

Happy, Healthy Streams & Streambanks

Imagine taking a ride in the countryside and seeing a beautiful bubbling brook meandering through a valley. Chances are, this little brook has banks covered with herbaceous plants and shrubs, such as purple coneflower or button bush, and is shaded by stately trees including swamp white oak and sycamore. When you walk down the gentle sloping floodplain and get closer to the stream you can see minnows swimming in the clear water, water boatman gliding on the surface and dragonflies hovering above. Looking down, you are able to see all the way to the bottom, where there are mixed cobbles, pebbles, and smaller grains of sand in the streambed. We would definitely call this a “happy” stream.

Happy streams are also healthy streams. Healthy stream channels are generally not straight: they curve or meander naturally. Erosion occurs on the outer bend of a meander curve where the water flows more swiftly and has a higher velocity. The eroded material is suspended in the water and transferred as bed load. Suspended materials tend to “drop out” where the flow slows down, especially on the inner part of the meander bends. In this way, streams form their bank patterns, sand bars, and even islands. The amount of erosion, sediment transport, and deposition vary with the intensity of each storm. In these ways, the stream’s configuration changes over time.

If your stream isn’t this picture of health and happiness then consider planting shrubs and trees along the stream. A streamside planting of trees, shrubs and grasses will provide many benefits. It can improve water quality by filtering runoff, increasing wildlife, stabilizing banks and reducing the effects of flooding. To establish and maintain a successful streamside (riparian) habitat, one must follow the rule of “right plant...right place.”

The streambank zone and the overbank zone floods frequently with spring runoff and heavy rains. This zone nearest the stream usually contains eroded banks therefore, bank stabilization is vital. Poplars, willows and sycamore trees/shrubs can withstand frequent periods of flooding, provide shade and quickly stabilize bank areas.

The transition zone between the streambank and the upland areas (such as crop fields or residential lots) is an excellent place to plant trees, shrubs and grasses. The transition zone slows and filters runoff from upland areas reducing water pollution. Recommended distance from waters edge to outer edge of the buffer zone is a minimum 35-150 feet wide depending on the size of the waterway.

Healthy streambank areas afford a number of benefits including their ability to absorb flood waters, provide bank stabilization, provide habitat and add to the scenic beauty of the community. If you would like to learn more or improve your streamside habitat there will be a session at the **“Wildlife and Habitat Management Workshop”** on October 4th, 2008. Please call Brown SWCD at 937-378-4424 ext.4 for more information or workshop registration. Details are also available at www.brownsxcd.org.