

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

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Warren Woods Subdivision  
Lot 1  
Warrenton, NC  
Warren County  
Parcel ID# E10 43

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Prepared for: Pete Reese

Prepared by: Erik Severson, Severson Soil Consulting, PLLC

Report Date: 10/28/2022



Erik D. Severson, Ph.D., LSS  
2714 Blaydon Dr. Raleigh, NC 27606  
919-623-6175 seversonsoil@gmail.com

To: Pete Reese

Re: Soil Feasibility for parcel:

Warren Woods Subdivision Lot 1  
Parcel ID# E10 43

Pete, this is a summary of my findings:

Severson Soil Consulting, PLLC (SSC) conducted a preliminary onsite wastewater soil feasibility study on the above referenced parcel to determine the area of soils, suitable for a subsurface onsite wastewater disposal system. The soil and site evaluation were performed by using a hand auger boring during moist soil conditions based on the recommended criteria found in the "Laws and Rules for Sewage Treatment and Disposal Systems", 15NCAC 18A. 1900. From this evaluation, SSC sketched an area suitable for the installation of a septic system. All dimensions, locations are approximate.

#### Site Description

The 10-acre tract near the end of Beamon Hunt Road (figure 1) lay in the Piedmont with parent materials weathering metamorphic rocks. The soil map showed one soils mapping units on the subject property: CeB, indicating Cecil soils on 2 to 8 percent slopes. These soils are deep, red, clayey, and well-drained. The CeB unit was located on a gently sloping ridge (see figure 2). A path was cut through the dense vegetation (see the gray box in figure 1 and figure 3). The soil evaluation was conducted via the path over a portion of the property.

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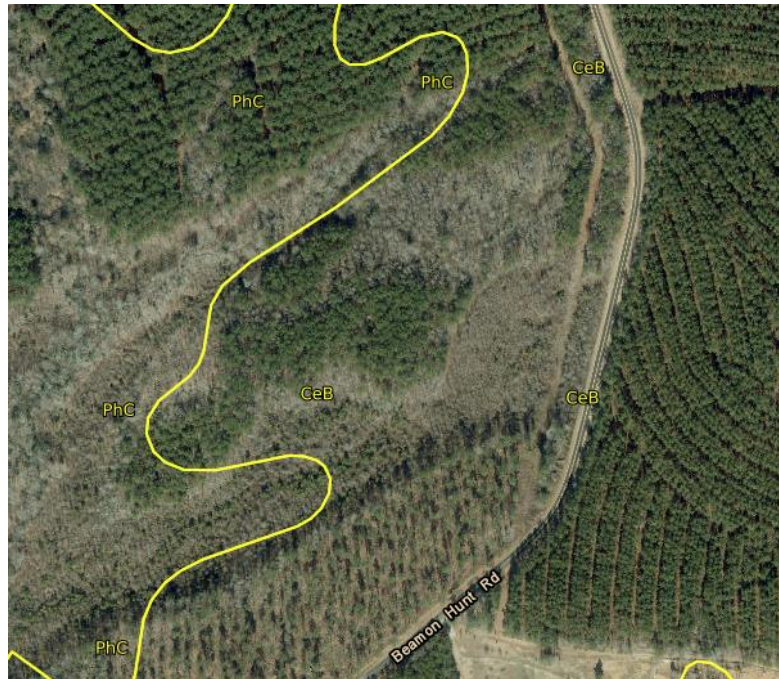


Figure 2. Soil map of the of the subject property (NRCS)



Figure 3. Path cut through property where evaluation occurred.



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## Soil Borings

Over 8 soil borings were advanced on the parcel as seen in figure 4. Their depths to suitable soils categorized the soils: the red dots represent suitable soils to 30", and the brown dots are suitable soils from 20-24". SSC found that the soil survey to be accurate. The red dots were the Cecil soils and the brown dots were the Pacolet soils (shallower to saprolite). The recommended loading rate (LTAR) for the Cecil soils are 0.3 gallons per day per square foot.

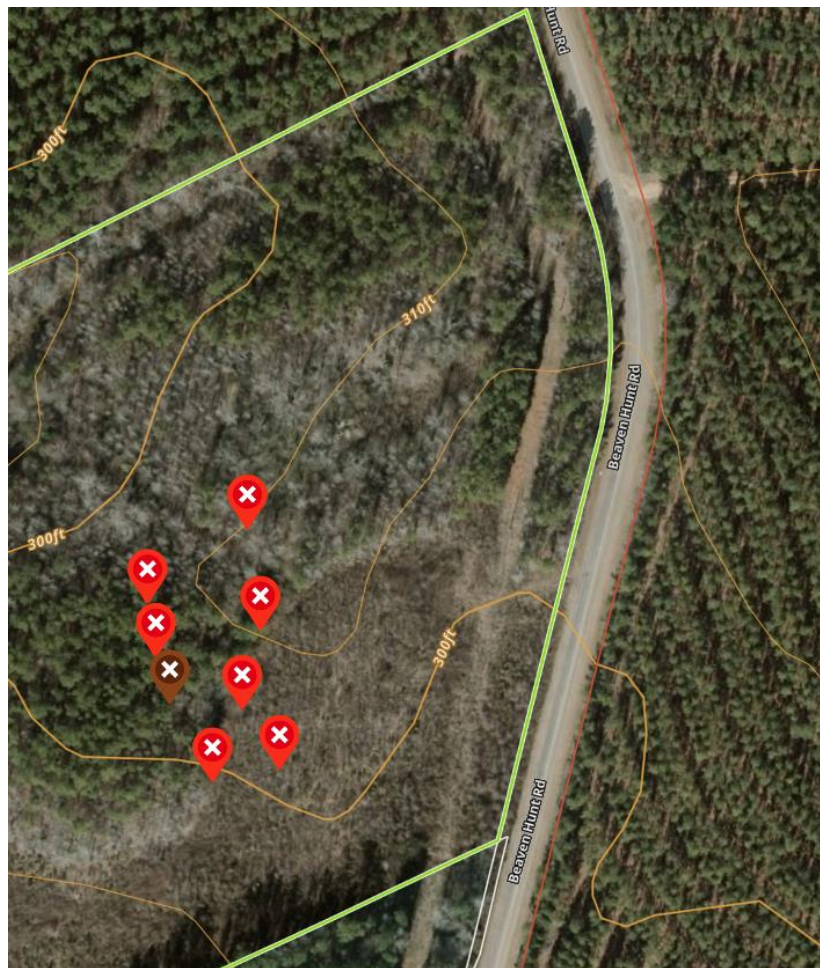


Figure 4. Soil boring locations within the lot as located by the onX Hunt application.

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## Usable Area

All holes evaluated were provisionally suitable and would support a conventional septic system. The entirety of the usable area evaluated was 0.53 acres, or 23,174 ft<sup>2</sup> (figure 5). This was located primarily on the CeB mapping unit, or the gently sloping ridgetop. The minimum area needed for a four-bedroom house using a 0.3 gpd ft<sup>2</sup> loading rate is 6,600 ft<sup>2</sup>. Adding a safety factor of 20% to account for slopes, topography, trees, etc., a practical area needed is 7,920 ft<sup>2</sup>.

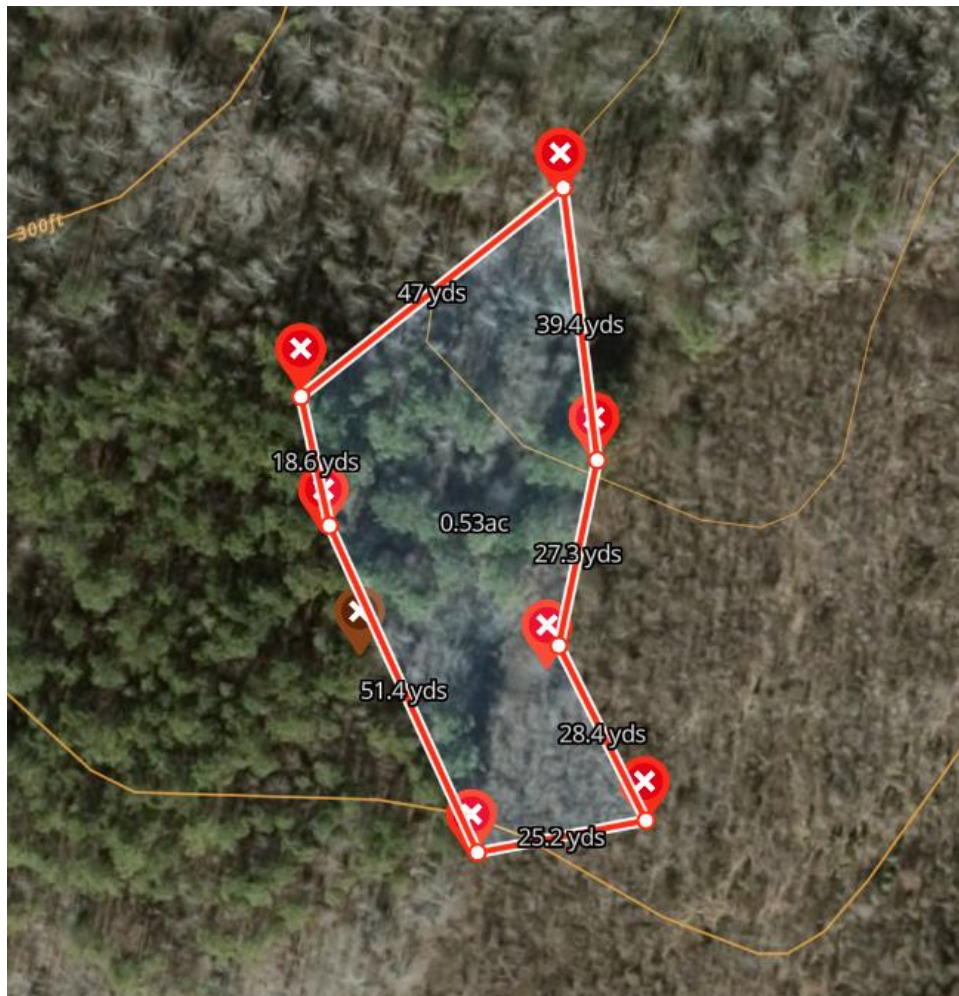


Figure 5. Usable area on the parcel.

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## Permitting

Prior to the issuance of a septic permit, the lot will require a soil and site evaluation by the Warren County Health Department. The specific trench product type and soil loading rate will be determined by their assessment. The areas for proposed drainfields shall not be impacted by home sites, pools, garages, nor be mechanically altered from the natural lay of the land. Regulatory setbacks to property lines, roads, wells, etc. are to be maintained.

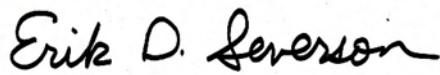
Exact locations of future drainfields, repair areas, buffer from property lines (current and future), building foundations, pools, decks, and well locations are not addressed in this report. Those items should be fully considered as the plans develop for the potential future use of the site. Depending on the position of the house location, house size, property lines and setbacks that may encroach on available usable space, this lot may require a septic system utilizing a pump.

Due to the subjective nature of the permitting process, zoning, variability of naturally occurring soil, and unforeseen circumstances, SSC cannot guarantee that areas delineated as suitable for on-site wastewater disposal systems will be permitted, as the permits are issued by the local governing agency. However, the areas of suitable soil have 3 times the needed space for a conventional system and repair depending on the final loading rate. This report may be used to assist the local permitting agency to issue a septic permit.

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Thank you for your business. Please do not hesitate to ask for more information regarding this report.

Sincerely,

Handwritten signature of Erik D. Severson in black ink.

Erik D. Severson, Ph-D., LSS  
North Carolina Licensed Soil Scientist #1275