

United States Department of Agriculture
 Natural Resources Conservation Service

03/25/2002

HIGHLY ERODIBLE LAND CLASSIFICATION REPORT

White Sands Missile Range, New Mexico, Parts of Dona Ana, Lincoln, Otero, Sierra and Socorro Counties: Detailed Soil Map Legend

FOTG - II Table HEL

Map Symbol	Soil Mapunit Name	HEL Classification		
		Wind	Water	MU
Ac	ACTIVE DUNE LAND, GYPSUM			
AD	ALADDIN ASSOCIATION			
BD	BERINO-DONA ANA ASSOCIATION			
Do	DEAMA-ROCK OUTCROP COMPLEX			
DP	DONA ANA-PAJARITO-BLUEPOINT ASSOCIATION			
Du	DUNE LAND-DONA ANA COMPLEX			
DY	DUNE LAND-YESUM ASSOCIATION			
Gr	GILLAND-ROCK OUTCROP COMPLEX			
Gs	GYPSUM LAND, HUMMOCKY			
Gu	GYPSUM LAND, LEVEL			
Gv	GYPSUM ROCK LAND			
InT	INTERMITTENT LAKES			
LA	LA FONDA ASSOCIATION			
Lf	LAVA FLOWS			
Lr	LOZIER-ROCK OUTCROP COMPLEX			
MA	MARCIAL-UBAR ASSOCIATION			
Me	MEAD SILT LOAM			
MG	MIMBRES-GLENDALE ASSOCIATION			
NT	NICKEL-TENCEE ASSOCIATION			
OB	ONITE-BLUEPOINT-WINK ASSOCIATION			
Os	OSCURA SILTY CLAY			
RK	ROCKLAND COOL			
RL	ROCK LAND, WARM			
SH	SHALE ROCK LAND			
SP	SONOITA-PINALENO-ALADDIN ASSOCIATION			
SR	SOTIM-RUSSLER ASSOCIATION			
TC	TENCEE-NICKEL ASSOCIATION, GENTLY SLOPING			
TK	TENCEE-NICKEL ASSOCIATION, STEEP			
Ye	YESUM VERY FINE SANDY LOAM			
YH	YESUM-HOLLOMAN ASSOCIATION			

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		R=	C=	MU
		Wind	Water	

Highly Erodible Land

General

The basis for identifying highly erodible land is the erodibility index of a soil map unit. The erodibility index of a soil is determined by dividing the potential erodibility for each soil by the soil loss tolerance (T) value established for the soil. The T value represents the maximum annual rate of soil erosion that could take place without causing a decline in long-term productivity. A soil map unit with an erodibility index of 8 or more is a highly erodible soil map unit.

Water Erosion

Potential erodibility for sheet and rill erosion is estimated by multiplying the following factors of the Universal Soil Loss Equation (USLE):

1. Rainfall and runoff factor (R)
2. Susceptibility of the soil to water erosion (K)
3. Combined effects of slope length and steepness (LS)

The erodibility index for sheet and rill erosion is represented by the formula $RKLS/T$. A soil map unit is highly erodible if the LS factor for the shortest length and minimum percent of slope is used and the $RKLS/T$ value equals or exceeds 8.

A soil map unit is potentially highly erodible if: (1) the $RKLS/T$ value using the minimum LS factor is less than 8 and (2) the $RKLS/T$ value using the maximum LS factor is equal to or greater than 8.

Wind Erosion

Potential erodibility from wind erosion is estimated by multiplying the following factors of the Wind Erosion Equation (WEQ).

1. Climatic characterization of windspeed and surface soil moisture (C)
2. The susceptibility of the soil to wind erosion (I)

The erodibility index for wind erosion is represented by the formula CI/T . A soil map unit is highly erodible if the CI/T value equals or exceeds 8.