

Streambank Restoration



Stabilizing Stream Banks Can:

- Prevent loss or damage of land, utilities, buildings and vegetation
- Reduce sediment loads to streams
- Improve the stream for recreational use and habitat
- Control unwanted meander of a river or stream

Planning Considerations:

- All streams are DYNAMIC, LIVING, CHANGING (no repairs will last forever!)
- Goal of bank stabilization: To increase a bank's resistance to the force of water. There are other techniques designed to reduce the force of water against a bank; these are not covered here.
- Specific solutions will be dependent on the soil types, slopes and water flows

Possible Solutions:

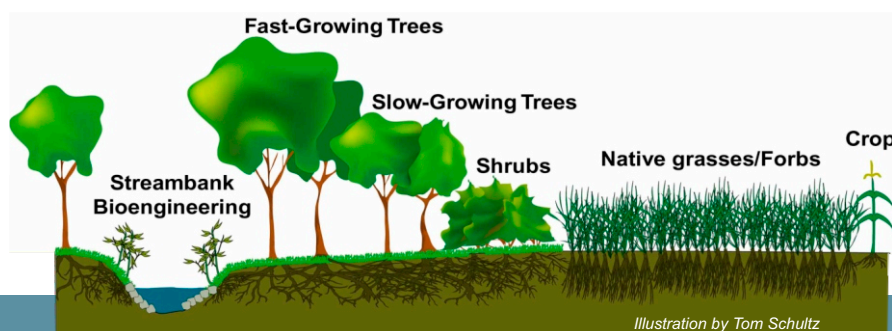
HARD ARMOR— non-living structures placed on the bank

- Riprap: permanent cover of rock used to stabilize streambanks
- Gabions: stone-filled galvanized or coated wire baskets

BIOENGINEERING—use of natural materials and vegetation to control bank erosion and promote longer-term stability of banks.

- Conventional Planting: Native plants hold soil in place with root structures, provide shade and habitat for fish and wildlife, and maintain qualities of a natural setting
- ENVIROLOK™: filled bags of organic material (soil and sand) on bank create a stable planting surface. Native plants are planted in between and into bags.
- Live Fascines: use of a long bundle of live, dormant branches bound in an overlapping pattern placed in shallow trenches
- Live Stakes: use of dormant, living woody cuttings of riparian species
- Additional bioengineering techniques include: Tree Revetments, Branch Packings, Live Cribwall, Brush Mattress and Rootwads

Many restoration projects are implemented using a combination of techniques, as illustrated in this multispecies riparian buffer:



Streambank Erosion:

- Is a natural process that occurs in streams, rivers and waterways
- May account for 40% of total soil loss depending on soil type and land use
- Is becoming a serious problem along many waterways in Defiance County



Riparian Areas:

- Naturally vegetated land that runs adjacent to a stream or river
- Provide bank stabilization, absorb flood water, provide habitat, and add to the scenic beauty of a community

Funding Provided By:



City of Defiance, MS4 Coordinator
419.783.4355