



Agri-Waste Technology, Inc.

501 N Salem Street, Suite 203, Apex, NC 27502

agriwaste.com | 919.859.0669



Soil Suitability for Domestic Sewage Treatment and Disposal Systems

8128 Noel Tuck Rd
Oxford, NC 27565
Granville County
PIN 0968-0075-8490

Prepared For: Mullinax Lan Co c/o Alva Mullinax, Client
Edwin Orr, Property Manager

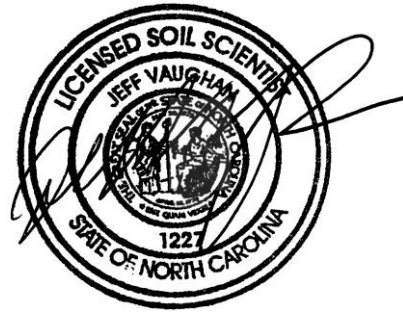
Prepared By: Jeff Vaughan, Ph.D., L.S.S.
Senior Agronomist/Soil Scientist

Bailey Stiles
Environmental Scientist

Report Date: January 15, 2025



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Soil suitability for domestic sewage treatment and disposal systems was evaluated on January 13, 2025, for the property located on Noel Tuck Road in Oxford, NC. Bailey Stiles and Noah Puckett of Agri-Waste Technology, Inc. (AWT) conducted the soils and site evaluation. Property reference maps are in Attachment 1.

The total property area is approximately 197 acres and approximately 3 acres were selected for this evaluation. The property is currently undeveloped and does not contain any on-site wastewater systems or wells. The majority of the property is wooded; however, the portion of the property that was evaluated is an old home site. There is a creek and associated drainage features located on the southern portion of the evaluated area that is unsuitable topography for on-site wastewater systems. Generally, the property has slopes ranging from 5 – 15%+ across the rolling landscape. (Attachment 2).

The dominant soil type mapped on this property are Georgeville loam (map symbol GeB/GeC). The dominant soil type in the evaluated area is Georgeville loam (map symbol GeB). Soil characteristics within the evaluated area most closely matched those of a Georgeville clay loam soil. Limiting features of the soil borings advanced on this property include shallow indications of saprolite and auger refusal. These soils typically are moderately suited for onsite wastewater systems as they can restrict the movement of water through the soil. No deviations from this mapped soil type were noted in any

borings within the area evaluated by AWT. A total of 23 borings were advanced in different areas during the evaluation. Generally, the provisionally suitable areas most closely matched the mapped Georgeville soil series, and these areas were delineated and are shown as Area 1 and Area 2 on the site evaluation map (Attachment 2). The Georgeville soil series, found in Area 1 and Area 2, is suitable for conventional and shallow conventional on-site wastewater systems. The typical profile descriptions of the soils evaluated on the property can be seen in Attachment 3 and the NRCS Soil Survey information regarding these soil types can be found in Attachment 4.

Conclusions:

Based on the site findings, two specific areas have been identified as having soils suitable to support a conventional or shallow conventional type on-site wastewater (septic) systems. The septic system area calculations for each of these types of systems can be found in Attachment 5. Area 1 (shallow conventional) is ~28,497 sqft and Area 2 (conventional) has ~30,811 sqft, each area will require detailed work to ensure what type of on-site wastewater system(s) can be supported on this site. The square footage of the suitable areas are noted on the soils evaluation map. These areas do not include future setbacks from other features that can only be factored in during detailed evaluation work and site planning. It's important to remember to consider the space occupied by the proposed home, driveways/roads, wells, and other factors. More detailed soils work, and a field layout will be required in order to determine system(s), types and size and to obtain permits to install the system.

We appreciate the opportunity to assist you in this matter. Please contact us with any questions, concerns, or comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeff Vaughan", with a stylized flourish at the end.

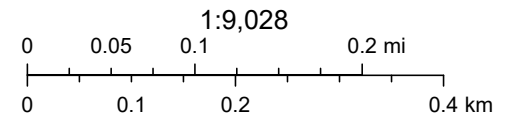
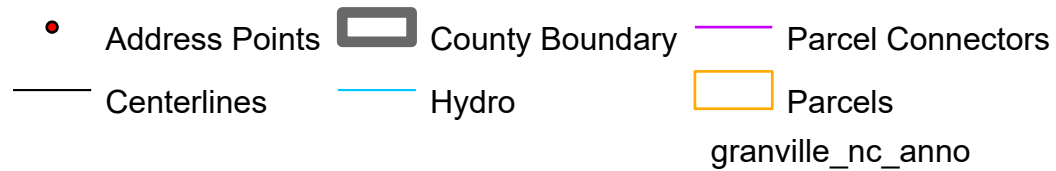
Jeff Vaughan

ATTACHMENT 1: Property Reference Map

Granville County, NC



12/30/2024, 9:40:41 AM



**ATTACHMENT 2: Property Map Detailing Soil Suitability
for Septic Systems and Soil Types**



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Preliminary Soil Evaluation

Mullinax Land Co
Granville Co., NC
PIN: 096800758490

GIS Acres: 198.9



Area for Septic:

Area 1: ~28,497 sq.ft.
Area 2: ~30,811 sq. ft.

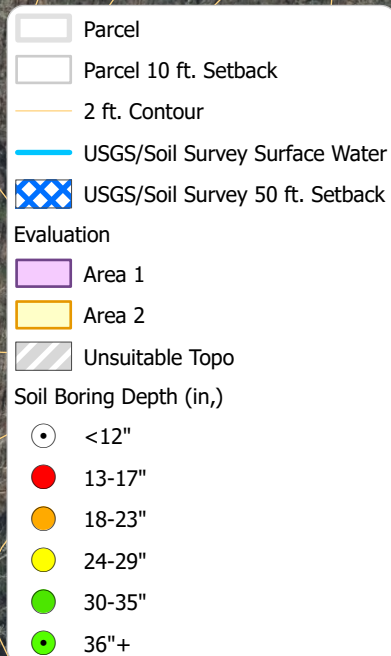
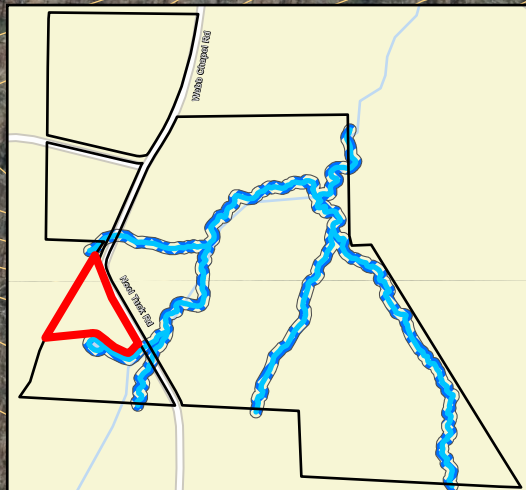
Soil Types:

GeB, GeC- Georgeville Silt Loam
TaE- Tatum loam
EnB- Enon loam
IrB- Iredell loam
NaB- Nason gravelly loam
ChA- Chewacla and Wehadkee soils

Notes:

Not in NC Riparian Buffer
No NWI Wetlands mapped
USGS/Soil Survey surface waters mapped

Drawn By: Clara Frickmann
Reviewed By: Bailey Styles
Date: 01/14/2025



0 50 100 200 Feet



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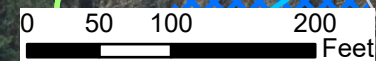
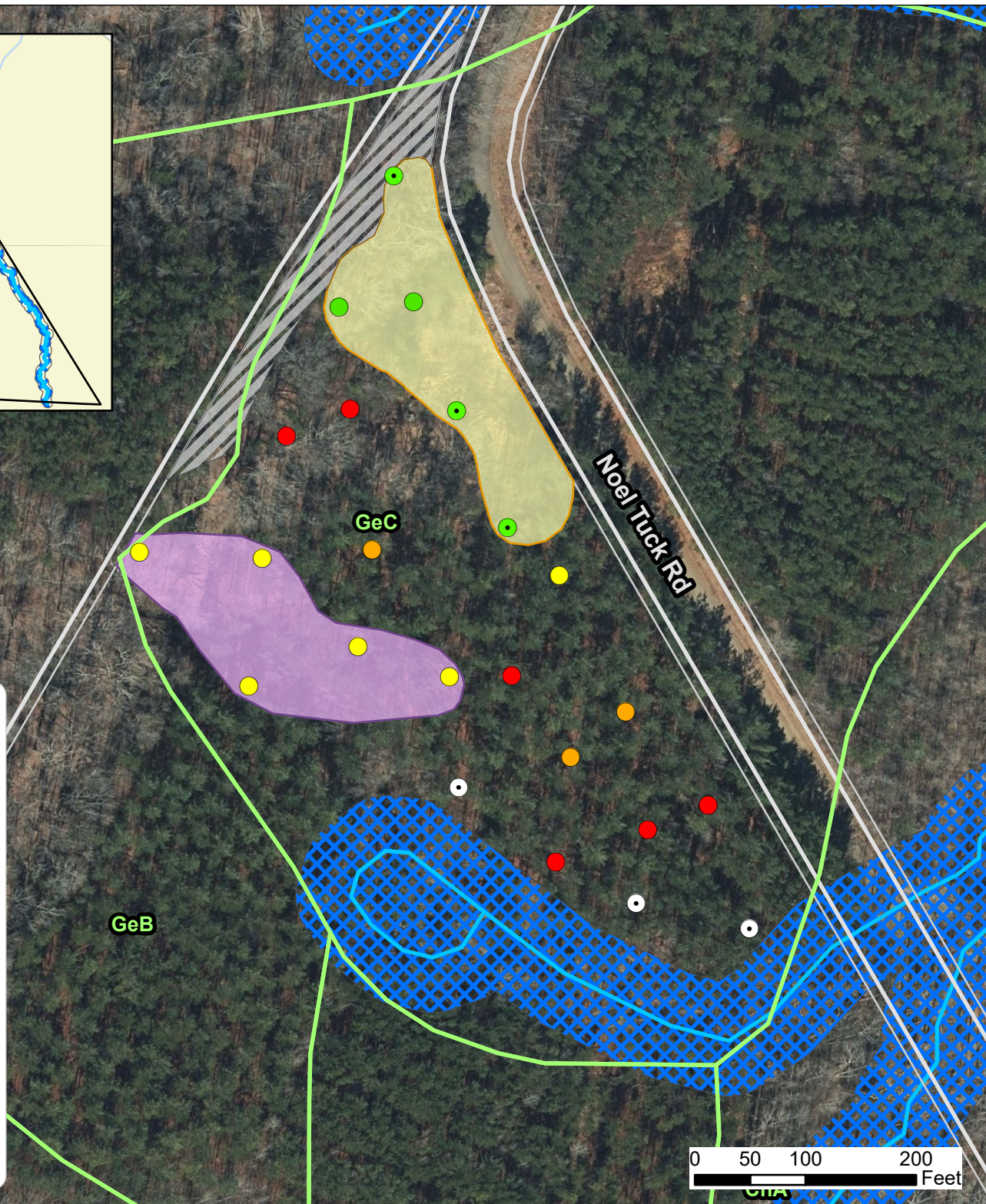
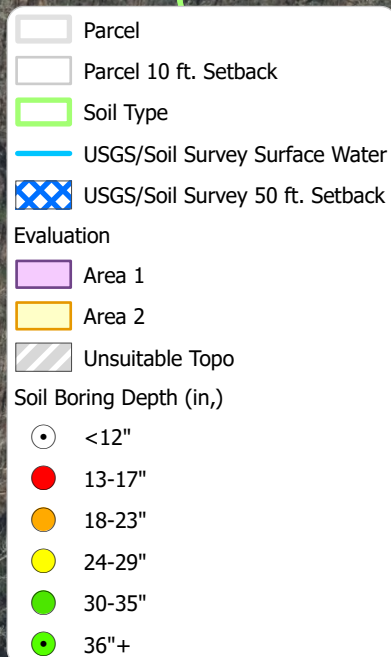
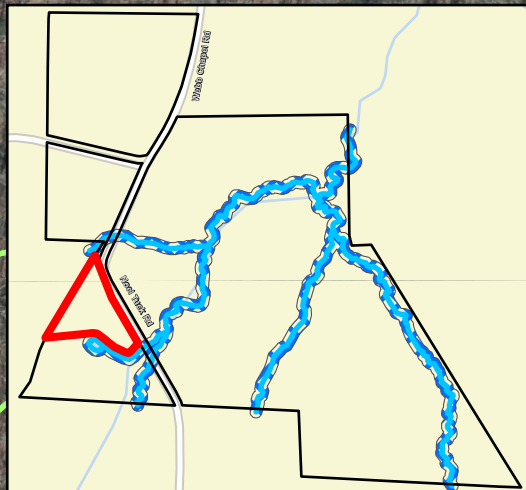
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Drawn By: Clara Frickmann
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Surface water and/or bad topo areas have not been officially evaluated for stream ID according to local regulatory requirements. This map is intended for preliminary purposes only and not to be used as a plat/survey or can it be assumed all streams are identified on this property.

**ATTACHMENT 3: Typical Profile Descriptions of
Provisionally Suitable Soil**

Property ID#: 0968-0075-8490
Property Recorded:
County: Granville

SOIL/SITE EVALUATION
FOR
ON-SITE WASTEWATER SYSTEM

Applicant: Mullinax Land Co, LLC c/o Alva Mullinax
Address: 642 Brodick Court NE
Concord, NC 28025
Location Site: 8128 Noel Tuck Road, Oxford, NC
Water Supply: On Site Well ☒ Comm. Well ☐ Public ☐ Other ☐
Buyer: ☐ Agent: ☒ Phone: (919) 880-4673
Date Evaluated: 01/13/2025
Proposed Facility: Single Family Residence(s)
Property Size: Approximately 197 acres
Evaluation Method: Auger Boring ☒ Pit ☐ Cut ☐

TYPICAL PROFILE

Horizon/ Depth (IN)	Matrix	Mottles	Mottle Abundance / Contrast	(a)(1) Texture	(a)(2) Structure	(a)(3) Minerology	Consistence Wet	Consistence Moist
A 0-6"	7.5YR 5/6	None	None	CL	WBK	NEXP	NS, NP	Fr
Bt1 6-13"	2.5 YR 5/6	None	None	C	SBK	NEXP	SS, SP	Fr/Fi
Bt2 13-28"	2.5YR5/6	5YR 6/8, 5YR 8/1	2, m,D	CL	SBK	SEXP	SS, SP	Fr/Fi
28+AR, SAP								

.1940 Landscape Pos/Slope %	- Suitable, <15%	Profile LTAR	0.1 - 0.3 GPD/ft ²
.1942 Wetness Condition	- Suitable	System Type	- Provisionally suitable for shallow conventional systems due to texture, structure, and depth.
.1943/.1956 Saprolite	- Suitable		
.1944 Restrictive Horizon	- Suitable		
.1948 Profile Classification	- Suitable		

Comment: slightly rock site, saprolite anywhere from 23-28 inches.

TYPICAL PROFILE

Horizon/ Depth (IN)	Matrix	Mottles	Mottle Abundance /Contrast	(a)(1) Tex- ture	(a)(2) Structure	(a)(3) Minerology	Consistence Wet	Consistence Moist
A 0-5"	7.5YR 4/6	None	None	CL	GR	NEXP	NS, NP	Fr
E 5-12"	7.5 YR 5/4	None	None	CL	SBK	SEXP	SS, SP	Fr
Bt1 12-24"+	5YR 5/6	7.5YR 7/6	1, m, F	C	SBK	SEXP	SS, SP	Fi
Bt2 24-36"	5YR 5/6	5YR 6/8, 5YR 8/1	2, m, D	C	SBK	SEXP	SS, SP	Fi

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.1948 Profile Classification	- Suitable		

Comments:

EVALUATED BY: Bailey Stiles & Noah Puckett

COMMENTS: _____

LEGEND OF ABBREVIATIONS FOR SITE EVALUATION FORM

<u>LANDSCAPE POSITION</u>	<u>TEXTURE GROUP</u>	<u>TEXTURE CLASS</u>	<u>.1955 LTAR</u> (gal/day/sqft)
CC - Concave Slope CV - Convex Slope DS - Debris Slump D - Depression DW - Drainage Way FP - Flood Plain FS - Foot Slope H - Head Slope I - Interfluvial L - Linear Slope N - Nose Slope P - Pocosin R - Ridge S - Shoulder T - Terrace	I	S - Sand LS - Loamy Sand	1.2 - .08
	II	SL - Sandy Loam L - Loam	0.8 - 0.6
	III	SCL - Sandy Clay Loam CL - Clay Loam SiL - Silt Loam Si - Silt SiCL - Silt Clay Loam	0.6 - 0.3
	IV	SC - Sandy Clay C - Clay SiC - Silty Clay O - Organic	0.4 - 0.1
<u>STRUCTURE</u>	<u>MOIST CONSISTENCE</u>	<u>MOTTLES</u>	<u>WET CONSISTENCE</u>
G - Single Grain M - Massive CR - Crumb GR - Granular SBK - Subgranular Blocky ABK - Angular Blocky PL - Platy PR - Prismatic	Vfr - Very Friable Fr - Friable Fi - Firm Vfi - Very Firm Efi - Extremely Firm	1 - Few 2 - Common 3 - Many F - Faint D - Distinct P - Prominent f - Fine m - Medium c - Coarse	NS - Non Sticky SS - Slightly Sticky S - Sticky VS - Very Sticky NP - Non Plastic SP - Slightly Plastic P - Plastic VP - Very Plastic

ATTACHMENT 4: Soil Survey Information

LOCATION GEORGEVILLE

SC+AL GA NC VA

Established Series

Rev.DJD;DTA

10/2021

GEORGEVILLE SERIES

The Georgeville series consists of very deep, well drained, moderately permeable soils that formed in material mostly weathered from fine-grained metavolcanic rocks of the Carolina Slate Belt. Slopes are 2 to 50 percent.

TAXONOMIC CLASS: Fine, kaolinitic, thermic Typic Kanhapludults

TYPICAL PEDON: Georgeville silt loam - forested. (Colors are for moist soil.)

Oe--0 to 1 inches; moderately decomposed organic matter.

A--1 to 5 inches; dark yellowish brown (10YR 4/4) silt loam; weak medium subangular blocky structure; friable; many fine and common medium roots; strongly acid; abrupt smooth boundary. (2 to 9 inches thick)

E--5 to 7 inches; yellowish brown (10YR 5/4) silt loam; weak medium subangular blocky structure; friable; many fine and medium roots; strongly acid; abrupt broken boundary. (0 to 5 inches thick)

Bt1--7 to 11 inches; yellowish red (5YR 5/6) silt clay loam; weak fine subangular blocky structure; friable; common fine and few medium roots; few distinct clay films on faces of peds; common fine pores; strongly acid; clear smooth boundary.

Bt2--11 to 29 inches; red (2.5YR 4/8) clay; moderate fine subangular blocky structure; friable; few fine and medium roots; common distinct clay films on faces of peds; common fine pores; strongly acid; clear smooth boundary.

Bt3--29 to 42 inches; red (2.5YR 4/6) clay with few fine prominent strong brown (7.5YR 5/8) mottles; moderate fine and medium subangular blocky structure; friable; common distinct clay films on faces of peds; few fine pores; strongly acid; gradual smooth boundary.

Bt4--42 to 54 inches; red (2.5YR 4/6) silty clay loam with few fine prominent yellowish brown (10YR 5/6) and brownish yellow (10YR 6/8) mottles; moderate coarse subangular blocky structure; friable; few fine roots; common distinct clay films on faces of peds; few fine pores; few fine flakes of mica; strongly acid; gradual smooth boundary. (Combined thickness of the Bt horizon ranges from 24 to 48 inches or more)

BC--54 to 64 inches; red (2.5YR 4/6) silty clay loam with common fine and medium prominent reddish yellow (7.5YR 6/8) and few fine distinct dark yellowish brown (10YR 4/6) mottles; weak coarse and very coarse subangular blocky structure; friable; few fine roots; few faint clay films on faces of peds; few fine flakes of mica; strongly acid. (5 to 25 inches thick)

TYPE LOCATION: Lancaster County, South Carolina; 6 miles northeast of Lancaster, South Carolina; 1.3 miles east of junction of State Highway 28 and 82; 60 feet south of State Highway 28; and 235 feet southeast of power pole no. COA31.

RANGE IN CHARACTERISTICS: Thickness of the clayey part of the Bt horizon ranges from 24 to 48

inches. Depth to the bottom of the clayey Bt horizon exceeds 30 inches. Depth to a lithic contact is more than 60 inches. The soil is very strongly acid to neutral in the A horizon and very strongly acid or strongly acid throughout the rest of the profile. Content of rock fragments ranges 0 to 20 percent in the A and E horizons, and 0 to 10 percent in the Bt, BC and C horizons. Few fine flakes of mica are in the lower part of the solum of some pedons, and some pedons may have few fine manganese concretions in the surface and upper subsoil horizons.

The A horizon has hue of 5YR to 2.5Y, value of 4 or 5 and chroma of 0 to 8. It is silt loam, loam, or very fine sandy loam in the fine-earth fraction. Where eroded, the A horizon has hue of 2.5YR to 7.5YR, value of 4 or 5, and chroma of 4 to 8. It is clay loam or silty clay loam.

The E horizon, where present, has hue of 5YR to 2.5Y, value of 4 or 5, and chroma of 3 to 8. It is silt loam, loam, or very fine sandy loam in the fine-earth fraction.

The upper part of the Bt horizon has hue of 5YR, value of 4 or 5 and chroma of 6 to 8. The middle part of the Bt horizon has hue of 10R or 2.5YR, value of 4 or 5 and chroma of 6 to 8. The lower part of the Bt horizon has hue of 10R or 2.5YR, value of 4 or 5 and chroma of 6 to 8, commonly with mottles in shades of red, yellow, or brown. The Bt horizon is clay loam, silty clay loam, silty clay or clay. The particle-size control section averages more than 30 percent silt or more than 40 percent silt plus very fine sand, or less than 15 percent sand coarser than very fine sand..

The BC horizon has hue of 10R to 5YR, value of 4 to 6, and chroma of 6 to 8, commonly with mottles in shades of yellow or brown. It is silt loam, loam, silty clay loam, or clay loam.

The C horizon has hue of 10R to 10YR, value of 4 to 6, and chroma of 3 to 8, commonly with mottles in shades of brown, yellow, white, gray, or red. In some pedons, the C horizon is coarsely mottled in shades of red, brown, yellow or gray. The C horizon is silt loam, loam, very fine sandy loam, fine sandy loam, sandy loam, or silty clay loam saprolite of fine-grained metavolcanic rock.

COMPETING SERIES: These are the [Appling](#), [Aragon](#), [Cataula](#), [Cecil](#), [Chestatee](#), [Darley](#), [Herndon](#), [Hulett](#), [Kolomaki](#), [Mahan](#), [Nanford](#), [Nectar](#), [Neeses](#), [Pacolet](#), [Spotsylvania](#), [Tarrus](#), and [Wedowee](#) series. Appling, Cecil, Hulett, Pacolet, and Wedowee soils have less than 30 percent silt in the control section. Aragon soils have Bt horizons that are mottled in the upper part. Aragon and Nectar soils formed in weathered limestone, sandstone, shale, or siltstone. Chestatee soils have more than 15 percent by volume of coarse fragments throughout. Darley soils contain layers of fractured ironstone in the B horizon. Herndon soils have Bt horizons with hue of 5YR or yellower. Nanford and Tarrus soils have a depth to weathered bedrock of 40 to 60 inches. Spotsylvania soils have a lithologic discontinuity. Mahan soils formed in coastal plain sediments and have coarse fragments of ironstone.

GEOGRAPHIC SETTING: Georgeville soils are on gently sloping to moderately steep Piedmont uplands. Slopes are generally 6 to 15 percent but range from 2 to 50 percent. The soil formed in residuum weathered from fine-grained metavolcanic rocks. Mean annual precipitation ranges from 37 to 60 inches, mean annual temperature ranges from 59 to 66 degrees F, and the frost-free season ranges from 190 to 240 days.

GEOGRAPHICALLY ASSOCIATED SOILS: In addition to the competing [Herndon](#), [Nanford](#), and [Tarrus](#) series, these are the [Alamance](#), [Badin](#), [Goldston](#), [Gundy](#), [Kirksey](#), [Nason](#), [Tatum](#), and [Uwharrie](#) series. Alamance and Kirksey soils are fine-silty. Goldston soils are loamy-skeletal. Badin, Gundy, Nason, Tatum, and Uwharrie soils have mixed mineralogy.

DRAINAGE AND PERMEABILITY: Well drained; medium runoff; moderate permeability.

USE AND VEGETATION: Cleared areas are used for cotton, small grains, tobacco, corn, hay, and pasture. Forested areas are in mixed hardwood and pines.

DISTRIBUTION AND EXTENT: Piedmont of Alabama, Georgia, North Carolina, South Carolina, and Virginia. The series is extensive.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Raleigh, North Carolina**SERIES ESTABLISHED:** Cabarrus County, North Carolina, 1910.**REMARKS:** Diagnostic horizons and features recognized in this pedon are:

Ochric epipedon - the zone from the surface of the soil to 7 inches (A and E horizons)

Argillic horizon - the zone from 7 to 54 inches (Bt1, Bt2, Bt3, and Bt4 horizons)

Soil horizon depths were updated 10-04-2021 as there was a 1 inch Oe horizon that didn't begin at the soil surface.

MLRA = 136

SIR = SC0014, SC0124 (ROCKY)

ADDITIONAL DATA:**TABULAR SERIES DATA:**

SOI-5	Soil Name	Slope	Airtemp	FrFr/Seas	Precip	Elevation
SC0014	GEORGEVILLE	2-50	59-66	190-225	37-60	300-1100
SC0124	GEORGEVILLE	2-50	59-66	190-225	37-60	300-1100

SOI-5	FloodL	FloodH	Watertable	Kind	Months	Bedrock	Hardness
SC0014	NONE		6.0-6.0		-	60-60	
SC0124	NONE		6.0-6.0		-	60-60	

SOI-5	Depth	Texture	3-Inch	No-10	Clay%	-CEC-
SC0014	0- 7	L VFSL SIL	0- 2	80-100	5-27	8-16
SC0014	0- 7	SICL CL	0- 2	90-100	27-35	8-16
SC0014	0- 7	FSL SL	0- 2	80-100	5-20	4-10
SC0014	7-11	SICL CL	0- 1	90-100	27-35	6-10
SC0014	11-54	C SIC SICL	0- 1	95-100	35-65	9-15
SC0014	54-64	SICL L SIL	0- 5	90-100	15-40	7-15

SC0124	0-7	GR-L GR-SIL GR-VFSL	0-10	55- 75	5-27	8-16
SC0124	0-7	SY-SIL SY-L SY-VFSL	0- 5	70- 80	5-27	8-16
SC0124	0-7	GR-FSL GR-SL	0-10	55- 75	5-20	4-10
SC0124	7-11	SICL CL	0- 1	90-100	27-35	6-10
SC0124	11-54	C SIC SICL	0- 1	95-100	35-65	9-15
SC0124	54-64	SICL L SIL	0- 5	90-100	15-40	7-15

SOI-5	Depth	-pH-	O.M.	Salin	Permeab	Shnk-Swll
SC0014	0- 7	4.5- 7.3	.5-2.	0- 0	0.6- 2.0	LOW
SC0014	0- 7	4.5- 7.3	0.-.5	0- 0	0.6- 2.0	LOW
SC0014	0- 7	4.5- 6.0	.5-2.	-	0.6- 2.0	LOW
SC0014	7-11	4.5- 5.5	0.-.5	0- 0	0.6- 2.0	LOW
SC0014	11-54	4.5- 5.5	0.-.5	0- 0	0.6- 2.0	LOW
SC0014	54-64	4.5- 5.5	0.-.5	0- 0	0.6- 2.0	LOW
SC0124	0- 7	4.5- 7.3	.5-2.	0- 0	0.6- 2.0	LOW
SC0124	0- 7	4.5- 7.3	.5-2.	0- 0	0.6- 2.0	LOW
SC0124	0- 7	4.5- 7.3	.5-2.	-	0.6- 2.0	LOW
SC0124	7-11	4.5- 5.5	0.-.5	0- 0	0.6- 2.0	LOW
SC0124	11-54	4.5- 5.5	0.-.5	0- 0	0.6- 2.0	LOW
SC0124	54-64	4.5- 5.5	0.-.5	0- 0	0.6- 2.0	LOW

**ATTACHMENT 5: Septic System Area Computation
Spreadsheets**

Conventional Septic System Area Computation

Created by: JV
Created on: 6/20/2001
Updated on: 4/9/2024

Client Name: *Mullinax/Orr*
Number Bedrooms: 2
Design Flow (gal/day): 240 (120 gal/day/bedroom, minimum 240 gal/day/dwelling)
LTAR (gal/day/ft²): 0.225
Trench Bottom Area (ft²): 1066.667 (Design flow/LTAR)
Trench Width (ft): 3
On-center distance between trenches (ft): 9
Trench Bottom Length (ft): 355.5556

Minimum Field Area Required (ft²): 3200 (Trench Bottom Length*Trench on-center distance)
Minimum Field Area Required (Innovative) (ft²): 2400 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 8000 (Minimum field area*2.5)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 6000 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 9600 (Minimum field area*3)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 7200 (25% reduction from above)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.

Client Name: *Mullinax/Orr*
Number Bedrooms: 2
Design Flow (gal/day): 240 (120 gal/day/bedroom, minimum 240 gal/day/dwelling)
LTAR (gal/day/ft²): 0.25
Trench Bottom Area (ft²): 960 (Design flow/LTAR)
Trench Width (ft): 3
On-center distance between trenches (ft): 9
Trench Bottom Length (ft): 320

Minimum Field Area Required (ft²): 2880 (Trench Bottom Length*Trench on-center distance)
Minimum Field Area Required (Innovative) (ft²): 2160 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 7200 (Minimum field area*2.5)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 5400 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 8640 (Minimum field area*3)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 6480 (25% reduction from above)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.

Client Name: *Mullinax/Orr*
Number Bedrooms: 2
Design Flow (gal/day): 240 (120 gal/day/bedroom, minimum 240 gal/day/dwelling)
LTAR (gal/day/ft²): 0.275
Trench Bottom Area (ft²): 872.7273 (Design flow/LTAR)
Trench Width (ft): 3
On-center distance between trenches (ft): 9
Trench Bottom Length (ft): 290.9091

Minimum Field Area Required (ft²): 2618.182 (Trench Bottom Length*Trench on-center distance)
Minimum Field Area Required (Innovative) (ft²): 1963.636 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 6545.455 (Minimum field area*2.5)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 4909.091 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 7854.545 (Minimum field area*3)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 5890.909 (25% reduction from above)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.

Conventional Septic System Area Computation

Created by: JV
Created on: 6/20/2001
Updated on: 4/9/2024

Client Name: *Mullinax/Orr*
Number Bedrooms: 3
Design Flow (gal/day): 360 (120 gal/day/bedroom, minimum 240 gal/day/dwelling)
LTAR (gal/day/ft²): 0.225
Trench Bottom Area (ft²): 1600 (Design flow/LTAR)
Trench Width (ft): 3
On-center distance between trenches (ft): 9
Trench Bottom Length (ft): 533.3333

Minimum Field Area Required (ft²): 4800 (Trench Bottom Length*Trench on-center distance)
Minimum Field Area Required (Innovative) (ft²): 3600 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 12000 (Minimum field area*2.5)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 9000 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 14400 (Minimum field area*3)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 10800 (25% reduction from above)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.

Client Name: *Mullinax/Orr*
Number Bedrooms: 3
Design Flow (gal/day): 360 (120 gal/day/bedroom, minimum 240 gal/day/dwelling)
LTAR (gal/day/ft²): 0.25
Trench Bottom Area (ft²): 1440 (Design flow/LTAR)
Trench Width (ft): 3
On-center distance between trenches (ft): 9
Trench Bottom Length (ft): 480

Minimum Field Area Required (ft²): 4320 (Trench Bottom Length*Trench on-center distance)
Minimum Field Area Required (Innovative) (ft²): 3240 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 10800 (Minimum field area*2.5)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 8100 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 12960 (Minimum field area*3)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 9720 (25% reduction from above)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.

Client Name: *Mullinax/Orr*
Number Bedrooms: 3
Design Flow (gal/day): 360 (120 gal/day/bedroom, minimum 240 gal/day/dwelling)
LTAR (gal/day/ft²): 0.275
Trench Bottom Area (ft²): 1309.091 (Design flow/LTAR)
Trench Width (ft): 3
On-center distance between trenches (ft): 9
Trench Bottom Length (ft): 436.3636

Minimum Field Area Required (ft²): 3927.273 (Trench Bottom Length*Trench on-center distance)
Minimum Field Area Required (Innovative) (ft²): 2945.455 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 9818.182 (Minimum field area*2.5)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 7363.636 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 11781.82 (Minimum field area*3)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 8836.364 (25% reduction from above)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.

Conventional Septic System Area Computation

Created by: JV
Created on: 6/20/2001
Updated on: 4/9/2024

Client Name: *Mullinax/Orr*
Number Bedrooms: 4
Design Flow (gal/day): 480 (120 gal/day/bedroom, minimum 240 gal/day/dwelling)
LTAR (gal/day/ft²): 0.225
Trench Bottom Area (ft²): 2133.333 (Design flow/LTAR)
Trench Width (ft): 3
On-center distance between trenches (ft): 9
Trench Bottom Length (ft): 711.1111

Minimum Field Area Required (ft²): 6400 (Trench Bottom Length*Trench on-center distance)
Minimum Field Area Required (Innovative) (ft²): 4800 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 16000 (Minimum field area*2.5)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 12000 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 19200 (Minimum field area*3)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 14400 (25% reduction from above)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.

Client Name: *Mullinax/Orr*
Number Bedrooms: 4
Design Flow (gal/day): 480 (120 gal/day/bedroom, minimum 240 gal/day/dwelling)
LTAR (gal/day/ft²): 0.25
Trench Bottom Area (ft²): 1920 (Design flow/LTAR)
Trench Width (ft): 3
On-center distance between trenches (ft): 9
Trench Bottom Length (ft): 640

Minimum Field Area Required (ft²): 5760 (Trench Bottom Length*Trench on-center distance)
Minimum Field Area Required (Innovative) (ft²): 4320 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 14400 (Minimum field area*2.5)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 10800 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 17280 (Minimum field area*3)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 12960 (25% reduction from above)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.

Client Name: *Mullinax/Orr*
Number Bedrooms: 4
Design Flow (gal/day): 480 (120 gal/day/bedroom, minimum 240 gal/day/dwelling)
LTAR (gal/day/ft²): 0.275
Trench Bottom Area (ft²): 1745.455 (Design flow/LTAR)
Trench Width (ft): 3
On-center distance between trenches (ft): 9
Trench Bottom Length (ft): 581.8182

Minimum Field Area Required (ft²): 5236.364 (Trench Bottom Length*Trench on-center distance)
Minimum Field Area Required (Innovative) (ft²): 3927.273 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 13090.91 (Minimum field area*2.5)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 9818.182 (25% reduction from above)
Total Field Area Required (ft²)⁽¹⁾: 15709.09 (Minimum field area*3)
Total Field Area Required (Innovative) (ft²)⁽¹⁾: 11781.82 (25% reduction from above)

(1) Provides for reserve area and soil irregularity, 2.5 to 3 is multiplier.