

# STRAW BALE CHECK DAM

## What is it?

These are temporary sediment barriers constructed of straw bales located across small drainages.

These temporary structures are used to slow debris flows in small channels. They are not intended to provide protection from large storm events nor to control debris flows in water bodies such as creeks, streams and rivers.

## When is it used?

## Planning Criteria:

Straw Bale Check Dam design limits are as follows:

| Slope         | Maximum Drain Area | Maximum Slope Length Between Check Dams |
|---------------|--------------------|---|
| 0-15 percent  | 1 acre             | 200 feet                                |
| 15-20 percent | 1/2 acre           | 100 feet                                |
| >20 percent   | Not recommended    | --                                      |

## Methods and Materials:

Bales should be bound with wire or nylon string. Twine bound bales are less durable. The bales should be placed in rows with bale ends tightly abutting the adjacent bales.

## Downstream Row (refer to illustration):

Dig a trench across the small channel, wide enough and deep enough to so that the top of the row of bales placed on their long, wide side is level with the ground. The tops of bales across the center of the channel should all be level and set at the same elevation. Place the bales in position and stake them according to the instructions below.

Dig another trench across the small channel, upstream and immediately adjacent to the first row of bales. The trench should be wide enough to accommodate a row of bales set vertically on their long edge. The trench should be deep enough so that at least 6 inches of each bale is below ground starting with the bale in the channel bottom. The trench should be as level as possible so that the tops of the bales across the center of the channel are level and water can flow evenly across them.

Continue this trench up the side slopes of the small channel to a point where the unburied bottom line of the highest bale (point "C", illustration) is higher than the top of the bales that are in the center of the channel (point "D", illustration).

## Upstream Row:

## Anchorage:

Drive 2 x 2 stakes or #4 rebar through the

bales and into the ground 1 1/2 to 2 feet for anchorage. The first stake in each bale should be driven toward a previously laid bale to force the bales together (see illustration).

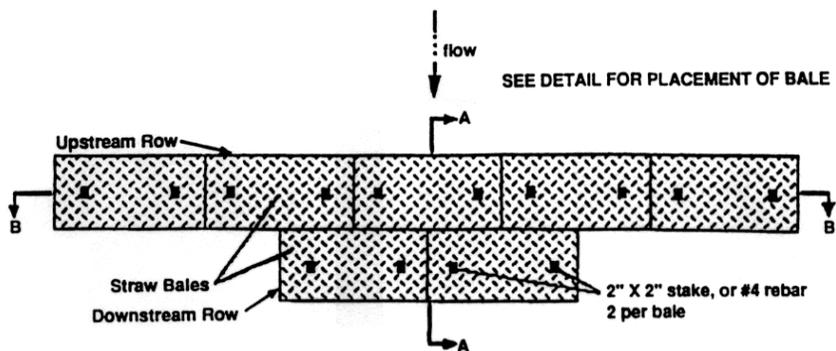
**Maintenance:**

Inspect the bale check dam and provide necessary maintenance following each storm period. It is important to assure that loose straw does not enter storm drain facilities. Remove the bales and stakes once permanent drainage and stabilization is re-established. Used straw can be used as mulch in other areas.

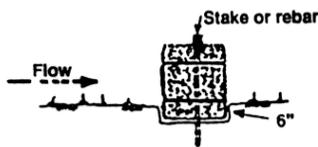
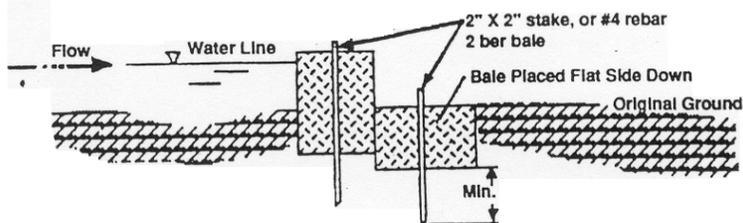
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# Straw Bale Check Dams



Section A-A



PLACEMENT DETAIL  
UPSTREAM ROW

Remove #4 rebar after  
straw bales are no longer  
in place

Section B-B

