

Land Smoothing (Ac.) 466

DEFINITION

Removing irregularities on the land surface.

PURPOSE

To improve surface drainage, provide for more uniform cultivation, and improve equipment operation and efficiency.

CONDITIONS WHERE PRACTICE APPLIES

This practice applies on areas where depressions, mounds, old terraces, turn-rows, and other surface irregularities interfere with the application of needed soil and water conservation and management practices.

It is limited to areas having adequate soil depth or where topsoil can be salvaged and replaced.

This practice does not apply to the regular maintenance on irrigated land or on land that has been modified using National conservation practice standards Precision Land Forming (462) or Irrigation Land Leveling (464).

CRITERIA

General Criteria Applicable to All Purposes

Land Smoothing shall be planned, designed, and installed to meet all federal, state, local and tribal laws and regulations.

The extent of rough grading required and tolerances of the finished smoothing job shall be in keeping with the requirements of the planned cropping system.

Construction operations shall be carried out in such a manner that erosion and air and water pollution are minimized.

Irregularities shall be smoothed to the degree required for the planned use.

The land to be smoothed shall be cleared of vegetative matter and trash.

Vegetation. Areas requiring vegetation after Land Smoothing shall be vegetated according to the NRCS conservation practice standard Critical Area Planting (342). Use vegetation adapted to the site that will accomplish the desired purpose. Preference shall be given to native species in order to reduce the introduction of invasive plant species; provide management of existing invasive species; and minimize the economic, ecological, and human health impacts that invasive species may cause. If native plant materials are not adaptable or proven effective for the planned use, then non-native species may be used. Refer to the Field Office Technical Guide, Section II, Invasive Plant Species, for plant materials identified as invasive species.

CONSIDERATIONS

Consider the potential effects of installation and operation of Land Smoothing on the cultural, archeological, historic and economic resources.

Where possible, the ground surface should be plowed or disked prior to smoothing.

Other planning considerations include the following:

- Effects on the water budget, especially on volumes and rates of runoff, infiltration, and evaporation.
- Effect on erosion and the movement of sediment and soluble substances attached to sediment carried by runoff.
- Potential for earth moving to uncover or redistribute toxic materials, such as saline soils.
- Effects on wetland hydrology and/or wetland wildlife habitat.
- Potential impacts to existing utilities.

- Effects on soil loss due to increased wind erosion potential and subsequent deposition.

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
 - 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

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.