



# *Soil Suitability for Domestic Sewage Treatment and Disposal Systems*

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Rock Mill Rd. Henderson,  
NC 27537

Vance County PIN: 054102028

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|---------------|---------------------------------------------------------------------------------------------------------------|
| Prepared For: | Kristie Rehders, Client                                                                                       |
| Prepared By:  | Jeff Vaughan, Ph.D., L.S.S.<br>Senior Agronomist/Soil Scientist<br><br>Brent Purdum, Assistant Soil Scientist |
| Report Date:  | July 3, 2024                                                                                                  |



**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**

**Rock Mill Rd. Henderson, NC 27537 (Vance County PIN: 054102028)**

PREPARED FOR: Kristie Rehders, Client

PREPARED BY: Jeff Vaughan  
Brent Purdum

DATE: July 3, 2025

Soil suitability for domestic sewage treatment and disposal systems was evaluated on July 1, 2025, for property located at Rock Mill Rd. located near Henderson, NC. Brent Purdum and Connor Britt of Agri-Waste Technology, Inc. (AWT) conducted the soil evaluation. A detailed soil evaluation of the land area will follow. A property reference map is in Attachment 1. The property map detailing soil suitability for septic systems and soil types can be found in Attachment 2.

Approximately 11.67 acres of the property were evaluated. The property is mostly open field. There is a powerline easement at the front and moderate slopes on the property (Attachment 2).

### Soil Suitability for Domestic Sewage Treatment and Disposal Systems

The aerial map in Attachment 2 details the approximate property boundaries, soil boring locations, soil types, and soil areas for septic systems. Numerous soil borings were advanced on the property and the soil evaluated (Attachment 3). A portion of the property contained a powerline easement, which is unsuitable for septic systems. However, this evaluation was merely a preliminary review to determine what potential this land might have for domestic sewage treatment and disposal systems. Therefore, specific types of septic systems, exact locations of future drainfields and repair areas, plus buffers from property lines (current and potential future lot lines), building foundations, wells, etc. are not fully considered. These things will need to be more fully considered as the plans develop for the potential future of this site. It is likely that additional soil evaluations will be required once lot layouts are considered and developed for this property so that septic system types and the location of a septic drainfield can be more fully and appropriately considered.

The purple area (see map in Attachment 2) evaluated on the property exhibited soil characteristics and soil depths (24" or greater) that are suitable for shallow conventional trench septic systems. The area is approximately 404,451 ft<sup>2</sup>.

Typical profile descriptions of the suitable soil for this property are in Attachment 3. Two distinct soil profiles were observed in the soil borings on the property with conventional soil depths.

The suitable soil borings had the following characteristics. No restrictive horizons were found in any soil borings within 24" of the soil surface. Soil texture was suitable and was estimated to be sandy loam near the soil surface (A horizons) sandy clay loam and clay loam in the subsoil (B horizons). Soil structure was suitable and was estimated to be granular near the soil surface (A horizons) and subangular in the subsoil (B horizons). Clay mineralogy was suitable with very friable to friable moist soil consistence and non-sticky to slightly sticky and non-plastic to slightly plastic wet soil consistence.

The mapped soil types on this property are predominantly Appling sandy loam (labeled as ApB) and Wedowee sandy loam (labeled as WeD). The Vance County Soil Survey indicates that moderate limitations exist for septic systems installed in these soil types (Attachment 4).

The land area required for a conventional septic system is calculated based on the size of the proposed home and the Long-Term Acceptance Rate (LTAR) of the soil. The LTAR range for the suitable soils on this property is 0.1 – 0.4 GPD/ft<sup>2</sup> for shallow conventional and conventional septic systems based on the most restrictive soil texture in the subsoil. The LTAR suggested by AWT is 0.25-0.275 GPD/ft<sup>2</sup>, but the final LTAR for specific septic system types and septic drainfield locations will be set by the Vance County Health Department. The detailed computations are in Attachment 5.

### Conclusions

Based on the results of this evaluation, the installation of conventional septic systems seems very probable on this property in the areas designated on the map in Attachment 2.

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

**ATTACHMENT 1: Property Reference Map**

0541 02010

0541 02028

0541D01013

0541D01024

0541D01014

0541D01025

02

0541D01015

0541D01026

0541D01029

0541D01031

0541D01033

0541D01035

0541D01016

0541D01027

0541 02034

ROCK MILL RD

ROCK MILL RD

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

## Preliminary Soil Evaluation

Green Group LLC  
Vance Co., NC  
PIN: 054102028

GIS Acres: ~32.6



### Area for Septic:

~404,451 sq.ft.

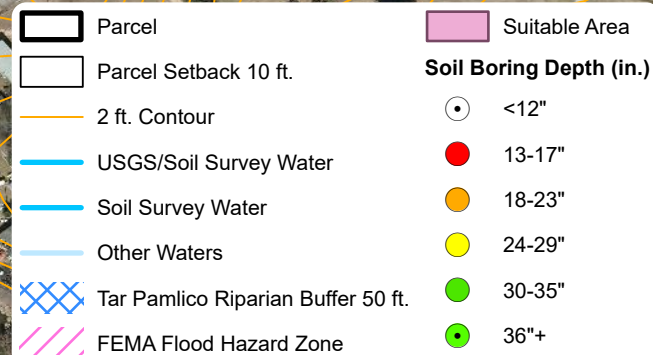
### Soil Types:

ApB- Appling sandy loam  
WeD- Wedowee sandy loam  
CeB2- Cecil sandy clay loam

### Notes:

In Tar Pamlico Riparian Buffer  
No mapped NWI Wetlands

Drawn By: William Snoeyink  
Reviewed By: Brent Purdum  
Date: 7/2/2025



Rock Mill Rd State Rd 1519

Freedom Ln

## Preliminary Soil Evaluation

Green Group LLC  
Vance Co., NC  
PIN: 054102028

GIS Acres: ~32.6



### Area for Septic:

~404,451 sq.ft.

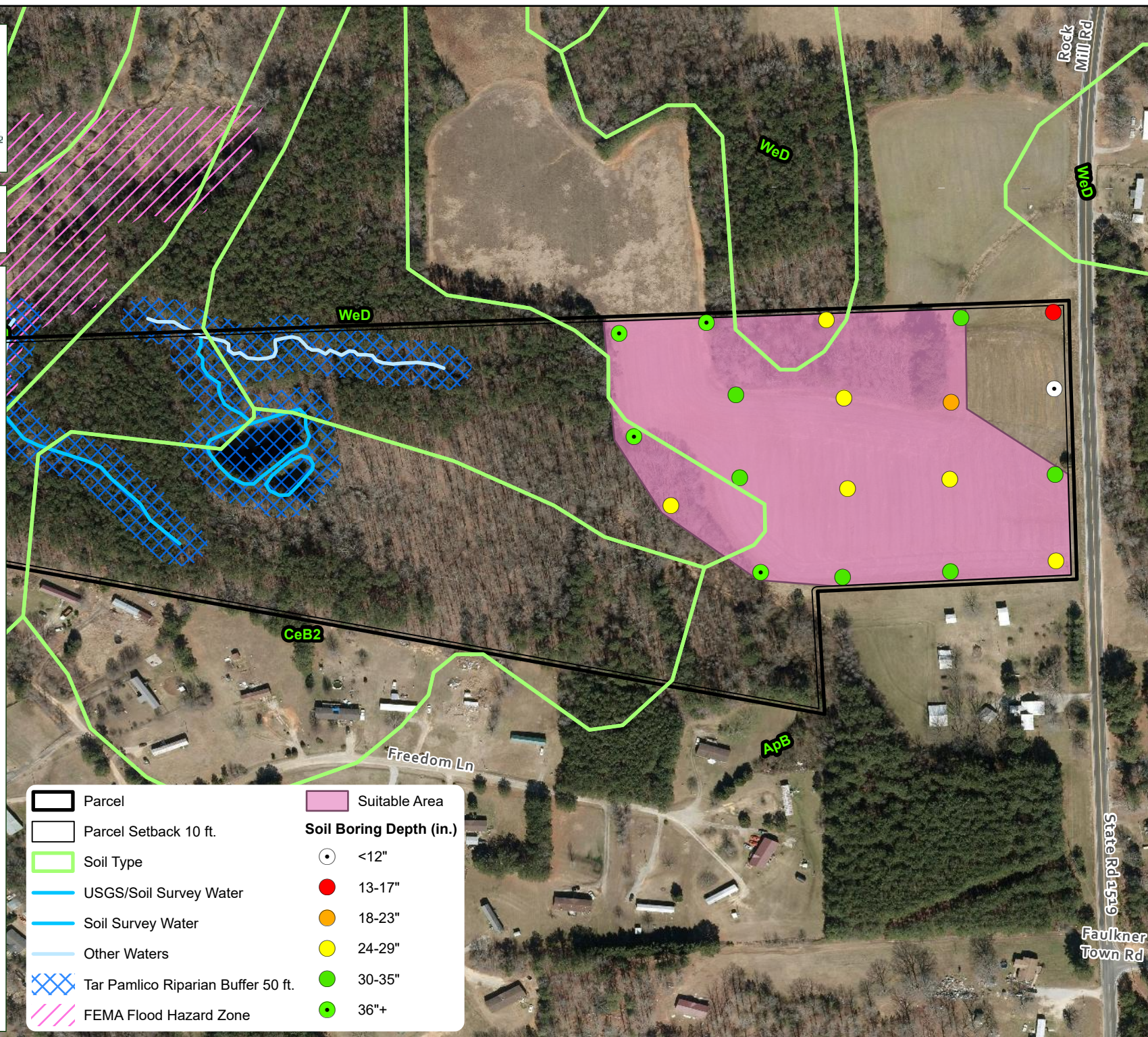
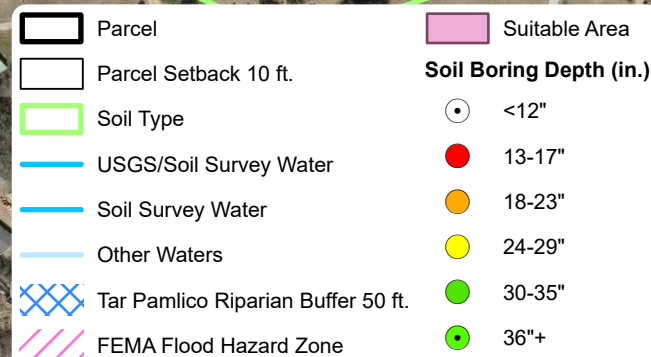
### Soil Types:

ApB- Appling sandy loam  
WeD- Wedowee sandy loam  
CeB2- Cecil sandy clay loam

### Notes:

In Tar Pamlico Riparian Buffer  
No mapped NWI Wetlands

Drawn By: William Snoeyink  
Reviewed By: Brent Purdum  
Date: 7/2/2025



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

Property ID#: 054102028  
Property Recorded: \_\_\_\_\_  
County: Vance

**SOIL/SITE EVALUATION  
FOR  
ON-SITE WASTEWATER SYSTEM**

Applicant: Kristie Rehder  
Address: 815 Water Street Rd.  
Tampa, FL 33602

Buyer: \_\_\_\_\_ Agent: X Phone: (980) 350 9803  
Date Evaluated: 07/01/2025  
Proposed Facility: Residential  
Property Size: Approximately 11.67 acres evaluated

Location Site: Rock Mill Rd. Henderson, NC 27505  
Water Supply: On Site Well ☐ Comm. Well ☐ Public ☐ Other ☐ Evaluation Method: Auger Boring X Pit ☐ Cut ☐

**TYPICAL PROFILE**

| Horizon/<br>Depth (IN) | Matrix           | Mottles     | Mottle<br>Abundance<br>/ Contrast | .0503<br>Texture | .0503<br>Structure | .0503<br>Minerology | .0504<br>Consistence<br>Wet | Consistence<br>Moist |
|------------------------|------------------|-------------|-----------------------------------|------------------|--------------------|---------------------|-----------------------------|----------------------|
| <b>A 0-4"</b>          | <b>10YR 5/3</b>  | <b>None</b> | <b>None</b>                       | <b>SL</b>        | <b>GR</b>          | <b>NEXP</b>         | <b>NS, NP</b>               | <b>Vfr</b>           |
| <b>E 4-7"</b>          | <b>10YR 6/3</b>  | <b>None</b> | <b>None</b>                       | <b>SL</b>        | <b>GR</b>          | <b>SEXP</b>         | <b>NS, NP</b>               | <b>Vfr</b>           |
| <b>Bt1 7-18"</b>       | <b>7.5YR 6/6</b> | <b>None</b> | <b>None</b>                       | <b>SCL</b>       | <b>SBK</b>         | <b>SEXP</b>         | <b>SS, SP</b>               | <b>Fr</b>            |
| <b>Bt2 18-36"</b>      | <b>5YR 6/6</b>   | <b>None</b> | <b>None</b>                       | <b>CL</b>        | <b>SBK</b>         | <b>SEXP</b>         | <b>SS, SP</b>               | <b>Fr</b>            |

|                              |                  |              |                                                                           |
|------------------------------|------------------|--------------|---------------------------------------------------------------------------|
| .0503 Landscape Pos/Slope %  | - Suitable, <15% | Profile LTAR | - 0.25-0.275 GPD/ft <sup>2</sup>                                          |
| .0504 Wetness Condition      | - Suitable       | System Type  | - Suitable for conventional systems due to texture, structure, and depth. |
| .0506 Saprolite              | - Suitable       |              |                                                                           |
| .0507 Restrictive Horizon    | - Suitable       |              |                                                                           |
| .0509 Profile Classification | - Suitable       |              |                                                                           |

Comments:

**TYPICAL PROFILE**

| Horizon/<br>Depth (IN) | Matrix           | Mottles                    | Mottle<br>Abundance<br>/ Contrast | .0503<br>Texture | .0503<br>Structure | .0503<br>Minerology | .0504<br>Consistence<br>Wet | Consistence<br>Moist |
|------------------------|------------------|----------------------------|-----------------------------------|------------------|--------------------|---------------------|-----------------------------|----------------------|
| <b>A 0-4"</b>          | <b>10YR 5/3</b>  | <b>None</b>                | <b>None</b>                       | <b>SL</b>        | <b>GR</b>          | <b>NEXP</b>         | <b>NS, NP</b>               | <b>Vfr</b>           |
| <b>E 4-10"</b>         | <b>10YR 6/4</b>  | <b>None</b>                | <b>None</b>                       | <b>SL</b>        | <b>GR</b>          | <b>SEXP</b>         | <b>NS, NP</b>               | <b>Vfr</b>           |
| <b>Bt 10-24"</b>       | <b>10YR 5/6</b>  | <b>None</b>                | <b>None</b>                       | <b>CL</b>        | <b>SBK</b>         | <b>SEXP</b>         | <b>SS, SP</b>               | <b>Fr</b>            |
| <b>Bt2 24-28"</b>      | <b>10YR 6/6</b>  | <b>2.5YR 4/8, 10YR 8/6</b> | <b>2, m, D</b>                    | <b>CL</b>        | <b>SBK</b>         | <b>SEXP</b>         | <b>SS, SP</b>               | <b>Fr</b>            |
| <b>C</b>               | <b>7.5YR 7/6</b> | <b>2.5YR 4/8, 10YR 8/6</b> | <b>2, m, D</b>                    | <b>SCL</b>       | <b>SBK</b>         | <b>SEXP</b>         | <b>NS, NP</b>               | <b>Fr</b>            |

|                              |                  |              |                                                                                                    |
|------------------------------|------------------|--------------|----------------------------------------------------------------------------------------------------|
| .0503 Landscape Pos/Slope %  | - Suitable, <15% | Profile LTAR | - 0.25-0.275 GPD/ft <sup>2</sup>                                                                   |
| .0504 Wetness Condition      | - Suitable       | System Type  | - Suitable for shallow conventional and conventional systems due to texture, structure, and depth. |
| .0506 Saprolite              | - Suitable       |              |                                                                                                    |
| .0507 Restrictive Horizon    | - Suitable       |              |                                                                                                    |
| .0509 Profile Classification | - Suitable       |              |                                                                                                    |

Comments:

**TYPICAL PROFILE** EVALUATED BY: Brent Purdum

## LEGEND OF ABBREVIATIONS FOR SITE EVALUATION FORM

[illegible]

## **ATTACHMENT 4: Soil Survey Information**

TABLE 11.--SANITARY FACILITIES

[Some terms that describe restrictive soil features are defined in the Glossary. See text for definitions of "slight," "moderate," "good," "fair," and other terms. Absence of an entry indicates that the soil was not rated]

| Map symbol and soil name               | Septic tank absorption fields        | Sewage lagoon areas             | Trench sanitary landfill              | Area sanitary landfill         | Daily cover for landfill              |
|----------------------------------------|--------------------------------------|---------------------------------|---------------------------------------|--------------------------------|---------------------------------------|
| ApB, AuB <sup>1</sup> -----<br>Appling | Moderate:<br>percs slowly.           | Moderate:<br>slope,<br>seepage. | Moderate:<br>too clayey.              | Slight-----                    | Fair:<br>too clayey.                  |
| CeB2-----<br>Cecil                     | Moderate:<br>percs slowly.           | Moderate:<br>seepage,<br>slope. | Moderate:<br>too clayey,<br>seepage.  | Slight-----                    | Fair:<br>too clayey.                  |
| CeD2-----<br>Cecil                     | Moderate:<br>percs slowly,<br>slope. | Severe:<br>slope.               | Moderate:<br>too clayey,<br>seepage.  | Moderate:<br>slope.            | Fair:<br>too clayey,<br>slope.        |
| CuB <sup>1</sup> -----<br>Cecil        | Moderate:<br>percs slowly.           | Moderate:<br>seepage,<br>slope. | Moderate:<br>too clayey,<br>seepage.  | Slight-----                    | Fair:<br>too clayey.                  |
| Cw-----<br>Chewacla                    | Severe:<br>floods,<br>wetness.       | Severe:<br>floods,<br>wetness.  | Severe:<br>floods,<br>wetness.        | Severe:<br>floods,<br>wetness. | Good.                                 |
| DuB-----<br>Durham                     | Moderate:<br>wetness.                | Moderate:<br>slope,<br>seepage. | Slight-----                           | Slight-----                    | Good.                                 |
| GeB-----<br>Georgeville                | Moderate:<br>percs slowly.           | Moderate:<br>slope,<br>seepage. | Moderate:<br>too clayey.              | Slight-----                    | Poor:<br>too clayey.                  |
| GeD-----<br>Georgeville                | Moderate:<br>percs slowly,<br>slope. | Severe:<br>slope.               | Moderate:<br>too clayey.              | Moderate:<br>slope.            | Poor:<br>too clayey.                  |
| GoC, GoE-----<br>Goldston              | Severe:<br>depth to rock.            | Severe:<br>depth to rock.       | Severe:<br>depth to rock.             | Severe:<br>seepage.            | Poor:<br>small stones,<br>thin layer. |
| HeB-----<br>Helena                     | Severe:<br>percs slowly,<br>wetness. | Moderate:<br>slope.             | Severe:<br>too clayey.                | Slight-----                    | Poor:<br>too clayey,<br>hard to pack. |
| IrB-----<br>Iredell                    | Severe:<br>percs slowly,<br>wetness. | Severe:<br>wetness.             | Severe:<br>too clayey,<br>wetness.    | Severe:<br>wetness.            | Poor:<br>thin layer.                  |
| LgB-----<br>Lignum                     | Severe:<br>percs slowly,<br>wetness. | Severe:<br>wetness.             | Severe:<br>depth to rock,<br>wetness. | Severe:<br>wetness.            | Poor:<br>too clayey.                  |
| LoB-----<br>Louisburg                  | Moderate:<br>depth to rock.          | Severe:<br>seepage.             | Severe:<br>seepage.                   | Severe:<br>seepage.            | Good.                                 |
| LoD-----<br>Louisburg                  | Moderate:<br>depth to rock.          | Severe:<br>seepage.             | Severe:<br>seepage.                   | Severe:<br>seepage.            | Fair:<br>slope.                       |
| LoE-----<br>Louisburg                  | Severe:<br>slope.                    | Severe:<br>seepage.             | Severe:<br>seepage.                   | Severe:<br>seepage.            | Poor:<br>slope.                       |
| NaB-----<br>Nason                      | Moderate:<br>depth to rock.          | Moderate:<br>slope,<br>seepage. | Severe:<br>too clayey.                | Slight-----                    | Poor:<br>too clayey.                  |

See footnote at end of table.

TABLE 11.--SANITARY FACILITIES--Continued

| Map symbol and<br>soil name | Septic tank<br>absorption<br>fields   | Sewage lagoon<br>areas              | Trench<br>sanitary<br>landfill                     | Area<br>sanitary<br>landfill               | Daily cover<br>for landfill                     |
|-----------------------------|---------------------------------------|-------------------------------------|----------------------------------------------------|--------------------------------------------|-------------------------------------------------|
| NaD-----<br>Nason           | Moderate:<br>slope,<br>depth to rock. | Severe:<br>slope.                   | Severe:<br>too clayey.                             | Moderate:<br>slope.                        | Poor:<br>too clayey.                            |
| PaE-----<br>Pacolet         | Severe:<br>slope.                     | Severe:<br>slope.                   | Severe:<br>slope.                                  | Severe:<br>slope.                          | Poor:<br>slope.                                 |
| Pt. 1<br>Pits               |                                       |                                     |                                                    |                                            |                                                 |
| TaE-----<br>Tatum           | Severe:<br>slope.                     | Severe:<br>slope.                   | Severe:<br>slope,<br>too clayey,<br>depth to rock. | Severe:<br>slope.                          | Poor:<br>slope,<br>too clayey.                  |
| UL. 1<br>Udorthents         |                                       |                                     |                                                    |                                            |                                                 |
| VaB-----<br>Vance           | Severe:<br>percs slowly.              | Moderate:<br>slope.                 | Severe:<br>too clayey.                             | Slight-----                                | Poor:<br>too clayey.                            |
| WeD-----<br>Wedowee         | Moderate:<br>percs slowly,<br>slope.  | Severe:<br>slope.                   | Moderate:<br>too clayey.                           | Moderate:<br>slope.                        | Fair:<br>too clayey,<br>area reclaim,<br>slope. |
| WeE-----<br>Wedowee         | Severe:<br>slope.                     | Severe:<br>slope.                   | Severe:<br>slope.                                  | Severe:<br>slope.                          | Poor:<br>slope.                                 |
| Wh-----<br>Wehadkee         | Severe:<br>wetness.                   | Severe:<br>floods,<br>wetness.      | Severe:<br>floods,<br>seepage,<br>wetness.         | Severe:<br>floods,<br>seepage,<br>wetness. | Poor:<br>wetness.<br>wetness.                   |
| WkC-----<br>Wilkes          | Severe:<br>depth to rock.             | Severe:<br>slope,<br>depth to rock. | Severe:<br>depth to rock,<br>seepage.              | Severe:<br>seepage.                        | Poor:<br>thin layer.                            |
| WkE-----<br>Wilkes          | Severe:<br>depth to rock,<br>slope.   | Severe:<br>slope,<br>depth to rock. | Severe:<br>depth to rock,<br>seepage,<br>slope.    | Severe:<br>slope,<br>seepage.              | Poor:<br>thin layer.                            |
| WoA-----<br>Worsham         | Severe:<br>percs slowly,<br>wetness.  | Slight-----                         | Severe:<br>wetness,<br>too clayey.                 | Severe:<br>wetness.                        | Poor:<br>wetness,<br>too clayey.                |

<sup>1</sup> See description of the map unit for composition and behavior characteristics.

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

## Conventional Septic System Area Computation

Client Name: *Green Group*  
Number Bedrooms: 3  
Design Flow (gal/day): 360 (120 gal/day/bedroom, minimum 240 gal/day/dwelling)  
LTAR (gal/day/ft<sup>2</sup>): 0.25  
Trench Bottom Area (ft<sup>2</sup>): 1440 (Design flow/LTAR)  
Trench Width (ft): 3  
On-center distance between trenches (ft): 9  
Trench Bottom Length (ft): 480

Minimum Field Area Required (ft<sup>2</sup>): 4320 (Trench Bottom Length\*Trench on-center distance)  
Minimum Field Area Required (Innovative) (ft<sup>2</sup>): 3240 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 10800 (Minimum field area\*2.5)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 8100 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 12960 (Minimum field area\*3)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 9720 (25% reduction from above)

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

Client Name: *Green Group*  
Number Bedrooms: 4  
Design Flow (gal/day): 480 (120 gal/day/bedroom, minimum 240 gal/day/dwelling)  
LTAR (gal/day/ft<sup>2</sup>): 0.25  
Trench Bottom Area (ft<sup>2</sup>): 1920 (Design flow/LTAR)  
Trench Width (ft): 3  
On-center distance between trenches (ft): 9  
Trench Bottom Length (ft): 640

Minimum Field Area Required (ft<sup>2</sup>): 5760 (Trench Bottom Length\*Trench on-center distance)  
Minimum Field Area Required (Innovative) (ft<sup>2</sup>): 4320 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 14400 (Minimum field area\*2.5)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 10800 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 17280 (Minimum field area\*3)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 12960 (25% reduction from above)

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

Client Name: *Green Group*  
Number Bedrooms: 5  
Design Flow (gal/day): 600 (120 gal/day/bedroom, minimum 240 gal/day/dwelling)  
LTAR (gal/day/ft<sup>2</sup>): 0.25  
Trench Bottom Area (ft<sup>2</sup>): 2400 (Design flow/LTAR)  
Trench Width (ft): 3  
On-center distance between trenches (ft): 9  
Trench Bottom Length (ft): 800

Minimum Field Area Required (ft<sup>2</sup>): 7200 (Trench Bottom Length\*Trench on-center distance)  
Minimum Field Area Required (Innovative) (ft<sup>2</sup>): 5400 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 18000 (Minimum field area\*2.5)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 13500 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 21600 (Minimum field area\*3)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 16200 (25% reduction from above)

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

## Conventional Septic System Area Computation

Client Name: *Green Group*  
Number Bedrooms: 3  
Design Flow (gal/day): 360 (120 gal/day/bedroom, minimum 240 gal/day/dwelling)  
LTAR (gal/day/ft<sup>2</sup>): 0.275  
Trench Bottom Area (ft<sup>2</sup>): 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 (ft<sup>2</sup>): 3927.273 (Trench Bottom Length\*Trench on-center distance)  
Minimum Field Area Required (Innovative) (ft<sup>2</sup>): 2945.455 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 9818.182 (Minimum field area\*2.5)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 7363.636 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 11781.82 (Minimum field area\*3)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 8836.364 (25% reduction from above)

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

Client Name: *Green Group*  
Number Bedrooms: 4  
Design Flow (gal/day): 480 (120 gal/day/bedroom, minimum 240 gal/day/dwelling)  
LTAR (gal/day/ft<sup>2</sup>): 0.275  
Trench Bottom Area (ft<sup>2</sup>): 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 (ft<sup>2</sup>): 5236.364 (Trench Bottom Length\*Trench on-center distance)  
Minimum Field Area Required (Innovative) (ft<sup>2</sup>): 3927.273 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 13090.91 (Minimum field area\*2.5)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 9818.182 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 15709.09 (Minimum field area\*3)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 11781.82 (25% reduction from above)

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

Client Name: *Green Group*  
Number Bedrooms: 5  
Design Flow (gal/day): 600 (120 gal/day/bedroom, minimum 240 gal/day/dwelling)  
LTAR (gal/day/ft<sup>2</sup>): 0.275  
Trench Bottom Area (ft<sup>2</sup>): 2181.818 (Design flow/LTAR)  
Trench Width (ft): 3  
On-center distance between trenches (ft): 9  
Trench Bottom Length (ft): 727.2727

Minimum Field Area Required (ft<sup>2</sup>): 6545.455 (Trench Bottom Length\*Trench on-center distance)  
Minimum Field Area Required (Innovative) (ft<sup>2</sup>): 4909.091 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 16363.64 (Minimum field area\*2.5)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 12272.73 (25% reduction from above)  
Total Field Area Required (ft<sup>2</sup>)<sup>(1)</sup>: 19636.36 (Minimum field area\*3)  
Total Field Area Required (Innovative) (ft<sup>2</sup>)<sup>(1)</sup>: 14727.27 (25% reduction from above)

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