Fence height must be 48° or more

Gap from bottom of the fence to the ground must not exceed 2

Distance between horizontal members will be 3 3/4". No extra vertical members.

### Aluminum OR Wrought Iron

Fence/Barrier to be pool code to meet specification detail in AG105.2 Complaint with Appendix G Requirement.

Magna Latch



Rising Sun Pools uses Magna Latch for our gate closures. It will be installed 54" above grade.



SATE, DOOR



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4020-300 Wake Forest Rd. Raleigh, NC 27609 Ph# 919-850-2526

## **SEPTIC SYSTEM EVALUATION**

Date:

February 26, 2019

Report for:

Robert & Gail Howington

Inspection address: 345 Fieldstone Drive, Holly Springs, NC 27540

Realtor:

Kristine Pryzgoda - Porchlight Real Estate

System Design:

2008



System Type: Conventional Pump to Gravity – Gravity feed distribution systems are the most commonly found/used septic systems and utilizes gravity alone to pass waste water effluent from the septic tank to the drain field.

System Design: Four bedrooms - The home currently has 3 bedrooms. The permit indicates that the system is designed to service four bedrooms.

Kitchen Disposal: Due to this house having a septic system, it is strongly recommended that a disposal not be installed/used to dispose of any kitchen food waste.

Field Observations: The septic tank and drain field site grades to the rear of the home at the field location.

Tank location: The septic tank is located roughly 125 feet off the rear foundation wall.

Tank size: 1000 gallons concrete mid seam (typical in system designs servicing 4 bedrooms) Pump Tank 1000-gallon concrete mid seam tank. Tank is approximately 120 feet from the foundation.

Water source: Private well - The well is located at the front of the home more than 100 feet from

Water source: Prive the septic system.	ite well - The well	is located at the fi	ont of the h	ome more than	1 100 feet from
Description.	Good	Comments	Fair	Poor	7

Description.	Good	Comments	Fair	Poor
Field View (visual only observations) grade of yard	×	Grades to rear of lot		
Rust / Cracks on tank Interior	х			
Filter	×	Cleaned		
Upper crust primary*	х	0"		
Upper crust secondary*	×	0"		
Lower sludge primary*	×	1-2"		
Lower sludge secondary*	×	1-2"		F1 ()

<sup>\*</sup>The Health Department recommends Upper Crust to be no less than 3" above the baffle and the Lower Sludge depth to be such that 12" of effluent is remaining between the top of the Lower Sludge and the baffle. Preventive maintenance pumping of the septic tank is not considered necessary at this time due to the amount of solid accumulation. Maintenance pumping is recommended to be performed every four to five years.

#### Observations & Recommendations:

- 1) The septic tank was located roughly 125 feet from the rear house foundation. The septic tank was pumped right before the septic tank inspection. The primary chamber does not have a riser and is about 24 inches below grade. Risers are provided to facilitate access to the septic tank access ports and when provided are required to extend a minimum of three inches above the surrounding surface dirt grade. The primary chamber lid was located, and the chamber was inspected. The septic tank is currently servicing the home and workshop. Both inlet waste lines were observed in the primary chamber. Accumulated solids were measured and determined to be at an acceptable level. Roots were observed inside of the primary chamber surrounding the workshop inlet waste line.
- The secondary chamber does not have a riser and is about 28 inches below grade. Risers are provided to facilitate access to the septic tank access ports and when provided are

required to extend a minimum of three inches above the surrounding surface dirt grade. The secondary chamber lid was located, and the chamber was inspected. Previously higher effluent levels were noted inside the septic tank indicated by the deposit of solids on top of both the inlet drain and outlet drain assembly. Normal operating levels inside the septic tank place the water level at the invert (bottom of the drain pipe) of the outgoing drain line. The directional effluent filter located in the outlet drain assembly was removed, cleaned and replaced as part of the inspection service. Maintenance cleaning of the filter should be performed every year and should not exceed every 2 to 3 years.

- 3) The pump tank riser was observed just below the dirt grade which can allow surface water intrusion to enter the tank. Pump tank risers are currently required to extend no less than six inches above the surrounding surface dirt grade. Roots were observed entering the pump chamber at the riser seams. The alarm float, pump on float and pump off float were tested by lifting the floats with a rake. All the floats were working at the time of inspection. The audible alarm and visible alarm (red light top of the control box) were also working at the time of inspection. Excess wire for the pump and floats was observed entangled with a pump float. It is recommended that the wires be secured to the mast to avoid any damage to the wires and to prevent the pump floats from becoming further tangled within the loose wires. The junction box was observed at dirt grade. It is recommended that the junction box be raised to meet the minimum height of 12" above soil grade.
- 4) The distribution box sits partially above grade. The distribution box was located, opened and visually inspected. A field distribution box distributes equal volumes of waste water effluents to the typically installed multiple individual drain field lines. The known area of the drain field (the front yard) was walked to inspect for surface water. An eight-footwide low spot was observed saturated. It is speculated that the saturated area is due to recent rain, however, this is not fully conclusive. No sewage smell or odor was noted in the area.
- 5) Limit any/all drive traffic in the known area of the septic tank and drain lines. Compaction of the soils above the drain lines by a vehicle will have an adverse effect in the ability of the sub surface soils to disperse effluent into it due to the compaction of the soil. Do not drive vehicles on the left of or behind the home.
- 6) Limit use of the septic system to body waste only. Disposal of female hygiene products, contraceptives, latex gloves baby and facial makeup wipes large amounts of paper products and kitchen waste products or plastic can shorten expected drain field life expectance. For more information about a septic system and the responsibilities associated with it, go to the following web site: http://www.wakegov.com/water/wastewater/Pages/fags.aspx

#### Conditions present at the time of the inspection:

> The septic tank was pumped before the inspection. It is not possible to inspect or report on physical conditions about the septic tanks ability to hold water due to it being emptied or to fully determine the condition of the drain field lines due to being installed below the surface dirt grade.

The home has been vacant for an unknown period, so the system was not inspected under normal operating conditions. Any speculation about the operating efficiency of the system is inconclusive when the system has been inactive for more than thirty days.

#### Conclusion:

Septic system was fully evaluated at the time of the inspection. Adverse conditions not associated with the operational efficiency of the system were shown to be present in the system itself that requires further evaluation and/or repairs to be made by a qualified contractor.

#### Recommended Repairs:

- The pump tank riser was observed just below the dirt grade which can allow surface water runoff to enter the tank. It is recommended that a riser extension be added to meet the current minimum requirement of six inches above the surrounding surface dirt grade.
- Excess wire for the pump and floats was observed entangled with a pump float. It is recommended that all wires be properly secured/tethered to the mast to avoid any damage to the wires and to prevent the pump floats from becoming further tangled within the loose wires.
- > The junction box was observed at dirt grade. It is recommended that the junction box be raised to meet the minimum height of 12" above soil grade.
- Root intrusion was observed in the primary chamber at the inlet drain and the pump tank at the riser/tank union. Repairs should be made to seal off any openings in the tank systems that are allowing root intrusion to occur.

# The following preventative maintenance suggestions and/or follow up evaluations are recommended to be followed:

- North Carolina State requirements since 1998 require risers to be installed at septic tank access ports. Not all local municipalities enforce state requirements, but most have required risers when the dirt grade above the septic tank is in excess of twelve inches. Due to the excessive depth of the septic tank below the surrounding dirt grade (partially due to the builder adding additional dirt grade after the initial installation of the system), it is recommended that risers be added to both access ports to facilitate service maintenance.
- Clean or have cleaned the effluent filter annually or at a minimum, every two to three years. If the outlet filter becomes obstructed the tank will breach effluent on the surface which is a condition to be avoided.

Please note that suggestions are not a "required repair". Suggestions are a means to improve on the system's ability to process waste water in the home based on more recent requirements mandated in newer system installation or as a personal safety concern alone. Inspections cannot require an older system (even if more recent repairs have been noted) to be brought up to installation standards other than what was require at the time of the original installation and/or noted repairs currently existing in the system. Suggestions are only provided so that the current service provider can be aware of ways to improve/enhance the operation of the existing system to extend the useful life of the



2/26/2019

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#### Disclaimer:

Because of the visual nature of this septic system, it is not possible to inspect or report on physical conditions with regard to the septic tank interior below the waste water effluent levels if the inspection was performed without pumping of the septic tank or the drain field lines due to being installed in the sub surface dirt grade. The inspector can only address those areas that are readily accessible at the time of the inspection. A septic system inspection is a "snapshot" of the system at the time of the inspection; it is designed to educate a buyer or seller about the system, not to replace the obligation of a home seller to disclose known defects. Observations made may require speculation on the part of the inspector in the analysis of how the system has been provided for and what the expectations of the system may be. A septic system inspection is not a guarantee or warranty of the condition of the system; neither is it a guarantee that conditions will not change in the future. Advantage does not make any representation to the "life expectancy" of the tank or the system. Our inspection is based on a one-time field observation and recommendation.

We recommend that appropriately licensed professionals carry out all repairs. Your real estate contract may include this as a stipulation as well. We also recommend that the buyer retain all repair work orders, receipts and guarantees for future reference. If Advantage Inspection performs are inspection of the system after repairs are completed, the repair work orders and receipts must be made available to the inspector at the time of the re inspection. Some repairs, such as back flushing of the septic drain lines, cannot be confirmed visually, and at times the repair receipts are the only indication of the nature and suitability of the repair. Please insure that relevant repair receipts will be available for view by your septic system inspector during the re inspection, if asked to perform.

\*This evaluation/inspection meets the requirements of the state and local environmental health service agencies with respect to required observations and/or notation of limitations present at the time of the inspection.

\*\* Only an official of Environmental Health Services Department can qualify a system as being failed.