

Section II-iii-N

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.

Highly Erodible Soils

When surface vegetation is removed from large areas of land, soil erosion often results. Sediment, the result of erosion, has a number of adverse effects as a pollutant. In suspension it reduces the amount of sunlight available to aquatic plants, covers fish spawning areas and food supplies and clogs gills of fish. Phosphorus moves into receiving waters attached to soil particles. Excessive quantities can cause algae blooms. Sediment fills drainage ditches, road ditches and stream channels and shortens the life of reservoirs.

Highly erodible soils are those soils that have a potential to erode at a rate far greater than what is considered tolerable soil loss. The potential erodibility of a soil takes into consideration a) rainfall and runoff, b) the susceptibility of the soil to erosion and c) the combined effects of slope length and steepness. A highly erodible soil has a potential erodibility that would cause a considerable decline in long term productivity of that soil as well as possible negative effects on water quality.

HIGHLY ERODIBLE SOILS IN OXFORD COUNTY, MAINE

The information in this table indicates the dominant soil condition but does not eliminate the need for onsite investigation. This list of HEL soils is a frozen list as of 1987)

<u>Publication Symbol</u>	<u>Map Unit Name</u>
AbE	Abram-rock outcrop complex, 15 to 80 percent slopes
ACE	Abram-rock outcrop-lyman complex, very hilly
AdD	Adams loamy sand, 15 to 25 percent slopes
AED	Adams loamy sand, moderately steep
AHD	Adams-hermon association, moderately steep
BeD	Becket fine sandy loam, 15 to 25 percent slopes
BkD	Becket fine sandy loam, 15 to 35 percent slopes, very stony
CgD	Colton gravelly loamy sand, 15 to 25 percent slopes
CHD	Colton-adams association, moderately steep
DsC	Dixfield fine sandy loam, 8 to 20 percent slopes, very stony
DUD	Dixfield-colonel association, moderately steep, very stony
DXD	Dixfield-marlow association, moderately steep, very stony
HeD	Hermon sandy loam, 15 to 25 percent slopes
HmD	Hermon sandy loam, 15 to 35 percent slopes, very stony
HsD	Hermon sandy loam, 15 to 35 percent slopes, extremely stony
HTD	Hermon and monadnock soils, moderately steep, very stony
HTE	Hermon and monadnock soils, steep, very stony
LtD	Lyman-tunbridge complex, 15 to 35 percent slopes, very stony
LUD	Lyman-tunbridge-becket complex, hilly, very stony
LUE	Lyman-tunbridge-becket complex, very hilly, very stony
LWD	Lyman-tunbridge-monadnock complex, hilly, very stony
LWE	Lyman-tunbridge-monadnock complex, very hilly, very stony
MaD	Marlow fine sandy loam, 15 to 25 percent slopes
MeD	Marlow fine sandy loam, 15 to 35 percent slopes, very stony
MnD	Monadnock fine sandy loam, 15 to 25 percent slopes
MvD	Monadnock fine sandy loam, 15 to 35 percent slopes, very stony
RCE	Ricker-saddleback-rock outcrop complex, very hilly

Publication
Symbol

Map Unit Name

RNE	Rock outcrop-ricker complex, very hilly
SAD	Saddleback-ricker complex, moderately steep
SAE	Saddleback-ricker complex, steep
SnD	Skerry fine sandy loam, 15 to 25 percent slopes, very stony
SOD	Skerry-becket association, moderately steep
SRD	Skerry-becket association, moderately steep, very stony
STD	Skerry-colonel association, moderately steep, very stony
TyD	Tunbridge-lyman complex, 15 to 35 percent slopes