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December 27, 2020

Dave Liskany (Countrytyme Land Specialist, Ltd)  
3451 Cincinnati-Zanesville Rd, SW  
Lancaster, OH 43130

Dear Mr. Liskany:

We would like to thank you for requesting our assistance to identify the specific soil properties on your property (**Track # 2, Pleasant Valley Woods - Union Road**), Chillicothe, in Ross County, Ohio.

Enclosed are the following:

1. Location map
2. Aerial Photo Sketch Map of Site
3. Soil Site Descriptions for the different Soil Areas
4. Soil and Site Evaluation and discussion, for the proposed waste water disposal

The information in this report is basic soils information as found on-site. This does not mean that this site is suitable for an STS, that is up to the Ross County Health Department. If I can be of further assistance, in helping to interpret, clarify or add additional information from my notes, please let me know at 304-372-4809 home or 304-532-4711 cell.

Thanks,



Carlos Cole  
Soil Scientist

Cc: Logan Calhoun, R. S., Director of Environmental Health

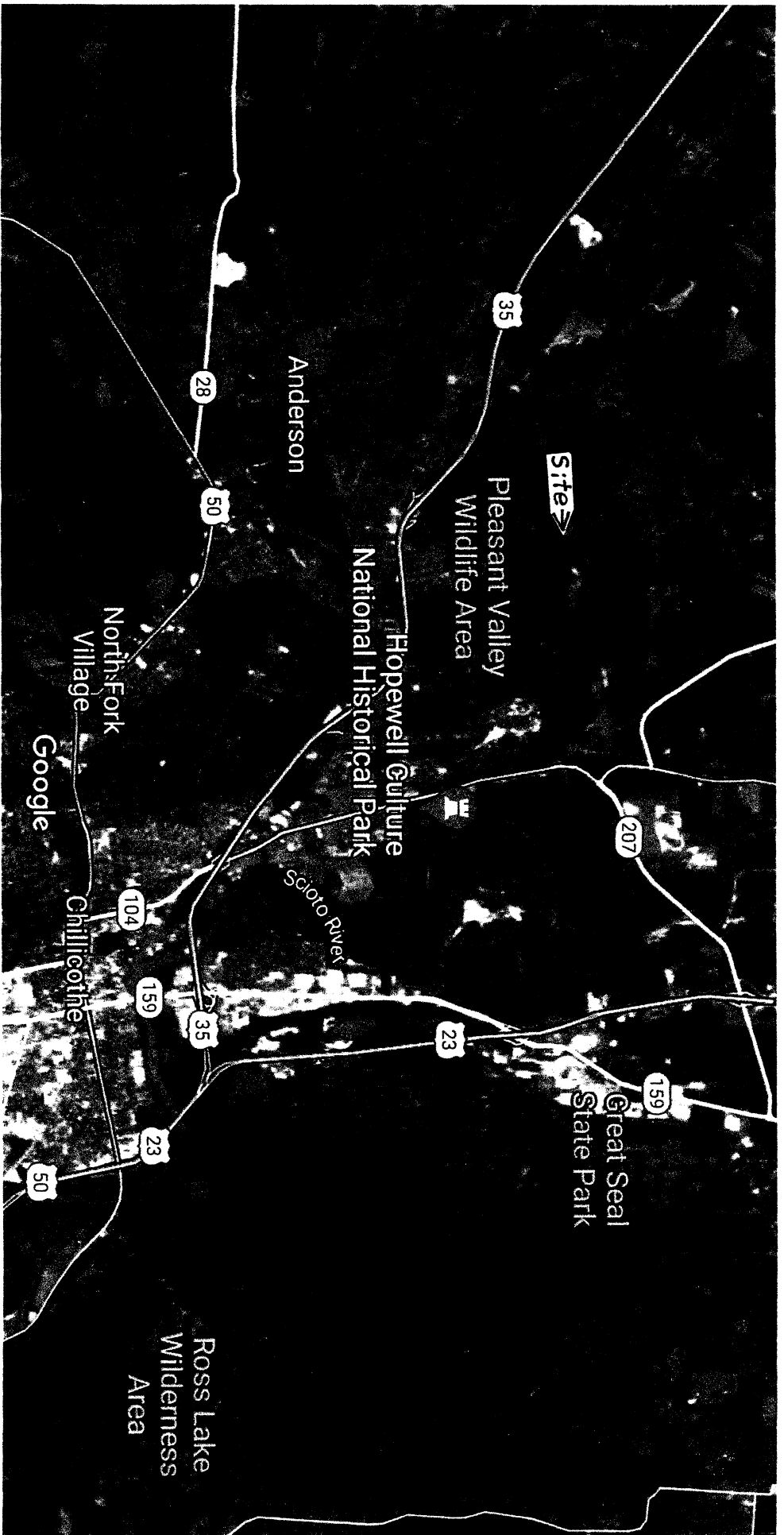
## **Soil and Site Evaluation Discussion**

This soil evaluation is for a new STS (sewage treatment system) for a new home (example that may change) on your property. We probed these soils as best as possible to find the depth to seasonal high water table, soil textures, percent clay and any compacted or dense layers that would impact the ability of a leach field to work properly. We located this proposed leach field on the most sloping area of this property on the outer edge of a slight point like landform. These are all limey till soils that allow for a little better drainage when compared to more acid clayey soils. Typically these soils in the proposed leach field were a little more loamy in the middle and upper part of the leach field, very similar to the property further upslope. We tried to select the better location for a leach field, however it's very difficult to find an area that is totally suitable for a leach field, when considering the Ross County Health Department criteria. If you find the best location for the leach field, provide for adequate surface drainage away from the leach field and pretreat waste water (aeration) is usually the only type system you can use for the STS in these glacial till soils.

This proposed filter field area is large and can serve as both the primary and secondary leach field areas. These soils are basically consistent in basic soil properties, as indicated by the soil site descriptions. We excavated soil pits to approximately 30 inches and then auger to a 60 inch depth. These soils (soil site #2) seem to be a little more loamy and better drained on the steeper slope on more of the end of the landform/point, similar as the property upslope (Track #1). The soils (#1 soil and #3 soil) on the outer edge of the proposed leach field are not as well drained as the soil (#2 soil) in the center of the leach field. This is a result of more loamy soil and more free water flow on the end of the point, with a little steeper slope. The middle to upper part of the proposed leach field is the better area or primary part of the leach field.

We have shown the location of the proposed STS leach field on the sketch map. We have marked the proposed filter field area with pink wire flags along the boundary and/or on the boundary corners. The soil description sites are marked with orange wire flags and the number of the description is marked on the flag. The approximate dominion, of the proposed filter field area, is marked on the sketch map. The proposed leach field area is just an indication of the area that can be used, the installer or the health department will determine where the filter lines will be located. The filter field lines would need to be located level on the contour around the slope. These soil descriptions were taken at random to show the soil properties at different areas within the proposed filter field area and the sketch map is not to scale. The proposed leach field can be extended around the slope if needed. We gave a house site location (example that may change with new owner) on the sketch map to give you a possible reference point, for this report.

Location Map





② we used their 24" Depth For H. Linear Loading Rate used 74-9% slope site and Soil Evaluation for Sewage Treatment and Dispersal

Lot #2

Ross

County: Union Land Use/Vegetation: Crop Field  
 Township / Sec.: S. Union Rd. Landform: Gleiss Till  
 Property Address/Location: Chitticothe, OH 45601 Position on Landform: Slight Point "Hump" outer side  
 Applicant Name: Country Time Realty Percent Slope: 3-6%  
 Address: ATT: David Lisheny - Land Specialist Shape of Slope: convex  
 Phone #: 514-427-8152 Evaluator: 12-28-20  
 Lot #: 1 Signature: Carlos Cole  
 Certification Stamp or Certification #: 24835

# 1 Test Hole #: 1 Latitude/Longitude: N39°23.668', W83°03.126' Phone #: 304-372-4809 Home  
 Method: 1 Pit 1 Auger 1 Probe Dug to 30" + Augered Remainder 304-532-4711 cell

Soil Profile	Depth (inches)	Matrix Color	Estimating Soil Saturation		Class	Texture		Estimating Soil Permeability			Infiltration Loading Rate gal./day/ft <sup>2</sup>	Hydraulic Linear Loading Rate	
			Manual Color (hue, value, chroma)	Redoximorphic Features		Approx. % Clay	Approx. % Fragments	Grade	Structure Size	Type (shape)			Consistence
Ap	0-7	10YR 4/4 + 5/4			L	17-20	2+	2-1	Ftm	Gr	VFR	.6	4.1
Bt1	7-19	10YR 5/6 + 6/4			CL	27-30	2+	2-1	M	Sbh	FR	.4	3.0
Bt2	19-28	10YR 5/6			sicL	29-35	2+	1-2	M+c	Sbt	FR-Fi	.2	2.7
C1	28-37	10YR 3/3 + 3/2			sicL	28-32	0-2+	-	-	-	FR-Fi	-	-
C2	37-45	10YR 5/6			CL/L	26-30	2-4+	-	-	-	FR	-	-
C3	45-60	10YR 5/6			L/CL	25-29	5+	-	-	-	FR	-	-
Limiting Conditions		Depth to (in.)	Descriptive Notes		Remarks / Bulk Factors								
Perched Seasonal Water Table		19											
Apparent Water Table		-											
Slightly Permeable Material		-											
Bedrock		None	To 60"										
Restrictive Layer		None	But some At				19 to 37"						

Note: The evaluation should include a complete site plan or site drawing.

+ grave!

② we used their 24 Depth For H. Linear Loading Rate used 5-9 % slope site and Soil Evaluation for Sewage Treatment and Dispersal

Lot #2  
Ross

County: Union  
 Township / Sec: S. Union Rd.  
 Property Address / Location: Chillicothe, OH 45601  
 Applicant Name: Country Home Realty  
 Address: ATT: David Lishenz - Land Specialist  
3451 Cincinnati - Zanesville Rd, SW Ohio  
 Phone #: 614-427-8152  
 Lot #: 2

Land Use / Vegetation: Crop Field  
 Landform: Glacial Till  
 Position on Landform: upper side of peak/crest  
 Percent Slope: 5-6%  
 Shape of Slope: Convex  
 Evaluator: Charles Cole  
12-28-20

# 3 Test Hole # 3  
 Latitude/Longitude: N39° 23.671', W83° 03.146'  
 Method:  Pit  Auger  Probe

Certification Stamp or Certification #: 24935  
 Signature: Charles Cole  
 Phone: 304-372-4809 Home  
304-532-4711 cell  
Dug to 30" + Augered Remainder

Soil Profile	Depth (Inches)	Matrix Color	Bedding Soil Saturation		Class	Texture		Grade	Structure		Consistence	Infiltration Loading gal./day/ft <sup>2</sup>	Hydraulic Linear Loading Rate
			Moisture (dug, value, chroma)	Redoxichromic Features		Approx. % Clay	Approx. % Fragments		Size	Type (shape)			
Ap	0-7	10YR 4/3	+4/4	-	L	15-17	2+	2	Ftm	Gr	vfr	.6	4.1
BA	7-11	10YR 5/4	-	-	L	18-21	0-2+	2-1	Ftm	sbh	fr	.6	4.1
Bt <sub>1</sub>	11-17	10YR 5/6	+5/4	-	CL	26-30	1-2+	2	m	sbh	fr	.4	3.0
Bt <sub>2</sub>	17-29	10YR 5/6	+5/4	-	CL	27-31	2+	2-1	m	sbh	fr	.4	3.0
BC <sub>1</sub>	29-41	10YR 5/6	+5/4	-	sicL/cl	29-32	2+	1-2	m	sbh	fr	.2	2.7
BC <sub>2</sub>	41-49	10YR 5/6	+5/4	-	CL/L	26-30	2+	1	m	sbh	fr	.2	2.7
C	49-60+	10YR 5/4	+5/6	-	CL/L	26-30	2-5+	-	-	-	fr		
Limiting Conditions		Depth to (in.)	Descriptive Notes		Remarks / Risk Factors								
Perched Seasonal Water Table		17											
Apparent Water Table		-											
Highly Permeable Material		-											
Bedrock		none	to 60"										
Restrictive Layer		none	to 60"										

Note: The evaluation should include a complete site plan or site drawing.

\* grave

② we used the 12-24 Depth For H. Linear Loading Rate used 4-9% slope site and Soil Evaluation for Sewage Treatment and Dispersal

Lot # 2

Ross

County: Union  
 Township / Sec: Union  
 Property Address / Location: Chillicothe, OH 45601

Land Use / Vegetation: Crop Field  
 Landform: Glacial Till  
 Position on Landform: Center of Property  
 Percent Slope: 6-8%  
 Shape of Slope: CONVEX

Center of Property (Crown of Point)

Applicant Name: COUNTRYME REALTY  
 Address: ATT: David L. Sherry - Land Specialist  
3451 CINCINNATI - Zanesville Rd., SW  
 Phone #: 614-427-8152  
 Lot #: # 2  
 Test Hole #: # 2  
 Latitude/Longitude: N 39° 23.669'  
 Method:  File  Auger  Probe

Evaluator: Charles Cole

Certification Stamp or Certification #: 24835  
 Signature: Charles Cole  
 Phone: 304-372-4809 Home  
304-532-4711 cell

Dug to 30" + Augered Remainder

Soil Profile	Depth (Inches)	Matrix Color	Estimating Soil Saturation		Depletions	Class	Texture		Grade	Structure		Consistence	Infiltration Loading Rate gal./day/Other Soil Features	Hydraulic Linear Loading Rate
			Munsell Color (hue, value, chroma)	Redox/Intraphic Features			Approx. % Clay	Approx. % Fragments		Size	Type (shape)			
Ap	0-7	10YR 4/4	+5/4		-	L	16-18	2+	2-1	FtM	Gr	VFr	.6	4.1
Bt1	7-16	10YR 5/4	+5/6 + 6/3		-	sic/sil	27-29	0-2+	2-1	m	sbh	Fr	.4	3.0
Bt2	16-23	10YR 5/4	+5/6 + 6/3			cl/l	26-28	0-2+	2-1	FtM	sbh	Fr	.4	3.0
Bt3	23-28	10YR 5/4	-			L/cl	25-28	2+	2-1	FtM	sbh	Fr	.6	4.1
Bt4	28-33	10YR 5/4	.5/6			CL	27-30	2-5+	1-2	m	sbh	Fr	.2	2.7
BC	33-49	10YR 5/4				L	24-28	2-5+	1	m	sbh	Fr	.4	3.8
C	49-60	10YR 5/4	5YR 5/6			L/cl	25-28	2-5+	-	-	-	Fr	-	-

Limiting Conditions: Depth to (in.) 23 Descriptive Notes: Remarks / Risk Factors

Periodic Seasonal Water Table: 23

Apparent Water Table:

Slightly Permeable Material: none

Bedrock: none

Restrictive Layer: none to 60"

Note: The evaluation should include a complete site plan or site drawing.

x gravel

②