



Natural Resources Conservation Service
Conservation Across America

Water Bars

Bryan Zone Job Sheet - 655A



What are Water Bars?

Water bars are a combination of a cross drain and diversion dam constructed across a road, trail, or firebreak for the purpose of gathering and shedding surface water.

Where Suitable

These water control devices can be used on roads and trails that will have limited or no traffic as well as on firebreaks that are constructed on sloping land. They should also be constructed on abandoned or retired roads and trails. Water bars are not well suited for roads and trails that will have frequent use. Rolling or broad-based dips are better choices in this case.

Purpose

When the slope of the road, trail, or firebreak cannot be regulated, water bars can be used to limit the length of slope over which the surface runoff water will travel.

Construction Guidelines

- Water bars can be constructed either with equipment or by hand. Skidder blades are not suitable for water bar construction.
- Use the soil from the ditch to construct the bar height.
- Angle the water bar across the road, trail, or firebreak in the downgrade direction. The device should turn the runoff water and not dam it. It should also be placed so that

the water will not return back to the road further down hill.

- When inside ditches are present, tie the upper end of the water bar into the ditch.
- The outflow end of the device should extend far enough beyond the road or trail surface to safely disperse the runoff water onto a stable outlet and protect the road from erosion.

Distance Guidelines

Water bars should be spaced according to the slope of the road, trails or firebreak.

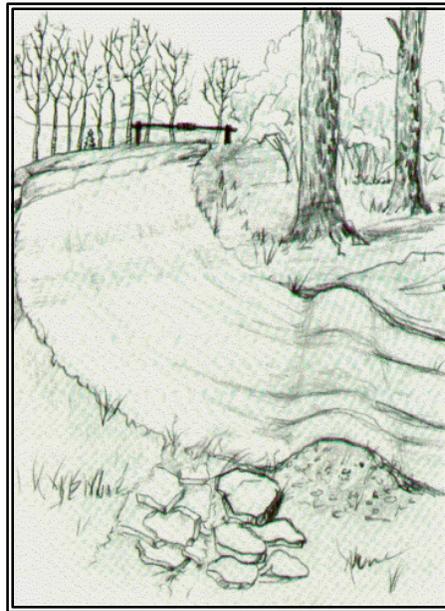
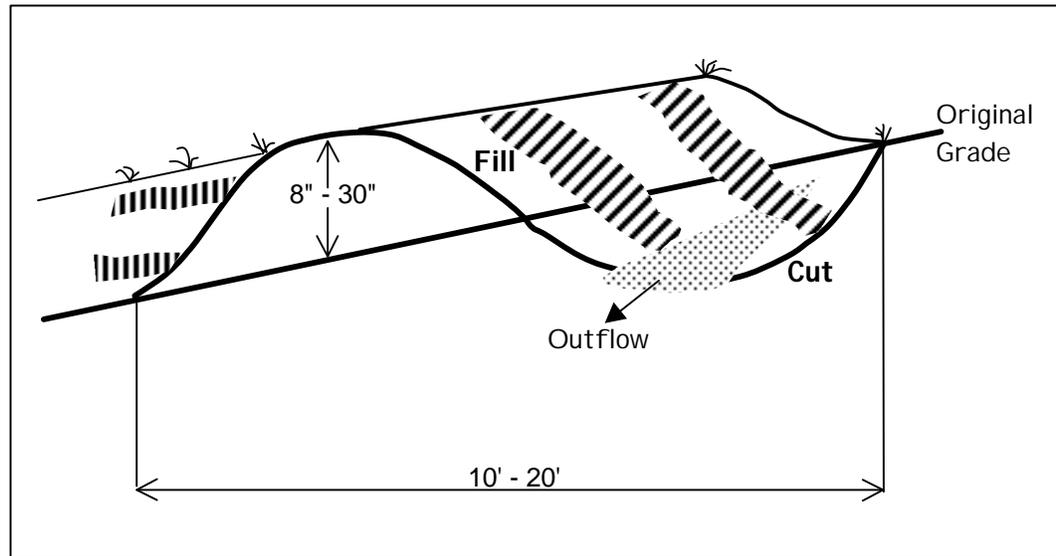
Slope Range	Distance between Bars
Flat (<4%)	160 - 250 feet
Moderate (5% - 12%)	80 - 135 feet
Steep (>12%)	60 - 75 feet

In addition to distance alone, consider taking advantage of factors such as slope changes, curves, and the presence of stable outlets.

Maintenance

- Inspect water bars after major rain storms for damage or breaches and correct.
- When possible, vegetate water bars with perennial grasses.

Side View



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