Bear Cabin Branch Stream Restoration

ECOTONE, INC





ecological restoration



Before - Bear Cabin Branch was experiencing high bank erodibility, leading to tight meanders and barren banks.



Before - Incised banks with little rooting depth led to severe erosion.



Before – Bear Cabin Branch was also isolated from its floodplain, preventing the water from escaping the channel to disperse energy during high flows.

Ecotone Stream Restoration Practices



After – Ecotone designed and built the restoration of Bear Cabin Branch to return it to a stable geometry,



After – Reconnected to its floodplain, the stream can now overflow onto the banks, where water will filter down through the dense vegetation surrounding the channel.

Ecotone Stream Restoration Practices



After – Several oxbow wetlands, like the one shown above, were created by planting remnant portions of channel with wetland vegetation and allowing them to refill with water.



After – The valley in which Bear Cabin Branch is located is an extensive floodplain, frequently saturated with water. The floodplain provides habitat, flood attenuation, and water filtration.



After – Wood and rock structures throughout the stream serve as grade controls, and create riffles and pools in the water. The resulting diversity of flow patterns creates many type of habitat.

Ecotone Stream Restoration Practices



After – Toe wood was installed around meander bends to reduce shear stress on the banks and prevent erosion. The toewood is built using rootwads and woody debris harvested from the project site.