



Interior Health Authority Turbidity Notification Program: Proposal for program revision

February, 2007

Proposal

The water supply industry agrees a public notification and education program is needed to inform the public about the risks in drinking water. The primary goal of the program must be to protect public health.

Many complementary outcomes are also possible with a well implemented program. These include providing information to the public about the importance of source water protection, the costs and benefits of water treatment, the importance of a well run distribution system and the role of qualified professionals to monitor water utility operations.

Much public credibility can also be gained by both the water supply industry and IHA through a consultative and well functioning relationship. An effective and successful program will utilize the strengths, resources and capabilities of both groups.

The main strategies proposed for the revised program include:

1. Develop a Water Quality Index derived from several indicators (Giardia performance, Cl_2 residual, pathogen loading, turbidity),
2. Proactively target the at risk immune compromised population with information to minimize the risk to that group from marginal water quality conditions,
3. Preserve the alert based notification protocol for general public emergencies and restore the discretionary authority of water managers in consultation with the PHI Water Specialists to issue Boil Water Notices using the revised Water Quality Index,
4. Implement initiatives to educate the public on the risk(s) inherent in local water supplies, including information on the Water Quality Index, safe potable water alternatives and the costs and benefits of treating public water supplies,

There are many ways to implement the above strategies and options are presented in the following section. Effective implementation will depend upon cooperation in defining program components, the respective roles and responsibilities of health authorities and water suppliers, and available resources.

Suggestions for Implementation

The following is intended to provide an outline for implementation of the strategies proposed above. General roles and responsibilities are proposed with the intent to take advantage of existing capabilities and resources.

As noted, the fundamental changes proposed involve using a multi-indicator water quality index to present a more accurate and comprehensive indication of the risk to the general public of the water supply, while targeting the immune compromised population with specific need to know information about water health risks.

1. Water Quality Index:

The Water Quality Index will replace the Turbidity Index currently in place. The WQI will be a composite of most indicators presented in Attachment 5 by E. Sigalet January 23, 2007. Excluded are disinfection byproducts, which are a long term water quality problem and do not contribute to imminent risk. Specifically the indicators used will be Giardia performance, turbidity, pathogen load and cl_2 residual in the distribution system.

The WQI for each water source would be evaluated using the current information available on each of the parameters and be made publicly available through acceptable media (see 2. and 3. below). Further, a reading of fair would require consultation with the PHIWS with respect to the protocol for further action. A reading of "poor" would require immediate consultation with the PHIWS as described under 3. below.

The WQI could be developed and distributed as a simple tool that water purveyors would enter water quality information into and the index would automatically be calculated.

2. Immune Compromised Notification:

A team approach for notification of the immune compromised population is proposed whereby initial notification is provided through care providers and complementary educational information is provided by the water supplier. Members of this group are in regular contact with health care professionals and this relationship provides an ideal opportunity to inform them about the potential risks of public water supplies and to refer them to their local water supplier for additional information.

Existing public health communication channels can be used to notify and inform physicians, hospitals, treatment centres and public health centres to target the immune compromised with the basic message that public water supplies are a potential health risk and additional information is available and should be obtained from the water supplier before use.

The water supplier's role would then be to provide information about the water supply to enable the individual to make informed choices about risk. This would entail posting the Water Quality Index prominently on the purveyor's web site, along with supplementary information about water quality, information about the supplier's water quality improvement plan, as well as other offerings the water purveyor may have such as subscribing to water quality notification programs. Reception staff would be able to provide a summary of this information to telephone inquiries.

This method would be highly effective in making sure the group most at risk from a Water Quality Advisory condition would be notified and informed and eliminate the general confusion generated under the alert based system.

3. Alert Based Notification

It is proposed that the Alert Response be reserved for water quality situations where the consensus is a serious health risk exists to the general public. In situations where the Water Quality Index is poor, consultation between the water manager and the PHI Water Specialist would take place and a decision on issuing an order to the public would be made. The order could be a Boil Water Notice, a Boil Water Order, or a Do Not Drink Order, depending on the situation at hand and the final determination by the PHIWS.

The Emergency Response Protocol for the water system would be used, but, in general, this would involve the water supplier issuing a press release to all local media outlets, directly contacting all public facilities and providing appropriate signage for posting in public places. Water supplier specific tools such as web site updates, email service to subscribers and phone notification can make up supplementary communication strategies. The Alert Based Notification Program would be specific to the water supplier's capabilities, form an integral part of the purveyor's Emergency Response Plan and be subject to approval by the PHIWS.

4. Public Education

There are many opportunities for public education under the proposed program. The onus would be on the water supplier to make basic water quality information such as the Water Quality Index available to the public. The minimum standard would require posting of the water quality index on water supplier web sites.

IHA should consider further development of a common web site containing multiple purveyor Water Quality Indexes that can be updated by individual suppliers. This service would also be useful where the concern is an individual might be in many different water supply areas over a short period of time and would like to check on the status of several systems at once.

Broad based public awareness can be raised by a program kick-off, where press releases would go to all major media outlets and lead health officials would convey the key principles of the program to the public at large. The program launch should be no later than March 15, 2007 to insure everything is in place prior to spring run off.

The program to educate health care providers to notify the immune compromised population would be handled internally through established IHA public health communication channels. It would be important to have this as a regular reminder to health care professionals to reinforce the messaging, with an obvious emphasis on those areas regularly used by the immune compromised, such as oncology, pediatric and geriatric specialists and treatment centres. A brochure could be developed for distribution at health care facilities to hand out to patients to reinforce and support the messaging.

This multi-purpose brochure would be available in print and electronic forms and contain information for the immune compromised population, information about the water quality index, explain the water supplier's role in the program, provide guidance on alternative water sources and provide references for additional water quality information. The brochure could be made available in hard copy for

distribution by health care providers, water suppliers (front counter and as bill stuffers) and electronically on a broad range of web sites.

There are many other options available in support of public education. These range from news releases to roadside signage to stories in individual water supplier newsletters. The intent is to educate the public on water quality issues, advise where to get current water quality information and provide a consistent and on going reminder of the challenges water suppliers face in providing safe, potable water.

Closure

The intent of this proposal is to provide the groundwork for discussion on crafting an effective Water Quality Education Program that protects public health. It incorporates the general principles agreed to with the Ministry of Health and the Office of the Provincial Health Officer on September 18, 2006. It also responds to a request by the IHA Drinking Water Officer and the PHI Water System Specialists at a WSA Director's meeting January 25, 2007 for a formal written submission suggesting changes to the program.

We welcome the opportunity to discuss this proposal in detail and offer our services to further define the details of the program and assist in its implementation.

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