

Placing Security into the Hands of the Consumer

For the consumer who relies on municipally treated drinking water, their sense of water security is placed into the hands of the municipalities. However, if one were to watch drinking water bulletins that are reported across North America, they would find that a Boil Water Advisory (BWA) is reported almost on a daily basis.

By Melissa Lubitz

Boil Water Advisories continue to grow in North America

BWAs are issued for a variety of different reasons: failure of disinfection equipment, high turbidity levels due to a malfunctioning filtration system, water main breaks, questionable pathogenic bacteria detection and general interruption of water treatment processes. The list could go on but these particular reasons seem to cover the majority of general reasons BWAs are issued.

Research has shown that rarely is an article published or a report issued when these BWAs have been lifted. How does the consumer know when it is safe to drink the water? Does the private homeowner continue to boil every drop of water used for cooking or consumption indefinitely? Should the public have to continue to warn their children not to open their mouths while bathing or showering for fear that they could come down with an

intestinal illness? How can consumers protect themselves so that safe water, which we all take for granted, is a given when the faucet is turned on?

BWAs in North America

When looking at the number of BWAs issued in Canada and the U.S., it comes as a surprise that although the U.S. is more public about issuing BWAs, they do not claim to know the total number of BWAs that have occurred over a certain period of time. One of the responses received from the U.S. Environmental Protection Agency (EPA) was: "After researching your question, it has been determined that we do not keep track of this information" (Towana Dorsey, Office of Ground Water and Drinking Water, U.S. EPA Government Office, Washington, D.C., Nov. 20, 2008).

Canada, however, has public

reports of the number of BWAs issued, of which CTV has published articles on. One article reported that on April 8, 2008, there were more than 1,760 BWAs currently in effect throughout the country. These advisories did not include First Nations territories, which at that time had at least 93 BWAs in effect. The two main provinces that have had the most advisories in 2008 were Ontario and British Columbia. Both provinces are now considered to be provinces of concern with regards to water quality.

Looking at these statistics, it is no wonder that consumers are now starting to question what is happening with their drinking water. In the wake of the tragedy in Walkerton, Ont., in 2000, why does it seem that the state of water quality is getting worse instead of better?

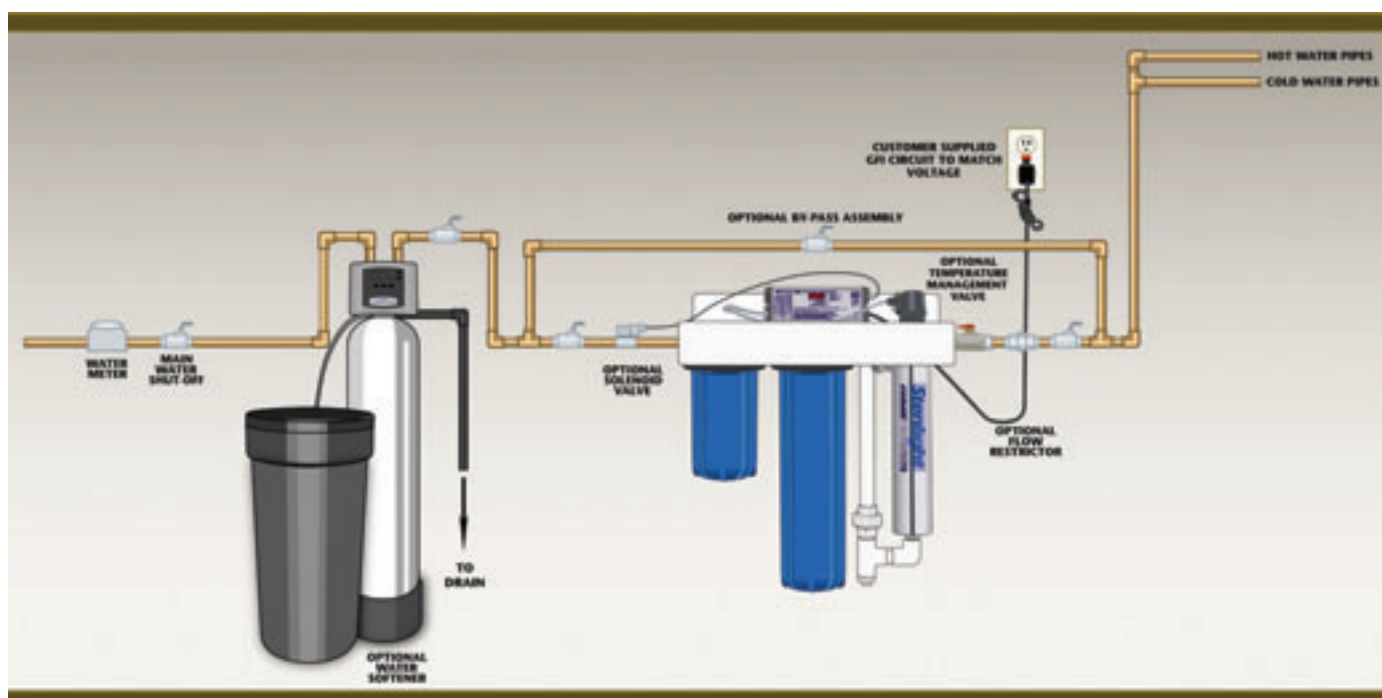
One can only assume that due to the current, more stringent drinking water regulations across North America, the BWAs are being used as precautionary measures as regulators do not want another potential tragedy to occur. These advisories, however, are getting to a point where they have been described as a band-aid substitute for treatment.

If this is the case, what can be done about it? Just simply looking at improving the municipal infrastructure is daunting, as it has been reported that in Canada alone, the Federation of Canadian Municipalities estimates about \$31 billion is needed to upgrade the country's water and wastewater treatment infrastructure.

Keeping Drinking Water Safe

Another step needs to be added to the water treatment equation. Consumers now have the ability to take some responsibility of their own drinking water security with the help of residential water treatment equipment. Most private homeowners throughout North America who have hardness in their water, or even the potential of hardness, will immediately look to purchase a water softener in order to keep their clothes looking better and their hair looking shinier. But hardness in water does not cause health issues; it is merely

Figure 1. Residential Water Treatment System



removed for aesthetic reasons.

As BWAs become more common across the continent, consumers now have the means to protect their home from possible bacterial contamination; they just need to know what type of equipment can help.

How does a private homeowner even go about this? As someone who has been in the water treatment industry for nearly 10 years, and with a solid understanding of the equipment available today, it can be very confusing to find the appropriate water treatment solution. Finding the right water treatment equipment for a consumer can be simple if you know the main components necessary to treat their water effectively.

For drinking water, one needs to first and foremost consider bacteria destruction, which can lead to an ultraviolet (UV) system—the most effective, simple and economical form of bacteria treatment. The consumer must remember, however, that the UV system needs to be protected and kept clean in order to ensure that it is doing its job. The main water quality components the consumer will want to consider are hardness, which a water softener can take care of, as well as particles in the water, which are referred to as turbidity or suspended solids.

Hardness needs to be removed in order to ensure that the UV is kept clean, and the particulates need to be removed in order to ensure that no bacteria breakthrough is occurring. Therefore, a complete water treatment system in a home that has hard water (if the water is soft, the water softening step can be eliminated) would consist of a water softener, some form of filtration and a UV disinfection system. (See Figure 1 for an example of a complete water system, including a water softener.)

As taxpayers, we have come to expect a level of excellence from municipalities regarding the delivery of safe, clean drinking water. This statement is typically the norm; however, it is not a 100% guarantee. All in all, our municipalities provide safe, clean drinking water to the best of their abilities, but for those who seek protection 100% of the time within their home, an integrated home treatment package seems to be a viable solution.

BWAs do not have to instill fear into the consumer. The private homeowner does have the ability to enjoy an added sense of water security through implementation of their own whole-house water treatment system regardless of whether they are on a

private well or municipally treated water. Therefore, even if the municipal drinking water is under an advisory, consumers no longer need to fear turning on their faucets. *wqp*

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