Erosion control around log landings

This article explains how landowners, loggers, and foresters can develop log landings that minimize sediment runoff during a timber harvest.

Basic concepts:
1. Create log landings so water cannot flow directly into a stream
2. Keep water off the landing and debris away from drainage zones
3. Prevent mud from being carried onto adjacent roadways

**Landings** are open areas used for processing and stacking logs before they are loaded onto a log truck. It is the "front room" of most timber harvests where machinery is stored and many field decisions are made. More vehicles drive around landings than any other area during a timber harvest. With little vegetation and a lot of vehicular traffic, landings can be prone to erosion. Additionally, landings are often the most publicly visible portions of the timber harvest.

Fortunately, erosion from log landings can be controlled effectively without interfering with the function of the site. Like in other areas of the timber harvest, smaller amounts of water should be controlled over short distances.

While first planning a timber harvest, designate a possible the location of the landing. Use topographic information to identify where old roads exit to public roads. Check the soil type of the area and seek well-drained soils with a slight slope. Take information about possibly sensitive areas into the work site.

**Landing best management practices**

**Use existing landings if they are properly placed and sized.**
Like forest roads, the number of landings should be minimized. Existing landings should be used if they were designed to control erosion. They should be free of standing water in all seasons and sloped to disperse water to vegetated areas and ditches.

**Locate new landings on firm, well-drained soil, as far from water as possible.**
There are several ways to prevent soil at log landings from eroding into streams. New landings should be placed more than 200 feet from wetlands or streams. If a landing needs to be located near a stream, which is sometimes unavoidable, logging crews should install controls, like silt fencing, straw bales, and geotextile fabrics around the perimeter.
Minimize traffic near the stream edge and add filter strips around the perimeter of the landing.

**Landings should be slightly sloping to shed water and keep equipment on firm ground.**
After trees and stumps are cleared as a landing is being built, make sure the site will have good drainage.

**Stabilize areas where heavy equipment is parked.**
Use gravel, logs, or other materials to prevent heavy equipment from settling down in forest soils. Most forest soils are naturally soft and uncompacted. Heavy equipment can become bogged down, leaving small craters and deep ruts.

**Log decks and landings should be kept at minimum size.**
The final size of the landing depends on location and how much timber is being removed from the woodlot. Some landings will be considered "hot landings" where many logs are stored and moved off continuously. Enough space should be available for moving equipment, processing and stacking logs, and loading log trucks without rutting up the adjacent forest. Landings should not be any larger than necessary.

**Identify where water will drain off the landing and keep it clear of debris.**
Residue piles of branches, tops and chips often accumulate at the edges of landings. These piles should not interfere with landing drainage patterns.

**Divert water that may enter from the skid trail.**
If the timber harvest site is uphill from the landing, avoid channeling water toward the landing. Control water and erosion with open top culverts or skid trail turnouts or turn-ups approaching the landing. Cull logs can be embedded in the diversion mound, reinforcing the berm.

**Prevent mud from being tracked onto public roads from landings.**
With trucks and machinery entering and exiting a timber harvest site at the landing, there are many chances for mud and dirt to be carried onto a paved public road. This mud tends to wash into ditches, polluting streams and leaving passers-by with a poor impression of timber harvesting. In fact, mud on public highways is one of the primary reasons why towns invoke cutting ordinances. At the point of exit, create truck pads with wood matting, rubber mats, or coarse rock to prevent buildup of mud on tires.
Erect signs that support the importance of timber management.
To improve the public acceptance and understanding of timber harvesting, logging crews can use a visible landing to promote the timber industry. Through good workmanship and best management practices, logging crews can instill a greater sense of public trust, rather than suspicion.

Rubber mat photo from TerraMat

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