

MAP CODE  
SDRN

# SLOPE DRAIN

**USE**  
Erosion  
Sediment  
Stormwater

**What** ➤ A flexible tube or conduit extending from the top of a cut or fill slope to the bottom.

**Purpose** ➤ To temporarily conduct concentrated stormwater runoff safely down the face of a cut or fill slope without causing erosion on or below the slope. Temporary slope drains provide valuable protection of exposed slopes until permanent draining structures and erosion control vegetation can be installed.



Source: USDA, 1999

**Where** **YES:** On cut or fill slopes before permanent stormwater drainage structures are installed and before permanent erosion control vegetation is established.

**Materials, Equipment & Costs**

- Heavy-duty flexible conduit designed for this purpose, hold down grommets, stakes, riprap for outlet protection.
- Backhoe, labour.
- \$ Low.

## **Plans & Specs**

- The recommended maximum drainage area per drain is 2 hectares.
- The slope drain should consist of heavy-duty flexible conduit designed specifically for this purpose.
- The diameter of the slope drain should be equal over its entire length.
- Reinforced hold-down grommets should be spaced at 3 metre intervals.
- The entrance to the slope drain should consist of a flared end-section or a standard t-section fitting. Watertight fittings should be used.

## **Installation**

- The entrance section should slope toward the slope drain at a minimum rate of 2 centimeter per metre.
- The soil around and under the entrance section should be hand-tamped in 10 centimeter lifts to the top of the dike to prevent piping failure around the inlet.
- The slope drain should be securely staked to the slope at the grommets provided.
- The slope drain sections should be securely fastened together and have watertight fittings.

## **Maintenance**

- The slope drain structure should be inspected weekly and after every storm and repairs made if necessary.
- Avoid placing any material or traffic on the slope drain.

## **Sources**

United States Department of Agriculture, (1994): **Planning and Design Manual for the Control of Erosion, Sediment, and Stormwater, Best Management Practice Standards.**