Title: Soils Notes
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SSURGO and Soils Characterization Database (SCD) data are not standardized across the board. This is due to two main things… 1. SSURGO represents soil series often composed of several soil types compared to SCD data which is specific to a particular soil type. 2. SSURGO data is an averaged representation of a particular soil series compared to SCD data which is specific measurements at a specific location. That said, these two data sets do not easily align.

To get past this and create on continuous data set we appended SCD data to SSURGO data. This was done with a few criteria in mind.

- Based on suggestions by William Wehmueller (Kansas NRCS) and DeAnn Presley (KSU, Dept of Agronomy) to use the dominant soil type data for a given series to link SCD data to SSURGO
    - For example, if SSURGO MUSYM = 4530, or Benfileld-Florence soils, we would simply use Benfileld.
    - One exception noted by William Wehmueller was MUSYM 4625, or Dwight-Irwin… where Irwin was the recommended dominant soil type.
- Horizons between data sets were first determined qualitatively based on depth of each horizon…
- If depths did not overlap well, horizon names were considered to help break "ties"…
- Due to this, all SSURGO horizons had 1 or more associated SCD horizon… in situations with 2 or more horizons we used the following criteria to populate the variables
    - If 2 or more horizons had existing data, an average of those were taken and used.
        - If 2 or more horizons had existing data, but 1 in the included set did not, the average was taken on what was available.
    - If only one horizon in a set had associated data, that data was used.
    - No data was left as such.

Further note… all soils contained the same data. Reading soils was the one exception… so in the database, data was described as follows…

DBF_ID	MDB_ID	MDB_ID_READING
p_key	pedon_key	
l_key	layer_key	
hzn_t	hzn_top	
hzn_b	hzn_bot	
hzn	hzn_desgn	
texture	texture_description	
ca_nh4	Ca_nh4_6N2e_Sjj_cmol(+)/kg_114_CMS_0_0	Ca_nh4_6N2e_Sjj_cmol(+)/kg_0_CMS_0_0
na_nh4	Na_nh4_6P2b_Sjj_cmol(+)/kg_114_CMS_0_0	Na_nh4_6P2a_Sjj_cmol(+)/kg_0_CMS_0_0
k_nh4	K_nh4_6Q2b_Sjj_cmol(+)/kg_114_CMS_0_0	K_nh4_6Q2a_Sjj_cmol(+)/kg_0_CMS_0_0
bsscat	BSSCat_d-0_S	
bssbas	BSSBas_d-0_S	
n_tot	N_tot_6B3a_Sjj_% wt_121_CMS_0_0	N_tot_6B1a_Sjj_% wt_0_CMS_0_0
ph_h20	pH_h2o_8C1f_Sjj_(NA)_123_CMS_0_0	pH_h2o_8C1a_Sjj_(NA)_123_CMS_0_0
salt_ca	Ca_sx_6N1b_Sjj_mmol(+)/L_114_CMS_0_0	Ca_sx_6N1b_Sjj_mmol(+)/L_0_CMS_0_0
salt_na	Na_sx_6P1b_Sjj_mmol(+)/L_114_CMS_0_0	Na_sx_6P1a_Sjj_mmol(+)/L_0_CMS_0_0
salt_k	K_sx_6Q1b_Sjj_mmol(+)/L_114_CMS_0_0	K_sx_6Q1a_Sjj_mmol(+)/L_0_CMS_0_0
salt_no3	NO3_sx_6M1c_Sjj_mmol(-)/L_125_CMS_0_0	
dbfmw	Dbfmw_d-1_S	
db1_3	Db1/3_4A1d_Caj_g/cc_0_CMS_0_0	
dbod	DbOD_4A1h_Caj_g/cc_0_CMS_0_0	
oc_6a1	OC_6A1c_Sjj_% wt_119_CMS_0_0	
caco3	CaCO3_6E1g_Sjj_% wt_118_CMS_0_0	
phcacl	pHcacl_8C1f_Sjj_(NA)_123_CMS_0_0	pHcacl_8C1e_Sjj_(NA)_123_CMS_0_0
ph_sp	pH_sp_8C1b_Sjj_(NA)_123_CMS_0_0	