



Fred D. Smith Soil Scientist

December 2, 2024

Shawn Pearce
Mike Wrenn
7710 NC Hwy 39
Zebulon, NC 27597

Subject: Preliminary Soil Suitability for Conventional Septic Systems
555 Corbett Rd., Parcel 0033095
Nash County

Dear Mr. Wrenn:

This letter presents our evaluation results and conclusions regarding soil suitability for septic systems for the above-mentioned parcel.

We were asked to evaluate the soils on the above-mentioned parcel. You provided us with an aerial map showing the areas on the parcel to be evaluated and a county soils map. You want to determine if the soils on those portions of the parcel are suitable for conventional septic systems for industrial use. The property lines were not flagged at the site.

Soil and Site Evaluation

The site and soil were evaluated to observe soil properties, surface features, landscapes, and site parameters. Hand auger borings were used to evaluate soil characteristics in accordance with 15A NCAC 18E (Laws and Rules for Sewage Treatment and Disposal Systems). See the attached map that shows the general location of each boring on a topographic map. It also shows the suitable and unsuitable soil areas and their general locations.

The portions of the tract that was evaluated is currently a harvested cornfield. They are flat linear areas with slopes of about 1-2%.

We were not asked to evaluate the wooded areas of the tract.

The attached map that shows the general location of each boring on a topographic map. It also shows the two suitable soil areas (Soil 1 and Soil 2) and unsuitable soil areas (US) and their general locations.

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Soil 1

The soils are marine sediments of the Middle and Upper Coastal Plain of N.C. They have sandy loam topsoil and brown sandy clay loam and sandy clay subsoils. They have sub-angular blocky structure. They do not have a significant amount of shrink-swell clay mineralogy.

Most of these soil areas will have soil wetness greater than 35 inches below the surface. These areas will sustain conventional septic systems that can use 25% reduction trench materials.

Most of these soil areas will have a loading rate of 0.30 LTAR.

Soil 2

The soils are marine sediments of the Middle and Upper Coastal Plain of N.C. They have sandy loam topsoil and brown sandy clay loam and sandy clay subsoils. They have sub-angular blocky structure. They do not have a significant amount of shrink-swell clay mineralogy.

This soil area will have soil wetness at approximately 21 inches or less. This area maybe suitable for some type of alternative system such as low-profile chambers or a fill system.

This soil area will have a loading rate of 0.30 LTAR.

Unsuitable Soils (US)


These soils are considered unsuitable for conventional septic systems due to shallow wetness.

Conclusions

Soil 1 areas shown on the attached map are suitable for shallow conventional septic designs
The Soil 2 area is suitable for some type of alternative system.

We appreciate the opportunity to work with you on this project. Please contact me with questions or additional information after you have reviewed the information here.

Sincerely,


Fred D. Smith, LSS

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