

II. Site Characteristics

Parent Material(s) - Mark upper as 1, next as 2, etc.	Land Form (Mark only one)		Slope/Aspect	Hillslope Position	Surface Runoff
<input type="checkbox"/> Recent alluvium <input type="checkbox"/> Human transported mat. <input type="checkbox"/> Glacial outwash <input type="checkbox"/> Lacustrine deposit <input type="checkbox"/> Loess <input type="checkbox"/> Eolian sand <input type="checkbox"/> Beach deposit <input type="checkbox"/> Glacial till <input type="checkbox"/> Colluvium <input type="checkbox"/> Residuum <input type="checkbox"/> Pedisegment	1. <u>Constructional</u> <input type="checkbox"/> Floodplain <input type="checkbox"/> Stream terrace <input type="checkbox"/> Kame/esker <input type="checkbox"/> Alluvial fan <input type="checkbox"/> Beach ridge <input type="checkbox"/> Loess plain/hillslope <input type="checkbox"/> Outwash plain <input type="checkbox"/> Sand dune <input type="checkbox"/> Lake plain <input type="checkbox"/> Till plain/drumlin/moraine	2. <u>Erosional</u> <input type="checkbox"/> Upland headslope <input type="checkbox"/> Upland sideslope <input type="checkbox"/> Upland noseslope <input type="checkbox"/> Interfluve	 _____ % _____ Aspect	<input type="checkbox"/> Summit <input type="checkbox"/> Shoulder <input type="checkbox"/> Backslope <input type="checkbox"/> Footslope <input type="checkbox"/> None	<input type="checkbox"/> Negligible <input type="checkbox"/> Very low <input type="checkbox"/> Low <input type="checkbox"/> Medium <input type="checkbox"/> High <input type="checkbox"/> Very high
	#1 Or #2				
Seasonal Saturation Depth	Effective Soil Depth	Kind of Limiting Layer(s)		Special Concerns	
_____ inches	_____ inches	<input type="checkbox"/> Bedrock <input type="checkbox"/> Coarse sand/LCS <input type="checkbox"/> Dense till <input type="checkbox"/> Fragipan <input type="checkbox"/> Man-made compaction <input type="checkbox"/> None present		<input type="checkbox"/> Flooding/ponding <input type="checkbox"/> Massive structure/firm consistence <input type="checkbox"/> Rapid permeability (>1.2 gal/day) <input type="checkbox"/> Slow permeability (<0.25 gal/day) <input type="checkbox"/> Shrink/swell <input type="checkbox"/> None present	

III. Soil Classification

Epipedon	Subsurface Horizon/ Feature	Subgroup Taxon
<input type="checkbox"/> Histic <input type="checkbox"/> Mollic <input type="checkbox"/> Umbric <input type="checkbox"/> Ochric <input type="checkbox"/> None	<input type="checkbox"/> Albic <input type="checkbox"/> Argillic <input type="checkbox"/> Artifacts <input type="checkbox"/> Calcic <input type="checkbox"/> Cambic <input type="checkbox"/> Fragipan <input type="checkbox"/> Glossic <input type="checkbox"/> Lamellae <input type="checkbox"/> Lithic contact <input type="checkbox"/> Paralithic contact <input type="checkbox"/> Slickensides <input type="checkbox"/> Spodic	<input type="checkbox"/> Krotovina <input type="checkbox"/> Secondary Carbonates <input type="checkbox"/> Abrupt Textural Change <input type="checkbox"/> Stratification <input type="checkbox"/> Skeletans <input type="checkbox"/> Argillans

Section 905.Appendix A

Illustrations and Exhibits

Illustration M

Subsurface Seepage Loading Rate Key

Exhibit B

(some of the numbers below have been changed)

KEY FOR DETERMINING SEWAGE SUBSURFACE LOADING RATES (g/d/sq. ft.) FOR ILLINOIS SOILS (1)

	Single Grain, weak Platy (2)	Granular, Angular and Subangular Blocky; Prismatic									Structureless or massive				
		Loess, Outwash, Alluvium, Lacustrine(8)				Till (3)					Loess, Outwash, Alluvium, Lacustrine(8)			Till (3)	
		Weak		Moderate, Strong		Weak		Moderate, Strong							
Moist Consistence	lo,vfr, fr	vfr, fr	fi	vfr, fr	fi	vfr, fr	fi	fr	fi	vfi	vfr	fr	fi	vfr, fr	fi, vfi
Texture	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1. Fragmental; Ext. or vgrs	>1.00 (4)	N/A (5)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2. s, lcs, ls, grs, cs, grls	1.00	1.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.00	N/A	N/A	N/A	N/A
3. fs, lfs, csl	.84	.91	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	.91	.84	N/A	N/A	N/A
4. sl, fsl, grsl, grl, grsil,	.75	.75	N/A	.84	N/A	.69	N/A	.75	N/A	N/A	.84	.75	.69	.62	.52
5. l, sil, vfsl, scl, si, vfs, lvfs, grcl	.62	.69	.62	.75	.52	.45 (6)	.40 (6)	.62	.52	N/A	.62	.52	.45 (6)	.27 (6)	N/R (7)
6. sicl, cl (< 35% clay)	.52	.52	.45 (6)	.62	.52	.40 (6)	.27 (6)	.52	.40 (6)	.27 (6)	.52	.45 (6)	.27 (6)	N/R	N/R
7. sicl, cl (>35% clay)	N/A	N/A	.40 (6)	.45 (6)	.40 (6)	.27 (6)	.20 (6)	.40 (6)	.27 (6)	.20 (6)	N/A	.20 (6)	N/R	N/R	N/R
8. sc,sic,clay	N/A	N/A	N/A	N/A	.20 (6) (9)	N/A	N/A	N/A	.20 (6) (9)	N/R	N/A	N/A	N/R	N/A	N/R
9. Organics, Fragic, Lithic, Paralithic	SOIL PROPERTIES HAVE VERY SEVERE LIMITATATIONS: SUBSURFACE DISPOSAL NOT RECOMMENDED														

FOOTNOTES:

- 1) Disturbed soils are highly variable and require special on-site investigations.
- 2) Moderate or strong platy structures for the soil textures in Groups 4, 5 and 6 have a loading rate of 0.40 g/d/sq. ft. Platy structure having firm or very firm consistence and/or caused by mechanical compaction has a loading rate of 0.0 g/d/sq. ft.
- 3) Basal glacial tills structured by geogenic processes have the same loading rates as structureless glacial till.
- 4) This soil group is estimated to have very rapid permeability and exceeds the maximum established rate in Section 905. Illustration H, Exhibit A of this part.
- 5) N/A means not applicable.
- 6) These soil groups are estimated to have moderately slow to very slow permeability and is less than the minimum established rate in Section 905. Illustration H, Exhibit A of this part.
- 7) N/R means not recommended. These soils have loading rates considered too low for conventional subsurface disposal.
- 8) In some areas, lacustrine material may have physical properties similar to glacial till and should be placed in the glacial till columns.
- 9) Non-swelling (1:1 lattice clays) formed in bedrock residuum have a loading rate of .27 g/d/sq. ft. Swelling (2:1 lattice) clays are not recommended for subsurface disposal.

Common Abbreviations

Texture Class or Subclass	Abbreviation
Coarse Sand	coS
Sand	S
Fine Sand	fS
Very Fine Sand	vfS
Loamy Coarse Sand	LcoS
Loamy Sand	LS
Loamy Fine Sand	LfS
Loamy Very Fine Sand	LvfS
Coarse Sandy Loam	coSL
Sandy Loam	SL
Fine Sandy Loam	fSL
Very Fine Sandy Loam	vfSL
Loam	L
Silt Loam	SIL
Silt	Si
Sandy Clay Loam	SCL
Clay Loam	CL
Silty Clay Loam	SiCL
Sandy Clay	SC
Silty Clay	SiC
Clay	C

Coatings	
Continuity Class	Abbreviation
Continuous (entire surface cover)	c
Discontinuous (partial surface cover)	d
Patchy (isolated surface cover)	p
Distinctness	
Faint (Visible with magnification only (10X hand lens); little contrast between materials.)	f
Distinct (Visible without magnification; significant contrast between materials.)	d
Prominent (Markedly visible without magnification; sharp visual contrast between materials.)	p
Types	
Argillans (clay coatings)	n/a
Orgainc (orgainc coatings)	n/a
Skeletans (silt coatings)	n/a
Mangans (manganese oxide coatings)	n/a
Ferrans (iron oxide coatings)	n/a
Location	
Surface of Ped	S.O.P.
Pore Linings	n/a

ex. (C,D 10YR5/4 argillans S.O.P. = common, distinct 10YR5/4

Soil Structure Classification			
Grade	Abbreviation		
Weak	1	Units are barely observable in place or in a hand sample.	
Moderate	2	Units well-formed and evident in place or in a hand sample.	
Strong	3	Units are distinct in place (undisturbed soil), and separate cleanly when disturbed.	
Size			
Size	Granular & Platy	Prismatic	Angular & Subangular
Very Fine (very thin) _f	vf (vn) _f	<1mm	>5mm
Fine (thin) _f	f (tn) _f	1 to <2mm	5 to <10mm
Medium	m	2 to <5mm	10 to <20mm
Coarse (thick) _f	co (tk) _f	5 to <10mm	20 to <50mm
Very Coarse (very thick) _f	vc (vk) _f	≥10mm	≥ 50mm
Extremely Coarse	ec	-	-

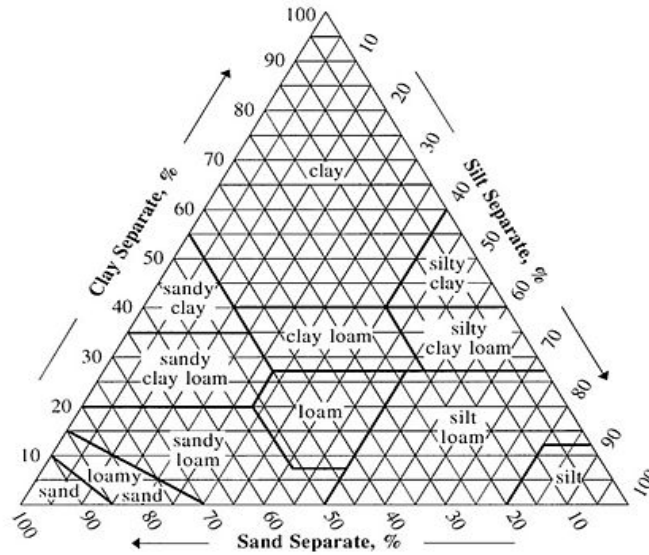
(1) Platy Structure Size

Type		Description
Granular	gr	Small polyhedrals, with curved or very irregular faces.
Angular Blocky	abk	Polyhedrals with faces that intersect at sharp angles (planes).
Subangular Blocky	sbk	Polyhedrals with sub-rounded and planar faces, lack sharp angles.
Platy	pty	Flat and tabular-like units.
Prismatic	pr	Vertically elongated units with flat tops.
Columnar	col	Vertically elongated units with rounded tops which commonly are "bleached".
Single Grain	sg	No structural units; entirely noncoherent; e.g., loose sand.
Massive	m	No structural units; material is a coherent mass (not necessarily cemented).

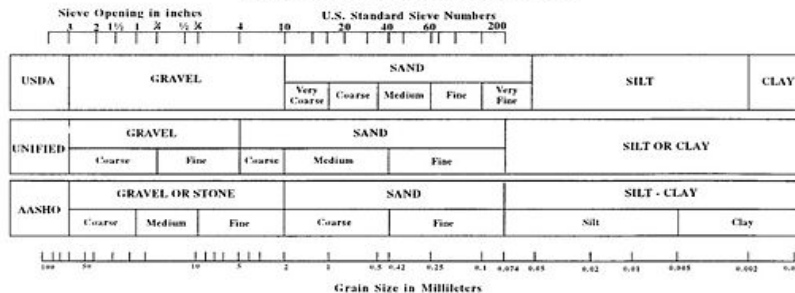
ex. (1msbk= weak medium subangular blocky structure)

Mottle or Redoximorphic Feature Descriptions	
Abundance	Abbreviation
Few (<2% of surface area)	f
Common (2-20% of surface area)	c
Many (≥20% of surface area)	m
Size	
Fine (<2mm)	1
Medium (2-<5mm)	2
Coarse (5-20mm)	3
Very Coarse (20-76mm)	4
Extremely Coarse (≥76mm)	5
Contrast with Matrix Color	
Faint (Δh =0; Δv ≤2 & Δc ≤1) (Δh =1; Δv ≤1 & Δc ≤1) (Δh =2; Δv =0 & Δc =0)	f
Distinct (Δh =0; Δv ≤2 & Δc >1 to <4) or Δv =2 to <4 & Δc <4) (Δh =1; Δv ≤1 & Δc >1 to <3) or Δv >1 to <3 & Δc <3) (Δh =2; Δv =0 & Δc >0 to <2) or Δv >0 to <2 & Δc <2)	d
Prominent (Δh =0; Δv ≥4 or Δc ≥4) (Δh =1; Δv ≥3 or Δc ≥3) (Δh =2; Δv ≥2 or Δc ≥2) (Δh ≥3;)	p

if Δv ≥3 & Δc ≥2, the contrast is Faint
ex. (f,1,f 10YR5/4= few, fine, faint 10YR5/4 mottles)



COMPARISON OF PARTICLE SIZE SCALES



Coarse Fragments		
Fragment	Size (mm)	Abundance vs. Textural Modifier
Gravel	Fine 2-5	<15% no modifier
	Medium 5-20	15-35% gravelly, cobbly, etc.
	Coarse 20-75	35-60% very gravelly, etc.
Cobbles	75-250	60-90% extremely gravelly, etc.
Stones	250-600	>90% gravel, cobbles, etc.
Boulders	>600	



MM Scale