly, and the water is on or close to the surface

- 2) The vegetation present responds to and requires abundant water to survive
- 3) The soils in the area have been modified by the water, stream or lake and influenced by the lush productive vegetation

List adapted from Cows and Fish – Caring for the Green zone

Examples of Ways to Manage Riparian Areas

Protection of riparian areas will vary depending on location and current cattle access. Key components for successful riparian area management are related to soil and water conservation practices across the landscape and preserving the integrity of the natural riparian zone. Riparian areas are also extremely sensitive to uncontrolled grazing. If access is not controlled, cattle tend to concentrate in riparian areas because of access to water, shade and lush forage. Successful management requires modifying typical cattle behaviour to control their grazing patterns, timing and intensity.

Below are general management options to help reduce cattle impact on riparian areas and specific practices that could be implemented.

Altering livestock distribution

- Place fencing to limit or reduce cattle access to riparian areas
- Change salt and mineral location to be away from riparian areas
- Provide alternate off-stream or off-site access to water
- Provide alternative shade or shelter away from riparian areas

Limit grazing timing and intensity

- Add more rest time to the grazing cycle of riparian areas to enhance plant vigour and allow growth of plants to a more grazing tolerant stage
- Avoid grazing during stressful times, such as autumn and winter
- Introduce riparian buffer strips
- Control grazing intensity (number of animals multiplied by duration of grazing)
 - o Provide supplemental feed to limit intensity
 - o Reduce cattle numbers in fields with access to riparian areas

Define a grazing management plan including riparian areas

- Fence the riparian area into a separate pasture with riparian specific management objectives and strategies
- Incorporate the riparian area into specific management plans including:
 - o Rest and rotational grazing
 - o Time-controlled grazing systems
- For high risk or chronic problem areas, adding exclusion fencing to the area may be required to prevent access

Activities to Avoid in Riparian Areas

It is important to be aware that certain practices common in upland areas should be avoided around riparian areas to help with proper management of these sensitive areas. Practices to avoid include:

- Always keeping salt or mineral close to natural water supplies
- Sole use of riparian water areas to provide water for livestock
- Cropping right to the edge of a water body; instead allow natural vegetation or planted forage to regenerate in these areas
- Grazing during high moisture conditions which can have a negative impact on soils and bank stability
- Fertilizer usage
- Transporting manure to riparian areas

Potential Economic Costs/Benefits

The size and type of riparian area(s) on an operation will influence the costs required to improve management of these areas.

Certain practices will require additional labour or management which may not have added expenses. These include:

- Moving salt blocks and mineral away from riparian areas
- Not grazing during sensitive periods such as high moisture or early spring/late autumn or winter
- Reducing cattle numbers in areas with access to riparian areas

Other practices will incur an additional cost to implement, however the amount will vary across operations depending on the resources currently used or available. These include:

- Providing off-site water
- Limiting access through fencing (permanent or temporary)
- Providing additional shelter away from riparian areas
- Providing supplemental feed away from riparian areas

Implementing riparian area management practices can have a variety of benefits including economic benefits. For example, providing cattle with access to clean water off site can improve herd health and potentially increase weight gain and backfat in calves. Cattle that drink contaminated water show a decrease in water consumption and weight gain. When water palatability is improved, cattle tend to consume more water and feed. If you are considering the economics of providing a new water system, the Beef Cattle Research Council (BCRC) has created an [Economics of Water Systems Calculator](#).

Other benefits include, but are not limited to:

- Long-term water conservation
- Increased forage production with improved management
- Reduced bank erosion
- Improved distribution and utilization of riparian areas and other grazing pastures used with improved management
- Improved nutrient management of grazing pastures and riparian areas
- Reduced risk of disease and death with access to clean water and higher quality forage

Financial Incentives

Riparian area management and protection is important to maintain and sustain the surrounding ecosystem. There are some programs available to assist with riparian area conservation and management.

Ducks Unlimited

Ducks unlimited has been partnering with landowners providing various resources and programs to help restore and protect Canada's land and water. You can more information on resources and programs currently available through Ducks Unlimited Canada [here](#).

You can also contact your provincial Ducks Unlimited office to speak directly with a conservation specialist.

Alberta

du_edmonton@ducks.ca

Tel: 780-489-2002

British Columbia

du_surrey@ducks.ca

Tel: 604-592-0987

Manitoba

du_brandon@ducks.ca

Tel: 204-285-9779

New Brunswick

du_fredericton@ducks.ca

Tel: 506-458-8848

Newfoundland & Labrador

du_newfoundland@ducks.ca

Tel: 902-667-8726

Nova Scotia

du_amherst@ducks.ca

Tel: 902-667-8726

Ontario

du_barrie@ducks.ca

Tel: 705-721-4444

Prince Edward Island

du_charlottetown@ducks.ca

Tel: 902-667-8726

Quebec

du_quebec@ducks.ca

Tel: 418-623-1650

Saskatchewan

du_regina@ducks.ca

Tel: 306-569-0424

Yukon & Northwest Territories

Yukon Territory Office Tel: 867-668-3824

Northwest Territories Office Tel: 867-873-6744

Saskatchewan

The Saskatchewan Stock Growers Foundation was launched in January 2020 and is affiliated with the Saskatchewan Stock Growers Association (SSGA). The foundation's goal is to conserve native grasslands and they offer term conservation easements. To find out more about available programs, contact the office at [\(306\) 757-8523](tel:3067578523).

The Saskatchewan Association of Watersheds often has programs to supply funding for alternative watering systems, grazing management infrastructure, and other projects to help improve grasslands and riparian areas. Contact your local watershed association to find out if they have any programs that meet your needs:

<https://saskwatersheds.ca>

info@saskwatersheds.ca

Alberta

Cows and Fish is an organization that aims to improve better understanding of how improvements in grazing and other management of riparian areas can enhance landscapes. For more information on how they can assist with your management goals, contact your local riparian specialist:

Cows and Fish Alberta Riparian Habitat Management Society

<https://cowsandfish.org/contact-us/>

riparian@cowsandfish.org

Alberta watersheds often have programs to supply funding for alternative watering systems, grazing management infrastructure, and other projects to help improve grasslands and riparian areas. There are 11 Alberta watershed associations. Contact your local watershed association using the link below to find out if they have any programs available that meet your needs.

<https://www.alberta.ca/watershed-planning-and-advisory-councils.aspx>

British Columbia

Through the Investment Agriculture Foundation and CAP there are available cost-share incentives for producers who have developed and completed a current (within 5 years) environmental farm plan. Visit the site below for more information. Please note current applications close **February 16 2023**.

Additional intakes are planned for **June 2023** and **September 2023**. You can find out more information on applications [here](#).

For more information on this program visit: [BC Climate Agri-solution Fund](#) or email them at bccaf@iafbc.ca

Ontario

Through the Canadian Agricultural Partnership there is cost-share funding available for producers in association with the Ontario Soil and Crop Improvement Association. For more information on eligibility, see the [Canadian Agricultural Partnership Producer Program Guide](#). Please note current applications must be submitted by **March 31, 2023**.

For more information on Riparian area management, you can visit the following sites:

[Cows and Fish – What is Riparian](#)

[Cows and Fish – Caring for the Green Zone](#)

[Government of Canada – Riparian Area Management](#)

[Government of British Columbia – Management of Riparian Areas](#)

[Government of Alberta – Grazing and Range Management](#)

[Beef Cattle Research Council – Rangeland & Riparian Health](#)

[Agroforestry & Woodlot Extension Society – Grazing Livestock in Riparian Areas](#)

[Beef Cattle Research Council – How Quickly Do Water Systems Pay for Themselves](#)

[Beef Cattle Research Council – Economics of Water Systems Calculator](#)

Video available from [Beef Research School – Restoring Riparian Areas](#)