

Pembina
North Dakota

5/20/88

Highly Erodible and
Potentially Highly Erodible
Land Calculator Ver. 1.1

Highly Erodible Land Classes

- 1= Highly Erodible Land
- 2= Potentially Highly Erodible
- 3= Not Highly Erodible

Map Symbol	Soil Name	%	WIND EROSION				WATER EROSION						Revised Water HEL Class				
			C Value	I Value	HEL Class	R Value	K Value	T Value	Slope- -Percent		Slope- -Length		LS- -Value		Water HEL Class	Water HEL Class	
									Min	Max	Min	Max	Min	Max	8T/RK=		
Ar	Arveson sl	90	0.40	86	1	60	0.24	4	0	1	100	300	0.069	0.179	2.222	3	3
*Av	Arveson l	90	0.40	86	3	60	0.24	4	0	1	100	300	0.069	0.179	2.222	3	3
*Aw	Arveson soils, very wet	90	0.40	86	3	60	0.24	4	0	1	100	300	0.069	0.179	2.222	3	3
BaD	Barnes l	85	0.40	48	3	60	0.28	5	9	20	80	150	1.049	4.995	2.381	2	1
BnA	Bearden sicl	95	0.40	86	3	60	0.28	5	1	3	100	300	0.129	0.399	2.381	3	3
BnB	Bearden sicl	95	0.40	86	3	60	0.28	5	3	6	100	200	0.287	0.951	2.381	3	3
BrA	Bearden sicl, saline	95	0.40	86	3	60	0.28	5	1	3	100	300	0.129	0.399	2.381	3	3
Bs	Bearden- Colvin sicl	60	0.40	86	3	60	0.28	5	0	1	80	200	0.066	0.159	2.381	3	3
BvA	Bearden and Glyndon sil	50	0.40	86	3	60	0.28	5	1	3	100	300	0.129	0.399	2.381	3	3
BwA	Binford sl	95	0.40	86	1	60	0.20	3	1	3	100	300	0.129	0.399	2.000	3	3
BwB	Binford sl	95	0.40	86	1	60	0.20	3	3	6	100	300	0.278	1.164	2.000	3	3
Bx	Borup	95	0.40	86	3	60	0.28	5	0	1	90	200	0.068	0.159	2.381	3	3
ByA	Brantford l	95	0.40	56	3	60	0.28	3	1	3	50	150	0.105	0.324	1.429	3	3
ByB	Brantford l	95	0.40	56	3	60	0.28	3	3	6	90	200	0.278	0.951	1.429	3	3
ByC	Brantford l	95	0.40	56	3	60	0.28	3	6	9	90	200	0.638	1.659	1.429	2	3
ByD	Brantford l	90	0.40	56	3	60	0.28	3	9	25	60	150	0.908	7.214	1.429	2	1
Ca	Cashel sic, channeled	95	0.40	86	3	60	0.32	5	6	25	80	250	0.601	9.313	2.083	2	1
CaA	Cashel sic	95	0.40	86	3	60	0.32	5	1	3	50	100	0.105	0.287	2.083	3	3
CaB	Cashel sic	90	0.40	86	3	60	0.32	5	3	6	100	200	0.287	0.951	2.083	3	3
CbB	Claire lcos	95	0.40	134	1	60	0.15	5	1	6	100	200	0.129	0.951	4.444	3	3
Cd	Clayey breaks	95	0.40	0		60											
Cf	Colvin sil	95	0.40	86	3	60	0.32	5	0	1	90	200	0.068	0.159	2.083	3	3
Cg	Colvin sil, saline	90	0.40	86	3	60	0.32	5	0	1	100	200	0.069	0.159	2.083	3	3
Ch	Colvin sicl	95	0.40	86	3	60	0.32	5	0	1	100	200	0.069	0.159	2.083	3	3
CoA	Cormant ls	85	0.40	134	1	60	0.17	5	1	3	100	300	0.129	0.399	3.922	3	3
*DdA	Divide l	95	0.40	86	3	60	0.28	4	1	3	50	100	0.105	0.287	1.905	3	3
Do	Dovray sic	85	0.40	86	3	60	0.28	5	0	1	90	200	0.068	0.159	2.381	3	3
EgA	Egeland l	95	0.40	56	3	60	0.20	5	1	3	100	300	0.129	0.399	3.333	3	3
EgB	Egeland l	95	0.40	56	3	60	0.20	5	3	6	80	200	0.268	0.951	3.333	3	3
EmA	Embden fsl	85	0.40	86	3	60	0.20	5	1	3	100	300	0.129	0.399	3.333	3	3
EmB	Embden fsl	95	0.40	86	3	60	0.20	5	3	6	80	200	0.268	0.951	3.333	3	3
FaA	Fairdale sicl	95	0.40	48	3	60	0.32	5	1	3	100	300	0.129	0.399	2.083	3	3
FaB	Fairdale sicl	95	0.40	48	3	60	0.32	5	3	6	100	300	0.287	1.164	2.083	3	3
Ff	Fargo sic	90	0.40	86	3	60	0.32	5	0	1	100	500	0.069	0.209	2.083	3	3
GaA	Gardena vfls	90	0.40	56	3	60	0.28	5	1	3	100	300	0.129	0.399	2.381	3	3
GbA	Gilby l	95	0.40	86	3	60	0.28	5	1	3	100	300	0.129	0.399	2.381	3	3
GdA	Glyndon lvfs	90	0.40	134	1	60	0.28	5	1	3	100	600	0.129	0.491	2.381	3	3
GfA	Glyndon sil	95	0.40	86	3	60	0.28	5	1	3	100	600	0.129	0.491	2.381	3	3
Gm	Glyndon sil, saline	85	0.40	86	3	60	0.28	5	0	1	100	600	0.069	0.221	2.381	3	3
Gr	Grano sic	95	0.40	86	3	60	0.28	5	0	1	80	200	0.066	0.159	2.381	3	3
Gs	Grano sic, saline	95	0.40	86	3	60	0.28	5	0	1	80	200	0.066	0.159	2.381	3	3
Ha	Hamar lfs	95	0.40	134	1	60	0.17	5	0	1	100	300	0.069	0.179	3.922	3	3
Hb	Hamar fsl	95	0.40	86	3	60	0.17	5	0	1	100	300	0.069	0.179	3.922	3	3
HdA	Hecla lfs	95	0.40	134	1	60	0.17	5	1	3	100	300	0.129	0.399	3.922	3	3
HdB	Hecla lfs	95	0.40	134	1	60	0.17	5	3	6	100	200	0.287	0.951	3.922	3	3

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Map Symbol	Soil Name	%	WIND EROSION				WATER EROSION						Revised Water						
			C	I	HEL	R	K	T	Slope- -Percent		Slope- -Length		LS- -Value		Water	HEL			
			Value	Value	Class	Value	Value	Value	Min	Max	Min	Max	Min	Max	8T/RK=	HEL Class	Class		
HfA	Hecla sl	95	0.40	86	3	60	0.17	5	1			3	100	300	0.129	0.399	3.922	3	3
HfB	Hecla sl	95	0.40	86	3	60	0.17	5	3			6	60	150	0.246	0.823	3.922	3	3
HgE	Hecla and Maddock soils	45	0.40	134	1	60	0.17	5	9			25	50	150	0.829	7.214	3.922	2	1
Hh	Hegne sic, saline	45	0.40	134	1	60	0.17	5	9			25	50	150	0.829	7.214	3.922	2	1
HmA	Hegne- Fargo sic	95	0.40	86	3	60	0.28	5	0			1	80	200	0.066	0.159	2.381	3	3
HmA	Hegne- Fargo sic	75	0.40	86	3	60	0.28	5	1			3	100	300	0.129	0.399	2.381	3	3
HmA	Hegne- Fargo sic	15	0.40	86	3	60	0.32	5	1			3	100	300	0.129	0.399	2.083	3	3
HmB	Hegne- Fargo sic	90	0.40	86	3	60	0.28	5	3			6	80	200	0.268	0.951	2.381	3	3
HmB	Hegne- Fargo sic	10	0.40	86	3	60	0.32	5	3			6	80	200	0.268	0.951	2.083	3	3
La	Lamoure	95	0.40	86	3	60	0.28	5	0			1	50	200	0.060	0.159	2.381	3	3
LbA	Lankin I	90	0.40	48	3	60	0.28	5	1			3	100	300	0.129	0.399	2.381	3	3
LgA	Lankin and Gilby stony I	45	0.40	48	3	60	0.28	5	1			3	100	400	0.129	0.435	2.381	3	3
LgA	Lankin and Gilby stony I	45	0.40	86	3	60	0.28	5	1			3	100	400	0.129	0.435	2.381	3	3
LpA	LaPrairie I	95	0.40	48	3	60	0.28	5	1			3	100	300	0.129	0.399	2.381	3	3
LrA	LaPrairie sicl	95	0.40	38	3	60	0.28	5	1			3	100	300	0.129	0.399	2.381	3	3
LrB	LaPrairie sicl	95	0.40	38	3	60	0.28	5	3			6	80	150	0.268	0.823	2.381	3	3
LvD	LaPrairie- Fairdale sicl, channeled	40	0.40	38	3	60	0.28	5	9			25	90	200	1.113	8.330	2.381	2	1
LvD	LaPrairie- Fairdale sicl, channeled	30	0.40	38	3	60	0.32	5	9			25	90	200	1.113	8.330	2.083	2	1
MaA	Maddock Is	90	0.40	134	1	60	0.17	5	1			3	100	300	0.129	0.399	3.922	3	3
MaB	Maddock Is	90	0.40	134	1	60	0.17	5	3			6	100	350	0.287	1.258	3.922	3	3
MbA	Maddock sl	90	0.40	86	3	60	0.17	5	1			3	100	300	0.129	0.399	3.922	3	3
MbB	Maddock sl	90	0.40	86	3	60	0.17	5	3			6	100	350	0.287	1.258	3.922	3	3
McB	Maddock Is, thin surface var.	85	0.40	134	1	60	0.17	5	1			6	100	350	0.129	1.258	3.922	3	3
Mf	McDonaldsville sic	85	0.40	86	3	60	0.28	5	1			3	50	200	0.105	0.353	2.381	3	3
Na	Nahon sil	95	0.40	56	3	60	0.32	3	0			1	80	200	0.066	0.159	1.250	3	3
Ng	Neche sicl	95	0.40	48	3	60	0.32	5	0			1	100	300	0.069	0.179	2.083	3	3
Nh	Neche sic	95	0.40	86	3	60	0.32	5	0			1	80	200	0.066	0.159	2.083	3	3
Oa	Ojata sil	95	0.40	86	3	60	0.32	5	0			1	50	200	0.060	0.159	2.083	3	3
OgB	Olga sicl	95	0.40	86	1	60	0.43	3	3			6	100	400	0.287	1.344	0.930	2	3
OgE	Olga sicl	95	0.40	86	1	60	0.43	3	9			25	100	800	1.173	16.659	0.930	1	1
OvA	Overly sicl	95	0.40	48	3	60	0.32	5	1			3	100	300	0.129	0.399	2.083	3	3
Pa	Peat		0.40	0		60													
Pu	Perella sicl	95	0.40	38	3	60	0.28	5	0			1	80	200	0.066	0.159	2.381	3	3
PyA	Poppleton Is	80	0.40	134	1	60	0.15	5	1			3	100	300	0.129	0.399	4.444	3	3
Ra	Rauville sil	95	0.40	86	3	60	0.28	5	0			1	100	300	0.069	0.179	2.381	3	3
RbA	Renshaw I	95	0.40	56	3	60	0.28	3	1			3	100	300	0.129	0.399	1.429	3	3
RfB	Renshaw very stony I	95	0.40	48	3	60	0.28	3	1			6	50	200	0.105	0.951	1.429	3	3
RoA	Rolette	95	0.40	86	3	60	0.32	5	1			3	200	600	0.159	0.491	2.083	3	3
Rp	Rough broken land		0.40	0		60													
Rr	Ryan- Fargo sic	85	0.40	86	1	60	0.28	3	0			1	100	500	0.069	0.209	1.429	3	3
Rr	Ryan- Fargo sic	15	0.40	86	3	60	0.32	5	0			1	100	500	0.069	0.209	2.083	3	3
SnD	Serden s	95	0.40	220	1	60	0.15	5	6			15	100	200	0.672	3.620	4.444	3	3
SwA	Swenoda fsl	95	0.40	86	3	60	0.20	5	1			3	100	300	0.129	0.399	3.333	3	3
Tf	Tiffany fsl	90	0.40	86	3	60	0.20	5	0			1	100	300	0.069	0.179	3.333	3	3
VaA	Vang I	90	0.40	48	3	60	0.28	4	1			3	80	200	0.121	0.353	1.905	3	3
VbA	Vang cl	95	0.40	48	3	60	0.28	4	1			3	80	200	0.121	0.353	1.905	3	3
VwA	Vang-	65	0.40	48	3	60	0.28	4	1			3	100	300	0.129	0.399	1.905	3	3

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	Walsh I	35	0.40	48	3	60	0.28	5	1				0.129	0.399	2.381	3	3
VwB	Vang- Walsh I	70 30	0.40 0.40	48 48	3 3	60 60	0.28 0.28	4 5	3 3		3 100 6 100	300 300	0.287 0.287	1.164 1.164	1.905 2.381	3 3	3 3
	Vy Vang I, wet variant	95	0.40	48	3	60	0.28	4	0		1 50	175	0.060	0.153	1.905	3	3
WaA	Wahpeton sic	95	0.40	86	3	60	0.28	5	1		3 100	300	0.129	0.399	2.381	3	3
WaB	Wahpeton sic	95	0.40	86	3	60	0.28	5	3		6 50	200	0.233	0.951	2.381	3	3
WaC	Wahpeton sic	95	0.40	86	3	60	0.28	5	6		9 50	200	0.475	1.659	2.381	3	3
WhC	Walsh I	95	0.40	48	3	60	0.28	5	6		9 100	300	0.672	2.031	2.381	3	3
WhD	Walsh I	95	0.40	48	3	60	0.28	5	9		15 60	200	0.908	3.620	2.381	2	3
WnA	Walsh cl	95	0.40	48	3	60	0.28	5	1		3 100	300	0.129	0.399	2.381	3	3
WoA	Waukon I	95	0.40	48	3	60	0.24	5	1		3 200	550	0.159	0.478	2.778	3	3
WoB	Waukon I	95	0.40	48	3	60	0.24	5	3		6 80	200	0.268	0.951	2.778	3	3
WoC	Waukon I	95	0.40	48	3	60	0.24	5	6		9 75	275	0.582	1.945	2.778	3	3
WoD	Waukon I	95	0.40	48	3	60	0.24	5	9		15 90	200	1.113	3.620	2.778	2	3
Wv	Wheatville vfl	95	0.40	56	3	60	0.28	4	0		1 100	300	0.069	0.179	1.905	3	3
ZgC	Zell- Gardena vfl	65 35	0.40 0.40	48 56	3 3	60 60	0.32 0.28	5 5	6 6		9 80 9 80	200 200	0.601 0.601	1.659 1.659	2.083 2.381	3 3	3 3
ZgD	Zell- Gardena vfl	80 20	0.40 0.40	48 56	3 3	60 60	0.32 0.28	5 5	9 9		15 80 15 80	200 200	1.049 1.049	3.620 3.620	2.083 2.381	2 2	1 3

*These soils are protected naturally in areas where they occur behind barriers, such as beach ridges, and also because they have a seasonal high water table and therefore capillary rise of water keeps the soil moist during the critical erosion period, these soils can be classified as NOT HIGHLY ERODIBLE.