

## 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 CUMBERLAND COUNTY AND PARTS OF 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 frozen as of 1987.

| Publication<br>Symbol | Map Unit Name                                                  |
|-----------------------|----------------------------------------------------------------|
| 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                |
| BgC2                  | Belgrade very fine sandy loam, 8 to 15 percent slopes, eroded  |
| BkD                   | Becket fine sandy loam, 15 to 35 percent slopes, very stony    |
| BuC2                  | Buxton silt loam, 8 to 15 percent slopes, eroded               |
| CaC                   | Canaan sandy loam, 8 to 15 percent slopes                      |
| CeE                   | Canaan very rocky sandy loam, 20 to 60 percent slopes          |
| DsC                   | Dixfield fine sandy loam, 8 to 20 percent slopes, very stony   |
| DXD                   | Dixfield-marlow association, moderately steep, very stony      |
| HfC2                  | Hartland very fine sandy loam, 8 to 15 percent slopes, eroded  |
| HfD2                  | Hartland very fine sandy loam, 15 to 25 percent slopes, eroded |
| HgD                   | Hermon sandy loam, 15 to 25 percent slopes                     |
| HhD                   | Hermon very stony sandy loam, 15 to 35 percent slopes          |
| HkE                   | Hermon extremely stony sandy loam, 20 to 60 percent slopes     |
| HlD                   | Hinckley gravelly sandy loam, 15 to 25 percent slopes          |
| HmD                   | Hermon sandy loam, 15 to 35 percent slopes, very stony         |
| HnD                   | Hinckley-suffield complex, 15 to 25 percent slopes             |
| HrC                   | Hollis fine sandy loam, 8 to 15 percent slopes                 |
| HrD                   | Hollis fine sandy loam, 15 to 25 percent slopes                |
| HsE                   | Hollis very rocky fine sandy loam, 20 to 35 percent slopes     |
| 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      |

Publication  
Symbol

Map Unit Name

|      |                                                                |
|------|----------------------------------------------------------------|
| LyC  | Lyman fine sandy loam, 8 to 15 percent slopes                  |
| LzC  | Lyman very rocky fine sandy loam, 8 to 20 percent slopes       |
| LzE  | Lyman very rocky fine sandy loam, 20 to 45 percent slopes      |
| MvD  | Monadnock fine sandy loam, 15 to 35 percent slopes, very stony |
| PbD  | Paxton fine sandy loam, 15 to 25 percent slopes                |
| PfD  | Paxton very stony fine sandy loam, 15 to 25 percent slopes     |
| 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       |
| SuC2 | Suffield silt loam, 8 to 15 percent slopes, eroded             |
| SuD2 | Suffield silt loam, 15 to 25 percent slopes, eroded            |
| SuE2 | Suffield silt loam, 25 to 45 percent slopes, eroded            |
| TyD  | Tunbridge-lyman complex, 15 to 35 percent slopes               |