

Forest Management Tech Tips

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San Dimas Technology and Development Center (SDTDC) occasionally reviews articles of other organizations which may also be of benefit to Forest Service field units. One such article is "Silt Fence Use Around Logging Jobs," written by Bob Ploetz of Mead Containerboard, Stevenson, Alabama, and published by the American Pulpwood Association, Inc., as Technical Release 98-R-27, May 1998. The article is being republished in its entirety by SDTDC with the permission of the American Pulpwood Association, Inc. Other informative articles will be distributed as available.

SILT FENCE USE AROUND LOGGING JOBS

by Bob Ploetz, Mead Containerboard, Stevenson, Alabama

INTRODUCTION

Controlling silt movement and soil erosion around timber harvesting jobs and haul roads is a primary focus of state BMP manuals and the national Sustainable Forestry InitiativeSM (SFI) Program. Generally, foresters and loggers will use proper road layout and design to control and divert water flows from areas of exposed soil into undisturbed areas to prevent stream siltation. However, there are times when additional stream protection is needed. Using a silt fence may help solve possible problems associated with overland water flow.

OPERATION

A silt fence is a plastic or cloth fabric available in fifty- to one hundred-foot rolls, usually pre-staked, which is designed to allow water to flow through but to catch, filter, or settle out silt. A roll of silt fence, a four-pound hammer, and a collapsible bow saw may be carried into the woods to protect several small storm water conveyances along a road or below a landing.

APPLICATION

When silt fences are used at construction sites, the bottom of the fence is buried, in order to keep water from just flowing under the fence. Foresters, however, generally do not have a ditch digger or back hoe available, and even if they did, they do not have the luxury of a nice, clean building site to dig. It is difficult to dig a ditch in the woods without hitting rocks or roots. Digging a ditch also disturbs additional soil, something which should be avoided, anyway. The object is to keep water from flowing under the fence. It is possible to obtain a good seal by staking the



Figure 1—Silt fencing is available in rolls. A hammer to drive stakes and a saw to make "pins" make up a portable and effective water quality protection kit.



Figure 2—Silt fence installed in an arc shape slows and filters storm runoff and traps silt.





Figure 3—This site required two “runs” of silt fence, with additional water-slowng protection provided by straw bales.

bottom of the fence with wooden sticks or “pins” cut on-site, piling rocks on the bottom of the fence, or in severe cases, by placing straw or hay bales in front of the silt fence.

Installation Tips

1. A small saw will allow you to cut additional stakes for holding the bottom of the fence down or to provide additional fence support.
2. When you cut the 100-foot rolls down to make several, shorter lengths, a stapler can be used to utilize any excess fabric efficiently.
3. If you install 100 feet of fence and then go back to pin the bottom, by about the third “pin,” you will begin to pull the earlier pins out. You have to either leave enough slack in the fence or pin the bottom as you go. A stapler can be used to tighten up any slack at the top of the fabric.
4. Set the fence out in an arc. If you get a heavy rain, the arc shape will impound and slow the water flow enough to settle out the silt.

5. Water flows downhill. If you stop the flow, the water will go around your fence. You may want to install several “runs” of fence, each run filtering or settling out more silt.

6. If your fence fills up with silt, don’t try to dig it out. Just install another “run” below the first.

COST

A silt fence can be purchased at large hardware or construction supply stores. A pre-staked, 100-foot-long roll of silt fence is normally one-third to one-half as expensive as a hundred feet of straw bales laid end to end.

COMMENT

The silt fence is cheaper and lighter than square bales of mulch or straw. A roll of fence, along with what few tools are needed for installation, can be carried in a truck at all times. When walking over a harvesting or road construction job, one can react immediately to an unexpected run of water or damage to a water bar.

