

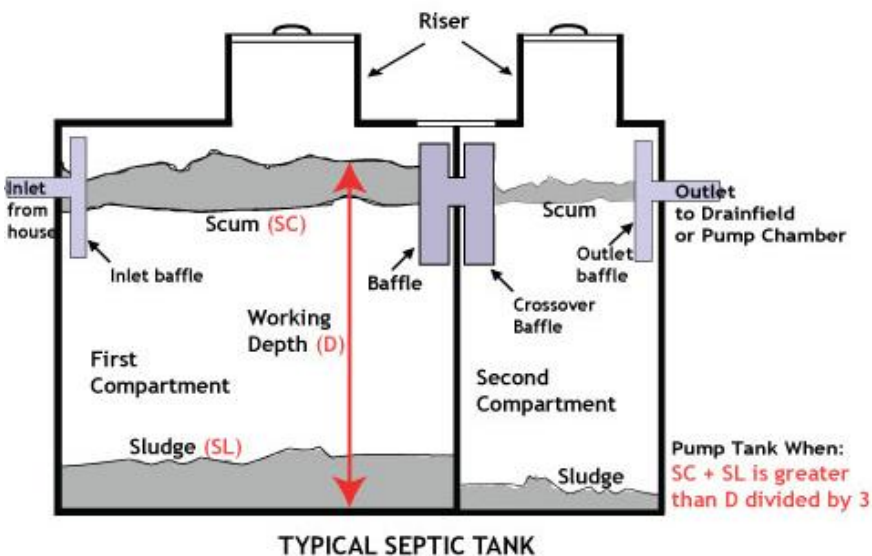
If you want to inspect your own septic tank... (green text is added for CBHA specifics)

The Stick Test

Septic tanks are mainly settling chambers. They allow time for solids and scum to separate from the wastewater, so clear liquid can safely go to the second tank. Over time, the scum and sludge layers get thicker, leaving less space and time for the wastewater to settle before passing to the *drainfield* or *second tank**. For every gallon entering the main tank, one gallon is pushed out to the *drainfield* or *second tank*. So, it is important to keep the level of scum and sludge from building up and nearing the inlet or outlet baffles, where the scum or sludge could plug them up or be carried out to the *drainfield* or *second tank*.

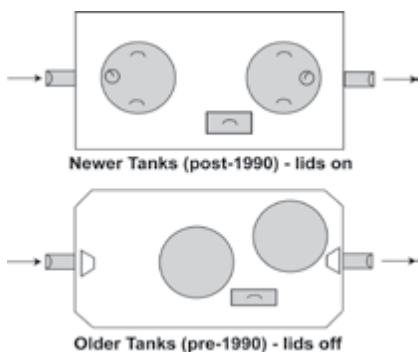
All septic tanks should be checked for buildup every 1 to 3 years until you can get on a predictable pumping schedule. **Most septic tanks need pumping every 3 to 5 years. How often depends on the size of the tank, the number of people in the household, and the amount and type of solids entering the tank.**

You can hire a professional or inspect your septic tank yourself. The “stick test” procedure below will guide you through the steps of measuring the amount of scum and sludge in the tank, discovering the working capacity of the tank, and determining whether the tank needs pumping. A more complete inspection includes inspecting the condition of the baffles and the pipe seals into and out of the tank (see Step 4).



Step 1

First uncover and remove the first manhole cover. Some systems have “risers” that make this job easier by bringing the tank lids up to the ground surface. (We encourage you to have risers installed so you won’t need to dig down each time you inspect.)



The diagram at left shows the tops of the two most common septic tank configurations. The upper figure is found on newer tanks and the bottom one is usually found on older septic tanks. In most cases, the hole to the left is the first compartment, the hole to the right is the second compartment, and the rectangular cover is to the crossover baffle. (Some tanks, 25 years or older, may have only one compartment that is round, oval, or square.)

Step 2 — Measuring the Scum Level

This procedure determines the thickness of the scum level (SC).

1. Make the **scum stick** — Cut 6 inches off one of the 10-foot PVC pipes and glue a 90° PVC elbow to it. Glue the elbow to the remaining 9.5-foot pipe. (see below). Place end caps on open ends.
2. Lay a board or stick across the top of the hole, manhole, or riser.



What you need for the Stick Test

- two 10-foot PVC pipes*
- four end caps*
- one 90° elbow*
- one adapter, male, threadXslip*
- one adapter, female, threadXslip*
- PVC cement, medium bodied (can use in rain and wet)
- 1 1/2 to 2 feet of white rag, old towel, or gym sock. Cotton is best.
- string or duct tape
- pencil or waterproof marker
- rubber gloves
- disinfecting solution made of 1/4 cup bleach per gallon of water in a bucket
- plastic bag for disposal of towel, rag/sock, gloves

* all PVC materials are 1/2-inch Schedule 40 PVC plastic

4. Work the stick through the scum layer, leading with the elbow end. Push straight through the scum layer, turn the stick 90°, gently pull up on the stick until you feel the bottom of the scum layer.

Scum stick is 6 feet long with a 6 inch leg. Sludge stick is two 5 foot sections screwed together.

Note: Scum and sludge sticks can be any length up to 10 feet.



CAUTION:

NEVER enter a septic tank - fumes can be fatal!
NEVER leave an open tank unattended. Keep kids and pets away. Cover with a large board or plywood, if needed.

3. Place the scum stick down the manhole of the first compartment of the tank until it rests on top of the scum layer (see Figure 1) and mark the scum stick where it crosses the reference point (A).

5. Mark the scum stick where it crosses the reference point (B).
6. Remove the scum stick and measure the distance between the two marks. This is the thickness of the scum layer (SC).

Step 3 — Measuring the Sludge Level

This procedure determines the thickness of the sludge level (SL).

1. To make the **sludge stick** — Cut the other 10-foot PVC pipe into two 5-foot sections if you want a two-piece stick. Glue an adapter and end cap to each stick. Connect the two sections to make a 10-foot stick.
2. Tightly wrap 1 1/2 to 2 feet of a white rag, old towel or gym sock around the bottom of the stick. Fasten it with

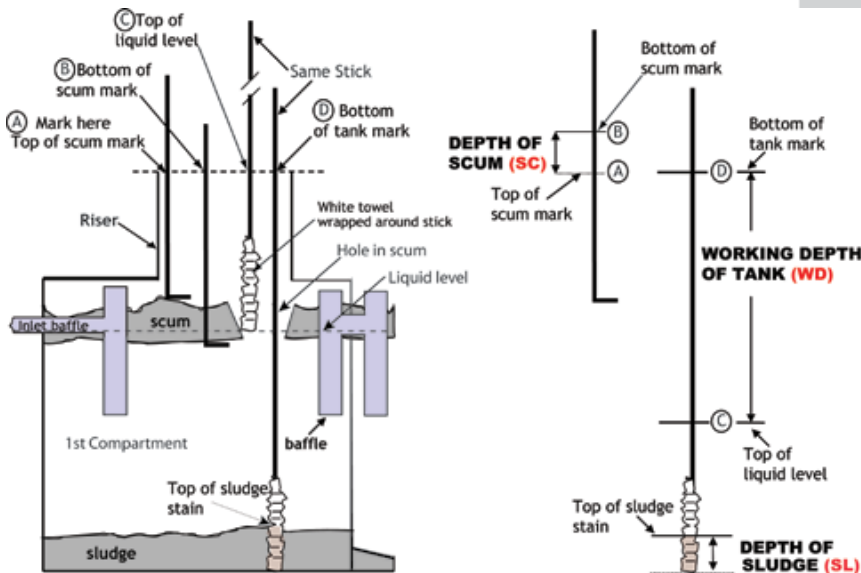


FIGURE 1 - SCUM DEPTH (SC), SLUDGE DEPTH (SL) AND WORKING DEPTH OF TANK (WD)

When to Pump

Pump the tank when the sludge depth, plus the scum depth, is greater than one-third of the working depth of the tank:

- (a) SC _____ inches + SL _____ inches = _____
(b) WD _____ ÷ 3 = _____

If (a) is greater than (b), the tanks needs pumping.

For example, if SC = 10, SL = 8, and WD is 48":
10 + 8 = 18 inches and 48/3 = 16 inches.

18 is greater than 16, so the tank needs pumping.

tape or string. Cotton is best.

3. Make hole in scum – do not stain the sludge stick with scum.
4. Carefully lower stick through the hole in scum in first compartment until it rests on top of the liquid layer. Mark the stick where it crosses the opening of the manhole or riser (C in Figure 1).
5. Lower the stick to the bottom of the tank. Hold the stick in the tank for at least ten minutes to allow sludge particles to adhere to the towel.
6. Mark the sludge stick where it crosses the board (D in Figure 1). The distance

between the two marks (C and D) is the working depth of the tank (**WD**).

7. Carefully remove the stick. There should be a distinct dark stain on the rag. Measure the height of the stain. This is the depth of the sludge layer (**SL**).

Step 4 — Inspect the Baffles

Remove the covers over the inlet, outlet, and crossover baffles. Inspect the baffles to ensure they are present and not severely corroded. If the baffles are concrete and molded into the rest of the tank, venting holes should be present and unobstructed.

- The inlet baffle should be unobstructed and the pipe sealed to the tank.
- The outlet baffle should be unobstructed and **the liquid level should be at the bottom of the inside of the pipe, not below the pipe** or above the bottom of the pipe. The pipe must be well sealed to the tank.
- The crossover baffle should also be free of obstruction.



In this picture, looking down an outlet baffle, the effluent is below the pipe, indicating a bad seal.

Safety and Cleanup

- Wear gloves.
- Discard soiled gloves and sludge toweling in a plastic bag.
- Rinse sticks **with bleach water to disinfect** before storing.

For more information on septic system care, inspection and maintenance, contact:

Thurston County Environmental Health

2000 Lakeridge Drive SW, Olympia, WA 98502

360-786-5490 or 360-867-2626 (TDD 360-867-2603)

www.co.thurston.wa.us/health/ehoss



Inspecting Your Septic Tank

It's not so bad...really!



PLEASE BE PROACTIVE AND CHECK YOUR HOLDING TANK

*In CBHA we mostly have pumpable systems that have their 2nd tank pumped by CBHA regularly for effluent ONLY. The homeowner also needs to have the solids in the tanks pumped by a reputable pumping company every few years, depending on your usage.

Water conservation can allow more time between maintenance pumps.