

Stream-Side Plants Protect and Improve Streams and Rivers

Riparian Forest Buffers clean up the water for all Hoosiers. A riparian buffer is simply a strip of trees and other vegetation along side streams or other water bodies. The buffers intercept surface and subsurface water as it flows from the upland. They serve many important functions. Perhaps the most important purpose is to filter nutrients, pesticides, sediment and other pollutants from the surface water before it enters the stream or water body.

Trees in the buffer create shade to lower water temperatures thereby improving habitat for fish and other aquatic organisms. The buffer provides a source of large woody debris to improve habitat and food supply for fish and other aquatic organism. Small pieces of debris, called detritus, made up of leaves, blooms and other pieces of vegetation are very important food sources for aquatic organisms, which then become food for larger organisms and fish. Production of this detritus is a key function of the buffer.

Tree and other plant roots intercept shallow ground water flow and absorb nutrients and other chemicals. Finally, riparian buffers become important corridors for wildlife to travel from one habitat area to another.

The best riparian buffers just don't happen. Good planning is key to any effective conservation measure. The Hancock County Soil and Water Conservation District and its partnership staff can help with this process. The first fifteen feet from the edge of the stream bank or other water body is often the most important. Dominant vegetation should be existing trees and shrubs, or if planting is necessary, select local native species. Several species should be planted. The trees closest to the water should be species with wide spreading crowns so that they will provide shade to the water when they mature and

will reach out over the water to provide the much-needed detritus. As with any tree or shrub planting operation, weed control is very important for the first two or three years to get the best survival rate. Consider tree and shrub species that not only provide shade but also produce fruit, nuts and other wildlife food products. Other species can be planted in the outer zone of the buffer to provide a minimum buffer width of 35 feet. Trees and shrubs in this part of the buffer will not be as important for shading the stream. Consider trees in the outer zone that will produce future timber and possibly other marketable products such as nuts or stems, like yellow twig dogwood, used in the floral trade.

Livestock should be excluded from the buffer to maintain healthy and vigorous growth. Some land users may want to plant a strip of warm season or other grass-legume mixture at the outside edge of the buffer. This area will trap sediment before it reaches the woody area. It can be used for hay production and as a travel area for crop harvest and other purposes.

To reduce water temperatures, the most important locations for a riparian forest buffer are along the south and west sides of streams and water bodies. The best buffers will be the ones that, when mature, achieve 50 percent crown cover with average canopy heights greater than the width of the stream or 30 feet for water bodies.

Riparian forest buffers are important conservation measures in Indiana and will protect our high quality water by filtering pollutants from upland sources, providing food for fish and wildlife, and by reducing water temperatures. Your local Hancock County Soil and Water Conservation District is the place to get planning and installation assistance.