MODULE 1

INSPECTION CERTIFICATION ASSOCIATES

SEPTIC INSPECTIONS

TOPICS DISCUSSED

- Why is it important as a home inspector to know about septic systems?
- What is a septic system?
- Why have a septic system?
- How do septic systems work?
- What should a septic inspection entail?
- Who might ask for a septic inspection?

ASHI STANDARDS OF PRACTICE

ASHI SOP 6.2

The home inspector is not required to inspect septic

and other sewage disposal systems

SEPTIC STANDARDS OF PRACTICE

Anytime we operate outside of the Home Inspector Standards of Practice, we are offering services that do not conform to the home inspection itself. A separate pre-inspection agreement with separate standards of practice should be used to outline what the inspection will include, and what the inspection will exclude. It should ultimately limit you liability and outline the common methods and approaches to how the inspection will be conducted.

An example Standards of Practice for Septic Inspections will be provided in this course.

AUXILIARY SERVICES

When offering this auxiliary service, like any auxiliary service, your findings should be separated from your normal home inspection report. This is a separate inspection and liability needs to separated just like our pre-inspection agreement, SOP's, report, and yes our fee as well.

It also requires additional education, training and equipment that requires investment from the inspector.

So what should be charged?

FEES

Fees will be dictated by the how extensive the inspection and report are. If, for instance, you contract the tank to be pumped and scope it with a bore camera, your fees should include the expense and include the hazards you pose.

The size of the system might also play an important factor in your fee.

Inspection fees vary though and can range from $200 - $600.

More will be covered on inspections in later modules.

CODE OF ETHICS

It is important, like with all auxiliary services that you obtain all the required certification, licensure, education and training required by the Local Authority Having Jurisdiction.

For instance, in the state of Florida, only a licensed plumber, licensed septic contractor or certified environmental health profession can conduct the inspection.

In Virginia and Pennsylvania however, there are no licensing laws or requirements.

SO WHY IS IT IMPORTANT AS A HOME INSPECTOR TO KNOW ABOUT SEPTIC SYSTEMS?

Although you may not ever inspect a system, it is important to know if they have a septic and to advise the client why to have it inspected. This system like any other can at any point, become a lability and has the potential to cost the client thousands of dollars.

If you do plan to inspect septic systems, this course will give you a better understanding, prepare you, and ultimately reduce your liability in performing these services.

WHY HAVE A SEPTIC SYSTEM?

Septic systems are just onsite sewage disposal. They are used in areas where municipal sewage disposal systems are not available such as in rural areas. Depending on the authority having jurisdiction, the regulations pertaining to the installation and maintenance might vary.

HOW DO SEPTIC SYSTEMS WORK?

Septic systems can vary depending on many factors. All systems have the following common elements.

- A system of drainage plumbing that brings the sewage out of the home
- A tank where the sewage enters

BACTERIA

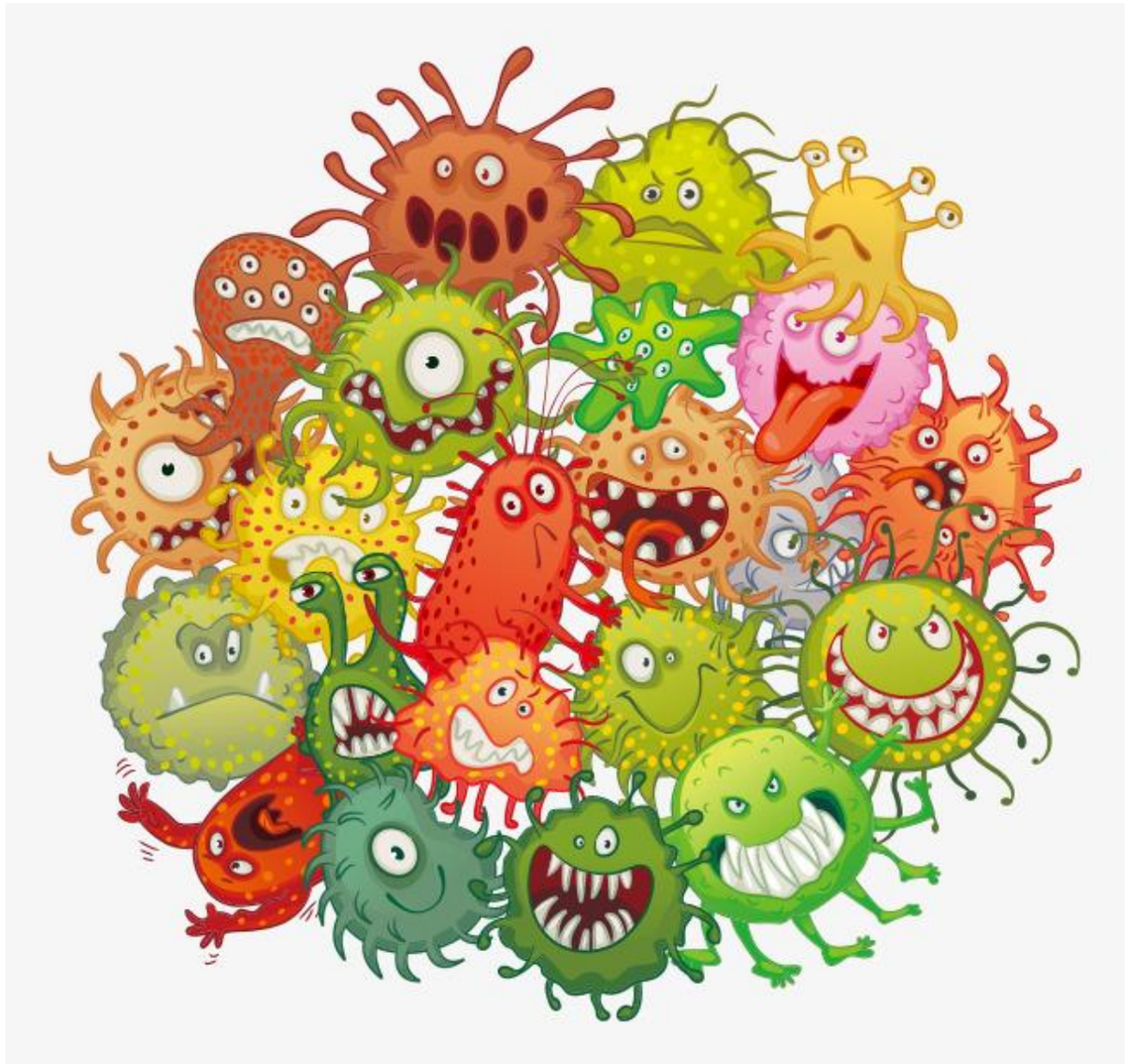
Septic systems rely on bacteria and other microbes to breakdown the sewage.

There are two types of bacteria involved

- Aerobic (with oxygen)
- Anaerobic (without oxygen)

BACTERIA

All systems have aerobic bacteria, but some systems are specifically designed to be more anaerobic. These are the more traditional types. They are cheaper, have less components, but are said to be less efficient than aerobic type systems.



BACTERIA

In traditional anaerobic systems, the anaerobic bacteria live, thrive and breakdown the sewage in the tank. This is the primary treatment method for this type of system. After the sewage is initially treated in the tank, it travels to the drain field where aerobic bacteria live and further breakdown the sewage as it leeches into the ground.

SEPTIC TANKS

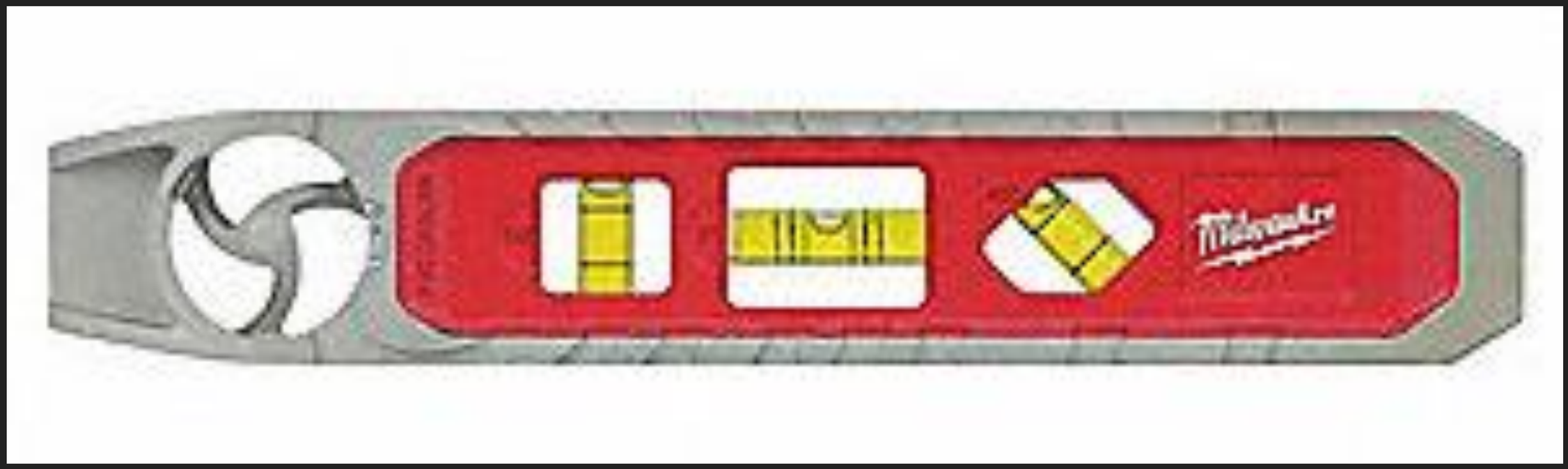
After the sewage exits the home, it travels eventually to the septic tank. Here, bacteria break the sewage down into 3 common elements.

- Scum of layer also called the fog (fats, oils, and grease)
- Effluent
- Sludge

PLUMBING DROP

All gravity fed plumbing from the home to the end of the drain field should have a drop of 1/8’’ to 1/4’’ per 1’.

For the level below, while placed on piping, when the bubble touches the outer lines on the center gauge, the pipe is properly pitched.



WHAT IS THE SCUM OR FOG LAYER?

Just as the name suggests, this layer is composed of fats, oils and greases that the bacteria cannot breakdown. They are lighter than both the sludge and effluent layers and therefor are always that the top of the tank.

Good tank design prevents this layer from exiting the tank and traveling to the drain field. Over time, this layer can get larger eventually leading it exiting the tank and eventual failure of the system. Periodic pump outs of the tank are recommended for this reason.

WHAT IS THE EFFLUENT LAYER?

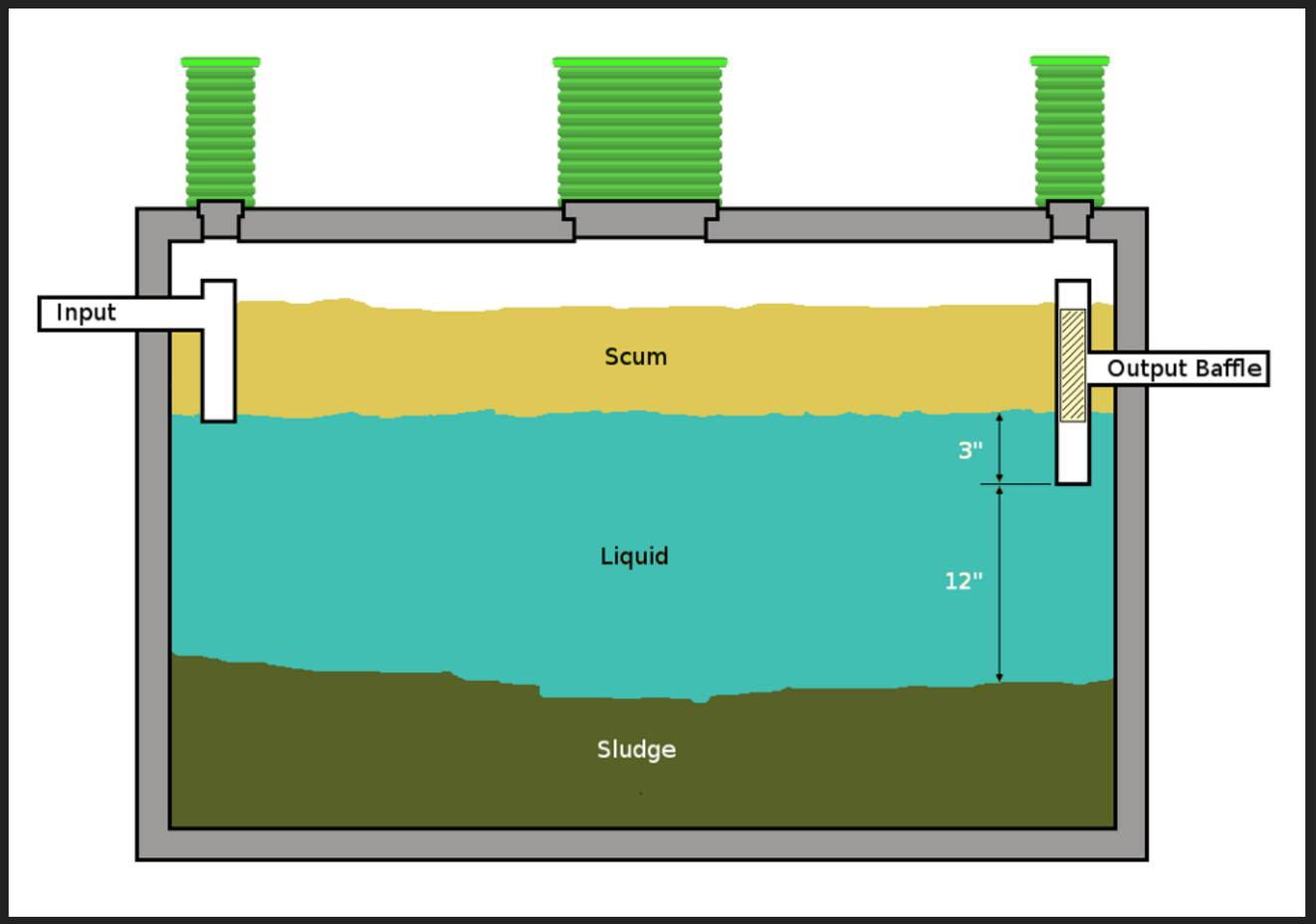
The effluent is the treated part of the sewage. This layer in the tank is a byproduct of the digestion of the sewage from the bacteria. It should be somewhat clarified and solid free by the time it leaves the tank. After leaving the tank, it travels to the drain field where further treatment takes place and it leeches into the soil.

WHAT IS THE SLUDGE LAYER?

The sludge layer is where all the action happens. This is the predominant layer where the bacteria do their work. They take the sewage and break it down. The scum floats to the top, the effluent rises to the middle, and any other material that cannot be further broken down remains at this layer. After the bacteria get done doing their job and die, they remain at the this level as well.

SEPTIC TANKS

What are some common elements for all Tanks?



SEPTIC TANKS

Tanks generally are made of either a type of plastic, fiberglass, steel, or concrete.

SEPTIC TANKS

All tanks are prone to some types of problems or even failure; steel through corrosion, concrete and fiberglass to cracking.

Plastic are becoming more desirable due to their longevity and resistance to the problems associated with the others. They are also lighter in weight and easier to transport and install making their use easier.

SEPTIC TANK VENTING

When a tank is empty, it is a giant cavity. This is essentially made up of air. However, because the tank and its plumbing system are closed, that air gets trapped. As the septic tank fills with waste and water, the air has to go somewhere or the pressure will stop the flow and back up into the structure. To solve this problem a vent is connected to the top of the tank to release the waste gases and air outside.

SEPTIC TANK VENTING

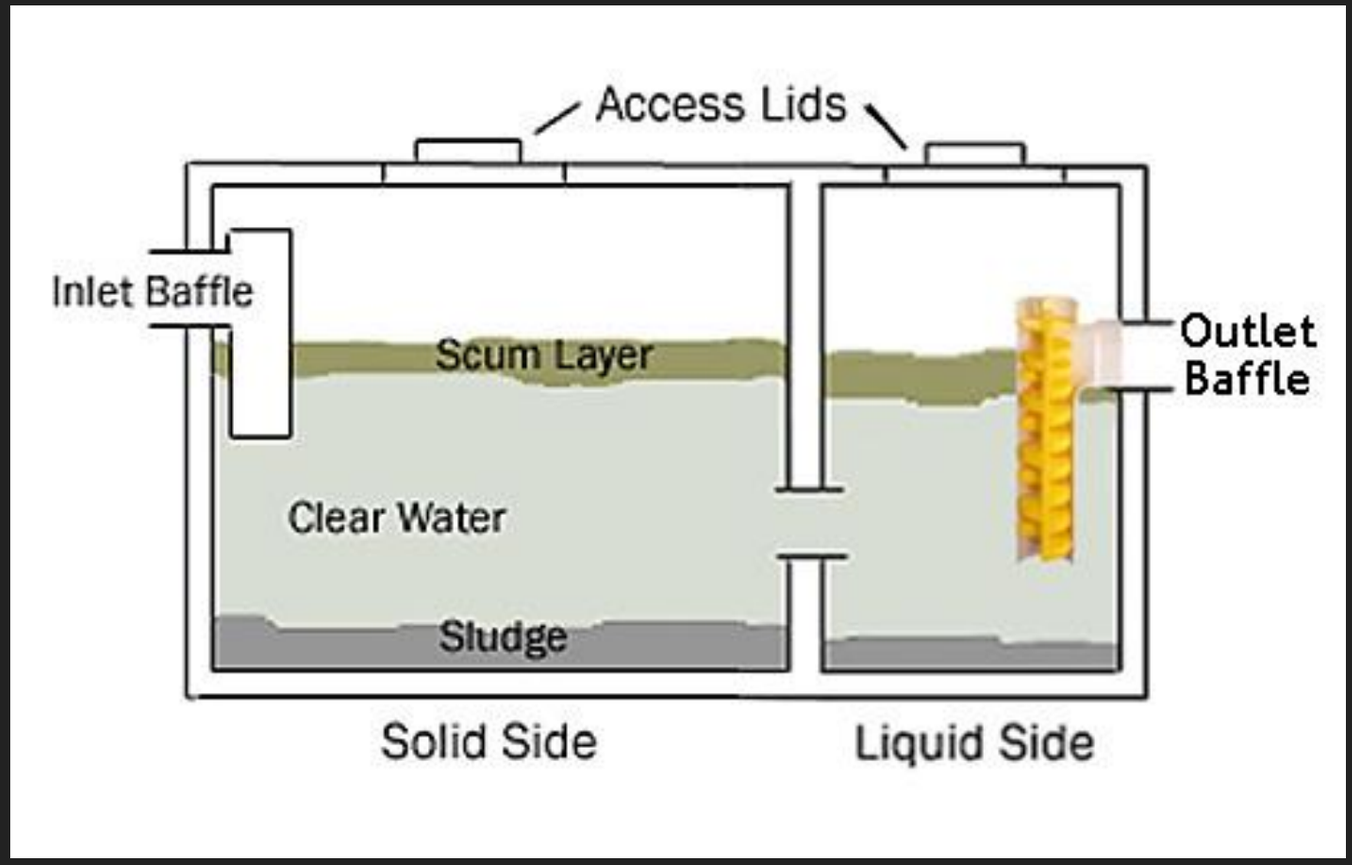
Although not all tanks have to be vented, venting does help the tank equalize and allows for better flow. Without venting, sewer gas has the potential to push back up in the home through the drain lines.

TANK BAFFLES

Baffles are septic tank components that slow wastewater entry and exit sufficiently to ensure the distillation of solids, and prevent their release (as well as the release of scum) into the drainfield. In doing so, they protect the absorptive quality of the soil and prolong the life of the septic system as a whole. They are normally made from the same material as the septic tank -- either fiberglass, steel or concrete. The inlet and exit baffles can be of PVC pipe like the image below.

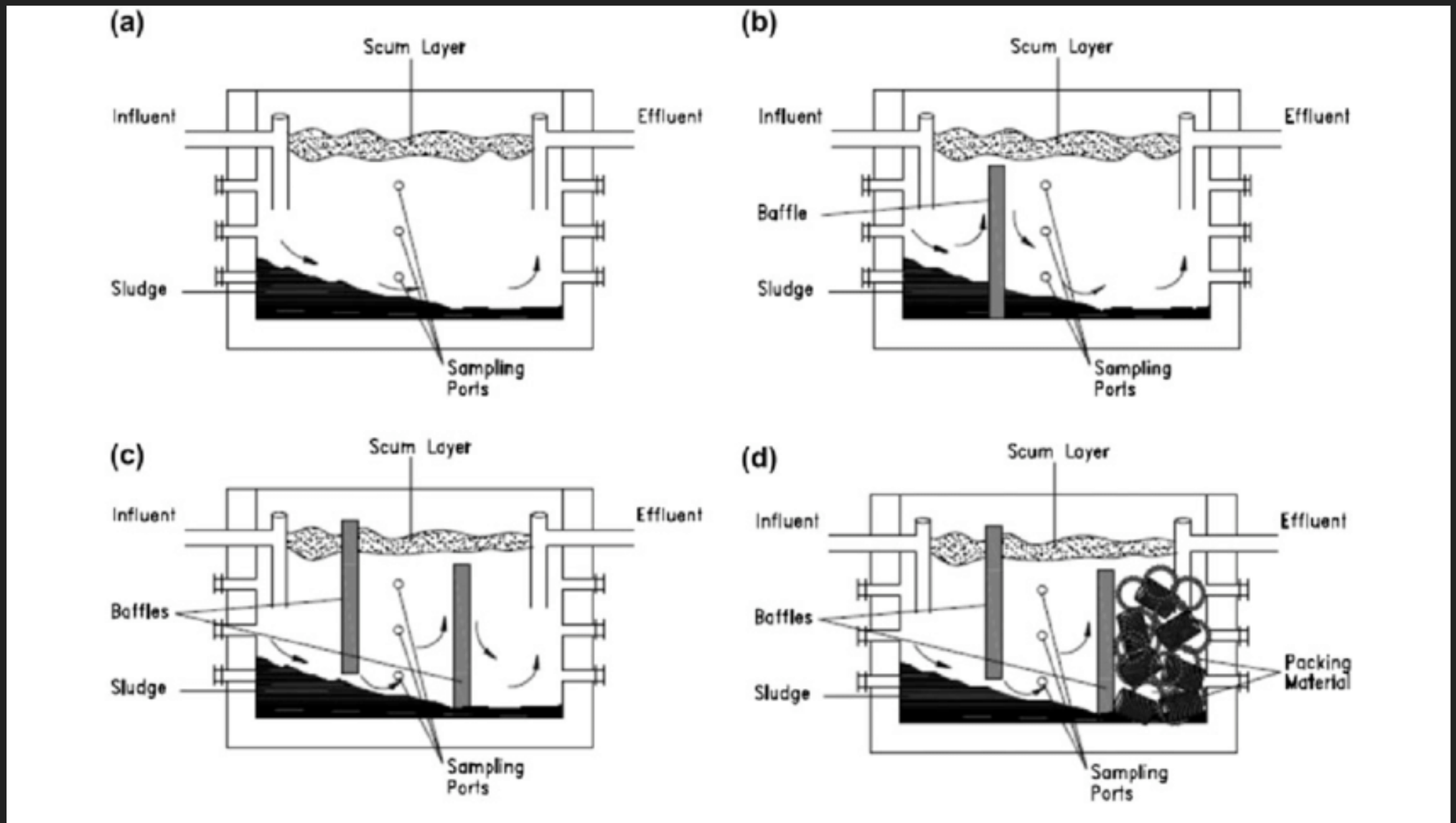
MULTI-SECTION TANKS

Multi-section tanks are becoming the standard and may be mandatory depending on authority having jurisdiction. They essentially have one or more baffles separating the tank to prevent more of the scum and sludge layers from exiting and traveling to the drain field.



TANK DESIGNS

Tank designs can vary extensively, but their concepts and key components stay the same for the most part.



SEPTIC TANKS SIZING

Tanks are typically sized based on the assumed load of the dwelling. Some local authorities having jurisdiction base assumed load off number of bedrooms and total square footage.

Example...

A 3 bedroom dwelling having less than 2250 square feet will require at least a 900 gallon tank.

SEPTIC TANK FILTER

A septic tank filter is sometimes installed to prevent suspended solids from entering the drain field without disrupting the flow. This filter should be changed whenever the system is pumped out or when the tank has been accessed.

DRAIN FIELD

After exiting the tank, the drainage pipe takes the effluent to a distribution of pipes that disperse it through a drain field. Aerobic bacteria further break the effluent down and the soil allow it to disperse throughout underground.

DRAIN FIELD

A drain field size is often determined by multiple factors

- Total load on the system
- Soil type
- System utilized

There may be other factors, but these are the most common.

Local authorities having jurisdiction will often adopt there own standards as well.

DRAIN FIELD SIZE

The size of the drain field is often dictated by the number of bedrooms and square footage of the dwelling or home.

The next example is from Florida Department of Health regulations

EXAMPLE

3 Bedrooms with 1201-2250 sq. ft. of building area and average of 300 gallons a day is applied

For ideal soils (course sand), absorption rate of 0.8 gallons of treated sewage per day per square foot for trench systems and 0.6 bed types

So...

300 gallons per day / 0.8 gallons per day absorption = 375 square feet of trench bed

Or

300 gallons per day / 0.6 gallons per day absorption = 500 square feet of bed type

DOES THE SOIL MATTER?

The type of soil around and underneath the drain field is extremely important. Clay, loamy and other types of densely compacted soil will not allow for adequate flow. Inadequate flow allows the system to back up and prevents enough natural aeration for the bacteria to thrive.

Loose gravel or other soils will allow too fast a flow and won’t allow the aerobic bacteria enough time to break it down further.

THE IDEAL SOIL

The ideal soil is sand with irregular sizes and shapes to allow water and the effluent to flow at a regular rate. Ideal soil is also loose enough to allow for proper aeration for aerobic bacteria to thrive in.

Some might refer to this as septic sand. It is often orange in color and cost is often dependent on transportation distance from distributors to site.

DRAIN FIELD

The type of system matters as each of them ultimately allow for a certain surface area of leeching or drainage. Some might offer drainage on all sides and the bottom, while others may only allow drainage on the bottom.

Cost also plays a factor when selecting a drain field system. Some might have cheaper materials but labor of installation is more expensive. Aggregate might also dictate price if it cannot be locally sourced.

A factor that is often overlooked but should be taken into consideration is maintenance and possible eventual replacement cost.

THE DIFFERENT LAYOUTS OF DRAIN FIELDS

- Trench type
- Bed type

TRENCH STYLE DRAIN FIELD

The trench style is one of the oldest and is still frequently utilized throughout the US. This is style is essentially trenches dug with a separation of soil in between. Their absorption into the soil is typically higher due to more surface area exposure.

TRENCH LAYOUT DRAIN FIELD

As the effluent enters the drain field, it gets distributed to the various trenches through whatever distribution system is implemented.

BED LAYOUT DRAIN FIELD

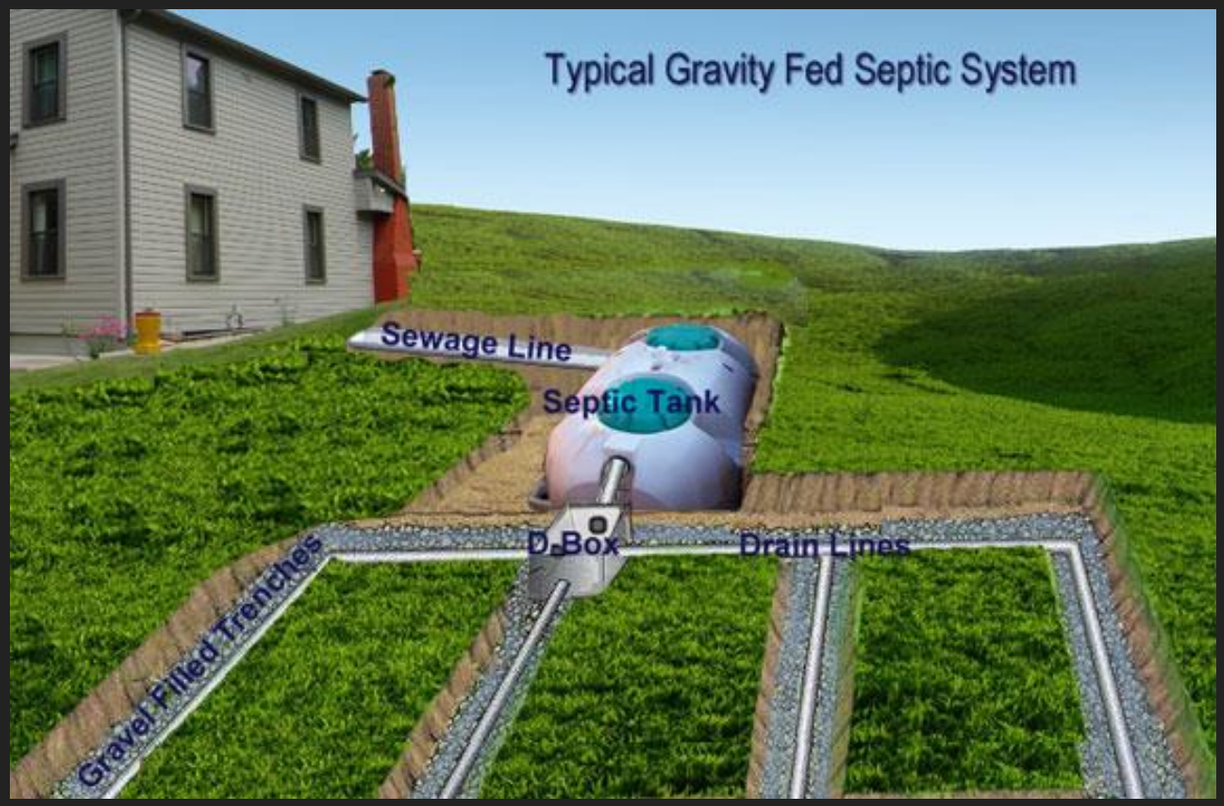
As the effluent enters the drain field, it gets distributed to the bed through whatever distribution system is implemented. Although this layout requires less over all square footage for the layout, ground absorption is less making the field slightly larger.

FLOW TYPES OF DRAIN FIELDS

- Gravity Flow
- Pressurized Flow

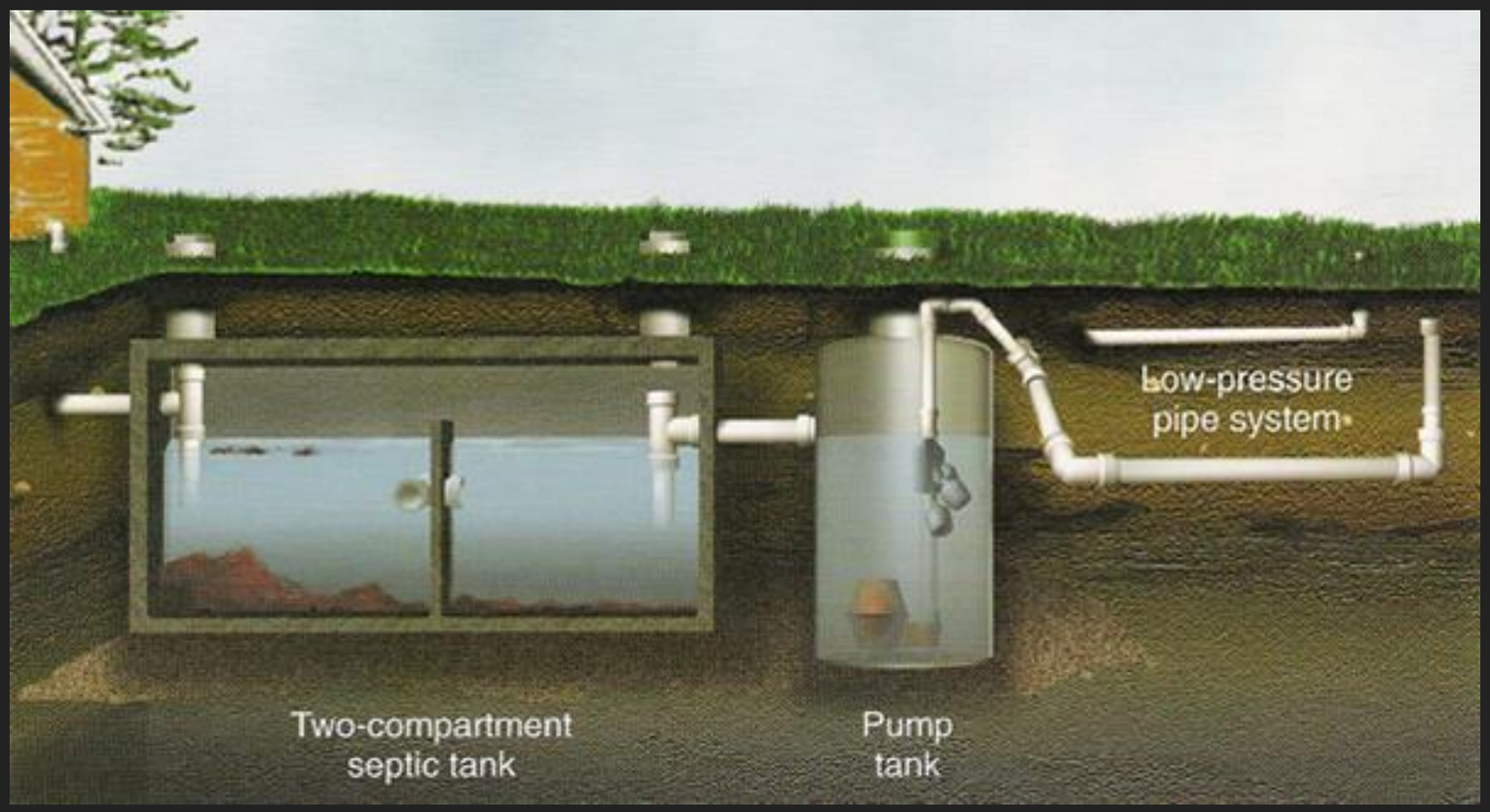
GRAVITY FLOW DRAIN FIELDS

Gravity systems are the most common variety of residential drainfield. They work by allowing the effluent to flow down a series of trenches or to a bed and filter through the soil before returning to water table. Gravity systems are most effective in areas with dry, permeable soil.



PRESSURIZED FLOW DRAIN FIELDS

For areas where a gravity drainfield isn’t effective — usually due to the septic tank being positioned below the home’s outlet pipe — a pressure distribution drainfield is the most common alternative. The system works the same as a gravity drainfield, but adds a pump to manually move the effluent through the drain field.



TYPES OF DRAIN FIELD DISTRIBUTION

- Pipe and gravel
- Chambers
- Rockless
- Multi-pipes
- Dry well

GRAVEL AND PIPE

This type is distribution is essentially perforated drainage pipe laid in an approved gravel.

The type of gravel is an important consideration. The size is taken into account along with the type. For example, lime type gravels are more alkaline and will adversely affect the pH. This will create an environment that may not allow the aerobic bacteria to thrive.

CHAMBERS SYSTEM

The chamber system is a relatively newer style of drain field system but is growing in popularity. The system comes in dome like segments, is easy to install and is on the cheaper end for material costs.

The only real draw backs to this system is that because leeching or draining can only occur from the bottom or underside, the size of the drain field is typically larger.

CHAMBERS SYSTEM

This system does not require any filter cloth and some manufactures boast that it can take heavy loads because of its design. Caution should still be taken.

One of the more popular brands is Infiltrators.

ROCKLESS SYSTEM

These systems mimic the gravel and pipe system, but instead of the gravel aggregate, a Styrofoam type aggregate is wrapped around a black perforated 4’’ drain line. These lines are connected together end to end and often bundled together to get the required surface area needed for the system.

This product can often be found in the plumbing section of most big box hardware stores such as Home Depot and Lowes.

They can be prone to the same problems as the traditional gravel systems, but will be cheaper to replace because of their weight.

ROCKLESS SYSTEM

In the example to the right, they are bundled together in the trench. This product uses a plastic netting instead of a filter cloth.

This product can either be used in a trench style or bed style system.

FILTER CLOTH

Filter cloth is a material that allows the effluent and other fluids to pass through but prevent soil from entering the system causing eventual failure. This product is cheap and should be utilized on most systems where soil can encroach and enter the system.

MULTIPLE PIPES SYSTEM

Like the chambers style system, this is a relatively newer system and can either be implemented in a trench or bed type system. It is essentially multiple black perforated 4’’ drainage pipes bundled together. A system such as MPS-9 is a one of the more popular types. The 9 indicating the number of pipes in a given bundle.

This is a relatively cheap product and has a very low labor cost. It also, because of the perforations on all sides, lends itself to have one of the highest surface areas for leeching or drainage allowing for a smaller drain field.

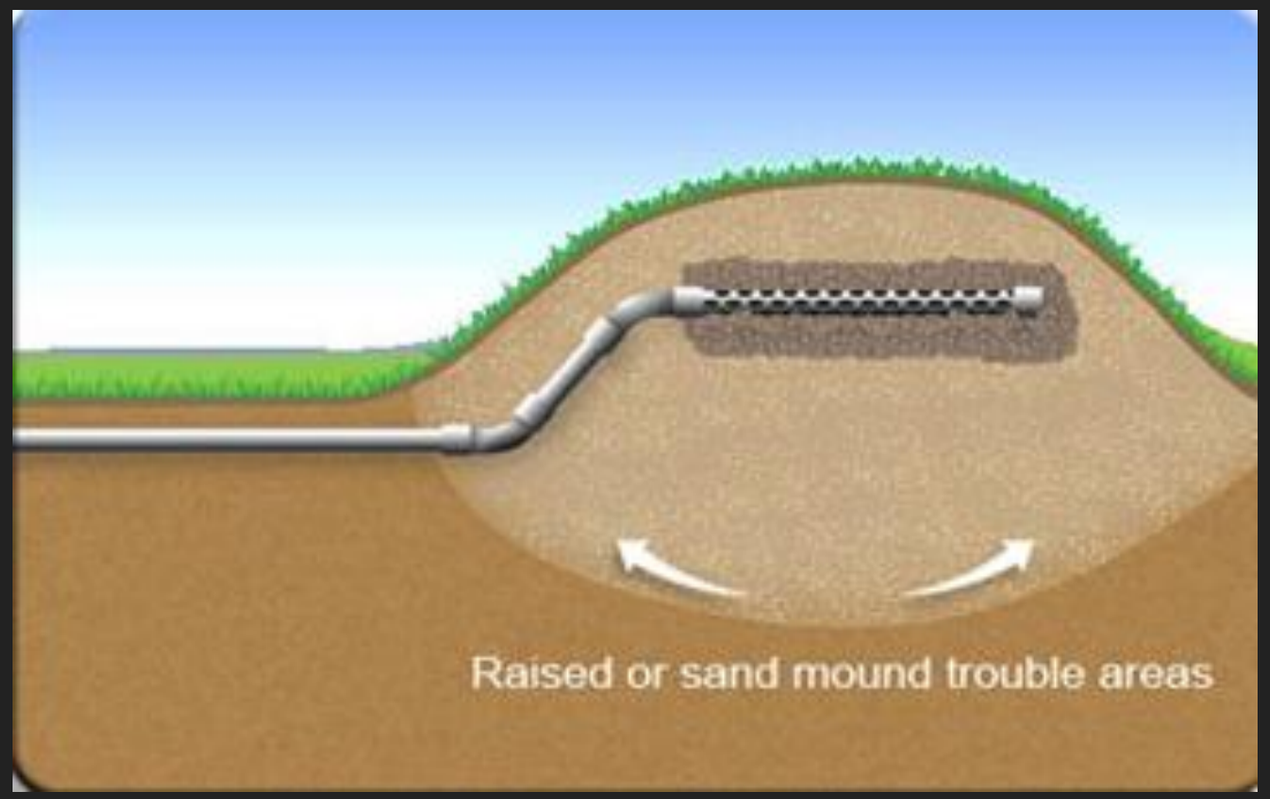
MULTIPLE PIPE SYSTEM

Because this system has exposed perforations though on all sides, filter cloth should always be utilized to prolong life and prevent failure.

Because, there is no aggregate, replacement is also cheaper than a traditional gravel system.

MOUND SYSTEM

Now this is not exactly a style of system as it is more change of location. Sometimes, depending on either ground conditions on site, or seasonal high water tables, a mound system might be required. Any one of the drain field distribution systems can be used with this set up.



MOUND SYSTEM

Mound systems require pumps to pump the effluent from typically a pump tank to a mound located in a higher location. The pumps are located in the pump tanks beside the treatment tank.

The mounds are composed of septic choice soils previously discussed.

MOUND SYSTEM

Mound systems might be exempt from certain regulations or criteria, but might have more or stricter guidelines all depended on the local authority having jurisdiction.

CESSPOOLS

Cesspools (or cesspits) are often found in older homes. Less efficient than drain fields, they work by allowing effluent to seep out of a single holding chamber and into the ground.

DRY WELL SYSTEM

These systems are essentially cesspools filled with aggregate. Newer styles like the one in the photo, are tanks with perforations on the exterior to allow for flow.

Although less effective than a traditional trench due to the lack of surface area, they are considered to be more durable.

HOLDING TANKS

In some situations, non-permeable holding tanks are used for temporary storage of sewage effluent to later be pumped off. These tanks do not treat sewage or allow it to leave the tank.

These components should be inspected and documented differently than normal septic tanks.

SEPTIC TANKS

All tanks should have lids or access hatches for maintenance, observation, and pump off.

No permanently affixed structures should be placed on top of the tank.

No heavy loads should ever be placed on the tank.

TOP COVER FOR DRAIN FIELDS

A minimum depth of 6’’ of topsoil is preferred and often required above any of the drain lines.

Grass and other shallow rooted, herbaceous plants are preferred to be grown above the septic drain fields. This will help prevent erosion of the topsoils exposing the drain field. It will also provide an oxygen rich environment for the aerobic bacteria down below to further break down the effluent as it leeches into the ground.

TOP COVER FOR DRAIN FIELDS

As a rough rule, trees and other vegetation will have a root diameter the same diameter of their canopy. The height should also be taken in consideration when the root diameter.

TOP COVER FOR DRAIN FIELDS

Caution should be taken when planting vegetation such as trees around the drain fields or any other component of the system.

Sewage and treated effluent is often rich in macro nutrients which most vegetation will seek out.

Over time, if allowed to, they will enter the system to seek out those nutrients and eventually the system will fail.

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Do not underestimate how far the root systems of some plants will go!

HORIZONTAL PLACEMENT

A factor yet discussed that has influence on placement is surface water. Surface water includes lakes, streams, rivers, ponds, and even the ocean. Set backs and placement of the drain field are often dictated by local authority having jurisdiction and are typically 75’ to 100’. Soil composition and height play factors in the set backs as they also dictate to potential for surface water contamination.

HORIZONTAL PLACEMENT

For example, in the state of Florida, the system cannot be within 75’ of any surface water or private well, 200’ from any public well, and 10’ from any storm sewer. Further guidelines are outlined in

CHAPTER 64E-6, FLORIDA ADMINISTRATIVE CODE STANDARDS FOR ONSITE SEWAGE TREATMENT AND DISPOSAL SYSTEMS

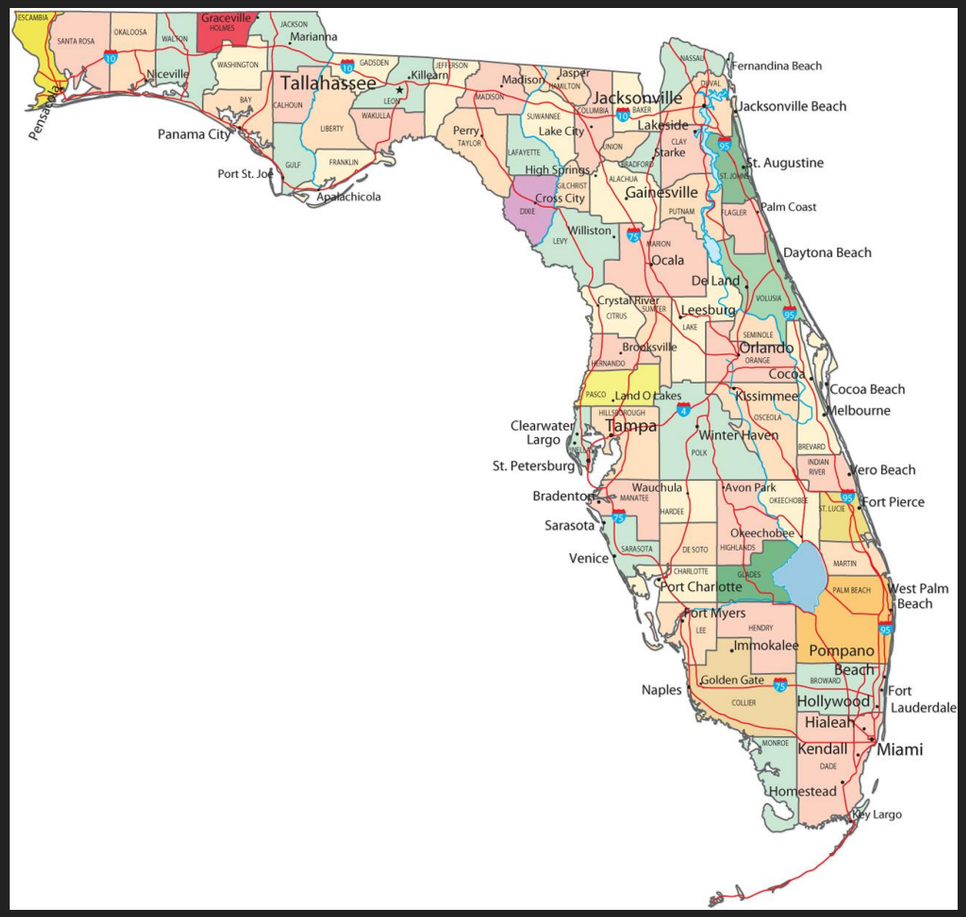
VERTICAL PLACEMENT

Vertical placement is either dictated by soil conditions or seasonal high water tables. The seasonal high water table is the level at which the water rises to within the ground on average, during the rainy season of the year. This is usually delineated in the soil with a clay boundary.

VERTICAL PLACEMENT

A minimum distance from this boundary to the start of the drain field vertically is usually dictated by the local authority having jurisdiction.

In the state of Florida for example, the minimum vertical distance the drain field can be from the seasonal high water table is 24’’.



MODULE 2

INSPECTION CERTIFICATION ASSOCIATES

SEPTIC INSPECTIONS

2 TYPES OF SEPTIC TANK SYSTEMS

Because there are two types of bacteria that can breakdown the sewage, these systems have differing components and function slightly differently.

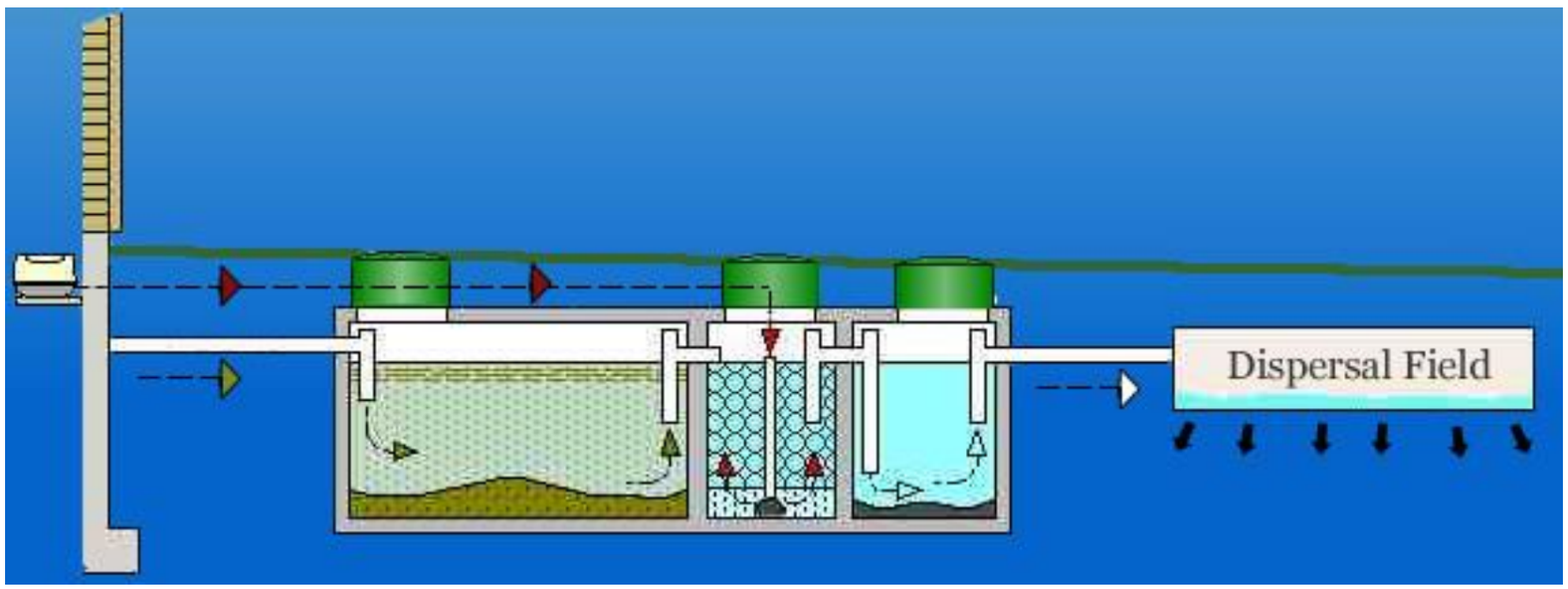
- Anaerobic
- Aerobic

So far, we have discussed the anaerobic systems. These are the most common as they have less components and have simpler style.

AEROBIC SYSTEMS

These systems rely on air injected into a treatment tank. Tank designs are specific for this type of system and have more components than traditional anaerobic systems.

Aerobic systems are boasted at being more efficient at breaking down the sewage, but because they do have more components, they have more potential for problems.



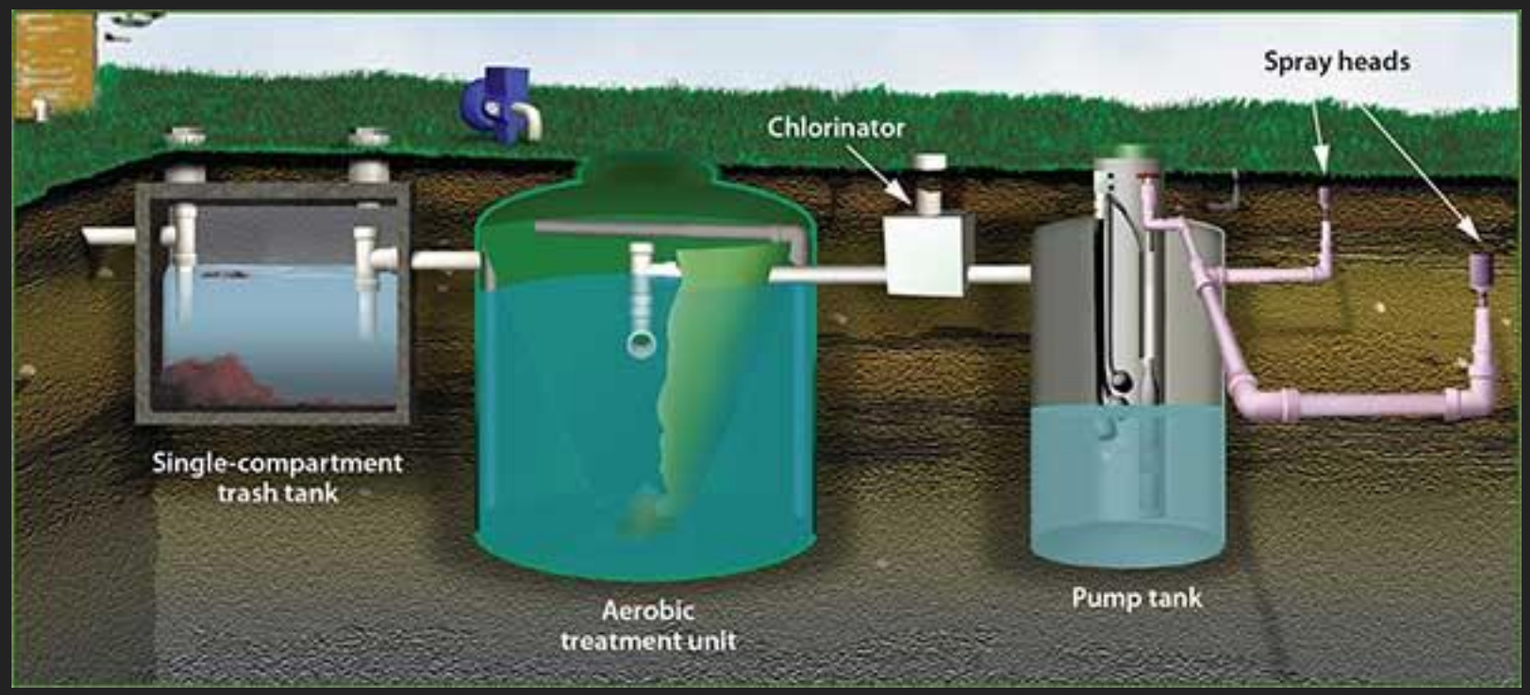
AEROBIC SYSTEMS

Some manufactures have come up with a solution to failed drain fields in that they retro fit an existing anaerobic tank with new components converting it into an aerobic system eliminating the need for the drain field.

These systems are relatively new and if observed, the client should be recommended to follow up with installer of the system for further evaluation.

AEROBIC SYSTEMS

Most new designs of the aerobic systems allow for the near complete treatment and drain fields are not required. Treated effluent enters a pump tank where pumps later pump it out to an irrigation system on site. Prior to or within the pump tank, the effluent is treated with a unstabilized chlorine product to ensure harmful microbes are eliminated.



AEROBIC SYSTEMS

An advantage to this type of system is that they can also be used in some cases by owners of wooded lots, who don’t want to clear enough land to install a traditional septic tank and drainfield.

A disadvantage is that because they require electricity for aerators and often times pumps, they ultimately cost more to operate, require more maintenance, and have a higher chance of failure.

TREATED SEWAGE IRRIGATION

Irrigating with the treated effluent from an aerobic is dependent on the soil composition and its ability to percolate the effluent.

Some various distribution types are:

- Sprinkler
- Drip
- Trench

AEROBIC SYSTEMS WITH GROUND IRRIGATION

Because these aerobic systems have more components and more mechanisms that can fail, more maintenance is recommended and is often required by the local authority having jurisdiction.

Certain types may or may no be allowed and systems often have to be designed or approved by an engineer.

TREATED SEWAGE IRRIGATION

Many areas mandate that irrigation lines that are used with treated sewage have piping that is purple in color to ensure that cross contamination potential is mitigated.

SEPTIC PUMP TANKS

Septic pump tanks are often required if the effluent eventually gets pumped away such as in an aerobic system with ground distribution or a mound drain field. The system below is an aerobic type system.

SEPTIC EJECTOR PUMPS

The pumps are controlled by a float switch/bulb that will activate once the treated effluent reaches a certain level within the tank. They typically are 1/4 to 2 hp, can pump up to 750 feet away and can handle a head pressure of up to 75’.

SEPTIC MACERATOR (GRINDER) PUMPS

Macerator pumps are similar to ejector pumps but have the ability to pass tougher solids. They work by grinding solids into a slurry before they get pumped away.

EJECTOR PUMPS VS MACERATOR PUMPS

Macerator pumps sound like they would be a good idea to implement in a system where the sewage coming from the home has to travel uphill to a tank. Some systems might have a pump installed at this location.

In reality though, these pumps grind the solids so much into a slurry, that the sewage is purely liquid. Once it enters the tank, the solids suspended in the liquid sewage do not settle and eventually travel to the drain field which leads to premature failure.

EJECTOR PUMPS VS MACERATOR PUMPS

Ejector pumps are the only pumps that should be used in septic systems whether prior to the tank to pump the raw sewage to the tank, or after the septic treatment tank to pump the effluent to the drain field.

Macerator pumps are not recommended for septic use and if noted to be in use in a septic system, it is recommended to have the client follow up with a qualified or licensed septic contractor.

SO WHAT MIGHT A SEPTIC INSPECTION ENTAIL?

As you have come to find out, system designs and components can vary quite extensively. Some are dictated by region or LAHJ. Some LAHJ will also dictate what an inspection entails, who can perform it, and how it is documented.

Before we dig into inspecting, lets talk about safety!

RECOMMENDED PPE

Recommended Personal Protection Equipment

- Tyvek suite to include shoe protection
- Non-permeable gloves
- Eye protection

Other Items Recommended

- Hand sanitizers
- Spare clothes
- Hand towels or wet wipes

YOUR SAFETY

While doing septic inspections, you will be exposed to numerous hazards and proper protection should be used. Your fees for your inspection should also reflect the amount of hazard you are exposed to.

Always be aware of cross contamination. Your Tyvek non-permeable gloves should be disposed of after every inspection. All tools should be cleaned after every inspection and stored in a location that limits cross contamination. Tools should not be kept on the interior of a vehicle.

YOUR SAFETY

If at any point, you find that in your professional judgment, you will be put in undo hazard, document the hazard in your report along with any exclusion to your inspection.

Yes you were hired for a service, but use your better judgement to ensure you go home healthy and safe at the end of the day.

SO WHAT MIGHT A SEPTIC INSPECTION ENTAIL?

The state of Florida is an example of a LAHJ that an extensive septic inspection and is a good example of a standard that can be followed.

We will roughy look at the mandatory requirements for Florida, then look at other methods that can be included into our inspection.

Ultimately, the more thorough our inspection, the less liability we incur.

WHO CAN PERFORM AN INSPECTION?

Keep in Mind That

Under Florida law, only

- State-licensed Septic Contractors
- State-licensed Plumbers
- Certified Environmental Health Professionals

Can inspect a septic system

It is important to ensure you are abiding by the law in whatever area you are operating in.

SEPTIC INSPECTION FORM

The form to the right is an example of a voluntary septic inspection form. This is a mandatory form to complete, give to the client, and even sometimes submit to the LAHJ for a archival history on system. While this is a good start, better documentation will also limit liability.

Voluntary Inspection and Assessment Report

Voluntary Inspection and Assessment of an Existing Onsite Sewage Treatment and Disposal System

Property Street Address: _____ City: _____ State: Florida Zip: _____

I have ownership, control or use of the onsite sewage treatment and disposal system at the property listed above and request an inspection except for the items I have initialed to request that they be excluded.

Signature of requestor: _____

Printed name of requestor: _____

Tank Inspection:

_____ **Owner's initials to request that the tank inspection NOT be included**

☐ The tank has been pumped and capacity is: _____gallons.
☐ I have waived the pumping requirement because proof of a tank pumping, permitted new installation, permitted repair, or permitted modification can be documented within the previous five years, and the document states the capacity of the tank and that the condition of the tank does not constitute a sanitary nuisance.

My visual inspection of the tank when the tank was empty detected the following cracks, leaks, or other defects:

_____

_____

Baffles or tees are intact and secure: ☐ yes ☐ no
Outlet device ☐ present ☐ not present
Condition: _____
Effluent filters ☐ present ☐ not present
Condition: _____
Compartment walls ☐ present ☐ not present
Condition: _____
Structural defects in the tank: _____
Condition and fit of the tank lid, including manholes: _____

☐ The tank, in my professional opinion, is in danger of being damaged by leaving the tank empty after inspection, and was refilled with water prior to concluding the inspection.

Drainfield Inspection:

_____ **Owner's initials to request that the drainfield inspection NOT be included.**

I have probed the drainfield area to determine its location and approximate size. Drainfield size: _____ sq. ft.
Describe drainfield location: _____
Drainfield configuration: ☐ Bed ☐ Trench
Drainfield is made of: ☐ Mineral Aggregate ☐ Non-mineral aggregate ☐ Plastic chambers. Indications of previous failure: _____
_____

Is there ponded water within the drainfield? ☐ yes ☐ no
Is there even distribution of effluent in the field? ☐ yes ☐ no
Are there downspouts or drains that encroach or drain into the drainfield area? ☐ yes ☐ no
Based on augering and examining soils in the area of the drainfield, the estimated seasonal high water table in the area of the drainfield is: _____inches ☐ above ☐ below the bottom of the drainfield.

Pump, Siphon, Alarm Inspection:

_____ **Owner's initials to request that pumps, siphons and alarms NOT be inspected.**

Dosing tank integrity: _____ Approximate volume of dosing tank: _____
Material used in construction of the dosing tank (i.e., concrete, fiberglass, plastic): _____
Is the pump elevated off the bottom of the chamber? ☐ yes ☐ no
Pump operational status: _____
If there is a check valve, is a purge hole present? ☐ yes ☐ no

Type of alarm ☐ audio ☐ visual ☐ both; Location of alarm: _____
Does the alarm work? ☐ yes ☐ no
Do electrical connections appear satisfactory? ☐ yes ☐ no
Can surface water infiltrate into the tank? ☐ yes ☐ no
Was the pump tank pumped out? ☐ yes ☐ no

Assessment:

In my professional opinion, the system ☐ is ☐ is not a sanitary nuisance through:
☐ allowing the discharge of untreated or improperly treated human waste.
☐ the improperly built or maintained sewage treatment tank
☐ the creation, maintenance or causing of any condition capable of breeding flies, mosquitoes or any other arthropods capable of transmitting diseases directly or indirectly to humans.

The following maintenance needs to be performed on the system: _____
_____

Disclosure Statements:

☐ I detected cracks, leaks, improper fit or other defects in the tank, manholes or lid. The following damaged or defective item of tank must be properly corrected: _____
☐ I detected missing or damaged components of the system. The following missing or damaged component must be replaced or an approvable replacement must be reinstalled in the system: _____
☐ I detected the following previous failure indicators: _____
☐ I detected ponding of the drainfield or uneven distribution of effluent. The extent of the ponding or uneven distribution is as follows: _____
_____
☐ I detected the following downspouts or other stormwater or other source of water directed toward the system and they should be re-directed away from the system: _____
_____
☐ I detected the seasonal high water table at or above the elevation of the drainfield. There is an increased probability of system malfunction due to the presence of groundwater at these levels.
☐ I detected the following condition or situation existing on the site at the time of the inspection that, in my opinion, would possibly interfere with or restrict any future repair or modification to the existing system: _____
_____

I am a ☐ master septic tank contractor ☐ registered septic tank contractor ☐ state-licensed plumber ☐ certified environmental health professional.

Inspection date: _____

Inspector's signature: _____

Inspector's printed name: _____

Inspector's address: _____

A copy of the Procedure for Voluntary Inspection and Assessment of Existing Systems is required to accompany this report.

Inspectors may use this form or develop their own report that meets the requirements of 381.0065(3)(a), Florida Statutes, and 64E-6.001(5), Florida Administrative Code.

WHAT IS REQUIRED IN A FLORIDA SEPTIC INSPECTION?

Under Florida law, the following are required

- Tank inspection
- Drain field inspection
- Additional component inspection
- Complete assessment of the system

This type of inspection is a functioning maintenance inspection.

TYPES OF INSPECTIONS

There are two general types of inspections that can be performed to septic tanks

- Functioning Maintenance Inspection
- Routine Maintenance Inspection

As you will see, a combination of these two types can and should be utilized

FUNCTIONAL MAINTENANCE INSPECTION

These inspections typically require more general tools and are more invasive.

This type typically includes:

- Locating the tank
- Opening the lids to the tank
- Inspecting the inlet and exit baffles
- Either pumping the tank or probing to determine sludge depth
- Locating the drain field
- Assessing problems with the drain field

FUNCTIONAL MAINTENANCE INSPECTION

Required Tools

- Flat head shovel
- Ground probe
- Measuring wheel
- Flashlight

FUNCTIONAL MAINTENANCE INSPECTION

Recommended Tools

- Sludge measurement tool
- Heavy duty gloves
- Bore snake camera

ROUTINE MAINTENANCE INSPECTION

This type of inspection can include:

- A dye and flow test
- Radio probe test

These tests require special equipment and should only be used in conjunction with other findings for a more conclusive and definitive assessment of the system.

They are “Routine Maintenance Inspections” because they are less invasive.

SEPTIC INSPECTION

A Dye and Flow Test

This is a non-invasive procedure that is sometimes used to determine the condition of the components of a home's waste system. A septic dye test can expose obvious leaks and inadequacies in the system and indicate the need for repairs or alterations. It involves the introduction of a fluorescent dye into the septic system, which is "traced" to ascertain that the septic system can handle the volume of waste that is currently being put through it.

ROUTINE MAINTENANCE INSPECTION

These types of inspections are typically required by most lenders on real estate transactions, although certain LAHJ might deem that these do not satisfy there minimum standards for a “Septic Inspection”.

SEPTIC INSPECTION

A Dye and Flow Test

This is a non-invasive procedure that is sometimes used to determine the condition of the components of a home's waste system. A septic dye test can expose obvious leaks and inadequacies in the system and indicate the need for repairs or alterations. It involves the introduction of a fluorescent dye into the septic system, which is "traced" to ascertain that the septic system can handle the volume of waste that is currently being put through it.

DYE AND FLOW TEST

This inspection is considered non-invasive, requires no excavation, and is generally limited to what can be viewed above the ground surface. It is intended as an observation of the parts of the typical waste-handling system - the septic tank, distribution boxes, leach field, and any related portions of the home's plumbing and water fixtures.

DYE AND FLOW TEST

Documentation

When utilizing this test, be sure to note the volume of water flowed and the type, brand, and amount of dye used in the test in your report.

Determining Flow

You can determine flow based off the fixtures utilized. Older faucets typically flow over 3 gallons per minute while newer faucets flow between 2.5 to 3 gallons per minute.

DYE AND FLOW TEST

Volume of Flow Test

Volume amount should range from a minimum of 150 to a maximum of 500 gallons

Amount of Dye

Only a dye approved for use in septic systems should be utilized. They do come in different forms such as tablets, powder, or a liquid. Amounts are depended on the forms and the recommendations from the manufacture. Be sure to follow these recommendations.

DYE AND FLOW TEST

How long do we flow the system?

So, if our one faucet flows approximately 2.5 GPM, flowing it for 60 minutes would give us the minimum flow for this test.

2.5 gallons per minute X 60 minutes = 150 gallons

When two faucets with approximately 2.5 GPM are flowed for 60 minutes, we would achieve a total flow of 300 gallons which is a good average amount for our test.

(2.5 gallons per minute) x 60 minutes = 300 gallons

DYE AND FLOW TEST

This test **IS** not conclusive and can result in false findings or evidence. If performed, ensure the SOP you are operating under outlines the limitations of this test and excludes you from liability.

RADIO TRANSMITTER PROBE TESTS

Radio probes can be used in finding and to help evaluate the flow a system as well. A transmitter is flushed down a toilet where it flows through the system while transmitting a signal to a receiver.

Transmitters vary for signal frequency depending on model and manufacturer. Typically, the lower the frequency, the more power the signal has and better penetration through the various components. With lower frequency though comes higher power usage which eats into battery life.

SEPTIC INSPECTION

A Dye and Flow Test

This is a non-invasive procedure that is sometimes used to determine the condition of the components of a home's waste system. A septic dye test can expose obvious leaks and inadequacies in the system and indicate the need for repairs or alterations. It involves the introduction of a fluorescent dye into the septic system, which is "traced" to ascertain that the septic system can handle the volume of waste that is currently being put through it.

RADIO TRANSMITTER PROBE

The two transmitters to the right range in price of between $27 - $32. The FTP-8 has a frequency of light 512 Hz and a battery life of 4 hours. It's range is between 10 - 15 feet depending on what it is transmitting though. ie. Cast Iron vs PVC. Frequency 512 Hz is the industry standard.

RADIO RECEIVERS

It is important to match the receiver to the transmitting probe. If you are only going to be using transmitters with 512 Hz, ensure that your receiver is matched for that. Some receivers can work a wide variety of frequencies.

Price can vary based on options such as visual displays and multiple frequency options. Typical costs are between $500 - $2000.

RADIO TRANSMITTER PROBE TESTS

Although useful, this method is costly and can also be inconclusive and lead to false findings.

It is at the discretion of the inspector as to whether to implement this method, but for the purposes of this course and the SOP, it will not be included as part of the recommended septic inspection.

SEPTIC INSPECTION

A Dye and Flow Test

This is a non-invasive procedure that is sometimes used to determine the condition of the components of a home's waste system. A septic dye test can expose obvious leaks and inadequacies in the system and indicate the need for repairs or alterations. It involves the introduction of a fluorescent dye into the septic system, which is "traced" to ascertain that the septic system can handle the volume of waste that is currently being put through it.

MODULE 3

INSPECTION CERTIFICATION ASSOCIATES

SEPTIC INSPECTIONS

SEPTIC INSPECTIONS

So lets recap, if you are in an area where the LAHJ allows home inspectors to perform septic inspections, what should the inspection entail?

The inspection needs to include documentation and an assessment of each component of the system while minimizing both liability and hazard to yourself. An estimate of the time has to be taken into consideration and your fees associated with that time.

SEPTIC INSPECTION

It should include:

- A dye flow test
- An “as built” diagram showing the home and locations of the tank, drain field and other components
- Obtaining tank information
- When a pump out of the tank is not performed, a sludge level should be obtained

SEPTIC INSPECTION

Continued

- Visual check of the inlet and exit baffles to ensure integrity and function
- Locating all clean outs associated with the system
- A dye flow test or just a flow test
- An assessment of the drain field
- Check all components to include aerators and pumps

THE DYE FLOW TEST

Before selecting a test volume the inspector needs to know something about the design of the onsite wastewater disposal system that is installed to ensure the right volume is used.

Also, do not assume that a conventional septic tank and drainfield are installed. If a dosing system, pumping system, or other special designs are present, flooding the system beyond the design-specifications for a given time period could damage the system or produce inappropriate test conclusions.

THE DYE FLOW TEST

If you find that the system either does not warrant this test, may cause damage, or for any reason in your professional judgement should not take place, document that the test was not performed and the reason why.

THE DYE FLOW TEST

If it is determined that you are performing the test, while on the exterior portion of your home inspection, you should observe and document the type of system and the approximate dosing volume.

While performing the interior portion of your home inspection, you should turn the desired number of fixtures on to initiate the dye flow test.

Once flowing, the dye can be added.

Special consideration should be taken if it is noted that there is any leaks in the drainage plumbing from the fixtures utilized.

CAUTION

It is usually a rule for most home inspector to never turn on a faucet and leave the room. During this inspection you will likely have to flow multiple fixtures and leave the house.

This is why a timer is so important. It will remind you to return to the home to shut off the water.

DYE FLOW TEST

Once you have achieved the desired flow and the fixtures have been shut off, you should return to the exterior to observe and document your findings.

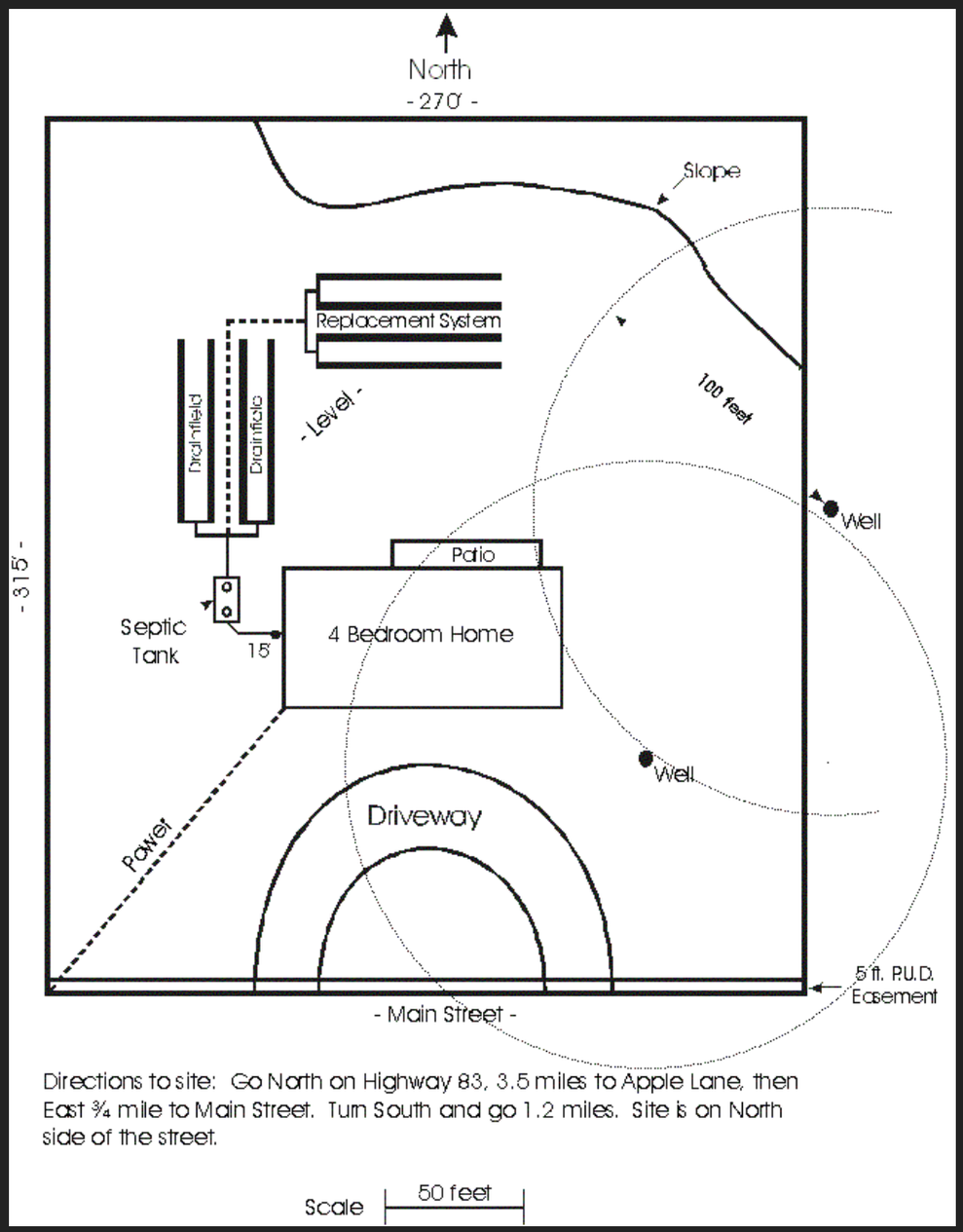
If at any point during the inspection you visualize the dye present on the surface, the system has failed in some way and should be documented.

THE FUNCTIONING MAINTENANCE INSPECTION

Once the dye flow test has been completed and documented, the functioning maintenance inspection can begin. If the tank is opened and pumped prior to the test finishing, the flow test results will be rendered useless.

AS BUILT DIAGRAM

An as built diagram should show the home and property from the arial view. It should always show north at the top with an indicator such as north. It should delineate the home in conjunction with system and its components. It should also show distances to all surface water and wells.



AS BUILT DIAGRAM

A measuring wheel should be used in construction your as built diagram. A note pad is useful in sketching out a rough diagram so later you can put together your final diagram. Programs such as google maps can be used to mark out your findings on a satellite view and inlayed into your report. Other mapping software is available for a cost.

SEPTIC CLEAN OUTS

Septic clean outs should be located and inspected. Their location within the system needs to be documented. At minimum clean out should be located between the house and the tank.

Clean outs can also be located between the tank and the drain field

SEPTIC CLEAN OUTS

A sanitary wye is the preferred connection for clean outs . This allows for access in both directions of the pipe while having only one pipe extend through the surface.

SANITARY FITTINGS

The top photo is an example of a sanitary tee. For the purpose of clean outs, it should be aligned with the swoop in the direction of the desired access.

The below fitting is a normal tee and should not be utilized in clean outs.

DOUBLE CLEAN OUTS

Sanitary T’s should only be used if there is a double clean out.

A double clean out is also excepted allowing for access to both directions just like the sanitary wye.

DOUBLE CLEAN OUTS

Clean out caps do not have to be taken off if they do not easily come off. They do need to be water and gas tight though and not permanently affixed.

LOCATING THE TANK

Once you locate the clean outs on the exterior, the distribution line can be followed by probing the ground until you reach the tank.

SEPTIC TANK

When inspecting the tank, note any permanently affixed structures that have been placed on the tank such as:

- Pavers
- Sidewalk
- Decks
- Sheds
- Putting greens

TANK INSPECTION

First thing is locating the tank. This can be done with a ground probing rod. Once the tank is located, the top soil above the tank must be removed to access the tank. Once, access can be made the lids are removed.

TANK SIZE

The tank size can be determined after the edges have been delineated. The below chart can be used to estimate its approximate size.

How to Calculate the Septic Tank Capacity in Gallons	
Round Septic Tanks	3.14 x radius squared x depth (all in feet) = cubic capacity. Cubic capacity x 7.5 = gallons capacity.
Rectangular Septic Tanks	Length x Width x Depth in feet x 7.5 = gallons
Rectangular Septic Tanks (alternative method 1)	Length x width in inches / 231 = gallons per inch of septic tank depth. Multiply this number by septic tank depth in inches to get gallons
Rectangular Septic Tanks (alternative method 2)	Length x Width x Depth in feet / .1337 = gallons

TANK INFORMATION

Documenting Material

Once the tank has been located and delineated using a ground probe, the lids need to be uncovered. At this point, you will be able to document the material of the tank.

TANK MATERIAL

If the soil above looks depressed, use caution. A heavy load may have been placed in the area of the tank.

At no point should a heavy load be placed on the tank such a vehicle. Septic tanks are not designed to handle vertical loads and will fail.

Coupled with an older possibly corroded or cracked can increase the risk of failure and caution should be utilized.

TANK BAFFLES

While the tank is open, whether the tank has been pumped or not, the inlet and exit baffles should be visually checked for function and integrity.

TANK BAFFLES

Inlet Baffle

The whether made from pvc or the tank material, the baffle should slow the sewage when entering the tank. The sewage should never be backed up into the inlet baffle. This could indicate a blocked filter or failing drain field. If the system has a pump and pump tank, it could also indicate a failed pump or connecting line.

TANK BAFFLES

Exit Baffle

When inspecting the exit baffle the effluent should be below the exiting pipe when the system is not in use. When in use, a slow flow of the effluent should be observed.

The scum layer should be on the outside of the baffle and be preventing it from entering the drain field.

The sludge layer should not be observed at all.

TANK BAFFLES

If its observed that the effluent is filling the exiting pipe from the baffle, the downstream components of the system (such as the drain field, possible pump, or filter) have failed.

If its observed that the scum layer has entered the exiting baffle, that baffle has failed and the scum exiting is possibly causing issues in the downstream components.

If the sludge layer is visible, the system is not functioning as intended and the sludge has possibly exited the tank and is possibly causing issues in the downstream components. This tank needs at minimum a pumping.

TANK INSPECTION

If the tank is found to be empty, and the system has been in use and has not been recently pumped, the tank should be under suspicion of having cracks and/or having active leaks.

Settlement around the tank might have also taken place causing additional issues.

This should be well documented to include photos.

TANK SLUDGE

Pump Out

A pump out is always the preferred when inspecting the tank, although a home inspector should not be the one performing this. This should be contracted out to a septic contractor along with the filter change. Ensure that any fees associated in the the pump out are included in your total fees.

TANK PUMP OUT

Once pumped out, you will be able to inspect the tank more thoroughly for cracks, leaks or any other integrity issues.

A flash light should be used to observed from the surface.

Sometimes the depth of the tank from the surface from letting you see much of the tank. Further inspection can be done using a bore snake camera preventing you from having to enter the tank.

AT NO TIME SHOULD YOU OR ANY PART OF YOU ENTER THE TANK!

PUMP OUT

Along with giving a more thorough service and inspection to your client, once the client owns the property, it will also give them peace of mind in knowing the tank has been pumped and the next pump out is 3 - 5 years in the future.

If a pump out is not performed, obtaining a sludge level is recommended.

THE “SLUDGE JUDGE”

This bottom section for the Sludge Judge Sampler includes a valve for opening and closing during sample collection. It measures 5ft (1.53m) in length. This product retails for approximately $45. There are other products similar, but this is one of most widely used in the industry.

SEPTIC INSPECTION

Note on the sludge level...

If sludge level is determined to be more than 1/3 of the bottom of the tank, a pump out should be recommended.

If it is not pumped out, solids have the potential to flow into the drain field or other parts of the system leading to the systems failure.

TANK INFORMATION

A reasonable effort should be made in obtained the following:

- Last pump out
- Maintenance information
- Size
- Material

TANK INFORMATION

Last pump out and maintenance performed to the system can sometimes be found from the LJHA Health Department. This information is often required to be archived.

If you are in an area where it is not, contacting the owner is the next best source. If they have no written proof of a pump out or maintenance, try to obtain the company that performed the services and call to get an accurate account of services provided with dates.

When relying solely on the owners account, ensure you document that that is where the information came from.

PROBLEMS WITH THE SEPTIC TANK

The most common problem with septic tanks are leaks associated with either a failure in the wall of the tank, or a pipe fitting attached to it. A tank problem will often present itself with effluent on the surface down stream or an empty tank. Regardless, it is recommended to pump the tank to visualize its integrity.

PROBLEMS WITH THE SEPTIC TANK

Another common problem is if the tank itself is full at the lid. This would indicate that the effluent is not exiting the tank whether from a clogged filter, blocked plumbing to the drainfield, of maybe a failed pump if it has one.

THE DRAIN FIELD INSPECTION

The drainfield area should be probed to determine its location, size, configuration, and type of drainfield material. The inspector should note signs of failure and any drainage that impacts the drainfield area. The elevation of the drain field above the seasonal high water table should be made as this separation is critical for proper treatment. The depth of the top soil to the drain field should also be documented.

INSPECTING THE DRAIN FIELD

Locating the drain field can be difficult sometimes. In some systems, the grass above the drain field might be an indication. It can be either a brighter green like the photo to the right, or browner in color.

INSPECTING THE DRAIN FIELD

If at any point you see effluent on the surface, the drain field has failed in some way and should be properly documented.

If the system does not have a drain field such as in an aerobic system, a dye flow test is less pertinent as long as a visual check of inside the tank is made.

PROBLEMS WITH THE DRAIN FIELD

Any effluent on the surface of the ground should be noted as a failure of the drain field. Reasons of failure could be from sludge entering the field, soil entering the field, heavy loads on the field collapsing it, or vegetation growing blocking flow.

DISTRIBUTION LINES

All distribution lines running form the home, to the tank and out to the drain field should be located with a ground probe and delineated on the ‘’as built” diagram along with any distribution boxes.

Any problems associated with them should be documented.

DRAIN FIELDS

When inspecting the drain field, note any permanently affixed structures that have been placed on the tank such as:

- Pavers
- Sidewalk
- Decks
- Sheds
- Putting greens

DRAIN FIELD FAILURE

Possible causes can be:

- Near by vegetation growing into the drain field
- Soil washing into the drain field
- The sludge layer entering the field
- A collapse of the drain field from a heavy load being placed on top of it

ADDITIONAL COMPONENT INSPECTION

If your system contains additional components, such as pumps or alarms, they should also be inspected. Dosing pumps should be checked to verify correct operation and alarms are in working order. Aerators should also be checked if the system is an aerobic type.

All additional components need to be identified and properly documented.

BE AWARE

If the home has any recent additions made and the septic system does not appear to be updated to accommodate the new heavier load. Recommend that it be evaluated by a qualified septic contractor regardless if the system is working normally.

GREY WATER SYSTEMS

Some homes may have grey water systems which are said to decrease the load on the septic systems. These systems should be located, identified, and documented but excluded from your inspection and report. Have your client follow up with a qualified or licensed septic contractor for further evaluation.

GREY WATER SYSTEMS

Do not confuse these systems with septic systems. These systems will have similar lines with clean outs and tanks often located in the close proximity to the septic system.

These systems need to be delineated in your report.

If you decide to you inspect the grey water system, it is recommended that:

- You have proper education and training on these systems
- A separate report is generated
- Your SOP’s cover grey water systems

SEPTIC INSPECTION

What should it NOT include:

For no reason should the inspector pump or enter the tank unless he has the proper equipment, training, and licensure (if applicable according to LAHJ).

Extreme Caution

If the tank appears to be at all compromised, extreme caution should be taken around the tank and possible exclusion of this area of the system might be taken. Collapse of the tank can cause serious injury and even death.

MAINTENANCE RECOMMENDATIONS TO THE CLIENT

Any defects associated with the system should be well documented and always refer your client follow up with a qualified or licensed septic contractor for further evaluated.

If at any point you are unsure about the system or its components, again, refer your client to follow up a qualified or licensed septic contractor for further evaluation.

MAINTENANCE RECOMMENDATIONS TO THE CLIENT

All septic systems need periodic maintenance and should be inspected annually.

It should be recommended to the client that the tank, regardless of the type of system, that it gets pumped and visually checked every 3 - 5 years or depending upon usage of the system. If the house is vacant for long periods, longer durations may be accepted.

MAINTENANCE RECOMMENDATIONS TO THE CLIENT

It is recommended that other than sewage, only toilet paper approved for septic use should ever enter their systems.

If there is a garbage disposal installed in the residence, the client should be cautioned of the amount of food and other waste discarded into it.

Fats and oils should also not be put through the system as this will increase the scum (fog) layer.

MAINTENANCE RECOMMENDATIONS TO THE CLIENT

It is also recommended that only grass be grown over the tank and drain field and to keep any large vegetation away from both.

Any heavy loads such as vehicles should also never be placed on top of the tank or the drain field at any time.

THE GFCI DEBATE

A dilemma presents itself where plumbing and electrical meet. NEC and many LAHJ's dictate that any power source that is within 6' of a possible source of water needs to be GFCI protected. This includes of course aerators and ejector pumps. Most code and regulation put life safety first. But, what happens to a system when the GFCI is tripped and is not reset in a timely manner.

THE GFCI DEBATE

Just remember, we are merely consultants and can only advise the client of our objective finding.

The decision is ultimately up to the client and is not your responsibility.

Stay out of this liability trap!

At the end of the day, you should always advise your client on the side of life safety.

DOCUMENTATION

Just like your home inspection, the septic inspection should be well documented. Remember, if you didn't document it, it wasn't inspected. Proper documentation will limit liability and add to your service.

Photos are always recommended in inspections reports as they are more evidence of what was done "At the time of the inspection"

DOCUMENTATION

Your report should include the following:

- A “As built diagram” of the home, property, and the system with all its components
- A description of the type system and its various components
- Location and adequacy of clean outs
- Tank information such as size, material, last pump out, and maintenance performed on it
- A determination of adequate size should be made on the tank based on observations and approximations

DOCUMENTATION

- If the tank is not pumped, the depth of the sludge layer should be documented
- The tank's integrity
- The level of effluent at both the inlet and outlet baffles
- If there is a tank filter and if it was replaced
- The drain field after before and after the flow test

DOCUMENTATION

- Any additional components and their functionality
- Was a grey water system present
- Any deficiencies found during the inspection
- Any exclusions to the inspection and reason why
- Any additional recommendations

DOCUMENTATION

Photos

The following photos are recommended in your report

- Every clean out
- The tank prior to uncovering
- The tank with lids removed
- Level of effluent at inlet baffle
- Level of effluent at exit baffle

DOCUMENTATION

Photos continued

- The tank filter
- Drain field before and after the flow test
- Any additional components such as aerators, pumps, pump tanks
- Any deficiencies found during the inspection
- Any exclusion to the inspection

FIELD TRAINING

It is recommended that along with completion of this course that you complete a minimum of 5 septic inspection with another inspector, plumber, septic contractor or certified environmental professional. This will help you in the process of the inspection and get you comfortable in the field.

Continuing education is always encouraged.

LIABILITY

Reducing liability while maintaining good service should be in balance.

- Educate yourself fully in the service you are providing
- Take your time and do not rush
- Document your findings fully
- Never state something that is outside of the Standards of Practice you are operating under.

WHO MIGHT REQUEST A SEPTIC INSPECTION?

On a real estate transaction, if the lending is FHA, VA, USDA, or any other HUD affiliate, a septic inspection is typically a mandatory requirement for lending.

ALWAYS RECOMMEND A SEPTIC INSPECTION

During any real estate transaction, a septic inspection should always be recommended.

COST TO THE CLIENT

Septic inspection costs can vary and depend on how intensive the inspection is, the services rendered and the hazards posed.

Typical costs, with a pump out should be around $500 with around $250 for the pump out and filter change.

A pump out and filter change is always recommended to the client and as an inspector, you should try to include this in your inspection. This will bring a higher level of service to your client, allows for better observation for your inspection, and ensures the client of a functioning system for years to come.

Ultimately, its about reducing your liability!

COST TO THE CLIENT

Replacing or repairing a septic system can range from a few thousand dollars to tens of thousands.

On average, a typical anaerobic, gravity fed septic system will be about $7,500 for replacement. This is on par with the cost of most other systems of the home and should not be taken lightly.

REMEMBER

We are merely consultants, or as I like to call it, objective observers. We can only merely assess and inspect what is there report it. It is up to the client to do with that information as they choose. Only client, or the person who signed the preinspection agreement contract is privy to the information obtained in the inspection.

CONGRATULATIONS

YOU HAVE COMPLETED

SEPTIC INSPECTIONS