



4/5/2019

Project # 1348

Mark Brown
27 Stony Pond Lane
Canton, NC 28716

Dear Mr. Brown,

This report details the findings of a limited feasibility study performed on parcels 628012, 628037, 628152, 628150, 628151, NC 52, Rowan County. The evaluation was conducted at the clients request in order to determine the site's suitability for the installation of sub-surface wastewater disposal systems to serve domestic strength wastewater. Select areas chosen by the client were evaluated in order to determine if soils in that location would support a septic system.

The evaluation was conducted by R. Edwin Stott and Chris Murray who are licensed soil scientists. The evaluation was conducted during moist soil conditions on April 4, 2019 with the use of a hand-auger. Characteristics that affect the suitability of sub-surface systems include soil depth to expansive clay, seasonal high-water table, rock, and unusable saprolite. Topography and slope also affect the suitability of an area for septic systems. The evaluation of these components was conducted on the site.

Findings are conveyed by showing areas on the enclosed map that were evaluated at your request. The red hatched units indicate soils that were at least 30 inches deep to an unsuitable characteristic and are provisionally suitable for accepted type wastewater systems. The purple hatched units indicate soils that are between 24 to 30 inches deep to unsuitable characteristics and contain mixed mineralogy clays. These soils are provisionally suitable for lpp, ldp, at grade accepted, low profile chamber type septic systems. Soils in these areas are marginal regarding usage for on-site wastewater systems and opinions will vary among regulatory agencies regarding their suitability. The areas without hatches were not evaluated by Piedmont Environmental.

Septic systems are sized according to the number of bedrooms in the proposed dwelling. Each bedroom in the proposed dwelling is calculated to generate a daily flow of 120 gallons. A four-bedroom dwelling would have a daily calculated flow of 480 gallons. This site has a clay texture so would have an estimated loading rate range of .1 to .4 gallons per day/ft². Unless you are pursuing an engineer option permit, the LTAR will be determined by the county health department. The LTAR and the daily flow are used to

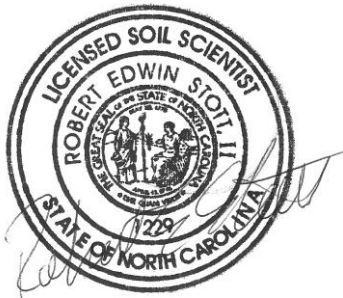
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determine the area needed for the primary septic system and the reserve area. A general guide for the piedmont of North Carolina is approximately 10,000 to 12,000 ft² of area for the primary and repair areas for each lot after all setbacks are taken into account.

This report discusses the general location of potentially usable soils for on-site wastewater disposal and the soil and site limitations on the property that exists at the time of the evaluation. Piedmont Environmental Associates, PA (“Piedmont”) provides professional consulting specializing in the practice of soil science and wastewater management. Piedmont is therefore hired for its professional opinion regarding these matters. Laws and rules governing wastewater treatment and disposal are forever evolving and subject to the interpretation and opinion of individuals which are employed by local and state agencies that govern these laws and rules. Due to this fact, Piedmont cannot guarantee in any way that any area located in the field, shown on a sketch, or discussed with the client will be permitted by any of these agencies. It is for this reason that **Piedmont strongly recommends to anyone considering a financial commitment on any piece of property be completely aware of any and all permit requirements on that property before purchase and obtain those permits prior to a final financial commitment.**

If you have any further questions, please feel free to call. Thank you for the opportunity to serve.

Sincerely,



R. Edwin Stott, REHS, MSEH
NC Licensed Soil Scientist
Piedmont Environmental Associates

Attachment I

.1950 Location of Sanitary Sewage Systems

(c) Every sanitary sewage treatment and disposal system shall be located at least the minimum horizontal distance from the following:

- | | |
|--|----------|
| (1) Any private water supply source including a well or spring | 100 feet |
| (2) Any public water supply source | 100 feet |
| (3) Streams classified as WS-I | 100 feet |
| (4) Water classified as S.A.
from mean high water mark | 100 feet |
| (5) Other coastal waters
from mean high water mark | 50 feet |
| (6) Any other stream, canal, marsh, or other surface waters | 50 feet |
| (7) Any Class I or Class II reservoir
from normal pool elevation | 100 feet |
| (8) Any permanent storm water retention pond
from flood pool elevation | 50 feet |
| (9) Any other lake or pond
from normal pool elevation | 50 feet |
| (10) Any building foundation | 5 feet |
| (11) Any basement | 15 feet |
| (12) Any property line | 10 feet |
| (13) Top of slope of embankments or cuts of 2 feet or more
vertical height | 15 feet |
| (14) Any water line | 10 feet |
| (15) Drainage systems: | |
| (A) Interceptor drains, foundation drains and storm water diversions | |
| (i) upslope | 10 feet |
| (ii) sideslope | 15 feet |
| (iii) downslope | 25 feet |
| (B) Groundwater lowering ditched and devices | 25 feet |
| (16) any swimming pool | 15 feet |
| (17) any other nitrification field (except repair area) | 20 feet |
| (b) Ground absorption, sewage treatment and disposal systems may be located closer than 100 feet from a private well supply, except springs and uncased wells located downslope and used as a source of drinking water, repairs, space limitations and other site-planning considerations but shall be located the maximum feasible distance and, in no case, less than 50 feet. | |
| (c) Nitrification fields and repair areas shall not be located under paved areas or areas subject to vehicular traffic. If effluent is to be conveyed under areas subject to vehicular traffic, ductile iron or its equivalent pipe shall be used. However, pipe specified in Rule .1955 (e) may be used if a minimum of 30 inches of compacted cover is provided over the pipe. | |

Note: Systems over 3000 GPD or an individual nitrification fields with a capacity of 1500 GPD or more have more restrictive setback requirements, see .1950 (a) (17) (d) for specifics.

