STANDARD AND SPECIFICATIONS FOR LEVEL SPREADER



Definition

A temporary non-erosive outlet for concentrated runoff, constructed to disperse flow uniformly across a slope.

Purpose

To convert concentrated flow to sheet flow and release it uniformly over a stabilized area.

Conditions Where Practice Applies

Where sediment-free storm runoff can be released in sheet flow down a stabilized slope without causing erosion; where a level lip can be constructed without filling; where the area below the level lip is uniform with a slope of 10% or less and the runoff will not re-concentrate after release; and where no traffic will be allowed over spreader.

Design Criteria

The design capacity shall be determined by estimating the peak flow from the 10-year storm. The drainage area shall be restricted to limit the maximum flows into the spreader to 30 cfs. The level spreader shall have the following minimum dimension:

	Minimum		End	
Design Flow	Entrance	Depth	Width	Length
(cfs)	Width (ft.)	(ft.)	(ft.)	(ft.)
0-10	10	0.5	3	10
10-20	16	0.6	3	20
20-30	24	0.7	3	30

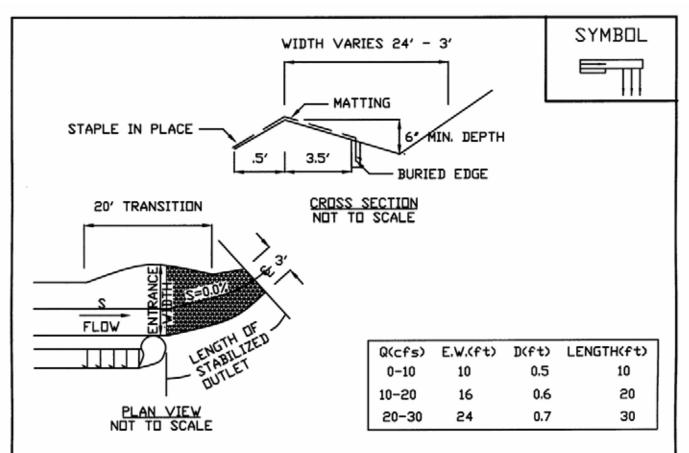
A transition section 20 feet in length shall be constructed from the width of the diversion or channel to the width of the spreader to ensure uniform outflow. This last transition section will blend the diversion grade to zero grade at the beginning of the spreader.

Construct the level lip in undisturbed soil to a uniform height and zeros grade over the length of the spreader. Protect the lip with an erosion resistant material or mat to prevent erosion and allow vegetation to become established.

The outlet area should be a generally smooth, well-vegetated areas no steeper than 10 percent.

See Figure 5A.5 on page 5A.14 for details.

Figure 5A.5 Level Spreader



CONSTRUCTION SPECIFICATIONS

- 1. THE MATTING SHOULD BE A MINIMUM OF 4FT. WIDE EXTENDING 6 INCHES OVER THE LIP AND BURIED 6 INCHES DEEP IN A VERTICAL TRENCH ON THE LOWER EDGE. THE UPPER EDGE SHOULD BUTT AGAINST SMOOTHLY CUT SOD AND BE SECURELY HELD IN PLACE WITH CLOSELY SPACED HEAVY DUTY WIRE STAPLES AT LEAST 12 INCHES IN LENGTH.
- 2. ENSURE THAT THE LIP IS LEVEL TO UNIFORMLY SPREAD DISCHARGE.
- 3. THE LIP SHALL BE CONSTRUCTED ON UNDISTURBED SOIL NOT FILL.
- 4. A 20 FOOT TRANSITION SECTION WILL BE CONSTRUCTED FROM THE DIVERSION CHANNEL TO THE SPREADER TO SMOOTHLY BLEND THE DIFFERENT DIMENSION AND GRADES.
- 5. THE RUNDFF DISCHARGE WILL BE DUTLETED ONTO A STABILIZED VEGETATED SLOPE NOT EXCEEDING 10%.
- 6. SEED AND MULCH THE DISTURBED AREA IMMEDIATELY AFTER CONSTRUCTION.

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

LEVEL SPREADER