

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**FOREST TRAILS AND LANDINGS**

(Acre)

**CODE 655**

**DEFINITION**

A temporary or infrequently used route, path or cleared area within a forest.

**PURPOSE**

- Provide infrequent access to forest stands for management activities including fire suppression.
- Provide periodic access for removal and collection of forest products.

**CONDITIONS WHERE PRACTICE APPLIES**

Trails and landings are applicable on forested areas. Refer to the standard for Access Road, code 560, for travel-ways that will be designed and used frequently or repeatedly for vehicular traffic.

**CRITERIA**

**General Criteria Applicable To All Purposes**

***NRCS personnel are encouraged to work closely with WV Division of Forestry personnel and the NRCS staff forester when utilizing this practice.***

Trails and landings will be of a size, gradient, number and location to accomplish the intended purpose.

They shall be located to minimize adverse onsite and off-site impacts such as accelerated erosion, riparian area ***and/or water quality*** degradation, stream channel and streambank damage, hydrology modification, aesthetics or unacceptable damage to advance

regeneration, residual growing stock or wildlife habitat.

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

Slash, debris and vegetative material left on the site after construction will not present an unacceptable fire or pest hazard or interfere with the intended purpose.

Drainage and erosion control measures for trails shall be used and located to minimize water flows and erosion rates to acceptable levels.

***Water bars, broad-based dips, and other drainage measures for trails shall be of sufficient size, intervals and gradient for adequate drainage and erosion control.***

Trails and landings shall be revegetated to control erosion as needed. See conservation practice standards for Critical Area Planting, code 342 ***and Mulching, code 484***. Locally invasive and noxious plants will not be used for revegetation.

Measures, including the use and treatment of equipment, will be used to control or protect against locally invasive species. If pesticides are used, refer to the Standard Pest Management, 595.

***At a minimum, comply with applicable federal, state and local laws and regulations during the installation, operation and maintenance of this practice. See Field Office Technical Guide Reference - Best Management Practices for Controlling Soil Erosion and Sedimentation***

**NRCS, NHCP  
January 2006**

**NRCS, WV  
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*from Logging Operations in West Virginia (WVDOF -TR-96-3 (most current version)).*

<http://www.wvforestry.com/BMP%20Book%202009.pdf>

**NOTE: Detailed specifics from this publication are included in the West Virginia Job Sheet, Forest Trails and Landings, code 655.**

*Use soils, topographic, aerial, conservation plan maps, and field reconnaissance to assist in preliminary layout. Southern exposures are generally best.*

*Minimum road surface widths of 16 feet should be used on all curves, and on areas of substantial cut and fill. Anticipated equipment use should be considered when determining road widths. An additional four feet of road width will be required when ditching and water disposal is necessary.*

*All cut and fill slopes with a vertical height greater than 3 feet shall have side slopes that are stable for the soil material involved. In most instances, the following is required: soil 1.5:1, shale 1:1, rock 1/2:1. In some instances rock, trees and large roots will prohibit sloping, but provide stability for the bank.*

*Haul roads, skid trails, and landings should not be located within filter stream management zones except when roads enter and leave stream crossings.*

*Culverts must have a capacity to carry the run-off from a 1-year frequency storm as determined from Chapter 2, Engineering Field Manual. For additional requirements see Access Road -560, pages 5 and 6.*

## **CONSIDERATIONS**

Assure safe ingress and egress to site.

Locate landings and trails to preserve aesthetic qualities.

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

Favor native species for revegetating trails and landings.

Landings and trails may be utilized as firebreaks.

Consider cultural resources and environmental concerns such as threatened and endangered species of plants and animals, natural areas and wetlands.

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

***Landings and trails may be utilized as firebreaks.***

***Consider species for revegetation which benefit wildlife.***

## **PLANS AND SPECIFICATIONS**

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

***Specifications for revegetation of landings and trails should include species, timing and method of application. See conservation practice standards for Critical Area Planting, code 342 and Mulching, code 484.***

***The following will be identified (as appropriate):***

- ***Purpose of the forest trail and landing***
- ***Field location / Plan view***
- ***Streamside management zone / Shade strip location / Treatment***
- ***Length and width of trails and landings***
- ***Slope calculations***
- ***Design calculations (Culverts, etc.)***
- ***Seeding / mulching specifications***
- ***Any relevant environmental documentation including but not limited to the WVCPA-052 or similar form***
- ***Operation and maintenance requirements***

**Provide the cooperators with the following:**

- **Location of roads, trails, and landings**
- **Location, number and size of culverts**
- **Location and type of water control measures**
- **Width of streamside management zones / shade strips**
- **Seeding / mulching specifications**
- **Operation and maintenance requirements**

**OPERATION AND MAINTENANCE**

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. Refer to the standard Use Exclusion, code 472.

**Traffic control is recommended to prevent road damage especially between December and April.**

Landings and trails no longer needed, and not used as a firebreak, can be retired **by removing high maintenance structures, such as culverts and bridges, and can be restored to a vegetative cover by planting and seeding.**

**Mowing helps to maintain grass cover and prevents vegetation from crowding roadways.**

**REFERENCES**

**Hartung, R.D., and Kress, J.M., Woodlands of the Northeast, Erosion and Sediment Control Guides, 1977, USDA Soil Conservation Service Northeast Technical Service Center and USDA Forest, Service State and Private Forestry, Broomall, PA.**

**Hausman, R.F., and Pruett, E.W., Permanent Logging Roads for Better Woodlot Management, 1973, USDA Forest Service, State and Private Forestry, Upper Darby, PA.**

**Kochenderfer, J. N., Erosion Control on Logging Roads in the Appalachians, 1970, USDA Forest Service Research Paper NE-158, Northeast Forest Experiment Station, Upper Darby, PA.**

**West Virginia Division of Forestry, Best Management Practices for Controlling Soil Erosion and Sedimentation from Logging Operations in West Virginia, WVDOF-TR-96-3 Field Office Technical Guide Reference.**

**<http://www.wvforestry.com/BMP%20Book%202009.pdf>**

**West Virginia Division of Forestry, Water Resources Section of the Division of Natural Resources, West Virginia Silvicultural Water Quality Management Plan, DOF-TR-89-6.**

**\*Bold italics indicate changes made or information added to the national standard by West Virginia.**