



Waterbars

Ensuring clean runoff

Lake friendly living
means using lakeshore
BEST MANAGEMENT
PRACTICES

BMP

Waterbars

STANDARDS

Recreation Area

- Soil erosion is not occurring on site (no eroding pathways, or exposed dirt)
- No pesticide, fertilizer, or unfiltered runoff to lake

LAKE BENEFITS

Waterbars remove pollutants so that runoff enters the buffer as spread out "sheet flow," not channelized flow. This prevents concentrated water flow from reaching the lake.

MATERIALS

Hemlock or cedar landscape timbers and steel rebar purchased from lumber and hardware stores. Some stores will cut rebar to the specified length for a small fee. Otherwise, rebar can be cut with a hack saw. Geotextiles, including landscaping weed barrier, can be substituted for smaller projects.

Waterbars

Description: Waterbars are diagonal channels across a path surface that divert surface water runoff away from the road or path into a protected drain way.

Purpose: Waterbars keep the volume of flow on a pathway from increasing and send it off to the side into a vegetated area for absorption. By increasing the frequency of waterbars, runoff volume can be kept low, improving the effectiveness of vegetation and duff layers that absorb it.

How to: Install waterbars on moderately steep paths with concentrated flows. Select a location where the waterbar outlet can drain to a stable, vegetated area. Install multiple waterbars as needed and space closer together on steeper slopes as directed in Table 1.

Any rot-resistant type of wood, such as cedar, spruce, fir or hemlock logs can be used. For logs, the diameter should be at least 8" at the small end. Six to 8" diameter, pressure treated or cedar timbers can also be used. The length should extend past the edge of the path on both sides.

Install waterbars as follows:

1. **Dig the trench** – First, dig a trench for the wood that is a 30° angle across the path. Be sure the trench and the waterbar extend off both sides of the path. The trench should be deep enough that the top of the log will be almost flush with the trail on its downhill side once in place. Soil and rock excavated from the trench should be heaped on the trail below the water bar to be used later as backfill.
2. **Install the log or timber** – Place the log or timber in the trench. The log should fit snugly in the trench with no high point or voids under the log. Secure the waterbar with large stones, rebar pins or wooden stakes. If using stones, partially bury on downhill side. If using rebar, drill ½" holes 6" in from each



Waterbar installed along a path to prevent runoff into the lake.

Source: Maine DEP.

Table 1. Waterbar Spacing

% Grade	Spacing Between Waterbars (feet)
2	250
5	130
10	80
15	50
25+	40

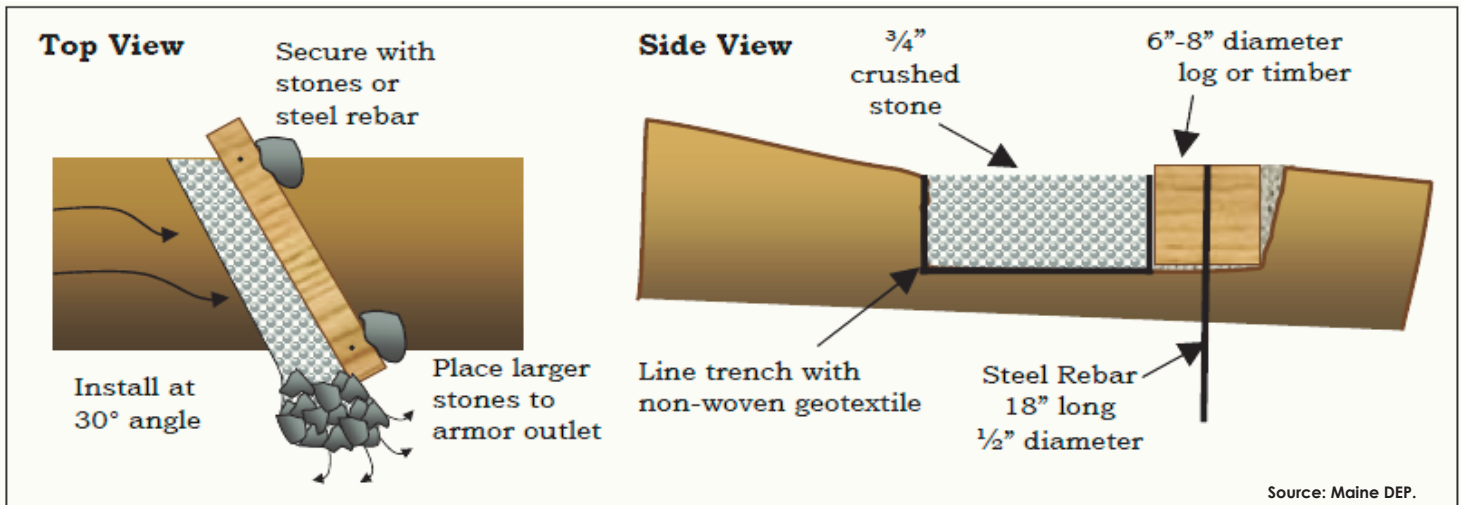
Source: Maine DEP.


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edge and pound in 18" pieces of rebar so that the rebar is flush or slightly recessed with the top.

3. **Backfill around the waterbar** – Dig a 12" wide and 6" deep trench along the uphill side of the bar. Fill the trench with crushed stone, leaving a few inches of the timber exposed. Place a flared apron of stones to armor the waterbar outlet. Pack soil and gravel up against the downhill side of the waterbar so that the top of it is flush with the trail. Cover all disturbed soil with seed and mulch or leaf litter.



Maintenance:  Waterbars should be checked periodically and after storm events to ensure that material is not eroding behind the structure or at the outlet. Any needed repairs should be made as soon as possible. Periodically remove accumulated leaves and debris from behind the waterbar.

Other Types of Waterbars: There are several other types of waterbars that are better suited for diverting water off driveways and gravel roads. For more information, see Lake Wise BMPs on open-top culverts, infiltration trenches, and rock-lined drainage ditches.

