

# Effects of NRCS Conservation Practices - National

## Land Smoothing

Removing irregularities on the land surface

Code: 466

Units: ac.

Typical Landuse:

AL-Aso Land	
O-Other	
W-Water	
D-Developed	
FS-Farmstead	
P-Protected	
R-Range	
F-Forest	
C-Crop	

<u>Soil Erosion</u>	<u>Effect</u>	<u>Rationale</u>
Soil Erosion - Sheet and Rill Erosion	0	Reshaping the land surface may decrease the degree of slope, however, the slope length may be increased.
Soil Erosion - Wind Erosion	0	Not Applicable
Soil Erosion - Ephemeral Gully Erosion	1	Creating a more uniform surface may increase infiltration and decrease concentrated flow.
Soil Erosion - Classic Gully Erosion	0	Not Applicable
Soil Erosion - Streambank, Shoreline, Water Conveyance C	0	Not Applicable
<u>Soil Quality Degradation</u>		
Organic Matter Depletion	-2	The process of cuts and fills alters the soil profile and aerates the soil.
Compaction	-2	Equipment used for smoothing will cause compaction, which may be substantial in the short term.
Subsidence	0	Not Applicable
Concentration of Salts or Other Chemicals	-1	Cuts may alter the soil profile moving salts into the root zone from deeper layers.
<u>Excess Water</u>		
Excess Water - Seeps	2	Creates a more uniform surface and removal of depressions reduces seepage.
Excess Water - Runoff, Flooding, or Ponding	2	Creates a more uniform surface and removal of depressions improves drainage.
Excess Water - Seasonal High Water Table	2	Creates a more uniform surface and removal of depressions reduces subsurface water.
Excess Water - Drifted Snow	0	Not Applicable
<u>Insufficient Water</u>		
Insufficient Water - Inefficient Use of Irrigation Water	2	Improves uniformity of water distribution.
Insufficient Water - Inefficient Moisture Management	2	Improved water distribution.
<u>Water Quality Degradation</u>		
Pesticides in Surface Water	1	Removing irregularities on the land surface reduces runoff.
Pesticides in Groundwater	1	Removing irregularities on the land surface reduces deep percolation.
Nutrients in Surface water	1	The action smooths the surface which increases infiltration and reduces transport of nutrients to surface waters.
Nutrients in Groundwater	2	The action smooths the surface which reduces ponding and the transport of nutrients to groundwater.
Salts in Surface Water	0	Not Applicable
Salts in Groundwater	0	The action causes a decrease in ponding and a more uniform infiltration.
Excess Pathogens and Chemicals from Manure, Bio-solic	0	Not Applicable
Excess Pathogens and Chemicals from Manure, Bio-solic	0	Not Applicable

Excessive Sediment in Surface Water	1	Land surface is formed to a non-erosive grade.
Elevated Water Temperature	0	Not Applicable
Petroleum, Heavy Metals and Other Pollutants Transport	1	Smoothing uneven land allows the application of practices that can reduce sheet, rill and ephemeral gully erosion and increase infiltration.
Petroleum, Heavy Metals and Other Pollutants Transport	0	Not Applicable
<u>Air Quality Impacts</u>		
Emissions of Particulate Matter (PM) and PM Precursors	-1	Equipment operations temporarily produce particulate emissions and exhaust emissions. Also, disturbance of the soil surface can release particulate emissions and smooth land may have more susceptibility to PM emissions from wind erosion.
Emissions of Ozone Precursors	0	Not Applicable
Emissions of Greenhouse Gases (GHGs)	-1	Some carbon may be lost due to soil disturbance.
Objectionable Odors	0	Not Applicable
<u>Degraded Plant Condition</u>		
Undesirable Plant Productivity and Health	2	Site modification to improve irrigation application enhances the health and vigor of desired species.
Inadequate Structure and Composition	0	Not Applicable
Excessive Plant Pest Pressure	2	Improved irrigation efficiency improves crop health and vigor which decreases weed competition.
Wildfire Hazard, Excessive Biomass Accumulation	0	Not Applicable
<u>Fish and Wildlife - Inadequate Habitat</u>		
Inadequate Habitat - Food	0	Smoothing activities are temporary.
Inadequate Habitat - Cover/Shelter	0	Smoothing activities are temporary.
Inadequate Habitat - Water	0	Not Applicable
Inadequate Habitat - Habitat Continuity (Space)	-1	The action causes a decrease in diversity
<u>Livestock Production Limitation</u>		
Inadequate Feed and Forage	0	Not Applicable
Inadequate Shelter	0	Not Applicable
Inadequate Water	0	Not Applicable
<u>Inefficient Energy Use</u>		
Equipment and Facilities	0	Not Applicable
Farming/Ranching Practices and Field Operations	0	Not Applicable

<b><u>CPPE Practice Effects:</u></b>	<i>0 No Effect</i>
<i>5 Substantial Improvement</i>	<i>-1 Slight Worsening</i>
<i>4 Moderate to Substantial Improvement</i>	<i>-2 Slight to Moderate Worsening</i>
<i>3 Moderate Improvement</i>	<i>-3 Moderate Worsening</i>
<i>2 Slight to Moderate Improvement</i>	<i>-4 Moderate to Substantial Worsening</i>
<i>1 Slight Improvement</i>	<i>-5 Substantial Worsening</i>