NATURAL RESOURCES CONSERVATION SERVICE
MONTANA CONSERVATION PRACTICE STANDARD

FOREST TRAILS AND LANDINGS (FEET)

CODE 655

DEFINITION

A temporary or infrequently used route, path or cleared area.

PURPOSE

- Provide routes for temporary or infrequent travel by people or equipment for management activities.
- Provide periodic access for removal and collection of forest products.

CONDITIONS WHERE PRACTICE APPLIES

Trails and landings including skid trails are applicable on forest land.

They typically connect to an Access Road **(Code** 560**)**. **Refer to the Field Office Technical Guide (FOTG), Section IV, practice Access Road (Code 560)**.

CRITERIA

General Criteria Applicable To All Purposes

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

Select the proper type of harvesting and yarding machine for the topography involved to minimize the number of harvest trails required.

Trails and landings shall be located and minimized in number and size to reduce adverse onsite and off-site impacts such as accelerated erosion, slope failure, water quality and riparian area degradation, stream channel and streambank damage, hydrologic modification, aesthetics, unacceptable damage to advance regeneration, or residual growing stock or fragmentation of wildlife habitat.

Locate trails on the contour to the greatest extent possible and incorporate breaks in grade (rolling dips or rolled grades) for trails on slopes. **Lay out harvest trails so that they intersect as infrequently as possible to minimize the risk of water concentrations.**

Avoid locating trails and landings on poorly suited soils of low-bearing strength and sites such as wetlands, riparian areas, critical wildlife habitat, or other environmentally sensitive areas.

Avoid the location of harvest trails in drainage ways. Where possible, locate landings on horizontally straight or convex slopes. Avoid concave slopes and other areas of concentrated flows.

Trails and landings will be set back from water bodies and water courses. Stream crossings, if necessary, will be minimized in size and number.

Skid logs uphill (with front ends off the ground) as practicable to minimize mechanical displacement of soil. **Downhill skidding of logs to a landing can result in concentrated flow pattern. Install the proper drainage control features to minimize erosion. Waterbar and reseed harvest trails after log skidding is complete.**

Assure safe ingress and egress from trails and landings to junctions with access roads. Refer to the practice standard, **Field Office Technical Guide (FOTG), Section IV,** Access Road **(Code** 560**)** for travel-ways including logging spur roads needing construction design and possibly surfacing to accommodate frequent, intensive, or repeated vehicular traffic.

NRCS, MT
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NOTE: This type of font **(AaBbCcDdEe 123..)** indicates NRCS National Standards.
This type of font (AaBbCcDdEe 123..) indicates Montana Supplement.

Those trails and landings intended or anticipated for management activities in subsequent years shall be designated for reuse to minimize the need for new trails and landings and associated site impacts.

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

On soils with poor traffic ability or susceptibility to compaction, limit season of use to periods when soil is dry or frozen. Temporarily suspend operations when soils become wet or unfrozen.

Drainage and erosion control measures shall be integrated with trails and landings and located to minimize detrimental effects of concentrated flow, erosion and sedimentation rates both during and after trail/landing use.

After usage, stream crossings will be restored and stabilized. Refer to the **Field Office Technical Guide (FOTG), Section IV for** applicable drainage and erosion sedimentation prediction technology and practice standards such as Critical Area Planting (**Code** 342**)**, Structure for Water Control **(Code** 587**)**, Stream Crossing **(Code** 578**)** and Mulching **(Code** 484**)**, as well as state forestry Best Management Practices.

All activity is done in accordance with the Montana Streamside Management Zone (SMZ) law and Montana's Best Management Practices (BMP).

Trails and landings shall be re-vegetated to control erosion as needed. Refer to the Field Office Technical Guide (FOTG), Section IV, practice standard Critical Area Planting (Code 342).

Some level of scarification (30-40 percent) may be needed for seedbed preparation when relying on natural or direct seeding.

Invasive and noxious plants will not be used for re-vegetation.

CONSIDERATIONS

Consider impacts to wildlife from increased fragmentation of the forest stand. Creation of openings can benefit some wildlife species (e.g., early successional and edge species) yet be detrimental to others (e.g., forest interior species)

Placement of harvest trails on slopes greater than 50 percent is not recommended.

Trails and landings, particularly after usage, may be utilized and managed for wildlife food and cover plantings. Refer to appropriate wildlife habitat practice standards, e.g., Upland Wildlife Habitat Management **(Code** 645**)** and Early Successional Habitat Development/Management **(Code** 647**)**.

Properly locate trails and landings of sufficient width and location may be utilized and managed as firebreaks.

Favor native species for re-vegetating trails and landings. Measures will be used to protect against invasive species.

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

PLANS AND SPECIFICATIONS

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

As a minimum, the Forest Trails and Landings practice will have the following components in its plan and specifications:

- **A narrative that describes the producer's goals and objectives. Identify why the practice is needed and feasible.**
- **An environmental assessment of the planned practice that includes the potential impacts on soil, water, animals, plants, air and humans.**
- **An alternatives narrative that identifies and describes several methods that could be used to address the resource issue. Also identifying the producer selected method.**
- **The Montana Forest Trails and Landings practice job sheet and specification.**
- **Plan map and soil map of site with location of practice on the map.**

- **Operations and maintenance instructions.**

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

OPERATION AND MAINTENANCE

Regular and timely inspections for adverse effects will be conducted with trails and landings and associated measures maintained or restored as necessary.

Treat areas of invasive and noxious weeds.

Trails and landings utilized and managed as firebreaks will be properly maintained to accomplish this purpose while maintaining acceptable mitigation of other concerns.

Access to trails and landings shall be controlled when and where needed for erosion abatement, safety and liability, and reduced maintenance costs. Refer to the **Field Office Technical Guide (FOTG), Section IV** practice standard Access Control (**Code** 472**)**, as needed.

Trails and landings no longer needed may be decommissioned. Refer to the **Field Office Technical Guide (FOTG), Section IV** practice standard Road/Trail/Landing Closure and Treatment **(Code** 654**)**, as needed.

REFERENCES

Garland, John. 1997. Designated Skid Trails Minimize Soil Compaction. Woodland Workbook, Oregon State University Extension Service, EC1110.

University of Minnesota. 2002. Broad-Based Dips. Forest Management Practices Fact Sheet #6, Managing Water Series.