

No. B12-01-R  
February 14, 2012  
Revised: May 28, 2012

## Potable water – “Safe for human consumption”

---

Division A.1.4.1.2.(1) states that *potable* means safe for human consumption. This bulletin is intended to provide code users guidance in determining what is “safe for human consumption.”

Through the requirements found in the *Drinking Water Protection Act*, British Columbians can have confidence that both public and larger private water supply systems are delivering water that is safe for human consumption. In addition to water supply systems governed by the Act, *private water supply systems* such as cisterns and wells that serve only one single-family residence are common in British Columbia. The responsibility for these small systems rests with the individual property owners.

Owners of such a *private water supply system* can determine if the water is safe for human consumption by referring to the Guidelines for Canadian Drinking Water Quality as published by Health Canada in 2010 ([http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/2010-sum\\_guide-res\\_recom/index-eng.php](http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/2010-sum_guide-res_recom/index-eng.php))

These guidelines contain maximum acceptable values for a large number of substances that could be found in water. Many of the substances or parameters are noted in the guideline for their effect on the aesthetics or appearance of the water, not for their effect on health.

As the 14 parameters (and their limits) listed below are commonly found in groundwater, they have been extracted from the summary table of the guideline and can be considered the baseline in determining potability. Contact your local Health Authority to ask the local Drinking Water Officer (DWO) if other contaminants are known to be a problem in your locality. Contact information for BC’s Health Authorities can be found at <http://www.health.gov.bc.ca/socsec/contacts.html>.

**Water Quality Guidelines for Potable Water**

<b>Parameters</b>	<b>Guideline Value Maximum Acceptable Concentration (MAC)</b>
Total coliform bacteria	<1 CFU per 100 mL
<i>Escherichia coli</i>	<1 CFU per 100 mL
Nitrate <sup>1</sup>	≤ 45 mg/L
Lead	≤ 0.01 mg/L
Fluoride	≤ 1.5 mg/L
Arsenic	≤ 0.01 mg/L
Antimony	≤ 0.006 mg/L
Barium	≤ 1 mg/L
Boron	≤ 5 mg/L
Selenium	≤ 0.01 mg/L
Cadmium	≤ 0.005 mg/L
Chromium	≤ 0.05 mg/L
Uranium	≤ 0.02 mg/L
Turbidity <sup>2</sup>	1 NTU

<sup>1</sup> Equivalent to 10 mg/L as nitrate–nitrogen. Where nitrate and nitrite are determined separately, levels of nitrite should not exceed 3.2 mg/L.

<sup>2</sup> Elevated turbidity (>1 NTU) indicates the presence of particulates in the water. This is unusual for well water and indicates the possible intrusion of surface water that may be contaminated with harmful micro-organisms. The well head should be checked for leaks to ensure that surface water is not entering the well.

If maximum acceptable concentrations are exceeded, appropriate water treatment might be necessary to make the water potable. Further guidance on well water treatment and maintenance is available from Health Canada at <http://www.hc-sc.gc.ca/ewh-semt/pubs/water-eau/well-puits-eng.php>. Your local Drinking Water Officer may be able to provide advice on appropriate treatment where needed.

For further information on the potability of water and the potential health effects of contaminated water, please refer to HealthLink BC File #05b “Should I Get My Water Well Tested?”, July 2010 (<http://www.healthlinkbc.ca/healthfiles/hfile05b.stm>).