

## Chapter 4 - BEST MANAGEMENT PRACTICE STANDARDS

### DIVERSION

(Temporary Practice)

#### Definition

A temporary ridge or excavated channel or combination ridge and channel constructed across sloping land on a predetermined grade.

#### Purpose

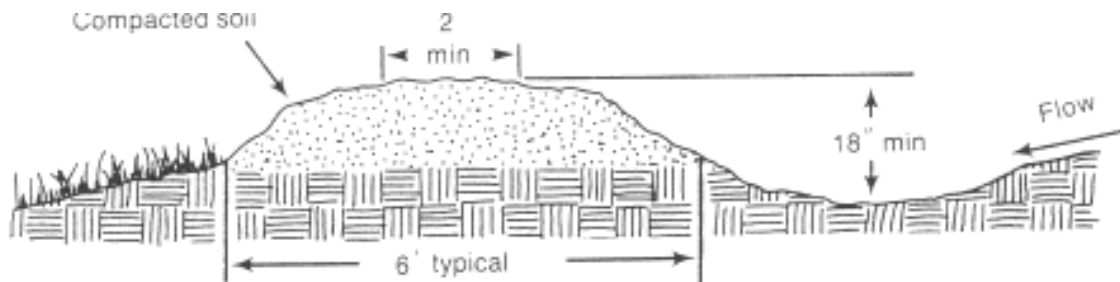
To protect work areas from upslope runoff and to divert sediment-laden water to appropriate traps or stable outlets.

#### Conditions Where Practice Applies

Wherever stormwater runoff must be temporarily diverted to protect disturbed slopes or retain sediments on site during construction. These structures generally have a life expectancy of 18 months or less.

#### Planning Considerations

A temporary diversion dike is intended to divert overland sheet flow to a stabilized outlet or a sediment trapping facility during establishment of permanent stabilization on sloping, disturbed areas. When used at the top of a slope, the structure protects exposed slopes by keeping upland runoff away. When used at the base of a slope, the structure protects adjacent and downstream areas by diverting sediment-laden runoff to a sediment trapping facility.



If the dike is going to remain in place for longer than 30 days, it is very important that it be established with temporary or permanent vegetation. The slope behind the dike is also an important consideration. The dike must have a positive grade to assure drainage, but if the slope is too great, precautions must be taken to prevent erosion due to high velocity flow behind the dike.

This practice is considered an economical one because it uses material available on the site and can usually be constructed with equipment needed for site grading. The useful life of the practice can be extended by stabilizing the dike with vegetation.

As specified herein, this practice is intended to be temporary. However, with more stringent design criteria, it can be made permanent in accordance with DIVERSION (Permanent Practices).

### **Design Criteria**

No formal design is required. The following criteria shall be met:

#### **Drainage Area**

The maximum allowable drainage area is 5 acres.

#### **Dimensions**

The typical height measured from the upslope side of the dike is 18 inches. Top width shall be a minimum of 2 feet with a typical base width of 6 feet.

#### **Side Slopes**

3:1 or flatter.

#### **Grade**

The channel behind the diversion shall have a positive grade to a stabilized outlet. If the channel slope is less than or equal to 2 percent, no stabilization is usually required. If the slope is greater than 2 percent, the channel shall be stabilized in accordance with TEMPORARY SEEDING in Chapter 5.

#### **Outlet**

Design the outlet to accept flow from the diversion plus any other contributing areas. Divert sediment-laden runoff and release through a sediment-trapping device. Flow from undisturbed areas can be dispersed by a level spreader.

#### **Construction Specifications**

1. Remove and properly dispose of all trees, brush, stumps, and other objectionable material.
2. Ensure that the minimum constructed cross section meets all design requirements.
3. Ensure that the top of the dike is not lower at any point than the design elevation plus the specified settlement.

**Construction specifications (cont.)**

4. Provide sufficient room around diversions to permit machine regrading and cleanout.
5. Vegetate the ridge immediately after construction, unless it will remain in place less than 30 days.

**Maintenance**

The measure shall be inspected after every storm and repairs made to the dike, flow channel and outlet, as necessary. Approximately once every week, whether a storm has occurred or not, the measure shall be inspected and repairs made if needed. Damages caused by construction traffic or other activity must be repaired before the end of each working day.