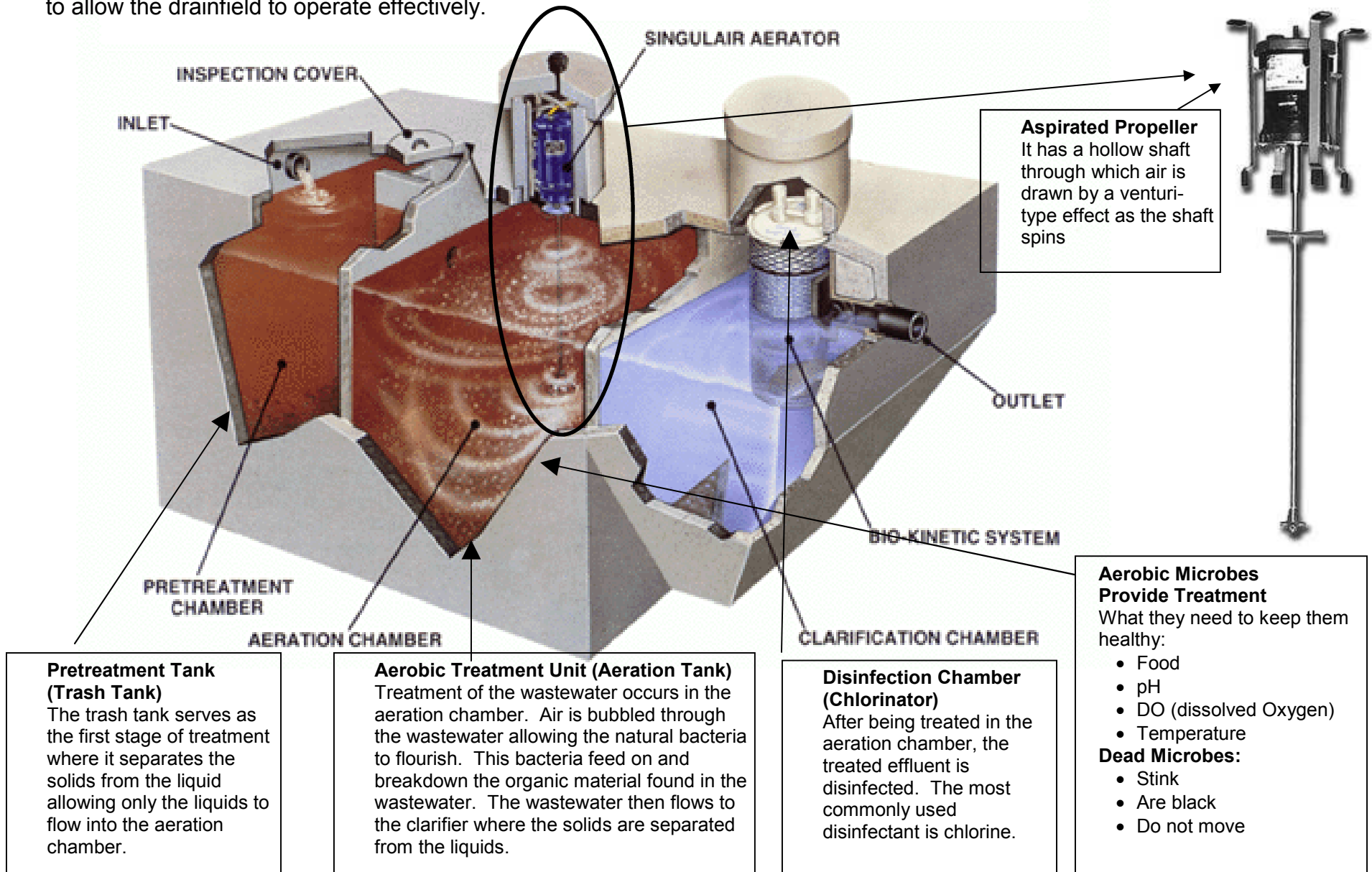


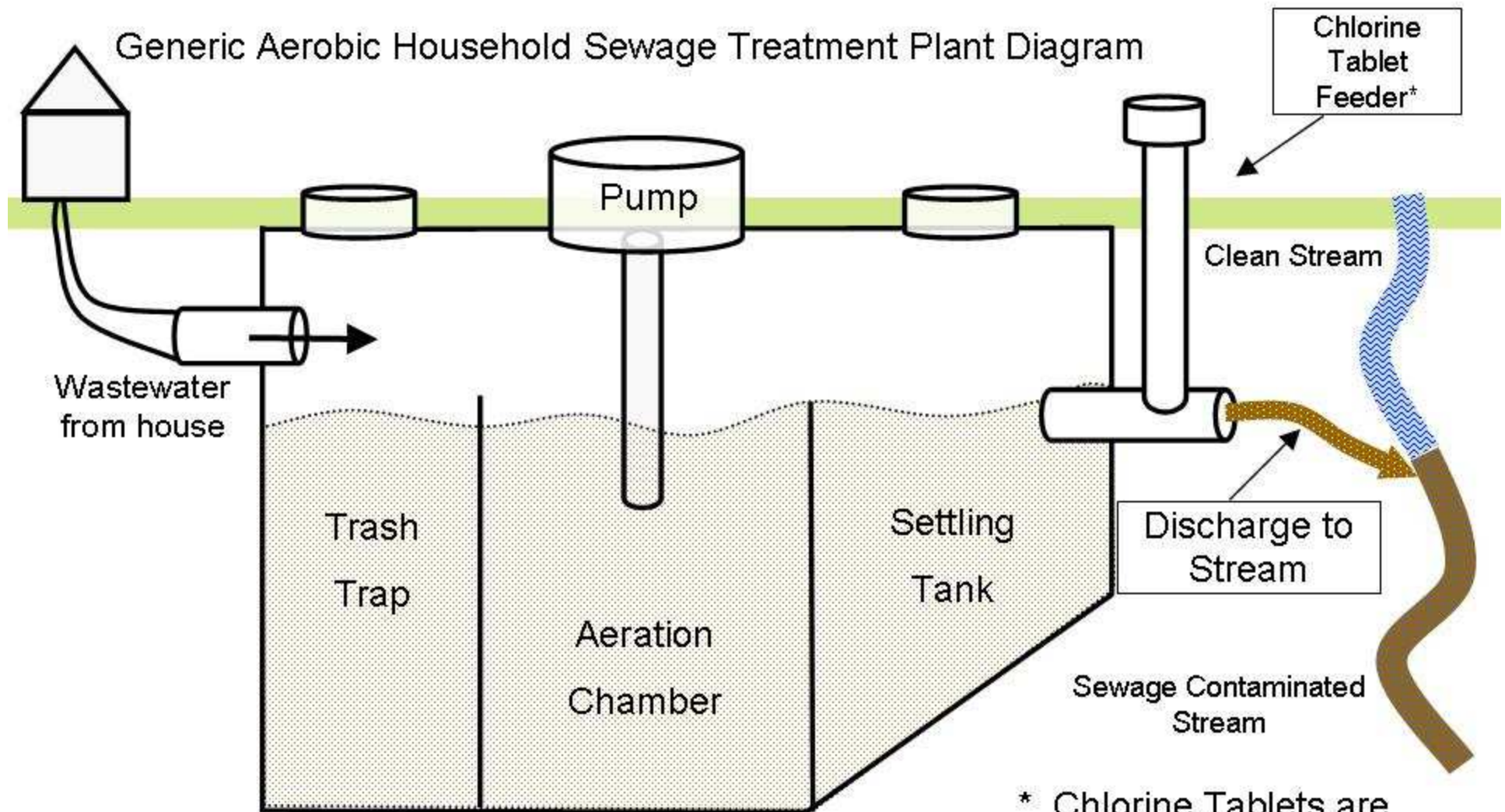
## How Aerobic Treatment Units Work

Aerobic Treatment Units (ATUs) are similar to standard septic systems in that they use natural processes to treat wastewater. But unlike conventional systems, ATUs also use oxygen to break down organic matter, much the same as municipal wastewater treatment systems, but in a scaled-down version.

ATUs decompose organic solids quickly. ATUs are useful in environmentally sensitive areas or locations that are less suitable for conventional or gravity flow septic systems, such as inappropriate soil conditions, small lot size, or where the water table is too high to allow the drainfield to operate effectively.



## Generic Aerobic Household Sewage Treatment Plant Diagram



How your aerobic household sewage treatment plant is supposed to work:

Wastewater flows from your house into the **Trash Trap** where most trash and large solids sink to the bottom and are prevented from passing through the system. The remaining liquids and smaller, suspended solids pass into the **Aeration Chamber** where the **Pump** bubbles air into the mixture to provide oxygen for the bacteria to break down many of the harmful components of the waste. Liquids then pass into the **Settling Tank** where more of the remaining solids sink to the bottom and are captured. The wastewater then passes into the discharge pipes where it is disinfected by the **Special Chlorine Tablets** to kill potential infectious organisms before being discharged into the environment where we can all come into contact with it. If ANY of these parts are not doing the job they were designed to do, your aerobic household sewage treatment plant is failing and contaminating our environment.

\* Chlorine Tablets are **required** to disinfect for potential infectious organisms before discharging to the stream.



# What can I do to ensure my Aerobic Treatment Unit (ATU) works properly and protect my investment?

## The Basics (everyone should do this)

1. Make sure there is electricity provided to the system at all times.
2. Have your system pumped and the filter cleaned periodically by a registered service provider
3. When you are outside make a point to listen for your system's motor to run.  
usually 30 minutes on and 30 minutes off, check with your service provider for your timer's exact settings
4. Immediately act on any:  
alarms,  
warning lights,  
or sewage odors  
call a service provider ASAP and cease all water use in your home until problem has been remedied

## The Advanced (must be done if you do not have regular service)

1. Ensure that the chlorine stack feeder tube has chlorine tablets available for treatment of the effluent at ALL times.

**Calcium Hypochlorite** certified by the EPA for wastewater disinfection is the **ONLY** type of chlorine tablet approved for use.

**POOL CHLORINE IS ILLEGAL** and can cause explosive gasses to build up.

2. Periodically inspect your filter, if you see a high water level, this indicates a clogged filter which requires professional service.
3. When the motor is running look for bubbles in the aeration chamber

If there are no bubbles you require service because no aeration is taking place

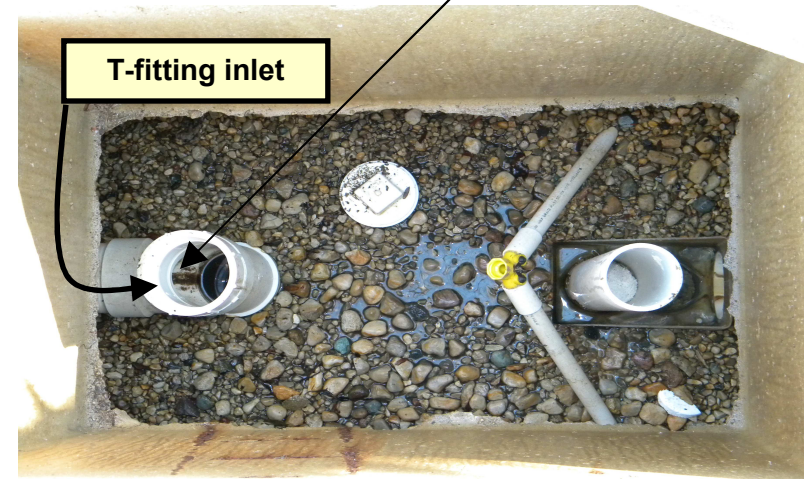
There could be a blocked air intake  
The aerator 'propeller' shaft could have material built up on the end causing a clog

If you can not see the bottom of the inlet portion of the T-fitting due to standing water it is time to call a registered service provider to have your filter backwashed and cleaned.

When your system is on, look for bubbles around the outside of the motor with a flashlight. Any solid material which has made it through the trash trap can become entangled on the bottom of the 'propeller' and cause system failure. This component must be regularly cleaned by a professional.



## Some examples of chlorine tablet stack feeder tubes



# What can I do to ensure my Aerobic Treatment Unit (ATU) works properly and protect my investment?

Regular professional service of your system will still be needed, even without a service contract. The difference is that without one **you** are responsible for the regular inspections of your system and calling a professional when service is needed; with a service contract **they** inspect your system at least twice a year and perform the needed services to keep your system in good working order in addition to being 'on-call' should you need them between regularly scheduled appointments.

## Service Contracts

- For an annual fee a trained service professional will inspect your system at least twice a year and perform routine maintenance
- If you have a problem with your system, they are 'on call' with a knowledge of your systems' maintenance history and an 'after hours' contact number may be provided
- Saves you money on your annual operations permit fee
- Ask your friends and neighbors for recommendations of service contract providers in your area

## What EVERYONE can do to keep your system performing at its best

### **Use your water wisely**

*Don't* do all of your laundry for the week in one day. This can overwhelm your system and cause untreated or partially treated sewage to be discharged due to the sheer volume of water put into the system in a short period of time.

Space out your water usage throughout the day (bathing in the morning, dishwasher on a timer to run mid-day, laundry in the evening).



## **What NOT to put into your system**

1. Flushable (baby) wipes are not flushable, it does not matter what the package says
2. Any cotton content 'paper' products like tissues, toilet paper etc
3. Paper Towels
4. Dental Floss
5. Feminine Hygiene Products (this includes applicators)
6. Prophylactic devices
7. Kitty Litter, even if it says flushable
8. Diapers of any sort
9. Cigarette Butts
10. Gauze Bandages
11. Paints
12. Varnishes
13. Thinners
14. Waste Oils
15. Pesticides
16. Large volumes of any chemicals (cleaners, etc.)
17. If your house has a garbage disposal, STOP using it
18. Don't use your toilet as a garbage can for unwanted food
19. Fat, Grease or Cooking Oils
20. Powdered dishwashing or laundry soaps, they often contain sand which can contribute to system failure
21. Septic systems 'additives' are unnecessary, and can actually accelerate failure by sending fine materials into the filter and clogging it
22. Prescription drugs should not be flushed. At best, your system cannot provide any treatment for them and they are released into the environment; at worst, they can harm or even kill the bacteria that provide treatment in your system causing system failure.

### **All of the above listed items can upset the delicate balance of your system.**

- Some of them will pass through the trash trap into parts of the system they should not enter.
- Some of them can actually kill the bacteria in your system which break down the waste and provide treatment.
- Some of them can cause failure of mechanical components in your system.



# Health District Aerator Inspection Procedures

## Statutory Authority

Section 29-17 of the Clark County Combined Health District Sewage Disposal Regulations allows that:

***The health commissioner may at any reasonable time during the course of construction or any time thereafter inspect any household sewage disposal system or part thereof, sample the effluent, or take any other steps which he deems necessary to insure proper compliance with rules 3701-29-01 to 3701-29-21 of the Administrative Code and sections 29-01 to 29-21 of these regulations. The health commissioner may utilize inspection reports or other data submitted or obtained from reliable sources to determine compliance.***

Example of the Health District Inspection Report A (yellow) copy of this report is provided to the homeowner.



CLARK COUNTY COMBINED HEALTH DISTRICT  
Division of Environmental Health  
[www.ccchd.com](http://www.ccchd.com)

Phone: 937-390-5600 Fax: 937-390-5625

## DISCHARGING SEWAGE TREATMENT SYSTEM ANNUAL INSPECTION

Address:	Township/municipality:
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Instructions: Check and complete those areas which apply.

YES	NO	
		<b>SEPTIC TANK</b>
		Do risers extend to grade or higher?
		Does tank have secured lids on openings?
		Is inlet baffle present, intact, and functional?
		Is outlet baffle present, intact and functional?
		Is water level, in tank, normal? (If no, circle <b>high</b> or <b>low</b> to specify.)
COMMENTS		

YES	NO	
		<b>AEROBIC TREATMENT UNIT</b>
		Is the unit odor free while the lids are on?
		Is the motor and timer functional?
		Are bubbles observed in the aeration chamber?
		Is the upflow filter clean, scum free and the water level normal?
		Is the filter re-aeration (if present) operational?
		Are chlorine tablets present?
		Sampling well accessible or final effluent able to be sampled within?
		Is the discharge point in good repair?
COMMENTS		

YES	NO	Is this system creating a public health nuisance?
Please have all violations (cited above) corrected by: _____/_____/_____		
Inspector Signature		Date: _____/_____/_____

The opinion rendered serves only as a confirmation that the sewage system complies with applicable regulations, as of the time of the inspection. This is not a guarantee of the system itself, nor is it a representation that the system will have an effective life for any certain period of time. The life of the system will depend upon many factors, including the manner in which the system is used, and the extent of the demands the user places upon the system. This inspection may not serve as a point of sale inspection.

## What are we looking for during an inspection?

1. Is the unit odor free with lids on?
2. Does the trash trap (first lid) need pumped?
3. Is the motor and timer functional?
  - If not set to run at the time we are there, the motor should still be warm. Some systems are set to run 30 min. on and 30 min. off.
4. Are bubbles observed in the aeration tank while the motor is running?
  - A clogged air intake may prevent the motor from properly aerating and treating sewage.
  - Aeration cannot be observed on all types of units. Dissolved oxygen readings may be taken as a substitute.
5. Is the upflow filter clean, scum free, and the water level normal?



If there is a large amount of visible scum floating in the trash trap we will recommend it be pumped .



Examples of three different types of motors



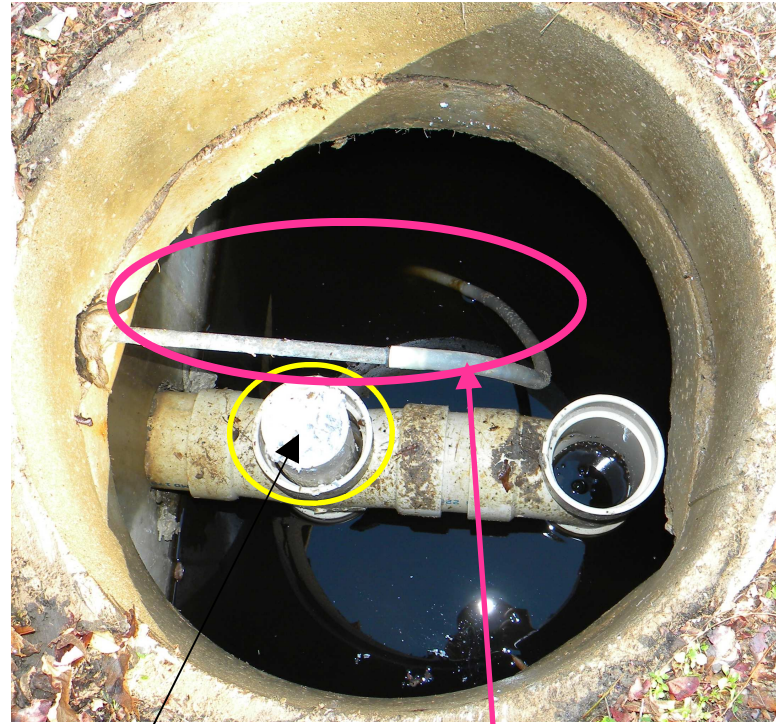
Two types of upflow filters. If there is significant scum visible we will recommend the filter be cleaned. If the water level is high, it indicates a clogged filter which will need to be cleaned by a service provider.





## What are we looking for during an inspection?

5. Is re-aeration functional (if present)?
6. Are calcium hypochlorite tablets present?
7. Is the Discharge point in good repair?
  - Not clogged.
  - Animal guard required on some systems, but not on all.
  - There needs to be a direct discharge to the receiving stream.
9. Is the system creating a public health nuisance?
  - If any of the system components are not working properly at the time of inspection, the system is discharging partially treated sewage.
  - The discharge of untreated or partially treated sewage is a violation of CCCHD Sewage Disposal Regulations and a public health nuisance.
  - In this case a compliance date will be written on the inspection form and a formal warning will be sent to the homeowner.



Calcium hypochlorite tablets should be visible in the stack feeder tube. If there is only a little bit of one tablet left the Health District may mail a 'friendly reminder letter' to let you know your system needs calcium hypochlorite tablets soon.



Some systems have a second phase of aeration treatment before the waste effluent is discharged from the system. If your system has this, we will check to ensure it is in good working order by looking for bubbles in this chamber as well.

## Health District Enforcement Procedures

If your system is not functional we will issue a deadline for repair. Typically 14 days from receipt of warning. Additionally, it is illegal to continue discharging sewage from a failed system. One of two things must happen:

1. You may choose to stop all water usage in your home until your system is repaired.
2. You may have your system pumped and monitor water usage so that the water level in the system never reaches the outlet. If water comes close to the outlet, it is time to pump again.

Continuing to discharge sewage after being warned to cease may result in a misdemeanor citation.

Repeat offenders and persons not complying within the given time frame may receive a misdemeanor citation and/or be called before the Board of Health.

The Board of Health has the authority to order your system to be upgraded/replaced with a more modern system complete with off site monitoring equipment. (quite expensive)

### Conclusion

Untreated and partially treated sewage adversely effects public health, environmental health, and quality of life of you and your neighbors. **(it stinks)**

Proper maintenance, by the homeowner and a service provider, can reduce the chances of system failure.

Having a service contract, with a local service provider, is the best way to ensure compliance with regulations.

When problems are found with your system work quickly to resolve them. Failure to do so can be costly and is very rude.

If you have any questions about your aeration system in the future please call the Clark County Combined Health District Environmental Health Division at (937)390-5600.

The logo for the Clark County Combined Health District is a blue-outlined shape that resembles a map of the county. It has a jagged bottom edge and a pointed right side. Inside the shape, the text "Clark County Combined Health District" is written in a blue, italicized serif font, arranged in three lines.

*Clark County  
Combined  
Health District*

**Additional information available on our  
website at: [www.ccchd.com](http://www.ccchd.com)**

**Or call the Environmental Health  
Division at (937) 390-5600**