alPHa

Association of Local
PUBLIC HEALTH
Agencies

Final Submission

Association of Local
Public Health Agencies (alPHa)

Submitted to:
Commissioner Dennis O'Connor
The Walkerton Inquiry

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INTRODUCTION

The stewardship of water resources, their protection from contamination and the assurance of their safety and quality at the point of use are related goals that entail a complex web of interconnected responsibilities that must be supported and reinforced by sound policy and adequate resources. A complete strategy for ensuring a sustainable and safe supply of potable water must include a comprehensive consideration of the source-to-tap-to-source flow of water, and identification of all of the potential influences along the way. Once such an assessment is done, the most appropriate control measures must be implemented to minimize the risks accompanying these influences. Source protection, maintenance the natural cleansing capacities of watershed recharge areas, minimization contaminant loads in such areas, water treatment, systems maintenance and vigilant oversight are examples of such controls. Federal, provincial and municipal governments all have important functions in ensuring these controls. Ensuring high quality and safe drinking water thus depends upon the coordination of sound policy decisions from each and adequate resources to implement them.

Local boards of health have an immediate and direct interest in water quality. Access to a safe and sufficient supply of potable drinking water is a prerequisite for health. Under the *Health Protection and Promotion Act* (HPPA), medical officers of health and public health inspectors are empowered to protect community health through the elimination or mitigation of health hazards.

The *Mandatory Health Programs and Services Guidelines* (MHPSG) provide the framework for public health programs in Ontario. The goal of the Safe Water program is to reduce the incidence of water-borne illness in the population, and as a primary objective, to ensure that community drinking water systems meet the health-related chemical, physical, microbiological and radionuclide objectives as published in the *Ontario Drinking Water Objectives (revised 1994)* and the *Guidelines for Canadian Drinking Water Quality (sixth edition)*. (Note – the Ontario Drinking Water Objectives have been superceded by the Ontario Drinking Water Standards (ODWS) August 2000).

When the *E. coli* 0157:H:7 outbreak occurred in Walkerton, Ontario, the local staff of the public health department implemented its outbreak investigation protocol to determine its cause and take steps to minimize its impact. These steps were predicated on the existence of the above mandates and legal powers. The actions and decisions of the local Medical Officer of Health and his staff were then subjected to the intense scrutiny of the media and the Ontario legal community during the course of the Walkerton Inquiry. During this examination, it also became clear that in the protection of communities from water-borne disease, the role of public health professionals was but one among many.

The primary goal of local boards of health is to prevent disease and injury and to promote and protect health. This includes addressing the safety of drinking water, but it is important to note that their primary role is the protection of the health of the end user. This should not be interpreted as a general duty of health units to oversee the operation of water systems, but rather to protect the community from risks to health that may appear within them. The protection of

public health thus also depends on the agencies whose policies and actions affect water resources and how they are used. It is in this context that we offer the present submission.

As the provincial organization representing medical officers and boards of health, alPHa, with support from the Ontario Public Health Association (OPHA) and the Association of Supervisors of Public Health Inspectors (ASPHIO), has participated to varying degrees in each phase of the Walkerton Inquiry, in order to provide assistance to the Commission with the public health perspectives essential to its mandate. This final submission to the process is a consolidation of the water quality-related work that alPHa has undertaken in the year and a half since the town of Walkerton gave its name to a public health disaster.

This submission consists essentially of recommendations that our membership would like to see reflected in the Commission's final reports. We make two chief recommendations at the outset, which should be considered underpinnings for the more specific ones that follow. Most of them have been extracted from position papers already submitted to the Inquiry in some form, which are included here as appendices for reference. Other recommendations are from oral submissions made during public hearings and expert meetings in which alPHa participated. This document, taken as a whole, is an attempt to represent the most complete resource for alPHa's voice during the Inquiry process.

alPHa and its partner organizations would like to thank the Commission for its keen interest in the perspectives and opinions of public health providers throughout the province, and for the opportunity to voice them in a process whose outcomes will no doubt do a great service to public health in Ontario.

BROAD RECOMMENDATIONS

RECOMMENDATION 1:

THAT PUBLIC HEALTH INPUT IS PROVIDED AT ALL POINTS IN AN INTEGRATED QUALITY ASSURANCE SYSTEM WHERE CONTROL CAN BE EXERCISED TO MINIMIZE RISKS TO HEALTH.

A Public Health Perspective

In general, our position as the voice of public health is not to comment on what the overall structure of water delivery should look like, but rather to ensure that regardless of the approach, mechanisms are always in place to minimize waterborne risks to health.

alPHa has made broad recommendations for many aspects of safe water, including source protection, land use, risk assessment, treatment options, accreditation, and system oversight to name but a few. Each of these is addressed in detail in alPHa's submission to the Inquiry entitled *Ensuring Drinking Water Quality in Ontario: A Framework* (Appendix 1). While public health professionals may not have the appropriate expertise to make sound and specific technical recommendations on certain aspects of water use, our chief recommendation is for meaningful public health involvement in all aspects of ensuring the availability of safe drinking water.

The input of public health authorities into the development of regulations and policies that may impact drinking water would ensure a health protection perspective in policy decisions that may originate from agencies for whom that perspective is not primary. The expertise of medical officers and Public Health Branch staff would be of great value in identifying potential health impacts of agricultural and environmental policy decisions.

A Quality Assurance Framework

The following is an adaptation of Ontario's HACCP (Hazard Analysis Critical Control Point) protocol statement, long used by public health to evaluate food safety (Appendix 9). The HACCP approach to health hazard prevention, elimination and control is a common-sense method of assessing risks to health in a product flow, and devising methods to minimize them. With proper evaluation and monitoring, effective contingency plans and a clear definition of responsibilities, it could be a valuable tool for the maintenance of the integrity and safety of the public water supply. In exchanging the HACCP focus on food for one on water, the protocol might read as follows:

> **Goal:**
> To improve the health of the population by reducing the incidence of water-borne illness
>
> **Objectives:**
>
> - To evaluate water delivery systems while maintaining a high level of compliance with design criteria and basic sanitation maintenance
> - To improve safety of drinking water in the delivery system through more focused evaluation, education, consultation and regulatory enforcement strategies
> - To optimize the resources of public bodies with responsibility for water quality by prioritizing areas of highest risk
> - To promote self-monitoring of water works by operators and staff well trained in quality assurance principles
> - To monitor and evaluate the level of compliance with practices necessary to the provision of safe water

In order to achieve these goals, a systematic approach must be employed, which consists of the following major steps:

- Risk assessment, including the identification of actual and potential health hazards at each step of the water-delivery process
- Identifying points in the process (Critical Control Points) where hazards can be minimized or eliminated and establishing operating criteria
- Developing monitoring criteria
- Establishing contingency plans for when operating or monitoring criteria are not met.
- Verification of the protocol – that it is being followed and that the criteria are appropriate.

RECOMMENDATION 2:

THAT A CLEAR AND COMPREHENSIVE WATER MANAGEMENT POLICY BE DEVELOPED, WHICH WILL DELINEATE AND CLARIFY GOVERNMENTAL RESPONSIBILITIES, ENHANCE INTERSECTORAL COMMUNICATION, AND PROVIDE FOR RESOURCES TO IMPLEMENT THE REQUIREMENTS OF THAT POLICY.

Ontario must ensure that a coordinated/integrated policy exists for drinking water that ensures that all agencies with jurisdiction over drinking water related issues are aware of each other's responsibilities and of where lines of communication must be maintained. This must include strict reporting requirements and documentation of adherence to standards and policies generated by each.

The importance of coordination of these agencies cannot be overstated. The lack of consistent flow of information and the lack of clear policy on what to do with it leads to a disjointed system that delays the quick identification and remediation of problems. It is worth noting that the HPPA requires the Environment, Labour and Health Ministries, as well as municipalities to provide medical officers of health with information related to environmental health when requested (R.S.O. 1990, c.H.7, s. 12).

There has been significant discussion about lead responsibility for drinking water. The fact is that several agencies have jurisdiction over activities that may impact it, and the expertise of each is valuable to the protection of potable water. Ministries of Health, Environment, Agriculture, Food and Rural Affairs, and Natural Resources, as well as municipalities and local Boards of Health, all have regulatory and/or policy functions in this respect.

The informal coordination that has taken place among these bodies in the past may now need to be formalized, as the reduction of available resources has put strains on some of these individual agencies' abilities to carry out their own duties, let alone keep an eye on those of others. Because these considerations involve so many agencies, it is essential that each have a general familiarity with the source-to-tap flow of drinking water

The Canadian Environmental Law Association has suggested a Drinking Water Commission, which would oversee the delivery of Ontario's overall drinking water program. While alPHa is not necessarily endorsing this specific approach, the idea of involving representatives from all of the above bodies in a unified coordinating body would provide a foundation for a consolidation of all of the expertise required for the protection of drinking water. This would lead to better coordination, communication and training, as well as a clarification of roles, and a reduction of conflicts.

Strategies that are implemented to protect water and the health of its consumers would thus originate from a unified, effective and comprehensive quality system that will greatly reduce the incidence of water-borne disease

The MHPSG, as published by the Minister of Health under section 7 of the HPPA, contain prescriptive requirements for programs that must be provided by local boards of health. These are conceived as minimum standards, to be tailored and expanded upon according to local needs. These programs, given the force of law and strengthened by other clauses in the HPPA, enable powerful public health functions (education, consultation, enforcement, etc.), with a built-in flexibility that ensures that prescriptive rigidity does not interfere with their intent. Adequate resources, skilled professionals and effective leadership from the Ministry of Health are necessary components in realizing the full potential for community health protection in Ontario.

At present, limited resources and personnel are preventing health units from meeting the minimum standards, let alone implementing additional ones. This results in a triage situation, where lower-priority programs are identified and resources shifted away from them. This seems to have been the case for aspects of the Safe Water program, where assumptions were made about the proper operation and oversight of drinking water systems, and where public health's role has not been clearly defined. It is worth noting that this same theme of inadequate resources and poorly defined roles in enforcement and abatement permeated much of what the Inquiry heard on the subject of the Ministry of the Environment.

We believe that a properly funded system of local public health agencies supported by strong leadership from the province will provide the means not only to meet the minimum standards, but also provide an extra level of safeguards for public health. The expertise of the medical officer of health and his or her staff should be used to full advantage to proactively facilitate locally relevant evaluation and protection of drinking water regardless of subjective jurisdiction.

POLICY RECOMMENDATIONS

RECOMMENDATION 3:

THAT A MULTI-BARRIER APPROACH TO ENSURING THE SAFETY OF DRINKING WATER BE FORMALIZED.

This is a crucial component of an integrated water quality assurance system. There is no need to repeat the significance of the number of agencies that have a hand in water quality. What is important is to ensure that each knows what the others' roles are, and that appropriate standards of practice for each are always being met. Policy statements should provide a foundation for this.

Federal Policy
Under the Federal Water Policy statement on Water Quality Management, the federal government role, in cooperation with the provinces, is to develop strategies for identifying the nature and extent of water contamination, and to support measures to protect water quality. The Federal Water Policy statement on Safe Drinking Water recognizes that the protection of drinking water is a shared responsibility of all levels of government and commits to helping all jurisdictions in setting safe drinking water standards. The statement also addresses the need for promoting public awareness and understanding of critical issues respecting drinking water safety,

such as prevention of contamination of drinking water sources from land area run-off (NOTE: the Federal Water Policy of 1987 was tabled in Parliament but not extended into a national policy). These strategies to protect drinking water sources, and ensure drinking water safety, should be specifically outlined and, where applicable, recommended for legislation (e.g. national standards for water quality).

A Multi Barrier Approach

This approach to drinking water quality has been consistently addressed by many of the parties during the Inquiry. Whatever the individual views on procedure, there can be no question that each agrees that quality drinking water depends on the proper management of the entire life-cycle or "product flow" of water – from source to tap and back to the source. Strong policies and procedures must be in place for each of the following barriers:

- **Source protection**: examination of the interaction between natural processes within a watershed and the human activities that influence them, and the implementation of management strategies to maximize sustainability and minimize negative impacts. This should of course involve public health perspectives wherever appropriate

- **Water treatment:** Several treatment methods are available, but the standard of chlorination plus filtration has proven to be the most effective. Despite the specific mention of this approach in current legislation (i.e. Ontario Regulation 459/00), evaluation of other methods (e.g. Ultraviolet light, ozone) must continue.

- **Proper Operation of the Distribution System:** Safe and high-quality drinking water will depend on a well-constructed, maintained and monitored system, from the exrtraction of water from its source, through its treatment in the waterworks, to its flow through the distribution network. Those responsible for these functions must have the proper skills to carry out all of the procedures and the knowledge to understand the reasons for them.

- **A comprehensive verification system:** Each component of the multi-barrier approach must in its regulation enable a verification system based on routine inspections, investigations, enforcement and clear reporting strategies. It should also require permits, licenses, and record keeping wherever relevant. Such a system would further be strengthened by a training component, whereby the agencies responsible for oversight also educate the operators. This system of safeguards serves to ensure that the protective aspects of policy are being followed and identify situations that could evolve into more serious problems before they do.

- **Public awareness and education:** This must be recognized as a primary tool in protecting drinking water supplies, as a reinforcement of the above functions. It should include guidance to help individuals and communities protect groundwater supplies , information on drinking water standards and health-related parameters, assistance with private drinking water monitoring and testing, clear understanding of the rights and responsibilities of individual well owners, and full disclosure of the performance of the water systems serving them.

RECOMMENDATION 4:

THAT A RISK-ASSESMENT BASED SYSTEM FOR THE EVALUATION AND OVERSIGHT OF PUBLIC WATER SYSTEMS BE DEVELOPED AND IMPLEMENTED

One of the most crucial components of proper planning and evaluation of a water system is a detailed examination and estimate of potential risks to both source and treated water. This estimate would take into account populations served, land use activities, hydrogeological sensitivity, well types, treatment methods, water quality history, and so on. This would in turn determine appropriate control measures and verification frequencies. The existence of risk categories may provide compliance incentives for system owners/operators while reducing the financial burdens imposed on lower-risk systems by the current legislation. On the regulatory side, it would provide for the most efficient use of verification resources, where the vigilance over a system would be proportionate to its estimated risk. This type of approach is included in the HACCP protocol described above and included as Appendix 9.

RECOMMENDATION 5:

THAT FEDERAL GUIDELINES FOR DRINKING WATER QUALITY BE THE MINIMUM REQUIREMENT FOR PROVINCIAL DRINKING WATER, LEGISLATED AS STANDARDS FOR ALL DRINKING WATER SYSTEMS.

The Guidelines for Canadian Drinking Water Quality are intended to apply to all drinking water supplies, public and private. However, they are not at present legally enforceable standards unless written into appropriate provincial legislation/policy.

RECOMMENDATION 6:

THAT THE MINISTRY OF HEALTH AND LONG-TERM CARE CONSIDER A MORE PROACTIVE ROLE IN WATER THROUGH ITS PUBLIC HEALTH FUNCTION.

Given that the Ministry of Health, under the HPPA, sets Mandatory Programs such as the Safe Water Program, the requirements of this program should be revised to include actions to protect groundwater sources e.g. "in consultation with other ministries and local municipalities, ensure that groundwater contamination is investigated, identified and managed/prevented." Health Inspectors might also have a restored role in consultation with waterworks operators and random sampling.
It is noteworthy that the explicit public health role in ensuring safe drinking water has been shrinking over the years. For a recent example, when the Ontario Drinking Water Objectives became Standards under O. Reg. 459/00, an explicit assignment of responsibility of systems not covered under the Ontario Water Resources Act (OWRA) to local health agencies was removed.

While some analysis of roles and responsibilities of other agencies may be required before defining the precise role of the Health Departments, it is clear that potable water is a public

health issue and as such should more directly involve public health agencies. Their responsibility has been shrinking over the years, despite their particular expertise.

RECOMMENDATION 7:

THAT THE MINISTRY OF HEALTH AND LONG TERM CARE (MOHLTC) ENSURE LEADERSHIP IS PROVIDED BY ITS PUBLIC HEALTH BRANCH ON WATER-RELATED PROGRAMS.

The requirements of the Safe Water component of the MHPSG should be clarified, and a more consistent system should be in place to ensure that protocols issued under its purview are well conceived, properly communicated and that support exists at the branch to ensure that clarification and consistent interpretation is always available.

Questions about the applicability of a Cryptosporidium / Giardia Outbreak Protocol to the Walkerton *E Coli* outbreak, lack of clarity on what should be done with inspection reports provided to local health units from MOE and the recent lack of a province-wide standard for the issuance of Boil Water Advisories are three examples that illustrate this need.

The public health field has also expressed concern about its recent role given their decreasingly explicit functions in water protection. In the past, specific directives were in place under the MHPSG to evaluate drinking water in systems not covered under the OWRA. If these functions were restored, many of the gaps in the current system would be at least partially filled.

RECOMMENDATION 8:

THAT THE ONTARIO GOVERNMENT IMPLEMENT A NEW PUBLIC HEALTH STRATEGY THAT PLACES MORE EMPHASIS ON PREVENTION AND EDUCATION, AS WELL AS RAISES THE PROFILE OF PUBLIC HEALTH.

By raising the status of health promotion and prevention of disease, the government may enhance public awareness of its importance, and attract the skilled staff required to implement the provisions of the HPPA and the MHPSG. This must of course be accompanied by a willingness to increase resources that will ensure a more active role for public health agencies in the provision of safe drinking water.

RECOMMENDATION 9:

THAT THE MINISTRY OF HEALTH AND LONG-TERM CARE ENSURE THAT INCENTIVES ARE IN PLACE TO FACILITATE THE RECRUITMENT AND RETENTION OF A FULL-TIME MEDICAL OFFICER OF HEALTH IN EACH HEALTH UNIT

The HPPA, under section 62, requires every Board of Health to have a full time medical officer of health. This requirement is clearly based on the importance of the medical officer of health as the key person responsible for community health protection. The absence of this key person could thus constitute a significant gap in the system that would constitute additional risk to that community's health under the right circumstances. The medical officer of health plays a key role in decision-making when a community health is at risk, including issuing orders and managing outbreaks.

RECOMMENDATION 10:

THAT THE MINISTRY OF HEALTH AND LONG-TERM CARE ENSURE THAT ALL HEALTH UNITS HAVE ADEQUATE FUNDING TO ENSURE THAT ALL MANDATORY PROGRAMS CAN BE CARRIED OUT ACCORDING TO HPPA, AND THAT ADDITIONAL PROACTIVE PUBLIC HEALTH PROGRAMS CAN BE IMPLEMENTED AS ENABLED BY THE SAME STATUTE.

In order to ensure that public demands regarding safe water are met, it is essential that health departments be equipped to meet their legal responsibility to investigate health hazard reports and to act immediately to protect the health of the public whenever the report is justified. This is a general duty of the MHPSG that applies to all programs within it. Included in this program are requirements for the provision of timely and essential information to the community and monitoring health hazard management strategies. The purpose of these requirements is to identify health hazards, take appropriate action in order to ensure community health protection and continued public health services delivery in the event of a health hazard.

The current level of Board of Health compliance with these programs stands at an average of about 75 – 80%. These may seem to be adequate numbers, but what they actually represent is a compliance rate of 20-25% below the minimum acceptable standard.

Investments required in the public health area are small, relative to the large potential benefits. Funding for public health programs amounts to less than 1% of Ontario's total health-care budget, and even with the cost-sharing arrangement with the municipalities, many health units are unable to fulfill the MHPSG as set out by the province, let alone the additional non-mandatory programs encouraged by the HPPA to meet local needs. This situation is exarcerbated by the need to mobilize already-limited health unit resources to respond to incidents such as the *E Coli* outbreak in Walkerton, which was not limited to that locale, as all Ontario health units were forced to put a higher priority on water issues.

RECOMMENDATION 11:

THAT THE PROVINCE ENSURE THAT EACH REGULATORY BODY HAS THE AUTHORITY AND THE RESOURCES TO PROPERLY CARRY OUT VERIFICATION AND ENFORCEMENT DUTIES ENABLED BY THEIR STATUTES AND REGULATIONS.

Clear and timely follow up must be required in all cases where deficiencies are identified, and random and routine inspections must be carried out with appropriate frequency. Verification and enforcement are essential components of regulation, in order to quickly identify and correct non-compliance. By empowering officers to investigate potential impairments to water, to examine relevant records, conduct tests and to require the production of any relevant information, the basis is laid for a periodic and detailed evaluation of the regulated activity in question, whether it be farm practices, land use or water plant operations. During this evaluation, deficiencies can be identified and corrections can be ordered, with the understanding that failure to do so will result in penalties under the Act. Follow-up is of course essential to ensure that any directions to achieve compliance have been carried out. Deterrent penalties constitute incentive to maintain compliance.

The appropriate combination of permits, licenses, record-keeping and routine inspections constitutes an effective verification process. Inspectors designated by legislation governing various land uses, farm practices, wells, septic systems and general environmental protection together verify that the protective systems that ought to be in place in fact are. This function, like monitoring, serves to identify situations that might evolve into real threats to drinking water before they have the opportunity to do so.

RECOMMENDATION 12:

THAT THE PROVINCE REQUIRE TRAINING AND CERTIFICATION OF WELL CONTRACTORS, WATERWORKS OPERATORS AND INSPECTORS, INCLUDING A MANDATORY WATERBORNE DISEASE COMPONENT.

The delivery of a safe water supply will depend in large part on the skills of the technicians responsible for it. System operators, technicians and analysts play a critical role in the reliable delivery of drinking water. Effective oversight and management of the water-delivery process requires expertise on maintenance requirements, knowledge of standards and the reasons for them, and overall competency with interpreting observations on system performance. Beyond the technical requirements that ensure the integrity of water-delivery hardware, it is important that technicians have a basic understanding of why those requirements exist. A basic understanding of the modes of transmission of waterborne disease and the methods used to prevent them is essential to the proper delivery of potable water. Mandatory training and certification requirements should include this understanding.

RECOMMENDATION 13:

THAT THE PROVINCE IMPLEMENT RECOMMENDATIONS 2, 6, 7, 20-24, AND 29-35 OF THE CORONER'S REPORT TO THE WALKERTON INQUIRY.

These are public health-related recommendations that are consistent with the views of our membership, and in many cases reinforce the recommendations that are being made in this submission. They are reproduced in Appendix 8.

OPERATIONAL RECOMMENDATIONS

RECOMMENDATION 14:

THAT MEDICAL OFFICER OF HEALTH OR DESIGNATE HAVE THE OPPORTUNITY TO COMMENT ON APPROVALS DEALING WITH LAND USE, SEPTIC SYSTEMS AND WELL CONSTRUCTION WITHIN HIS OR HER JURISDICTION.

The approving body (e.g. MOE, Municipality) may not necessarily have the appropriate perspective for recognizing potential threats to public health in such plans. By ensuring that input, risks may be identified and changes can be made in the planning stages. Health inspectors already employ this approach for food premises. It is an effective opportunity to consult with operators and contractors who may not have complete knowledge of compliance requirements.

RECOMMENDATION 15:

THAT OPPORTUNITY FOR COMMENT ON DECISIONS THAT MIGHT IMPACT WATER IS PROVIDED TO A WIDER GROUP OF STAKEHOLDERS.

Water providers and water users must have access to information, and the opportunity for input, on all land-use planning decisions impacting on drinking water sources (i.e. similar to Environmental Registry requirements for provincial ministries)

RECOMMENDATION 16:

THAT THE ONTARIO MINISTRY OF AGRICULTURE, FOOD AND RURAL AFFAIRS ENACT ITS PROPOSED STANDARDS FOR NUTRIENT MANAGEMENT.

As the Ministry of Agriculture, Food and Rural Affairs has set proposed standards under the *Nutrient Management Act* for agricultural operations applying nutrients to land, the implementation of this Act should be phased in as quickly as possible in order to reduce potential groundwater contamination from these sources.

RECOMMENDATION 17:

THAT THE FEDERAL GOVERNMENT ENACT ITS PROPOSED STANDARDS FOR DRINKING WATER MATERIALS.

The *Drinking Water Materials Safety Act* was introduced by Health Canada in 1996 to protect consumers, by preventing unsafe drinking water materials from being sold or imported into Canada. The Act would require certification of water treatment devices, water treatment additives and water system components for which health based performance standards have been established.

About 100,000 home water treatment devices are sold annually in Canada; studies have shown that water passing through an improperly maintained home filtration device may have levels of bacteria up to 2000 times higher than levels in unfiltered water.

As this Act has not yet been passed, there are currently no specific regulations for drinking water treatment devices. Presently, Health Canada strongly recommends that consumers wishing to use water treatment devices, purchase one that is certified as meeting the applicable American National Standards Institute (ANSI)/ National cience Foundation (NSF) health-based performance standards. Our recommendation is that the federal government revisit this Act.

alPHa SAFE WATER WORK GROUPS RECOMMENDATIONS

alPHa created three safe water work groups to deal with the growing issue of drinking water in the province of Ontario. These groups were subdivided by the size of the water system. Below are the summaries of various submissions made by alPHa on behalf of these groups to the Province. Recommendations of a more technical nature were also made, but are not repeated here. Each of these submissions is included in full in the appendices.

LARGE SYSTEMS

RECOMMENDATION 18:

THAT THE MINISTRY OF THE ENVIRONMENT REVIEW AND AMEND ONTARIO REGULATION 459/00, DRINKING WATER PROTECTION.

O.Reg 459/00 was drafted and passed quickly in response to problems identified soon after the Walkerton outbreak occurred. Most notably, it strengthened reporting requirements and gave the Ontario Drinking Water Objectives the force of law. Overall, we believe that this regulation is a strong one and will afford greater protection from water borne disease. We also believe that it could be further strengthened with some revision.

Summary of Recommendations made in the alPHa submission regarding Large Water Systems:

1. Clearer references should be made to the requirements set out in the Ontario Drinking Water Standards. The document is referenced in the present regulation, but clarity regarding its application is lacking. The concern is that required standards for water quality parameters that are not specifically mentioned in the attached schedules, such as viruses and protozoa, may be overlooked.

2. An allowance for the prioritization of reporting of and response to adverse water quality notices should be made. A potential lack of understanding of what the numbers mean at the Spills Action Centre may lead to unnecessary urgency being attached to certain incidents. An elevated plate count in the absence of *E.coli* and coliforms for example does not warrant the same response. Recommendation is to categorize urgency of adverse water reports into at least two levels with corresponding response times.

3. A clearer role in water quality under this regulation for the health departments should include routine reviews of reports, studies and surveys by water works owners as well as routine microbiological sampling and Free Available Chlorine (FAC) measurements to ensure that water quality parameters are met in every part of the system.

4. Clear procedures on good sampling practices are recommended to ensure that proper disinfectant residuals and acceptable water quality parameters are maintained throughout the entire system. Requirements for the availability of detailed and up-to-date distribution system plans are also strongly recommended.

SMALL SYSTEMS

RECOMMENDATION 19:

THAT THE MINISTRY OF THE ENVIRONMENT IMPLEMENT A SOUND REGULATORY FRAMEWORK FOR SYSTEMS NOT YET COVERED BY PROPOSED OR EXISTING LEGISLATION.

Shortly after the introduction of O. Reg. 459/00, the MOE circulated a discussion paper that provided a springboard for comments on what the regulation covering smaller waterworks might entail. Many stakeholders provided comments based on the guidance provided in the paper. It was widely expected that a counterpart regulation to O. Reg. 459 would be drafted that would cover facilities such as summer camps, restaurants with proprietary water supplies, and recreation facilities.

The proposed regulation that was released (Drinking Water Protection for Designated Facilities) limits its focus to facilities that house what might be considered vulnerable populations (schools, day cares, long-term care facilities etc.). While this focus is very important in a risk-based system, a significant number of small waterworks - from which equally significant numbers of

Ontarians draw their water - remain unprotected. The recommendations that follow are drawn from the alPHa and ASPHIO responses to both the Discussion Paper (Appendix 3) and the proposed regulation of Designated Facilities (Appendix 4).

Our first broad recommendation is that the MOE reconsider recommendations made during the discussion paper process in order to address the pressing need to regulate the operation and monitoring of small waterworks in general. While the proposed regulation of Designated Facilities does address perceived high-risk areas, large gaps still exist in the overall regulatory protection of drinking water. What follows is a reiteration of the recommendations alPHa and ASPHIO made with these gaps in mind.

Summary of Recommendations made in the alPHa / ASPHIO submission in response to the discussion paper:

1. That the Small Public Waterworks Regulation (SPWR) establish a definition for a small public waterworks as: 25 or more people served or 15 or more service connections, operating at least 30 days per year or serving at least 750 people on one or more days; a waterworks serving populations at increased risk of waterborne illness; or a waterworks which uses water for food production and processing.

2. That the Ministry of Environment establish an internet accessible Register of Ontario Waterworks to contain data by community of all waterworks including the name, location, source, plant, and population served. This Register would categorize each waterworks as to whether it falls under the DWPR or proposed SPWR.

3. That all small public waterworks be classified by the Ministry of Environment accounting for the source of water (surface, surface under the direct influence of ground water, ground water).

4. That all small public waterworks drawing from a surface water source be required to ensure the provision of a minimum level of treatment consisting of chemically assisted filtration and disinfection.

5. That all small public waterworks drawing from a ground water source under the direct influence of surface water be required to ensure the provision of a minimum level of treatment consisting of filtration and disinfection.

6. That all small public waterworks obtaining water from a ground water source not under the direct influence of surface water be required to ensure the provision of a minimum level of treatment consisting of disinfection.

7. That the Ministry of Environment undertake a hydrogeologic sensitivity assessment of all non-disinfecting ground water systems to determine the vulnerability to microbial contamination, need for disinfection and other corrective action.

8. The SPWR should define requirements for bacteriologic and chemical testing of small public waterworks. Minimum frequencies for bacteriologic testing should be specified. A schedule for chemical testing should be specified which might be based on category specific results. Radionuclide testing should be included if locally relevant.

9. That the template for notification and corrective action included in the DWPR be utilized in the SPWR, with appropriate modification to deal with the requirements of small waterworks.

10. That the regional offices of the Ministry of Environment be provided with sufficient staff and resources to monitor and enforce the regulation.

11. That local boards of health be provided with sufficient staff and resources to support implementation of the regulation, including the monitoring and enforcement role where relevant.

Summary of alPHa/ASPHIO recommendations in response to the proposed Drinking Water Protection Regulation for Designated Facilities

1. There are no definitions of what constitute a treatment and distribution system. These should be included, and more details on procedure should be considered, keeping in mind that regulatory requirements will be carried out by people whose primary function may not be operating a waterworks.

2. Clearer criteria for becoming a "trained person" as identified in the regulation are recommended. The inclusion of a mandatory water borne disease component and the identification of those permitted to provide the training are examples of what we would like to see. Properly-resourced health units might be logical providers of this training.

3. Some health units include communities whose technological infrastructure will not allow them to meet the requirements of the new regulation. Schools in Amish or Mennonite communities are examples of facilities that might require special consideration.

4. Page 6, 1(1) Concern has been expressed by our members about the exemption of social care facilities (e.g. day nurseries) located in private residences.

5. Page 7 2 (3) If this regulation does not apply to a water treatment system that obtains all of its water from a treatment or distribution system covered by this regulation or regulation 459/00, what covers potential degradation or loss of chlorine residual within the system not covered? Where is the regulatory protection of drinking water once it enters the exempt system?

6. There is an inconsistency with accepted practice in the Schedule, which requires five minutes of boiling time as a corrective action inadequate disinfection. The literature

recommends one minute, a practice that is reflected in the Ministry of Health and Long Term Care's draft Boil Water Advisory Protocol.

PRIVATE SYSTEMS

RECOMMENDATION 20:

THAT THE MINISTRY OF THE ENVIRONMENT CONSIDER A REGULATORY STRATEGY FOR THE PROTECTION OF DRINKING WATER FOR PRIVATE SYSTEMS.

A significant number of Ontarians obtains drinking water from private or residential wells, and there is substantial and consistent evidence of risks to health in such systems. alPHa and ASPHIO are in the process of finalizing a position paper on the regulation of private systems, which will cover several topic areas. This DRAFT paper is included as an illustration of the approach we are considering. Some of the ideas presented within it are yet subject to debate and should not yet be considered alPHa's or ASPHIO's final position on the subject.

Some recommendations were taken from this paper for presentation to the Inquiry during Public Hearing # 6, and are reproduced below. The full written submission is included in Appendix 6.

The existing legislation governing well construction and maintenance in Ontario (Regulation 903 respecting Wells under the Ontario Water Resources Act) needs to be strengthened in the areas of monitoring, enforcement and contamination control. Specifically, alPHa and ASPHIO recommend the following:

1. That a permit or Certificate of Approval be required for construction of individual wells, and that a Use Permit be required for operation, the issued upon inspection of the completed well, including a water test. This would improve monitoring and enforcement of construction requirements, as well as facilitate a more complete cataloguing of wells in the province.

2. That inspections or consultations be carried out to ensure that wells are properly maintained as well as abandoned in compliance with the regulation. Reference should also be made to the OBC Part 8 (sewage systems) that all abandoned wells within the required distances are identified and properly filled in.

3. That water sampling requirements be implemented for private wells. These requirements must be based on risk assessments (which would occur during the permit process) and must take into account the potential cost to the well owner, the potential impacts on ground water by processes outside of the owner's control, and the Government responsibility for monitoring and protecting overall groundwater quality.

4. That a database be considered for private systems, which would include

- an inventory of all wells, existing and abandoned, to be provided to municipalities for consideration in land use planning
- all sources of potential contamination (agricultural, domestic, industrial etc.) in vicinity of a given wellhead to determine impact on water supply
- proof or documentation that treatment requirements have been met, where required
- The diagrams provided on the well record, including details indicating where on-sewage systems and other sources of pollution are located in relation to the well.

5. That owner rights and responsibilities in wellhead protection and groundwater protection be clearly outlined in well maintenance and protection from contamination sections of the regulation, and that the well owner be educated on these during the permit process or during inspections / consultations.

6. That Ontario require training and certification of well contractors, and inspectors, including a mandatory waterborne disease component. Examinations developed should be consistent in content and types of questions for all areas of the province.

APPENDIX 1: alPHa submission to Part 2 of the Walkerton Inquiry: Ensuring Drinking Water Quality in Ontario: A Framework

www.alphaweb.org/docs/Part_II_Paper-13_07_2004-12_18_05.pdf

APPENDIX 2: RECOMMENDATIONS MADE BY THE alPHa LARGE WATER SYSTEMS WORK GROUP ON ONTARIO REGULATION 459/00, DRINKING WATER PROTECTION, MADE UNDER THE ONTARIO WATER RESOURCES ACT.

www.alphaweb.org/docs/ RecommendationsOreg459-13_07_2004-12_37_12.pdf

APPENDIX 3: Protecting Drinking Water for Small Waterworks in Ontario - A submission in response to the Discussion Paper

www.alphaweb.org/docs/smallwaterworks-13_05_2003-15_49_45.pdf

APPENDIX 4: alPHa / ASPHIO response to the proposed Drinking Water Protection Regulation for Designated Facilities

http://www.alphaweb.org/docs/drinkingwater_regulation-13_05_2003-15_06_02.pdf

APPENDIX 5: DRAFT alPHa/ASPHIO Position Paper on the Regulation of Private Wells.

Included only for the benefit of the O'Connor Commission. This position paper is tabled

APPENDIX 6: Proposed Recommendations: Public Hearing 6: Standards; Technology; Small Systems

www.alphaweb.org/docsPublic_Hearing_6_Recommendations-13_07_2004-12_53_44.pdf

APPENDIX 7: Proposed Recommendations: Public Hearing # 2 & 3: Provincial Government: Functions and Resources (Includes Transcript of alPHa presentation)

www.alphaweb.org/docs/Public_Hearing_2_&_3_Recommendations-13_07_2004-12_57_38.pdf

APPENDIX 8: Public Health Related Recommendations from the Coroner's Report to the Walkerton Inquiry.

Coroner's Recommendations

2. Random assessment should be conducted on a regular basis by the Minister of Health or his or her delegate, pursuant to the Health Promotion and Protection Act (Ontario), of public health boards with the Mandatory Health Program and Services Guidelines of the Public Health Branch. Further, the Public Health Branch of the Government of Ontario or the Minister of Health's delegate should continue to track on an annual basis trends, if any, in programs and services non-compliance by public health boards in Ontario in order to assess whether altered programs and services guidelines are required from time to time and whether resourcing allocations by the Government of Ontario require adjustment to ensure full compliance.

6. The respective roles and responsibilities of all involved oversight agencies concerning treated and untreated municipal water systems, including in connection with the provision of safe drinking water, should be clearly and unambiguously stated.

7. The role of medical officers of health in relation to public health issues concerning treated and untreated municipal water systems should be clarified and strengthened including, in particular, with respect to whether local medical officers of health are to implement a proactive approach to responding to adverse drinking water sample test results upon receipt of notification of same.

20. Written guidance should be provided to the local medical officers of health by the PHB of the Ministry of Health, developed in cooperation with local medical officers of health and the MOE, concerning steps to be taken by local medical officers of health upon receipt of MOE inspection reports.

21. Regular meetings should be scheduled between involved local MOE and local boards of health personnel to discuss public health issues, including issues arising in respect of water works facilities as documented in MOE inspection reports.

22. The written guidance to be provided to a local medical officer of health regarding the steps to be taken upon receipt of MOE inspection reports, as set out in recommendation 13 below, should also stipulate that such inspection reports are to be read and analyzed by public health inspectors upon receipt and that the reports, or a summary of their pertinent contents, are to be made known to and shared among involved public health officials in local public health units.

    Further, upon implementation by the MOE of the IDS management information system, access to it should be made available to local boards of health, including to water works operator profile information, and to data concerning adverse drinking water quality sample test results, as included in that database.

23. In the future the Government of Ontario should ensure that all private laboratories performing, or who wish to perform, routine analytical testing of municipal water samples are accredited by CAEAL or other suitable organizations to ensure maintenance of minimum acceptable standards for the performance of such testing and the reporting to the MOE and public health authorities of all results therefrom concerning E.coli.

24. Regardless of whether routine analytical testing of municipal drinking water samples is carried out in the future by the public or private laboratories, reporting requirements for the results of such testing in respect of E.coli must be clearly outlines and entrenched in a legally binding instrument.

29. The HPPA should be amended to require boards of health, and the Minister of Health, acting in concert, to expeditiously fill any vacant medical officer of health position with a full-time medical officer of heath

30. The HPPA should be further amended to provide that is a board of health fails to act expeditiously in accordance with Recommendation No. 5 above, that the Minister of Health should be required to do so with full authority to appoint a full-time medical officer of health to the vacant position(s).

31. If necessary to achieve the objectives set out under recommendation No.5, boards of health and the Minister of Health should be obliged to actively recruit qualified persons to apply for appointment as full-time medical officers of health in Ontario, in consultation with the affected boards of health, and with such incentives as are necessary to ensure an effective recruitment program.

32. The Minister of Health, in consultation with the affected boards of health, should move forthwith to appoint full-time medical officers of health to those boards of health in which acting medical officers of health are currently serving.

33. (a) The PHB of the Ministry of Health should ensure that a written protocol outlining the circumstances in which a boil water advisory or a boil water order could and should be issued, is in a place at all times (the “Boil Water Protocol”);

(b)The Boil Water Protocol should be developed by the PHB in consultation with local medical officers of health, municipalities and the MOE;

(c)The Boil Water Protocol should:

(i) provide guidance concerning an effective communication strategy for making the issuance of a boil water advisory or order known:

(ii) be provided upon completion to all medical officers of health, MOE environmental and abatement staff, municipalities and operators of treated and untreated municipal water systems in Ontario and further, be made available to members of the public upon request.

(d) The Canadian Radio Telecommunications Commission, in conjunction with industry stakeholders and the public health community, should be requested to develop guidelines for radio and television outlets to follow in broadcasting boil water advisories or orders. Such guidelines should include the coordination of information among media outlets in the geographic area affected.

34. A steering group should be established with each public health unit area in the province, comprised of representatives of affected local hospitals, municipalities, local MOE offices and local boards of health , for the purpose of developing in a coordinated fashion

emergency response plans for the control of, or the response to, infectious diseases and public health hazard outbreaks;

Local medical officers of health should have input into and help facilitate the development of public health aspects of emergency response plans for municipalities and hospitals within their geographical area of responsibility.

35. Appropriate steps should be taken forthwith by the PHB of the Ministry of Health to ensure that all boards of health in Ontario have in place adequate written protocols for dealing with adverse drinking water test results. The PHB of the Ministry of Health should take a leadership role in providing guidance on the criteria to be included in such protocols for the assistance of local public health units. Further, such protocols should be prepared as comprehensive stand-alone policy documents within each local board of health.

APPENDIX 9: Ministry of Health and Long Term Care HACCP Protocol