

# Kentucky Erosion Prevention and Sediment Control Guide

A guide to preventing erosion and controlling sediment from construction activities in Kentucky

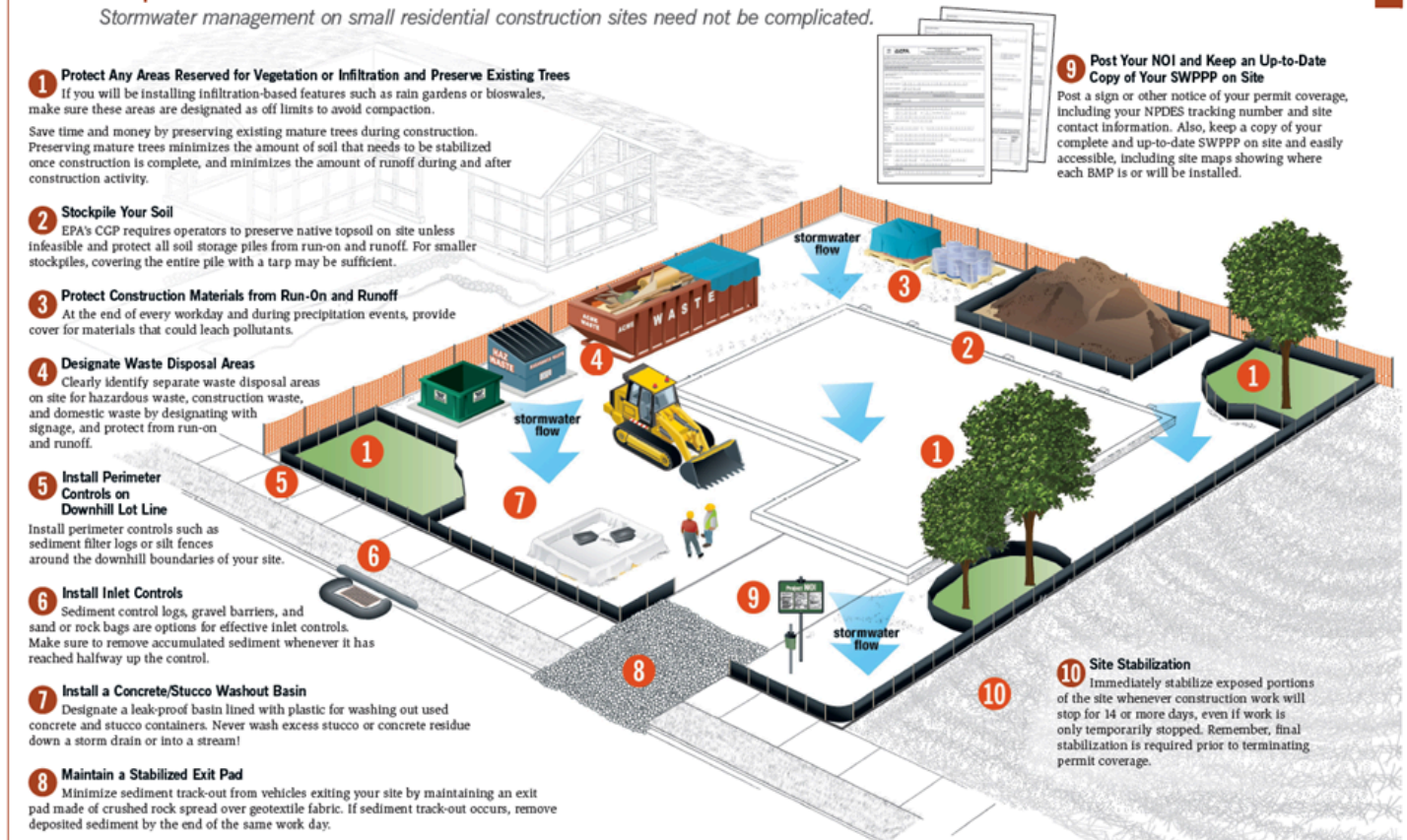
## Introduction

### Clean runoff starts with you.

This Guide will take you through the erosion and sediment control process. The guide starts out with sections on pre-project planning and operational activities. The rest of the guide discusses erosion prevention and sediment control by starting at the top of the hill, above the project site, and proceeding down the slope through the bare soil area, ditches and channels, traps and basins, and on down to the waterways below.

## 10 Steps to Stormwater Pollution Prevention on Small Residential Construction Sites

*Stormwater management on small residential construction sites need not be complicated.*



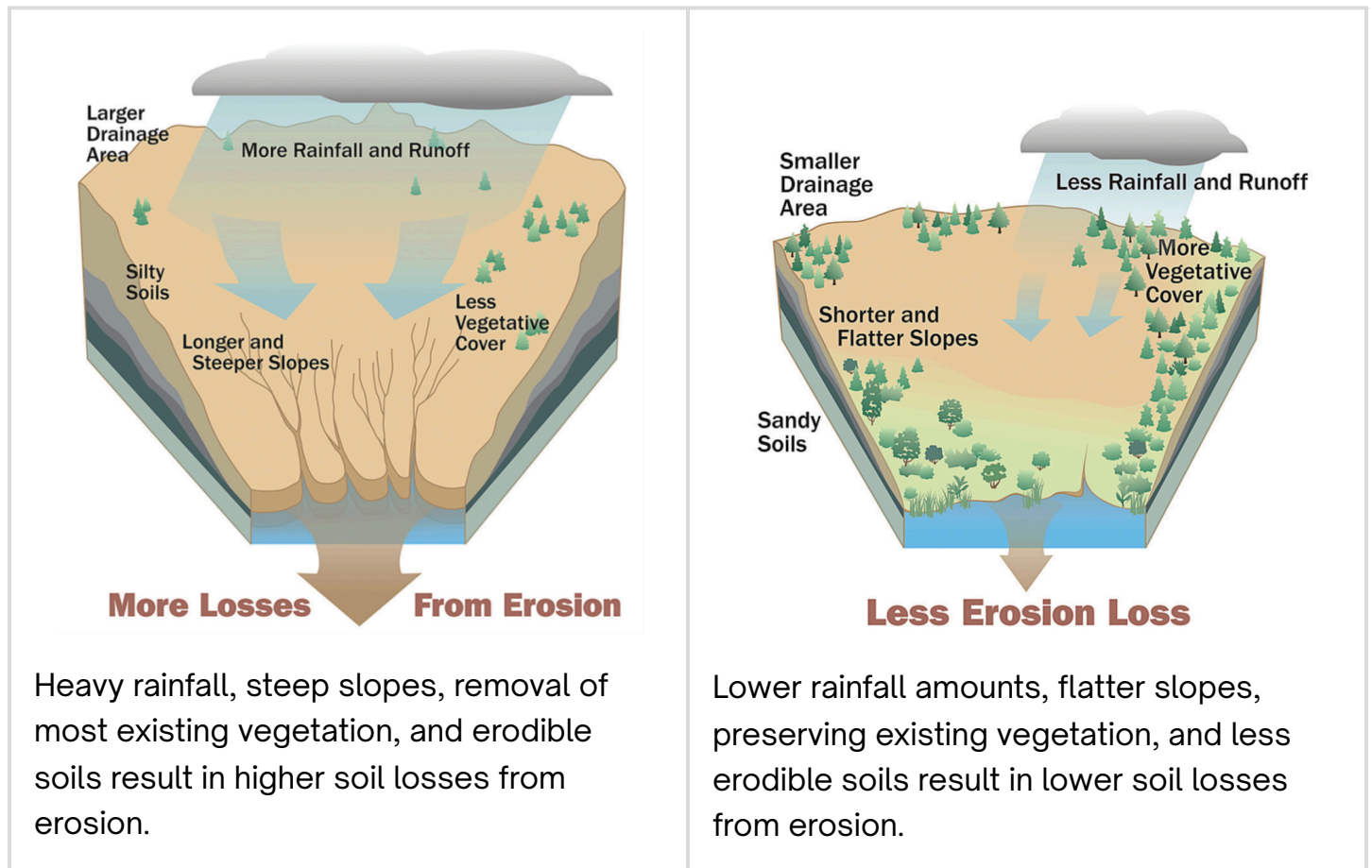
U.S. Environmental Protection Agency summarizes the information in this brochure 10 Steps to Stormwater Pollution Prevention on Small Residential Construction Sites available at [www.epa.gov/sites/default/files/2015-12/documents/cgp\\_small\\_lot\\_swppp\\_brochure-508\\_0.pdf](http://www.epa.gov/sites/default/files/2015-12/documents/cgp_small_lot_swppp_brochure-508_0.pdf).

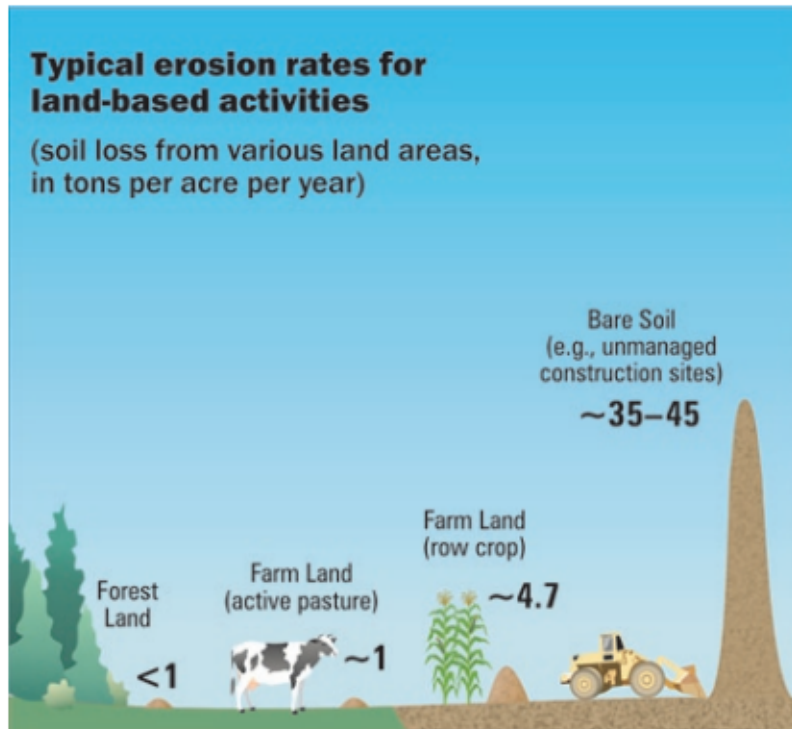
## Why do we need to control erosion and sediment losses from construction sites?

Sediment washing into streams is one of the biggest water quality problems in Kentucky. Sediment muddies up the water, kills or weakens fish and other organisms, and ruins wildlife habitat. It is not difficult to reduce erosion and prevent sediment from leaving construction site. Follow the basic approach shown above. Sites with steep slopes near waterways need more controls than flat sites farther away.

Observe basic principles such as: 1) Preserve existing vegetation as much as possible; 2) Mulch or seed bare soil immediately for the best and cheapest erosion protection; 3) Use silt fences, brush barriers, or other approaches to pond and filter sediment from runoff; 4) Install silt check dams made of rock, brush, or other products to prevent ditch erosion and remove sediment; 5) Protect inlets and outlets; and 6) Settle out soil particles in sediment traps and basins.

## What contributes to erosion?





Typical erosion rates for land-based activities from [Developing Your Stormwater Pollution Prevention Plan: A Guide to Construction Sites EPA-833-R-06-004](#).

#### What contributes to erosion?

- Removing vegetation
- Removing topsoil and organic matter
- Reshaping the lay of the land
- Exposing subsoil to precipitation
- Failure to cover bare soil areas
- Allowing gullies to form and grow larger
- Removing vegetation along stream banks

#### What other factors affect erosion?

- Rainfall frequency and intensity
- Slope (steep = more; flat = less)
- Soil structure and type of soil (silty = more erosion)
- Vegetation (more vegetation = less erosion)

Erosion and sediment controls for muddy runoff:

- Soak it in – maximize seeding and mulching
- Sift it out – use silt fences or other filters
- Slow it down – don't let gullies form
- Spread it around – break up concentrated flows
- Settle it out – use sediment traps and basins

### Types of Erosion

Raindrop erosion (top) breaks down soil structure. Slope runoff creates sheet erosion, which can lead to the formation of small rill channels and larger gullies (below). Erosion of

unprotected stream banks can be caused by removing vegetation and higher flows created by runoff from pavement, sidewalks, and roofs in newly developed areas.

