

# Drinking Water Quality

## In Greater Victoria




Little girl enjoying a fresh drink of water.

## Is Greater Victoria's water safe to drink?

Absolutely! Greater Victoria residents enjoy safe, healthy drinking water. It is thirst-quenching and quite inexpensive—and of course, it is also fat-free, cholesterol free, and has zero calories!

Greater Victoria's drinking water continues to meet all provincial and federal health-based regulations. In short, the 320,000 consumers in Greater Victoria from Sooke to the tip of the Saanich Peninsula receive high quality drinking water!

### Need more information?

CRD Water Quality Division: **250.474.9603** or  
CRD Water Services: **250.474.9600**  
[www.crd.bc.ca/water/waterquality/reports.htm](http://www.crd.bc.ca/water/waterquality/reports.htm)



Making a difference...together

**Capital Regional District** | Water Services  
479 Island Highway, Victoria, BC V9B 1H7  
T: 250.474.9600 | F: 250.474.4012  
[www.crd.bc.ca/water](http://www.crd.bc.ca/water)

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Testing for bacteria at the water quality lab.

## What's in our drinking water?

The drinking water in Greater Victoria is tested for about 300 different types of water quality parameters. The table below summarizes some of the average results of this testing.

TEST	MEDIAN VALUE	LIMIT
Arsenic	0.001 mg/L*	0.01 mg/L
Chlorine	1.24 mg/L	3.0 mg/L
Copper	0.01 mg/L	1.0 mg/L
Fluoride	0.009 mg/L	1.5 mg/L
Iron	0.04 mg/L	0.3 mg/L
Lead	0.5 µg/L**	10 µg/L
Mercury	0.0009 µg/L	1.0 µg/L
Selenium	0.001 mg/L	0.01 mg/L
Sodium	1.7 mg/L	200 mg/L
Viable Parasites	Zero	Zero desirable
Pesticides and Organics (We test for 95 different compounds)	None detected	Of the 95 compounds only 41 have limits. Our water is below all limits
Trihalomethanes (THMs) (By-products of interaction between chlorine and naturally-occurring organic matter)	12 µg/L	100 µg/L
Hardness (measure of mineral concentration)	17 mg/L	Our water is very soft
pH	7.12	6.5 - 8.5

\*mg/L is milligrams per litre (one part per million)

\*\*µg/L is micrograms per litre (one part per billion)



Consult your pet store for a chloramine neutralizing chemical.

## Pets? Fish?

Greater Victoria's drinking water is safe for all pets as it comes from the tap. However, this is not true for fish that live in water. Chloramines must be removed from the water before adding it to fish bowls and aquariums.

## Immuno-compromised?

The Provincial Medical Health Officer has advised that all immuno-compromised people should boil their drinking water to lessen the risk of infection. This precautionary advice applies to both tap and bottled water and affects:

- People under going chemotherapy
- People who have undergone transplants
- People with HIV/AIDS or other immune system disorders
- Some elderly persons and infants under 1 year of age

## Dialysis patient?

It is perfectly safe for dialysis patients to drink water containing chloramines. Chloramines are harmful only when they directly enter the bloodstream through the dialysis process. For this reason, dialysis equipment must remove chloramines before it is used for dialysis patients. Check with your medical center to ensure that is done.



# Refreshing Information

About Drinking Water Quality  
in Greater Victoria



Water Intake Tower at Sooke Reservoir.

## Where does our drinking water come from?

Greater Victoria's drinking water comes from Sooke Reservoir which is nestled in the Sooke Hills about 30 km northwest of the City of Victoria. Sooke Reservoir is surrounded by a large forested watershed that is owned and protected by the Capital Regional District (CRD). It is one of the most stable drinking water sources in the Pacific Northwest. At full storage capacity, Sooke Reservoir holds 20.4 billion litres of water-enough to fill 31 million Olympic-sized pools!

CRD Water Services operates the source, treatment and transmission systems and supplies drinking water to the municipalities of Central Saanich, North Saanich, Oak Bay, Saanich, Sidney, and Victoria. These municipalities own and operate their own distribution systems (Victoria owns and operates the Esquimalt system) and supply retail drinking water to their customers. CRD Water Services operates the distribution system and supplies drinking water to the Westshore (View Royal, Colwood, Langford, Metchosin) as well as Sooke and parts of the Juan de Fuca Electoral Area.

**The watershed lands are reserved solely for producing high quality drinking water.**

**"Sooke Reservoir source water requires only disinfection to make it safe to drink."**

Dr. Richard Stanwick, Chief Medical Health Officer  
Vancouver Island Health Authority



Disinfection kills bacteria, parasites and viruses that come from wildlife.

## How is our drinking water protected?

CRD Water Services uses a multiple barrier approach to prevent contamination of Greater Victoria's drinking water. The barriers listed below protect and maintain the high quality of our drinking water:

- Watershed lands are 98% owned by CRD
- Extensive watershed protection programs
- No public access, no swimming or boating
- No farming, pesticides, logging or mining
- Multi-step water disinfection
- Well trained staff, certified operators
- Good distribution system maintenance
- Pipe replacement program
- Cross connection control program
- Certified Water Quality Laboratory
- Extensive water quality monitoring

## Why do we need to disinfect our drinking water?

Even though Sooke Reservoir is a high quality source of drinking water, it can contain low levels of bacteria, viruses or parasites that have come from the birds and animals which inhabit the watershed lands. Some of these organisms can be harmful to human health and therefore, the water must be disinfected before it can be used by the public.



Japan Gulch UV Disinfection Plant

## How is our drinking water disinfected?

CRD Water Services disinfects Greater Victoria's drinking water using a three-step process:

- Step 1. UV Disinfection**  
Ultraviolet (UV) disinfection is the first step of the disinfection process. UV kills bacteria and parasites such as *Giardia* and *Cryptosporidium*.
- Step 2. Add Chlorine**  
Chlorine is added as the second step in the disinfection process. The low dose (1.5–1.7 mg/L) of chlorine kills viruses and provides further protection against bacteria.
- Step 3. Add Ammonia**  
Ammonia is added as the final step in the disinfection process. The tiny quantity of ammonia combines with chlorine to produce chloramines. Chloramine is a long-lasting disinfectant which protects the water from bacterial contamination as it travels through the long distribution system pipelines in Greater Victoria.



Sampling Sooke Reservoir and the water distribution system.

## Who samples our drinking water?

Staff from the Water Quality Division of CRD Water Services sample the source water reservoirs and streams in the Water Supply Area along with the drinking water throughout the municipalities of Greater Victoria. In the course of sampling this large drinking water system, a Water Sampling Technician can travel up to 100 km per day. This results in about 7,500 samples being collected each year!

## Who tests our drinking water?

At CRD Water Services' provincially certified water quality laboratory, the water is tested each day for bacteria, turbidity (cloudiness), taste, odour, and chlorine. Other tests are conducted weekly, monthly, quarterly, or semi-annually. In total, about 35,000 laboratory tests are conducted each year.

CRD Water Services also monitors the algae and other microscopic organisms that live in Sooke Reservoir. The great variety of algae living in Sooke Reservoir is one of the indicators of a healthy ecosystem.



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