

Water Warnings Are Not Enough

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Saskatchewan Environment and Resource Management (SERM) puts together a weekly list of boil water orders and boil water advisories. These warnings are issued by Provincial Environment and Health Departments when they agree that drinking water quality concerns exist. The difference between an advisory and an order is that, in an advisory, the health threat has not been identified, but for an order the health threat has been established.

Last year there was one boil water advisory in Saskatchewan because of contamination by microbes (coliforms) and one boil water advisory because of high levels of trihalomethanes (chlorinated organic compounds that form during the chlorination process, another issue that is plaguing rural Saskatchewan).

This year, there were no boil water orders or advisories until June 19 when one was issued. The warnings picked up speed in July and to the end of September an additional 34 boil water warnings were issued. This averages almost three new boil water warnings per week. These warnings are issued almost exclusively to rural communities.

SERM does not know how many boil water advisories were issued prior to 1999, but all indications are there were not many. One wonders at the reason for the sudden sharp increase in water quality warnings. Did our water suddenly get bad or did the government suddenly begin to pay attention?

Is it coincidence that the dramatic increase comes directly following the Walkerton tragedy? It is becoming clear that the Walkerton tragedy is going to cost hundreds of millions of dollars mainly due to litigation. Who is going

to pay? Whoever is deemed liable. For Walkerton it may end up being the Province of Ontario, the Municipality, or even individuals.

While issuing boil water warnings does nothing to remedy the water quality supply of rural Saskatchewan residents, it certainly may reduce liability for the Province of Saskatchewan should any illness be linked to the identified supplies of water. The municipality then may sit with the liability.

Waterborne illness costs Saskatchewan at least \$10 million per year. Problems point to a combination of poor quality source waters and inadequate water treatment. To improve the quality of any product typically requires research and development. Did the Province with its drinking water mandate try to improve the product? Sask Water's token 1998 research

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expenditure on water quality was \$5,000 while SERM spent nothing.

Issuing water quality warnings may prevent some illnesses, even deaths and possibly, government liability. But the increase and unacceptably high level of warnings only underlines the fact that the people of Saskatchewan are, in many cases, drinking unhealthy water. What we need now is more than warnings. We need immediate, concerted action to develop sustainable solutions for rural drinking water.

Municipalities will be faced with many challenges for which most are poorly equipped. How are municipalities going to deal with leaking sewage and manure lagoons threatening water supplies? How are individual users going to deal with on-site wells and dugouts that have been affected by manure or sewage?

How are these concerns going to be monitored? Only one-third of waterborne illnesses are being picked up by current coliform testing. Therefore, most waterborne illnesses will not be identified using the present testing system. How are municipalities going to assess treatment capabilities for municipal water treatment plants and for individual users? Such assessments need to be carried out.

Municipalities need to work together to find solutions to water quality problems affecting them. Demands need to be placed on higher levels of government that expenditures on drinking water research need to include problems with poor quality rural water sources. Research also needs to focus on small treatment systems and not only on the large water treatment systems used by cities.

The Safe Drinking Water Foundation (SDWF), an independent not-for-profit organization, is working to find solutions to rural water quality issues through cutting edge research. SDWF is working with all levels of government, academia and research organizations not only in Canada, but internationally.

The question why government agencies and some corporations hesitate to deal with these issues can be summed up as good news. Everybody wants to be the bearer of good news. That's what gets support both within and outside the civil service. This is the

resistance SDWF is up against every day.

We have sponsors that have made it a condition of support for SDWF that we never mention their name to anybody. They believe in what we do, but they don't want to be associated with SDWF's findings. From our perspective if something is going to make us sick, we would like to know what it is, and how to deal with it.

By working with the best scientists in the world we are determined that we will be able to achieve that. To us, this is positive news at its best. Taking formidable challenges, break them down to manageable pieces, and pull safe drinking water solutions out of the research. If government agencies were

ever able to work on these premises, there would be no need for a Safe Drinking Water Foundation.

SDWF is at present developing methods that can identify the microbial problems in water supplies. This work is far more detailed than the present coliform testing that municipalities do and provincial agencies require. The need for better microbial methods rests with the fact that many waterborne illnesses are caused by microbes that have never been measured in Saskatchewan water supplies.

This work needs to be expanded to developing methods for removing these microbes from rural water supplies. It also needs to be expanded to other issues that make rural Saskatchewan

water unsafe, especially the high content of dissolved organic material. This material needs to be reduced by about 50% for most rural water supplies. Current water treatment techniques do not achieve this in a sustainable fashion.

At present the entire scientific input to SDWF is from voluntary contributions by scientists from around the world. The Foundation is in urgent need of more technical support and equipment if it is to continue research which will benefit rural Saskatchewan. Active involvement by municipalities in the formulation of *safe drinking* water solutions is not only the right thing to do, it will be the least expensive route to success. ■



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