

Riparian Forest Buffer...an area of predominantly trees and/or shrubs located adjacent to and up-gradient from watercourses or water bodies.



Riparian forest buffer, photo courtesy USDA – Natural Resources Conservation Service

Purposes

This practice is designed to meet the following purposes:

- ☑ To create shade to lower water temperatures in order to improve habitat for aquatic organisms
- ☑ To provide a source of detritus and large woody debris for aquatic and terrestrial organisms
- ☑ To create wildlife habitat and establish wildlife corridors
- ☑ To reduce excess amounts of sediment, organic material, nutrients, and pesticides in surface runoff and reduce excess nutrients and other chemicals in shallow ground water flow.
- ☑ To provide a harvestable crop of timber, fiber, forage, fruit, or other crops consistent with other intended purposes
- ☑ To provide protection against scour erosion within the floodplain
- ☑ To restore natural riparian plant communities
- ☑ To moderate winter temperatures to reduce freezing of aquatic over-wintering habitats
- ☑ To increase carbon storage

Benefits

Riparian forest buffers can aid in reducing contributions of sediment, nutrients, pesticides, and other materials in runoff water to water bodies. Woody vegetation can also provide food, cover, and connectivity for terrestrial wildlife. Aquatic wildlife can benefit from the increased shade, litter fall, and large woody debris. In addition, erosion can be reduced as woody roots strengthen streambank and shoreline resistance to waves and water flows.

Applications

This practice applies on areas adjacent to permanent or intermittent streams, lakes, ponds, wetlands, and areas with ground water recharge that are capable of supporting woody vegetation.

Design and Installation

Species chosen for this practice should be native species. Known non-native invasive species should be avoided. Be sure to follow the recommended site preparation methods and planting dates for selected species.

All riparian forest buffers consist of at least two zones, Zone 1 (streamside forest) and Zone 2 (managed forest). If needed, Zone 3 (stiff-stemmed grasses) can be required to control erosion. Zone 1 extends at least 25 feet away from the water body. Tree removal is minimized in this zone to allow trees to grow to maturity. The width of Zone 2 is dependent on stream order and ranges from 25 to 75 feet. Tree removal for forest products is permitted in Zone 2 on a periodic and regular basis provided the intended purpose is not compromised. If needed, Zone 3 consists of a vegetated filter strip of grasses and/or forbs at least 20 feet in width.

Maintenance

Using acceptable methods, control weed competition during the establishment period. After the first three years, check to make sure that at least 300 desirable stems per acre of woody plants are established. At that time, if it is determined that natural regeneration will not colonize the site to this density, replanting may be necessary.

Relative Cost

Installation low ●●●○○ high

Maintenance low ●●●○○ high

For Additional Information...

Visit the Indiana NRCS office online at <http://www.in.nrcs.usda.gov/>, see the Indiana Job Sheet or the Field Office Technical Guide (FOTG) standard for (391) Riparian Forest Buffer, or contact your local USDA-NRCS office

Local USDA-NRCS contact information