The Upper Ohio Conservation District announces A Soil Bioengineering Demonstration Project In Cow Creek

The **Upper Ohio Conservation District and the West Virginia Conservation Agency's NONPOINT SOURCE PROGRAM** will be breaking ground on a soil bioengineering project on Cow Creek under the **Clean Water Act 319(h)**. The demonstration project will address nonpoint source pollution from agriculture sources. The project will serve to mitigate the detrimental effects of sedimentation by utilizing various upland management practices in conjunction with the stabilization of failing stream banks using soil bioengineering techniques.

What is Soil Bioengineering

Soil Bioengineering is a collection of methods that speed up the recovery process of a failing streambank by reestablishing native plant communities through the use of natural methods to control creek bank erosion and to restore natural stream habitat. Soil-bioengineering involves the use of live and dead woody cuttings and poles or posts collected from native plants to revegetate watershed slopes and stream banks. The cuttings, posts, and vegetative systems composed of bundles, layers, mats, and posts provide structure, drains, and vegetative cover to repair eroding and slumping slopes.

Soil bioengineering methods help to stabilize failing stream banks without imposing manmade structures on the site at the expense of existing native plant materials. By working in concert with nature, bio-engineering techniques offer initial protection for the failing bank but give way to the establishment of native plant communities that eventually stabilize banks. Root wads, "bio-logs," brush mattresses and various other re-vegetation techniques have proven to be a very effective method and roughly cost one third of rip-rap channel projects.

Agricultural Nonpoint Source pollution

Sediment is the number one pollutant in West Virginia's streams and rivers and is responsible for a variety of stream related problems including reductions in game fish populations reduced hydrologic capacity and incised or failing banks. These problems have a variety of effects including increased risk of flooding, depletion of fisheries, and loss of valuable farmland. Sources of sediment vary with regions but poor land use practices are considered the primary reason for excess sedimentation. The restoration of riparian buffers provides long term erosion control by stabilizing stream banks and improves water quality by trapping sediments and absorbing excess nutrients.

Before Restoration

After Restoration