

## THE IMPORTANCE OF STREAM BUFFER PRESERVATION AND MITIGATION

Stream buffers, also known as Riparian buffers, are areas of vegetation adjacent to streams, rivers, wetlands, etc. that protects these water resources from nonpoint source pollution and provide bank stabilization and support aquatic and wildlife habitat.

Stream/Riparian buffers fulfill many functions:

- They provide water quality benefits, assisting with water purification,
- They provide erosion control and control of runoff.
- They provide biologically diverse habitats, both in the water and on land. These are complex ecological systems that connect the upland areas with surface waters, providing a transitional area through which both the surface and ground waters flow.

The ability of the buffer to reduce the speed and volume of stormwaters and floodwaters encourages their retention in the soil, thereby helping prevent the loss of property and lives. In slowing the progress of the floodwaters, the buffer also reduces the velocity of the streams, allowing sediment, nutrients and toxins to filter out and settle. The woody vegetation with associated litter (natural deposition of plant material on forest floor) slows stormwater runoff, reducing erosion and permitting infiltration of water to recharge the ground water system. Detention within the buffer of both surface and ground waters allows the retention or transformation of pollutants before they can reach open waters.

The vegetation along streams holds the banks in place with their roots, minimizing the addition of further sedimentation through bank failure. As part of greenways and open space within a community, riparian forest buffers provide numerous opportunities for recreation and education. While its primary value is derived from its water quality, flood control and erosion control functions, fortunate side effects of a functioning buffer are the benefits to fisheries and wildlife and to the quality of life for communities' citizens.