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KANSAS FOREST SERVICE

RIPARIAN FOREST BUFFERS:

BENEFITS OF TREES ALONG STREAMS AND RIVERS IN KANSAS

WWW.KANSASFORESTS.ORG

Landowner Assistance Programs

Many opportunities exist for landowners to receive assistance establishing and maintaining riparian forest buffers. For specific details and eligibility requirements, contact the appropriate agency or group.

Kansas Forest Service

www.kansasforests.org

785-532-3300

The Rural Forestry Program provides landowners with technical assistance in managing riparian forestland and establishing riparian forest buffers along streams with no woody vegetation. The Kansas Forest Service also serves as a source for conservation seedlings.

Farm Service Agency

www.fsa.usda.gov

785-539-3531

The Continuous Conservation Reserve Program (CRP) offers cost-share assistance to landowners to establish riparian forest buffers through specific conservation practices: CP-22, riparian buffers, and CP-31, bottomland timber establishment.

Natural Resources Conservation Service

www.ks.nrcs.usda.gov

785-823-4500

The Environmental Quality Incentives Program (EQIP) provides technical and cost-share assistance for landowners to establish and manage riparian forest buffers. NRCS also offers financial and technical assistance to restore, protect, and manage wetlands through the Wetland Reserve Program (WRP).

Kansas Department of Wildlife and Parks

www.kdwp.state.ks.us

620-672-5911

The Wildlife Habitat Improvement Program (WHIP) offers landowners technical and financial assistance to establish wildlife plantings, including those along riparian areas.

Kansas State Conservation Commission

scc.ks.gov

785-296-3600

The commission administers programs to improve water resources and provides financial assistance through programs including the Riparian and Wetland Protection Program (RWPP), Water Resources Cost-Share Program (WRCSP), and the Governor's Water Quality Buffer Initiative. Technical assistance is provided by NRCS and through county conservation districts. Many county conservation districts have buffer coordinators available to help landowners establish practices for riparian forest buffers.

Watershed Restoration and Protection Strategy

www.kswraps.org

785-296-1500

Watershed Restoration and Protection Strategy (WRAPS) groups are forming across the state to develop and implement plans for watershed protection. Organized groups assist landowners with cost-share opportunities that include the planting and managing of riparian forest buffers. To find out if your watershed has a WRAPS project in place contact the Watershed Management Section of the Kansas Department of Health and Environment.

Benefits of Riparian Forest Buffers

Riparian Forest Buffers

Riparian forest buffers are areas of trees and shrubs established along the banks of streams, rivers, and open bodies of water. In Kansas, riparian forest buffers exist mostly in the eastern part of the state but also are important in the west for the protection of the more than 134,400 miles of streams.

As population and farming practices expanded, forests throughout the state, including those in riparian areas, have been converted for agricultural and other purposes. This reduced forestland in Kansas from an estimated 4.5 million acres in the mid 1800s to 2.2 million acres today. The reestablishment and management of riparian forests is important for restoring and maintaining the water quality in Kansas. Riparian forests help improve and maintain water quality; regulate water quantity; stabilize streambanks; provide wildlife habitat and recreational activities; and are a possible source of income.



Water Quality and Quantity

Riparian forest buffers help maintain water quality. They reduce the amount of pollutants in runoff — such as sediments, nutrients, pesticides, and fecal coliform bacteria — from entering streams. Riparian forest buffers shade streams, maintaining cooler water temperatures and healthy levels of dissolved oxygen, which is important for aquatic habitat.

Riparian forest buffers also help regulate water quantity. During a flood, trees reduce the velocity of the water, allowing more water to infiltrate into the ground and recharge groundwater supplies. This enables water to be released more slowly and over longer periods of time. The reduced velocity of water and increased infiltration also helps minimize the magnitude of downstream flooding.

Wildlife Habitat

Riparian forest buffers are critical for the survival of many wildlife species. They serve as safe travel corridors between land and water, provide a reliable food source, and serve as areas of cover. Many fish and bird species depend on the insects that live in forested riparian areas for food. Many threatened and endangered species require the presence of forested areas along streams to survive.

Trees also act as a source of nutrients and woody debris that are important as a source of food and shelter for aquatic invertebrates, fish, reptiles, and amphibians.



Streambank Stabilization

Riparian forest buffers are important for the stability of streambanks. In addition to smaller roots found mainly in the upper 8 inches of the soil, trees send larger roots into the ground vertically and laterally and use those roots as anchors to hold them in place. These larger roots help hold the soil and reduce the amount of erosion. After a flood, non-forested streambanks have been found to have significantly more erosion than forested banks. Forested streambanks have even shown overall deposition of sediment. With high water flows, as the trees slow the velocity of the water, sediment has more time to settle out, allowing soil to accumulate in the forested areas. Trees also stop large debris carried by the floodwaters from entering fields and other land.

Recreation

A direct result of riparian forest buffers and improved water quality is a better location for recreational activities such as swimming, hiking, boating, fishing, and hunting, many of which provide revenue for landowners.

Source of Income

Maintenance of the riparian forest buffers is necessary to ensure that the trees remain healthy and the buffers continue to function effectively. Timber stand improvement helps to foster the vegetation that will most effectively remove pollutants from runoff and subsurface flow before it reaches the water. Maintaining riparian forest buffers for desirable species may provide a profit when trees become mature and ready for harvest. This will not only be a financial gain, but will also ensure the future effectiveness of the riparian forest buffer.

