Public Health
HEALTH AND HUMAN SERVICES

RICHARD O. BRAJER
Secretary

DANIEL STALEY
Director, Division of Public Health

September 30, 2016

Mr. Jeremy Michael, EH Supervisor
Mecklenburg County Environmental Health
700 North Tryon St., Suite 208
Charlotte, NC 28202-2222

RE: Subject: Soil/Site evaluation for Kirk & Susan Stump
Owner: Kirk & Susan Stump
Location: 8428 Island Point Rd Charlotte NC 28278
Parcel Number: 19909129
Size: 0.551 GIS acres

Mr. Michael:

On September 14, 2016, I along with yourself, Jacob Presley and Philo Walker with Environmental Health Department in Mecklenburg County attempted to troubleshoot the malfunctioning (per Rule .1961) subsurface treatment and disposal system serving the aforementioned residence and performed a soil and site evaluation for its suitability in repairing the system serving the 2-bedroom residence. The residence is served by a community water supply located off-site.

The property was evaluated in accordance with the North Carolina Laws and Rules for Sewage Treatment and Disposal Systems, 15A NCAC 18A .1900 with hand auger borings. A previous evaluation had been completed by your department with pits. Listed below are the results of the evaluation and recommendations for the site. Please share this report with the applicant/property owner.

The most limiting soil and site factors encountered are:

Fill material (Rule .1957(b)) Fill material is **unsuitable** due to:

- Soil Texture (Group IV) (Rule .1941)
- Expansive soil minerology (Rule .1941)
- Massive soil structure (Rule .1941)

Soil Characteristics (Morphology) (Rule .1941) - Expansive (unsuitable) soil minerology was encountered at the ground surface to 50 inches in some locations.

Available Space (Rule .1945) – There is insufficient space on the property with soils that can be classified as suitable or provisionally suitable (i.e. usable/modifiable soils) for the repair of the ground absorption sewage treatment and disposal system. The site was limited by:

- a five (5) foot horizontal separation distance to any property line.
- a fifty (50) foot horizontal separation distance to a lake.
- a five (5) foot horizontal separation distance to any footer.
- a ten (10) foot horizontal separation distance to any water line.

Site Classification

The site is UNSUITABLE for the installation of subsurface treatment and disposal repair system due to lack of available space (Rule 15A NCAC 18A .1945), unable to maintain setbacks (Rule 15A NCAC 18A .1950), unsuitable fill material (Rule 15A NCAC 18A .1957) and shallow soil depth (Rule 15A NCAC 18A .1943).

Currently, the site is classified as unsuitable per Rule .1948 based on the above referenced soil/site limitations.

This site is unsuitable under Rule .1955, Conventional Sewage Systems.
This site is unsuitable under Rule .1956, Modifications to Septic Tank Systems.
This site is unsuitable under Rule .1957, Alternative Sewage Systems.
This site is unsuitable under Rule .1969, Experimental, Innovative, Accepted Systems, Components, or Devices.

Recommendations

Unfortunately, there is no obvious fix to this situation. In my opinion the best option is for the owner to pursue an off-site area or municipal sewer connection. If those are not viable options the following are some recommendations that could be considered.

1. Controlled dosing of the drainfield: Equalization of the flow going to the drainfield over a twenty-four hour period (instead of the current on-demand, gravity flow to the drainfield) may allow for the temporary recovery of the drainfield. Other than Permanent Pump and Haul, this is the only permitting option available through our Department on this site at this time. Some conditions for this option are:
    a. Installation of a new septic tank and proper abandonment of the existing septic tank.
    b. Installation of a pump tank. This tank must be sized for a permanent pump and haul pump system.

   c. Accurately locate the existing drainfield, with as little disturbance as possible, in order to locate the new septic and pump tanks.
2. The applicant/owner may receive a permit, from our Department, for permanent Pump and Haul to an approved NCDEQ facility.
   The applicant may purchase other suitable or provisionally suitable property to locate a new ground absorption sewage treatment and disposal system.
3. The applicant may obtain an easement on a suitable or provisionally suitable property to locate a new ground absorption sewage treatment and disposal system.
4. The Division of Water Resources, NC Dept. Environmental Quality (NCDEQ; previously NCDENR Div. Water Quality/DWQ) in Raleigh, North Carolina may be contacted at (919) 791-4200 to pursue options available through that office.
5. A ground absorption sewage treatment and disposal system may be pursued under Rule .1948(d). Written documentation, including engineering, hydro-geologic, geologic or soil studies, shall indicate that the proposed system can be expected to function satisfactorily. The substantiating data shall indicate that:
   1. A ground absorption system can be installed so that the effluent will be non-pathogenic, non-infectious, non-toxic, and non-hazardous;
   2. The effluent will not contaminate groundwater or surface water; and
   3. The effluent will not be exposed on the ground surface or be discharged to surface waters where it could come in contact with people, animals, or vectors.
6. The owner/applicant may pursue an Engineer Option Permit per Rule .1971.

If you have any questions or if I can be of assistance, contact me at 828-764-5076, E-mail at alan.mckinney@dhhs.nc.gov, or PO Box 1972, Boone, NC 28607.

Sincerely,

Alan McKinney
Regional Soil Scientist