



Onsite Wastewater System Inspection

Inspection Title

7722 NC Hwy 27 West

Property Address

7722 NC Hwy 27 West
Lillington, N.C. 27546

Inspected On

11/29/2022, 09:45 AM

Inspected & Prepared By

Stephen Holland

Inspection Requested By

Gabrielle Downs

System Overview:

On November 29, 2022 I was at the property address above to perform an onsite wastewater system inspection. Harnett County Department of Environmental Health did not have a copy of the existing septic system operation permit for this three bedroom home, with a 360 gallon per day septic system that was built in 1950. Water is supplied by a water meter that is located at the right front side of the property, six foot to the left of the driveway. There is also a well (not in use) located behind the back right of the house, and measured forty-seven feet from the closest point on the septic tank. NC Onsite Wastewater Rules require that private wells be located no less than fifty foot from the septic tank. If the well is ever placed back into use, then it is recommended that the water be tested for fecal coliform bacteria. The onsite wastewater treatment system is a conventional gravity flow system with a septic tank that stores wastewater from the house before being transferred by gravity to a distribution box. The size of the septic tank could not be approximated because I could not access the inlet half of the septic tank, since it was paved over top with concrete. From the distribution box, waste water flows into two outlet pipes that feed the drain field. It is suspected that the drain field consists of one six foot gravel trench (fed by two pipes) that goes straight out from the distribution box towards the property line, but due to hard rocky soils, I could not confirm this was the case beyond all reasonable doubt. Since the drain field is constructed of gravel, I was unable to distinguish the line from the natural rock in the ground. I was able to identify one point about ten foot straight out from the distribution box that is part of the drain field, and I have marked this point with a single orange flag. Further evaluation will be needed to confirm the number of trenches and the length of the drain field.

Septic Tank Summary:

The septic tank is a single compartment tank without a baffle wall. Therefore the top of the tank consists of individual slabs that also serve as access points for cleaning. The inlet slab of the septic tank was measured to be approximately twenty-eight feet straight out from the rear crawl space door, and is approximately thirteen inches deep. Since the concrete driveway pad was poured over top of this end of the septic tank, I inspected the tank from the outlet end. I was able to capture some images of the interior of the inlet side, and I did not observe any large cracks, or signs of excessive corrosion, and the inlet pipe appeared to be sufficient. The septic tank was pumped out within the last few weeks, so it was only half full of wastewater, and no measurable solids were present. Water was flowed inside the house, and I did not observe wastewater enter the tank in an amount comparable to that which was running inside. There was a slight trickle of water entering the tank, however. To further investigate this issue, I went underneath the house, and listened to the water travel through the plumbing. I traced all the plumbing pipes to a common point where they transition into a single cast iron drain. This was the only drain leaving the house that I could see, and all the plumbing pipes come together at this point. Based on the location of this cast iron pipe, it is clear that it drains towards the septic tank that was being inspected. After flowing water in all the fixtures inside the house, I went back underneath the house, and immediately began seeing an excessive

amount of water building up underneath the vapor barrier. This explains why some fixtures are draining, while others are not. Due to the age of the cast iron pipe, there is likely a build-up of scale, reducing the inside diameter of the pipe. This will make it more susceptible to clogging. It is likely that there is a blockage inside the cast iron pipe, but the water underneath the house indicates that the cast iron has become disconnected or broken. Further evaluation by a licensed plumber is required at this time.

The outlet compartment access to the septic tank was measured to be thirty-six feet straight out from the rear crawl space door. The outlet compartment slab was found to be fourteen inches deep, in good condition, and properly seated to the top of the septic tank. There was a terracotta outlet sanitary tee present on the outlet of the septic tank that was in good condition. Upon inspection of the interior of the outlet compartment I did not observe any large cracks or excessive corrosion to the concrete above the water level. Lastly, I ran water directly into the outlet tee with a hose pipe and I observed the water flow properly into the distribution box.

Distribution & Drain Field Summary

The distribution box was located and this component measured five feet straight out from the outlet of the septic tank. The distribution box and distribution box lid were both found to be structurally sound with no signs of damage or excessive corrosion. While water was flowing into the outlet of the septic tank I confirmed that the effluent enters the distribution box appropriately. I also confirmed that the effluent is being distributed equally into each of the two outlet pipes. I continued flowing water for an additional forty-five minutes, and the water flowed, equally, into each of the lines the entire time.

It is suspected that the drain field consists of one six foot gravel trench (fed by two pipes) that goes straight out from the distribution box towards the property line, but due to hard rocky soils, I could not confirm this was the case beyond all reasonable doubt. Since the drain field is constructed of gravel, I was unable to distinguish the line from the natural rock in the ground. I was able to identify one point about ten foot straight out from the distribution box that is part of the drain field, and I have marked this point with a single orange flag. Further evaluation will be needed to confirm the number of trenches and the length of the drain field. At this time, I walked the entire area behind the house to look for any surfacing of effluent, or grading issues that need to be addressed, and none were found. I did notice that another area had been previously dug up that was eleven feet to the left of the septic tank, and forty feet straight out from the garage. I uncovered this area and found a round metal tank that is covered in rust from old age. I uncovered the entire top of this tank and found no point of access to inspect the inside, other than a fist-sized hole that was covered with a brick. The tank is clearly full of water, but no further information could be gained. I ran water into every plumbing fixture in an attempt to observe water flowing into the tank, but at no time did I see any water enter the tank. It is likely that this is an old grey water tank that is no longer being used. Based on the condition of the top of the tank, it is recommended that the tank be properly abandoned since it poses a safety hazard if it ever collapses.

Suggested Maintenance & Repairs:

1. If the existing well is ever put back into use, it should be tested for fecal coliform bacteria since it does not meet the set back requirement for the septic tank. → will not be used.
2. Further evaluation by a licensed plumber will be needed to address the plumbing not draining properly into the septic tank as well as the wastewater pooling underneath the house. → This was fixed. all plumbing was replaced & re-routed.
3. Further evaluation will be required in order to confirm the exact location of each drain line as well as the length of the drain field. It is possible that the drain field crosses onto the adjacent property, in which case, permission from the owner of the property will be required.
4. It is recommended that the rusty metal tank (presumably the old grey water tank) be properly abandoned, so that it does pose a safety hazard if the top collapses.

Recommended Items Based on Best Septic Management Practices:

1. Pump out the septic tank every 3-5 years.
2. Do not exceed 360 gallons of water in the septic system on any given day. Continuously exceeding eighty percent of the design maximum daily flow rate will greatly increase the probability of septic system malfunction.
3. 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.
4. Do not flush contraceptives, feminine hygiene products or candy wrappers. While these will flush, they do not break down inside of the septic tank.
5. Do not pour grease or drippings into the drains.
6. Garbage disposals should not be used with a septic system

Sincerely,



Stephen Holland
NC Septic Inspector License: 6901i
Grade IV NC Septic Installer License: 6901
SS Onsite Wastewater System Operator: 1011875

Holland Septic Services

HollandSepticServices@gmail.com
(984) 220-3486
2601 Sheriff Johnson Rd.
Lillington, NC 2754

PICTURES

P1. House Frontage



P2. Water Meter Location



P3. Septic Tank Location



P4. Septic Tank Outlet Slab



PICTURES

P5. Septic Tank Inlet Interior



P6. Septic Tank Inlet Pipe



P7. Septic Tank Outlet Sanitary Tee



P8. Septic Tank Outlet Interior



PICTURES

P9. Septic Tank Outlet Interior



P10. Septic Tank Outlet Sanitary Tee



P11. Distribution Box Location



P12. Distribution Box Lid & Interior



PICTURES

Fixed
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P13. Potential Old Grey Water tank



P14. Water Pooling Under Vapor Barrier



P15. Common Cast Iron Drain



P16. Well Location



Notice of Confidentiality:

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STRUCTURAL DESIGN **ENCLOSED BUILDING**

**MAXIMUM 30'-0" WIDE X 20'-0" EAVE HEIGHT-
BOX EAVE FRAME AND BOW FRAME**

11 December 2020

Revision 9

M&A Project No.

16062S/16155S/16207S/17155S/17200S/18068S/18156S/18290S/20019S/20324S

Prepared for:

Steel Buildings and Structures, Inc.

P.O. Box 1287

Mt. Airy, NC 27030

Prepared by:

**Moore and Associates Engineering
and Consulting, Inc.**

1009 East Avenue

North Augusta, SC 29841

401 S. Main St., Suite 200

Mt. Airy, NC 27030



MOORE AND ASSOCIATES
ENGINEERING AND CONSULTING