

## Highly Erodible Soil Map Unit List - ST. LOUIS COUNTY - MEADOWLANDS PART, MN

C=.09

R=100

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

musym	muname	HEL	T	K	I	slope_%	slope_l	LS
1003B	Udorthents, loamy (cut and fill land)	NHEL						
1012A	Lobo-Waskish complex, 0 to 2 percent slopes	NHEL	3	.02	38	0.5	80	
1014A	Uskabwanka peat, 0 to 1 percent slope	NHEL	1	.02	38	0	80	
1020A	Bowstring muck and Fluvaquents, loamy, 0 to 1 percent slopes, frequently flooded	NHEL	3	.02	134	0	80	
1021A	Rifle soils, 0 to 1 percent slopes	NHEL	3	.02	56	0	80	
1022A	Greenwood soils, 0 to 1 percent slopes	NHEL	3	.02	38	0	80	
1026A	Udifluvents, loamy, 0 to 2 percent slopes, occasionally flooded	NHEL	5	.24	56	1	80	
1050	Tailings basin	NHEL						
A1B	Eagleview and Menahga soils, 1 to 8 percent slopes	NHEL						
A41E	Itasca silt loam, 18 to 45 percent slopes	HEL	3	0.24	86	25	80	5.5
A42B	Itasca-Goodland-Aquepts complex, pitted, 0 to 8 percent slopes	NHEL	5	.02	56	6	80	
A42D	Itasca-Goodland-Aquepts complex, pitted, 0 to 18 percent slopes	PHEL	3	0.24	86	12	80	1.6
A42E	Itasca-Goodland-Aquepts complex, pitted, 0 to 45 percent slopes	HEL	3	0.24	86	25	80	5.5
A43D	Warba very fine sandy loam, 8 to 18 percent slopes	PHEL	5	0.37	56	12	80	1.6
A44B	Udalfs-Cathro complex, 0 to 8 percent slopes	NHEL	5	.32	86	6	80	
A44D	Udalfs-Cathro complex, 0 to 18 percent slopes	PHEL	5	.32	134	13	80	1.6
A45B	Eutrudepts-Itasca-Endoaqualls, depressional, complex, 0 to 8 percent slopes	NHEL	5	.02	56	6	80	
B100A	Greenwood-Merwin complex, depressional, 0 to 1 percent slopes	NHEL	3	.02	38	0	80	
B101A	Schisler-Ellsburg-Baden, depressional, complex, 0 to 2 percent slopes	NHEL	5	.15	86	1	80	
B102A	Hellwig-Ellsburg-Baden, depressional, complex, 0 to 2 percent slopes	NHEL	5	.15	86	1	80	
B103A	Melrude-Schisler-Baden, depressional, complex, 0 to 2 percent slopes	NHEL	5	.15	56	1	80	
B104A	Ellsburg-Baden complex, 0 to 2 percent slopes	NHEL	5	.24	56	1	80	
B107A	Baden muck, depressional, 0 to 1 percent slopes	NHEL	5	.02	134	0	80	
B108A	Cathro muck, depressional, upham basin, 0 to 1 percent slopes	NHEL	2	.02	134	0	80	
B118A	Rifle soils, duluth catena, 0 to 1 percent slopes	NHEL	3	.02	38	0	80	
B119A	Tacoosh mucky peat, upham basin, 0 to 1 percent slopes	NHEL	2	.02	56	0	80	
B120A	Mooselake mucky peat, duluth catena, 0 to 1 percent slopes	NHEL	3	.02	38	0	80	
B121A	Merwin peat, duluth catena, 0 to 1 percent slopes	NHEL	2	.02	38	0	80	
B122A	Tacoosh mucky peat, duluth catena, 0 to 1 percent slopes	NHEL	2	.02	56	0	80	
B123A	Blackhoof-Cathro-Baden complex, depressional, 0 to 1 percent slopes	NHEL	3	.02	134	0	80	
B124A	Dusler-Ellsburg complex, 0 to 3 percent slopes	NHEL	5	.24	56	2	80	
B125B	Culver silt loam, 3 to 8 percent slopes	NHEL	5	.24	56	6	80	
B126D	Duluth-Culver complex, 3 to 18 percent slopes	PHEL	5	0.37	56	12	80	1.6
B126E	Duluth silt loam, 18 to 45 percent slopes	HEL	3	0.24	86	25	80	5.5
B127B	Culver-Dusler-Ellsburg complex, 0 to 8 percent slopes	NHEL	5	.24	56	6	80	
B128D	Duluth-Culver-Cathro, depressional, complex, 0 to 18 percent slopes	PHEL	5	0.37	56	12	80	1.6

## Highly Erodible Soil Map Unit List - ST. LOUIS COUNTY - MEADOWLANDS PART, MN

C=.09

R=100

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

musym	muname	HEL	T	K	I	slope_%	slope_l	LS
B129B	Culver-Culver, coarse substratum-Ellsburg complex, 0 to 8 percent slopes	NHEL	5	.24	56	6	80	
B130D	Duluth-Duluth, coarse substratum-Ellsburg complex, 0 to 18 percent slopes	PHEL	5	0.37	56	12	80	1.6
B131F	Duluth-Duluth, coarse substratum, complex, 18 to 45 percent slopes	HEL	5	0.24	86	25	80	5.5
B135A	McDavitt, depressional-Zimm, complex, 0 to 2 percent slopes	NHEL	5	.02	56	0	80	
B143B	Dinham-Dusler complex, 1 to 8 percent slopes	NHEL	5	.15	86	6	80	
B144A	Ellsburg-Dusler complex, 0 to 3 percent slopes	NHEL	5	.24	56	1	80	
B145B	Dusler-Culver complex, 1 to 8 percent slopes	NHEL	5	.24	56	2	80	
B147A	Rifle soils, upham basin, 0 to 1 percent slopes	NHEL	3	.02	38	0	80	
B148A	Greenwood soils, duluth catena, 0 to 1 percent slopes	NHEL	3	.02	38	0	80	
B149A	Zimm-McDavitt, depressional-Brickton complex, 0 to 2 percent slopes	NHEL	5	.28	56	1	80	
B14A	Greenwood soils, upham basin, 0 to 1 percent slopes	NHEL	3	.02	38	0	80	
B150D	Dinham-Duluth complex, 8 to 18 percent slopes	PHEL	5	0.37	56	12	80	1.6
B152A	Greenwood soils, hibbing catena, 0 to 1 percent slopes	NHEL	3	.02	38	0	80	
B153B	Aerie-Zimm complex, 0 to 3 percent slopes	NHEL	5	.20	86	2	80	
B16B	Westoo-Barber-Vasso complex, 0 to 6 percent slopes	NHEL	5	.17	134	3	80	
B17B	Graycalm-Biwabik complex, 1 to 6 percent slopes	NHEL	5	.17	134	4	80	
B17D	Graycalm-Biwabik complex, pitted, 6 to 25 percent slopes	PHEL	5	0.15	220	12	80	1.6
B212A	Brickton-Hassman, depressional, complex, 0 to 2 percent slopes	NHEL	5	.28	48	1	100	
B213A	Hassman, depressional-Brickton complex, 0 to 1 percent slopes	NHEL	5	.02	56	0	100	
B220A	Meadowlands-Leeora-Alborn complex, 0 to 2 percent slopes	NHEL	5	.28	56	1	80	
B221A	Leeora-Meadowlands-Sago complex, 0 to 1 percent slopes	NHEL	5	.02	38	0	80	
B230A	Joki-McDavitt, depressional-Little White complex, 0 to 2 percent slopes	NHEL	5	.10	134	1	80	
B234A	Joula-Meadowlands-Leeora complex, 0 to 3 percent slopes	NHEL	5	.32	56	2	80	
B235A	Skunkcreek-Meadowlands-Kapla, depressional, complex, 0 to 2 percent slopes	NHEL	5	.24	86	1	80	
B236A	Skunkcreek-Louis-Meadowlands complex, 0 to 3 percent slopes	NHEL	5	.24	86	1	80	
B237A	Onega-Kapla, frequently ponded complex, 0 to 1 percent slope	NHEL	5	.32	86	1	80	
B238A	Cowhorn-Onega-Sago, frequently ponded complex, 0 to 3 percent slopes	NHEL	5	.37	134	1	80	
B239B	Cedar Valley-Cowhorn-Onega complex, 0 to 5 percent slopes	NHEL	5	.37	86	3	80	
B240D	Wawina-Cedar Valley complex, 1 to 18 percent slopes	PHEL	5	.32	56	16	80	2.6
B241A	Wabuse-Vasso-Leeora, depressional, complex, 0 to 3 percent slopes	NHEL	5	.20	86	1	80	
B266A	Gowan-Alborn-Sax complex, 0 to 2 percent slopes	NHEL	5	.28	56	1	80	
B267B	Lahti-Gowan-Littleswan complex, 1 to 3 percent slopes	NHEL	5	.37	86	2	80	
B268B	Eutrudepts-Fluvaquents complex, 0 to 8 percent slopes, flooded	NHEL	5	.02	56	6	80	
B268D	Fluvaquents-Eutrudepts-Udifluents complex, 0 to 18 percent slopes, flooded	PHEL	5	0.32	56	16	80	2.6
B268E	Fluvaquents-Eutrudepts-Udifluents complex, 0 to 35 percent slopes, flooded	PHEL	5	0.32	56	16	80	2.6
B270A	Alborn-Littleswan complex, 0 to 3 percent slopes	NHEL	5	.28	56	1	80	

Highly Erodible Soil Map Unit List - ST. LOUIS COUNTY - MEADOWLANDS PART, MN

C=.09

R=100

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

musym	muname	HEL	T	K	I	slope_%	slope_l	LS
B271A	Alborn-Sax complex, 0 to 2 percent slopes	NHEL	5	.28	56	1	80	
B27A	Mcquade-Buhl complex, 0 to 3 percent slopes	NHEL	4	.28	48	1	80	
B28B	Buhl loam, 1 to 5 percent slopes	NHEL	4	.28	48	3	80	
B29D	Hibbing-Buhl complex, 1 to 18 percent slopes	PHEL	3	0.32	48	10	80	1.2
B30A	Sago muck, 0 to 1 percent slopes, frequently ponded	NHEL	5	.02	56	0	80	
B31D	Hibbing loam, 8 to 18 percent slopes	PHEL	3	0.32	48	10	80	1.2
B31E	Hibbing loam, 18 to 30 percent slopes	HEL	3	0.24	86	25	80	5.5
B32A	Mcquade-Dora, depressional-Fayal, depressional, complex, 0 to 2 percent slopes	NHEL	4	.28	48	1	80	
B33A	Mcquade-Fayal, depressional, complex, 0 to 2 percent slopes	NHEL	4	.28	48	1	80	
B34B	Majestic-Hibbing complex, 2 to 8 percent slopes	NHEL	4	.20	86	5	80	
B35E	Hibbing-Udorthents complex, 18 to 45 percent slopes	HEL	3	0.24	86	25	80	5.5
B36B	Lavell-Shawano complex, 1 to 6 percent slopes	NHEL	5	.17	134	4	80	
B37B	Westoo-Lavell complex, 0 to 6 percent slopes	NHEL	5	.17	134	2	80	
B39A	Meehan loamy sand, 0 to 3 percent slopes	NHEL	5	.17	134	1	80	
B40D	Shawano loamy fine sand, 6 to 18 percent slopes	PHEL	5	0.15	220	12	80	1.6
B41B	Friendship loamy sand, 0 to 4 percent slopes	NHEL	5	.17	134	2	80	
B47A	Daisybay peat, 0 to 1 percent slopes	NHEL	2	.02	38	0	80	
B48A	Mooseline-Turpela complex, 0 to 3 percent slopes	NHEL	4	.20	86	2	80	
B52A	Dora muck, depressional, hibbing catena, 0 to 1 percent slopes	NHEL	2	.02	134	0	80	
B53A	Dora mucky peat, hibbing catena, 0 to 1 percent slopes	NHEL	2	.02	56	0	80	
B54A	Spooner-Littleswan complex, 0 to 2 percent slopes	NHEL	5	.32	56	1	100	
B56A	Sax, frequently ponded-Spooner complex, 0 to 1 percent slopes	NHEL	5	.32	56	1	100	
B57A	Littleswan silt loam, 0 to 3 percent slopes	NHEL						
B57B	Baudette-Littleswan complex, 0 to 6 percent slopes	NHEL	5	.32	56	2	100	
B58B	Wurtsmith-Meehan complex, 0 to 4 percent slopes	NHEL	5	.17	134	2	80	
B61A	Cathro, depressional-Barber complex, 0 to 3 percent slopes	NHEL	5	.02	56	0	80	
B62A	Wabuse-Vasso complex, 0 to 3 percent slopes	NHEL	5	.20	86	1	80	
B63B	Urbanland-McQuade-Buhl complex, 0 to 12 percent slopes	PHEL	3	0.43	86	5	80	0.5
B64B	Vasso-Keenan complex, 1 to 6 percent slopes	NHEL	5	.20	86	2	80	
B65A	Merwin peat, upham basin, 0 to 1 percent slopes	NHEL	2	.02	38	0	80	
B66C	Entisols, channeled, 0 to 20 percent slopes, rarely to frequently flooded	PHEL	5	0.15	220	12	80	1.6
B67A	Rifle soils, hibbing catena, 0 to 1 percent slopes	NHEL	3	.02	38	0	80	
B68A	Roscommon-Roscommon, silty substratum, complex, depressional, 0 to 1 percent slopes	NHEL	5	.02	134	0	80	
B72A	Barber-Wabuse complex, 0 to 3 percent slopes	NHEL	5	.20	86	2	80	
B73A	Spooner-Buhl-Littleswan complex, 0 to 3 percent slopes	NHEL	5	.32	56	1	100	
B74A	Kapla, depressional-Wabuse complex, 0 to 2 percent slopes	NHEL	5	.02	56	0	80	

## Highly Erodible Soil Map Unit List - ST. LOUIS COUNTY - MEADOWLANDS PART, MN

C=.09

R=100

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

musym	muname	HELC	T	K	I	slope_%	slope_l	LS
B81A	Cathro muck, depressionnal, duluth catena, 0 to 1 percent slopes	NHEL	2	.02	134	0	80	
B83A	Rifle-Tacoosh complex, depressionnal, 0 to 1 percent slopes	NHEL	3	.02	56	0	80	
B85A	Mooselake mucky peat, upham basin, 0 to 1 percent slopes	NHEL	3	.02	38	0	80	
B86A	Meadowlands-Leeora-Alborn complex, clayey substratum, 0 to 2 percent slopes	NHEL	5	.28	56	1	80	
B99A	Cathro-Sago complex, depressionnal, 0 to 1 percent slopes	NHEL	5	.02	134	0	80	
F101A	Bugcreek extremely stony sandy loam, 0 to 1 percent slopes, rubbly	NHEL	4	.15	0	0	80	
F102A	Nevens stony loam, 0 to 2 percent slopes, very stony	NHEL	4	.15	48	1	80	
F103B	Brimson stony fine sandy loam, 2 to 5 percent slopes, very stony	NHEL	4	.15	56	3	80	
F104B	Toimi stony loam, 3 to 8 percent slopes, very stony	NHEL	4	.15	48	5	80	
F104D	Toimi stony loam, 8 to 18 percent slopes, very stony	PHEL	4	0.17	0	13	80	1.8
F104E	Toimi stony loam, 18 to 45 percent slopes, very stony	HEL	3	0.24	86	25	80	5.5
F106B	Toimi-Nevens-Brimson complex, 0 to 8 percent slopes, very stony	NHEL	4	.15	48	5	80	
F107D	Toimi-Nevens complex, 0 to 18 percent slopes, very stony	PHEL	4	0.17	0	13	80	1.8
F108B	Brimson, very stony-Bugcreek, rubbly complex, 0 to 5 percent slopes	NHEL	4	.15	56	3	80	
F109A	Wahbegon, depressionnal-Eldes complex, 0 to 2 percent slopes	NHEL	5	.37	56	0	80	
F110A	Hegberg-Eldes complex, 0 to 3 percent slopes	NHEL	5	.37	56	2	80	
F111B	Augustana-Hegberg complex, 1 to 8 percent slopes	NHEL	5	.37	56	6	80	
F112D	Forbay-Augustana complex, 3 to 18 percent slopes	PHEL	5	.37	56	12	80	1.6
F115A	Merwin peat, dense substratum, 0 to 1 percent slopes	NHEL	2	.02	38	0	80	
F116A	Mooselake muck, 0 to 1 percent slopes	NHEL	3	.02	38	0	80	
F117A	Rollins sandy loam, 0 to 3 percent slopes	NHEL	3	.20	86	1	80	
F117B	Rollins sandy loam, 2 t 8 percent slopes	PHEL	2	.20	0	4	80	0.4
F117D	Rollins sandy loam, 8 to 18 percent slopes	PHEL	2	0.10	0	14	80	2.0
F117F	Rollins sandy loam, 18 to 45 percent slopes	HEL	2	0.10	0	30	80	7.0
F118B	Aldenlake-Pequaywan complex, 0 to 6 percent slopes	PHEL	2	.20	0	4	80	0.4
F120A	Grayling-Cromwell complex, 0 to 3 percent slopes	NHEL	5	.15	134	1	80	
F120B	Grayling-Cromwell complex, 2 to 8 percent slopes	NHEL	5	.15	134	5	80	
F120D	Grayling-Cromwell complex, 8 to 18 percent slopes	PHEL	5	.15	220	12	80	1.6
F120F	Grayling-Cromwell complex, 18 to 45 percent slopes	PHEL	5	.15	220	25	80	5.5
F121A	Aldenlake sandy loam, 0 to 3 percent slopes	NHEL	4	.20	86	1	80	
F121B	Aldenlake sandy loam, 2 to 8 percent slopes	PHEL	2	.20	0	4	80	0.4
F121D	Aldenlake sandy loam, 8 to 18 percent slopes	PHEL	3	0.24	86	12	80	1.6
F121F	Aldenlake sandy loam, 18 to 45 percent slopes	HEL	3	0.24	86	30	80	7.0
F122B	Aldenlake-Pequaywan complex, pitted, 0 to 8 percent slopes	PHEL	2	.20	0	4	80	0.4
F122D	Aldenlake-Pequaywan complex, pitted, 0 to 18 percent slopes	HEL	3	0.24	86	12	80	1.6
F122F	Aldenlake-Pequaywan complex, pitted, 0 to 45 percent slopes	HEL	3	0.24	86	30	80	7.0

## Highly Erodible Soil Map Unit List - ST. LOUIS COUNTY - MEADOWLANDS PART, MN

C=.09

R=100

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

musym	muname	HEL	T	K	I	slope_%	slope_l	LS
F123B	Grayling-Grytal-Cromwell complex, pitted, 0 to 8 percent slopes	NHEL	5	.15	134	5	80	
F123D	Grayling-Grytal-Cromwell complex, pitted, 0 to 18 percent slopes	PHEL	5	.15	220	12	80	1.6
F124B	Rollins-Pequaywan complex, pitted, 0 to 8 percent slopes	PHEL	2	.20	0	4	80	0.4
F124D	Rollins-Pequaywan complex, pitted, 0 to 18 percent slopes	PHEL	2	0.10	0	14	80	2.0
F124F	Rollins-Pequaywan complex, pitted, 0 to 45 percent slopes	HEL	2	0.10	0	30	80	7.0
F125A	Pequaywan fine sandy loam, 0 to 3 percent slopes	NHEL	4	.20	86	1	80	
F126A	Grytal sandy loam, 0 to 3 percent slopes	NHEL	4	.17	86	1	80	
F127A	Hulligan mucky fine sandy loam, depressional, 0 to 1 percent slopes	NHEL	4	.20	86	0	80	
F128A	Hulligan fine sandy loam, 0 to 1 percent slopes	NHEL	4	.20	86	1	80	
F129A	Tacoosh mucky peat, 0 to 1 percent slopes	NHEL	2	.02	56	0	80	
F134A	Giese muck, depressional, 0 to 1 percent slope	NHEL	4	.02	134	0	80	
F135A	Hermantown-Canosia-Giese, depressional, complex, 0 to 3 percent slopes	NHEL	4	.28	56	2	80	
F136A	Hermantown silt loam, 1 to 3 percent slopes	NHEL	4	.28	56	2	80	
F137B	Normanna-Canosia-Hermantown complex, 0 to 8 percent slopes	NHEL	4	.17	56	6	80	
F138D	Ahmeek-Normanna-Canosia complex, 0 to 18 percent slopes	HEL	3	.28	86	12	80	1.6
F139F	Ahmeek silt loam, 18 to 45 percent slopes	HEL	3	0.24	86	25	80	5.5
F140B	Normanna-Giese, depressional, complex, pitted, 0 to 8 percent slopes	NHEL	4	.17	56	6	80	
F141D	Ahmeek-Normanna-Cathro, depressional, complex, pitted, 0 to 25 percent slopes	PHEL	3	.28	86	12	80	1.6
F142A	Canosia loam, 0 to 2 percent slopes	NHEL	4	.17	56	1	80	
F143B	Normanna-Aldenlake-Canosia complex, 0 to 8 percent slopes	NHEL	4	.17	56	6	80	
F144D	Aldenlake-Ahmeek complex, 8 to 18 percent slopes	PHEL	3	0.24	86	12	80	1.6
F145F	Ahmeek-Aldenlake complex, 18 to 45 percent slopes	HEL	3	0.24	86	25	80	5.5
F146A	Giese muck, 0 to 2 percent slopes, rubbly	NHEL	4	.02	134	1	80	
F148F	Ahmeek-Rock outcrop-Fluvaquents, frequently flooded, complex, 0 to 50 percent slopes	HEL	3	0.24	86	25	80	5.5
F150A	Twig-Tacoosh-Giese complex, depressional, 0 to 1 percent slopes	NHEL	4	.02	56	0	80	
F151A	Tacoosh mucky peat, dense substratum, 0 to 1 percent slopes	NHEL	2	.02	56	0	80	
F161A	Mooselake muck, dense substratum, 0 to 1 percent slopes	NHEL	3	.02	38	0	80	
F162A	Spidercreek sandy loam, 0 to 1 percent slopes	NHEL	5	.17	86	1	80	
F170A	Rifle soils, dense substratum, 0 to 1 percent slopes	NHEL	3	.02	38	0	80	
F175A	Greenwood soils, dense substratum, 0 to 1 percent slopes	NHEL	3	.02	38	0	80	
F188A	Marl	NHEL	2	.02	56	0	80	
F32A	Merwin peat, 0 to 1 percent slopes	NHEL	2	.02	38	0	80	
F33A	Cathro muck, depressional, dense substratum, 0 to 1 percent slopes	NHEL	2	.02	134	0	80	
F34A	Cathro muck, depressional, 0 to 1 percent slopes	NHEL	2	.02	134	0	80	
GP	Pits, gravel-Udipsamments complex	NHEL						
I-W	Water, intermittent	NHEL						

Highly Erodible Soil Map Unit List - **ST. LOUIS COUNTY - MEADOWLANDS PART, MN**

**C=.09**

**R=100**

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

<b>musym</b>	<b>muname</b>	<b>HEL</b>	<b>T</b>	<b>K</b>	<b>I</b>	<b>slope_%</b>	<b>slope_I</b>	<b>LS</b>
M-W	Water, miscellaneous	NHEL						
W	Water	NHEL						