

# Advisory Council on Drinking Water Quality and Testing Standards

March 7, 2006

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# Key Messages

- Ontario is setting clear goals for protecting drinking water and is committed to implementing all of the O'Connor Commission recommendations
- Establishing the Advisory Council helps to meet these goals

# Broad Mandate

- The Minister of the Environment can request that the Council provide advice on specific issues related to drinking water
- Conversely, the Council can *choose* to pursue issues related to drinking water

# Role

- Justice O'Connor recommended establishing an “Advisory Council on Standards” to advise the Minister on:

## 1. Priority Setting

- review priorities suggested by Federal-Provincial-Territorial (FPT) Committee on Drinking Water (CDW)
- recommend standards that are not on the current national agenda

## 2. Standards Development

- provide advice on the approach to standard setting
- address specific standards

# Role (cont'd)

## 3. Stakeholder Consultation

- review and conduct public consultations on standards and issues referred by the Minister
- provide recommendations to the Minister on the outcomes of consultations

## 4. Implementation

- provide recommendations to the Minister on proposed standards and implementation plans for Ontario, research needs, and issues management

# Background

- Creation of an Advisory Council on Standards is provided for under the *Safe Drinking Water Act, 2002 (SDWA)*
- Section 4 indicates that:

“The Minister shall establish an advisory body known as the ‘Advisory Council on Drinking-water Quality and Testing Standards’ to consider issues relating to standards for drinking-water quality and testing and to make recommendations to the Minister”
- Under the legislation:
  - Members are to be appointed by the Minister from key professional fields representing a cross-section of academia, industry and municipalities, with expertise in areas of microbiology, toxicology, engineering, utility operations, public health, and other organizations with a record of interest and accomplishment in areas related to drinking water (*See Appendix*)
  - Council may publish information on the environmental registry
  - The Minister will consider recommendations of the Council in establishing and revising standards under the Act

# Drinking Water Standards Process

- Ontario Drinking Water Quality Standards (ODWQS) are generally adopted from Canadian Drinking Water Quality Guidelines (CDWQG)
- Ontario can also develop ODWQS for substances that are not a national priority (i.e. NDMA)
- ODWQS are cited in Ontario Regulation 169/03
- The Council now has a direct role in this process

# Current Status

- Chair and members appointed in May, 2004
- Inaugural meeting held in June, 2004
- Monthly meetings held
- Terms of Reference finalized
- 2 full-time support positions in place

# Immediate Priorities

- The Council focused on priorities recommended by Commissioner O'Connor:
  - Advising on the desirability of a turbidity limit that is lower than the limit specified by the FPT guidelines
  - Considering whether to replace the total coliform test with an *E. coli* test
  - Reviewing Ontario's standards for disinfection by-products (DBPs)
  - Considering implementation of a protozoa treatment standard, as well as THM limits and implementation considerations

# Standards Review

- Items from the FPT Drinking Water Committee:
  - Revision of standards for trichloroethylene, arsenic and trihalomethanes (a disinfection by-product)
  - Proposed new standards for chlorate / chlorite
  - Proposed new aesthetic objective for methyl tertiary butyl ether
- Priority Review to takes place June of every year

# Direct Requests from the Minister

- The Minister of the Environment has requested that the Council provide advice on:
  - *Drinking Water Systems Regulation* (O. Reg. 170) requirements for smaller, private systems
  - Disinfection requirements for the *Wells Regulation* (O. Reg. 903)

# O. Reg. 170 Request - Consultation

- Initial Review revealed limited information on risk to small systems
- The Council decided to consult with stakeholders to gain a clearer understanding of the issues and risks. 12 consultation sessions were held: Arnprior, Dunnville, Chatham, Kemptville, Goderich, Belleville, Elora, Bracebridge, Lindsay, Thunder Bay, Sudbury and Alfred (bilingual). Videoconferencing was used for sessions in Geraldton, Nipigon, Fort Frances, Kenora, North Bay, Sault Ste. Marie, South Porcupine
- The Council heard from scientific and technical experts on drinking water
- The Part 2 Walkerton Report was reviewed and discussions were held with people who participated in the development process, to clarify the intent of the recommendations; particularly Chapter 14 (Small Systems)
- A review of other jurisdictions was also undertaken

# O. Reg. 170 Request – What We Heard

- Cost
  - Too expensive to comply
- Funding
  - Need provincial funding to make it work
- Responsibility
  - Request that Health Unit take a lead role
- Implementation
  - Extend and phase in the deadlines
- Communication/Training
  - Improve communication and access to training
- Legislation
  - Need for Source Water Protection Act

# O. Reg. 170 Request – What we heard (cont'd)

- Exemptions
  - Exempt smaller operations, simplify rules for service industry
- Options
  - Offer options to create flexibility in delivering safe drinking water, sign Posting, use of alternate potable water supply
- Treatment
  - concern for use of chlorine and other chemicals
- Liability
  - Owner liability and insurance issues
- Risk
  - Many owners were not aware of the potential risks to their systems

# O. Reg. 170 Request - Conclusions

- The current Regulation seems effective for managing larger systems that possess an economy of scale
- The potential risks to smaller and private systems were not well understood by the owners / operators
- Bed & Breakfasts, churches, community centres, small lodges, camps, trailer parks, seasonal operations, etc. may not have the resources, knowledge or skills to comply with the current Regulation, *even with amendments*, and, as such, require an alternative approach.
- A safe drinking water program that better addresses the capacities and abilities of the small service owners and operators could be implemented, without compromising the Ontario Drinking Water Quality Standards and general level of safety to the water consumers.
- “Non-Municipal Year-Round Residential” systems, like residential mobile trailer parks, need a new management approach and best fall under municipal responsibility, and the current requirements of the Regulation.

# O. Reg. 170 Request - Recommendations

- A risk-based, site-specific approach should be used to manage all commercial and institutional systems that serve the public
- Both municipal and non-municipal residential systems should be managed under Regulation 170/03.
- The proposed risk-based, site-specific approach should be outcome-based, anchored by compliance with the Ontario Drinking Water Quality Standards
- There should be a transfer of responsibility to Public Health Units to administer safe drinking water programs for commercial and institutional systems that serve the public

## O. Reg. 170 Request – Recommendations (cont'd)

- The provincial grant program should be extended to assist local municipalities in providing assistance to Non-Municipal, Year-Round Residential systems
- The Ministry of the Environment should allow the use of validated alternative testing methods (that indicate the presence / absence of bacteria), where traditional sampling and testing methods are not practical
- Sign posting should be an option on a permanent basis, pending the risk-based assessment and requirements
- The Ministry of the Environment should work with the water treatment equipment industry to develop a system to pre-approve or certify treatment equipment.

# Reg. 170 Final Report

- The Council delivered its final report with 22 recommendations, entitled '*Report and Advice on Ontario Regulation 170/03 Smaller, Private Systems Review and Recommendations*' to the Ontario Minister of the Environment on February 8, 2005
- Report can be downloaded at:

[http://www.odwac.gov.on.ca/reports/020805\\_Reg\\_170\\_Final\\_Report.pdf](http://www.odwac.gov.on.ca/reports/020805_Reg_170_Final_Report.pdf)

# Provincial Acceptance & Response

- Final Report was well received by Minister, MOE, and stakeholders
- Province committed to taking all recommendations into consideration
- MOE posted a proposal for public comment in May, 2005, looking for feedback on the broad regulation of drinking water in Ontario, as well as the use of a risk-based approach
- MOE developed and promulgated a new regulation (Reg. 252) in June, 2005 for *Non-Residential And Non-Municipal Seasonal Residential Systems That Do Not Serve Designated Facilities*

# Next Steps

- Systems currently under Reg. 252 will be transferred to a new regulation, under the Ontario Ministry of Health and Long-Term Care, for management by Public Health Units, using a site-specific, risk-based approach
- MOE continues to address Council's recommendations and on-going advice

# O. Reg. 903

- Final Advice delivered to the Minister on June 16, 2005
- Advice not publicly released as of yet
- Issues raised:
  - 50 mg/l chlorine dosage is too low
  - Should allow other disinfection options
  - Should apply additional process steps

# Contact Information

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# Appendix - Membership

**Dr. Robert Andrews** is a Professor and Associate Chair of Research in the Department of Civil Engineering at the University of Toronto. He is a 2003 co-recipient of the National Science and Engineering Research Council (NSERC) Synergy Award for University-Industry Partnerships. He currently serves on the NSERC Civil Engineering Grant Selection Committee and the Council of Research Managers - Great Lakes International Joint Commission. Dr. Andrews also serves on the American Water Works Association (AWWA) Disinfection Committee, and on the Ontario Water Works Association's Distribution System Committee. He has extensive experience in Drinking Water Treatment and Disinfection.

**Dr. Ronald Brecher** is a founding partner of GlobalTox International Consultants - a Canadian corporation that assesses the impact of toxic chemical exposures on human health. Dr. Brecher is one of about 35 Canadians certified by the American Board of Toxicology. He is an Adjunct Professor, School of Planning, at the University of Waterloo and Associated Graduate Faculty, Department of Biomedical Sciences at the University of Guelph. From 1994-2002, he was a director of the Children's Groundwater Institute. He is a past recipient of the National Science and Engineering Research Council's Industrial Research Fellowship. He is a member of the Science and Policy Advisory Board of the American Council of Science and Health.

**Michele Giddings** is the Manager of the Water Quality and Science Division in the Water Quality and Health Bureau, Healthy Environments & Consumer Safety Branch, Health Canada. She is on Health Canada's Secretariat for the Federal/Provincial/Territorial Committee on Drinking Water. She is currently co-coordinator of the Disinfectants and Disinfection By-products Working Group for the World Health Organization's Guidelines for Drinking Water Quality. Ms. Giddings has developed a number of drinking water guidelines for Health Canada and WHO.

# Appendix – Membership (cont'd)

**Rod Holme** is former Vice President of the Water and Wastewater division of Earth Tech Canada and is currently an independent consultant on drinking water. He is Past President of American Water Works Association and currently chairs their International Council. He is also Chair of the Joint Committee on Water Regulations for the Ontario Water Works Association and the Ontario Municipal Water Association. He has extensive experience in technical and project management in municipal water supply.

**Dr. Peter Huck** is a Professor in the Department of Civil Engineering, NSERC Chair in Water Treatment and University Research Chair at the University of Waterloo. He has undertaken extensive research in water quality and treatment in areas such as the robustness of water treatment systems, membrane and UV treatment, the removal of Cryptosporidium pathogen loadings in watersheds, among other topics.

**Dr. Alexander Hukowich** is the Associate Medical Officer of Health, Haliburton Kawartha, Pine Ridge Health Unit and the appointed coroner for Northumberland County. He also serves as Chair of the Association of Local Public Health Authorities' Advocacy Committee. He represents the Association of Local Public Health Authorities.

**Marilyn Lee** is a trustee of the Environmental Health Foundation of Canada and a member of the Joint Committee on Drinking Water Treatment Units (NSF). She is a professor in the School of Occupational and Public Health, Ryerson University, where she teaches courses on water quality, food pathogens, parasitology, and infection control. She is also a Certified Public Health Inspector and worked for 6 years in a general program of public health inspection with the Wellington-Dufferin-Guelph Health Unit. Her published work primarily deals with food pathogens, which include Giardia, the coccidial parasites, and E. coli O157:H7.

# Appendix – Membership (cont'd)

**Jim Merritt** is an independent consultant on environmental services, municipal infrastructure and water management. He is a former Assistant Deputy Minister of Operations at the Ontario Ministry of the Environment. Mr. Merritt led the establishment of the Ontario Clean Water Agency and served as Vice President of Operations and Vice President of Information and Technology. **Mr. Merritt currently serves as the Chair of the Council**

**Dr. Harold Richardson** is the managing director of the Laboratory Proficiency Testing Program of the Ontario Medical Association. He also serves as the Vice-chair of the National Committee on Medical Laboratory Quality Systems of the Canadian Standards Association. He is a former chair of the Medical Microbiology and Infectious Diseases program, and past president of the Canadian Association of Medical Microbiologists. Dr. Richardson represents the Ontario Medical Association.

**Dr. Ken Roberts** has over 30 years' experience in the field of drinking water treatment engineering and groundwater management. He currently works for XCG Consultants Ltd. Prior to joining XCG, he served in a number of water-quality-related positions in the Ontario Ministry of the Environment and Energy. Mr. Roberts is a member of the American Water Works Association and the AWWA's Research Foundation.

# Appendix – Membership (cont'd)

**John Rudnickas** is the Manager of Water Quality for the City of Toronto. A chemist by training, he has extensive experience in all aspects of quality assurance/quality control in a large drinking water system. He is responsible for the management of the City of Toronto's accredited and licensed laboratory for drinking water testing. He is a member of the Ontario Water Works Association and is on the Water Quality Committee of the Canadian Water and Wastewater Association. He is also a member of the American Water Works Association.

**Dr. Lesbia F. Smith** is an Assistant Professor at the University of Toronto and Clinical Research Associate of the McMaster University Institute of Environment and Health. Dr. Smith holds a Medical degree, and is the former head of the Environmental health and Toxicology Unit of the Public Health Branch of the Ontario Ministry of Health. Dr. Smith has researched drinking water quality and chronic diseases such as non-bladder cancer (by-products of chlorination) and Alzheimer's disease (aluminum). She has participated in the development of several Ontario drinking water standards. Her current work relates to ecological and human impacts of industrial emissions through human and ecological risk assessments including studies of the impacts on health of surface waters affected by a variety of industrial contaminants.

**Robert Walton** is Director of Public Works for the County of Oxford. He is the former Manager of Water and Wastewater Services. Prior to joining the County of Oxford, Mr. Walton worked as a consulting engineer. Mr. Walton is a member of the Ontario Municipal Water Association and has served on the Drinking Water Committee of the Association of Municipalities of Ontario. He represents the Ontario Municipal Water Association.