



# Cattle Producer's Handbook

Range and Pasture Section

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## Managing Riparian Pastures

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Riparian areas are generally defined as ecosystems that occur around water courses and water bodies. They occupy the transitional area between wet and dry ecosystems. Common examples would be land adjacent to streams, rivers, and lakes as well as marshes and wet meadows. Riparian areas are characterized by plant communities that require more water than adjacent upland plant communities.

Riparian plant communities are more productive and generally have higher quality forage than upland plant communities. Because of water availability, riparian plant communities are usually more resistant to damage from environmental or management impacts than upland plant communities. Likewise, these plant communities are relatively resilient and have a great capacity to respond positively to changes in environmental conditions or grazing management.

In the West, riparian areas represent a small portion of the landscape but provide some of the most important sources of habitat for wildlife and forage for livestock. Cattle, elk, horses, and bighorn sheep have all been shown to preferentially select riparian areas for foraging. Because riparian areas often support woody plant communities these habitats are also selected by browsing species such as deer, sheep, and goats. Shrubs and trees growing in riparian areas also provide important security cover for big game, small mammals, birds, and fish.

Riparian areas also provide important ecological functions such as flood control, groundwater storage, enhancements to water quality, and erosion control. Riparian areas provide critical habitats for fish, invertebrates, aquatic insects, and unusual plant species.

### Livestock Use of Riparian Areas

Cattle are attracted to riparian areas for one, or a combination of the following reasons:

1. Foraging conditions (quality and/or quantity) are better than adjacent uplands,

2. Environmental conditions (temperature, ease of travel, resting sites, insects, and presence of threats) are more favorable than in the uplands,
3. Available water source, or
4. Previous positive experiences and the associated learned behavior.

When and how cattle are managed in pastures with riparian plant communities can influence each of these factors and determine if riparian areas become an asset or a detriment to the condition of rangelands. A cattle producer's objective should be to use the available forage within riparian areas without causing long-term detriment to the ecosystem associated with these plant communities. Negative impacts to riparian areas from livestock grazing are usually attributable to the repeated grazing of individual sites within a single grazing season. Factors that contribute to the over use of riparian areas by cattle include:

1. The riparian area provides the only source of water.
2. Upland topography is steep and/or rocky with little forage.
3. Supplements are placed in or near the riparian area.
4. During times of hot weather the only shade available is in the riparian area.
5. Upland forage is less palatable compared to riparian forage.
6. The class of livestock tends to be less mobile or prone to dispersion (i.e., cows/calves vs. yearlings).
7. Individual animals develop behaviors favoring riparian use.
8. Continuous or extended grazing seasons.

The season of use changes the potential for livestock grazing to have negative impacts to riparian areas. In the spring, uplands typically have succulent grasses and forbs that attract grazing animals away from riparian areas. During this time, riparian areas are also cooler in temperature than may be undesirable early in the spring. The hoof action of cattle accessing water or grazing may cause mechanical damage to stream banks