Helpful Hint for Determining Wind Erodibility Index (WEI).

For nutrient management (NRCS 590 standard) planning purposes and for operations needing coverage under DENR's 2017 general permit, water and wind erosion, both have to be taken into account. The Revised Universal Soil Loss Equation (RULSE2) or most recent water erosion prediction technology for water erosion, must be run for all fields. **Wind erosion calculation, Wind Erosion Prediction System (WEPS), will only need to be run for fields with predominate soils having a Wind Erodibility Index (WEI) of 134 or greater, or if a wind erosion resource concern exists.** This helpful hint or guide outlines three different ways of determining WEI. If use of the tools below indicate a WEI of 134 or greater, please contact the NRCS for assistance in running the Wind Erosion Prediction System (WEPS) to determine wind erosion.

1) Refer to the SD eFTOG > Section II > Statewide Soil and Site > Information > Section 6 "CNMP Folder" (https://efotg.sc.egov.usda.gov/). Then refer to the county folder you are working in and select the map titled "County" Wind Erosion Index or Greater Map. (Figure 1) An Adobe PFD file (Figure 2) will open up for that county showing the locations of soils with WEI equal to and great than 134. This map can be saved for future purposed.

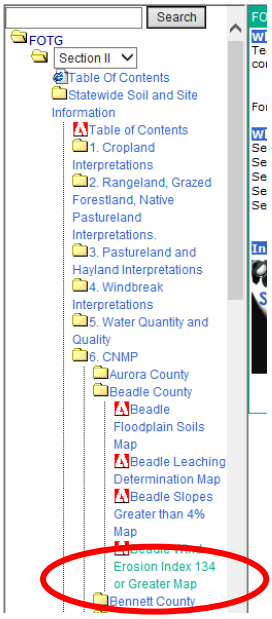

Figure 1

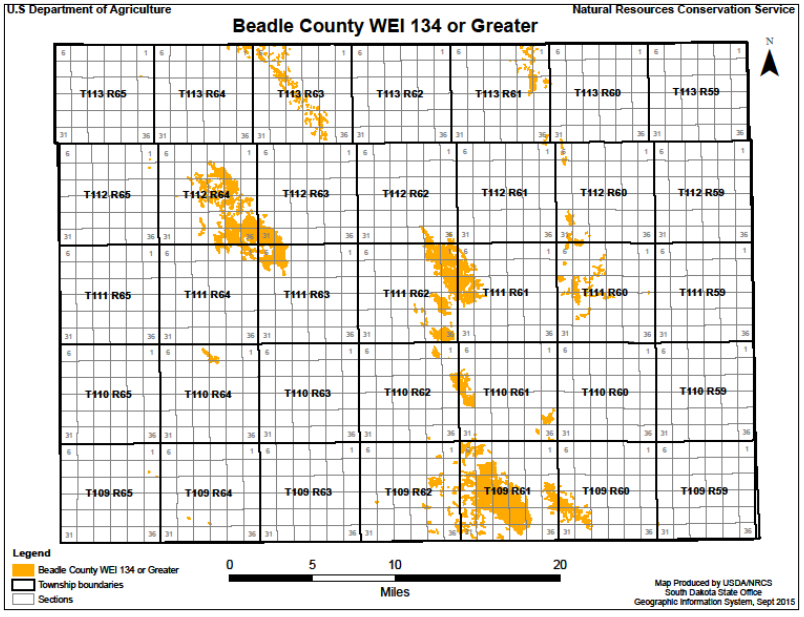

Figure2

2) Refer to Soil Survey Table 1 – Soil Interpretive Groups (Figure 3) for WEI. Soils on this table are listed by county and soil property. Refer to the WEI column and cross reference it with dominate soil in the field. Table 1 can be found on the SD eFOTG > Section II > Soil Survey Information (https://efotg.sc.egov.usda.gov/) (Figure 4). This table can be saved as an Abode file, for future use.

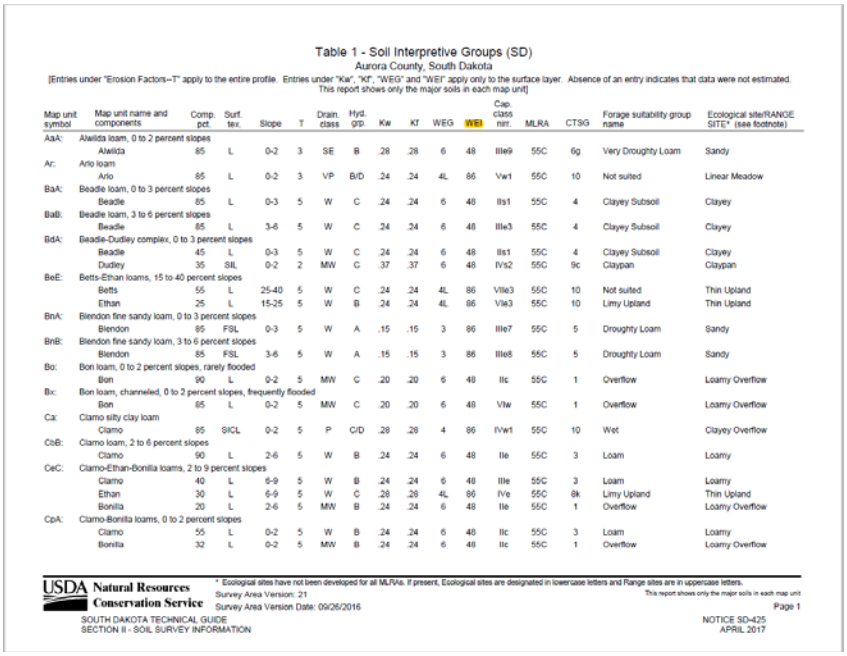

Table 1 - Soil Interpretive Groups (SD)

Aurora County, South Dakota

[Entries under "Erosion Factors--T" apply to the entire profile. Entries under "Kw", "Kf", "WEG" and "WEI" apply only to the surface layer. Absence of an entry indicates that data were not estimated. This report shows only the major soils in each map unit]

Map unit symbol	Map unit name and components	Comp. pct.	Surf. tex.	Slope	T	Drain. class	Hyd. grp.	Kw	Kf	WEG	WEI	Cap. class nirr.	MLRA	CTSG	Forage suitability group name	Ecological site/RANGE SITE* (see footnote)
AaA:	Alwilda loam, 0 to 2 percent slopes															
	Alwilda	85	L	0-2	3	SE	B	.28	.28	6	48	IIIe9	55C	6g	Very Droughty Loam	Sandy
Ar:	Arlo loam															
	Arlo	85	L	0-2	3	VP	B/D	.24	.24	4L	86	Vw1	55C	10	Not suited	Linear Meadow
BaA:	Beadle loam, 0 to 3 percent slopes															
	Beadle	85	L	0-3	5	W	C	.24	.24	6	48	IIs1	55C	4	Clayey Subsoil	Clayey
BaB:	Beadle loam, 3 to 6 percent slopes															
	Beadle	85	L	3-6	5	W	C	.24	.24	6	48	IIIe3	55C	4	Clayey Subsoil	Clayey
BdA:	Beadle-Dudley complex, 0 to 3 percent slopes															
	Beadle	45	L	0-3	5	W	C	.24	.24	6	48	IIs1	55C	4	Clayey Subsoil	Clayey
	Dudley	35	SIL	0-2	2	MW	C	.37	.37	6	48	IVs2	55C	9c	Claypan	Claypan
BeE:	Betts-Ethan loams, 15 to 40 percent slopes															
	Betts	55	L	25-40	5	W	C	.24	.24	4L	86	VIIe3	55C	10	Not suited	Thin Upland
	Ethan	25	L	15-25	5	W	B	.24	.24	4L	86	VIe3	55C	10	Limy Upland	Thin Upland
BnA:	Blendon fine sandy loam, 0 to 3 percent slopes															
	Blendon	85	FSL	0-3	5	W	A	.15	.15	3	86	IIIe7	55C	5	Droughty Loam	Sandy
BnB:	Blendon fine sandy loam, 3 to 6 percent slopes															
	Blendon	85	FSL	3-6	5	W	A	.15	.15	3	86	IIIe8	55C	5	Droughty Loam	Sandy
Bo:	Bon loam, 0 to 2 percent slopes, rarely flooded															
	Bon	90	L	0-2	5	MW	C	.20	.20	6	48	IIc	55C	1	Overflow	Loamy Overflow
Bx:	Bon loam, channeled, 0 to 2 percent slopes, frequently flooded															
	Bon	85	L	0-2	5	MW	C	.20	.20	6	48	VIw	55C	1	Overflow	Loamy Overflow
Cx:	Clamo silty clay loam															
	Clamo	85	SICL	0-2	5	P	C/D	.28	.28	4	86	IVw1	55C	10	Wet	Clayey Overflow
CbB:	Clamo loam, 2 to 6 percent slopes															
	Clamo	90	L	2-6	5	W	B	.24	.24	6	48	IIe	55C	3	Loam	Loamy
CeC:	Clamo-Ethan-Bonilla loams, 2 to 9 percent slopes															
	Clamo	40	L	6-9	5	W	B	.24	.24	6	48	IIIe	55C	3	Loam	Loamy
	Ethan	30	L	6-9	5	W	C	.28	.28	4L	86	IVe	55C	8k	Limy Upland	Thin Upland
	Bonilla	20	L	2-6	5	MW	B	.24	.24	6	48	IIe	55C	1	Overflow	Loamy Overflow
CpA:	Clamo-Bonilla loams, 0 to 2 percent slopes															
	Clamo	55	L	0-2	5	W	B	.24	.24	6	48	IIc	55C	3	Loam	Loamy
	Bonilla	32	L	0-2	5	MW	B	.24	.24	6	48	IIc	55C	1	Overflow	Loamy Overflow

USDA Natural Resources Conservation Service

* Ecological sites have not been developed for all MLRAs. If present, Ecological sites are designated in lowercase letters and Range sites are in uppercase letters.

Survey Area Version: 21

Survey Area Version Date: 09/26/2016

This report shows only the major soils in each map unit

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Figure 3

Figure 4

3) WEI can also be found Web Soil Survey (http://websoilsurvey.nrcs.usda.gov/app/). Once the field area has been defined (Area of Interest), select the “Soil Data Explorer” tab > then the “Soil Properties and Qualities” tab. Then under the Properties and Qualities Rates choose “Soil Erosion Factors” > “Wind Erodibility Index” > “View Rating”. This will generate a map and table with WEI ratings. This map can be printed and/or saved, for future purposes. See figure 5.

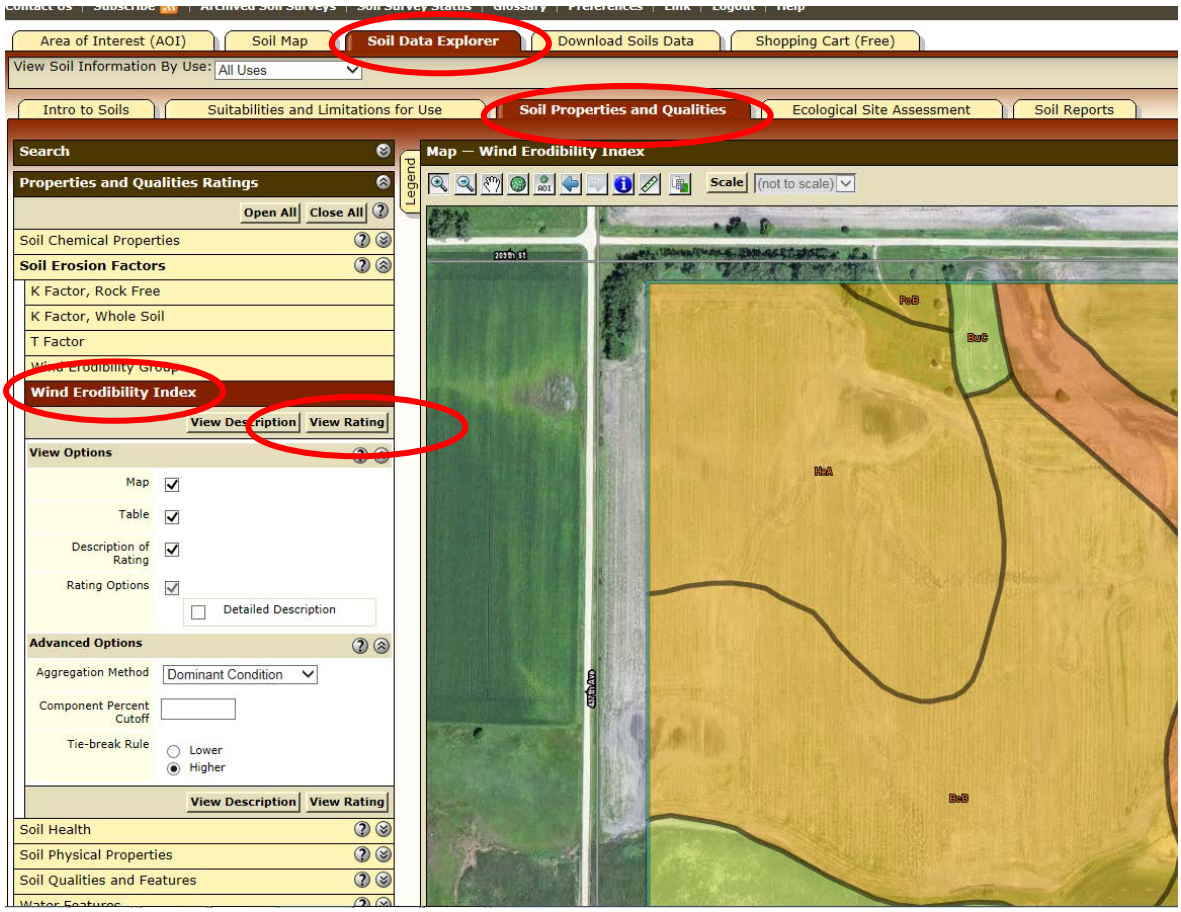

Figure 5

For questions please contact your local NRCS field office or:

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