

Highly erodible soil mapunit list - Winona County, MN

This data is only to be used for HEL determinations

C=0.07 R=160

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Mapunit

Symbol	Mapunit Name	HELC	T	K	I	slope %	slope l	LS
11B	SOGN SILT LOAM, 1 TO 6 PERCENT SLOPES	HEL	1	0.32	86	4.00	125	0.44
11D	SOGN SILT LOAM, ROCKY, 6 TO 30 PERCENT SLOPES	HEL	1	0.32	86	20.00	100	4.08
19	Chaseburg silt loam, moderately well drained, 0 to 2 percent slopes	NHEL	5	0.37	56	2.00	200	0.25
24	KASSON SILT LOAM	NHEL	5	0.32	56	3.00	200	0.39
25	BECKER FINE SANDY LOAM	NHEL	4	0.20	86	1.00	400	0.20
79B	BILLETT FINE SANDY LOAM, 1 TO 6 PERCENT SLOPES	NHEL	5	0.20	68	4.00	125	0.44
81B	BOONE LOAMY FINE SAND, 2 TO 6 PERCENT SLOPES	NHEL	4	0.17	134	4.00	150	0.47
81C	BOONE LOAMY FINE SAND, 6 TO 15 PERCENT SLOPES	PHEL	4	0.17	134	11.00	125	1.77
95C	DUNBARTON SILT LOAM, ROCKY, 4 TO 12 PERCENT SLOPES	HEL	2	0.37	48	8.00	125	1.11
99B	RACINE SILT LOAM, 2 TO 6 PERCENT SLOPES	NHEL	5	0.32	48	4.00	200	0.53
99C	RACINE SILT LOAM, 6 TO 12 PERCENT SLOPES	HEL	5	0.32	48	8.00	130	1.13
103A	Seaton silt loam, driftless ridge, 1 to 3 percent slopes	NHEL	5	0.37	56	2.00	200	0.25
103B	Seaton silt loam, ridge phase, 2 to 6 percent slopes	NHEL	5	0.37	56	4.00	200	0.53
103C2	Seaton silt loam, driftless ridge, 6 to 12 percent slopes, moderately eroded	HEL	5	0.37	56	8.00	150	1.21
103vC2	Seaton silt loam, driftless valley, 6 to 12 percent slopes, moderately eroded	HEL	5	0.37	56	8.00	150	1.21
103D2	Seaton silt loam, driftless ridge, 12 to 20 percent slopes, moderately eroded	HEL	5	0.37	56	16.00	150	2.84
103vD2	Seaton silt loam, driftless valley, 12 to 20 percent slopes, moderately eroded	HEL	5	0.37	56	16.00	150	2.84
173F	FRONTENAC LOAM, 30 TO 40 PERCENT SLOPES	HEL	4	0.32	48	35.00	200	14.50
174D	Gale silt loam, 12 to 20 percent slopes, moderately eroded	HEL	4	0.37	56	15.00	140	3.03
176	GARWIN SILT LOAM	NHEL	5	0.28	48	2.00	200	0.25
194	HUNTSVILLE SILT LOAM	NHEL	5	0.28	48	1.00	400	0.20
198C	ROLLINGSTONE SILT LOAM, 3 TO 12 PERCENT SLOPES	HEL	3	0.43	48	9.00	200	1.66
198D	ROLLINGSTONE SILT LOAM, 12 TO 20 PERCENT SLOPES	HEL	3	0.43	48	16.00	150	2.84
215B	SOUTHRIDGE SILT LOAMS, 2 TO 6 PERCENT SLOPES	NHEL	4	0.37	56	4.00	200	0.53
215C	SOUTHRIDGE SILT LOAM, 6 TO 12 PERCENT SLOPES	HEL	4	0.37	56	8.00	100	0.99
215D	SOUTHRIDGE SILT LOAM, 12 TO 20 PERCENT SLOPES	HEL	4	0.37	56	16.00	200	4.01
262B	MEDARY SILT LOAM, 1 TO 6 PERCENT SLOPES	PHEL	3	0.37	56	4.00	300	0.62
271	MINNEISKA FINE SANDY LOAM, CHANNELED	NHEL	5	0.20	86	1.00	300	0.18
283B	Plainfield loamy sand, river valley, 1 to 6 percent slopes	NHEL	5	0.15	310	4.00	200	0.53

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283C	Plainfield sand, river valley, 6 to 15 percent slopes	NHEL	5	0.15	310	8.00	175	1.31
283D	Plainfield sand, river valley, 12 to 25 percent slopes	HEL	5	0.15	310	18.00	100	3.43
283F	Plainfield sand, river valley, 15 to 60 percent slopes	HEL	5	0.15	310	35.00	150	12.50
285A	Port Byron silt loam, 0 to 2 percent slopes	NHEL	5	0.32	48	2.00	300	0.26
285B	Port Byron silt loam, 2 to 6 percent slopes	NHEL	5	0.32	48	4.00	250	0.55
285C	Port Byron silt loam, 6 to 12 percent slopes, moderately eroded	HEL	5	0.32	48	8.00	150	1.21
299B	ROCKTON SILT LOAM, 1 TO 6 PERCENT SLOPES	NHEL	4	0.28	48	4.00	200	0.53
301A	LINDSTROM SILT LOAM, 1 TO 3 PERCENT SLOPES	NHEL	5	0.28	56	2.00	300	0.28
301C	LINDSTROM SILT LOAM, 6 TO 12 PERCENT SLOPES	PHEL	5	0.28	56	8.00	200	1.40
301D	LINDSTROM SILT LOAM, 12 TO 20 PERCENT SLOPES	HEL	5	0.28	56	16.00	300	4.92
322C2	Timula silt loam, 6 to 12 percent slopes, moderately eroded	HEL	5	0.37	56	8.00	125	1.11
322D2	Timula silt loam, 12 to 20 percent slopes, moderately eroded	HEL	5	0.37	56	16.00	125	3.17
322TD2	Timula silt loam, terrace, 12 to 20 percent slopes, moderately eroded	HEL	5	0.37	56	16.00	125	3.17
322TE2	Timula silt loam, terrace, 20 to 40 percent slopes, moderately eroded	HEL	5	0.37	56	50.00	125	19.90
331	TRIPOLI SILTY CLAY LOAM	NHEL	5	0.28	38	2.00	200	0.25
369B	WAUBEEK SILT LOAM, 2 TO 6 PERCENT SLOPES	NHEL	5	0.28	48	4.00	250	0.55
369C	WAUBEEK SILT LOAM, 6 TO 12 PERCENT SLOPES	HEL	5	0.28	48	8.00	130	1.13
388C	Churchtown silt loam, 6 to 12 percent slopes, moderately eroded	HEL	5	0.37	56	8.00	200	1.40
388D	Churchtown silt loam, 12 to 20 percent slopes, moderately eroded	HEL	5	0.37	56	16.00	200	4.01
388E	Churchtown silt loam, 20 to 30 percent slopes, moderately eroded	HEL	5	0.37	56	25.00	130	6.72
401B	Mt. Carroll silt loam, 2 to 6 percent slopes, moderately eroded	NHEL	5	0.32	48	4.00	250	0.55
401C	Mt. Carroll silt loam, 6 to 12 percent slopes, moderately eroded	HEL	5	0.32	48	8.00	200	1.40
401D	Mt. Carroll silt loam, 12 to 20 percent slopes, moderately eroded	HEL	5	0.32	48	16.00	100	2.84
455A	FESTINA SILT LOAM, 0 TO 2 PERCENT SLOPES	NHEL	5	0.28	48	1.00	300	0.18
455B	FESTINA SILT LOAM, 2 TO 6 PERCENT SLOPES	NHEL	5	0.28	48	4.00	200	0.53
457E	LACRESCENT CHANNERY SILT LOAM, 20 TO 45 PERCENT SLOPES	HEL	3	0.20	310	30.00	150	9.74
457G	LACRESCENT SILT LOAM, ROCKY, 45 TO 70 PERCENT SLOPES	HEL	3	0.28	48	60.00	250	36.60
468	OTTER SILT LOAM	NHEL	5	0.28	48	1.00	200	0.16
474B	HAVERHILL MUCKY SILTY CLAY LOAM, 1 TO 8 PERCENT SLOPES	PHEL	4	0.37	38	5.00	200	0.68

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476B	FRANKVILLE SILT LOAM, 2 TO 6 PERCENT SLOPES	NHEL	4	0.32	48	4.00	200	0.53
476C	FRANKVILLE SILT LOAM, 6 TO 12 PERCENT SLOPES	HEL	4	0.32	48	9.00	200	1.41
476D	FRANKVILLE SILT LOAM, 12 TO 18 PERCENT SLOPES	HEL	4	0.32	48	14.00	125	2.57
477	LITTLETON SILT LOAM	NHEL	5	0.32	48	1.00	300	0.18
483	WAUKEE LOAM	NHEL	4	0.24	48	1.00	300	0.18
484D	EYOTA FINE SANDY LOAM, 12 TO 20 PERCENT SLOPES	HEL	5	0.20	86	16.00	200	4.01
488G	BRODALE COBBLY LOAM, ROCKY, 45 TO 70 PERCENT SLOPES	HEL	5	0.17	48	60.00	200	32.70
492B	NASSET SILT LOAM, 3 TO 6 PERCENT SLOPES	NHEL	4	0.28	48	4.00	200	0.53
492C	NASSET SILT LOAM, 6 TO 12 PERCENT SLOPES	HEL	4	0.32	48	8.00	200	1.40
493B	ORONOCO FINE SANDY LOAM, 3 TO 8 PERCENT SLOPES	NHEL	5	0.24	86	5.00	125	0.57
501B	NEWGLARUS SILT LOAM, 3 TO 6 PERCENT SLOPES	NHEL	4	0.37	56	4.00	200	0.53
501C	NEWGLARUS SILT LOAM, 6 TO 12 PERCENT SLOPES	HEL	4	0.37	56	8.00	150	1.21
501D	NEWGLARUS SILT LOAM, 12 TO 20 PERCENT SLOPES	HEL	4	0.37	56	15.00	200	3.62
501E	NEWGLARUS SILT LOAM, ROCKY, 12 TO 30 PERCENT SLOPES	HEL	4	0.37	56	20.00	130	4.65
522	BOOTS MUCK	NHEL	5	0.00	134	1.00	400	0.20
576	NEWALBIN SILT LOAM	NHEL	5	0.32	56	1.00	200	0.16
577	NEWALBIN SILT LOAM, CHANNELED	NHEL	5	0.32	56	1.00	200	0.16
578	NEWALBIN SILT LOAM, VERY WET	NHEL	5	0.32	56	1.00	100	0.13
580B	BLACKHAMMER-SOUTHRIDGE SILT LOAMS, 2 TO 6 PERCENT SLOPES	NHEL	4	0.37	56	4.00	225	0.55
580C	BLACKHAMMER-SOUTHRIDGE SILT LOAMS, 6 TO 12 PERCENT SLOPES	HEL	4	0.37	56	8.00	200	1.40
580D	BLACKHAMMER-SOUTHRIDGE SILT LOAMS, 12 TO 20 PERCENT SLOPES	HEL	4	0.37	56	15.00	150	3.13
584F	LAMOILLE-DORERTON SILT LOAMS, 30 TO 45 PERCENT SLOPES	HEL	3	0.32	56	40.00	100	12.70
586C	NODINE-ROLLINGSTONE SILT LOAMS, 4 TO 12 PERCENT SLOPES	HEL	3	0.43	48	8.00	250	1.13
586D	NODINE-ROLLINGSTONE SILT LOAMS, 12 TO 20 PERCENT SLOPES	HEL	3	0.43	48	16.00	130	3.24
587B	PALSGROVE SILT LOAM, 2 TO 6 PERCENT SLOPES	NHEL	4	0.32	48	4.00	250	0.55
587C	PALSGROVE SILT LOAM, 6 TO 12 PERCENT SLOPES	HEL	4	0.32	48	8.00	200	1.40
587D	PALSGROVE SILT LOAM, 12 TO 20 PERCENT SLOPES	HEL	4	0.32	48	16.00	150	3.48
592E	LAMOILLE-ELBAVILLE SILT LOAMS, 20 TO 30 PERCENT SLOPES	HEL	4	0.32	56	25.00	100	5.89
598B	BEAVERCREEK SILT LOAM, 1 TO 8 PERCENT SLOPES, STONY	NHEL	3	0.24	56	5.00	100	0.52

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599E	Norden silt loam, 20 to 30 percent slopes, moderately eroded	HEL	4	0.32	56	20.00	130	4.65
599F	Norden silt loam, 30 to 45 percent slopes	HEL	4	0.32	56	38.00	150	14.30
604	HUNTSVILLE-BEAVERCREEK COMPLEX, CHANNELED	NHEL	5	0.28	48	2.00	300	0.28
606	SHILOH SILT LOAM, PONDED	NHEL	5	0.28	48	1.00	100	0.13
815F	ELBAVILLE-SEATON SILT LOAMS, 30 TO 45 PERCENT SLOPES	HEL	4	0.32	56	40.00	150	15.50
826B	GALE-BLACKHAMMER SILT LOAMS, 2 TO 6 PERCENT SLOPES	NHEL	4	0.37	56	4.00	200	0.53
826C	GALE-BLACKHAMMER SILT LOAMS, 6 TO 12 PERCENT SLOPES	HEL	4	0.37	56	8.00	150	1.21
829C	SEATON-GALE SILT LOAMS, 6 TO 12 PERCENT SLOPES	HEL	4	0.37	56	8.00	100	0.99
830D	ELEVA-SEATON COMPLEX, 12 TO 30 PERCENT SLOPES	HEL	5	0.37	56	20.00	100	4.08
831F	SPINKS-BOONE-SOIGN COMPLEX, ROCKY, 15 TO 60 PERCENT SLOPES	HEL	1	0.24	310	40.00	160	16.00
832F	LACRESCENT-ROCK OUTCROP COMPLEX, 30 TO 45 PERCENT SLOPES	HEL	3	0.20	134	38.00	150	14.30
832G	LACRESCENT-ROCK OUTCROP COMPLEX, 45 TO 70 PERCENT SLOPES	HEL	3	0.20	134	60.00	200	32.70
839	URBAN LAND-MINNEOPA COMPLEX	NHEL	4	0.20	86	1.00	200	0.16
840	URBAN LAND-FINCHFORD COMPLEX	NHEL	5	0.17	134	1.00	200	0.16
898F	BELLECHESTER-BRODALE COMPLEX, ROCKY, 15 TO 60 PERCENT SLOPES	HEL	5	0.15	134	30.00	200	11.24
1002	FLUVAQUENTS, CHANNELED	NHEL	5	0.17	48	1.00	200	0.16
1010	Riverwash							
1013	Pits, quarries							
1015	PSAMMENTS, FILL	NHEL	5	0.10	134	1.00	200	0.16
1016	UDORTHENTS, LOAMY	NHEL	5	0.24	86	1.00	200	0.25
1029	Pits, gravel							
1822B	ABSCOTA VARIANT SAND, 1 TO 6 PERCENT SLOPES	NHEL	5	0.15	310	4.00	200	0.53
1830	EITZEN SILT LOAM	NHEL	5	0.28	48	2.00	300	0.28
1857	EITZEN SILT LOAM, CHANNELED	NHEL	5	0.28	48	3.00	200	0.39
1860	COMFREY SILT LOAM, CHANNELED	NHEL	5	0.28	48	1.00	200	0.16
1861	CHASEBURG SILT LOAM, CHANNELED	NHEL	5	0.37	56	4.00	200	0.53
1893B	BEAVERCREEK VARIANT LOAM, 1 TO 6 PERCENT SLOPES	NHEL	4	0.28	56	4.00	100	0.40
1936	HOOPESTON SANDY LOAM, BEDROCK SUBSTRATUM	NHEL	4	0.20	86	2.00	200	0.24
1937	LAWLER LOAM, BEDROCK SUBSTRATUM	NHEL	4	0.28	48	2.00	150	0.23

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1951A	FLAGLER SANDY LOAM, BEDROCK SUBSTRATUM, 0 TO 2 PERCENT SLOPES	NHEL	4	0.20	86	1.00	300	0.18
1951B	FLAGLER SANDY LOAM, BEDROCK SUBSTRATUM. 2 TO 6 PERCENT SLOPES	NHEL	4	0.20	86	4.00	200	0.53
1952B	KELTNER SILT LOAM, 3 TO 6 PERCENT SLOPES	NHEL	4	0.32	48	4.00	200	0.56
1952C	KELTNER SILT LOAM, 6 TO 12 PERCENT SLOPES	HEL	4	0.32	48	8.00	175	1.36
1953	MARSHAN SILT LOAM, LOAMY SUBSTRATUM	NHEL	4	0.28	48	1.00	300	0.18
1954B	SPINKS LOAMY FINE SAND, BEDROCK SUBSTRATUM, 1 TO 6 PERCENT SLOPES	NHEL	5	0.17	134	4.00	200	0.53
1954C	SPINKS LOAMY FINE SAND, BEDROCK SUBSTRATUM, 6 TO 15 PERCENT SLOPES	PHEL	5	0.17	134	9.00	225	1.76
1955A	WAUKEE LOAM, BEDROCK SUBSTRATUM, 0 TO 2 PERCENT SLOPES	NHEL	4	0.24	48	1.00	200	0.16
1955B	WAUKEE LOAM, BEDROCK SUBSTRATUM, 2 TO 6 PERCENT SLOPES	NHEL	4	0.24	48	4.00	200	0.53
1960B	HAVERHILL VARIANT, CLAY LOAM, 1 TO 8 PERCENT SLOPES	PHEL	3	0.32	48	5.00	200	0.68
1990	OTTER MUCKY SILT LOAM, VERY WET	NHEL	5	0.28	48	1.00	200	0.16
M-W	Water, miscellaneous							
W	Water							