

Highly Erodible Soil Map Unit List - CASS COUNTY, MN

C=.12

R=100

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musym	muname	HELC	T	K	I	slope_%	slope_l	LS
48	Hiwood loamy fine sand	NHEL	5	0.17	134	1	150	0.15
82B	Redeye loamy sand, 1 to 6 percent slopes	NHEL	5	0.17	134	3	125	0.3
82C	Redeye loamy sand, 6 to 12 percent slopes	NHEL	5	0.17	134	9	125	1.35
116	Redby loamy fine sand, 0 to 3 percent slopes	NHEL						
119B	Pomroy loamy sand, 3 to 8 percent slopes	NHEL	4	0.15	134	5	125	0.6
119C	Pomroy loamy sand, 8 to 15 percent slopes	PHEL	4	0.15	134	11	125	1.8
126B	Graycalm loamy sand, 1 to 8 percent slopes	NHEL	5	0.17	134	4	125	0.43
126C	Graycalm loamy sand, 8 to 15 percent slopes	PHEL	5	0.17	134	11	125	1.8
139B	Huntersville loamy fine sand, 1 to 6 percent slopes	NHEL	4	0.17	134	3	125	0.3
142	Nokay loam	NHEL	4	0.32	86	1	150	0.15
144B	Flak sandy loam, 3 to 8 percent slopes	PHEL	4	0.28	86	5	200	0.76
144C	Flak sandy loam, 8 to 15 percent slopes	HEL	4	0.28	86	12	200	2.6
146B	Wabedo sandy loam, 1 to 6 percent slopes	NHEL	4	0.28	86	3	200	0.35
147	Spooner very fine sandy loam	NHEL	5	0.37	86	1	150	0.15
158B	Zimmerman fine sand, 1 to 8 percent slopes	NHEL	5	0.17	220	4	125	0.44
167B	Baudette silt loam, 1 to 6 percent slopes	NHEL	5	0.37	48	3	125	0.3
202	Meehan loamy sand	NHEL	5	0.17	134	1	150	0.15
204B	Cushing loam, 2 to 8 percent slopes	NHEL	5	0.32	56	5	125	0.6
204C	Cushing loam, 8 to 15 percent slopes	PHEL	5	0.32	56	11	125	1.8
204E	Cushing loam, 15 to 30 percent slopes	HEL	5	0.32	56	22	100	5
217	Nokasippi loamy fine sand	NHEL	4	0.17	134	1	150	0.15
218	Watab loamy sand	NHEL	4	0.17	134	1	150	0.15
240A	Warba very fine sandy loam, 1 to 3 percent slopes moderately wet	NHEL	5	0.2	86	2	150	0.23
240B	Warba very fine sandy loam, 3 to 8 percent slopes	NHEL	5	0.2	86	5	125	0.6
240C	Warba very fine sandy loam, 8 to 15 percent slopes	PHEL	5	0.2	86	11	125	1.8
243	Stuntz very fine sandy loam	NHEL	5	0.28	86	1	150	0.15
268B	Cromwell sandy loam, 1 to 8 percent slopes	NHEL	3	0.2	86	5	125	0.6
268C	Cromwell sandy loam, 8 to 15 percent slopes	PHEL	3	0.2	86	11	125	1.8
292	Alstad fine sandy loam	NHEL	5	0.24	86	1	150	0.15
453B	DeMontreville loamy sand, 2 to 8 percent slopes	NHEL	5	0.17	134	5	125	0.6
453C	DeMontreville loamy sand, 8 to 15 percent slopes	PHEL	5	0.17	134	11	125	1.8
453E	DeMontreville loamy sand, 15 to 40 percent slopes	HEL	5	0.17	134	28	100	7
454B	Mahtomedi loamy sand, 1 to 8 percent slopes	NHEL	5	0.15	134	5	125	0.6
454C	Mahtomedi loamy sand, 8 to 15 percent slopes	PHEL	5	0.15	134	11	125	1.8
454E	Mahtomedi loamy sand, 15 to 40 percent slopes	PHEL	5	0.15	134	28	100	7
458A	Menahga loamy sand, 0 to 3 percent slopes	NHEL	5	0.15	134	2	150	0.23
458B	Menahga loamy sand, 3 to 8 percent slopes	NHEL	5	0.15	134	5	125	0.6
458C	Menahga loamy sand, 8 to 15 percent slopes	PHEL	5	0.15	134	11	125	1.8
458E	Menahga loamy sand, 15 to 40 percent slopes	PHEL	5	0.15	134	28	100	7

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540	Seelyeville-Seelyeville, ponded, complex, 0 to 1 percent slopes	NHEL	5		134	1	150	0.15
541	Rifle mucky peat	NHEL	5		134	1	150	0.15
543	Markey muck	NHEL	4		134	1	150	0.15
544	Cathro muck	NHEL	5		134	1	150	0.15
549	Greenwood-Greenwood, ponded, complex, 0 to 1 percent slopes	NHEL	5		38	1	150	0.15
564	Friendship loamy sand	NHEL	5	0.17	134	2	150	0.23
620B	Cutaway loamy sand, 1 to 10 percent slopes	NHEL	5	0.17	134	5	125	0.6
620D	Cutaway loamy sand, 10 to 25 percent slopes	PHEL	5	0.17	134	18	100	3.5
625	Sandwick loamy sand	NHEL	5	0.17	134	1	150	0.15
665B	Menahga loamy sand, moraine, 3 to 8 percent slopes	NHEL	5	0.15	134	5	125	0.6
665C	Menahga loamy sand, moraine, 8 to 15 percent slopes	PHEL	5	0.15	134	11	125	1.8
665E	Menahga loamy sand, moraine, 15 to 40 percent slopes	PHEL	5	0.15	134	28	100	7
679B	Menahga loamy sand, loamy substratum, 2 to 8 percent slopes	NHEL	5	0.17	134	5	125	0.6
679C	Menahga loamy sand, loamy substratum, 8 to 15 percent slopes	PHEL	5	0.17	134	11	125	1.8
684	Bergkeller sandy loam, moderately wet	NHEL	4	0.2	86	1	150	0.15
701	Runeberg mucky loam, depressional	NHEL	5	0.28	86	1	150	0.15
703	Paddock loam	NHEL	5	0.32	-	1	150	0.15
720B	Blowers sandy loam, 1 to 5 percent slopes	NHEL	4	0.24	86	3	125	0.3
730A	Sanburn sandy loam, 1 to 3 percent slopes	NHEL	4	0.2	86	2	150	0.23
730B	Sanburn sandy loam, 3 to 8 percent slopes	NHEL	4	0.2	86	5	125	0.6
730C	Sanburn sandy loam, 8 to 15 percent slopes	PHEL	4	0.2	86	11	125	1.8
731A	Sanburn loamy sand, 0 to 3 percent slopes	NHEL	4	0.17	134	2	150	0.23
731B	Sanburn loamy sand, 3 to 8 percent slopes	NHEL	4	0.17	134	5	125	0.6
731C	Sanburn loamy sand, 8 to 15 percent slopes	PHEL	4	0.17	134	11	125	1.8
732	Bushville loamy sand, 1 to 3 percent slopes	NHEL	4	0.17	134	2	150	0.23
739B	Wabedo sandy loam, 1 to 6 percent slopes, very stony	NHEL	4	0.28	-	3	200	0.35
742B	Flak sandy loam, 3 to 8 percent slopes, very stony	PHEL	4	0.28	-	5	200	0.76
742C	Flak sandy loam, 8 to 15 percent slopes, very stony	HEL	4	0.28	-	12	200	2.6
750B	Pomroy loamy sand, 3 to 8 percent slopes, very stony	NHEL	4	0.15	-	5	150	0.66
750C	Pomroy loamy sand, 8 to 15 percent slopes, very stony	PHEL	4	0.15	-	11	150	2
773B	Warba-Cromwell complex, 1 to 8 percent slopes	PHEL	3	0.2	86	5	125	6
773E	Warba-Cromwell complex, 8 to 25 percent slopes	HEL	3	0.2	86	18	100	3.5
788	Cathro-Seelyeville complex	NHEL	5		134	1	150	0.15
797	Mooselake and Lupton soils	NHEL	5		56	1	150	0.15
799	Bowstring-Seelyeville complex, frequently flooded	NHEL	5		-	1	150	0.15
870B	Itasca-Goodland complex, 1 to 8 percent slopes	PHEL	4	0.37	56	4	125	0.43
870C	Itasca-Goodland complex, 8 to 15 percent slopes	HEL	4	0.37	56	11	125	1.8
928B	DeMontreville-Mahtomedi-Cushing complex, 2 to 8 percent slopes	NHEL	5	0.24	-	5	125	0.6
928C	DeMontreville-Mahtomedi-Cushing complex, 8 to 15 percent slopes	PHEL	5	0.24	-	11	125	1.8

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928E	DeMontreville-Mahtomedi-Cushing complex, 15 to 40 percent slopes	HEL	5	0.24	-	28	100	1.8
1002	Fluvaquents, frequently flooded	NHEL	-	-	-	-	-	-
1141	Runeberg loam, acid substratum, depressional	NHEL	5	0.28	86	1	150	0.15
1151B	Blowers sandy loam, acid substratum, 1 to 5 percent slopes	NHEL	4	0.24	86	3	125	0.3
1153B	Huntersville loamy sand, acid substratum, 1 to 6 percent slopes	NHEL	4	0.17	134	3	125	0.3
1155	Staples loamy sand, acid substratum	NHEL	5	0.14	134	1	150	0.15
1157	Paddock loam, acid substratum	NHEL	5	0.32	56	1	150	0.15
1160B	Redeye loamy sand, acid substratum, 1 to 6 percent slopes	NHEL	5	0.17	134	3	125	0.3
1160C	Redeye loamy sand, acid substratum, 6 to 12 percent slopes	NHEL	5	0.17	134	9	125	1.35
1943	Roscommon loamy sand	NHEL	5	0.17	134	1	150	0.15
1956	Staples loamy sand	NHEL	5	0.17	134	1	150	0.15
1957B	Friendship loamy sand, loamy substratum, 1 to 6 percent slopes	NHEL	5	0.17	134	3	125	0.3
1970B	Menahga loamy sand, till substratum, 2 to 8 percent slopes	NHEL	5	0.17	134	5	125	0.6
1970C	Menahga loamy sand, till substratum, 8 to 15 percent slopes	PHEL	5	0.17	134	11	125	1.8
1978	Nokay loam, very stony	NHEL	4	0.32	-	1	150	0.15
1995B	Bergkeller sandy loam, 1 to 6 percent slopes	NHEL	4	0.2	86	3	125	0.3
1996	Cromwell sandy loam, moderately wet	NHEL	3	0.24	86	1	150	0.15
A1B	Eagleview and Menahga soils, 1 to 8 percent slopes	NHEL						
A1C	Eagleview and Menahga soils, 3 to 15 percent slopes	NHEL						
A10	Glossaqualfs	NHEL	5	0.32	56	0.5	150	0.1
A12	Warba-Aquic Eutroboralfs, loamy-Aeric Glossaqualfs, loamy, association, nearly level to gently rolling	NHEL	5	0.17	134	1	150	0.15
A13	Warba-Aquic Eutroboralfs, loamy-Aeric Glossaqualfs, loamy, association, nearly level to hilly	PHEL	5	0.2	86	11	125	1.8
A15	Typic Udipsamments-Arenic Eutroboralfs-Alfic Udispamments association, nearly level to gently rolling	NHEL	5	0.17	220	4	125	0.44
A16	Warba-Dystric Eutrochrepts-Typic Udispamments association, nearly level to gently rolling	NHEL	5	0.2	86	5	125	0.6
A17	Menahga-Cutaway-Glossic Eutroboralfs association, rolling and hilly	HEL	4	0.37	56	11	125	1.8
A18	Arenic Eutroboralfs, nearly level to gently rolling	NHEL	5	0.17	134	5	125	0.6
A19	Menahga loamy coarse sand, moraine, rolling and hilly	PHEL	5	0.15	134	11	125	1.8
A20	Typic Udipsamments, gravelly, rolling to very hilly	PHEL	5	0.15	134	28	100	7
A60B	Zimmerman loamy fine sand, 1 to 8 percent slopes	NHEL						
A60C	Zimmerman loamy fine sand, 3 to 15 percent slopes	NHEL						
A92B	Zimmerman-Hiwood complex, 1 to 8 percent slopes	NHEL						
B54A	Spooner-Littleswan complex, 0 to 2 percent slopes	NHEL						
B56A	Sax, frequently ponded-Spooner complex, 0 to 1 percent slopes	NHEL						
B57A	Littleswan silt loam, 0 to 3 percent slopes	NHEL						
B57B	Baudette-Littleswan complex, 0 to 6 percent slopes	NHEL						
B252A	Redby-Deford-Hiwood complex, 0 to 3 percent slopes	NHEL						
B253B	Guida-Zimmerman-Redby complex, 0 to 8 percent slopes	NHEL						
B254D	Zimmerman-Guida complex, 1 to 18 percent slopes	PHEL	5	0.15	134	11	125	1.8
D67A	Hubbard loamy sand, Mississippi River Valley, 0 to 2 percent slopes	NHEL	5	0.15	134	1	150	0.15

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D67B	Hubbard loamy sand, Mississippi River Valley, 2 to 6 percent slopes	NHEL	5	0.15	134	5	125	0.6
E59	Warba-Stuntz-Arenic Eutroboralfs association, nearly level and undulating	NHEL	5	0.2	86	5	125	0.6
E60	Warba-Stuntz association, nearly level and undulating	NHEL	5	0.2	86	5	125	0.6
E61	Glossic Eutroboralfs, loamy, rolling and hilly	HEL	4	0.37	56	11	125	1.8
E62	Warba-Histosols association, nearly level to gently rolling	NHEL						
E63	Aquic Eutroboralfs, clayey subsoil, nearly level and undulating	PHEL	5	0.24	134	11	125	1.8
E65	Aeric Glossaqualf, loamy	NHEL	5	0.28	86	1	150	0.15
F77	Warba very fine sandy loam, rolling and hilly	HEL	5	0.37	86	18	100	3.4
K25	Eutroboralfs-Typic Ochraqualfs association, nearly level and undulating	NHEL						
K27	Aquic Eutroboralfs, loamy, nearly level and undulating	NHEL						
K28	Aquic Eutroboralfs, silty, nearly level and undulating	NHEL						
K30	Typic Ochraqualfs, clayey	NHEL						
K31	Suomi-Aeric Glossaqualfs, loamy, association, nearly level and undulating	NHEL						
K35	Typic Ochraqualfs, ponded	NHEL						
M-W	Water, miscellaneous	NHEL						
N80	Cutaway-hiwood association, nearly level and undulating	NHEL						
O93	Eutroboralfs, nearly level and undulating	NHEL						
O95	Humaquepts	NHEL						
O96	Mollic Fluvaquents, frequently flooded	NHEL						
O97	Humaquepts, sandy	NHEL	4		134	1	150	0.15
W	Water	NHEL						
X01	Histosols, depressional	NHEL	5		134	1	150	0.15
X02	Typic borohemists, acid	NHEL	5		38	1	150	0.15
X03	Typic borohemists, nonacid-typic borosaprists association	NHEL	5		134	1	150	0.15
X04	Typic borosaprist-bowstring association	NHEL	5		-	1	150	0.15
X05	Typic borohemists, nonacid	NHEL	5		134	1	150	0.15
XW1	Aqualfs	NHEL	5	0.15	134	0.5	150	0.1