

Grazing Recommendations for Riparian Areas

Ranching is an integral part of Montana's history, economy, and cultural heritage. Of the 93 million acres in Montana, about 56 million are in agricultural production – 38 million of those are pasture and range lands. We must recognize the challenges of keeping riparian areas intact and properly functioning.

Unmanaged grazing in riparian areas can result in:

- a change to channel shape and flow
- loss of vegetation that holds soil in place
- destabilized banks
- accelerated erosion
- introduction of pathogens and nutrients from cattle excrement deposited in or near the water

Livestock trample can weaken and erode stream banks. If left unchecked, this can widen channels and increase sediment load.



The negative effects of livestock grazing in riparian areas can be *prevented*, *minimized*, or *improved* by controlling when, where, how long, and with what intensity livestock graze in the riparian area.

Properly functioning riparian areas benefit agricultural practices by :

- improving water storage and availability
- increasing and enhancing forage quantity and quality
- providing windbreak and thermal shelter for livestock

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Grazing Best Management Practices in Riparian Areas

The following grazing BMPs can help promote livestock health and productivity, and at the same time, protect water quality and quantity.

DO limit livestock time in pastures with riparian areas, and avoid grazing these areas during the rainy season

DON'T graze in riparian pastures during the critical growth period of plants that provide bank stability

DO provide adequate re-growth time and rest for plants

DO alternate the season of use from year to year if possible

DO build a bridge for cattle crossing over streams

DO develop off-stream water, feed, and shelters in upland areas



Resources for more information on best management practices in riparian areas:

- Local county extension offices
<http://www.mt.nrcs.usda.gov>
- Local NRCS offices
<http://www.mt.nrcs.usda.gov>
- Montana DEQ
<http://www.deq.mt.gov/wqinfo/wetlands/>
- Montana Water Center
www.montanawatercenter.org

Montana Watercourse
Room 335 Culbertson Hall - MSU
P.O. Box 170570
Bozeman, MT 59717-0570
(406) 994-6425 – water@montana.edu

Riparian Best Management Practices

A guide for landowners

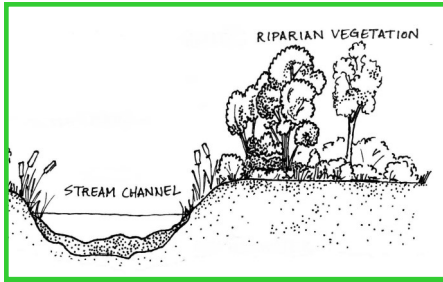


**What are riparian areas?
Why are they important?
What are riparian best management practices that protect and enhance water quality and quantity?**

Developed and distributed by:


Montana
Watercourse

What are Riparian Areas?



The land bordering streams, rivers, wetlands, ponds, and lakes are unique ecosystems called **riparian**



areas.

Riparian areas occupy only a small part of a watershed but their influence extends well beyond that. These areas provide many social, economic, and ecological



benefits.

Benefits of Properly Functioning Riparian Areas

Controls Flooding - Montana's 175,000 miles of streams and rivers are all vulnerable to flooding. Riparian vegetation dissipates the water's energy, allowing it to spread out across the land. As flood water slowly reenters the main channel, some is soaked up by soils.

Moderates Water Temperature - Riparian plants provide shade to help moderate temperature fluctuations and extremes. Montana's 85 species of fish depend on stable temperatures.

Reduces Erosion - Riparian plants hold soil in place and reduce the erosive power of water.

Filters Water - Riparian plants physically trap nutrients and sediment, reducing the input to surface waters from the surrounding landscape.

Creates Habitat - Riparian plants serve as a forage area, wind break, and thermal cover for wildlife, including birds, mammals, reptiles, and insects.

Recharges Aquifers - Adequate native plant life in riparian areas enhances groundwater recharge by holding water long enough to allow it to seep down into the underlying soil. This helps maintain surface water levels and flows, especially during late summer.

Increases Property Value - Property values can benefit from protection of riparian areas. Studies show that people are willing to pay 6% or more for property near protected riparian areas.

Enhances Tourism and Recreation- Healthy riparian areas invite opportunities for outdoor activities such as fishing, boating, swimming and hunting.

How can You Protect Your Riparian Areas?

These ecologically sensitive and beneficial areas are increasingly threatened by expanding development in urban, residential and agricultural areas.

The following best management practices (BMPs) are strategies to prevent or minimize the effect of human-related activities on riparian resources, functions and values.

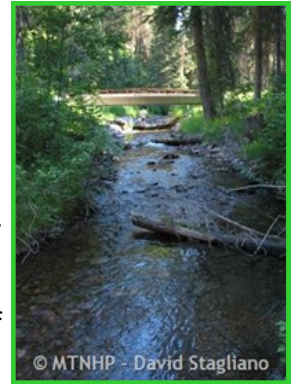
Keep native riparian vegetation intact

DO limit building in riparian areas

DO plant native grasses, sedges, shrubs, and trees

DO eradicate noxious or invasive plants

DON'T mow near a body of water—let those plants grow!



Reduce sediment and nutrient loads

DO maintain natural woody debris in the riparian area

DO size culverts properly to accommodate passage of extreme flows

DO use debris screens at culvert inlets and inspect often to remove debris

DO build bridges long and high enough to accommodate floods

DON'T apply more pesticides, herbicides, or fertilizers than necessary in riparian areas