



The drop on water

Natural and Roadside Springs

A natural spring is a place where groundwater flows to the surface and discharges freely from the ground.

History of natural and roadside springs

Roadside springs in Nova Scotia often served as a place of rest and refreshment for travelers and their horses before automobiles and convenience stores were common on Nova Scotia's highways.

Before modern well drilling equipment, natural springs were also used as a source of drinking water for many without other alternatives.

Many people still use natural or roadside springs as a source of drinking water, but **natural and roadside springs are not considered to be a reliable, safe water supply.**

Springs are not monitored or treated

There is a general public perception that spring water is pure, natural, better tasting, and free of contaminants compared to local municipal water supplies or private wells. In most cases, these perceptions are not scientifically valid.

Groundwater may be relatively pristine, but as it passes through soil, sand, and gravel on its way to the surface, it can become contaminated by surface runoff and other natural or man-made sources.

Most natural or roadside springs are not routinely tested or monitored. They are generally not adequately constructed to protect against surface contaminants.

QUICK FACTS

- Natural and roadside springs are not reliable, safe water supplies.
- Most natural or roadside springs are not routinely tested or monitored.
- Springs may be located near sources of surface water or groundwater contamination.
- Studies of roadside springs in Nova Scotia found that about 90 per cent had total coliforms present and 20 per cent had *Escherichia coli* (*E. coli*) bacteria present.
- Private well owners are able to monitor the water quality of their own wells.
- If the water from a private well is not adequate for consumption, homeowners have several options for ensuring their water is safe to drink.

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Bacterial contamination

Total coliform bacteria are used as an indicator of the general quality of the water and the potability of drinking water. The presence of total coliforms means the spring is in contact with surface water that may contain disease-causing organisms, such as bacteria, viruses, and parasites. Studies of roadside springs in Nova Scotia found that about 90 per cent had total coliform bacteria present and 20 per cent had *Escherichia coli* (*E. coli*) bacteria present. *E. coli* is a bacterium that is commonly found in the intestinal tract and feces of warm-blooded animals.

The presence of *E. coli* bacteria indicates that the source of water has been affected by recent faecal contamination and therefore the water is unsafe to drink. Some *E. coli* strains are pathogenic and cause bloody diarrhea, food poisoning, urinary and digestive infections, and in extreme cases, death in humans.

The results of total coliform and *E. coli* bacteria vary seasonally and may be higher after a heavy rainfall, snow melt, or other unusual events.

Chemical contamination

Springs may be located near sources of surface water or groundwater contamination, such as storage tanks, septic systems, hazardous waste sites, or landfills. Water in a natural spring may become contaminated when man-made products such as gasoline, oil, road salts, and chemicals leach into surface water or groundwater, making it unsafe for human consumption.

Roadside Springs

Safe options

Drinking water obtained from a municipal water system or a properly constructed, maintained, and monitored private well (a drilled well or a dug well) are considered safer options than natural or roadside springs.

Municipalities that obtain their drinking water from wells treat the water before distribution and consumption by consumers. They also regularly monitor the quality of the water.

Private wells are specifically constructed to ensure that the risk of surface water contamination of the water supply is minimized. If water from a private well is found to be contaminated after bacterial and chemical testing through an accredited laboratory, homeowners have several options for ensuring the water is safe to drink. Some of these options are to

- remove the source of contamination, if possible
- reconstruct the existing well
- construct a new well
- install a treatment system to treat specific problems
- use an alternate source of water, such as bottled water or another well that has been tested and found to be safe

Using a natural or roadside spring as a source of water is not a safe option.

FOR MORE INFORMATION

Contact

Nova Scotia Environment at
1-877-9ENVIRO
or 1-877-936-8476

www.gov.ns.ca/nse/water/


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