

PRELIMINARY SOIL AND SITE EVALUATION

Union County Parcel: 05144014N
Rehobeth Road
Waxhaw, NC 28173

Prepared For:

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March 14, 2026



INTRODUCTION & SITE DESCRIPTION

This Preliminary Soil and Site Evaluation was performed on a 2.4-acre parcel located on Rehobeth Road, Waxhaw, North Carolina (Union County Tax Parcel: 05144014N).

Thompson Environmental Consulting, Inc. (TEC) was retained to determine whether the soils are suitable for onsite subsurface wastewater treatment and disposal. The property was evaluated in accordance with North Carolina statutes for waste disposal (“Laws and Rules for Sewage Treatment and Disposal Systems”, September 30, 2024).

INVESTIGATION METHODOLOGY & SITE PHYSICAL CHARACTERISTICS

Individual soil borings were evaluated, and soil color was determined with a Munsell Soil Color Chart. Observations of the landscape (slope, drainage patterns, etc.) as well as soil properties (depth, texture, structure, seasonal wetness, restrictive horizons, etc.) were recorded.

The project study area is currently undeveloped and is vegetated a mixed forest.

FINDINGS

The field work for this project was completed on March 13, 2026. Ten soil borings were advanced with a hand-held auger, and locations are noted in the attached Figure 1.

Suitable for Conventional Type Systems. Soil borings classified as Provisionally Suitable for Conventional Systems may include Gravel, Accepted, and Prefabricated Permeable Block Panel Systems and are denoted in the attached Figure as green points within green polygons. While the particulars and costs between the system types can vary considerably, these are generally the preferred system types. This soil appeared adequate to support a long-term acceptance rate (LTAR) of 0.225 to 0.3 GPD/sq-ft.

Suitable for Low-profile Chamber Systems. Low-Profile Chamber systems are designed similarly to Conventional Type systems but are not allotted any reduction in drainfield size, thus will require more space than the typical Conventional Type systems. These soils require a minimum of 20 inches of suitable soil when factoring in slope corrections and are depicted in the attached Figure as orange points within a green polygon. This soil appeared adequate to support an LTAR of 0.3 GPD/sq-ft.

DISCUSSION

The soils located within the green polygons in the attached Figure are ‘Suitable’ for Conventional-Type Systems. It is estimated that approximately 7,500 square feet of suitable soil area would need to be allocated and left completely available for the installation and required repair area for each Accepted System serving a 4-bedroom single-family residence. Additional bedrooms area possibility, the 4-bedroom reference is being used for illustrative purposes only.

Should the client decide to proceed with onsite wastewater treatment and disposal on this property, Thompson Environmental Consulting, Inc. (TEC) is available to provide further

support. Specifically, TEC can assist with the preparation of a private permit package tailored to the requirements of this site and in accordance with applicable North Carolina statutes and regulations.

All work related to the preparation of this permit package would be provided under a separate cost proposal, ensuring clarity and transparency regarding the associated fees and scope of services.

PROFESSIONAL OPINION AND LIMITATIONS

The findings described in this report reflect the professional judgment of TEC, based on the results of the conducted Soil and Site Evaluation and an understanding of the current laws and regulations that apply to on-site wastewater treatment systems in North Carolina. It is important to recognize that soils are inherently variable; they change naturally across any given landscape and often include numerous inclusions that may not be fully captured by sampling.

Because of this natural variability and the subjective elements involved in identifying limiting factors within the soil, any quantification or classification of soil suitability should be considered an approximation rather than a precise or exact measurement. Consequently, TEC cannot guarantee that regulatory authorities will reach the same conclusions or agree with every aspect of the findings outlined in this report.



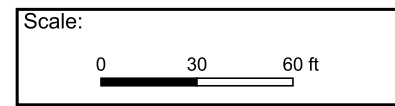
FIGURE 1

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Soil and Site Evaluation

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Union County



TEC Job No.
 26-73

Date:
 March 2026

