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December 15, 2022  
S&FS Job #22-1167

Jimmy Lentz  
c/o Jimmie Childers  
Via email: [jimmie\\_childers@hotmail.com](mailto:jimmie_childers@hotmail.com)

RE: Soil/Site Evaluation-Ned Marsh Road

Mr. Childers:

Soil & Forestry Services of the Carolinas (S&FS) has performed a preliminary soil/site evaluation on portions of a 23-acre parcel on Ned Marsh Road in Rowan County. The purpose of our work was to evaluate soil/septic suitability on the parcel.

#### Site Conditions

The evaluated parcel is listed as Tax Parcel ID 614 038 with the Rowan County Tax Office. The parcel is primarily forested 2 small fields. A dilapidated home exists on the western end of the property. High Rock Lake serves as the eastern property boundary. At least one well exists on the property. The well needs to be successfully abandoned in order to avoid a 100' setback to septic systems. A large drainageway occurs in the central portion of the parcel.

#### Methodology

Our evaluation was performed by reviewing soil conditions via hand augers. Soil morphological conditions including color, texture, structure, etc. were evaluated with boring locations recorded via GPS technology. Soil suitability was determined by referencing 15A NCAC 18A.1900 "Laws and Rules for Sewage Treatment and Disposal Systems".

#### Findings

Soils on the lot formed from weathering both of acid crystalline and mafic rock types. The mafic rocks typically weather to form soils with expansive (high shrink-swell) clays. Depending on the depth of occurrence, expansive clays are unsuitable for supporting subsurface septic systems. Additionally, these soil types typically exhibit evidence of soil wetness via low chroma colored mottles. Most of the evaluated soils on the property were unsuitable due to the presence of expansive clays and unsuitable topography.

Soils weathered from acid crystalline rocks generally yield red clay subsoils. These soils are typically suitable for supporting subsurface septic systems. The usable soils identified have potential to support accepted (conventional) and panel block type system types. The attached sketch map depicts the approximate location of the usable soil areas identified. Based on your comments regarding the potential plans for the property to support 4 new homes there is plenty of soil to meet the requirements.

### Septic System Requirements

Septic system leach fields are sized based on the number of bedrooms proposed as well as the Long-Term Acceptance Rate (LTAR). The LTAR represents the rate effluent can be disposed onto the soil based on soil texture, structure, etc. An area designated for the leach field must meet setback requirements to property lines (10'), wells (50'/100'), streams (50'), etc. For reference, a 3-bedroom home typically requires approximately 8,000sf to 12,000sf of usable soil for system and repair depending on topography and type of system proposed.

### Recommendations

We recommend contacting a land surveyor if you propose to subdivide the property. We can forward a cad file of our findings to the surveyor. If you are interested in obtaining septic permits for the future lots, we can revisit the property to perform additional soil evaluations and drain field layouts. S&FS can also perform septic system designs to submit to the Health Department for review/approval.

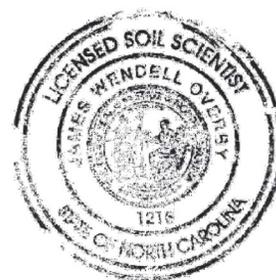
This report reflects the findings of S&FS, PA. Permits will be required from the Rowan County Health Dept (RC) prior to building. RC issues Improvements Permits and Construction Authorizations based on their findings. On behalf of our clients, S&FS provides soil descriptions, layouts and design proposals to the RC for review and approval. This report reflects the general findings of S&FS for the property in question at the time of our evaluation.

Sincerely,

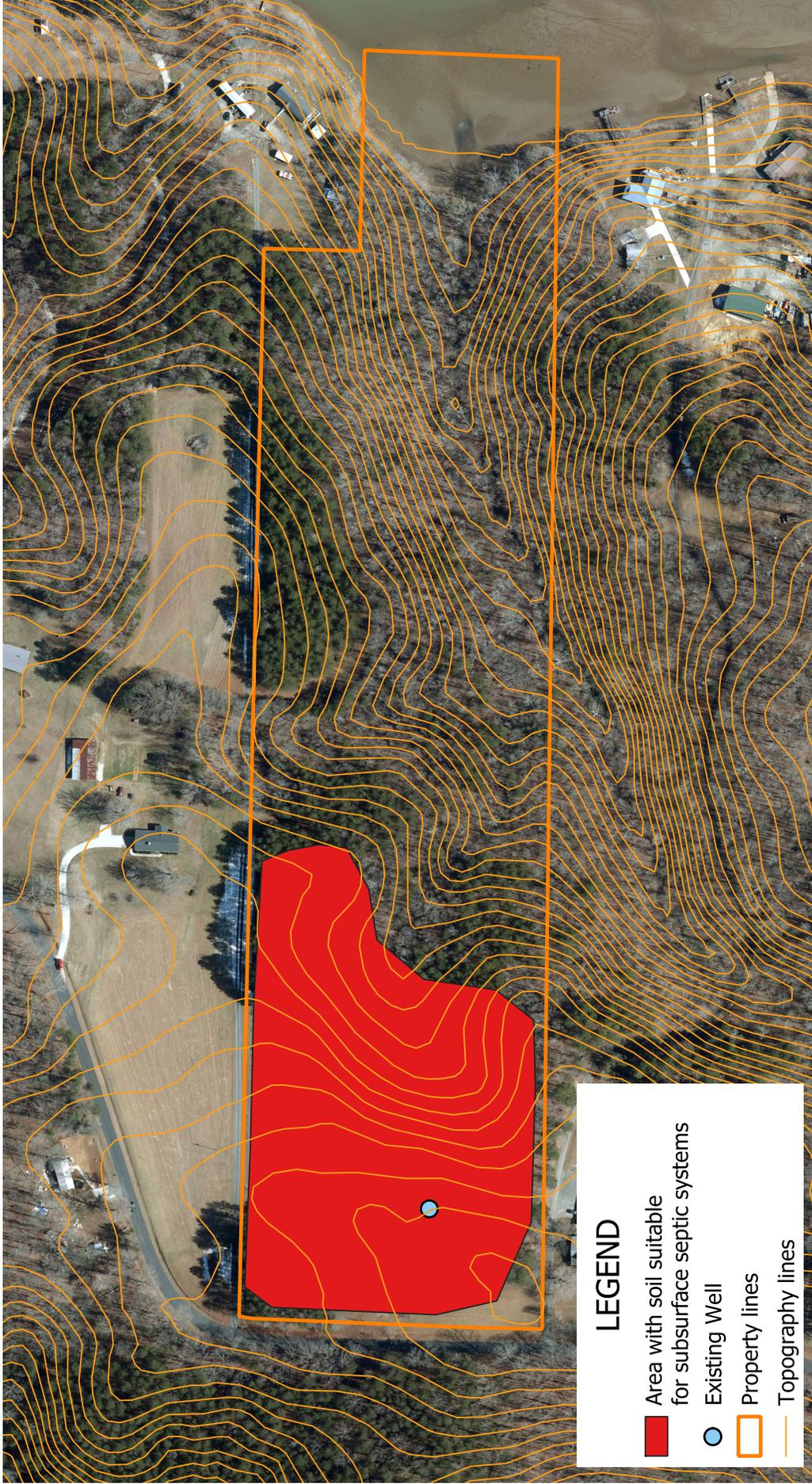
*Wendell Overby*

Wendell Overby, RF LSS SC

Attachments



Preliminary Soil Evaluation Sketch Map  
 Ned Marsh Rd - Rowan County  
 December 2022  
 Project #22-1167



0 400 800 ft



\*\* Not a survey  
 \*\* Imagery from NC OneMap  
 \*\* Parcel data from Rowan GIS