

# Definitions

**Best Management Practice (BMP)** - a practice or combination of practices found to be the most effective means of preventing or reducing the amount of pollution



**Drainage Area** - a low lying area of land where all surface and groundwater flows to, usually a body of water



**Dredging** - the process of removing debris and sediment from the bottom of a stream using excavating tools

**Erosion** - the removal and movement of soils from natural sources such as wind and water

**Floodplain** - low lying area near a body of water that is prone to flooding



**Gravel Bar** - soil and stone deposits in stream channels which obstruct and redirect stream flow and can lead to streambank erosion



**Riparian Buffer** - a vegetated area that separates a body of water from land and improves the quality of the surrounding ecosystem

**Rip-Rap** - a layer of stone in variously sized pieces selectively placed to prevent streambank erosion



**Sedimentation** - a process caused by erosion in which solid materials are transported and deposited into a body of water

**Watershed** - an area of land that separates where water flows to based on geographical features like ridges and valleys

## Additional Resources

**Westmoreland Conservation District**  
218 Donohoe Road, Greensburg, PA 15601

[www.westmorelandconservation.org/watershed-restoration/](http://www.westmorelandconservation.org/watershed-restoration/)  
(724) 837-5271

**Pennsylvania Association of Conservation Districts**  
5925 Stevenson Avenue, Suite A, Harrisburg, PA 17112

[www.pacd.org/?page\\_id=1107](http://www.pacd.org/?page_id=1107)  
(717) 238-7201

**Pennsylvania Department of Environmental Protection  
Southwest Regional Office**  
400 Waterfront Dr, Pittsburgh, PA 15222

<https://www.pa.gov/agencies/dep/programs-and-services/water.html>  
(412) 442-4000

**Pennsylvania Fish and Boat Commission  
Southwest Region**  
236 Lake Road Somerset, PA 15501

<https://www.pa.gov/agencies/fishandboat/conservation.html>  
(814) 445-8974

Westmoreland  
Conservation  
District



## STREAMBANK STABILIZATION RESOURCES *for Homeowners*

*A guide on how to stabilize eroding streambanks and protect your property from soil erosion*

Financial and other support for Streambank Stabilization Resources for Homeowners Guide has been provided by the Department of Environmental Protection's Environmental Education Grants Program.



# How to Detect Streambank Erosion

Some of the major signs that your streambank is eroding are as follows:

**Exposed Roots**



**Undercut Soil**



**Slides**



**Murky Water**



## Things to Avoid



**Dredging** is commonly believed to help reduce streambank erosion. However, dredging can often make erosion worse.



**Improper Fill Material** laid on streambanks such as tires or loose soil can obstruct a stream, cause further pollution, and will not stabilize the streambank.



**Work Without a Permit** for extensive streambank changes is not allowed and can make repairing your stream a much longer process.

# Best Management Practices

Best Management Practices (BMPs) can be used to manage erosion on your streambanks. They can be constructed in many different ways with benefits to each.

### Benefits:

- long lasting
- durable
- low maintenance

### Works Best:

- for a larger budget
- with the use of heavy equipment
- in a larger stream

**Rip-Rap**



**Riparian Buffer**



### Benefits:

- low cost
- easy to plant
- visually pleasing

### Works Best:

- with moderate upkeep
- in larger yards
- with deeply rooted plants

## Gravel Bar Removal

### You Can...

- move unvegetated gravel bars to divert velocity away from the streambanks



### You Cannot...

- remove vegetated gravel bars
- perform removal at times outside of low flow
- remove gravel bar less than 6 inches above water level at low flow
- change the stream channel width
- cross adjacent property without permission
- bulldoze gravel bar material into the stream

# Taking Action

In order to protect your property and work towards restoring your stream, there are 5 steps you should follow:

**1**



## CONTACT WESTMORELAND CONSERVATION DISTRICT (WCD)

Trained staff can help you understand the issues happening with your stream. A staff member can come to your property and have a conversation with you about the conditions of your stream. They will survey the area of concern and take photos.

**2**



## RECEIVE A RECOMMENDED PLAN

Following the survey, if your streambank shows signs of erosion and you need advice on what to do to protect your property, WCD will send you a recommended plan that highlights problem areas and provides solutions.

**3**



## COMPLETE A PERMIT APPLICATION

WCD will assist you with filling out a General Permit 3 (GP-3) application. This application will be what you need to acquire the permit and be legally allowed to work on the streambanks.

**4**



## ACQUIRE THE PERMIT AND CONTACT WCD TO BEGIN CONSTRUCTION

If your application was processed successfully and approved, you will receive your permit. Before starting construction, contact WCD. They can recommend contractors and assist with carrying out the BMP installation.

**5**



## FINISH CONSTRUCTION AND UPKEEP THE PROJECT

Once construction is complete, it is important to monitor the project to ensure BMPs are working effectively. Your permit does not expire and can be used for maintenance of the existing project area if needed.