

3.11 LEVEL SPREADER



Figure 3.23. Level spreader installation (Source: William B. Umstead State Park)

Overview

Description: A storm flow outlet device constructed at zero grade across a slope to allow concentrated runoff to empty at a non-erosive velocity onto an area stabilized by existing vegetation.

Problem identification: Runoff at the outlet of diversion ditches must be controlled to prevent sheet erosion as the runoff spreads out and reduces in velocity.

Design purpose: To change storm runoff at the outlet to non-erosive sheet flow.

Associated practices: Used at the terminal end of waterways or diversion structures.

Installation: A transition section 10–20 ft long should be constructed from the width of the channel to the width of the spreader to ensure uniform flow. The transition section will blend the channel grade to zero grade at the beginning of the spreader. The spreader will have the level lip constructed on a 0% grade. The level spreader must be constructed on undisturbed soil. The lip of the spreader should be protected with an erosion-resistant material, such as excelsior matting, to allow vegetation to become established.

Maintenance/inspection: The device should be inspected periodically to ensure the intended purpose is accomplished. Maintain as necessary so that the level spreader functions.

Design life: One year.