University of Minnesota Onsite Sewage Treatment Program

Soil Observation Log

Project ID: v 04.17.2018

Client:	**Pat Casagrande/Greg Dueberry**	Location / Address:	10600 Kelvin Ave. N Stillwater MN		
Soil parent material(s): (Check all that apply)	☐ Outwash ☐ Lacustrine ☐ Loess ☑ Till ☐ Alluvium ☐ Bedrock ☐ Organic Matter				
Landscape Position: (check one)	☐ Summit ☑ Shoulder ☐ Back/Side Slope ☐ Foot Slope ☐ Toe Slope	Slope shape	Convex, Linear		
Vegetation:	Grass	Soil survey map units:		Slope %:	5.0
Elevation:	980				
Weather Conditions/Time of Day:	65 deg, mostly Sunny	Date	05/08/18		
Observation #/Location:	Soil Boring 1	Observation Type:	Auger		

Depth (in)	Texture	Rock Frag. %	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	I-------- Structure----------I		
							Shape	Grade	Consistence
0 to 9	Fine Sandy Loam	<35%	7.5YR 3/3				Blocky	Moderate	Friable
9 to 30	Fine Sandy Loam	<35%	7.5YR 4/4				Blocky	Moderate	Friable
30 to 44	Loam	<35%	7.5YR 2.5/3				Blocky	Moderate	Friable
44 to 50	Loam	<35%	7.5YR 5/4	5YR 4/6	Concentrations	S1	Blocky	Moderate	Friable
				5YR 4/1	Depletions	S1			

Comments

I hereby certify that I have completed this work in accordance with all applicable ordinances, rules and laws.

Paul Brandt	Paul Brandt PSS	**5182**	**5/8/2018**
(Designer/Inspector)	(Signature)	(License #)	(Date)

Additional Soil Observation Logs

Project ID:

Client	**Pat Casagrande/Greg Dueberry**	Location / Address:	10600 Kelvin Ave. N Stillwater MN		
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Landscape Position: (check one)	☐ Summit ☑ Shoulder ☐ Back/Side Slope ☐ Foot Slope ☐ Toe Slope	Slope shape	Convex, Linear		
Vegetation:	Grass	Soil survey map units:		Slope %:	5.0
Elevation:	979				
Weather Conditions/Time of Day:	65 Mostly Sunny	Date:	05/08/18		
Observation #/Location:	Soil Boring 2	Observation Type:	Auger		

Depth (in)	Texture	Rock Frag. %	Matrix Color(s)	Mottle Color(s)	Redox Kind(s)	Indicator(s)	I-------- Structure----------I Shape	Grade	Consistence
0 to 7	Fine Sandy Loam	<35%	7.5YR 3/3				Blocky	Moderate	Friable
7 24	Fine Sandy Loam	<35%	7.5YR 4/4				Blocky	Moderate	Friable
24 to 28	Loam	<35%	7.5YR 2.5/3				Blocky	Moderate	Friable
28 to 31	Loam	<35%	7.5YR 5/4				Blocky	Moderate	Friable
31 to 44	Loam	<35%	7.5YR 2.5/3				Blocky	Moderate	Friable

Comments	

Textures:

c-clay
sic-silty clay
sc-sandy clay
cl-clay loam
sicl-silty clay loam
scl-sandy clay loam
si-silt
sil-silt loam
l-loam
sl-sandy loam*
ls-loamy sand*
s-sand*

Subsoil Indicator(s) of Saturation:

S1. Distinct gray or red redox features
S2. Depleted matrix (value >/=4 and chroma </=2)
S3. 5Y chroma </= 3
S4. 7.5 YR or redder faint redox concentrations or redox depletio

***Sand Modifiers**

co-coarse
m-medium
f-fine
vf-very fine

If yes to one of the above indicators then:

Topsoil Indicator(s) of Saturation:

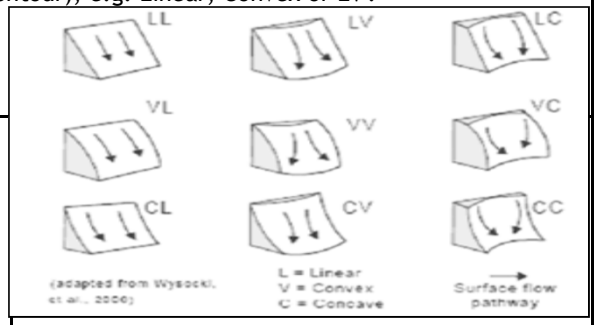
T1. Wetland Vegetation
T2. Depressional Landscape
T3. Organic texture or organic modifiers
T4. N 2.5/ 0 color
T5. Redox features in topsoil
T6. Hydraulic indicators

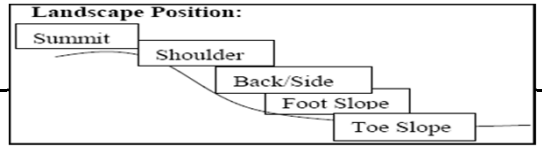
Consistence:

Loose-	Intact specimen not available
Friable-	Slight force between fingers
Firm-	Moderate force between fingers
Extremely firm-	Moderate force between hands or slight foot pressure
Rigid-	Foot pressure

Slope Shape:

Slope shape is described in two directions: up and down slope (perpendicular to the contour), and across slope (along the horizontal contour); e.g. Linear, Convex or LV'.





Soil Structure
Grade:

Massive-	No observable aggregates, or no orderly arrangement of natural lines of weakness
Weak-	Poorly formed, indistinct peds, barely observable in place
Moderate-	Well formed, distinct peds, moderately durable and evident, but not distinct in undisturbed
Strong-	Durable peds that are quite evident in un-displaced soil, adhere weakly to one another, withstand displacement, and become separated when soil is disturbed
Loose-	No peds, sandy soil

Soil Structure
Shape:

Granular-	The peds are approximately spherical or polyhedral and are commonly found in topsoil. These are the small, rounded peds that hang onto roots
Platy-	The peds are flat and plate like. They are oriented horizontally and are usually overlapping. Platy structure is commonly found in forested areas
Blocky-	The peds are block-like or polyhedral, and are bounded by flat or slightly rounded surface that are casting of the faces of surrounding peds.
Prismatic-	Flat or slightly rounded vertical faces bound the individual peds. Peds are distinctly longer vertically, and faces are typically cast or molds of
Single Grain-	The structure found in a sandy soil. The individual particles are not held together.