

Stream Buffers

Placing fences around riparian areas help protect stream buffers. Buffers are the natural areas of vegetation around the stream. Buffers serve many important functions in keeping the stream and surrounding ecosystem healthy.

The plants in a buffer help with:

- Bank stability to resist erosion
- Habitat for a diverse community of plants and animals
- Canopy cover which provides shading and cooling of the water
- Organic materials that drop from canopy cover into waterbodies and provide food for animals that live in the water
- Soils soak up water from runoff and prevent flooding
- Healthy riparian areas protect the land from flooding, and provide storage for a sustained summer flow
- Plant roots can filter some pollutants

Our Mission is to protect, monitor, restore, and regulate Morongo's natural resources, honoring and protecting all life, land, and traditions and enhancing tribal sovereignty. We will promote environmental awareness and environmentally considerate actions by exemplifying environmental stewards, fostering collaborative relationships, expanding education and outreach activities, and continuing to enrich and develop our programs.



Morongo Band of Mission Indians

Environmental Protection Department
Tribal Water Program
Phone: 951-755-5197
E-mail: kmiller@morongo-nsn.gov

Fencing Riparian Areas

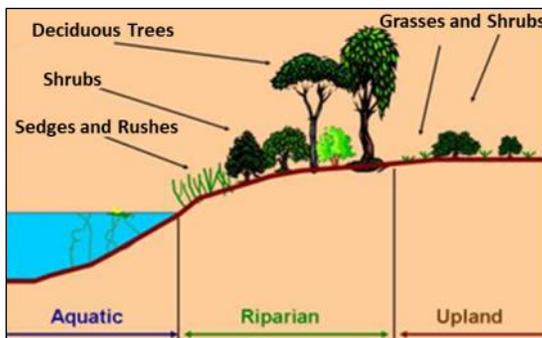


Keeping waterways safe from contamination

Fences Provide Protection

At first glance, fencing along a stream or wetland may seem pointless. This can be particularly true when there are easily opened gates along the area. While many fences aren't designed to keep people out, they are designed to limit access to waterbodies.

Waterbodies like streams, springs, and wetlands can be delicate ecosystems that are easy to disturb. Plants rooted in mud can be easy to destroy and banks can become destabilized from trampling. Fencing limits cow access to streams and also helps to keep off road vehicles from frequent stream crossings. They also serve as a reminder to people who visit that riparian areas are sensitive and need to be protected.



What does riparian mean? Riparian is a word that refers to the area along the banks of a river or stream.

Why Keep Cattle from Waterbodies?

Prevent manure in and around streams

If cattle spend the majority of time in and around the water, their manure will also end up in and around the water. Nutrients and pathogens from inside the digestive system of cattle can enter the water. This can reduce the amount of dissolved oxygen available to aquatic life, can disrupt the aquatic ecosystem and change the species composition, as well as have human health consequences. Manure can contain pathogens, like *E. coli*, that can make people sick with gastrointestinal illness.

Reduce vegetation removal and soil compaction

When the native vegetation is removed, invasive species have an opportunity to become established. Less water is absorbed by the ground, so the water velocity is increased and more erosion occurs. Erosion can add excess sediment to



the stream, which can harm aquatic organisms. The likelihood of flooding is increased while the amount of groundwater recharge is reduced.

Avoid streambank damage

Cattle trampling over streambanks changes the shape and structure of the channel. This increases bank instability, which can lead to erosion and the disconnection of a stream from its riparian area/floodplain. The balance of sediment in the stream can be disrupted. The habitat of aquatic animals can also be damaged.

Keep livestock healthy

Fence and stream crossings may help reduce the risk of animal injury. Limiting livestock's access to streams reduces animals' contact with waterborne bacteria that may cause black leg, mastitis and other ailments.