

# DRINKING WATER QUALITY

engineerscanada



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## Issue

Providing guaranteed access to safe drinking water is an essential component for building safe, healthy communities and a necessary pre-condition for economic growth.

## Why Is This Important?

The planning, design, construction and operation of water supply, treatment and distribution systems all involve engineering principles.

Engineers Canada advocates a system-based approach to safe drinking water that includes the promotion of good conservation practices and the protection and risk assessment of all the components of a safe water system, including the water supply, its source, water treatment facilities, and water distribution systems.

Effective regulatory oversight is essential to establishing accountability and ensuring that water treatment and supply systems are operated and maintained in a way that protects the public. Enforcement and regulatory powers, based on sound engineering principles and standards, need to be applied at the appropriate level of government.

Although legislative authority for drinking water standards rests primarily with provincial and territorial governments, the federal government also plays an important role through its funding for infrastructure and support for First Nations communities. The 2007 budget reaffirmed the federal government's commitment to work with First Nations communities to ensure access to safe drinking water. The budget also offered support for investments by provinces, territories and municipalities to improve water and wastewater infrastructure.

## What Has Engineers Canada Done To Date?

Engineers Canada advocates the adoption of a *voluntary national code for drinking water quality*, similar in operation to the National Building Code. While many regulations or laws to enforce a national code fall predominantly under provincial or territorial jurisdiction, voluntary national standards can be designed that allow provinces and territories

to accept the provisions of a national code as the basis for their own legislation.

Existing provincial and territorial water safety regulations do not apply to First Nations communities. As such, they often do not benefit from the same levels of protection and safety for drinking water in place elsewhere in Canada. Engineers Canada made a submission to the Expert Panel on Safe Drinking Water for First Nations that recommended these communities be encouraged to adopt minimum standards consistent with a voluntary national code for drinking water quality.

The *Public Infrastructure Engineering Vulnerability Committee*, an initiative of Engineers Canada, has been working on a pilot project to assess the vulnerability of water treatment plants to climate change.

## How Can Engineers Canada Contribute?

Engineers Canada supports a system of accountability whereby engineers and other professionals take ongoing responsibility for the safety of drinking water systems throughout all stages of the systems' life cycles, from planning to de-commissioning. Public accountability is assured by requiring mandatory and publicly-accessible reporting for all water supply systems, with data provided on both water quality indicators and the overall system.

Engineers Canada calls on the federal government to provide adequate financial resources to support a regional approach for a voluntary national code for drinking water quality that deals with research and development; infrastructure; and improved processes and technologies.

Educational institutions, government agencies, professional associations, and private firms need to commit to developing the human resource capability for managing water systems. The training of those who operate and maintain water systems must include an in-depth knowledge of planning and design. Public education about the importance of safe drinking water is necessary to garner support for the adequate funding and regulation of public drinking water systems, to alert water purveyors of their responsibilities, and to encourage effective land use planning.

## THE PROFESSION'S POSITION

*Adequate financial resources must be made available by the federal government to support a sustainable and planned approach over the full life cycle of the water system to ensure the safety of Canada's drinking water, with emphasis on funding for research and development for: improved systems; processes and technologies; the proposed national drinking water code; and infrastructure projects.*

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