

**NATURAL RESOURCES CONSERVATION SERVICE  
CONSERVATION PRACTICE STANDARD**

**LAND SMOOTHING**

(Acre  
CODE 466

**DEFINITION**

Removing irregularities on the land surface by use of special equipment.

**PURPOSE**

To improve surface drainage, provide for more effective use of precipitation, obtain more uniform planting depths, provide for more uniform cultivation, improve farm machinery and/or irrigation equipment operation and efficiency.

**CONDITIONS WHERE PRACTICE APPLIES**

This practice applies to 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.

Land smoothing operations are typically classed as rough grading. Ordinarily, this does not require a complete grid survey. It does not apply to the regular maintenance on irrigated land or on land that has been modified using Precision Land Forming (462) or Irrigation Land Leveling (464).

**CRITERIA**

Land smoothing shall comply with all applicable federal, state and local laws, rules and regulations.

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

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. When improvement of surface water drainage is the primary

purpose the design grades shall provide adequate gradient to drain the effected area. Natural wetland areas shall not be drained.

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

The use of this practice on surface irrigation lands shall be limited to sites where leveling to the requirements of Practice Standard, Land Leveling (464), is not feasible because of soil depth, topography or other physical limitation.

**CONSIDERATIONS**

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

Effects on the water budget, especially on volumes and rates of runoff, infiltration, evaporation and on plant growth and transpiration because of changes in the volume of soil water.

Consider the effects on erosion and the movement of sediment and soluble substances carried by runoff.

Consider the effects on the use and management of nutrients and pesticides.

Consider the potential for earth moving to uncover or redistribute toxic materials, saline soils, hard pan, etc.

Effects on wetland hydrology and/or wetland wildlife habitat.

Potential effect to existing utilities.

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

**PLANS AND SPECIFICATIONS**

Plans and specifications for land smoothing shall describe the requirements for applying the practice to achieve its intended purpose.

## **OPERATION AND MAINTENANCE**

Operation and maintenance is generally not required for this practice, however gradients may need to be maintained when drainage or improved surface irrigation water distribution is the main purpose. Such maintenance shall include actions to insure that surface irregularities are maintained to the degree of smoothness required.