

Highly Erodible Soil Map Unit List - MILLE LACS COUNTY, MN								
C=.10								
R=120								
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musym	muname	HEL	T	K	I	slope_%	slope_l	LS
1003B	Udorthents, loamy (cut and fill land), 0 to 6 percent slopes	NHEL						
1008B	Udipsamments (cut and fill land)	NHEL						
1009	Udorthents, lake beach, 1 to 20 percent slopes, very rubbly	PHEL	5	0.17	220	8	80	0.89
1010	Pits, quarry	NHEL						
1011A	Fordum-Winterfield complex, 0 to 2 percent slopes, frequently flooded	NHEL	4	.20	0	0.5	150	0.10
1013A	Seelyeville and Cathro soils, ponded, 0 to 1 percent slopes	NHEL	5	0	134	0.2	50	0.06
1017A	Fluvaquents, ponded, 0 to 1 percent slopes, frequently flooded	NHEL	5	.24	0	0.2	110	0.07
1020A	Bowstring muck and Fluvaquents, loamy, 0 to 1 percent slopes, frequently flooded	NHEL	4	0.28	48	0.2	100	0.07
1023A	Seelyeville and Markey soils, ponded, 0 to 1 percent slopes	NHEL	4	0	134	0.2	125	0.07
1025A	Fluvaquents and Udifluvents, loamy, 0 to 2 percent slopes, frequently flooded	NHEL	5	.24	56	1	100	0.13
1026A	Udifluvents and Fluvaquents, loamy, 0 to 2 percent slopes, occasionally flooded	NHEL	5	.24	56	1	100	0.13
C1C	Milaca-Brennyville complex, 1 to 7 percent slopes, stony	NHEL	4	0.24	86	4	80	0.59
C4A	Cebana-Giese, frequently ponded-Ronneby complex, 0 to 3 percent slopes, stony	NHEL	4	0.32	48	1	50	0.08
C6A	Cebana silt loam, 0 to 2 percent slopes, stony	NHEL	4	0.32	48	1	50	0.08
C9B	Mora-Ronneby complex, 1 to 4 percent slopes, stony	NHEL	4	0.15	86	2	125	0.20
C10B	Brennyville-Freer complex, 1 to 4 percent slopes, stony	NHEL	4	.28	56	4	80	0.36
C13A	Bluffton loam, depressional, 0 to 1 percent slopes	NHEL	5	.20	56	0.5	50	0.08
C14A	Cathro, Twig, and Adolph soils, ponded, 0 to 1 percent slopes	NHEL	4	0	48	0	50	0.06
C16B	Mahtomedi-Chetek complex, 1 to 8 percent slopes	NHEL	3	.15	86	5	80	0.27
C16C	Mahtomedi-Chetek complex, 8 to 15 percent slopes	PHEL	3	0.24	86	8	80	0.89
C16E	Mahtomedi-Chetek complex, 15 to 30 percent slopes	HEL	5	.15	134	30	80	7.00
C17A	Rosholt-Chetek complex, 0 to 2 percent slopes	NHEL	3	.15	86	1	80	0.12
C17B	Rosholt-Chetek complex, 2 to 8 percent slopes	NHEL	3	.15	86	5	80	0.27
C17C	Rosholt-Chetek complex, 8 to 15 percent slopes	PHEL	4	0.24	86	8	80	0.89
C17E	Rosholt-Chetek complex, 15 to 40 percent slopes	HEL	3	0.24	86	20	80	3.50
C18B	Branstad loam, 2 to 6 percent slopes	NHEL	5	.24	56	3	80	0.27
C19A	Longsiding-Grasston complex, 0 to 3 percent slopes	NHEL	5	.28	38	1	80	0.08

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musym	muname	HELC	T	K	I	slope_%	slope_l	LS
C20C	Cushing loam, 6 to 12 percent slopes	PHEL	5	.32	56	9	80	1.00
C20D	Cushing loam, 12 to 18 percent slopes	HEL	5	.32	56	15	80	2.30
C20E	Cushing loam, 18 to 35 percent slopes	HEL	4	0.24	86	20	80	3.50
C21A	Quam mucky silty clay loam, depressional, MLRA 90, 0 to 1 percent slopes	NHEL	5	.20	48	0.5	80	0.08
C23B	Antigo-Chetek complex, 2 to 8 percent slopes	NHEL	3	.15	86	5	0.8	0.27
C24A	Billyboy-Ossmer complex, 0 to 3 percent slopes	NHEL	4	.32	56	1	125	0.20
C25A	Alstad loam, 1 to 3 percent slopes	NHEL	5	0.37	56	1	80	0.12
C26A	Foglake silt loam, 0 to 2 percent slopes	NHEL	5	.24	48	1	100	0.13
C27A	Oesterle-Scott Lake complex, 0 to 3 percent slopes	NHEL	4	.24	56	1	100	0.12
C28A	Cathro-Twig, stony complex, 0 to 1 percent slopes, frequently ponded	NHEL	4	0	134	0.2	80	0.08
C29D2	Debs silt loam, 12 to 18 percent slopes, eroded	HEL	4	0.24	86	16	80	2.60
C29E	Debs silt loam, 18 to 25 percent slopes	HEL	4	0.24	86	20	80	3.50
C30A	Talmoon loam, 0 to 2 percent slopes	NHEL	5	0.28	56	1	80	0.12
C31B	Grasston silt loam, 2 to 6 percent slopes	PHEL	3	0.43	48	3	100	0.29
C31C2	Grasston silt loam, 6 to 12 percent slopes, eroded	HEL	3	0.43	48	8	100	0.99
C32A	Ellsburg silt loam, 0 to 2 percent slopes	NHEL	5	0.37	48	1	80	0.12
C34B	Dusler-Culver complex, 0 to 5 percent slopes	NHEL	5	0.37	86	3	80	0.27
C35A	Ossmer-Billyboy complex, 0 to 3 percent slopes	NHEL	4	0.32	56	1	80	0.13
C40A	Scott Lake fine sandy loam, 0 to 3 percent slopes	NHEL	4	.24	86	2	100	0.18
C41B	Culver-Sanburn-Cathro complex, pitted, 0 to 8 percent slopes	NHEL	3	0.2	86	3	80	0.27
C43C	Duluth loam, 8 to 15 percent slopes	PHEL	5	0.37	86	9	80	1.00
C43E	Duluth loam, 15 to 25 percent slopes	HEL	5	0.37	86	20	80	3.50
C44A	Wurtsmith-Grettum complex, 0 to 3 percent slopes	NHEL	5	0.17	134	1	80	0.12
C45C	Duluth-Sanburn-Cathro complex, pitted, 0 to 15 percent slopes	PHEL	5	0.37	86	9	80	1.00
C45E	Duluth-Sanburn-Cathro complex, pitted, 0 to 35 percent slopes	HEL	5	0.37	86	20	80	3.50
C49A	Antigo silt loam, 0 to 2 percent slopes	NHEL	4	0.37	56	1	80	0.12
C50B	Culver-Dusler complex, 1 to 8 percent slopes	NHEL	5	.24	56	3	80	0.27

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C53B	Pomroy loamy fine sand, 2 to 6 percent slopes	NHEL	4	0.15	250	3	80	0.27
C53C	Pomroy loamy fine sand, 6 to 12 percent slopes	NHEL	4	0.15	250	8	80	0.89
C57A	Warman loam, depressional, 0 to 1 percent slopes	NHEL	4	.24	56	1	80	0.12
C58A	Ogilvie loam, 0 to 2 percent slopes	NHEL	4	0.28	56	1	80	0.12
C69B	Milaca, stony-St. Francis complex, 3 to 8 percent slopes	NHEL	3	0.24	86	3	80	0.27
C69C	Milaca, stony-St. Francis complex, 8 to 15 percent slopes	PHEL	3	0.24	86	8	80	0.89
C71C	Milaca-Mora complex, 1 to 7 percent slopes, stony	NHEL	4	.15	86	4	80	0.36
C72D	Milaca-Millward complex, 2 to 20 percent slopes, stony	PHEL	4	0.24	86	8	80	0.89
C73C	Milaca loam, 1 to 7 percent slopes, stony	NHEL	4	0.2		3	80	0.27
C75A	Seelyeville, occasionally ponded-Cathro, frequently ponded, complex, 0 to 1 percent slopes	NHEL	5	0	134	0.2	80	0.08
C77A	Novak loam, 0 to 2 percent slopes	NHEL	4	.32	56	1	80	0.12
C77B	Novak loam, 2 to 6 percent slopes	NHEL	4	.32	56	3	80	0.27
C78A	Warman loam, 0 to 2 percent slopes	NHEL	4	.24	56	1	80	0.12
C86A	Aftad-Plover complex, 0 to 3 percent slopes	NHEL	4	0.37	56	1	80	0.12
C87A	Plover fine sandy loam, 0 to 3 percent slopes	NHEL	4	0.24	86	1	80	0.12
C88A	Fenander fine sandy loam, 0 to 2 percent slopes	NHEL	4	0.32	56	1	80	0.12
C89A	Cathro (Grasston catena) and Seelyeville soils, depressional, 0 to 1 percent slopes	NHEL	5	0	134	0.2	80	0.08
C91E	Milaca, stony-Chetek complex, 15 to 30 percent slopes	HEL	3	0.24	86	20	80	3.50
C93A	Greenwood mucky peat (Grasston catena), 0 to 1 percent slopes	NHEL	5	0	56	0.2	80	0.08
C94A	Seelyeville and Cathro (Cushing catena) soils, depressional, 0 to 1 percent slopes	NHEL	5	0	134	0.2	80	0.08
C95A	Seelyeville and Cathro (Milaca catena) soils, wooded, 0 to 1 percent slopes	NHEL	5	0	134	0.2	80	0.08
C96A	Cathro, Twig, and Giese, stony, soils, depressional, 0 to 1 percent slopes	NHEL	4	0	48	0.2	50	0.06
C97A	Cathro, sandy substratum, and Seelyeville soils, depressional, 0 to 1 percent slopes	NHEL	5	0	134	0.2	80	0.08
C98A	Seelyeville and Cathro (Duluth catena) soils, wooded, 0 to 1 percent slopes	NHEL	5	0	134	0.2	80	0.08
C99A	Greenwood mucky peat (Duluth catena), 0 to 1 percent slopes	NHEL	5	0	56	0.2	80	0.08
C100A	Seelyeville and Cathro (Cushing catena) soils, wooded, 0 to 1 percent slopes	NHEL	5	0	134	0.2	80	0.08
C101A	Greenwood mucky peat, 0 to 1 percent slopes	NHEL	5	0	56	0.2	80	0.08

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C102A	Cathro, sandy substratum, and Seelyeville soils, ponded , 0 to 1 percent slopes	NHEL	5	0	134	0.2	80	0.08
C103A	Cathro, sandy substratum, and Seelyeville soils, wooded, 0 to 1 percent slopes	NHEL	5	0	134	0.2	80	0.08
C104	Seelyeville and Cathro (Duluth catena) soils, depressional, 0 to 1 percent slopes	NHEL	5	0	134	0.2	80	0.08
C104A	Cathro, frequently ponded-Seelyeville, occasionally ponded-Greenwood complex, 0 to 1	NHEL	5	0	134	0.2	80	0.08
C108A	Hulligan loam, 0 to 2 percent slopes	NHEL	4	.24	56	1	80	0.12
C109A	Lenroot loamy sand, 1 to 3 percent slopes	NHEL	5	.15	134	1	80	0.12
C110A	Annriver silt loam, 0 to 2 percent slopes	NHEL	4	.28	56	1	80	0.12
C112B	Graycalm-Grayling complex, 2 to 8 percent slopes	NHEL	5	0.15	134	3	80	0.27
C112C	Graycalm-Grayling complex, 8 to 15 percent slopes	PHEL	5	0.17	220	8	80	0.89
C112E	Graycalm-Grayling complex, 15 to 30 percent slopes	HEL	5	0.17	134	20	80	3.50
C114B	Hubbard loamy sand, lake beach, 2 to 8 percent slopes	NHEL	5	0.15	134	3	80	0.27
C114D	Hubbard loamy sand, lake beach, 8 to 20 percent slopes	PHEL	5	0.15	134	15	80	2.30
C115B	Rushlake coarse sand, lake beach, 1 to 4 percent slopes	NHEL	5	.10	134	2	80	0.12
C117A	Cebana, stony-Annriver complex, 0 to 2 percent slopes	NHEL	4	.28	56	1	80	0.12
C118C	Chetek-Emmert complex, 8 to 15 percent slopes	PHEL	3	0.24	86	8	80	0.89
C120A	Meehan-Roscommon complex, lake beach, 0 to 3 percent slopes	NHEL	5	0.17	134	1	80	0.12
C121A	Wurtsmith-Meehan complex, lake beach, 1 to 3 percent slopes	NHEL	5	0.17	134	1	80	0.12
C122E	Emmert-Chetek complex, 15 to 45 percent slopes	HEL	2	0.17	0	30	80	7.00
C123B	Milaca, stony-Mora, stony-Cathro complex, pitted, 0 to 8 percent slopes	NHEL	4	0.24	86	4	80	0.59
C125A	Hulligan loam, depressional, 0 to 1 percent slopes	NHEL	4	.24	56	1	80	0.12
C126A	Cebana-Giese, frequently ponded-Freer complex, 0 to 3 percent slopes, stony	NHEL	4	0.32	48	1	50	0.08
C126B	Balmlake-Rosy complex, 1 to 6 percent slopes	NHEL	4	.37	56	3	80	0.27
C127A	Whited silt loam, 0 to 2 percent slopes	NHEL	4	.28	48	1	80	0.12
C130B	Mora, stony-Chetek complex, 2 to 6 percent slopes	NHEL	3	0.24	86	3	80	0.27
C133A	Brennyville, stony-Scottlake complex, 0 to 3 percent slopes	NHEL	4	.28	56	2	125	0.20
C134A	Rosy very fine sandy loam, 0 to 4 percent slopes	NHEL	5	.37	86	2	125	0.20
C135A	Lewis Lake silt loam, 1 to 3 percent slopes	NHEL	3	0.43	48	1	100	0.13

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C135B	Lewis Lake silt loam, 3 to 6 percent slopes	PHEL	3	0.43	48	3	100	0.29
C135C2	Lewis Lake silt loam, 6 to 12 percent slopes, moderately eroded	HEL	3	0.43	48	8	100	0.99
C139A	Minocqua silt loam, depressional, thick solum, 0 to 1 percent slopes	NHEL	4	.32	56	1	80	0.12
C140A	Hillview fine sandy loam, 0 to 2 percent slopes	NHEL	5	.28	86	1	80	0.12
C143B	Alban fine sandy loam, 1 to 8 percent slopes	NHEL	5	.20	86	3	80	0.27
C144A	Coin silt loam, 0 to 2 percent slopes	NHEL	4	.28	48	1	80	0.12
C147A	Blackhoof-Cathro-Baden complex, depressional, 0 to 1 percent slopes	NHEL	5	0	134	0	80	0.12
C158	Rifle mucky peat, 0 to 1 percent slopes, occasionally ponded	NHEL	5		56	0.2	80	0.08
C211	Bowstring muck and Fluvaquents, loamy, 0 to 2 percent slopes, frequently flooded	NHEL	4	0.28	48	0.2	100	0.07
D2A	Elkriver fine sandy loam, 0 to 2 percent slopes, rarely flooded	NHEL	4	.15	86	1	80	0.12
D3A	Elkriver fine sandy loam, 0 to 2 percent slopes, occasionally flooded	NHEL	4	.15	86	1	80	0.12
D9B	Stonelake-Sanburn complex, 1 to 6 percent slopes	NHEL	3	0.24	86	3	80	0.27
D30A	Seelyeville and Markey soils, depressional, 0 to 1 percent slopes	NHEL	4	0	134	0.2	125	0.07
D38A	Cantlin loamy fine sand, 0 to 3 percent slopes	NHEL	5	0.17	134	1	80	0.12
D44A	Isanti loamy fine sand, 0 to 2 percent slopes	NHEL	5	.17	134	1	80	0.12
D45A	Soderville loamy fine sand, 0 to 3 percent slopes	NHEL	5	0.17	134	1	80	0.12
D46A	Lino loamy fine sand, 0 to 2 percent slopes	NHEL	5	.17	134	1	80	0.12
D50A	Isanti fine sandy loam, depressional, 0 to 1 percent slopes	NHEL	5	.17	134	1	80	0.12
D60A	Zimmerman fine sand, 0 to 3 percent slopes	NHEL	5	0.17	134	1	80	0.12
D60B	Zimmerman fine sand, 3 to 6 percent slopes	NHEL	5	0.17	134	3	80	0.27
D60C	Zimmerman fine sand, 6 to 12 percent slopes	NHEL	5	0.17	134	8	80	0.89
D60E	Zimmerman fine sand, 12 to 30 percent slopes	HEL	5	0.17	134	20	80	3.50
GP	Pits, gravel-Udipsamments complex	NHEL						
M-W	Water, miscellaneous	NHEL						
W	Water	NHEL						