HOLLAND
SEPTIC SERVICES

Onsite Wastewater System Inspection

Inspection Title
165 Buie Farm Road

Property Address
165 Buie Farm Road
Lillington, N.C. 27546

Inspected On
09/26/2023, 08:30 AM

Inspected & Prepared By
Stephen Holland

Inspection Requested By
Rachel Rea
Keller Williams Legacy—Apex

System Overview:

On September 26, 2023 I was at the property address above to perform an onsite wastewater system inspection. Harnett County Department of Environmental Health did have a copy of the existing septic system operation permit on file for this three bedroom home with a 360 gallon per day septic system built in 2007. There is public water supply available, and the meter was located at the front of the property, out near the street. The onsite wastewater treatment system is a conventional gravity flow system with a 1,000 gallon septic tank that stores wastewater from the house before being transferred by gravity to a distribution box. From the distribution box, the effluent flows into three, 100 foot long EZ-Flow drain field lines. The drain lines are configured for parallel distribution, and run from the distribution box, towards the right side of the front yard, and on contour. I have marked the drain lines with alternating orange, blue and green marking flags, where each set of flags that are on the same line of contour and of the same color represent a distinct drain field line—see pictures that conclude this report along with the attached septic permit.

Septic Tank Summary:

The septic tank inlet measured ten feet out from the front right corner of the house. The inlet contained a concrete access riser that brought access to grade level. The riser and the riser lid were in satisfactory condition, and they were sealed to the septic tank properly. The inner septic tank lid was in good condition, but the handle was broken. I managed to duct tape the handle back together, in order to remove it, but this lid should be replaced. The water level inside the inlet was at least two inches below the bottom invert of the inlet pipe, which is the proper operating level. I observed the inlet pipe for correct fall into the septic tank, and water was flowed inside the inlet pipe. The inflow into the tank was noted as sufficient and satisfactorily transferred wastewater from the plumbing, into the septic tank. I inspected the interior of the inlet compartment, above the water level, and the areas that I was able to see appeared to be in satisfactory condition. Since the septic tank was not empty at the time of the inspection, a complete inspection of the septic tank interior could not be performed. Lastly, I took a column sample from the inlet compartment of the septic tank, and I obtained ten inches of sludge, with less than an inch of scum, out of the forty-nine inch total liquid depth. This equates to approximately twenty percent solids; therefore, the septic tank does not need to be pumped out at this time. It is recommended that the tank be pumped out every three to five years, or when the percentage of solids is greater than one-third (33%) of the total liquid depth in either compartment.

The outlet compartment of the septic tank was measured to be twelve feet out from the front right corner of the house, contained a concrete access riser and was at grade level. The riser, riser lid and inner septic tank lid were all in satisfactory condition and they were sealed to

the septic tank. The operating water level in the outlet was at the bottom invert of the outlet pipe, which is the proper operating level. There was a PVC outlet filter tee present in the outlet of the septic tank that was found to be in good condition and the filter was cleaned. I inspected the interior of the outlet compartment above the water level, and the areas that I could see did not contain any defects, cracks or significant deterioration. Since the tank was not empty at the time of the inspection, a complete inspection of the interior of the outlet compartment could not be performed. There is a baffle wall present that separates the inlet and outlet compartments, and it was found to be in satisfactory condition above the water level, and it was properly vented. Lastly, I ran water into the outlet pipe of the septic tank to confirm that the effluent flows to the distribution box, and it did.

Distribution & Drain Field Summary

The distribution box was located and it measured four feet out to the right of the septic tank outlet and twelve feet back towards the right side of the house. I measured the box to be two feet on the opposite side of the fence than the septic tank, and twelve feet and six inches off the right hand side of the house. The distribution box and lid were severely deteriorated, and should be replaced at this time. When I first opened the lid I noticed that the water was standing above two of the outlets, and the water that was put inside the septic tank was only flowing out of the line closest to the front of the property.

At this time I ran water into the outlet of the septic tank to perform a flow test. After only eight minutes the single line accepting effluent had reached its capacity, and the water began to back up into the box. It was at this point that I turned off the water to conclude the flow test. Since the flow rate was measured to be five gallons per minute, the total volume of the flow test was approximately 40 gallons. Because this system is designed to accommodate, at a maximum, six people at sixty gallons per person per day, the drain field needs to be repaired. It is possible that with a full house, the water will back up into the septic tank and above the inlet pipe, which will prevent proper plumbing drainage or possibly surfacing effluent in and around the septic system.

After the flow test was performed, I probed and located the drain field lines. There are three EZ-Flow drain field lines, and each of these run from the distribution box, towards the right side of the front yard, and on contour. All of the lines are three feet wide and 100 feet long, and each line was measured to be at least nine feet apart from each other, from their centers. Additionally, each line contained at least six inches of soil cover on top, which is the required amount of soil cover. Lastly, I did a final walk through of the system to look for any grading issues, non-permitted connections, or signs of past or current surfacing of waste water, and none were observed. It was apparent, however, that the two lines that were not accepting any effluent were overly saturated at the depth of the drain field media. Ten minutes after the conclusion of the flow test, I observed the distribution box again, and the water level was still

above each of the three outlet pipes. Contact the local environmental health department to obtain a permit for repairing the drain field.

Suggested Maintenance, Repairs, and Recommendations:

1. Further evaluation by Harnett County Environmental Health or a Licensed Soil Scientist is needed at this time to address the malfunctioning drain field.
2. Repair/replace distribution box.
3. Replace the septic tank inlet lid.

Recommended Items Based on Best Septic Management Practices:

1. Clean the septic tank outlet filter (if present) once per year.
2. Pump out the septic tank every 3-5 years.
3. Do not exceed the design daily flow rate for the system which is 360 gallons of water per day. Continuously exceeding eighty percent of the design daily flow rate will increase the probability of septic system malfunction.
4. Do not put anything into the septic system besides human waste and toilet tissue. No wipes should be flushed, even if they are labeled as flushable. These do not break down properly inside of the septic tank.
5. Do not pour grease or drippings into the drains.
6. Garbage disposals should not be installed on homes with a septic system.
7. If a water softener is installed, then the backwash should not dump to the septic system. The waste by-products in the softener system can cause damage to the septic system, and will add more to the amount of water the system has to treat. Water softener backwash is not wastewater and can dump directly to the surface of the ground.
8. Keep the drain field area properly maintained. Do not leave vegetation such as trees and shrubs to go unmanaged as the roots from these can cause damage to the system. Keep a good ground cover, such as grass, over this area to prevent erosion, and to achieve more evapotranspiration. Do not allow settled areas or holes to remain. Any low spots will allow storm water to puddle, which will eventually drain down into the drain field media. The drain field media is for storage of wastewater, not storm water. Any accumulation of storm water in the media will reduce the system's capacity to treat the

Sincerely,

Stephen Holland
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PICTURES

P1. House Frontage

P2. Water Meter Location

PICTURES

P3. Septic Tank Location

P4. Septic Tank Inlet & Lids

P5. Septic Tank Inlet Lid—Handle Broken

P6. Outlet Riser Lid

PICTURES

P7. Outlet Septic Tank Lid

P8. Septic Tank Inlet Pipe

P9. Septic Tank Inlet Interior

P10. Septic Tank Inlet Interior

PICTURES

P11. Septic Tank Inlet Interior

P12. Septic Tank Inlet Interior

P13. Septic Tank Inlet Interior

P14. Septic Tank Outlet Filter Tee

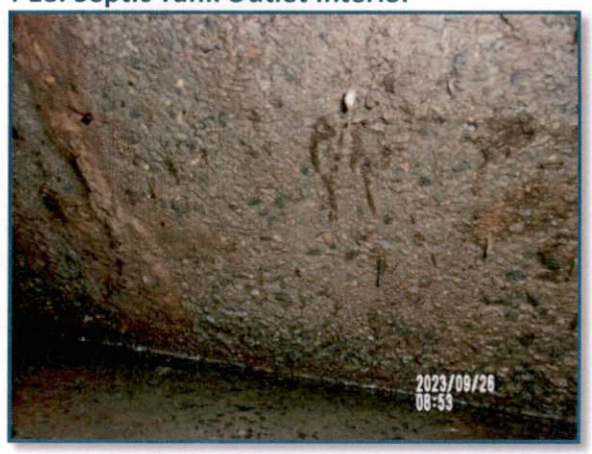
PICTURES

P15. Septic Tank Outlet Interior

P16. Septic Tank Outlet Interior

P17. Septic Tank Outlet Interior

P18. Septic Tank Outlet Interior



PICTURES

P19. Septic Tank Outlet Interior

P20. Septic Tank Outlet Filter—Dirty

P21. Septic Tank Outlet Water Level

P22. Septic Tank Outlet Filter—Cleaned

PICTURES

P23. Distribution Box Location

P24. Distribution Box Location

P25. Distribution Box

P26. Distribution Box—Before Flow Test

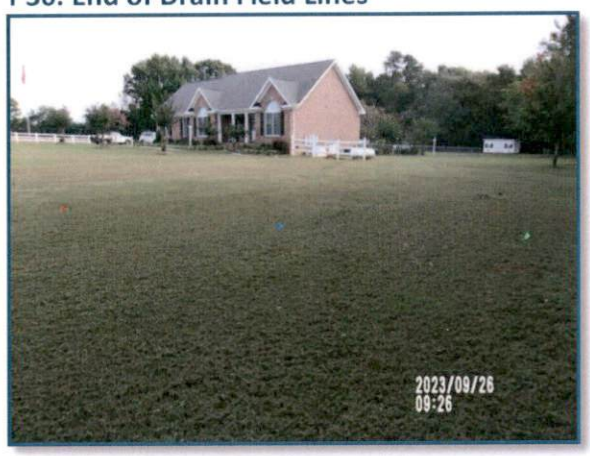
PICTURES

P27. Beginning of 1st Drain Line

P28. Beginning of 2nd & 3rd Drain Lines

P29. Direction of Drain Field Lines

P30. End of Drain Field Lines

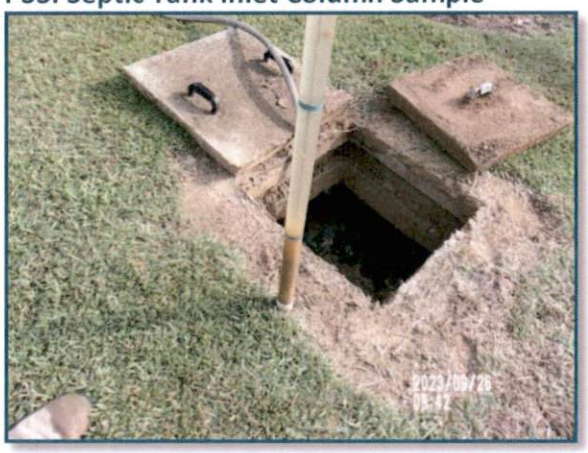


PICTURES

P31. Distribution Box—After Flow Test

P32. DBox—Ten Minutes After Flow Test

P33. Septic Tank Inlet Column Sample



P34. Septic Tank Outlet Column Sample

Disclaimer:

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This report is based on matters which were observed or came to the attention of the inspector on the date of the inspection and should not be relied upon as a comprehensive record of all possible issues that may exist or potential improvements that can be made.

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