



Streambank Stabilization

Sediment Reduction

In the Chesapeake Bay

Pennsylvania's Conservation Districts: Working with the Agricultural Community to Reduce Sediment Levels in the Chesapeake Bay

Streambank Stabilization Projects Completed in Luzerne County

The Luzerne Conservation District (LCD) receives numerous requests for assistance from landowners with streambank erosion problems on private land.

The LCD developed a program to work with landowners to reduce property loss and the resulting sediment pollution to Luzerne County streams and downstream watersheds. Through this program, private landowners are able to apply for assistance to address streambank erosion problems occurring on their property.



In 2005, the LCD received a growing greener grant from the Department of Environmental Protection (DEP) in the amount of \$56,528 for streambank stabilization projects on private lands.

The primary goal of the Luzerne County Streambank Stabilization Program is to protect the county's water resources by reducing sediment pollution from streambank erosion. This, in turn,

will result in the reduction of sediment and other pollutants to down stream water bodies, including the Susquehanna River and the Chesapeake Bay.

Assistance was given in two forms: Technical and Financial.

Technical assistance included:

- Inventory and Evaluation (I&E), an unbiased assessment of the problem and recommended improvements

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PROJECT FACTS

Project:

Streambank Stabilization on private lands in Luzerne County

Anticipated Results:

Protect the county's water resources by reducing sediment pollution from streambank erosion. This, in turn, will result in the reduction of sediment and other pollutants to downstream water bodies, including the Susquehanna River and the Chesapeake Bay.

Watersheds:

- Little Wapwallopen Creek
- Solomon's Creek
- Toby's Creek

Impacts:

6 landowners, 1,030 liner feet of streambank stabilized, 73,630 tons of soil saved

BMPs & Enhancements:

BMP's that were installed varied greatly depending on site specific conditions (size and flow of stream, area of erosion, condition of stream, etc.). Enhancements were made using various techniques that included both hard and soft structures.

For more information on sediment reduction strategies, please contact your local conservation district (a directory is available at www.PACD.org/districts).

Recent Conservation District Streambank Stabilization Projects:



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- Topographic survey of the site
- Design of recommended improvements
- Construction Bidding, with contractors, for the work to be completed
- General Permit preparation, submission, and approval
- Construction Inspection

This assistance provided for safe, efficient, and environmentally sound Best Management Practices (BMP's). BMP's that were installed varied greatly depending on site specific conditions (size and flow of stream, area of erosion, condition of stream, etc.). Enhancements were made using various techniques that included both hard and soft structures. Hard structures would include techniques that grade the streambank and place large rock with other materials such as vegetation and brush. Soft structures would include techniques that include buffer establishment and vegetative plantings.

If the project area met specific criteria, the district was able to provide partial funding to stabilize the streambank's and reduce sedimentation of Luzerne County streams. The LCD used the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) stream protocol ranking sheet as a basis for selecting projects. This protocol was selected because of its ease of use and that it primarily looked at physical conditions of the streambank and stream. The protocol took into account such items as stream channel condition, streambank stability, water appearance, in-stream fish cover, and riparian zone condition (area adjacent to streams).

Since the establishment of the grant in 2005, six projects have been completed and have helped to correct the streambank erosion problems in the Little Wapwallopen Creek, Solomon's Creek, and Toby's Creek watersheds. These six projects stabilized 1,030 linear feet of stream and reduced sediment loads by 73,630 tons.

The LCD continues to seek more grant opportunities to further enhance its Streambank Stabilization Program.

**For further information specific to this project:
Luzerne Conservation District**

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