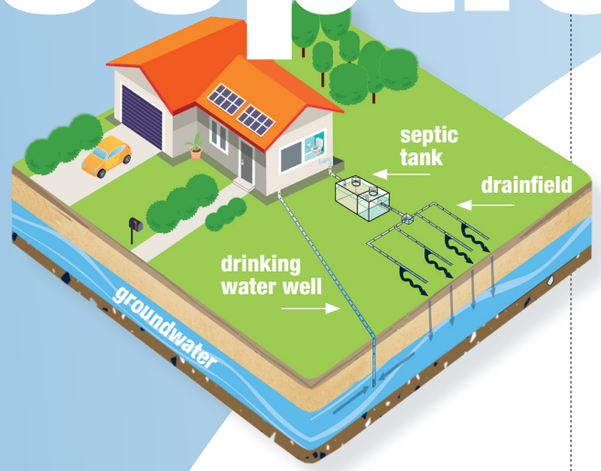
septic



Septic systems

Septic systems have only a few parts: the water piped from your home to the tank where the solids settle, a filtered solid pipe from the top of the tank to the 'D' box (distribution box) which has a few perforated pipes that reach out underground to spread out the water into the leach field.

Septic systems, when properly used and cared for, are an efficient way to deal with all the outflow water from inside your home. A "sick" septic system can be a smelly nightmare and also dangerous because the wastewater contains fecal coliforms, which are bacteria present in the intestines of humans and animals. Untreated wastewater can carry dangerous viruses and pathogens like cryptosporidium, giardia, hepatitis and salmonella. When septic systems do not work well, untreated or partially treated wastewater can be exposed.

A septic system is simply where all the water from inside your home goes to a tank, unless you have a dual system that separates out grey water. Septic systems work best when they get only three ingredients to feed the bacteria that keeps the tank functioning well. "Poop, pee and paper" with only a little water will keep your tank healthy. Toilet paper described as luxurious does not make for a happy septic system as it is hard to break down. Too much water dilutes the bacteria that do the work. No baby wipes, latex products, antibacterial soap, bleach, medicine, cosmetics, hygiene products, facial tissue, leftover food, dental floss, cotton swabs, disposable diapers, kitty litter, liquid fabric softeners, laundry detergent pods etc. go into the system in any way. Do not use harsh chemicals or drain cleaners because they will kill the good bacteria in your tank. Clean toilets with hydrogen peroxide, which breaks down into harmless hydrogen and oxygen or pour in a measured amount of white vinegar then the same amount of baking soda. This will fizz and clean the bowl, then the ingredients will neutralize each other.

Read the labels on laundry and dish detergent since many will state they are environmentally friendly or septic friendly. Look for low or no phosphates. Look online for the best and remember that "more is not better". Borax and bleach are great cleaners but they poison the septic tank and the soil except when used in tiny amounts.

Never put FOG (fats, oils, grease) down the drain because it will clog the sink pipes and septic tank filter, causing blockages and back ups. Wipe small amounts of FOG with a paper towel, larger amounts should be cooled and put into a container then into the garbage. Up to 10 litres of liquid cooking oil can be taken to a recycling depot. It is not a good idea to put any of it into the compost as it will attract rats and bears. Use the kitchen sink strainer and pull out bathroom hair clogs in drains with tweezers or needle nose pliers. Hair and body products can add to the oil scum in a septic tank and contribute to blocking the filter so use sparingly if at all.

Do you know when your septic tank was last cleaned? **Septic tanks should be inspected by you at least once a year** and the filter, if it has one, should be hosed clean back into the tank, not onto the ground. Hair can catch and clog the filter so the liquid cannot exit the tank to the septic field. Tanks should be professionally cleaned out about every five years or so, depending on size of the system and on the number of people using the system. The more bedrooms in a home, the bigger the tank and leach field that is required.

Do not plant anything with deep roots over a septic (leach) field. The experts recommend lawn grass but clover is healthier for the soil and for the pollinators and does not need regular mowing. Do not plant any kind of tree (especially water-hungry species like willow) anywhere near the septic because the roots will seek water and infiltrate the pipes, blocking the system.

Do not allow vehicles or hoofed animals on the septic field because they weigh enough to compress the soil so it will not be able to work well dissipating the liquid. Do watch for very green lawn stripes on the septic field, unpleasant sewage odours and tiny white flies over the field. These are warning signs indicating that you need to pay attention to your septic and perhaps have any problems corrected. A septic system is estimated to last for 20 to 30 years but a well maintained one can last 100 years. Replacing a single-family septic system can cost from $15,000 to $45,000.

For more information, go online to CRD Septic at www.crd.bc.ca/education/stormwater-wastewater-septic/at-home/protecting-septic-system

wells

All of our water comes from the sky as rain or snow in late autumn, winter and early spring. Wells can take a year or more to refill from the rainwater or snowmelt, so it is very important to conserve water in the dry months until the wells refill. Wells draw water from natural underground water storage (aquifers). Wells in a local area likely share an aquifer, and like several straws in a milkshake, when one takes too much water, it affects neighbours' wells too. Ways to save water and care for your well: https://www.rdn.bc.ca/sites/default/files/inline-files/WellSmart%20Workshop%20Presentation

think twice

Think twice about cutting down trees because they affect our aquifers in many ways: they hold the soil, help infiltrate water into the soil, stop flooding, provide shelter from weather and are homes for many species. If many trees are cut down, other plants will want to grow there, and in this area Scotch broom and Himalayan blackberries, which are both invasive species and aggressive, will quickly appear and become established.

Never put water or anything else down your well. It is illegal and can be dangerous and costly. A well does not have a solid bottom like a silo or tank, and your hauled water will spread out into the aquifer and be lost. Think of it like pouring a bucket of water into a lake. If your well runs dry, adding hauled water can cause problems because it can have a different chemical balance in it. This can damage your well equipment and the aquifer and can cause minerals naturally occurring in the soil to be drawn out. In this area, manganese, iron and arsenic are common in groundwater and it is best not to draw them out. If your well runs dry and you have to order water in, it needs to be stored in a tank or cistern.

Well water should be tested once a year to see if there are any problems. Water testing businesses charge a fee, but will send you some bottles, labels and instructions. There are various tests available: 'drinking water' is the most useful. Samples need to get back to the lab quickly for valid testing, and some tests take longer but you will normally get your results within a few weeks.

Keep your animals away from the wellhead because E-coli and coliform in the feces can get into the water supply. Abandoned wellheads need to be protected from surface water runoff. Similarly, don't pour or spray anything that you would not drink onto the ground near your well. Your water source is below.

Filters and UV lights need to be replaced about once a year. If you are unsure what to do, ask a neighbor or call a professional well business. Watch what they do, ask questions, and follow manufacturer's instructions.

You may want to check to see if your well is registered or licensed. A government site has that information, see https://apps.nrs.gov.bc.ca/gwells. You can change the well in your new home to your name if it is already listed. A domestic well is free to register (this is voluntary) and the benefit is that if there are plans for a nearby development, your well can be taken into account regarding available water supply. There is no fee for domestic water use of well water. If you are using your well or stream water for anything that creates income, you are required (by law) to license your well and there will be a charge for the portion that generates income. Farms and B&Bs are included in this category, and more information can be found by looking up "BC groundwater wells and aquifers".

water saving tips

Scrape the dishes before hand washing them, and when you are saving water, use a bowl or basin in the sink to wash dishes, rinsing in another bowl of clean water. The rinse water can be used to water outdoor plants, for flushing or washing a vehicle. Soak baked-on food, then scrape and compost or throw out the residue.

Catch the water in a bucket while you run water waiting for the shower to warm up. The excess water can be used for flushing or watering plants and animals or heated to wash dishes. A low flow shower head and short showers will save a lot of water.

Fill a jug with as much drinking water that you will need for the next day and put it in the fridge instead of running the tap until it is cold. If you use water stored in an above ground tank, it will not get cold in summer.

Only do full loads of dishes and laundry. Don't use laundry pods because the gel pods recombine as blobs in the septic system and can clog the outfeed pipes. Don't do back-to-back loads, so that your well has time to recharge (refill). If you overuse the well, it can cause soil to get into the pump and damage it, into the filter and clog it, and into the UV light and block the light radiation that kills the bacteria. It can also cause sea water incursion and ruin your well water and the local aquifer.

Turn the tap on and off while brushing teeth, shaving and washing hands.

"If it's yellow, let it mellow, if it's brown flush it down." A low flush toilet is best and do think if you really need to flush for every use. 25% or more of potable household water is used for flushing.

Check for leaks in outdoor taps, indoor faucets and toilets. Drips are easy to spot and can waste a lot of water over time. Toilets can have silent leaks that waste water without anyone noticing.

To test your toilet, take off the tank lid and set it aside. Put a few drops of food colouring into the tank, wait fifteen minutes and see if the water in the toilet bowl is coloured. If it is, you have a leak. Turn off the infeed water line tap to the tank, flush the toilet to drain the tank, and use an old toothbrush or other small stiff bristle brush to scrub around the rubber "flap" and the hole it fits. Biofilm (slime) and mineral deposits from well water can build up in standing water over time and stop a good seal. After scrubbing, put the tank lid back on so water does not shoot everywhere, turn on the infeed tap and when the tank is full, do the colouring drops test again and check the bowl. If the water is coloured, you still have a leak.

It may then be necessary to replace the parts in the toilet tank. Turn off the infeed tap, flush to drain the tank, and take the parts to the store so you buy the right size and type. The test should be done twice a year, and a good time is when we change the clocks in spring and autumn. Silent toilet leaks can waste hundreds of litres of good water in a short time.