

***Conference Statement***  
***Priorities for Drinking Water Safety in Canada***

**DRINKING WATER SAFETY CONFERENCE: A TOTAL QUALITY  
MANAGEMENT APPROACH**  
**International Conference on Water and Health**  
**September 23-25, 2002.**

**CONFERENCE STATEMENT**

A Conference on Drinking Water Safety: A Total Quality Management Approach was convened by the Network for Environmental Risk Assessment and Management (NERAM) on September 23-25, 2002 to review best practice in drinking water systems safety and identify priority actions to ensure safe drinking water in Canada. The conference was attended by more than 150 delegates representing, in order of number of attendees, federal and provincial governments, water quality scientists, municipal water service representatives and their private sector suppliers, and public interest groups. Delegates considered current information on drinking water protection such as: i) the recommendations of the Walkerton and North Battleford inquiries; ii) the multi-barrier approach to safe drinking water including the Canadian source to tap guidance document developed by the Federal-Provincial-Territorial Subcommittee on Drinking Water and the Canadian Council of Ministers of the Environment's Water Quality Task Group; iii) the Australian drinking water quality management framework; and iv) perspectives of scientists, regulators, operators and suppliers concerning key measures to ensure robustness in drinking water management systems.

As governed by an appropriate regulatory framework, the reliable provision of safe drinking water requires using the best possible source, designing and operating appropriate treatment facilities, providing secure distribution, conducting appropriate monitoring, and responding in an appropriate and timely manner to adverse monitoring results. Thus mechanical, human and institutional elements (including an appropriate knowledge base) of drinking water systems are all important. The objective of the conference was to consider these elements and identify priority actions to improve drinking water safety in Canada. The following four priority actions reflect the results of the final plenary session in which the rapporteurs from the three break-out groups reported the results of their group deliberations. This was followed by plenary discussion to identify key areas for action. The recommendations include long-term initiatives as well as short-term actions to improve the safety of drinking water systems. It is critical that efforts to implement both the long-term and short-term actions be initiated in parallel and begin immediately.

**Recommendation 1:** It is essential to develop and implement a National comprehensive, risk-based framework for total quality management of drinking water across Canada. The

Framework should be developed through a consultative, collaborative process involving all levels of government, water suppliers/operators and industry organizations (CWWA) and the public.<sup>1</sup> The Framework should be adopted across Canada, and include legislative tools to ensure that it is uniformly enforced to provide equal access to safe drinking water for all Canadians.

**Recommendation 2:** It is essential to adopt an integrated, ecosystem-based, watershed management approach within the National water quality management framework for effective source protection. The definition of watershed includes surface water, groundwater and recharge areas. Water conservation measures should be included as a key aspect of watershed management. Provincial legislation is required to encourage and support watershed-based source management protection across Canada.

**Recommendation 3:** There is a need to immediately improve the robustness of existing systems through the enforcement of existing standards, mobilization of existing expertise, and implementation of best practice for total quality operation of drinking water systems. The most critical immediate needs are within small systems in Canada, and therefore there is a need to increase support for small systems through partnerships, aggregation of systems, and shared expertise. Best practice includes:

- adaptive and vigilant monitoring of disinfectant residuals, turbidity and, if possible, particle counts;
- organizational systems which are able to rapidly respond to adverse monitoring results;
- continued development of methods and technology for treatment, monitoring and management of systems.

It is critical that the Federal government and provinces ensure that effective mechanisms are in place for consistent implementation of best practice.

**Recommendation 4:** Continued support for research and development is essential for effective water quality management. This includes:

- the collection of baseline data (operational and financial) to identify vulnerabilities and measure performance of drinking water systems;
- the collection of data for risk assessment at the watershed level;
- the development of methods and technology for water treatment and distribution;
- optimization of management systems; and
- quantification and mitigation (where necessary) of emerging risks.

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<sup>1</sup> Agreement was not reached on a recommended mechanism for undertaking this effort. In plenary, several delegates emphasized the need for Federal leadership in developing the Framework. Others disagreed with this view, in favour of an equal partnership among stakeholders.