

## Mill Creek Streambank Stabilization

**Design Features:** rootwads, rip-rap, multi-log vane deflectors, mud sills, riparian buffers, limestone saw-tooth deflectors,

**Date of Installation:** 2006-2008

**Location:** Ligonier Township

**Client:** Loyalhanna Watershed Association

**Cost:** \$50,000

**Project Partners:** Westmoreland Conservation District, Forbes Trail Chapter of Trout Unlimited, Loyalhanna Watershed Association, Western Pennsylvania Conservancy, Pennsylvania Fish and Boat Commission, Youth Conservation Corps

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*Serious erosion along the bank of Mill Creek at Hannas Run*

### Project Specifications:

The streambank along portions of Mill Creek in Ligonier Township had been severely eroding from the force of water coming down the creek. The landowners' backyards were being worn away, and restoration was needed to prevent any further erosion and improve water quality.

The Westmoreland Conservation District provided technical assistance and project management for this project. Funds were acquired from a Growing Greener grant to implement the erosion control practices needed to stabilize various sections of bank along the creek.

This project was made up of a number of smaller restoration projects on various sections of the streambank along Mill Creek, including Hannas Run, the Denison Investment property, and the area behind the township municipal building off Route 711.

Multi-log vane deflectors were installed at an angle out of the bank to help sediment re-deposit and rebuild the eroded streambank. Rootwads and limestone saw-tooth deflectors were also used in

some areas to protect the bank. Rip-rap was used to stabilize the trunks of the deflectors, rootwads, and other bare sections of the streambank. A mudsill was installed at the Mallard Lane site, and trees were planted along the streambank at most sites to create a riparian buffer.

### Benefits:

Approximately 1,000 feet of streambank was stabilized by this project, which reduced sediment entering the creek and improved water quality. The vegetation cover from over 50 trees improved the stream temperatures creating a better habitat for the trout.

## Mill Creek Streambank Stabilization



*Denison Investment property before any streambank stabilization was done*



*Rootwads and rip-rap installed along the same bank at the Denison property*



*The bank section at Denison over a year later since the installation of the rootwads and rip-rap*

Mill Creek Streambank Stabilization



*Another streambank along Mill Creek at the Denison property before any stabilization was done*



*Multi-log vane deflectors installed at the Denison property with rip-rap stabilization*



*The same streambank almost one year after construction*



*The same streambank two years after construction*

Mill Creek Streambank Stabilization Project



*A section of streambank at Hannas Run before any stabilization was done*



*The streambank with rootwads, multi-log vane deflectors, and rip-rap installed. The bank is also being re-seeded.*



*The same streambank after about eight months of growth*



*The same streambank at Hannas Run two years after construction*