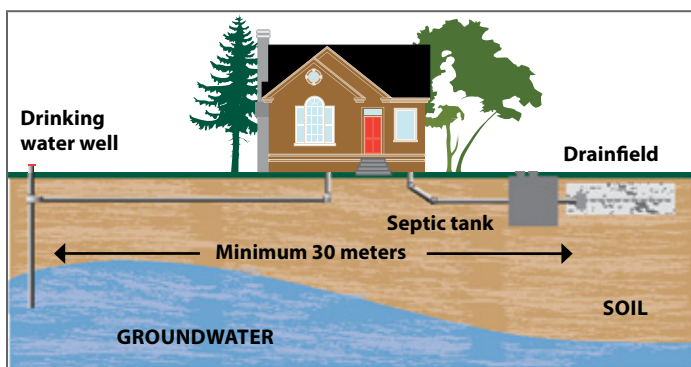


**HOMES NOT CONNECTED TO A MUNICIPAL SEWAGE SYSTEM USE SEPTIC SYSTEMS TO DISPOSE OF HUMAN WASTE. KNOWING THE LOCATION OF THE SEPTIC TANK IS IMPORTANT FOR PROPER MAINTENANCE OF THE SEPTIC SYSTEM.**

## WHAT IS A SEPTIC TANK?

A septic tank is a watertight, underground container for receiving, treating and settling human waste. Solids settle to the bottom of the tank where they are broken down by anaerobic bacteria. In well-maintained systems, solids can be reduced by 50 to 60%. Any liquids in the tank flow out into the dispersal area or drain field, where the remainder of the biological breakdown and filtration occurs in the soil (see Figure 1). Any sludge and surface oils remaining in the septic tank need to be pumped out every two to three years by a qualified sewage pump and haul company.

It is important to ensure proper sewerage system design (septic tank and drain field), installation, operation and maintenance to minimize the risk of harmful biological organisms reaching an aquifer or water supply well.



**FIGURE 1** Regulated setbacks of sewerage systems and wells (health hazard reg and sewerage system reg)

The Sewerage System Regulation ([http://www.bclaws.ca/civix/document/id/loo97/loo97/22\\_326\\_2004](http://www.bclaws.ca/civix/document/id/loo97/loo97/22_326_2004)) and Health Hazards Regulation ([http://www.bclaws.ca/civix/document/id/complete/statreg/216\\_2011](http://www.bclaws.ca/civix/document/id/complete/statreg/216_2011)) states that

sewerage systems must not be constructed within 30 metres (m) of a well (see Figure 1). However, the Sewerage System Regulation allows for a lesser distance with the submission of a report completed by a professional competent in hydrogeology to a health officer for approval.

## WHY DO I NEED TO KNOW THE LOCATION OF MY SEPTIC TANK?

Improper maintenance of an on-site septic system can result in the premature malfunction of the system and could create a health hazard, reduce the lifespan of the system or contaminate the groundwater or surface water that you and your neighbours are drinking.

Home owners are responsible for operating and maintaining their septic systems in a safe manner. Proper maintenance includes annual inspections of the septic tank, pumping out the septic tank every two to three years by a qualified sewerage pump and haul company, and prompt repairs carried out by an Authorized Person, if necessary (see the "Who is an Authorized Person?" section at the end of this brochure for more information).

Useful information on how to care for and prevent damage to your residential septic system can be found at: <https://www.crd.bc.ca/education/stormwater-wastewater-septic/at-home/protecting-septic-system/septic-system-resources>; and <https://www.healthlinkbc.ca/healthlinkbc-files/sewage-disposal-system-operation>.

## HELPFUL HINTS FOR MANAGING YOUR SEPTIC SYSTEM:

- » Use an Authorized Person trained in the maintenance and service of septic systems.
- » Follow the maintenance plan developed by an Authorized Person.
- » If water pools on a disposal area, seek the advice of an Authorized Person.
- » Do not plant trees near the sewerage system.

- » Do not leave the system out of operation for long periods of time during cold weather.
- » Prevent frost penetration in cold areas.
- » Do not drive or park over the system.
- » Do not overload the system with too much water or organic matter.
- » Do not flush inorganic items down the toilet.

## HOW CAN I FIND MY SEPTIC TANK?

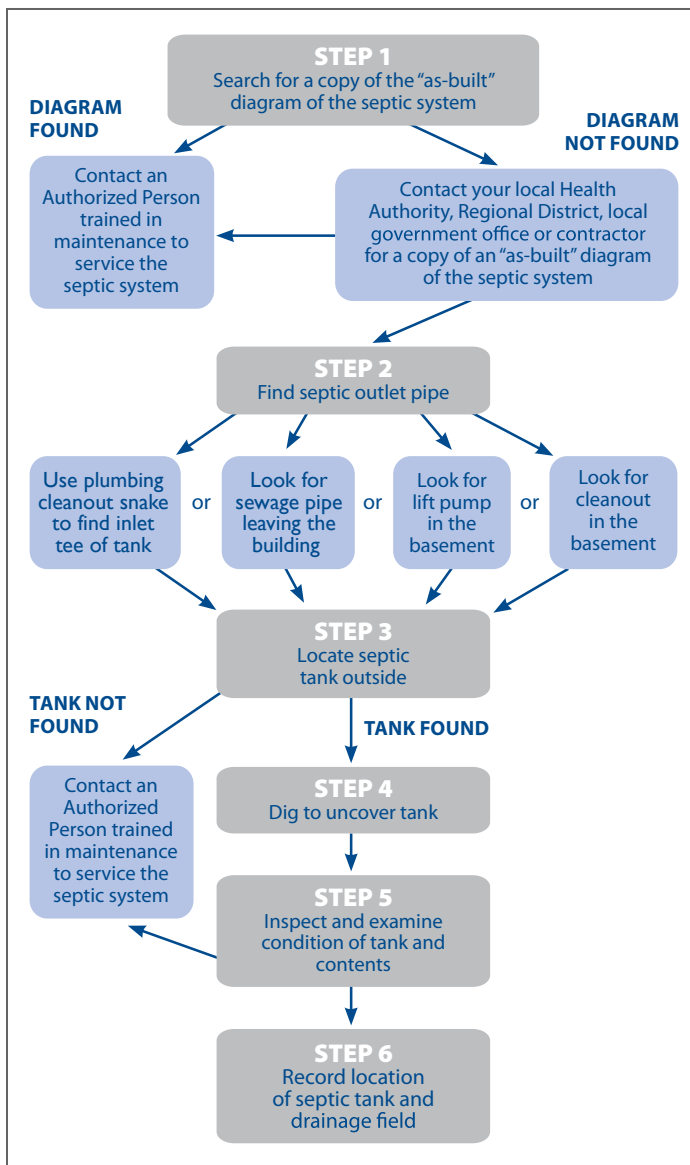


FIGURE 2 Finding a septic tank

### STEP 1 - SEARCH FOR A COPY OF THE "AS-BUILT" DIAGRAM OF YOUR SEPTIC SYSTEM

When a septic system is installed, an as-built diagram may have been provided to your local Health Authority. If you can't find your copy of the as-built diagram, contact the Authorized Person that designed or installed the

system, or submit a sewerage file information request to your local Health Authority. Additionally, if your system includes electrical components, you may be able to find the diagram in your municipal or regional district building department. Note that older systems may not have a diagram on file. If you cannot find an as-built diagram, it is recommended to investigate further and contact an Authorized Person.

### STEP 2 - FIND YOUR BUILDING SEWERAGE OUTLET PIPE

In the basement of the building, find the sewer outlet pipe (usually a black 4" pipe with a cleanout – see Figure 3 showing the blue sewer outlet pipe).

The cleanout (in a finished basement) will sometimes be found in a closet or behind a wall. Look for access covers, a box-style cover or a structure that may be hiding the sewer outlet pipe.

Some buildings will have a lift pump (see Figure 4) in the basement to pump sewage up and out of the building. Flush a toilet in the lowest level of the building and listen for the pump to determine the direction in which the sewage is being pumped. This should lead to the sewer outlet pipe.



FIGURE 3 Sewer outlet pipe (Left)  
FIGURE 4 Sewage lift pump (Right)

### STEP 3 - LOCATE THE SEPTIC TANK OUTSIDE

Determine where the sewer outlet pipe exits your home close to the outside wall of the house. It can be any distance from the house but is generally no closer than 1m (approximately 3ft). Sometimes the outlet pipe will take a

30°, 45° or 90° turn, so the tank may be located around the corner of the building. Look around the yard and try to judge the location of the tank and drain field.

### HELPFUL HINTS FOR LOCATING A SEPTIC TANK

- » A metal detector can help locate a buried concrete tank by finding the reinforcement bars. Don't wear footwear with any steel when using the metal detector.
- » A flushable transmitter can be obtained from an Authorized Person, a plumbing or rental store, or a tank cleaning company and flushed down the toilet and tracked with a receiver – the strongest signal will likely be over the inlet area of the septic tank.
- » A plumbing cleanout snake can be run through the sewage pipe to find the septic tank. Pay attention to any curves or bends the snake takes. When the snake stops, you have found the inlet tee of the tank. Do not ram the snake as this may dislodge the inlet tee, a very important part of the tank. When you recoil the snake, make note of the bends and distance to the inlet and add about 1 meter (approximately 3 feet) to reach the center of the septic tank. Be sure to take proper sanitary measures during and after use of the snake. Thick rubber gloves are recommended for handling and operating the snake. Thoroughly wash your hands and wipe down the area after you have completed the work. Once any dirt or waste matter has been removed, surfaces should be wiped down with a bleach solution (1 L household bleach in 25 L of water or one quart of household bleach to 7 US gallons of water). Any items used should be soaked in the bleach solution.
- » A pipe camera (see Figure 5) has a transmitter head and can be used to investigate the tank to check on its condition and location.



**FIGURE 5** Using a pipe camera to find a septic tank

### STEP 4 - DIG TO UNCOVER THE TANK

Once located, you will probably only see the top of the septic tank (the rest of the tank will be buried). The top of the septic tank is normally about the size of a 1.2 m x 2.4 m (4 ft x 8 ft) sheet of plywood. Septic tanks can be concrete, plastic or fibreglass and either rectangular, spherical or oblong in shape. The lighter plastic or fibreglass tanks are sometimes the only feasible option for rural areas. The lid of a newer tank (see Figure 6) is often located centrally, whereas many older tanks (see Figure 7) have concrete or wood slabs covering the entire top (generally two or three lids located over the inlet and outlet of the tank and one large lid as a cleanout). The lid will generally be within 1 m (approximately 3 ft) of the ground surface, but sometimes can be found much deeper.



**FIGURE 6** Newer style septic tank (Left)  
**FIGURE 7** Old style septic tank lids removed (Right)

Always look for gas, electrical, water and utility lines before digging. Dig gently, as aggressive use of a shovel or pounding bar can damage or destroy the pipes. A thin steel probe rod with a handle can be gently pushed into the soil to find the tank, as concrete and plastic tanks produce a distinct sound when tapped.

### STEP 5 - INSPECT AND ASSESS THE CONDITION

It is appropriate after finding the tank to remove the lid for inspection, assessment of the scum and sludge layers and maintenance. Check the thickness of the scum layer and the depth of the sludge to ensure that the scum or solids are not exiting the tank or significantly reducing the overall internal capacity of the tank. Never remove a lid and leave the tank unattended.

If your tank contains an effluent filter, have the person doing the maintenance rinse the filter contents into the open septic tank and not the yard or garden. It is recommended to involve an Authorized Person trained in maintenance to service your septic system.

Anyone entering a confined space (see Figure 8) must follow WorkSafeBC rules for confined space entry and have the appropriate training, experience and equipment. For more information, see: [www2.worksafebc.com/Topics/ConfinedSpaces/Home.asp](http://www2.worksafebc.com/Topics/ConfinedSpaces/Home.asp).



**FIGURE 8** Deep septic tank in confined place (worksafeBC rules apply)

## STEP 6 - RECORD THE LOCATION OF THE SEPTIC TANK AND DRAINFIELD

For future reference, note down the location of your septic tank – a useful form can be found at: [https://www.crd.bc.ca/docs/default-source/septic-pdf/septic-savvy/septicsystemmaintenancelocationrecord.pdf?sfvrsn=a02c8cc9\\_2](https://www.crd.bc.ca/docs/default-source/septic-pdf/septic-savvy/septicsystemmaintenancelocationrecord.pdf?sfvrsn=a02c8cc9_2)

## WHAT IF THE TANK IS UNDER A PERMANENT STRUCTURE?

It may be hard to find your septic tank if your home has had lots of repairs and/or renovations. The septic tank may be found under a concrete patio, cedar deck, porch, driveway, shed, etc., even though it should not be found in these locations. In rare instances, the tank may be found within a building. A septic tank within a building should be moved outside. A tank under a tightly enclosed structure should be properly ventilated or moved (septic tanks produce harmful and flammable gases). Moving any major component of the septic system will require meeting the Sewerage System Regulation and should be done by an Authorized Person.

Covering the tank with soil or a concrete slab is acceptable if the tank is easily accessible for servicing. All access lids must be easily reached for monitoring and maintenance.

## WHO IS AN AUTHORIZED PERSON?

There are two types of Authorized Persons – a Professional and a Registered Practitioner. It is an offence for anyone other than an Authorized Person to construct, install, repair or maintain a sewage system. To find an Authorized Person, see the Applied Science Technologists and Technicians of BC (ASTTBC) website (<https://asttbc.org/registration/technologists/register/>) for Registered Practitioners or Engineers and Geoscientists of BC (EGBC) website (<https://www.egbc.ca/Member-Directories/Professionals-for-Sewerage-System-Regulation>) for a list of Professional Engineers carrying out services under the Sewerage System Regulation.

## FOR FURTHER INFORMATION

Contact your local Health Authority (phone number can be found in your phone directory, internet or from Enquiry BC 1 800 663-7867).

Alternatively, you can contact the BC Onsite Sewage Association at 1 866 391-8442 or [www.bcossa.com](http://www.bcossa.com)

For information on groundwater and well stewardship go to: <https://www2.gov.bc.ca/gov/content/environment/air-land-water/water/groundwater-wells-aquifers>

Photos by Coast Mountain Earth Sciences

