

DEQ Certification Class Presentations

Class presentations are provided for study/review purposes only. Printouts of these PowerPoint slides will not be allowed into the exam testing centers.

July 2024

Module 2

Fundamentals of Erosion and Runoff

Managing Erosion Online Course

Concentrated Flow Summary

- Amount of soil detachment & transport is determined by water volume and velocity
 - Velocity increases when slope steepness and length increase
- Erosive capacity of flowing water depends on velocity and turbulence (amount & type of abrasive material flow and roughness of the channel)

The energy of runoff is a function of **slope gradient, slope length,** and **volume.**

The greater the energy of the runoff and/or the greater the water's turbulence, the **more erosive** it is.

QuickPoll

Which slope would likely be the most prone to erosion?

- a. A soils, convex, 0.28 K-factor
- b. C soils, concave, 0.22 K-factor
- c. B soils, concave, 0.38 K-factor
- d. D soils, convex, 0.12 K-factor

Module 2c.

Principles of Erosion and Sediment Control

Principles of ESC

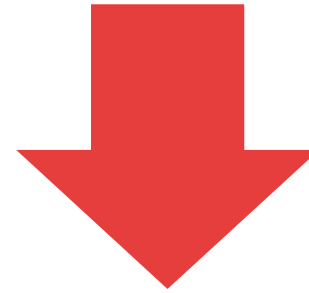
Vegetative Erosion Control **1st Line of Defense**

Inexpensive
Easy to install



Structural Sediment Control **2nd Line of Defense**

Expensive
Require maintenance



Q&A



2a. Erosion defined



2b. Stormwater
Runoff



2c. Principles of
ESC