

How can I find out more about drinking water quality in Alberta?

- For information on certification, approvals, legislation, guidelines and related publications, visit Alberta Environment's web site at <http://www.gov.ab.ca/env/>. You may also contact Alberta Environment's Information Centre at:
Main Floor, 9920-108 Street
Edmonton, Alberta T5K 2M6
Phone: 780-944-0313
(call toll-free by dialing 310-0000)
Fax: 780-427-4407
env.infocent@gov.ab.ca
- For information on how to have your water tested, contact your local regional health authority. A map of regional health authorities is available on the Alberta Health and Wellness web page at <http://www.health.gov.ab.ca/index.html>
- For information on public water supplies, contact your local municipality.

MAKING SURE IT'S



SAFE

Water is life. Simply put, without clean water, nothing can live. It is vital to our survival.

Yet few people really understand where it comes from and how we make sure it's safe to drink.

Here are some frequently asked questions and answers about Alberta's drinking water.

Where does Alberta's drinking water come from?

- There are two major sources of drinking water: surface water and groundwater.
- Surface water comes from lakes, reservoirs and rivers. Most of Alberta's population gets water from surface water sources.
- Groundwater comes from either wells or springs, which are fed by underground water sources called aquifers.



Why does drinking water need to be treated?

- The main reason for treating or disinfecting public water supplies is to kill pathogens, which are disease-causing organisms transmitted by water.
- Some examples of waterborne diseases and disease-causing organisms are cholera, typhoid, E.Coli, *Giardia* and *Cryptosporidium*.

Who is responsible for ensuring our drinking water is safe in Alberta?

- Alberta Environment regulates public waterworks systems in the province in accordance with the *Environmental Protection and Enhancement Act*. The department works closely with Alberta Health and Wellness and the regional health authorities to ensure Albertans continue to enjoy high-quality drinking water.
- Alberta Environment issues "waterworks system" operating approvals to Alberta's municipalities. These approvals clearly outline the municipalities' responsibilities for:
 - treatment requirements
 - performance standards
 - compliance sampling
 - monitoring
 - reporting requirements
- By law in Alberta, water from treatment facilities must also meet standards based on Health Canada's stringent *Guidelines for Canadian Drinking Water Quality*.

How can we be sure our drinking water is safe in Alberta?

- Drinking water safety depends on a number of key elements:
 - good water supply and treatment systems
 - proper operation and maintenance of waterworks systems
 - comprehensive monitoring for drinking water quality
 - appropriate steps for correction and enforcement
- Alberta Environment's drinking water program addresses *all* of these elements. In fact, Alberta's treatment performance standards are the *most stringent* in Canada.
- Alberta Environment works cooperatively with owners and operators of municipal water treatment systems to *prevent* drinking water problems *before* they occur. The department also has an active enforcement program to take action if requirements are violated.
- In addition to Alberta Environment's comprehensive approvals and standards, there is a communication and action protocol in place. This protocol is designed to ensure that Alberta Environment, the regional health authorities, the public health laboratories, and the owners and operators of municipal water treatment systems can deal effectively with emergency situations, such as failed bacteriological tests.
- Compliance monitoring includes a minimum of one or more tests for bacteria each week. The samples are submitted to the provincial health laboratories in Edmonton and Calgary for analysis. Only the City of Edmonton is permitted to do some of the analysis in its own laboratory.
- In addition, Alberta Environment continuously reviews new information to evaluate and, if necessary, revise drinking water requirements and standards.
- As a result, there are many requirements and standards that work together to form a drinking water program that provides Albertans with a high level of public health protection.

What if I don't get my water from a public water system?

- Albertans who obtain their drinking water from alternative sources – such as personal groundwater wells and other wells, dugouts, canals, streams and lakes – are responsible for making sure their own drinking water is safe.
- It is important to note that they are responsible for having the water tested on a regular basis and for applying the appropriate treatment options based on the water quality reports.
- Water analysis for public health purposes, testing for routine chemistry, trace metals and microbial contamination is provided to Albertans through the Public Health Laboratories. These facilities are funded by Alberta Health and Wellness, while access is provided through the regional health authorities. A handling fee may be required.

Is it OK for hikers and backpackers to drink water from streams or lakes in remote areas of Alberta?

- No. You may have heard about "beaver fever" (giardiasis) in recent years. This disease is characterized by severe diarrhea that can last several weeks. In addition, disease-causing bacteria from wildlife may be present in remote streams.
- *Always* boil your water if you draw it from any surface water source like a stream, lake or river. Boil the water for three minutes (use a timer) *after* it reaches a full boil. Do not count the time it takes for the water to reach full boiling.
- Water purification tablets are available at drug stores and camping supply stores, but they are less reliable than boiling. Purification tablets at the right concentration and time of exposure will inactivate *Giardia*, but they will not protect against other parasites, such as *Cryptosporidium*. They are less effective in cloudy or coloured water. Always ensure that you follow the manufacturer's instructions.

What's the difference between hard water and soft water? Is one safer to drink than the other?

- The hardness of water relates to the amount of calcium, magnesium and sometimes iron in the water. The more minerals present, the harder the water. Soft water may contain sodium and other minerals or chemicals; however, it contains very little calcium, magnesium or iron.
- Very soft water may not be as palatable as water that contains some hardness, but you can drink either soft or hard water. The most acceptable water is moderately soft or slightly hard.
- Although the average intake of sodium from drinking water is only a small fraction of that consumed in a normal diet, water containing sodium may be of some significance if you are on a sodium restricted diet. This information should be brought to the attention of your physician.

Is it okay to use hot water for cooking?

- No, use cold water. Hot water is more likely to contain mineral deposits that may have accumulated in the water heater.

How can I help prevent pollution of drinking water sources?

- Properly dispose of the chemicals you use in your home. Every chemical you buy has the potential of polluting the environment if disposed of improperly. Remember, what you pour down your drain or in the sewer may eventually migrate to a drinking water source.
- If you have a septic tank, discharges from your drain fields may pollute groundwater if the system is not properly installed and maintained. Treat your wastewater system with respect.

Best in Canada – Alberta's program to protect our drinking water is the best in Canada because ...

... Alberta is the only province in Canada that requires all surface water (like lakes, streams and dugouts) to be filtered and disinfected before people drink it.

... Alberta is one of only two provinces in Canada that requires drinking water to meet health-related concentration limits for substances (like lead and arsenic) as outlined in Health Canada's stringent *Guidelines for Canadian Drinking Water Quality*.



... Alberta is the only province in Canada that requires even stricter rules for microbial quality of drinking water than those outlined in Health Canada's stringent *Guidelines for Canadian Drinking Water Quality*. Alberta requires microbial quality to be based on the stricter requirement to reduce protozoa, rather than reduce bacteria.

... There are no double standards for systems approved by Alberta Environment. Alberta requires all waterworks systems, regardless of the size, to meet the same treatment design and performance standards, and the same guidelines for drinking water quality. This is unlike the U.S. Environmental Protection Agency, whose requirements are based on the size of the population served by a waterworks system.

... Alberta requires all waterworks systems to be operated by a certified operator.

... Alberta has comprehensive and stringent operating, monitoring and reporting requirements.