

Central Carolina Soil Consulting, PLLC

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Wake Forest, NC 27587

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August 4, 2026

Job # 5536

Julie Wright
10931 Strickland Road
Suite 111
Raleigh, NC 27615

RE: Soil/site evaluation on ~6.8-acres in eastern Wake County

Dear Ms. Wright:

Central Carolina Soil Consulting, PLLC conducted a preliminary soil evaluation on the parcel listed above to determine the areas of soils that are suitable for subsurface wastewater disposal systems (conventional & LPP). The soil/site evaluation was performed using hand auger borings during dry soil moisture conditions based on the criteria found in the State Subsurface Rules, 15ANCAC 18E "Laws and Rules for Sewage Treatment and Disposal Systems" along with "Regulations Governing Sewage Treatment and Disposal Systems in Wake County. From this evaluation, CCSC gps located of soil borings to increase mapping accuracy along with other site features.

The above referenced parcel located in the heastern portion of Wake County, 5600 Mitichell Mill Road. This area lies in the acidic crystalline geologic unit where soils have formed from residual parent material. The soils that have formed on this parcel are similar to the Wodowee and Louisburg soil series. The attached soils map indicates the areas of provisionally suitable vs. unsuitable soils. The Wodowee soil series are generally suitable for subsurface wastewater disposal systems. That is, the morphology of the soils contain suitable characteristics that would support subsurface septic systems such as clay textured subsoils that are not considered expansive, blocky structure and no indicators of restrictive characteristics within 24 inches of the soil surface. The Louisburg soils have areas of rock less than 24 inches to the soil surface and are unsuitable for the systems shown on the attached map. Additional unsuitable areas on-site are either in drainageways/depressions or have existing structures (barns, house, well setbacks, etc.) or powerline setbacks.

The attached soils map indicates the areas of soils which are suitable for subsurface wastewater systems. The "hatched soil units" on the attached map indicates the areas of soils that have 30+ inches of suitable soil material. These areas have potential for conventional or modified conventional septic systems. The "cross hatched units" on the attached map indicate areas of soils with 24-29 inches of suitable soil material and have potential for ultra-shallow conventional or LPP septic systems. Unit "UN" on the attached map indicates areas of unsuitable soils for conventional and LPP septic systems.

Future Subdivision Considerations

Several factors should be considered before a final subdivision plan is created for this property. One consideration is that each proposed lot shall contain an adequate amount of suitable soils, which can support a primary septic system along with a repair septic system. The suitable soil areas cannot be affected by future homes, driveways, patios, excavation or filling activities and if an on-site well is used then a 100' setback is required around the well head for both system and repair drainfields along with all tanks (septic & pump). An exact square footage of suitable soils required per lot to obtain a permit cannot be given due to soil variability and topographic characteristics on each lot. The amount of suitable soils required to support a 3-bedroom residence will range between 10,000 ft² - 12,000 ft² (could be more or less) per lot. These soil area estimates are based upon soil application rates for sandy clay loam to clay textured subsoil with a range of .275-.35 gallons per day/square for conventional type systems. The ultimate application rate will be assigned by the Wake County Health Department or an AOWE based on a detailed evaluation.

The Wake County Planning Department requires that any proposed subdivision in the county with onsite wastewater disposal systems follow certain criteria set forth in the subdivision regulations. The regulations (Section V) mandate that any proposed lot for recordation shall have at least 30,000 ft² of suitable soils before it can be recorded. If any proposed lot does not meet the minimum of 30,000 ft² of suitable soils, then a septic system field layout is required demonstrating system and repair, along with the location of a house, well, drive, decks, etc. If the layout proves the lot can accommodate a system and repair on the lot with the house and other features, then it can be recorded under Section VI of the subdivision regulations. The amount of drain line required for each lot will be based upon the daily flow, soil application rate and type of system proposed on the lot. The daily flow is assigned by the number of actual bedrooms in a proposed home (120 gallons/day/bedroom). The field layouts

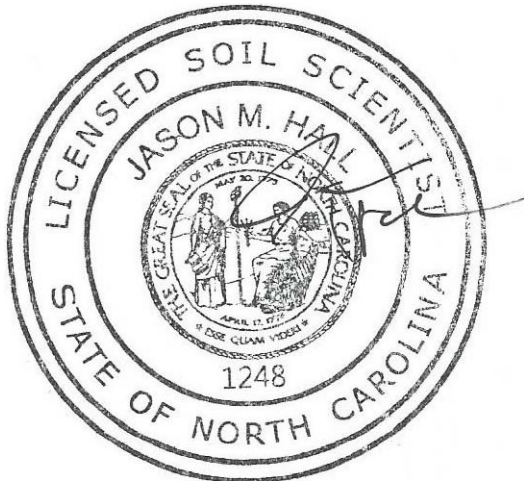
required by the Section VI regulations do not represent a septic permit or a guarantee of a permit on such lots. The permits are ultimately issued by the local health department based on current subsurface wastewater regulations.

During the road construction process of a subdivision or site development of a single lot it is important not to impact any suitable soil areas with such activities as excavating or filling. Only the actual roadways and required drainage ditches and/or sediment basins should be constructed during this process. If the contractor requires a staging area to place fill from the construction process, then areas of unsuitable soils on the property should be utilized as long as they are not state/county buffers, jurisdiction wetlands or other areas protected by local zoning regulations. If this is not possible, then the disturbed areas should be minimized as much as possible. The same precautions should be taken when the individual lots are cleared for home sites. Only the vegetation should be removed in the areas of the proposed drain fields on lots to prevent any disturbance of the naturally occurring soil. A lot with adequate areas of suitable soils can be deemed unsuitable due to poor planning or site disturbance. Central Carolina Soil Consulting recommends that all lot clearing activities are delayed until a permit is issued by the local health department, with the exception of clearing thick vegetation to access the lot.

This report discusses the location of suitable soils for subsurface wastewater disposal systems and does not guarantee any permits or approval required by the local health department. Central Carolina Soil Consulting, PLLC is a professional consulting firm specializing in soil delineations and design for on-site wastewater disposal systems. The rules governing on-site wastewater disposal systems are complex and the interpretation of the rules are based upon the opinions of regulators (state and county level). Due to the subjective nature of the permitting process and the variability of naturally occurring soils, CCSC cannot guarantee that areas delineated as suitable for on-site wastewater disposal systems will be permitted by the governing agencies. These permitting considerations should be taken into account before a financial commitment is made on a tract of land.

If you have any questions regarding the findings on the attached map or in this report, please feel free contact me at anytime. Thank you allowing Central Carolina Soil Consulting to perform this site evaluation for you.

Sincerely,



Jason Hall
NC Licensed Soil Scientist #1248
AOWE #10004

Encl: Soil Map

