NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

SPOIL SPREADING

(Ac.)

CODE 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. This practice does not apply to spoil piles or areas that are temporary or that may be removed in the future. Temporary spoil areas should be addressed in the practice standard that required the excavation of the surplus materials.

CRITERIA

Plan and design spoil spreading to comply with all federal, state, and local laws and regulations. Laws, rules, and regulations of particular concern include those involving land use, pollution control, property easements, wetlands, preservation of cultural resources, and endangered species. A wetland determination shall be used to document that National Environmental Policy Act (NEPA) and National Food Security Act Manual (NFSAM) provisions concerning wetlands are met for the spoil areas. If a certified wetland determination does not exist for the area, one shall be completed as part of the planning process.

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 vertical (4:1) 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. Refer to Conservation Practice Standard (CPS) 342, Critical Area Planting, for 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, use 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.

Conservation practice standards are reviewed periodically and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service or download it from the electronic Field Office Technical Guide (eFOTG).

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 CPS 391, Riparian Forest Buffer, and CPS 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 3:1. On the land side, design slopes not steeper than 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. Refer to CPS 410, Grade Stabilization Structure, for 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 CPS 560, Access Road, for 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

Prepare plans and specifications for spoil spreading that describe the requirements for applying the practice according to this standard. Plans and specifications for this practice may be incorporated into the plans and specification for the practice it serves. As a minimum, the plans and specifications shall include the following:

- A plan view showing the location of the spoil area.
- Lift thickness for spoil placement.
- Maximum and/or minimum slopes for spoil areas.
- Typical cross sections of spoil areas.
- Maximum and/or minimum height of spoil to be spread above the existing ground surface.
- An estimate of quantities.
- Construction specifications that describe in writing the site-specific installation requirements for the spoil spreading.

OPERATION AND MAINTENANCE

Prepare an operation and maintenance (O&M) plan for the operator. The minimum requirements to be addressed in a written O&M plan are as follows:

- Inspect the spoil areas within 6 months after spreading and periodically thereafter.
- Fill or repair any excessive rills or gullies in the spoil.

- Reestablish vegetation as necessary on the repaired areas.
- Mow the vegetation as necessary to maintain a dense, vigorous stand.
- Control undesirable species and/or noxious weeds as necessary.

REFERENCES

USDA Natural Resources Conservation Service. 2008. National Engineering Handbook Part 650, *Engineering Field Handbook*, Chapter 17, “Construction and Construction Materials.”