

CHAPTER 5

Soil Stabilization and Erosion Controls

The most effective way to reduce sediment discharge in construction site stormwater runoff is to control soil erosion. Any construction site erosion control strategy has three key objectives: 1) disturb the smallest land area possible for the shortest time necessary; 2) promptly stabilize soils after the disturbance; and 3) protect erosion-prone areas.

To achieve the first objective, strive to keep as much of the existing vegetation as possible. Focus on preserving vegetation near streams, wetlands, and other surface waters with the setbacks presented in Chapter 1. Delineate a legally binding limit of disturbance on the construction plans that protects these preserved areas and clearly mark them in the field.

Next, limit unnecessarily exposing soil within that limit of disturbance by sequencing construction to minimize the extent of soil open at any given time. Minimize the duration of exposure by stabilizing any idle areas or areas at final grade without delay and before moving to the next area or task. Do not overlook temporary stabilization – it is relatively inexpensive, easy to implement, and significantly reduces erosion without interfering with the project.

Areas of the site that are highly susceptible to erosion such as the site entrance, work areas, stream crossings, and steep slopes may need structural protection. In addition, implement practices described in Chapter 6 to convey concentrated flows on site in a non-erosive manner.

The soil stabilization and erosion control practices necessary to accomplish the strategy outlined above are detailed in the remainder of this chapter. They include both temporary measures and permanent installations.

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