

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

LAND SMOOTHING, (ACRE)

Code 466

DEFINITION

Removing irregularities on the land surface.

PURPOSE

- Improve surface drainage
- Provide for more uniform cultivation
- 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.

The smoothing of agricultural lands to improve surface drainage must be for the purpose of proper land use under the following conditions:

1. The soils to be smoothed shall be of such capability as to provide good permanent cropland after drainage.
2. The land to be smoothed must have an outlet, based on the degree of drainage required by the crops to be grown, to adequately provide for the removal of drainage water.
3. A collection ditch system must be located or planned in accordance with

standards and specifications for Surface Drainage, Field Ditch (607) when necessary for proper functioning of the system.

4. The land should be protected from damaging overflows.

CRITERIA

This practice shall comply with all federal, state, and local laws.

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.

On depressional land, only sufficient soil shall be moved to fill in minor depressions varying in depth up to approximately 0.5 foot and to remove small ridges and humps. Where larger depressions are encountered, they shall be drained by a shallow field ditch with the land surface smoothed so as to provide drainage to the depression or drainage provided by adequate tiling.

Adequate soil investigations shall be made to determine the depth of topsoil. Depth of cutting shall be controlled so as to prevent exposing excessive amounts of infertile subsoil.

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

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

CONSIDERATIONS

Effects on the water budget, especially on volumes and rates of runoff, infiltration, and evaporation.

Potential for changes in plant growth and transpiration because of changes in the volume of soil water.

Effect on erosion and the movement of sediment and soluble substances attached to sediment carried by runoff.

Effects on the use and management of nutrients and pesticides on surface and ground water quality.

Effects on downstream water quality.

Potential for earth moving to uncover or redistribute toxic materials, such as saline soils.

Effects on the visual quality of downstream water resources.

Effects on wetland hydrology and/or wetland wildlife habitat.

Potential impacts to existing utilities.

Effects on soil loss due to increased wind erosion potential.

PLANS AND SPECIFICATIONS

Plans and specifications for land smoothing shall be in keeping with this standard and shall describe the requirement for applying the practice to achieve its intended purpose.

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

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

Actions shall be carried out to insure that this practice functions as intended. Such actions shall include performing maintenance when needed to insure that surface irregularities are maintained at the degree of smoothness required.