Highly Erodible Soil Map Unit List - Red Lake County, MN

C= 0.25

R= 80

This data is only to be used for HEL determinations

This is the "frozen data" based on 01/01/1990 information. Values other than "HELC" should only be used for PHEL.

Mapunit Symbol	Mapunit Name	HELC	Т	К	I	Slope Percent	Slope Length	LS
B109A	Bowstring and Fluvaquents soils, mlra 88, 0 to 2 percent slopes, frequently flooded	NHEL	5		134			
B200A	Garnes fine sandy loam, 0 to 3 percent slopes	NHEL	5	0.32	48			
B201A	Chilgren fine sandy loam, 0 to 2 percent slopes	NHEL	5	0.28	56			
B202A	Cathro muck, occasionally ponded, 0 to 1 percent slopes	NHEL	5		134			
B203A	Northwood muck, depressional, mlra 88, 0 to 1 percent slopes	NHEL	5		134			
B204A	Roliss loam, mlra 88, 0 to 2 percent slopes	NHEL	5	0.28	86			
B205A	Berner muck, depressional, mlra 88, 0 to 1 percent slopes	NHEL	5		134			
B206A	Hamre muck, depressional, mlra 88, 0 to 1 percent slopes	NHEL	5		134			
I1A	Augsburg loam, 0 to 1 percent slopes	NHEL	4	0.28	86			
I2A	Augsburg very fine sandy loam, clayey till substratum, 0 to 1 percent slopes	NHEL	4	0.2	86			
I3A	Berner muck, 0 to 1 percent slopes	NHEL	5		134			
14A	Berner, Rosewood, and Strathcona soils, seepy, 0 to 2 percent slopes	NHEL	3	0.24	86			
15A	Borup loam, 0 to 1 percent slopes	NHEL	4	0.28	86			

16A	Borup very fine sandy loam, 0 to 1 percent slopes	NHEL	4	0.2	86		
17A	Bowstring-Fluvaquents complex, 0 to 2 percent slopes, frequently flooded	NHEL	5		134		
I8A	Cathro muck, 0 to 1 percent slopes	NHEL	5		134		
19A	Clearwater clay, 0 to 1 percent slopes	NHEL	5	0.28	86		
I10A	Clearwater mucky clay loam, 0 to 1 percent slopes	NHEL	5	0.28	86		
I11A	Deerwood muck, 0 to 1 percent slopes	HEL	3		134		
I12A	Eckvoll loamy fine sand, 0 to 2 percent slopes	NHEL	5	0.17	134		
I13A	Espelie fine sandy loam, clayey till substratum, 0 to 1 percent slopes	NHEL	4	0.2	86		
I14B	Fairdale silt loam, 1 to 6 percent slopes, occasionally flooded	NHEL	5	0.24	56		
l14D	Fairdale silt loam, 6 to 15 percent slopes, occasionally flooded	NHEL	5	0.24	56		
I15A	Hecla loamy fine sand, 0 to 2 percent slopes	NHEL	5	0.17	134		
116F	Fluvaquents, frequently flooded-Hapludolls complex, 0 to 30 percent slopes	NHEL	5	0.24	56		
117A	Foldahl fine sandy loam, loamy till substratum, 0 to 3 percent slopes	NHEL	5	0.2	86		
I18A	Foldahl loamy fine sand, loamy till substratum, 0 to 3 percent slopes	NHEL	5	0.17	86		
I19A	Foxhome sandy loam, 0 to 2 percent slopes	NHEL	3	0.2	86		
120A	Foxlake loam, 0 to 1 percent slopes	NHEL	5	0.28	86		
I21A	Fram loam, 1 to 3 percent slopes	NHEL	5	0.28	86		

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Glyndon loam, Aspen Parkland, 0 to 2 percent slopes	NHEL	5	0.28	86			
Glyndon very fine sandy loam, 0 to 2 percent slopes	NHEL	5	0.2	86			
Grimstad fine sandy loam, 0 to 2 percent slopes, aspen parkland	NHEL	5	0.2	86			
Hamar loamy fine sand, Aspen Parkland, 0 to 1 percent slopes	NHEL	5	0.17	134			
Hamerly loam, 0 to 2 percent slopes	NHEL	5	0.28	86			
Hamre muck, 0 to 1 percent slopes	NHEL	5		134			
	HEL	2	0.2	86			
	NHEL	5	0.28	86			
	PHEL	5	0.28	86			
	NHEL	5	0.28	86			
	NHEL	5	0.28	86			
	NHEL	4	0.2	86			
	NHEL	4	0.17	86			
	NHEL	4	0.2	86			
	NHEL	3	0.24	86			
	NHEL	5	0.17	86			
	NHEL	5	0.2	86			
	Glyndon very fine sandy loam, 0 to 2 percent slopes Grimstad fine sandy loam, 0 to 2 percent slopes, aspen parkland Hamar loamy fine sand, Aspen Parkland, 0 to 1 percent slopes Hamerly loam, 0 to 2 percent slopes	Glyndon loam, Aspen Parkland, 0 to 2 percent slopes Glyndon very fine sandy loam, 0 to 2 percent slopes Hamar loamy fine sand, Aspen Parkland, 0 to 1 percent slopes Hamerly loam, 0 to 2 percent slopes Hamre muck, 0 to 1 percent slopes Hangaard sandy loam, 0 to 2 percent slopes Hattie clay, Aspen Parkland, 0 to 2 percent slopes Hattie clay, 6 to 15 percent slopes Hedman loam, 0 to 2 percent slopes Hedman-Fram complex, 0 to 3 percent slopes Hilaire fine sandy loam, clayey till substratum, 0 to 2 percent slopes Hilaire sandy loam, clayey till substratum, 0 to 2 percent slopes Huot fine sandy loam, clayey till substratum, 0 to 2 percent slopes Karlsruhe sandy loam, 0 to 2 percent slopes NHEL Karlsruhe sandy loam, 0 to 2 percent slopes NHEL Kratka and Strathcona soils, 0 to 1 percent slopes NHEL	Glyndon loam, Aspen Parkland, 0 to 2 percent slopes Glyndon very fine sandy loam, 0 to 2 percent slopes Grimstad fine sandy loam, 0 to 2 percent slopes, aspen parkland Hamar loamy fine sand, Aspen Parkland, 0 to 1 percent slopes Hamerly loam, 0 to 2 percent slopes Hamre muck, 0 to 1 percent slopes Hamre muck, 0 to 1 percent slopes Hangaard sandy loam, 0 to 2 percent slopes Hattie clay, Aspen Parkland, 0 to 2 percent slopes Hattie clay, 6 to 15 percent slopes Hedman loam, 0 to 2 percent slopes Hedman-Fram complex, 0 to 3 percent slopes Heldman-Fram complex, 0 to 3 percent slopes Hilaire fine sandy loam, clayey till substratum, 0 to 2 percent slopes Huot fine sandy loam, clayey till substratum, 0 to 2 percent slopes Karlsruhe sandy loam, 0 to 2 percent slopes NHEL Karlsruhe sandy loam, 0 to 2 percent slopes NHEL S NHEL S	Glyndon loam, Aspen Parkland, 0 to 2 percent slopes Glyndon very fine sandy loam, 0 to 2 percent slopes NHEL 5 0.2 Grimstad fine sandy loam, 0 to 2 percent slopes, aspen parkland NHEL 5 0.17 Hamar loamy fine sand, Aspen Parkland, 0 to 1 percent slopes NHEL 5 0.28 Hamre muck, 0 to 2 percent slopes NHEL 5 0.28 Hamgaard sandy loam, 0 to 2 percent slopes Hattie clay, Aspen Parkland, 0 to 2 percent slopes Hattie clay, 6 to 15 percent slopes Hedman loam, 0 to 2 percent slopes Hedman loam, 0 to 2 percent slopes Hedman-Fram complex, 0 to 3 percent slopes Hilaire fine sandy loam, clayey till substratum, 0 to 2 percent slopes Hilaire loamy fine sand, 0 to 2 percent slopes NHEL 4 0.2 Hilaire loamy fine sandy loam, clayey till substratum, 0 to 2 percent slopes NHEL 4 0.2 Karlsruhe sandy loam, 0 to 2 percent slopes NHEL 5 0.28 Kratka and Strathcona soils, 0 to 1 percent slopes NHEL 5 0.17	Glyndon loam, Aspen Parkland, 0 to 2 percent slopes Glyndon very fine sandy loam, 0 to 2 percent slopes AHEL 5 0.2 86 Grimstad fine sandy loam, 0 to 2 percent slopes, aspen parkland Hamar loamy fine sand, Aspen Parkland, 0 to 1 percent slopes Hamerly loam, 0 to 2 percent slopes Hamerly loam, 0 to 2 percent slopes Hamre muck, 0 to 1 percent slopes Hamper muck, 0 to 1 percent slopes Hattle clay, Aspen Parkland, 0 to 2 percent slopes Hattle clay, Aspen Parkland, 0 to 2 percent slopes Hattle clay, 6 to 15 percent slopes Hedman loam, 0 to 2 percent slopes Hedman-Fram complex, 0 to 3 percent slopes Hedman-Fram complex, 0 to 3 percent slopes Heldman loam, 0 to 2 percent slopes NHEL 5 0.28 86 Hillaire loamy fine sand, 0 to 2 percent slopes NHEL 4 0.2 86 Huot fine sandy loam, clayey till substratum, 0 to 2 percent slopes NHEL 4 0.17 86 Karlsruhe sandy loam, 0 to 2 percent slopes NHEL 5 0.17 86 Kratka and Strathcona soils, 0 to 1 percent slopes NHEL 5 0.17 86	Glyndon loam, Aspen Parkland, 0 to 2 percent slopes Glyndon very fine sandy loam, 0 to 2 percent slopes Grimstad fine sandy loam, 0 to 2 percent slopes, aspen parkland Hamar loamy fine sand, Aspen Parkland, 0 to 1 percent slopes Hamerly loam, 0 to 2 percent slopes Hamerly loam, 0 to 2 percent slopes Hamre muck, 0 to 1 percent slopes Hangaard sandy loam, 0 to 2 percent slopes Hattie clay, Aspen Parkland, 0 to 2 percent slopes Hattie clay, Aspen Parkland, 0 to 2 percent slopes Hattie clay, 6 to 15 percent slopes Hedman loam, 0 to 2 percent slopes Hedman-Fram complex, 0 to 3 percent slopes Hilaire fine sandy loam, clayey till substratum, 0 to 2 percent slopes Hilaire loamy fine sand, 0 to 2 percent slopes Huot fine sandy loam, clayey till substratum, 0 to 2 percent slopes Karlsruhe sandy loam, 0 to 2 percent slopes Kratka and Strathcona soils, 0 to 1 percent slopes NHEL 5 0.2 86 0.2 86 0.2 86 0.2 86 0.2 86 0.2 86 0.2 86 0.3 0.4 86 0.7 0.7 86 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.	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Linveldt fine sandy loam, 0 to 2 percent slopes	NHEL	5	0.28	86			
Maddock loamy fine sand, 2 to 6 percent slopes	NHEL	5	0.17	134			
Markey muck, 0 to 1 percent slopes	HEL	4		134			
Markey muck, ponded, 0 to 1 percent slopes	NHEL	4					
Mavie fine sandy loam, 0 to 1 percent slopes	NHEL	3	0.24	86			
	NHEL	5	0.28	86			
	NHEL	5		134			
	HEL	5	0.15	250			
	NHEL	5	0.17	134			
	NHEL	4	0.28	86			
	NHEL	5	0.2	86			
	NHEL	5	0.17	134			
	NHEL	5	0.28	86			
	NHEL	5	0.28	86			
	NHEL	5	0.28	86			
	NHEL	3	0.24	86			
	NHEL	3	0.24	86			
	Maddock loamy fine sand, 2 to 6 percent slopes Markey muck, 0 to 1 percent slopes	Linveldt fine sandy loam, 0 to 2 percent slopes Maddock loamy fine sand, 2 to 6 percent slopes HEL Markey muck, 0 to 1 percent slopes Markey muck, ponded, 0 to 1 percent slopes Mavie fine sandy loam, 0 to 1 percent slopes NHEL Newfolden loam, 0 to 2 percent slopes NHEL Northwood muck, 0 to 1 percent slopes NHEL Poppleton fine sand, 0 to 2 percent slopes Radium loamy sand, 0 to 2 percent slopes Rauville silty clay loam, 0 to 2 percent slopes, frequently flooded Reiner fine sandy loam, 0 to 2 percent slopes Reis-Clearwater complex, 0 to 1 percent slopes Roliss loam, 0 to 2 percent slopes Roliss loam, 0 to 2 percent slopes NHEL Rosewood fine sandy loam, Aspen Parkland, 0 to 1 percent slopes NHEL	Linveldt fine sandy loam, 0 to 2 percent slopes Maddock loamy fine sand, 2 to 6 percent slopes Markey muck, 0 to 1 percent slopes Markey muck, ponded, 0 to 1 percent slopes Mavie fine sandy loam, 0 to 1 percent slopes NHEL 3 Newfolden loam, 0 to 2 percent slopes Northwood muck, 0 to 1 percent slopes Northwood muck, 0 to 1 percent slopes NHEL 5 Poppleton fine sand, 0 to 2 percent slopes Radium loamy sand, 0 to 2 percent slopes Rauville silty clay loam, 0 to 2 percent slopes Reiner fine sandy loam, 0 to 2 percent slopes Reiner loamy fine sand, 0 to 3 percent slopes Reis-Clearwater complex, 0 to 1 percent slopes Roliss loam, 0 to 2 percent slopes Roliss loam, very poorly drained, 0 to 1 percent slopes Rosewood fine sandy loam, Aspen Parkland, 0 to 1 percent slopes NHEL 3 NHEL 3	Linveldt fine sandy loam, 0 to 2 percent slopes Maddock loamy fine sand, 2 to 6 percent slopes Markey muck, 0 to 1 percent slopes Markey muck, ponded, 0 to 1 percent slopes Mavie fine sandy loam, 0 to 1 percent slopes NHEL 3 0.24 Newfolden loam, 0 to 2 percent slopes NHEL 5 0.28 Northwood muck, 0 to 1 percent slopes NHEL 5 0.15 Poppleton fine sand, 0 to 2 percent slopes Radium loamy sand, 0 to 2 percent slopes Rauville silty clay loam, 0 to 2 percent slopes Reiner fine sandy loam, 0 to 2 percent slopes Reiner loamy fine sand, 0 to 3 percent slopes Reis-Clearwater complex, 0 to 1 percent slopes Roliss loam, 0 to 2 percent slopes Roliss loam, very poorly drained, 0 to 1 percent slopes Rosewood fine sandy loam, Aspen Parkland, 0 to 1 percent slopes NHEL 5 0.28 NHEL 5 0.28 NHEL 5 0.28 NHEL 5 0.28	Maddock loamy fine sand, 2 to 6 percent slopes NHEL 5 0.17 134	Maddock loamy fine sand, 2 to 6 percent slopes Markey muck, 0 to 1 percent slopes Markey muck, 0 to 1 percent slopes Markey muck, 0 to 1 percent slopes Markey muck, ponded, 0 to 1 percent slopes Mavie fine sandy loam, 0 to 1 percent slopes NHEL	Invelot tine sandy loam, 0 to 2 percent slopes NHEL 5 0.17 134

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157B	Sandberg-Radium complex, 0 to 6 percent slopes	NHEL	5	0.17	134			
158A	Seelyeville muck, 0 to 1 percent slopes	NHEL	5		134			
159A	Smiley loam, 0 to 1 percent slopes	NHEL	5	0.24	56			
160A	Smiley mucky loam, 0 to 1 percent slopes	NHEL	5	0.24	56			
I61A	Strandquist loam, 0 to 1 percent slopes	NHEL	3	0.2	86			
I62A	Syrene sandy loam, 0 to 2 percent slopes	NHEL	3	0.24	86			
163A	Thiefriver fine sandy loam, clayey till substratum, 0 to 1 percent slopes	NHEL	3	0.24	86			
164A	Ulen fine sandy loam, Aspen Parkland, 0 to 2 percent slopes	NHEL	5	0.2	86			
165A	Ulen loamy fine sand, 0 to 2 percent slopes	NHEL	5	0.17	86			
166A	Vallers loam, 0 to 2 percent slopes	NHEL	5	0.28	86			
167A	Wheatville loam, clayey till substratum, 0 to 2 percent slopes	NHEL	4	0.28	86			
168A	Wheatville very fine sandy loam, clayey till substratum, 0 to 2 percent slopes	NHEL	4	0.2	86			
169A	Wyandotte clay loam, 0 to 1 percent slopes	NHEL	4	0.2	86			
170A	Strathcona fine sandy loam, 0 to 1 percent slopes	NHEL	5	0.2	86			
1362E	Maddock loamy fine sand, 9 to 25 percent slopes	PHEL	5	0.17	134			
1690A	Kittson loam, wet, 0 to 2 percent slopes	NHEL	5	0.28	86			
1906F	Orthents-Aquents-Urban Land, highway complex, 0 to 35 percent slopes	NHEL	5		134			

lGp	Pits, gravel and sand	NHEL			
IM-W	Miscellaneous water				
IWa	Water				
W	Water				