

How do we maintain healthy riparian areas?

Manage land and streams carefully.

- ❑ Leave trees and brush cover along stream banks (at least 25-75 feet from each bank).
- ❑ Avoid straightening or “cleaning out” creeks. If bank erosion and flooding are a problem, seek technical help from a professional (see back panel).
- ❑ Avoid construction or pavement on floodplains. Flooding is natural. A floodplain’s function is to absorb and slow down floodwaters.
- ❑ Keep bulldozers, 4WDs, 4 wheelers and other equipment out of the creek as much as possible. Don’t mine gravel below the normal high water line.
- ❑ Control erosion on the uplands, too. Install filter strips and conservation tillage on cropland. Use silt fences, mulch, and sod to prevent erosion on construction sites.

Graze riparian areas carefully.

- ❑ Reduce grazing pressure on stream-bank vegetation by maintaining good forage, shade and water outside the riparian area.
- ❑ Allow riparian pastures to rest and recover, and don’t graze in early spring.
- ❑ Move cattle feeding areas and mineral feeders away from the creek.
- ❑ Consider exclusion fencing with stabilized stream access areas for sensitive sites.

Where to get help:

- 💧 **County Conservation Districts and Natural Resources Conservation Service (NRCS):** technical and design assistance for riparian management and information on cost share programs.
- 💧 **Forest Services Division, Oklahoma Department of Agriculture, Food and Forestry:** assistance on riparian planting, timber harvest, and cost-share programs for conservation practices. 918-456-6139.
- 💧 **The Oklahoma Scenic Rivers Commission:** landowner assistance in the watersheds of the Illinois and other state Scenic Rivers. Phone 918-456-3251 or visit their website at: www.scenicrivers.state.ok.us
- 💧 **Oklahoma Department of Wildlife Conservation, Northeast Region:** 918-683-1031
- 💧 **U.S. Fish and Wildlife Service, Tulsa:** 918-581-7458.
- 💧 **County OSU Cooperative Extension Service:** information and programs on riparian and grazing management. *The Riparian Area Management Handbook*, a publication of OSU Extension and Oklahoma Conservation Commission, is available for purchase, or it can be downloaded free on the internet at: <http://agweb.okstate.edu/pearl/e952/e-952.pdf>

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PROTECT RIPARIAN AREAS FOR THE ILLINOIS RIVER



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Oklahoma Cooperative Extension Service
in cooperation with
Oklahoma Conservation Commission

If you have a stream on your land, you have a valuable natural gift - water for livestock, wildlife habitat, fishing, recreation and scenic beauty. A creek is an important part of the equity in your land. It pays to take care of it and the **riparian areas** that protect it.

What is a riparian area?

Riparian refers to land areas directly adjacent to water bodies like creeks, rivers, lakes or wet-lands. They have distinct soil, plant and wildlife resources, with a unique blend of terrestrial and aquatic habitats.

In the Ozark streams of the Illinois Basin, the dominant riparian vegetation is woody brush - species like Black Willow and Boxelder. They have spreading root systems that can reinforce creek banks, the way steel mesh reinforces concrete. Their stems resprout rapidly when damaged by ice, floods or beavers. In floods, their bushy crowns reduce the effect of moving water and protect stream banks from erosion. During low flow, they provide the woody debris essential for good aquatic habitat, and good fishing.

Why are riparian areas important?

Riparian areas are natural “buffers” between land and water. Available moisture makes their vegetation productive and dense. Riparian corridors along streams provide food and cover for wildlife. The riparian vegetation intercepts runoff coming from upland areas, slows it down and allows it to soak in. This helps control flooding and stream bank erosion. Riparian areas also filter out sediment, organic matter, fertilizers and other pollutants before they reach the stream. Ri-

parian vegetation provides shade along creeks, enhancing aquatic habitat by maintaining cooler temperatures.



Figure 1. Construction and removal of riparian vegetation cause stream bank erosion.

What are the causes of riparian degradation?

Residential development, intensive livestock grazing, and removal of streamside vegetation have put pressure on riparian areas throughout Northeast Oklahoma and Northwest Arkansas. Causes include:

- ❑ **Construction** Rooftops, roads, and other pavement, and bare soil reduce the area that can absorb rainfall. This increases runoff and sediment.
- ❑ **Clearing** Landowners remove riparian vegetation to improve access to streams or in the belief that they are preventing floods. This removes the root systems that protect banks.
- ❑ **Unrestricted grazing** - Livestock naturally congregate in riparian areas seeking shade and water.

What are the impacts?

- ❑ Unlimited cattle access leads to overgrazing, cattle trails, and soil compaction, leaving riparian areas exposed to erosion.
- ❑ Straightening or “cleaning out” channels increases water velocity, causing bank erosion and downstream flooding.
- ❑ Stream channels become clogged with sediment from the watershed until they cannot accommodate increased storm flows.
- ❑ Stream channels widen as banks collapse, yielding even more sediment.
- ❑ Wider, shallower stream channels mean warmer water and poor habitat for fish.



Figure 2. Shallow braided streams with poor habitat for fishing result from removal of riparian vegetation.