MAP UNITS OF HIGHLY ERODIBLE LAND

INTRODUCTION

Natural processes continually create new soil from the raw underlying parent material or from bedrock. For most soils in the State, these processes offset about 3 tons per acre of erosion each year. Erosion slower than the rate of replacement is considered "tolerable". Each soil is assigned a tolerance value based mainly on the thickness of the soil above bedrock or unaltered parent material.

Soil Conservation Service Soil Scientists and Soil Conservationists determine if a soil or map unit is highly erodible or potentially highly erodible due to sheet and rill erosion. This is done by using the Universal Soil Loss Equation (USLE). The USLE relates the effects of rainfall, soil characteristics, and length and steepness of slope to the soil's tolerable erosion rate by water.

DEFINITION OF HIGHLY ERODIBLE SOIL

A highly erodible soil/map unit is a soil with a maximum potential for erosion that equals or exceeds eight times the tolerable erosion rate. This can be represented by the formula - $RKLS/T \geq 8$. The formula does not consider crop management or conservation practices, which influence the actual erosion rate.

CRITERIA FOR HIGHLY ERODIBLE SOIL MAP UNITS

The procedure used to determine whether a given soil map unit qualifies as highly erodible land or potentially highly erodible land follows:

Step 1. For each soil map unit in the county soil legend, calculate the minimum LS value required for $RKLS/T \geq 8$ by solving for LS, ie. $LS = 8T/RK$.

Step 2. For the specific combinations of slope and steepness specified in Steps 3 and 4, obtain LS values from table 3 in the Appendices (from Agriculture Handbook 537, December, 1978).

Step 3. A soil map unit qualifies as highly erodible land if the LS value for the shortest length and minimum percent of slope expected for the unit equals or exceeds the minimum value calculated in Step 1, ie. $LS = 8T/RK$. See Appendices A-F.

Step 4. A soil map unit qualifies as potentially highly erodible land if --

a. The LS value for the shortest length and minimum percent of slope expected for the unit is less than 8T/RK and

b. The LS value for the longest length and maximum percent of slope expected for the unit exceeds 8T/RK.

See Apendices A-F.

This information is to be used in conjunction with published county soil surveys.

List of Map Units that Qualify as Highly Erodible Land

Fairfield County, Connecticut
(Correlated and Published, 1981)

AfC	Agawam fine sandy loam, 8 to 15 percent slopes
CfC	Charlton fine sandy loam, 8 to 15 percent slopes
CfD	Charlton fine sandy loam, 15 to 25 percent slopes
GgC	Georgia silt loam, 8 to 15 percent slopes
HkC	Hinckley gravelly sandy loam, 8 to 15 percent slopes
HkD	Hinckley gravelly sandy loam, 15 to 35 percent slopes
PbC	Paxton fine sandy loam, 8 to 15 percent slopes
PbD	Paxton fine sandy loam, 15 to 25 percent slopes
SnC	Stockbridge loam, 8 to 15 percent slopes
SnD	Stockbridge loam, 15 to 25 percent slopes
WxC	Woodbridge fine sandy loam, 8 to 15 percent slopes

List of Map Units that Qualify as Highly Erodible Land

Hartford County, Connecticut
(Correlated and Published, 1962)

AfC	Agawam fine sandy loam, 8 to 15 percent slopes
AgC	Agawam very fine sandy loam, 8 to 15 percent slopes
BcC	Berlin silt loam, 8 to 15 percent slopes
BrC	Broadbrook silt loam, 8 to 15 percent slopes
BrC2	Broadbrook silt loam, 8 to 15 percent slopes, eroded
BrD	Broadbrook silt loam, 15 to 25 percent slopes
BtC	Brookfield fine sandy loam, 8 to 15 percent slopes
BxC	Buxton silt loam, 8 to 15 percent slopes
CaC	Charlton fine sandy loam, 8 to 15 percent slopes
CaD	Charlton fine sandy loam, 15 to 25 percent slopes
CsC	Cheshire fine sandy loam, 8 to 15 percent slopes
CsC2	Cheshire fine sandy loam, 8 to 15 percent slopes, eroded
CsD2	Cheshire fine sandy loam, 15 to 25 percent slopes, eroded
EsC	Enfield silt loam, 8 to 15 percent slopes
EsC2	Enfield silt loam, 8 to 15 percent slopes, eroded
GcC	Gloucester fine sandy loam, 8 to 15 percent slopes
GcD	Gloucester fine sandy loam, 15 to 25 percent slopes
HfC	Hartford sandy loam, 8 to 15 percent slopes
MrC	Merrimac fine sandy loam, 8 to 15 percent slopes
MyC	Merrimac sandy loam, 8 to 15 percent slopes
NaC	Narragansett silt loam, 8 to 15 percent
NaC2	Narragansett silt loam, 8 to 15 percent slopes, eroded
NaD	Narragansett silt loam, 15 to 25 percent slopes
PaC	Paxton fine sandy loam, reddish substratum, 8 to 15 percent slopes
PaD	Paxton fine sandy loam, reddish substratum, 15 to 25 percent slopes
PbC	Paxton loam, 8 to 15 percent slopes
PbD2	Paxton loam, 15 to 25 percent slopes, eroded
PuC	Poquonock sandy loam, 8 to 15 percent slopes
WkC	Wethersfield loam, 8 to 15 percent slopes
WkC2	Wethersfield loam, 8 to 15 percent slopes, eroded
WkD	Wethersfield loam, 15 to 25 percent slopes
WkD3	Wethersfield loam, 15 to 25 percent slopes, severely eroded

List of Map Units that Qualify as Highly Erodible Land

Litchfield County, Connecticut
(Correlated and Published, 1970)

AnC	Amenia silt loam, 8 to 15 percent slopes
BoC	Branford loam, 8 to 15 percent slopes
BqC	Bernardston silt loam, 8 to 15 percent slopes
CaC	Charlton fine sandy loam, 8 to 15 percent slopes
CaC2	Charlton fine sandy loam, 8 to 15 percent slopes, eroded
CaD	Charlton fine sandy loam, 15 to 25 percent slopes
CaE	Charlton fine sandy loam, 25 to 35 percent slopes
CwC	Copake loam, 8 to 15 percent slopes
DoC	Dover fine sandy loam, 8 to 15 percent slopes
DoD	Dover fine sandy loam, 15 to 25 percent slopes
EsC	Enfield silt loam, 8 to 15 percent slopes
GaC	Gloucester sandy loam, 8 to 15 percent slopes
GaD	Gloucester sandy loam, 15 to 25 percent slopes
HbC	Hartland silt loam, 8 to 15 percent slopes
MyC	Merrimac sandy loam, 8 to 15 percent slopes
PbC	Paxton fine sandy loam, 8 to 15 percent slopes
PbC2	Paxton fine sandy loam, 8 to 15 percent slopes, eroded
PbD	Paxton fine sandy loam, 15 to 25 percent slopes
PbD2	Paxton fine sandy loam, 15 to 25 percent slopes, eroded
PbE	Paxton fine sandy loam, 25 to 35 percent slopes
SnC	Stockbridge loam, 8 to 15 percent slopes
SnC2	Stockbridge loam, 8 to 15 percent slopes, eroded
SnD2	Stockbridge loam, 15 to 25 percent slopes, eroded
WxC	Woodbridge fine sandy loam, 8 to 15 percent slopes

List of Map Units that Qualify as Highly Erodible Land

Middlesex County, Connecticut
(Correlated and Published, 1980)

BoC	Branford silt loam, 8 to 15 percent slopes
CsC	Cheshire silt loam, 8 to 15 percent slopes
HME	Hinckley and Manchester soils, 15 to 45 percent slopes
PbC	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes
PbD	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes
WkC	Wethersfield loam, 8 to 15 percent slopes
WkD	Wethersfield loam, 15 to 35 percent slopes
YaC	Yalesville fine sandy loam, 8 to 15 percent slopes

List of Map Units that Qualify as Highly Erodible Land

New Haven County, Connecticut
(Correlated and Published, 1979)

AfC	Agawam fine sandy loam, 8 to 15 percent slopes
BoC	Branford silt loam, 8 to 15 percent slopes
CfC	Charlton fine sandy loam, 8 to 15 percent slopes
CfD	Charlton fine sandy loam, 15 to 25 percent slopes
CsC	Cheshire fine sandy loam, 8 to 15 percent slopes
CsD	Cheshire fine sandy loam, 15 to 25 percent slopes
HkC	Hinckley gravelly sandy loam, 8 to 15 percent slopes
HME	Hinckley and Manchester soils, 15 to 35 percent slopes
MgC	Manchester gravelly sandy loam, 8 to 15 percent slopes
PbC	Paxton fine sandy loam, 8 to 15 percent slopes
PbD	Paxton fine sandy loam, 15 to 25 percent slopes
WkC	Wethersfield loam, 8 to 15 percent slopes
WkD	Wethersfield loam, 15 to 25 percent slopes
YaC	Yalesville fine sandy loam, 8 to 15 percent slopes

List of Map Units that Qualify as Highly Erodible Land

New London County, Connecticut
(Correlated and Published, 1983)

CbC	Canton and Charlton fine sandy loams, 8 to 15 percent slopes
CbD	Canton and Charlton fine sandy loams, 15 to 25 percent slopes
HkD	Hinckley gravelly sandy loam, 15 to 35 percent slopes
MyC	Merrimac sandy loam, 8 to 15 percent slopes
PbC	Paxton and Montauk fine sandy loams, 8 to 15 percent slopes
PbD	Paxton and Montauk fine sandy loams, 15 to 25 percent slopes
WxC	Woodbridge fine sandy loam, 8 to 15 percent slopes

List of Map Units that Qualify as Highly Erodible Land

Tolland County, Connecticut
(Correlated and Published, 1966)

CaC	Charlton fine sandy loam, 8 to 15 percent slopes
CaD	Charlton fine sandy loam, 15 to 25 percent slopes
CsC	Cheshire fine sandy loam, 8 to 15 percent slopes
CsC2	Cheshire fine sandy loam, 8 to 15 percent slopes, eroded
CsD2	Cheshire fine sandy loam, 15 to 25 percent slopes, eroded
GaC	Gloucester sandy loam, 8 to 15 percent slopes
NaC	Narragansett silt loam, 8 to 15 percent slopes
PbC	Paxton fine sandy loam, 8 to 15 percent slopes
PbD	Paxton fine sandy loam, 15 to 25 percent slopes

List of Map Units that Qualify as Highly Erodible Land

Windham County, Connecticut
(Correlated and Published, 1981)

CbC	Canton and Charlton fine sandy loams, 8 to 15 percent slopes
HkD	Hinckley gravelly sandy loam, 15 to 40 percent slopes
PbC	Paxton fine sandy loam, 8 to 15 percent slopes
PbD	Paxton fine sandy loam, 15 to 25 percent slopes
WxC	Woodbridge fine sandy loam, 8 to 15 percent slopes

List of Map Units that Qualify as Potentially Highly Erodible Land

Hartford County, Connecticut
(Correlated and Published, 1962)

AcB	Acton fine sandy loam, 3 to 8 percent slopes
AfB	Agawam fine sandy loam, 3 to 8 percent slopes
AgB	Agawam very fine sandy loam, 3 to 8 percent slopes
BaB	Belgrade silt loam, 3 to 8 percent slopes
BbB	Belgrade silt loam, reddish variant, 3 to 8 percent slopes
BcB	Berlin silt loam, 3 to 8 percent slopes
BhB	Birchwood fine sandy loam, 3 to 8 percent slopes
BoB	Branford silt loam, 3 to 8 percent slopes
BrB	Broadbrook silt loam, 3 to 8 percent slopes
BrB2	Broadbrook silt loam, 3 to 8 percent slopes, eroded
BtB	Brookfield fine sandy loam, 3 to 8 percent slopes
BxB	Buxton silt loam, 3 to 8 percent slopes
CaB	Charlton fine sandy loam, 3 to 8 percent slopes
CsB	Cheshire fine sandy loam, 3 to 8 percent slopes
CsB2	Cheshire fine sandy loam, 3 to 8 percent slopes, eroded
EnB	Elmwood sandy loam, 3 to 8 percent slopes
EoB	Elmwood very fine sandy loam, 3 to 8 percent slopes
EsB	Enfield silt loam, 3 to 8 percent slopes
EsB2	Enfield silt loam, 3 to 8 percent slopes, eroded
GcB	Gloucester fine sandy loam, 3 to 8 percent slopes
HdB	Hartford fine sandy loam, 3 to 8 percent slopes
HfB	Hartford sandy loam, 3 to 8 percent slopes
HkC	Hinckley gravelly sandy loam, 3 to 15 percent slopes
HnC	Hinckley loamy sand, 3 to 15 percent slopes
LoB	Ludlow loam, 3 to 15 percent slopes
McC	Manchester gravelly loam, 3 to 15 percent slopes
MgC	Manchester gravelly sandy loam, 3 to 15 percent slopes
MhC	Manchester loamy sand, 3 to 15 percent slopes
MmB	Melrose sandy loam, 3 to 8 percent slopes
MnB	Melrose very fine sandy loam, 3 to 8 percent slopes
MrB	Merrimac fine sandy loam, 3 to 8 percent slopes
MyB	Merrimac sandy loam, 3 to 8 percent slopes
NaB	Narragansett silt loam, 3 to 8 percent slopes
NaB2	Narragansett silt loam, 3 to 8 percent slopes, eroded
NnB	Ninigret fine sandy loam, 3 to 8 percent slopes
NsB	Ninigret very fine sandy loam, 3 to 8 percent slopes

PaB	Paxton fine sandy loam, 3 to 15 percent slopes
PbB	Paxton loam, 3 to 8 percent slopes
PnC	Penwood loamy sand, 8 to 15 percent slopes
PpC	Poquonock loamy sand, 8 to 15 percent slopes
PuB	Poquonock sandy loam, 3 to 8 percent slopes
RaB	Rainbow silt loam, 3 to 8 percent slopes
SvB	Sutton loam, 3 to 8 percent slopes
TsB	Tisbury silt loam, 3 to 8 percent slopes
WeB	Wapping silt loam, 3 to 8 percent slopes
WgB	Watchaug loam, 3 to 8 percent slopes
WkB	Wethersfield loam, 3 to 8 percent slopes
WkB2	Wethersfield loam, 3 to 8 percent slopes, eroded
WuC	Windsor loamy coarse sand, 8 to 15 percent slopes
WvC	Windsor loamy fine sand, 8 to 15 percent slopes
WxB	Woodbridge loam, 3 to 8 percent slopes
WyB	Woodbridge loam, reddish substratum, 3 to 8 percent slopes

List of Map Units that Qualify as Potentially Highly Erodible Land

Litchfield County, Connecticut
(Correlated and Published, 1970)

AnB	Amenia silt loam, 3 to 8 percent slopes
BaB	Belgrade silt loam, 3 to 8 percent slopes
BoB	Branford loam, 3 to 8 percent slopes
BqB	Bernardston silt loam, 3 to 8 percent slopes
CaB	Charlton fine sandy loam, 3 to 8 percent slopes
CaB2	Charlton fine sandy loam, 3 to 8 percent slopes, eroded
CwB	Copake loam, 3 to 8 percent slopes
DoB	Dover fine sandy loam, 3 to 8 percent slopes
EsB	Enfield silt loam, 3 to 8 percent slopes
GaB	Gloucester sandy loam, 3 to 8 percent slopes
GrC	Groton gravelly sandy loam, 3 to 15 percent slopes
HbB	Hartland silt loam, 3 to 8 percent slopes
HeB	Hero loam, 3 to 8 percent slopes
HkC	Hinckley gravelly sandy loam, 3 to 15 percent slopes
HmC	Hinckley gravelly loamy sand, 3 to 15 percent slopes
MyB	Merrimac sandy loam, 3 to 8 percent slopes
PbB	Paxton fine sandy loam, 3 to 8 percent slopes
PbB2	Paxton fine sandy loam, 3 to 8 percent slopes, eroded
SnB	Stockbridge loam, 3 to 8 percent slopes
SnB2	Stockbridge loam, 3 to 8 percent slopes, eroded
SvB	Sutton fine sandy loam, 3 to 8 percent slopes
TwB	Tisbury and Sudbury soils, 3 to 8 percent slopes
WvC	Windsor loamy fine sand, 8 to 15 percent slopes
WxB	Woodbridge fine sandy loam, 3 to 8 percent slopes

List of Map Units that Qualify as Potentially Highly Erodible Land

Middlesex County, Connecticut
(Correlated and Published, 1980)

AfB	Agawam fine sandy loam, 3 to 8 percent slopes
BoB	Branford silt loam, 3 to 8 percent slopes
CbB	Canton and Charlton fine sandy loams, 3 to 8 percent slopes
CsB	Cheshire silt loam, 3 to 8 percent slopes
HfB	Hartford sandy loam, 3 to 8 percent slopes
HkC	Hinckley gravelly sandy loam, 3 to 15 percent slopes
LpB	Ludlow silt loam, 3 to 8 percent slopes
MgC	Manchester gravelly sandy loam, 3 to 15 percent slopes
MyB	Merrimac sandy loam, 3 to 10 percent slopes
PbB	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes
WkB	Wethersfield loam, 3 to 8 percent slopes
WxB	Woodbridge fine sandy loam, 3 to 8 percent slopes
YaB	Yalesville fine sandy loam, 3 to 8 percent slopes

List of Map Units that Qualify as Potentially Highly Erodible Land

New Haven County, Connecticut
(Correlated and Published, 1979)

AfB	Agawam fine sandy loam, 3 to 8 percent slopes
BoB	Branford silt loam, 3 to 8 percent slopes
BrC	Branford-Holyoke silt loams, 3 to 15 percent slopes
CfB	Charlton fine sandy loam, 3 to 8 percent slopes
CsB	Cheshire fine sandy loam, 3 to 8 percent slopes
HcB	Haven silt loam, 3 to 8 percent slopes
HkB	Hinckley gravelly sandy loam, 3 to 8 percent slopes
LpB	Ludlow silt loam, 3 to 8 percent slopes
MgB	Manchester gravelly sandy loam, 3 to 8 percent slopes
PbB	Paxton fine sandy loam, 3 to 8 percent slopes
SvB	Sutton fine sandy loam, 3 to 8 percent slopes
WcB	Watchaug fine sandy loam, 3 to 8 percent slopes
WkB	Wethersfield loam, 3 to 8 percent slopes
WxB	Woodbridge fine sandy loam, 3 to 8 percent slopes
YaB	Yalesville fine sandy loam, 3 to 8 percent slopes

List of Map Units that Qualify as Potentially Highly Erodible Land

New London County, Connecticut
(Correlated and Published, 1983)

AfB	Agawam fine sandy loam, 3 to 8 percent slopes
BrB	Broadbrook silt loam, 3 to 8 percent slopes
CbB	Canton and Charlton fine sandy loams, 3 to 8 percent slopes
HcB	Haven silt loam, 3 to 8 percent slopes
HkC	Hinckley gravelly sandy loam, 3 to 15 percent slopes
MyB	Merrimac sandy loam, 3 to 8 percent slopes
NaB	Narragansett silt loam, 3 to 8 percent slopes
PbB	Paxton and Montauk fine sandy loams, 3 to 8 percent slopes
RaB	Rainbow silt loam, 3 to 8 percent slopes
SvB	Sutton fine sandy loam, 3 to 8 percent slopes
WxB	Woodbridge fine sandy loam, 3 to 8 percent slopes

List of Map Units that Qualify as Potentially Highly Erodible Land

Tolland County, Connecticut
(Correlated and Published, 1966)

AbB	Agawam sandy loam, 3 to 8 percent slopes
BhB	Birchwood sandy loam, 3 to 8 percent slopes
BrB	Broadbrook silt loam, 3 to 8 percent slopes
BtB	Brookfield fine sandy loam, 3 to 8 percent slopes
CaB	Charlton fine sandy loam, 3 to 8 percent slopes
CsB	Cheshire fine sandy loam, 3 to 8 percent slopes
EsB	Enfield silt loam, 3 to 8 percent slopes
EtB	Enfield silt loam, shallow, 3 to 8 percent slopes
GaB	Gloucester sandy loam, 3 to 8 percent slopes
HdB	Hartford fine sandy loam, 3 to 8 percent slopes
HfB	Hartford sandy loam, 3 to 8 percent slopes
HkC	Hinckley gravelly sandy loam, 3 to 15 percent slopes
HmC	Hinckley gravelly loamy sand, 3 to 15 percent slopes
JaC	Jaffrey gravelly sandy loam and loamy sand, 3 to 15 percent slopes
MgC	Manchester gravelly sandy loam, 3 to 15 percent slopes
MhC	Manchester gravelly loamy sand, 3 to 15 percent slopes
MrB	Merrimac fine sandy loam, 3 to 8 percent slopes
MyB	Merrimac sandy loam, 3 to 8 percent slopes
NaB	Narragansett silt loam, 3 to 8 percent slopes
NrB	Ninigret sandy loam, 3 to 8 percent slopes
PbB	Paxton fine sandy loam, 3 to 8 percent slopes
PuB	Poquonock sandy loam, 3 to 8 percent slopes
RaB	Rainbow silt loam, 3 to 8 percent slopes
SvB	Sutton fine sandy loam, 3 to 8 percent slopes
WeB	Wapping silt loam, 3 to 8 percent slopes
WgB	Watchaug fine sandy loam, 3 to 8 percent slopes
WvC	Windsor loamy sand, 8 to 15 percent slopes
WxB	Woodbridge fine sandy loam, 3 to 8 percent slopes

List of Map Units that Qualify as Potentially Highly Erodible Land

Windham County, Connecticut
(Correlated and Published, 1981)

AfB	Agawam fine sandy loam, 3 to 8 percent slopes
CbB	Canton and Charlton fine sandy loams, 3 to 8 percent slopes
HkC	Hinckley gravelly sandy loam, 3 to 15 percent slopes
MyB	Merrimac sandy loam, 3 to 8 percent slopes
PbB	Paxton fine sandy loam, 3 to 8 percent slopes
SvB	Sutton fine sandy loam, 3 to 8 percent slopes
WxB	Woodbridge fine sandy loam, 3 to 8 percent slopes

List of Map Units that Qualify as Potentially Highly Erodible Land

Fairfield County, Connecticut
(Correlated and Published, 1981)

AfB	Agawam fine sandy loam, 3 to 8 percent slopes
CfB	Charlton fine sandy loam, 3 to 8 percent slopes
GgB	Georgia silt loam, 3 to 8 percent slopes
HcB	Haven silt loam, 3 to 8 percent slopes
HkB	Hinckley gravelly sandy loam, 3 to 8 percent slopes
MyB	Merrimac sandy loam, 2 to 8 percent slopes
NeB	Nellis fine sandy loam, 3 to 10 percent slopes
PbB	Paxton fine sandy loam, 3 to 8 percent slopes
SnB	Stockbridge loam, 3 to 8 percent slopes
SvB	Sutton fine sandy loam, 3 to 8 percent slopes
WxB	Woodbridge fine sandy loam, 3 to 8 percent slopes