Spoil Spreading (Ac.) 572

DEFINITION

Disposal of surplus excavated materials.

PURPOSE

To dispose of excess soil from construction activities in an environmentally sound manner that minimizes soil erosion, protects water quality and fits with the land use and landscape.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies to sites where spoil material is available from the excavation of open channels, ponds or other construction sites.

CRITERIA

Spoil spreading shall be planned, designed, and installed to meet all federal, state, local, and tribal laws, rules and regulations.

Locate spoil spreading areas as close as practical to the excavation area to minimize haul distance. Spread spoil in relatively uniform layers, maintaining positive drainage away from the spoil. Do not spread spoil when the ground or spoil is frozen or excessively wet unless site specific design considerations indicate frozen or wet conditions will not have adverse effects.

Design spoil areas to blend with the landscape and planned land use. Use slopes that are stable and fit the land use. For areas that will be cropped or mowed use slopes of 4 horizontal to 1 (4:1) vertical or flatter.

Establish vegetation on spoil areas immediately after spreading unless the area will be cropped within 30 days. Use plant species appropriate to the soil, climate conditions and land use in accordance with the practice standard Critical Area Planting 342, criteria on vegetative establishment.

If spoil spreading is completed at a time of year that is not conducive to the establishment of the desired plant species, utilize temporary erosion control measures immediately and maintain the measures until the site can be successfully vegetated.

Before placing spoil material that has physical or chemical characteristics that prevent the establishment of adequate vegetation, strip topsoil from the spoil area. Use the topsoil or other suitable soil material to cover the spoil with a minimum of 6 inches of soil prior to seeding.

Spoils that are known or suspected to be contaminated with toxic substances must be tested to determine the nature and toxicity of the contamination. This is particularly true of waterborne sediments that drain from industrial or urban areas. Based upon the evaluation develop a plan to remove and dispose of the spoil in an environmentally sound manner.

Additional Criteria for Spoil Spreading Along Channels, Canals and Streambanks.

Choose the location and placement of spoil to avoid the destruction of vegetation in Riparian Zones 1 and 2 as defined in NRCS Conservation Practice Standard 391, Riparian Forest Buffer and 390, Riparian Herbaceous Cover.

Design the placement of spoil so that it does not endanger the stability of the channel. Place the spoil so that it will not immediately fall or erode back into the channel.

If the spoil is used to establish a berm along a channel, design slopes on the channel side not steeper than 3 horizontal to 1 vertical (3:1). On the land side, design slopes not steeper than 4 horizontal to 1 vertical (4:1). Heights of berms shall not exceed 3 feet above the original ground.

Check the channel capacity with the spoil in place to ensure that channel capacity will not adversely affect upstream drainage.

Design the placement of spoil to provide for the safe passage of surface water that collects on the land side of the spoil into the channel. Where necessary, use pipes, channels or structures to convey runoff into the channel in accordance with

practice standard, Grade Stabilization Structure, 410; criteria for structure design.

Where a travel way is needed to facilitate maintenance along the bank of a channel, place and shape the spoil to provide access for maintenance or other activities. Refer to practice standard, Access Road 560, criteria for the construction of a travel way along the spoil.

CONSIDERATIONS

Spoil areas need not be waste areas. Spoil areas should blend with the landscape and the land use. Plan the location, slopes and vegetation to benefit the planned land use.

Landscape quality can be improved by the creative placement of spoil material. Spoil material can be used to block undesirable views, deflect or redirect agricultural runoff, wind or snow, or block noise.

Spoil areas with permanent vegetation can provide excellent wildlife habitat. When choosing vegetation for these areas select native species that will provide food and cover for wildlife.

The construction of berms along one or both sides of a channel can affect channel capacity, and out of bank flow. When planning the location of spoil areas consider how the spoil placement will affect the flow regime of the channel.

PLANS AND SPECIFICATIONS

Plans and specifications shall be prepared in accordance with the criteria of this standard and shall describe the requirements for applying the practice to achieve its intended use.

Support data documentation requirements are as follows:

- Inventory and evaluation records
- Conservation Assistance notes or special report Survey notes, where applicable
  - Design survey
  - Construction layout survey
  - Construction check survey

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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
  - Conservation 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

- Well isolation distance documentation, where applicable

OPERATION AND MAINTENANCE

An Operation and Maintenance (O&M) plan shall be developed for this practice. The O&M plan shall be consistent with the purposes of the practice, its intended life, safety requirements, and the criteria for the design.

REFERENCES

USDA, Natural Resources Conservation Service. 2008. Engineering Field Handbook, Chapter 17, construction and Construction Materials, National Engineering Handbook, 650.17.