

Site Suitability for Domestic Sewage Treatment and Disposal Systems

Warren Woods Subdivision
Lot 4
Warrenton, NC
Warren County
Parcel ID# E10 43

Prepared for: Pete Reese

Prepared by: Erik Severson, Severson Soil Consulting, PLLC

Report Date: 10/28/2022

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SYNOPSIS

This report shows the findings of a preliminary soil and site evaluation of the referenced parcel in Warren County, NC. There were provisionally suitable soils found that would support the installation of a conventional septic system plus repair area for a four-bedroom dwelling.

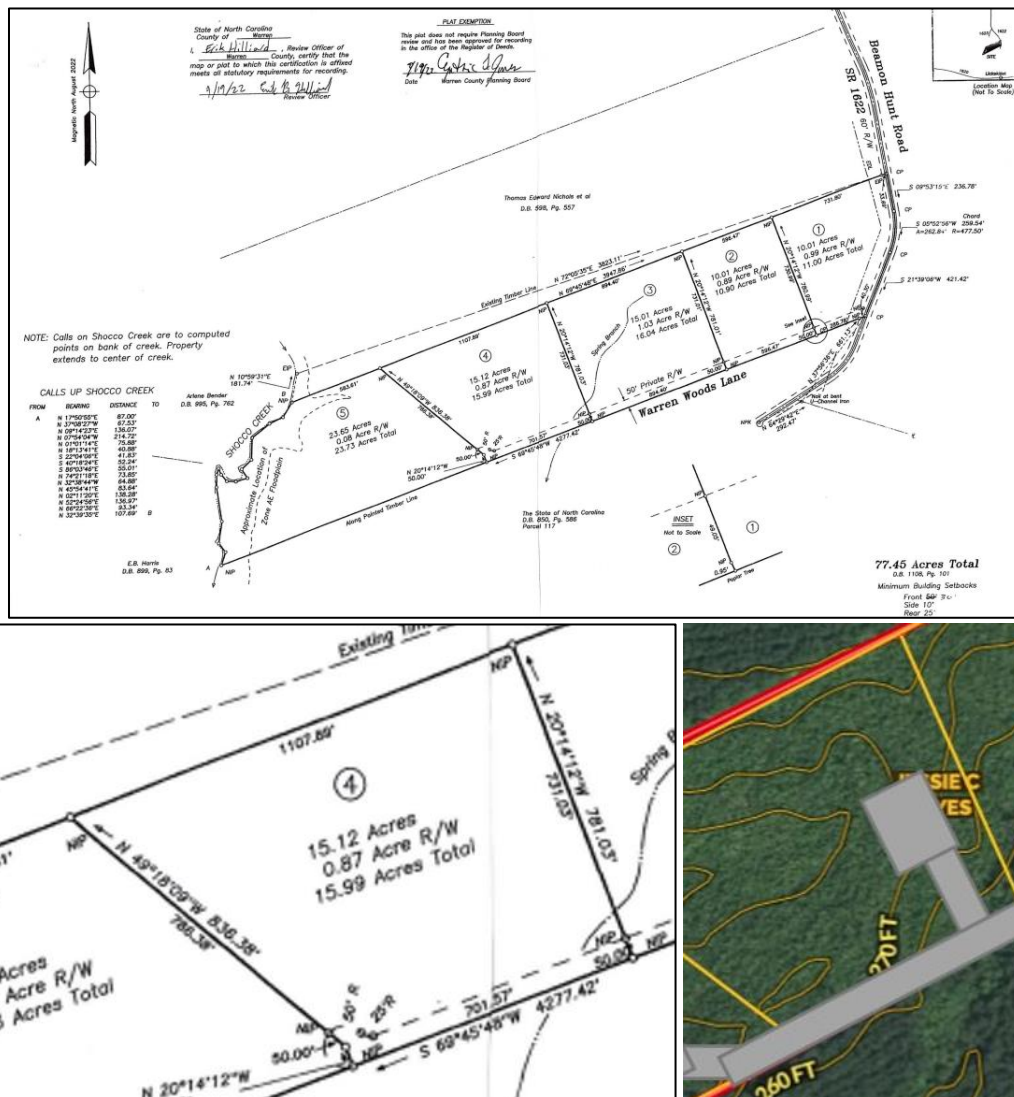


Figure 1. Property Location.

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To: Pete Reese

Re: Soil Feasibility for parcel:

Warren Woods Subdivision Lot 4
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 15-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 and PhC, the Pacolet soils on 8 to 15 percent slopes. The Cecil 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 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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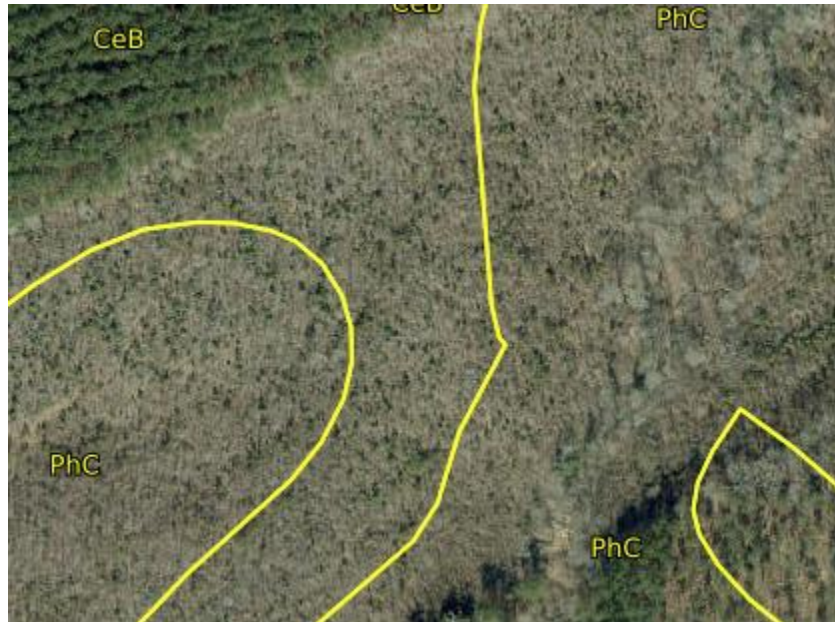


Figure 2. Soil map of the of the subject property (NRCS)



Figure 3. Path cut through property where evaluation occurred.

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Soil Borings

Over 10 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". SSC found that the soil survey to be accurate. The red dots were the Cecil soils. The recommended loading rate (LTAR) for the Cecil soils are 0.3 gallons per day per square foot. There was an obvious concave area in the cleared portion of the lot that should be avoided for septic system use.

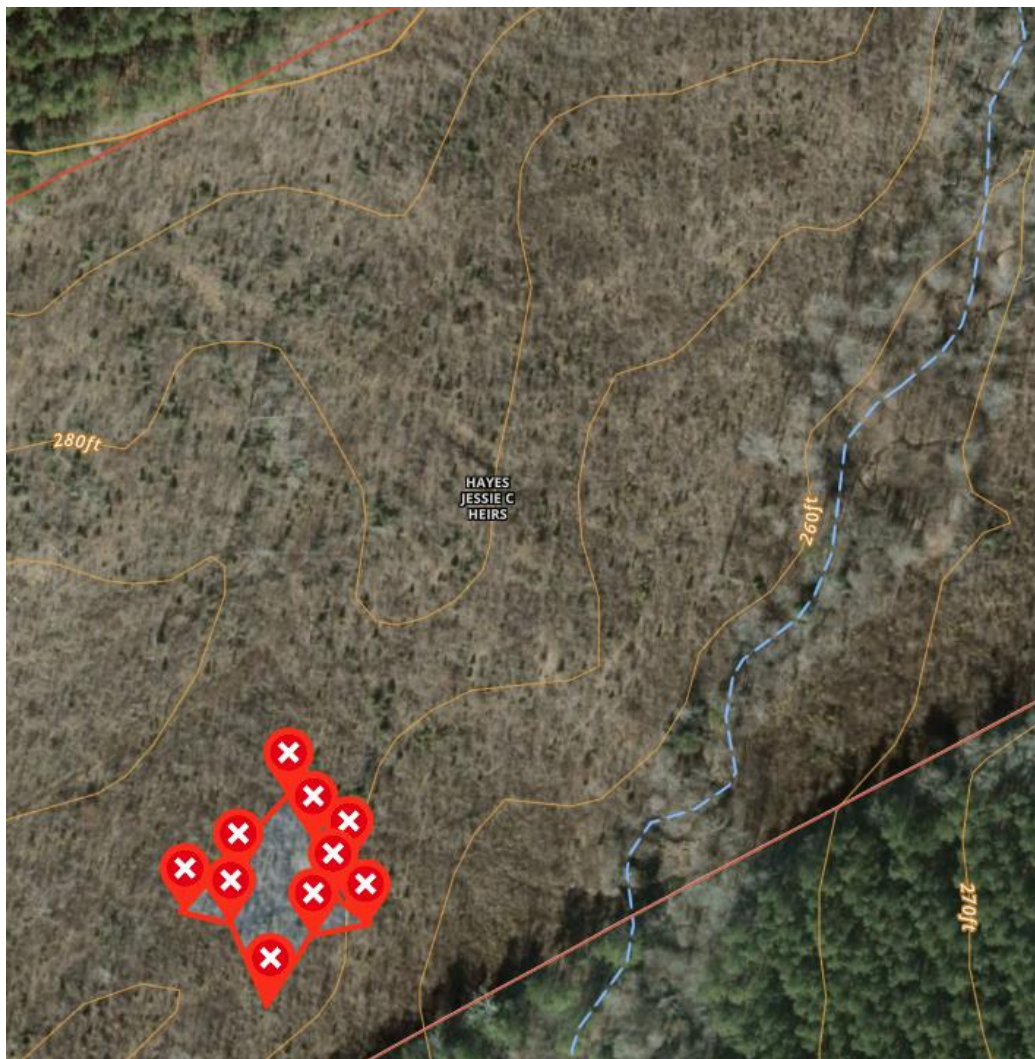


Figure 4. Soil boring locations within the lot as located by the onX Hunt application.

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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 0.32 acres, or 13,939 ft² (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 ft² loading rate is 6,600 ft². Adding a safety factor of 20% to account for slopes, topography, trees, etc., the area needed is 7,920 ft².



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 1.8 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,

Erik D. Severson



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North Carolina Licensed Soil Scientist #1275