



# Conveyor Belt Water Bars

## Forest Management Practices Fact Sheet Managing Water Series #5

### Introduction

Forest roads can be leading sources of nonpoint source pollution. By controlling water runoff, this pollution (mostly sediment) can be reduced. In fact, if water speed and volume can be controlled on the top one-third of the road, erosion problems can be reduced by more than 65 percent. Water bars can slow the velocity of water and divert it into vegetated areas.

Best Management Practices (BMPs) can prevent or minimize the impact of forestry activities on rivers, lakes, streams, groundwater, wetlands, and visual quality.

*Conveyor belts, old snowmobile treads, and similar material* can be used instead of soil to build water bars. The material is buried on edge in the traffic surface. It bends over to let vehicles easily pass, but diverts water off of the road. These structures work with most vehicle traffic.

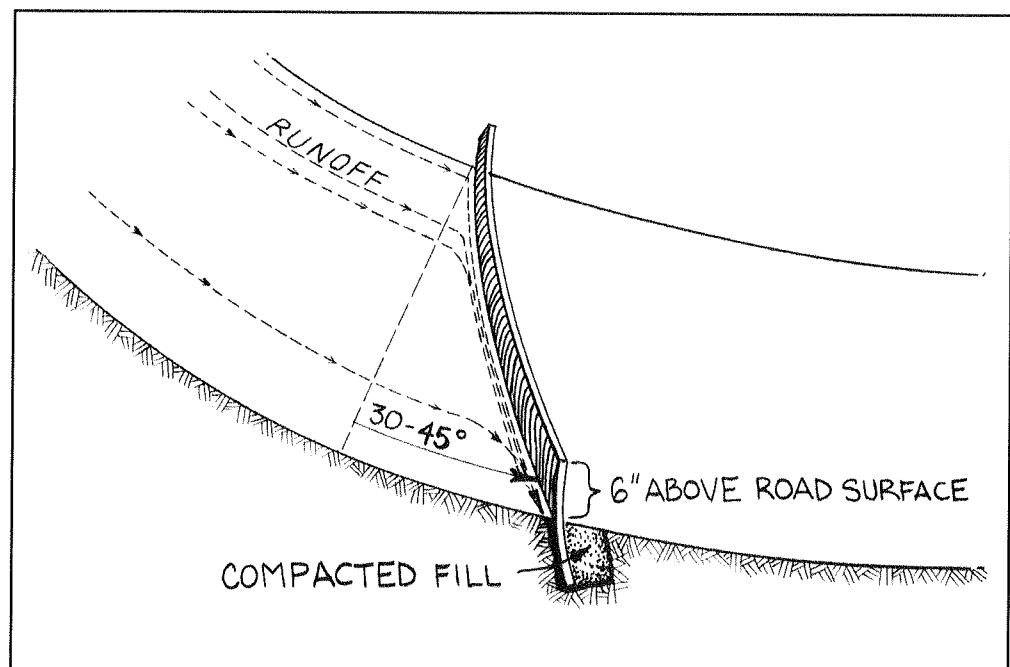
### Where Used

Conveyor belt water bars can be used where other options would restrict road use. The best locations are active management projects with significant traffic.

### Application

When building conveyor belt water bars:

- Dig a trench at a 30- to 45-degree angle to the road or skid trail. The face of the cut should be on the uphill side.



Conveyor belt water bar

- ▶ Place the conveyor belt against the face of the cut. Leave at least 6 inches of belt above the surface of the road. Refill the trench and compact the soil. If necessary, nail a two-by-eight board to the base of the belt to keep it straight and to hold it in the ground.
- ▶ Remove berms or other obstructions from the lower end of the water bar to allow water to move off the road. Water should flow into a stable vegetated area, away from open water.
- ▶ Space conveyor belt water bars as you would earthen water bars. See your state's water quality BMP guidelines for spacing information.
- ▶ Old snowmobile treads and other similar material can be used in place of conveyor belts.

### **Advantages**

Conveyor belt water bars let recreational vehicles use the road or trail more safely than other water bar structures. Conveyor belt water bars are relatively inexpensive because low-cost salvage materials can be used.

### **Disadvantages**

Conveyor belt water bars can be easily damaged by cable or grapple skidders or tracked machines. They work best with trucks, forwarders, and other rubber-tired traffic. They require caution when blading to maintain roads or trails.

### **Maintenance**

Conveyor belt water bars work best with rubber-tired traffic. Tracked machines or skidders dragging loads may tear or pull up the belt. Rough use or substantial traffic may require frequent replacement.

### **Related Fact Sheets in This Series**

*Project Planning: Locating Roads, Landings, Skid Trails, and Crossings (FS-6970); Managing Water on Roads, Skid Trails, and Landings (FS-6971); Earth-Berm Water Bars (FS-6972); Using Logging Debris or Logs to Build Water Bars (FS-6973); Broad-Based Dips (FS-6975); Open-Top Culverts (FS-6976); Shaping Roads and Trails (FS-6977); Roadside and Diversion Ditches (FS-6978); Cross-Drainage Culverts (FS-6979); Project Closure (FS-6980); Making and Using Measurement Tools—Basal Area (FS-6981); and Making and Using Measurement Tools—Slope (FS-6982).*

### **Cooperators**

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FS-6974-S

1998