

Road/Trail/Landing Closure and Treatment (Feet) 654

DEFINITION

The closure, decommissioning, or abandonment of roads, trails, and/or landings and associated treatment to achieve conservation objectives.

PURPOSE

To minimize various resource concerns associated with existing roads, trails, and/or landings by closing them and treating to a level where one or more the following objectives are achieved:

- Controlling erosion (road, sheet and rill, gully, wind), chemical residues and off-site movement, sediment deposition and damage, accentuated storm runoff, and particulate matter generation;
- Restoring land to a productive state by reestablishing adapted plants and habitat (wildlife food, cover, and shelter), reconnecting wildlife habitat and migration corridors including streams and riparian areas, and controlling noxious and invasive species;
- Reestablishing drainage patterns that existed prior to construction of the road, trail, or landing to restore the form and integrity of associated hill slopes, channels and floodplains and their related hydrologic and geomorphic processes;
- Minimizing human impacts to the closure area to meet safety, aesthetic, sensitive area protection, or wildlife habitat requirements.

CONDITIONS WHERE PRACTICE APPLIES

On roads, trails, and landings designated for closure including cut-and-fill slopes, sidecast areas and associated drainage structures.

CRITERIA

Plan, design and install this practice to meet all federal, state, local, and tribal laws, rules and regulations.

Roads, trails, and landings will be designated into one of three levels of treatment:

- 1) Closure and treatment to a level that facilitates future use for management activities.
- 2) Closure, treatment, and reconnection to applicable drainage networks (usually involves culvert removal which limits potential for future use).
- 3) Closure, removal and reshaping to natural contours, treatment and stabilization, and natural landscape and drainage restoration.

Determine the appropriate level of treatment based on the associated severity of environmental effects of existing roads, trails, and landings; future access requirements; and short-term disturbance effects during closure and treatment activities.

Select treatment(s) that achieve the stated purpose and objective(s). Use technology tools, if available, to support design and specifications development such as prediction models for erosion, hydrology and hydraulics, soil mechanics and slope stability, and wildlife/habitat interactions.

For “treatment level 3” (see above), return sidecast to create a rooting medium, if possible. Otherwise, use the existing soil as a rooting medium, or use haul-in top soil or other soil amendments to create a suitable rooting medium. Assure that such material is free of weed seeds and/or contaminants.

Minimize adverse onsite and off-site effects such as water and wind erosion including particulate matter/dust generation, concentrated flows to unprotected areas, destabilization of slopes and mass wasting, riparian area or wetland degradation, stream channel and streambank damage, barriers to aquatic organism and wildlife movement or migration, hydrologic modification, or other water resource damage during closure and treatment activities and final conditions and configuration.

Do not bury under fill any seep or spring that is on or associated with the area to be treated or allow its drainage concentrated through unarmored fill areas. Reconnect seeps and springs to appropriate drainage networks.

Select equipment types sufficient to implement treatments to the designated level. Schedule treatment and construction techniques to minimize soil erosion, displacement, compaction, aesthetics degradation, safety concerns, barriers to wildlife movement, or unacceptable damage to adjacent areas.

For all levels of treatment, utilize measures applicable to that level such as but not limited to:

- Permanent or temporary traffic barriers and caution signage.
- Excavation and reshaping of roads, trails, landings, and drainage ways to natural conditions including culvert removal and reconnection of the site areas to appropriate drainage networks.
- Ripping to improve infiltration and vegetation root growth.
- Topsoil stockpiling and respreading and, in some cases, importing.
- Rolling grades to disperse runoff from selected road and trail segments to be closed.
- Control of nuisance, noxious or invasive species.
- Reestablishing adapted vegetation including mulch and soil amendments as necessary to enhance establishment. Refer to the Michigan NRCS Conservation Cover (327) and/or Critical Area Planting (342) Conservation Practice Standards, as appropriate.

Select treatments to restore natural topography and surface hydrology that will result in stable slopes and be compatible with existing land uses in the vicinity.

Minimize indirect adverse impacts or effects of the practice on species with declining populations, particularly aquatic species in streams or wetlands downslope of project area.

Remove or immobilize hazardous material prior to the establishment of this practice following all local, state, and federal regulatory requirements. Base appropriate actions to clean sites suspected of containing hazardous waste on soil tests, where applicable.

To control emissions of particulate matter to the air during closure and treatment operations, utilize a dust palliative or other method of dust control on bare and disturbed surfaces.

Integrate compatible design, construction criteria, and specifications of other practices used in combination with this practice to conduct closure and treatment activities and achieve specified final conditions and configuration. Select only components not addressed in NRCS practice standards that are consistent with professional engineering practices.

CONSIDERATIONS

For roads, trails, or landings deemed unsuitable as candidates for closure and treatment, consider upgrading specifications and operation-maintenance provisions of the existing conservation practices Access Road (560) and/or Forest Trails and Landings (655) to achieve conservation objectives. In these cases, install complementary practices and measures concurrently while upgrading road, trails, and/or landings.

Compacted areas may need bulk density tests at various depths to assure treatment specifications are adequate to reestablish infiltration and vegetation.

Use native species when establishing vegetation, especially those having multiple values, e.g., biomass, nuts, fruit, browse, nesting, and aesthetics.

Road sites are typically nutrient poor. Consider soil amendments or organic matter, as appropriate, to accelerate the rate of revegetation.

PLANS AND SPECIFICATIONS

Plans and specifications for this practice shall be prepared for the specific site conditions in accordance with this standard and shall describe the requirements for applying the practice to achieve its intended purpose.

Support data documentation requirements are as follows:

- Purpose of treatment
- Map indicating the location of treatment
- The designated level of treatment
- Inventory and evaluation records
 - Assistance notes or special report
- Survey notes, where applicable
 - Design survey
 - Construction layout survey
 - Construction check survey
- Design records
 - Physical data, functional requirements and site constraints, where applicable
 - Soils/subsurface investigation report, where applicable
- Design and quantity calculations
- Construction drawings/specifications with:
 - Location map
 - “Designed by” and “Checked by” names or initials
 - Approval signature
 - Job class designation
 - Initials from preconstruction conference
 - As-built notes
- Construction inspection records
 - Assistance notes or separate inspection records
 - Construction approval signature
- Record of any variances approved, where applicable
- Record of approvals of in-field changes affecting function and/or job class, where applicable.

OPERATION AND MAINTENANCE

Operation and maintenance shall include periodic monitoring and weather event-based patrolling of completed sites to determine adverse environmental effects and the condition of vegetation established on disturbed areas. Dying or dead vegetation shall be replaced as necessary. Control of nuisance, noxious, or invasive species will be continued.

Initial monitoring and patrolling shall be conducted during water and/or wind erosive period(s) as needed until the site is determined to be stable. Stabilizing measures and additional treatment will be applied when and where necessary.

REFERENCES

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