# STANDARD AND SPECIFICATIONS FOR PERIMETER DIKE/SWALE



#### **Definition**

A temporary ridge of soil excavated from an adjoining swale located along the perimeter of the site or disturbed area

#### **Purpose**

The purpose of a perimeter dike/swale is to prevent off site storm runoff from entering a disturbed area and to prevent sediment laden storm runoff from leaving the construction site or disturbed area.

#### **Conditions Where Practice Applies**

Perimeter dike/swale is constructed to divert flows from entering a disturbed area, or along tops of slopes to prevent flows from eroding the slope, or along base of slopes to direct sediment laden flows to a trapping device.

The perimeter dike/swale shall remain in place until the disturbed areas are permanently stabilized.

### **Design Criteria**

See Figure 5A.3 on page 5A.8 for details.

The perimeter dike/swale shall not be constructed outside the property lines without obtaining legal easements from affected adjacent property owners. A design is not required for perimeter dike/swale. The following criteria shall be used: <u>Drainage area</u> – Less than 2 acres (for drainage areas larger than 2 acres but less than 10 acres, see earth dike or temporary swale; for drainage areas larger than 10 acres, see standard and specifications for diversion).

<u>Height</u> – 18 inches minimum from bottom of swale to top of dike evenly divided between dike height and swale depth.

Bottom width of dike – 2 feet minimum.

Width of swale – 2 feet minimum.

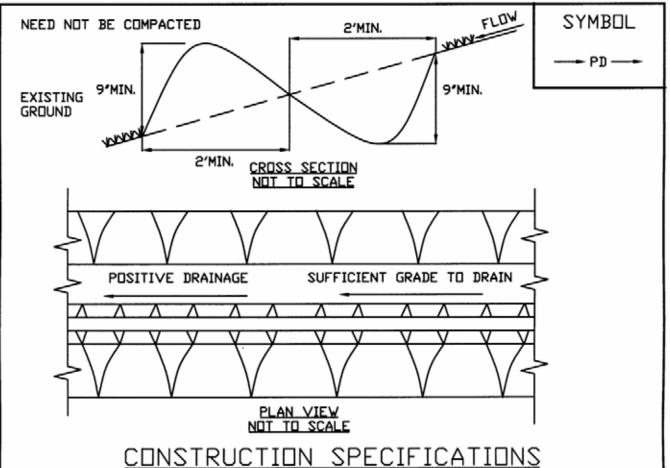
<u>Grade</u> – Dependent upon topography, but shall have positive drainage (sufficient grade to drain) to an adequate outlet. Maximum allowable grade not to exceed 8 percent.

<u>Stabilization</u> – The disturbed area of the dike and swale shall be stabilized within 7 days of installation, in accordance with the standard and specifications for temporary swales.

#### Outlet

- 1. Perimeter dike/swale shall have a stabilized outlet.
- 2. Diverted runoff from a protected or stabilized upland area shall outlet directly onto an undisturbed stabilized area.
- 3. Diverted runoff from a disturbed or exposed upland area shall be conveyed to a sediment trapping device such as a sediment trap, sediment basin, or to an area protected by any of these practices.
- 4. The on-site location may need to be adjusted to meet field conditions in order to utilize the most suitable outlet.

## Figure 5A.3 Perimeter Dike/Swale



- 1. ALL PERIMETER DIKE/SWALE SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN DUTLET.
- DIVERTED RUNDFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
- 3. DIVERTED RUNDFF FROM AN UNDISTURBED AREA SHALL OUTLET INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSION VELOCITY.
- 4. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED IN THE STANDARD.
- 5. STABILIZATION OF THE AREA DISTURBED BY THE DIKE AND SWALE SHALL BE DONE IN ACCORDANCE WITH THE STANDARD AND SPECIFICATIONS FOR TEMPORARY SEEDING AND MULCHING, AND SHALL BE DONE WITHIN 10 DAYS.
- 6. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

MAX. DRAINAGE AREA LIMIT: 2 ACRES

ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

PERIMETER DIKE OR SWALE