

Testing Your Well Water

Why should I get my well water tested?

A visual inspection of your water or a taste test does not tell you if your well water is safe to drink. The only way to provide this reassurance is to have your water tested at an accredited lab.

Water for drinking, cooking, washing dishes, brushing teeth and all other domestic purposes should be free from harmful microorganisms, like bacteria, viruses and protozoa. Additionally, chemicals or minerals should not be present in your water at a level that could cause a health problem

What should I test for and how often?

Bacteriological Testing: You should test your well for bacteria at least once per year or immediately if you notice a change in clarity, colour or taste. If your water source is a shallow well (dug well) or a surface supply then you should test more frequently (e.g. seasonally) as these sources are more susceptible to contamination. Additionally, it is recommended that you install an approved treatment device to disinfect or otherwise remove harmful bacteria, virus and protozoa (e.g. filtration and ultraviolet). Contact your local Drinking Water Officer for advice; refer to the contact information below.

Bacteriological safety is determined by testing for “indicator organisms” called total coliform and E. coli. The presence of these organisms indicates that contamination has entered the well and disease-causing organisms may be present. Contamination can occur from many sources including the soil or from human and animal waste including failing septic systems.

Chemical Testing: Testing should be done initially when the well construction is completed and annually thereafter. If there is no significant change in water chemistry over two years then testing can be done every five years. Safe drinking water should meet the most common physical and chemical parameters listed in the *Guidelines for Canadian Drinking Water Quality*.

To view a copy of the guidelines refer to: <http://www.hc-sc.gc.ca/ewh-semt/water-eau/drink-potab/guide/index-eng.php>

The table below lists the chemical and physical parameters that are recommended for testing. Ensure that the test includes a low level metals scan (ICPMS Extractable).

Physical Parameters	Dissolved Anions	Total Metals		
Color	Alkalinity	Aluminum	Copper	Potassium
Conductivity	Chloride	Arsenic*	Iron	Selenium
Dissolved Solids	Fluoride	Barium	Lead	Sodium
Total Hardness	Sulphate	Boron	Magnesium	Uranium
pH	Nitrate-Nitrogen	Calcium	Manganese	Zinc
Turbidity	Nitrite-Nitrogen	Chromium	Mercury	

*Note: Elevated levels of naturally-occurring arsenic in drilled wells are common throughout the Sunshine Coast, Powell River, Sea to Sky and Bowen Island areas. Do not consume water with arsenic levels above the Maximum Acceptable Concentration (MAC) determined by Health Canada guidelines. Contact your local Drinking Water Officer for advice or refer to the Arsenic in Drinking Water health file; <http://www.healthlinkbc.ca/healthfiles/hfile49c.stm>

How do I collect and ship the water sample?

Contact a lab from the list below and enquire about lab costs, sample bottles and shipping arrangements. Once you receive the sample bottles from the lab, read the sampling instructions carefully. Sampling error often contaminates the samples and produces elevated coliform results (false positive results).

When collecting a sample, it is important that the following steps are followed:

1. Choose a sample site that is accessible in an often used location, such as a kitchen tap. Do not use a garden hose or dipper.
2. The water must be collected prior to any water treatment devices such as softeners, carbon filters, reverse osmosis units and ceramic filters. Bypass, remove or disconnect these devices to ensure that the sample is taken before the water enters these treatment devices.
3. Remove any attachments from the tap such as an aerator, swivel, or hose and any rubber washers.
4. **Wash your hands prior to collecting the water sample.**
5. Clean and disinfect the tap inside and out with an alcohol wipe or chlorine bleach solution prior (4 parts water to 1 part chlorine).
6. Run the water until cold.
7. Do not rinse the bottle prior to sampling.
8. Remove the lid from the sample bottle with one hand while holding the container with the other hand. Do not touch the neck or inside of the lid or otherwise allow anything else to contaminate the sample.
9. Fill the bottle to the recommended level.
10. If you are unsure whether the sample was contaminated; discard and re-sample using a new bottle.
11. Package the sample in a cooler with an ice pack (maintain temperature below 10°C) and ship to the lab immediately (the test may not be completed if the transit time is greater than 30 hours).

Where can I get my water tested?

Water can be tested for bacteria and chemical analysis at the labs listed in the table below. This test is often referred to as a "Potability Test" by local building departments for final occupancy approval or for mortgage companies when applying for a new mortgage. Vancouver Coastal Health does not provide certification that the water is potable.

Name of Lab	Location	Contact information
ALS Laboratory Group	8081 Lougheed Hwy, Burnaby, BC V5A 1W9	604-253-4188 www.alsglobal.com
Bureau Veritas Laboratories (formerly Maxxam)	4606 Canada Way, Burnaby, BC V5G 1K5 2755B Moray Avenue, Courtney, BC V9N 8M9	604-734-7276 250-338-7786 www.bvlabs.com
Exova Ltd.	#104-19575-55A Ave, Surrey, BC V3S 8P8	604-514-3322 www.exova.ca
MB Laboratories Ltd.	2062 Henry Avenue, W. Sidney, BC V8L 5Y1	250-656-1334 www.mblabs.com
CARO Analytical Services	4011 Viking Way, Richmond, BC V6V 2K9	604-279-1499 www.caro.ca

What if there is a problem with my water test?

Refer to the following website links for advice:

Arsenic in Drinking Water <http://www.healthlinkbc.ca/healthfiles/hfile49c.stm>

Water Well Disinfection http://www.env.gov.bc.ca/wsd/plan_protect_sustain/groundwater/wells/factsheets/PFRA_simple_chlorification.pdf

Total, Fecal, and E. coli Bacteria in Groundwater

http://www.env.gov.bc.ca/wsd/plan_protect_sustain/groundwater/library/ground_fact_sheets/pdfs/coliform%28020715%29_fin2.pdf

Should I Get My Well Water Tested <http://www.healthlinkbc.ca/healthfiles/hfile05b.stm>

Or you can contact a local Drinking Water Officer in your area for assistance:

Sechelt	Darren Molder	604-885-8711	darren.molder@vch.ca
Squamish/Sea to Sky	Dan Glover	604-815-6846	dan.glover@vch.ca
Powell River	Michael Nguyen	604-485-3324	michael.nguyen@vch.ca
Bowen Island	John Pickles	604-983-6758	john.pickles@vch.ca
Central Coast & Indian Arm	Phil Muirhead	604-983-6756	phil.muirhead@vch.ca

