



2021 Region 5 Collegiate Soil Judging Contest

Crookston, MN

Hosted by: University of Minnesota and USDA-NRCS (MN/ND)
Sept. 26 – Oct. 1, 2021

Contestant Number	
Site/Pit Number	
Number of Horizons	
Profile Depth (cm)	
Nail Depth (cm)	
Scorecard Version	2.1 18SEP2021

A. Soil Morphology

Part A Score _____

Horizonation				Boundary		Texture				Color			Structure		Redox.		Moist Cons.	Eff.	Total	
Prefix	Master	Suffix	No.	Lower Depth	Dist.	CF Mod.	Class	Sand %	Clay%	Hue	Value	Chroma	Grade	Type	Conc. Abund.	Depl. Abund.	Moist Rupt. Res.	Y/N	Total	
2	4	2	2	2	2	2	4	2	2	2	2	2	2	2	2	2	2	2	2	40

B. Soil Hydrology and Profile Properties

Part B Score _____

Hydraulic Conductivity (3-5-3)		Effective Soil Depth (5)	Water Retention Diff. (5)	Soil Wetness Class (5)	Score Summary
Surface Layer	Limiting Layer				
___ Very High	___ Very High	___ Very Deep (> 150 cm)	___ High (> 22.5 cm)	___ Class 1 (> 150 cm)	Part A
___ High	___ High	___ Deep (100-150 cm)	___ Medium (15-22.5 cm)	___ Class 2 (100-150 cm)	Part B
___ Moderately High	___ Moderately High	___ Mod. Deep (50-100 cm)	___ Low (7.5-15 cm)	___ Class 3 (50-100 cm)	Part C
___ Moderately Low	___ Moderately Low	___ Shallow (25-50 cm)	___ Very Low (< 7.5 cm)	___ Class 4 (25-50 cm)	Part D
___ Low	___ Low	___ Very Shallow (0-25 cm)		___ Class 5 (0-25 cm)	Part E
___ Very Low	___ Very Low				TOTAL

C. Site Characteristics

Part C Score _____

Landform (5)	Parent Material (5)*	Slope (5)	Hillslope Position (5)	Surface Runoff (5)
___ Floodplain	___ Alluvium	___ 0-2 %	___ Summit	___ Negligible (or Ponded)
___ Stream Terrace	___ Beach Deposits	___ 2-5 %	___ Shoulder	___ Very Low
___ Lake Plain Rise	___ Glacial Till	___ 5-9 %	___ Backslope	___ Low
___ Lake Plain Dip	___ Glaciolacustrine Sediments	___ 9-14 %	___ Footslope	___ Medium
___ Lake Plain Talf	___ Loess	___ 14-18 %	___ Toeslope	___ High
___ Beach Ridge	___ Outwash	___ 18-25 %	___ None	___ Very High
___ Water-Modified Moraine		___ > 25 %		

D. Soil Classification

Part D Score _____

Epipedon (5)	Diagnostic Subsurface Horizons & Characteristics (5)*	Order (5)	Suborder (5)	Great Group (5)		Family Particle Size Class (5)
___ Mollic	___ Albic	___ Mollisol	___ Alboll	___ Argialboll	___ Endoaquept	___ Sandy
___ Ochric	___ Abrupt Textural Change	___ Alfisol	___ Aquoll	___ Natraquoll	___ Hapludept	___ Loamy
___ Umbric	___ Aquic Conditions	___ Inceptisol	___ Udoll	___ Calciaquoll	___ Psammaquent	___ Silty
___ None	___ Argillic	___ Entisol	___ Aqualf	___ Argiaquoll	___ Fluvaquent	___ Coarse Loamy
	___ Calcic	___ Vertisol	___ Udalf	___ Endoaquoll	___ Endoaquent	___ Fine Loamy
	___ Cambic		___ Aquept	___ Natrudoll	___ Udipsamment	___ Coarse Silty
	___ Lithic Contact		___ Udept	___ Calciudoll	___ Udifluent	___ Fine Silty
	___ Lithologic Discontinuity		___ Aquent	___ Argiudoll	___ Udorthent	___ Fine
	___ Natric		___ Psamment	___ Hapludoll	___ Epiaquert	___ Very Fine
	___ Paralithic Contact		___ Fluvent	___ Albaqualf	___ Endoaquert	___ Sandy Skeletal
	___ Slickensides		___ Orthent	___ Endoaqualf	___ Calciaquert	___ Loamy Skeletal
	___ None		___ Udert	___ Hapludalf	___ Hapludert	___ Silty Skeletal
			___ Aquert	___ Humaquept	___ Dystrudert	___ Contrasting (any)
Particle Size Control Section (5)	___ 0 cm to root limiting layer (limiting layer < 36 cm depth)			___ Upper 50 cm of argillic horizon		
	___ 25-100 cm			___ Upper boundary of argillic to 100 cm (contrasting particle size class)		
	___ 25 cm to root limiting layer (36-100 cm depth)			___ All of the argillic where it is < 50 cm thick		

E. Site Interpretations

Part E Score _____

Septic Tank Absorption Field (5)	Dwellings without Basements (5)	Most Probable Native Plant Community Classification (5)			
		___ WPn53a Wet Seepage Prairie	___ WMp73a Prairie Meadow/Carr	___ UPn12b Dry Sand/Gravel Prairie	___ UPn24b Aspen Openings
___ Slight	___ Slight	___ WPn53c Wet Prairie	___ OPp91a Rich Fen	___ UPn12d Dry Hill Prairie	___ FFn57a Northern Terrace Forest
___ Moderate	___ Moderate	___ WPn53d Wet Saline Prairie	___ UPn12a Dry Barrens	___ UPn23b Mesic Prairie	___ FFn67a Northern Floodplain Forest
___ Severe	___ Severe				