



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 | 1.0 18AUG2021 |

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 |
| | | | | | | | | | | | | | | | | | | | | |
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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 % | ___ None | ___ High |
| ___ Beach Ridge | ___ Outwash | ___ 18-25 % | | ___ Very High |
| ___ Wave-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 | ___ Epiaquent | ___ 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 | ___ UPn12c Dry Sand-Gravel Brush Prairie | ___ UPn24b Aspen Openings |
| ___ Slight | ___ Slight | ___ WPn53b Wet Brush-Prairie | ___ OPp91a Rich Fen | ___ UPn12d Dry Hill Prairie | ___ FFn57a Northern Terrace Forest |
| ___ Moderate | ___ Moderate | ___ WPn53c Wet Prairie | ___ UPn12a Dry Barrens | ___ UPn23a Mesic Brush-Prairie | ___ FFn67a Northern Floodplain Forest |
| ___ Severe | ___ Severe | ___ WPn53d Wet Saline Prairie | ___ UPn12b Dry Sand/Gravel Prairie | ___ UPn23b Mesic Prairie | |