

Effects of NRCS Conservation Practices - National

Surface Roughening

Performing tillage operations that create random roughness of the soil surface.

Code: 609

Units: ac.

Typical Landuse: C

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

<u>Soil Erosion</u>	<u>Effect</u>	<u>Rationale</u>
Soil Erosion - Sheet and Rill Erosion	1	Soil roughness created for wind erosion also temporarily reduces runoff and erosion from water
Soil Erosion - Wind Erosion	3	Clods and ridges from tillage temporarily reduce wind erosion
Soil Erosion - Ephemeral Gully Erosion	0	Not Applicable
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	0	Not Applicable
Compaction	0	Not Applicable
Subsidence	0	Not Applicable
Concentration of Salts or Other Chemicals	0	Not Applicable
<u>Excess Water</u>		
Excess Water - Seeps	0	Not Applicable
Excess Water - Runoff, Flooding, or Ponding	0	Not Applicable
Excess Water - Seasonal High Water Table	0	Not Applicable
Excess Water - Drifted Snow	0	Not Applicable
<u>Insufficient Water</u>		
Insufficient Water - Inefficient Use of Irrigation Water	0	Not Applicable
Insufficient Water - Inefficient Moisture Management	0	Not Applicable
<u>Water Quality Degradation</u>		
Pesticides in Surface Water	1	The action reduces soil erosion from wind.
Pesticides in Groundwater	0	Not Applicable
Nutrients in Surface water	0	Not Applicable
Nutrients in Groundwater	0	Not Applicable
Salts in Surface Water	0	Not Applicable
Salts in Groundwater	0	Not Applicable
Excess Pathogens and Chemicals from Manure, Bio-solic	0	Not Applicable
Excess Pathogens and Chemicals from Manure, Bio-solic	-1	Roughened surface may cause some modest infiltration increases, moving soluble contaminates and pathogens below the root zone.

Excessive Sediment in Surface Water	1	Formation of clods will reduce wind erosion.														
Elevated Water Temperature	0	Not Applicable														
Petroleum, Heavy Metals and Other Pollutants Transport	0	Not Applicable														
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<u>Air Quality Impacts</u>																
Emissions of Particulate Matter (PM) and PM Precursors	2	Increasing the random roughness of the soil surface reduces the potential for 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	0	Not Applicable														
Inadequate Structure and Composition	0	Not Applicable														
Excessive Plant Pest Pressure	0	Not Applicable														
Wildfire Hazard, Excessive Biomass Accumulation	0	Not Applicable														
<u>Fish and Wildlife - Inadequate Habitat</u>																
Inadequate Habitat - Food	0	Not Applicable														
Inadequate Habitat - Cover/Shelter	0	Not Applicable														
Inadequate Habitat - Water	1	Not Applicable														
Inadequate Habitat - Habitat Continuity (Space)	0	Not Applicable														
<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	-3	High Energy Requirement to Roughen the Surface														
Farming/Ranching Practices and Field Operations	-3	High Energy Requirement to Roughen the Surface														
		<table border="1"> <thead> <tr> <th colspan="2"><u>CPPE Practice Effects:</u></th> </tr> </thead> <tbody> <tr> <td>5 Substantial Improvement</td> <td>0 No Effect</td> </tr> <tr> <td>4 Moderate to Substantial Improvement</td> <td>-1 Slight Worsening</td> </tr> <tr> <td>3 Moderate Improvement</td> <td>-2 Slight to Moderate Worsening</td> </tr> <tr> <td>2 Slight to Moderate Improvement</td> <td>-3 Moderate Worsening</td> </tr> <tr> <td>1 Slight Improvement</td> <td>-4 Moderate to Substantial Worsening</td> </tr> <tr> <td></td> <td>-5 Substantial Worsening</td> </tr> </tbody> </table>	<u>CPPE Practice Effects:</u>		5 Substantial Improvement	0 No Effect	4 Moderate to Substantial Improvement	-1 Slight Worsening	3 Moderate Improvement	-2 Slight to Moderate Worsening	2 Slight to Moderate Improvement	-3 Moderate Worsening	1 Slight Improvement	-4 Moderate to Substantial Worsening		-5 Substantial Worsening
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