

Sediment Reduction

In the Chesapeake Bay

Pennsylvania's Conservation Districts: Working with the Agricultural Community to Reduce Sediment Levels in the Chesapeake Bay

Clearfield County Timberland Revegetation

Synopsis:

The Clearfield County Conservation District obtained a Pennsylvania Chesapeake Bay Program *Special Project Grant* to purchase a power mulch blower. The grant was submitted in response to local environmental concerns related to the impact timber harvesting can have on water quality. The power mulch blower is used to assist timber harvesters in post harvest revegetation efforts. These efforts benefit water quality through the reduction of sediment that could otherwise move into local streams.

Background:



Typical unprotected skidder trail

Timber harvesting is a vital part of the local economy in Clearfield County. Forests cover 74 percent of the land. The process of harvesting timber, can lead to considerable disturbance of the soil. Such earth disturbance activity requires an erosion and sedimentation control plan and may require a permit.

To move the logs from the stump at the harvest site to the highway, loggers often construct skidder trails. Skidder trails may lead to erosion because they tend to run perpendicular to the slope, leading down the slope to waterways which become unstable after logs are repeatedly dragged across them. From the skidder trail, the logs are dragged to a stockpile area until a truckload is ready for transport. From this point, haul roads are used to move the load to an established highway. Stockpile areas and haul



Water affected by sediment

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PROJECT FACTS

Project:

Timber Land Revegetation

Cost of Mulcher:

\$18,000

Anticipated Result:

Reduced erosion, resulting in reduced sediment runoff

Watershed:

Chesapeake Bay - West Branch Susquehanna River Basin

Acres Impacted:

5 acres seeded & mulched in 2006; 19 acres in 2007

Nutrient Reduction Impact:

35 tons of erosion prevention in 2006; 133 tons in 2007

For more information on sediment reduction strategies, please contact your local conservation district.

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Timber Harvest Site Stabilization Process



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roads, depending on conditions, often become eroded or compacted. This leads to increased sediment movement.

A typical harvest site may create several acres of bare soil depending on the size of the tract of land involved. Given that many harvest sites or haul roads are located near water, targeting these sites for erosion control is an important factor in local water quality efforts. The forested areas often include steep slopes and highly erodible soils.

Project:

Conservation districts in Pennsylvania regularly work with timber harvesters to provide technical assistance for the installation of best management practices that reduce erosion. One way to reduce erosion and sedimentation on harvested timber land is to reseed and then cover the seed with a layer of mulch. The mulch holds moisture to aid germination while keeping the soil in place until the vegetation is established. Once the vegetation is well established, the soil stabilizes, reducing erosion. There is also an added bonus of the vegetation creating excellent wildlife habitat.

The self-contained mulcher is maneuverable enough to use on haul roads, with the mulch hay hauled in the bed of the towing vehicle. A seeding attachment is mounted on the blower to allow the seed to be spread by the blower prior to mulching.

Results:

With proper operation of the mulcher, a layered mat is created which is more conducive to seed germination and soil-holding ability than an area mulched by hand. In a short period of time, a properly mulched area will show significant vegetation and erosion control, translating into less sediment moving into local streams.

For further information specific to this project:
Clearfield County Conservation District

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