

Highly Erodible Soil Map Unit List - COOK COUNTY, MN

C=.08

R=80

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areasym	musym	muname	HEL	T	K	I	slope_%	slope_I	LS
MN031	A1-11D	Quetico, stony-Barto, stony-Rock outcrop complex, 15 to 35 percent slopes	HEL						
MN031	A1-11F	Quetico, stony-Barto, stony-Rock outcrop complex, 35 to 60 percent slopes	HEL						
MN031	A1-20C	Mesaba, stony-Greysolon-Rock outcrop complex, 2 to 15 percent slopes	PHEL	2	0.17	0	10	80	1.2
MN031	A1-20D	Mesaba, stony-Barto, stony-Rock outcrop complex, 15 to 35 percent slopes	HEL						
MN031	A1-20F	Barto, stony-Mesaba, stony-Rock outcrop complex, 35 to 60 percent slopes	HEL						
MN031	A1-30D	Barto, stony-Greysolon-Rock outcrop complex, 0 to 18 percent slopes	PHEL	2	0.24	0	10	80	1.20
MN031	A1-40B	Normanna-Greysolon-Rock outcrop complex, 2 to 8 percent slopes	NHEL						
MN031	A1-41D	Ahmeek-Normanna-Mesaba, stony-Rock outcrop complex, 4 to 18 percent slopes	HEL	3	0.37	56	16	80	2.6
MN031	A1-41F	Ahmeek-Mesaba, stony-Rock outcrop complex, 18 to 35 percent slopes	HEL						
MN031	A2-19A	Twig, rubbly-Rock outcrop complex, 0 to 3 percent slopes	NHEL						
MN031	A2-30B	Greysolon-Giese, rubbly-Barto, stony-Rock outcrop complex, 0 to 8 percent slopes	NHEL						
MN031	A2-30D	Mesaba, stony-Giese, rubbly-Barto, stony-Rock outcrop complex, 0 to 18 percent slopes	PHEL	2	0.17	0	10	80	1.2
MN031	A2-40B	Greysolon-Normanna-Giese, rubbly-Rock outcrop complex, 0 to 8 percent slopes	NHEL						
MN031	A2-41D	Ahmeek-Mesaba, stony-Giese, rubbly-Rock outcrop complex, 0 to 18 percent slopes	HEL	3	0.37	56	16	80	2.6
MN031	A3-10A	Giese, rubbly-Tacoosh-Rifle complex, 0 to 2 percent slopes	NHEL						
MN031	A3-11A	Twig-Tacoosh-Giese complex, 0 to 1 percent slopes, depressional	NHEL						
MN031	A3-13A	Giese muck, 0 to 2 percent slopes, rubbly	NHEL						
MN031	A3-20A	Canosia loam, 0 to 2 percent slopes	NHEL						
MN031	A3-21A	Hermantown silt loam, 1 to 3 percent slopes	NHEL						
MN031	A3-22B	Normanna-Hermantown complex, 1 to 8 percent slopes	NHEL						
MN031	A3-30B	Normanna-Canosia-Hermantown complex, 0 to 8 percent slopes	NHEL						
MN031	A3-31D	Ahmeek-Normanna-Canosia complex, 0 to 18 percent slopes	HEL	3	0.37	56	16	80	2.6
MN031	A3-32F	Ahmeek-Canosia complex, 0 to 45 percent slopes	HEL						
MN031	A3-41B	Normanna-Giese, depressional complex, 0 to 8 percent slopes, pitted	NHEL						
MN031	B1-10A	Wahbegon, depressional-Eldes complex, 0 to 2 percent slopes	NHEL						
MN031	B1-20B	Hegberg-Eldes complex, 0 to 3 percent slopes	NHEL						
MN031	B1-30E	Forbay loam, 18 to 45 percent slopes	HEL						
MN031	B1-40B	Augustana-Hegberg complex, 1 to 8 percent slopes	NHEL						
MN031	B1-41D	Forbay-Augustana complex, 3 to 18 percent slopes	PHEL	5	0.37	86	8	80	0.89
MN031	B1-50D	Forbay-Eldes-Rock outcrop complex, 0 to 25 percent slopes	PHEL	5	0.37	86	8	80	0.89
MN031	B2-20D	Forbay, moderately deep-Barto, stony-Rock outcrop complex, 15 to 35 percent slopes	HEL						
MN031	B2-40B	Hegberg, moderately deep-Augustana, moderately deep-Rock outcrop complex, 1 to 8 percent slopes	NHEL						
MN031	B2-41D	Forbay, moderately deep-Augustana, moderately deep-Rock outcrop complex, 3 to 18 percent slopes	PHEL	5	0.37	86	8	80	0.89
MN031	B2-41E	Forbay, moderately deep-Rock outcrop complex, 18 to 35 percent slopes	HEL						
MN031	B3-40B	Hegberg, moderately deep-Eldes, moderately deep-Rock outcrop complex, 0 to 8 percent slopes	NHEL						
MN031	B3-41D	Augustana, moderately deep-Mesaba, stony-Eldes, stony-Rock outcrop complex, 0 to 18 percent slopes	PHEL	2	0.17	0	10	80	1.2

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areasym	musym	muname	HEL	T	K	I	slope_%	slope_l	LS
MN031	C1-10A	Palmers, depressional-Badriver complex, 0 to 1 percent slopes	NHEL						
MN031	C1-20A	Badriver complex, 0 to 3 percent slopes	NHEL						
MN031	C1-40B	Badriver complex, 0 to 8 percent slopes	NHEL						
MN031	C1-41D	Sandborg-Badriver complex, 3 to 18 percent slopes	PHEL	3	0.28	86	8	100	0.99
MN031	C3-20A	Badriver-Rock outcrop complex, 0 to 3 percent slopes	NHEL						
MN031	C3-40B	Badriver-Rock outcrop complex, 0 to 8 percent slopes	NHEL						
MN031	C3-41D	Sandborg-Badriver-Rock outcrop complex, 1 to 18 percent slopes	PHEL	3	0.28	86	8	100	0.99
MN031	C1070B	Badriver, mantled phase-Rock outcrop complex, 0 to 8 percent slopes	NHEL						
MN031	C1071D	Normanna, clayey substratum-Badriver, mantled-Rock outcrop complex, 3 to 18 percent slopes	PHEL	5	0.37	86	8	80	0.89
MN031	E1-9B	Normanna-Fluvaquents, frequently flooded-Rock outcrop complex, 0 to 8 percent slopes	NHEL						
MN031	E1-9D	Ahmeek-Udifluents, frequently flooded-Rock outcrop complex, 1 to 18 percent slopes	HEL	3	0.37	56	16	80	2.6
MN031	E1-10F	Ahmeek-Rock outcrop-Fluvaquents, frequently flooded complex 0 to 50 percent slopes	HEL						
MN031	E1-12F	Quetico, stony-Rock outcrop-Fluvaquents, frequently flooded complex, 0 to 50 percent slopes	HEL						
MN031	E1-13F	Mesaba, stony-Rock outcrop-Fluvaquents, frequently flooded complex, 0 to 50 percent slopes	HEL						
MN031	E1-14F	Ahmeek-Rock outcrop-Udifluents, frequently flooded complex, 1 to 70 percent slopes	HEL						
MN031	E1-18B	Augustanna-Rock outcrop-Fluvaquents, frequently flooded complex, 0 to 8 percent slopes	NHEL						
MN031	E1-19D	Forbay-Udifluents, frequently flooded-Rock outcrop complex, 1 to 18 percent slopes	PHEL	5	0.37	86	8	80	0.89
MN031	E1-20E	Forbay-Udifluents, frequently flooded-Rock outcrop complex, 1 to 70 percent slopes	HEL						
MN031	E1-26B	Badriver-Rock outcrop-Fluvaquents, frequently flooded complex, 0 to 8 percent slopes	NHEL						
MN031	E1-27D	Sandborg-Fluvaquebts, frequently flooded-Rock outcrop complex, 0 to 18 percent slopes	PHEL	3	0.28	86	8	100	0.99
MN031	E1-28D	Sandborg-Udifluents, frequently flooded-Rock outcrop complex, 1 to 18 percent slopes	PHEL	3	0.28	86	8	100	0.99
MN031	E1-30F	Odanah-Udifluents, frequently flooded-Rock outcrop complex, 1 to 70 percent slopes	HEL						
MN031	E2-10B	Augustanna-Fluvaquents, frequently flooded complex, 0 to 8 percent slopes	NHEL						
MN031	E2-12D	Forbay-Udifluents, frequently flooded complex, 1 to 18 percent slopes	PHEL	5	0.37	86	8	80	0.89
MN031	E2-14E	Forbay-Udifluents, frequently flooded complex, 1 to 45 percent slopes	HEL						
MN031	E2-20B	Badriver-Fluvaquents, frequently flooded complex, 0 to 8 percent slopes	NHEL						
MN031	E2-21D	Sandborg-Fluvaquents, frequently flooded complex, 0 to 18 percent slopes	PHEL	3	0.28	86	8	100	0.99
MN031	E2-22D	Sandborg-Udifluents, frequently flooded complex, 1 to 18 percent slopes	PHEL	3	0.28	86	8	100	0.99
MN031	E2-23E	Odanah-Fluvaquents, frequently flooded complex, 0 to 45 percent slopes	HEL						
MN031	E2-24E	Odanah-Udifluents, frequently flooded complex 1 to 45 percent slopes	HEL						
MN031	F1-10B	Rollins sandy loam, 2 to 8 percent slopes	NHEL						
MN031	F1-10D	Rollins sandy loam, 8 to 18 percent slopes	PHEL	3	0.2	0	16	80	2.6
MN031	F1-10F	Rollins sandy loam, 18 to 45 percent slopes	HEL						
MN031	F2-10A	Hulligan mucky fine sandy loam, depressional, 0 to 1 percent slopes	NHEL						
MN031	F2-11A	Hulligan fine sandy loam, 0 to 1 percent slopes	NHEL						
MN031	F2-13A	Pequaywan fine sandy loam, 0 to 3 percent slopes	NHEL						

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areasym	musym	muname	HEL	T	K	I	slope_%	slope_l	LS
MN031	F2-14B	Aldenlake-Pequaywan complex, 0 to 6 percent slopes	NHEL						
MN031	F2-15B	Aldenlake sandy loam, 2 to 8 percent slopes	NHEL						
MN031	F2-15D	Aldenlake sandy loam, 8 to 18 percent slopes	PHEL	3	0.2	0	16	80	2.6
MN031	F2-15F	Aldenlake sandy loam, 18 to 45 percent slopes	HEL						
MN031	F2-20B	Aldenlake-Pequaywan complex, 0 to 8 percent slopes, pitted	NHEL						
MN031	F2-20D	Aldenlake-Pequaywan complex, 0 to 18 percent slopes, pitted	PHEL	3	0.2	0	16	80	2.6
MN031	F2-20F	Aldenlake-Pequaywan complex, 0 to 45 percent slopes, pitted	HEL						
MN031	F2-30D	Aldenlake-Rock outcrop complex, 3 to 20 percent slopes	PHEL	3	0.2	0	16	80	2.6
MN031	F2-41D	Aldenlake-Ahmeek complex, 8 to 18 percent slopes	PHEL	3	0.2	0	16	80	2.6
MN031	G1-10A	Eldes, colluvial mantle-Wahbegon-Rock outcrop complex, 0 to 3 percent slopes	NHEL						
MN031	G1-10B	Hegberg, colluvial mantle-Eldes, colluvial mantle-Rock outcrop complex, 0 to 8 percent slopes	NHEL						
MN031	G1-10D	Augustanna, colluvial mantle-Hegberg, colluvial mantle-Mesaba, stony-Rock outcrop complex, 1 to 18 percent slopes	PHEL	2	0.17	0	10	80	1.2
MN031	I2a10C	Quetico, stony-Rock outcrop complex, 2 to 15 percent slopes	PHEL	1	0.24	0	10	80	1.2
MN031	I2a10D	Quetico, stony-Rock outcrop complex, 15 to 35 percent slopes	HEL						
MN031	I2a10F	Quetico, stony-Rock outcrop complex, 35 to 60 percent slopes	HEL						
MN031	I2a20B	Wahlsten, bouldery-Insula, bouldery-Rock outcrop complex, 1 to 10 percent slopes	PHEL	2	0.17	0	10	80	1.2
MN031	I2a21B	Insula, very bouldery-Rock outcrop-Wahlsten, very bouldery complex, 2 to 12 percent slopes	PHEL	2	0.17	0	10	80	1.2
MN031	I2a22D	Conic, bouldery-Insula, bouldery-Rock outcrop complex, 8 to 25 percent slopes	PHEL	3	0.15	0	10	80	1.2
MN031	I2a23G	Conic, very bouldery-Insula, very bouldery-Rock outcrop complex, 20 to 70 percent slopes	HEL						
MN031	I2a30B	Eaglesnest, bouldery-Wahlsten, bouldery-Rock outcrop complex, 2 to 8 percent slopes	NHEL						
MN031	I2a31D	Eveleth, bouldery-Eaglesnest, bouldery-Conic, bouldery-Rock outcrop complex, 6 to 18 percent slopes	PHEL	3	0.2	0	16	80	2.6
MN031	I2a32E	Eveleth, bouldery-Conic, bouldery-Rock outcrop complex, 18 to 30 percent slopes	HEL						
MN031	I2b10B	Aquepts, very stony-Wahlsten, very stony-Rock outcrop complex, 1 to 8 percent slopes	NHEL						
MN031	I2b19A	Babbitt, bouldery-Aquepts, rubbly complex, 0 to 3 percent slopes	NHEL						
MN031	I2b20B	Babbitt, bouldery-Wahlsten, bouldery-Aquepts, rubbly-Rock outcrop complex, 0 to 8 percent slopes	NHEL						
MN031	I2b21D	Eveleth, bouldery-Conic, bouldery-Aquepts, rubbly-Rock outcrop, complex, 0 to 18 percent slopes	PHEL	3	0.2	0	16	80	2.6
MN031	I2b21E	Eveleth, bouldery-Conic, bouldery-Aquepts, rubbly-Rock outcrop complex, 0 to 30 percent slopes	HEL						
MN031	I2c10B	Wahlsten, bouldery-Rock outcrop-Aquepts, rubbly complex, 0 to 12 percent slopes	PHEL	2	0.17	0	10	80	1.2
MN031	I2c10D	Wahlsten, bouldery-Rock outcrop-Aquepts, rubbly complex, 0 to 25 percent slopes	PHEL	2	0.17	0	10	80	1.2
MN031	I2c11E	Insula, bouldery-Rock outcrop-Aquepts, rubbly complex, 0 to 50 percent slopes	HEL						
MN031	I2c20B	Babbitt-Lithic Endoaquepts-Eaglesnest complex, 0 to 8 percent slopes, bouldery	NHEL						
MN031	I2c21B	Babbitt, bouldery-Wahlsten, bouldery-Canthook complex, 0 to 8 percent slopes	NHEL						
MN031	I2c22D	Conic, bouldery-Rock outcrop-Eaglesnest, bouldery complex, 2 to 18 percent slopes	PHEL	3	0.15	0	10	80	1.2
MN031	I2c23E	Conic, bouldery-Rock outcrop-Eveleth, bouldery complex, 2 to 35 percent slopes	HEL						
MN031	I2c30A	Aquepts, rubbly-Foglake-Hassman, depressional complex, 0 to 2 percent slopes	NHEL						
MN031	I2c31B	Longsiding-Canthook-Foglake complex, 0 to 6 percent slopes	NHEL						

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MN031	I2c40A	Canthook-Bootleg-Foglake complex, 0 to 3 percent slopes	NHEL						
MN031	I2c41B	Durkeelake-Canthook-Longsiding complex, 0 to 6 percent slopes	NHEL						
MN031	I3-10A	Aquepts complex, 0 to 2 percent slopes, rubbly	NHEL						
MN031	I3-11A	Aquepts, rubbly-Tacoosh-Rifle complex, 0 to 2 percent slopes	NHEL						
MN031	I3-30B	Eaglesnest-Babbitt complex, 1 to 8 percent slopes, bouldery	NHEL						
MN031	I3-32D	Eveleth stony loam, 8 to 18 percent slopes, bouldery	PHEL	3	0.2	0	16	80	2.6
MN031	I4-20G	Shagawa-Beargrease complex, 35 to 60 percent slopes, extremely bouldery	HEL						
MN031	I4-30E	Shagawa-Beargrease complex, 8 to 30 percent slopes, extremely bouldery	PHEL	3	0.2	0	16	80	2.6
MN031	J1a10A	Rifle soils, dense substratum, 0 to 1 percent slopes	NHEL						
MN031	J1a11A	Mooselake muck, 0 to 1 percent slopes	NHEL						
MN031	J1a12A	Uskabwanka-Rifle, ponded complex, 0 to 1 percent slopes	NHEL						
MN031	J1a40A	Greenwood soils, dense substratum, 0 to 1 percent slopes	NHEL						
MN031	J2-15A	Lougee peat, 0 to 1 percent slopes	NHEL						
MN031	J2-30A	Tacoosh mucky peat, dense substratum, 0 to 1 percent slopes	NHEL						
MN031	J2-31A	Merwin peat, dense substratum, 0 to 1 percent slopes	NHEL						
MN031	J2-40A	Cathro muck, depressional, dense substratum, 0 to 1 percent slopes	NHEL						
MN031	J2-50A	Daisybay peat, 0 to 1 percent slopes	NHEL						
MN031	J2-60A	Dora mucky peat, 0 to 1 percent slopes	NHEL						
MN031	K1-10	Pits, gravel-Udipsamments complex	PHEL	2	0.17	0	6	80	0.6
MN031	K1-13B	Udorthents, loamy (cut and fill land)	NHEL						
MN031	K1-15C	Beaches, remnant complex, 2 to 12 percent slopes	PHEL	2	0.17	0	6	80	0.6
MN031	K1-18C	Beach-Swale complex, 2 to 12 percent slopes	PHEL	2	0.17	0	6	80	0.6
MN031	K1-22D	Urban land-Amnicon-Rock outcrop complex, 0 to 18 percent slopes	PHEL	3	0.28	86	8	100	0.99
MN031	K1-25A	Urban land-Udorthents-Aquents complex, 0 to 8 percent slopes	NHEL						
MN031	K2-10A	Bowstring and Fluvaquents soils, 0 to 2 percent slopes, frequently flooded	NHEL						
MN031	K2-11A	Fluvaquents-Udifluvents complex, 0 to 3 percent slopes, frequently flooded, rubbly	NHEL						
MN031	K2-12	Entisols, frequently flooded, rubbly and Histosols soils, 0 to 1 percent slope, ponded	NHEL						
MN031	K2-13A	Udifluvents complex, 0 to 2 percent slopes, occasionally flooded	NHEL						
MN031	K2-14A	Fluvaquents, clayey, 0 to 1 percent slopes, frequently flooded	NHEL						
MN031	K2-15A	Udifluvents complex, 0 to 3 percent slopes, flooded	NHEL						
MN031	L1-30C	Annalake-Aldenlake complex, 6 to 15 percent slopes	PHEL	3	0.2	0	8	80	2.89
MN031	NOTCOM	No Digital Data Available							
MN031	W	Water	NHEL						

The Soil Legend below represents soil mapping 2013 and early.

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areasym	musym	muname	HEL	T	K	I	slope_%	slope_l	LS
MN031	21A	Ahmeek loam, 0 to 2 percent slopes	NHEL	5	0.37	86	1	80	0.12
MN031	21B	Ahmeek loam, 2 to 6 percent slopes	NHEL	3	0.37	56	4	80	0.37
MN031	21BC	Ahmeek loam, 2 to 12 percent slopes	PHL	3	0.37	56	8	80	0.89
MN031	21C	Ahmeek loam, 6 to 12 percent slopes	PHL	3	0.37	56	8	80	0.89
MN031	21D	Ahmeek loam, 12 to 18 percent slopes	HEL	3	0.37	56	16	80	2.60
MN031	21DE	Ahmeek loam, 12 to 25 percent slopes	HEL	3	0.37	56	16	80	2.60
MN031	21E	Ahmeek loam, 18 to 25 percent slopes	HEL	3	0.37	56	20	80	3.50
MN031	21F	Ahmeek loam, 25 to 40 percent slopes	HEL	5	0.37	86	30	80	7.00
MN031	22	Allendale loamy sand	NHEL	4	0.17	134	1	80	0.12
MN031	254B	Hibbing loam, 2 to 6 percent slopes	NHEL	3	0.32	48	4	80	0.37
MN031	254BC	Hibbing loam, 2 to 12 percent slopes	PHL	3	0.32	48	8	80	0.89
MN031	254C	Hibbing loam, 6 to 12 percent slopes	PHL	3	0.32	48	8	80	0.89
MN031	254D	Hibbing loam, 12 to 18 percent slopes	HEL	3	0.32	48	16	80	2.60
MN031	254DE	Hibbing loam, 12 to 25 percent slopes	HEL	3	0.32	48	16	80	2.60
MN031	254E	Hibbing loam, 18 to 25 percent slopes	HEL	3	0.32	48	20	80	3.50
MN031	254F	Hibbing loam, 25 to 40 percent slopes	HEL	5	0.37	86	30	80	7.00
MN031	274	Newson loamy sand	NHEL	5	0.17	134	1	80	0.12
MN031	303A	Ontonagon silty clay, 0 to 2 percent slopes	NHEL	3	0.28	86	1	100	0.13
MN031	303B	Ontonagon silty clay, 2 to 6 percent slopes	NHEL	3	0.28	86	4	100	0.40
MN031	303BC	Ontonagon silty clay, 2 to 12 percent slopes	PHL	3	0.28	86	8	100	0.99
MN031	303C	Ontonagon silty clay, 6 to 12 percent slopes	PHL	3	0.28	86	8	100	0.99
MN031	303D	Ontonagon silty clay, 12 to 18 percent slopes	HEL	3	0.28	86	16	100	2.80
MN031	303DE	Ontonagon silty clay, 12 to 25 percent slopes	HEL	3	0.28	86	16	100	2.80
MN031	303E	Ontonagon silty clay, 18 to 25 percent slopes	HEL	3	0.28	86	20	100	4.00
MN031	303F	Ontonagon silty clay, 25 to 40 percent slopes	HEL	3	0.28	86	30	100	8.00
MN031	305	Bergland clay	NHEL	5	0.28	86	1	100	0.13
MN031	355A	Cloquet fine sandy loam, 0 to 2 percent slopes	NEHL	3	0.24	86	1	80	0.12
MN031	355B	Cloquet fine sandy loam, 2 to 6 percent slopes	NEHL	3	0.24	86	4	80	0.37
MN031	355BC	Cloquet fine sandy loam, 2 to 12 percent slopes	PHL	3	0.24	86	6	80	0.60
MN031	355C	Cloquet fine sandy loam, 6 to 12 percent slopes	PHL	3	0.24	86	8	80	0.89
MN031	355D	Cloquet fine sandy loam, 12 to 18 percent slopes	HEL	3	0.24	86	16	80	2.60
MN031	355DE	Cloquet fine sandy loam, 12 to 25 percent slopes	HEL	3	0.24	86	18	80	3.00
MN031	355E	Cloquet fine sandy loam, 18 to 25 percent slopes	HEL	3	0.24	86	20	80	3.50
MN031	355F	Cloquet fine sandy loam, 25 to 40 percent slopes	HEL	3	0.28	86	30	100	8.00
MN031	407	Brimson loam, rubbly	NHEL	4	0.20	86	1	80	0.12

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MN031	420	Twig muck	NHEL	5	-	134	1	80	0.12
MN031	454AC	Mahtomedi loamy sand 0 to 12 percent slopes	NHEL	5	0.15	134	6	80	0.60
MN031	454DE	Mahtomedi loamy sand 12 to 25 percent slopes	PHEL	5	0.15	134	18	80	3.00
MN031	454F	Mahtomedi loamy sand 25 to 40 percent slopes	HEL	5	0.15	134	30	80	7.00
MN031	502	Dusler silt loam	NHEL	5	0.37	48	1	80	0.12
MN031	504A	Dusler very fine sandy loam, 0 to 2 percent slopes	NHEL	5	0.37	86	1	80	0.12
MN031	504B	Duluth very fine sandy loam, 1 to 6 percent slopes	NHEL	5	0.37	86	4	80	0.37
MN031	504BC	Duluth very fine sandy loam, 2 to 12 percent slopes	PHEL	5	0.37	86	8	80	0.89
MN031	504C	Duluth very fine sandy loam, 6 to 12 percent slopes	PHEL	5	0.37	86	8	80	0.89
MN031	504D	Duluth very fine sandy loam, 12 to 18 percent slopes	HEL	5	0.37	86	16	80	2.60
MN031	504DE	Duluth very fine sandy loam, 12 to 25 percent slopes	HEL	5	0.37	86	16	80	2.60
MN031	504E	Duluth very fine sandy loam, 18 to 25 percent slopes	HEL	5	0.37	86	20	80	3.50
MN031	504F	Duluth very fine sandy loam, 25 to 35 percent slopes	HEL	5	0.37	86	30	80	7.00
MN031	512A	Amasa fine sandy loam, 0 to 2 percent slopes	NHEL	4	0.24	86	1	80	0.12
MN031	512B	Amasa fine sandy loam, 2 to 6 percent slopes	NHEL	4	0.24	86	4	80	0.37
MN031	512C	Amasa fine sandy loam, 6 to 12 percent slopes	NHEL	4	0.24	86	8	80	0.89
MN031	515A	Newfound gravelly sandy loam, 0 to 2 percent slopes	NHEL	3	0.20	0	1	80	0.12
MN031	515B	Newfound gravelly sandy loam, 2 to 6 percent slopes	NHEL	3	0.20	0	4	80	0.37
MN031	515BC	Newfound gravelly sandy loam, 2 to 12 percent slopes	PHEL	3	0.20	0	8	80	0.89
MN031	515C	Newfound gravelly sandy loam, 6 to 12 percent slopes	PHEL	3	0.20	0	8	80	0.89
MN031	515D	Newfound gravelly sandy loam, 12 to 20 percent slopes	PHEL	3	0.20	0	16	80	2.60
MN031	515DE	Newfound gravelly sandy loam, 12 to 25 percent slopes	PHEL	3	0.20	0	16	80	2.60
MN031	515EF	Newfound gravelly sandy loam, 18 to 35 percent slopes	HEL	3	0.32	56	20	80	3.50
MN031	515F	Newfound gravelly sandy loam, 25 to 40 percent slopes	HEL	3	0.32	56	30	80	7.00
MN031	530	Greenwood mucky peat	NHEL	5	-	56	0.2	80	0.08
MN031	531	Beseman muck	NHEL	2	-	134	0.2	80	0.08
MN031	534	Mooselake mucky peat	NHEL	5	-	56	0.2	80	0.08
MN031	540	Seeyleville muck	NHEL	3	-	134	0.2	80	0.08
MN031	555AD	Barto gravelly loam, 2 to 18 percent slopes	PHEL	2	0.24	0	10	80	1.20
MN031	556AD	Insula gravelly sandy loam, 2 to 18 percent slopes	PHEL	2	0.17	0	10	80	1.20
MN031	556DE	Insula gravelly sandy loam, 12 to 25 percent slopes	HEL	2	0.17	0	18	80	3.00
MN031	557AD	Conic gravelly sandy loam, 2 to 18 percent slopes	PHEL	3	0.15	0	10	80	1.20
MN031	557DF	Conic gravelly sandy loam, 12 to 35 percent slopes	PHEL	3	0.15	0	20	80	3.50
MN031	685	Oesteale fine sand loam	NHEL	4	0.24	86	1	80	0.12
MN031	695B	Finland loam, 2 to 6 percent slopes	NHEL	3	0.32	56	4	80	0.37
MN031	695C	Finland loam, 6 to 12 percent slopes	PHEL	3	0.32	56	8	80	0.89

Highly Erodible Soil Map Unit List - COOK COUNTY, MN

C=.08

R=80

This data is only to be used for HEL determinations. This is the "frozen list" based on 01/01/1990 information. Values other than 'HEL' should only be used for PHEL.

areasym	musym	muname	HEL	T	K	I	slope_%	slope_l	LS
MN031	695D	Finland loam, 12 to 18 percent slopes	HEL	3	0.32	56	16	80	2.60
MN031	695E	Finland loam, 18 to 25 percent slopes	HEL	3	0.32	56	20	80	3.50
MN031	695F	Finland loam, 25 to 35 percent slopes	HEL	3	0.32	56	30	80	7.00
MN031	696	Hermantown silt loam	NHEL	4	0.32	56	1	80	0.12
MN031	697B	Toimi sandy loam, 2 to 6 percent slopes	NHEL	4	0.24	86	4	100	0.40
MN031	697C	Toimi sandy loam, 6 to 12 percent slopes	NHEL	4	0.24	86	8	100	0.99
MN031	697D	Toimi sandy loam, 12 to 18 percent slopes	HEL	4	0.24	86	16	100	2.80
MN031	714	Buhl loam	NHEL	3	0.37	56	1	80	0.12
MN031	890B	Barto-Mesaba complex, 2 to 6 percent slopes	NHEL	2	0.24	0	4	80	0.37
MN031	890BD	Barto-Mesaba complex, 2 to 18 percent slopes	PHEL	2	0.24	0	10	80	1.20
MN031	890EF	Barto-Mesaba complex, 18 to 35 percent slopes	HEL	2	0.17	0	18	80	3.50
MN031	952AD	Quetico-Rock outcrop complex, 2 to 18 percent slopes	PHEL	1	0.24	0	10	80	1.20
MN031	952EF	Quetico-Rock outcrop complex, 12 to 40 percent slopes	HEL	1	0.24	0	20	80	3.50
MN031	975A	Ahmeek and Omega soils, 0 to 2 percent slopes	NHEL	3	0.37	56	1	80	0.12
MN031	975B	Ahmeek and Omega soils, 2 to 6 percent slopes	NHEL	3	0.37	56	4	80	0.37
MN031	975C	Ahmeek and Omega soils, 6 to 12 percent slopes	PHEL	3	0.37	56	8	80	0.89
MN031	975D	Ahmeek and Omega soils, 12 to 18 percent slopes	HEL	3	0.37	56	16	80	2.60
MN031	975E	Ahmeek and Omega soils, 18 to 25 percent slopes	HEL	3	0.37	56	20	80	3.50
MN031	980	Blackhoof and Mahtowa soils	NHEL	5	0.28	48	0.2	80	0.08
MN031	995	Borosaprist, undifferentiated	NHEL	-	-	-	0.2	80	0.08
MN031	1001	Alluvial land, occasionally flooded	NHEL	-	-	-	1	80	0.12
MN031	1002	Alluvial land, frequently flooded	NHEL	5	0.28	56	1	80	0.12
MN031	1022	Dumps	PHEL	-	-	-	10	80	1.20
MN031	1020F	Udorthents, very steep	HEL	5	0.24	86	50	80	####
MN031	1334B	Eveleth stony loam, 2 to 6 percent slopes	NHEL	4	0.24	0	4	80	0.37
MN031	1334BC	Eveleth stony loam, 2 to 12 percent slopes	NHEL	4	0.24	86	8	100	0.99
MN031	1334C	Eveleth stony loam, 6 to 12 percent slopes	NHEL	4	0.24	86	8	100	0.81
MN031	1336	Bugcreek stony loam	NHEL	4	0.17	0	0.2	80	0.08
MN031	1340A	Ontonagon-Omega complex, 0 to 2 percent slopes	NHEL	3	0.28	86	1	100	0.13
MN031	1340B	Ontonagon-Omega complex, 2 to 6 percent slopes	NHEL	3	0.28	86	4	100	0.40
MN031	1340C	Ontonagon-Omega complex, 6 to 12 percent slopes	PHEL	3	0.28	86	8	100	0.99
MN031	1340D	Ontonagon-Omega complex, 12 to 18 percent slopes	HEL	3	0.28	86	16	100	2.80
MN031	1340E	Ontonagon-Omega complex, 18 to 25 percent slopes	HEL	3	0.28	86	20	100	4.00
MN031	1340F	Ontonagon-Omega complex, 25 to 40 percent slopes	HEL	3	0.28	86	30	100	8.00
MN031	1823	Mesaba variant, 2 to 12 percent slopes	PHEL	2	0.17	0	10	80	1.20