

WATER QUALITY WATER CONFIDENCE

Drinking Water Safety in Newfoundland and Labrador



GOVERNMENT OF
NEWFOUNDLAND AND LABRADOR
Department of Environment

When we turn on our taps, we want to feel confident that the water coming out is clean and safe to drink. Generally, Newfoundlanders and Labradorians enjoy good drinking water quality. Our province's source water is among the safest in the country, and Government's multi-barrier approach to drinking water safety is designed to keep it that way until it reaches our taps. Since 1991, across the country, people have become increasingly aware of and interested in water quality issues. That is why Government has committed to keeping residents of the province updated on drinking water safety.

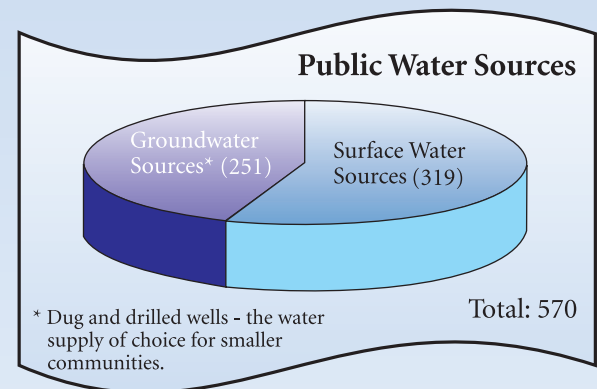
WHERE DOES OUR WATER COME FROM?

TYPES OF WATER SUPPLIES

Public	Cities, Towns and Local Service Districts.
Institutional	Supplies serving public schools, hospitals, parks, firehalls that provide water to the public, Newfoundland and Labrador Housing group housing and other facilities that are <i>not</i> on a public supply as defined above.
Commercial	Supplies serving private schools, daycare centres, hotels, motels, restaurants and other facilities that are <i>not</i> on a public supply as defined above.
Private	Supplies serving individual homes or clusters of homes and businesses <i>not</i> catering to the public (whether leased or rented, including from Newfoundland and Labrador Housing).
No Owner	Roadside springs, lakes, rivers and ponds.

About 83 per cent of Newfoundlanders and Labradorians are served by a public water system. The remaining 17 per cent rely on their own private well. 600 public supply systems of varying sizes deliver water from 570 public drinking water sources.

For information on safety of public water supplies, visit www.gov.nf.ca/env or contact your nearest Government Service Centre or Department of Environment office. The numbers are listed on the back panel of this brochure.



SAFEGUARDING OUR DRINKING WATER

Because water is part of our natural ecosystem, it will contain many different kinds of substances. Using the appropriate guidelines or standards, Government routinely monitors our public water supplies for bacteria and substances which may affect the safety or cleanliness of public drinking water.

Public health inspectors working for the Department of Government Services and Lands monitor the bacteriological quality of drinking water and the amount of chlorination. Watershed management specialists and water quality officers working for the Department of Environment monitor the chemical and physical quality of drinking water, both at the source and at the tap. The Department of Municipal and Provincial Affairs provides financial support to municipalities enhancing chlorination systems.

Chlorine and Public Health

Chlorination plays a critical role in protecting drinking water supplies from waterborne infectious diseases. The filtration and disinfection of drinking water has been responsible for a large part of the 50 per cent increase in life expectancy in the developed world, in this century. Filtration of drinking water and use of chlorine has been called "probably the most significant public health advance of the millennium."

To minimize the possibility of people drinking water containing harmful bacteria, chlorine is usually used to disinfect our public water systems. If tests detect certain kinds of bacteria, or if chlorination is in some way inadequate, a "boil water advisory" is issued for that community. When unacceptable concentrations of chemicals are found, the Department of Environment works directly with the community and health officials to address the problem.

OUR COMMITMENT

Government has a long-standing commitment to providing a reliable supply of clean and safe drinking water for all Newfoundlanders and Labradorians. The **Multi-barrier Strategic Action Plan (MBSAP)** ensures appropriate safeguards are in place at each stage of water supply systems, to minimize the possibility of people drinking water containing substances or pathogens that may pose health concerns. This multi-barrier approach radically reduces the possibility of failures that contributed to the Walkerton tragedy or other waterborne disease outbreaks. The MBSAP in Newfoundland and Labrador is consistent with the recommendations of the Walkerton Report and in many areas has exceeded them.

The components of the MBSAP include:

- ◆ source protection
- ◆ water treatment
- ◆ operation and maintenance of water supply systems
- ◆ comprehensive drinking water quality monitoring and reporting
- ◆ appropriate inspection, abatement and enforcement measures
- ◆ operator education and training

Further information on the MBSAP for drinking water safety is contained in the Drinking Water Safety Annual Report 2002, available on the Department of Environment web site (www.gov.nf.ca/env).

WORKING TOGETHER

Implementing this program to ensure water safety is a collaborative effort of several provincial government departments. Each department has its own specific responsibilities, and all work together to monitor progress and address challenges.

Environment

- ◆ Responsible for source protection and management, regulatory approvals for construction, operation and maintenance of public water systems, and subsequent inspection and follow-up.
- ◆ Responsible for drinking water quality monitoring and reporting related to chemical and physical parameters.
- ◆ Responsible for developing and implementing corrective measures to address drinking water quality problems.
- ◆ Responsible for assisting in the review of capital works applications relating to public water supply systems.
- ◆ Provides operator education and training.
- ◆ Takes the lead on water quality related communications with municipalities and communities.

Government Services and Lands

- ◆ Responsible for bacteriological monitoring and chlorine residual testing of public water supplies and the bacteriological testing of private water supplies.
- ◆ Responsible for providing advice and consultation to public and private water supply owners.

Health and Community Services

- ◆ Responsible for assessing the health impacts of chemical and microbiological test results.
- ◆ Responsible for providing appropriate advice on potential health impacts of test results.
- ◆ Responsible for operating the provincial Public Health Laboratory, which oversees testing and quality control for microbiological sampling of water.
- ◆ Responsible for developing policy and guidelines for bacteriological monitoring of public and private water supplies.

Municipal and Provincial Affairs

- ◆ Responsible for developing and enforcing water system construction standards.
- ◆ Responsible for the administration of the Capital Works Program, which provides funding for new and upgraded public water system infrastructure.
- ◆ Provides funding to assist with expansion or upgrade and repair of existing infrastructure.
- ◆ Facilitates communications with municipalities and communities.
- ◆ Can assist, in emergency situations, in the operation of public water supply systems.

WHAT WE'VE ACCOMPLISHED

Since 2001, Government has focused on strengthening our Multi-barrier Strategic Action Plan. We have achieved several important milestones toward ensuring a reliable supply of clean and safe drinking water.

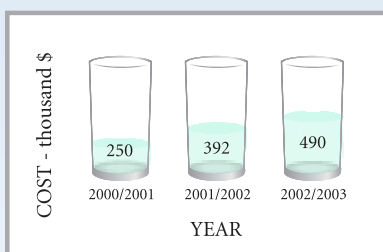
- ✓ New legislation
- ✓ Updated standards
- ✓ Additional source protection
- ✓ Enhanced resources

In Spring 2002, Government adopted the new *Environmental Protection Act* and the new *Water Resources Act*, which provide for the fair allocation and proper use of water and ensure that water quality is protected.

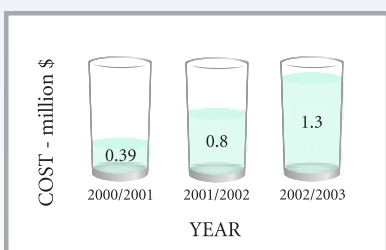
Government amended provincial standards for bacteriological safety of drinking water, including application of standards to private wells.

- ◆ Nine new protected water supply areas have been designated in the province.
- ◆ Through the Department of Municipal and Provincial Affairs, \$13.4 million has been provided to 173 projects throughout the province, under the Disinfection Assistance Program.
- ◆ 50 contracts have been awarded for chlorination projects and chlorine test kits for municipalities throughout the province.
- ◆ Information on water quality testing has been made more readily available, especially on Government's web site.
- ◆ A Geographic Information Systems layer is being developed for both protected and unprotected public water supply and well-head areas. This will be used to promote responsible land use within public water supply areas, while maintaining the integrity of drinking water sources.
- ◆ The Department of Environment has carried out numerous operator training seminars and expanded drinking water quality monitoring. New training staff and new equipment is currently being procured.
- ◆ Bacteriological water quality monitoring has been improved and expanded.

Public Health Laboratory Funding - enhancing our bacteriological testing programs



Drinking Water Monitoring Program - the science of safety



MOVING FORWARD

While much progress has been made in improving drinking water safety, Government recognizes that many challenges remain. However, we are confident that the Multi-barrier Strategic Action Plan for drinking water safety can and will be achieved.

We have three objectives for our public water supply: drinking water must be safe, clean and secure. By safe we mean that it must be free of all pathogens (viruses, bacteria and protozoa) and any quantity of substances that may be harmful to a person's health (for example, arsenic, lead, THMs). Water must be clean: that is, it must be free of unpleasant taste, colour, particles or odor. Finally, water must be secure, meaning that Newfoundlanders and Labradorians can depend on having enough water to meet their requirements every single day of the year.

Whenever one of these objectives is not met, for whatever reason, there is a challenge. Some challenges we are focusing on are the need to boil water to ensure that the water is safe or to carry out other treatment to remove unacceptable concentrations of substances. Some drinking water, while perfectly safe, does not look pleasing due to elevated levels of colour or suspended particles or sediment.

On each of these issues Government is meeting the challenge.

While many activities and resources have focused on improving water quality in the province, Government recognizes that a continuous approach toward drinking water safety is required. Therefore, the following long-term goals have been designated:

- The Department of Government Services and Lands has allocated \$458,000 to hire seven new Environmental Health Officers, to expand bacteriological water quality monitoring.
- Chemical water quality monitoring will be expanded to cover all public water supplies.
- An expanded bacteriological monitoring program will be introduced.
- The Department of Environment will hire a full-time system analyst to maintain drinking water data and to publish related information.
- The Department of Health and Community Services will increase the capacity of the Newfoundland Public Health Laboratory.
- The Department of Environment has allocated \$530,000 for an on-site operator training program.
- Additionally, over the next three years, the Department of Municipal and Provincial Affairs will dedicate a significant portion of funding to drinking water and water treatment projects.
- Over \$170 million will be invested in water supply and distribution systems by Government over the next three years.
- The Department of Health and Community Services will hire an environmental health promotion specialist to conduct a health promotion program addressing clean and safe drinking water.

Water quality is important to the people of our province, and Government is working on many fronts to ensure a reliable supply of clean and safe drinking water for all Newfoundlanders and Labradorians. Substantial progress has been made and substantial resources have been committed to ensure further progress - this year and in years to come.

WATER QUALITY MEANS WATER CONFIDENCE.

FOR MORE INFORMATION:

Government Service Centres

(Department of Government Services and Lands)

St. John's	729-3699
Clarenville	466-4060
Corner Brook	637-2204
Gander	256-1420
Happy Valley - Goose Bay	896-2661
Grand Falls - Windsor	292-4206
Harbour Grace	945-3014

Sub Offices

Grand Bank	832-1672
Lewisporte	535-0262
Stephenville	643-8650
St. Anthony	454-8833
Port aux Basques	695-2835

Water Resources Division

(Department of Environment)

St. John's	729-2563
Grand Falls - Windsor	292-4280
Corner Brook	637-2431

Medical Officers of Health

St. John's	738-4906
Eastern	229-1571
Central	651-3306
Western	637-5245
St. Anthony	454-3333
Happy Valley - Goose Bay	897-2328

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