

4. TIMBER HARVESTING

Harvesting activities should be conducted to ensure long-term maintenance of water quality. The following suggestions will help timber harvesters achieve this objective.

Temporary access roads (logging roads) and landing locations should be planned before operations begin to minimize soil disturbance. Road construction should be kept to a minimum, consistent with reasonable skidding distance. Spring heads, natural drainages and gullies should be avoided. Landings should also be kept as small as possible, consistent with safe and efficient operation. Logging roads and landings must be located on firm ground, outside of Streamside Management Zones and above the ordinary high water mark of streams.

Landings must be located to prevent the adverse impact of skidding on water quality. Locating logging decks uphill and skidding up to them results in



a cone-shaped pattern of skid trails which disperses water running downhill. If the logging deck is on the lower slope, the V-shaped pattern of skid trails could concentrate runoff and erode the logging deck areas. If the trees must be skidded downhill, erosion can be minimized by using several, smaller logging decks with fewer, smaller skid trails leading to any one.



When operations are completed, landings and temporary roads should be stabilized with water diversion devices and/or vegetation where there is a possibility of significant erosion and/or water quality degradation.

Felling should be done carefully to minimize the impact of subsequent phases of logging operations on water quality. Timber cut in Streamside Management Zones should be harvested in accordance with recommended guidelines on pages 4 and 5.

Skidding should be done to avoid disrupting natural drainages, prevent excessive soil displacement, and minimize impacts of rutting, compaction, and puddling on water quality and soil stability.



Stream channels and natural drainages must not be used as skid trails. They should be crossed following guidelines in Section 2.

Where slopes are steep but short in duration, trees can be felled uphill and winched to the skidder. Skid trails on steep slopes should have occasional breaks in grade and upon completion of use, must be water barred. Erosion in skid trails can sometimes be reduced by covering them with logging slash. Logging slash can also be scattered over temporary landings to help stabilize them.

When wet and/or soft ground conditions cannot be avoided, it is better to concentrate soil compaction from skidder traffic on a few trails that can be stabilized rather than disperse the effects over many trails.

Cut-to-length harvesting systems offer state-of-the-art equipment and best available technology to maximize timber production and protect water quality and other forest resources at the same time.

Primary benefits of this system are from forwarders (or prehaulers) which can haul wood off the ground for long distances and need only minimum skid trails or landings. Less soil is displaced, rutted, and compacted. The on-board loader can be used to place logs for stream crossings and easily remove them when the crossing is no longer need-

ed. In addition to high initial costs, however, this equipment is also limited by very steep terrain.

Trash disposal must be properly handled throughout the operation in accordance with all applicable laws. Fuel, lubricants and other toxic chemicals must never be drained into the soil. Food and drink containers, discarded equipment parts, and used fluids must be properly removed and disposed of. Trash must not be burned or buried on site.

