

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

FOREST TRAILS AND LANDINGS

(Acre)
CODE 655

DEFINITION

A route, travel-way or cleared area within a forest.

PURPOSE

- Provide access to forest stands for management.
- Provide access for removal and collection of forest products.
- Provide access to forested areas for recreation.
- Minimize onsite and off-site damage, to resources (including water quality) during periods of access.

CONDITIONS WHERE PRACTICE APPLIES

On forested areas.

CRITERIA

General Criteria Applicable to All Purposes

Timing and use of equipment will be commensurate with site and soil conditions to maintain site productivity and minimize soil erosion, displacement and compaction.

Harvest trails and landings will be of a size, gradient, number and location to accomplish tree removal and transport while minimizing adverse on-site and off-site impacts. Adverse impacts include, but are not limited to, accelerated erosion, riparian zone degradation, stream channel and streambank damage, or unacceptable damage to advance regeneration, residual growing stock, or wildlife habitat.

Slash, debris and vegetative material left on the site after harvesting must not present an

unacceptable fire or pest hazard or interfere with the intended purpose.

Water bars, rolling dips, timber bridges, rock plunge pools, and other drainage measures for trails shall be of sufficient size, intervals and gradient for adequate drainage and erosion control. Use Missouri Department of Conservation *Watershed Protection Practice Guidelines - Best Management Practices* (BMPs).

Follow soil survey forestland interpretations for directing practice activities.

Upon completion of harvest, landings and trails will be left in a stable, non-erosive condition.

Comply with applicable laws and regulations.

Avoid, where possible, skidding through stream channels, springs, seeps, sinkholes, and other wet areas.

Landings or Yarding Areas

Locate landings or yarding areas before developing skid roads and trails. Preferred sites include ridgetops, well-drained areas, areas close to an all-weather road, or sites close to the stand being harvested. The areas should have some slope to facilitate drainage. Construct road approaches to the area at a slight grade to divert road drainage from the landing area.

Do not locate landings within 200 feet of streams, ponds, lakes, sink holes, springs, caves, or wetlands.

Seed abandoned landing areas. Refer to CRITICAL AREA PLANTING (342).

Harvest Trails

Keep grades as low as possible. Avoid long, steep grades that exceed 20%.

Plan the location of trails to minimize the number of stream crossings. Remove any temporary bridges and culverts when logging activities are completed. Fords shall not be used in watersheds for domestic water supplies or on important fishing streams.

On harvest (skid) trails with erosion problems, install water breaks (bars). Refer to *Missouri Watershed Protection Practices*, Missouri Department of Conservation.

Water bars, rolling dips and other drainage measures for trails shall be of sufficient size, intervals and gradient for adequate drainage and erosion control. Start building water breaks at the end of the trail and work out to avoid damaging previously constructed water breaks. Adjust spacing to place water breaks at abrupt gradient changes. Protect the discharge area with stone, grass sod, brush, logs, or other materials that will reduce the velocity of the runoff and control scouring.

Seed abandoned harvest trail areas that would be susceptible to erosion. Refer to CRITICAL AREA PLANTING (342).

CONSIDERATIONS

Assure safe ingress and egress to site.

Locate landings and trails to preserve the aesthetic quality.

Trails may be closed for erosion control, safety and liability, and reduced maintenance costs.

Landings and trails may be used for wildlife food and cover plantings.

Landings and trails may be utilized as firebreaks.

Landings and trails no longer needed can be retired by removing high maintenance structures, such as culverts and bridges, and restored to a vegetative cover by planting and seeding.

PLANS AND SPECIFICATIONS

Specifications for applying this practice shall be prepared for each site and recorded using approved specification sheets, job sheets, and narrative statements in the conservation plan, or other acceptable documentation.

Specifications for re-vegetation of landings and trails should include species, timing and method of application.

The following species and rates can be used for non-erosive areas:

Species	Seeding Rate/Acre
Virginia Wildrye <i>Elymus virginicus</i>	2 pounds
Hairy Wildrye <i>Elymus villosus</i>	1 pounds
Bottle Brush Grass <i>Hystrix patula</i>	1 pounds
Tioga Deertongue <i>Panicum clandestinum</i>	2.5 pounds
Wheat, Rye, or Oats	20 pounds

OPERATION AND MAINTENANCE

Watercourses and water quality shall be protected during and after removal and transport of trees.

Periodic inspections of landings and trails will be conducted and where necessary repairs will be made.

Landings and trails utilized as firebreaks will be properly maintained to accomplish this purpose.

Landings and trails may be closed for erosion control, safety and liability, and reduced maintenance costs.

REFERENCES

Forestry Handbook, Second Edition: Society of American Foresters; Wiley Press; 1984.

"Missouri Watershed Protection Practices: Management Guidelines for Maintaining Forested Watersheds to Protect Streams" Missouri Department of Conservation; 1997.