NRCS
Natural Resources
Conservation Service

Concrete Barrier Wall

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NOTE

After a fire many trees are weakened from burning around the base of the trunk. The trees can fall over or blow down without warning. Shalow rooted trees can also fall. Therefore be extremely alert when around burned trees.

What is a concrete barrier wall?

A strong temporary wall constructed of precast concrete barriers, such as "Jersey Barriers" or K-rails, placed end to end to divert debris flows away from buildings or other important structures.

When is a concrete barrier wall used?

These barrier walls are used to protect buildings and other important sites with increased risk of flooding as a result of wildfires within the contributing drainage area. This is an expensive but stout protection method that can be installed quickly with heavy equipment and will last indefinitely. Temporary concrete barriers can be combined with diversion channels or other practices to create a flood/debris protection system.

How is a concrete barrier wall installed?

Barrier sections are constructed from reinforced concrete, normally in 10 ft. lengths and weighing 4,000 lbs. or more. They are usually available from precast concrete manufacturers, highway departments or highway contractors. Precast sections are available in many shapes. Figure 1 shows a typical end view of one type known as a "Jersey Barrier". Because of their size and weight heavy equipment is required to place them.

Selecting Treatment Areas: Use the barriers as a diversion wall to direct debris flows around or away from buildings and other structures. Do not try to dam or stop debris flows. Protect your most valuable property first.

Site Preparation: Prepare the foundation by clearing all vegetation and debris away from the proposed alignment and performing light grading as needed to assure full contact between the base of the barrier sections and the ground.

Placing Barrier Sections: Each section is set end to end along the proposed alignment and drawn or pushed together to form as tight a joint as possible. Sections are connected with a steel rod or pipe slipped through connecting loops cast into the concrete, and driven into the ground at each joint. 4 to 6 inches of soil or sandbags should be placed along the upstream side to block drainage holes and to prevent water from flowing under the barrier. Figure 2 shows a typical concrete barrier wall installation.

Figure 1 - Typical jersey barriers

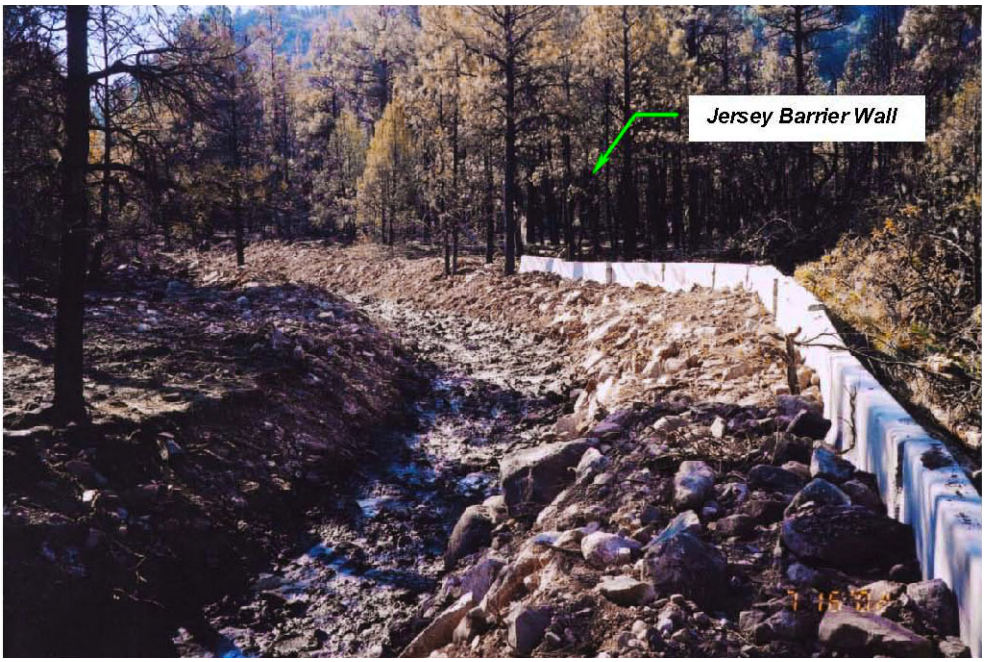

Figure 2 - Typical temporary concrete barrier installation