

3.16 SEDIMENT BARRIER



Figure 3.29. Silt fence sediment barrier (Source: Department of Civil, Construction, and Environmental Engineering, Iowa State University)

Overview

Description: Sediment barriers are temporary structures that filter runoff so the water continues while the sediment stays on the site.

Problem identification: Sediment carried by sheet flow should be prevented from leaving the construction site.

Design purpose: To retain the sediment on construction sites of one-half acre or less.

Associated practices: As soon as the vegetation is removed by construction activity, sediment barriers should be used extensively in drainage ditches and waterways.

Installation: All barriers should be placed on the contour. On-slope barriers should be placed no more than 50 ft apart. The most commonly used materials for sediment barriers are sandbags and silt fences.

1. Sandbags: Sandbags should be installed so that the flow under or between bags is minimal. If the height exceeds two bags, anchoring with stakes may be required.
2. Silt fence: A silt fence is designed to allow water to pass through while retaining the sediment on the site. The silt fence should be installed in accordance with the details set forth in this manual.

Maintenance/inspection: Inspect periodically or after each precipitation event. The sediment barrier must be maintained until the project is vegetated or accepted. If the sediment barrier deteriorates to the point at which it loses its effectiveness, it should be replaced.

Design life: Six to nine months.

Estimated cost: Silt fence costs \$2.80 per linear ft (2004).