

Ranching Along the Stream

Ranchers customarily build their operations around streams. They depend on water and vegetation in riparian areas for feed and shade for their livestock. However these areas are highly attractive and subject to heavy use which can degrade them.

Good quality water and healthy productive forage is “money in the bank” for ranchers who stand to see better cattle performance. A healthy riparian area, with abundant vegetation and stable streambanks indicates a high water table that can release moisture throughout the growing season. Thanks to the moisture, sediment and nutrients trapped from runoff and flooding, riparian forage has a longer growing season and better re-growth than in the uplands. In fact, riparian areas are among the most productive ecosystems on the central coast, and can be an important source of forage for livestock operations even though they only occupy a small percentage of the land base.

Historical Management

The early development of livestock grazing operations across North America tended to focus on streams as water sources only. Although the banks and adjacent areas were recognized as providing excellent grazing and shelter for cattle, there was little understanding of the interactions among water, soil, vegetation and grazing animals.

Traditional grazing strategies were generally designed for the extensive uplands, and as a result, riparian areas were overgrazed and sometimes considered ‘sacrifice areas.’ If allowed continuous access, livestock spend much of their time

in close proximity to the riparian areas. As a result, many streams were degraded.

In these streams, water flow may be more seasonal than in the past. Some may disappear completely, becoming no more than dry ravines. As a consequence, livestock must be moved to other natural water sources, or new water sources such as wells or impoundments must be developed.

Signs of Streambank Degradation

shallow rooted vegetation with relatively low productivity

no woody vegetation

lack of shade and overhanging vegetation

streambank collapse and excessive down cutting

high levels of exposed soil and poor plant cover

a wide stream channel with shallow, muddy water

How does Unrestricted Grazing Impact Riparian Areas?

Heavy livestock grazing impacts streambanks by trampling, excessive vegetation removal and manure and urine contamination.

Trampling compacts soil, reduces water infiltration and increases storm runoff and peak flow discharges. Streamflow becomes more variable and increased erosion may shear away portions of the streambank decreasing bank stability. Livestock trample, graze, browse and rub vegetation. Overgrazing reduces plant vigor and may lead to the invasion of unwanted species. Stream channels become wider and shallower and gravel bottoms become covered with finer sediment, resulting in poor fish spawning habitat.



Riparian Restoration Project in San Benito County, California

Managing the System Today

It is becoming apparent that using riparian areas as “sacrifice areas” means sacrificing forage production, water quality and quantity and livestock performance. Fortunately, riparian areas are very resilient and generally respond more quickly to changes in management than uplands. However, in some cases it may take years, even decades, to recover the economic costs of a severely damaged streambank.



Highly Degraded Riparian Area

Ranchers are finding that livestock perform better when pastures and water are carefully managed. Livestock drink more water and consume more forage when provided good quality water. Toxins and water-borne pests and diseases are reduced. Some studies have shown performance has decreased approximately 20 percent when livestock are infested with water-borne parasites such as Giardia.

Many ranchers have already changed their management approach. Improving riparian areas is considered to be a financially sound investment.

The recommended approach is not to eliminate grazing on the highly productive and profitable riparian area, but to monitor and adjust grazing so that all of the riparian pasture areas are kept in healthy condition. This means leaving sufficient carry-over and allowing for woody species

regeneration. Rest is therefore an important part of designing a grazing plan.

Corridor fencing to prevent grazing of riparian areas should only be used as a last resort on severely degraded site(s) access.

Although creation of a rotational grazing system may require investment in fences and alternate water sites, forage production and management flexibility are enhanced.

Resting pastures during vulnerable periods allows time for plant re-growth and minimizes streambank degradation. Alternate water sites may be developed in uplands to attract cattle away from creeks and to be used in rotational grazing systems. Distribution of grazing pressure may be improved by herding or by placing salt or mineral blocks in remote sections of the pasture, attracting cattle away from the stream. Creating artificial or natural shade may also improve distribution. Where a rancher wants to restore a degraded riparian area, woody species such as willow and poplar may be planted to stabilize streambanks.

Ranch operators throughout North America are adopting these techniques and others. Each operation requires an individual management plan that takes into consideration the unique features of the land base.

Several resources are available to help ranchers develop plans that benefit their bottom line as well as their livestock and the riparian and upland ecosystems. For assistance and information contact the Natural Resources

Conservation Service (NRCS) or the Resource Conservation District (RCD) office in your area.

Central Coast Contacts

NRCS

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San Benito & Santa Clara County
831/637-4360
San Mateo & Santa Cruz County
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RCD

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805-772-4398
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Reference: Ranching along the stream, Saskatchewan Wetland Conservation Corporation.