Straw Bale Dikes

Definition: A "temporary" barrier with a life expectancy of three months or less, installed across or at the toe of a slope of a construction site or new development.

Purpose: The purpose of a straw bale dike is to intercept and detain small amounts of sediment from unprotected areas of limited extent.

Conditions Where Practice Applies: The temporary straw bale dike may be used where:

1. There is no concentration of water in a channel or other drainage-way above the barrier.

2. Erosion would occur in the form of sheet and rill erosion.

3. The length of slope of the contributing drainage area above the dike is less than 200-feet. The slope should be 15-percent or less. If slope is greater than 15-percent, bale dikes should be located on 100-foot spacings down the slope.

Design Criteria

All bales shall be placed on the contour and should be tied with either wire or nylon string if available. These types of ties will not deteriorate rapidly and insure a longer life. If ordinary baler twine is used, the bales should be placed so that the twine is not in contact with the ground.

Specifications

1. Bales shall be placed in a row with ends tightly abutting the adjacent bales.

2. All bales shall be embedded in the soil a minimum of 4-inches or bales covered with a fiber mat, with earth tamped on the upstream side to prevent piping.

3. Bales shall be securely anchored in place by stakes or reinforcing bars driven through the bales. The first stake in each bale shall be driven toward previously laid bale to force bales together.

4. An inspection should be made after rainfall and repairs or replacements made promptly as needed. Sediment should also be removed to insure capacity.

5. Bales shall be removed when they have served their usefulness so as not to block or impede storm flow or drainage.

Figure 1 — Straw Bale Dike