

Who Cares About Rural Drinking Water?

BY DR. HANS PETERSON
SAFE DRINKING WATER FOUNDATION

Canada has the world's largest supplies of freshwater and most Canadians envision drinking water as pure, cold and clear. And for most Canadian cities, the quality of the water to be treated is excellent, so producing safe drinking water is not that difficult.

The focus of the Safe Drinking Water Foundation is quality of rural drinking water. But for comparison, it is useful to look at how cities approach drinking water issues. For example, we know that the source water for most urban areas in Canada is of higher quality than that of most rural areas. So let's look at some urban examples to see how the already high-quality source water is prepared for human consumption.

A couple of years ago I was attending the American Water Works Association's annual meeting in Vancouver. About 15,000 people were in attendance, most from the U.S.. One of the sessions dealt with the City of Vancouver's water treatment, or rather lack thereof. Vancouver's raw water is exceptional in terms of clarity, low levels of dissolved organic material, low levels of dissolved inorganic material and low levels of microbes.

Vancouver has taken this as a cue not to have to filter the water. Instead, the City of Vancouver uses watershed protection and chlorination as their only tools to provide safe drinking water. The Vancouver presenter concluded that the City is, through this shortened process, able to save millions of dollars.

Then came question period. The direct outrage by the U.S. people, including people from the U.S. Environmental Protection Agency, was something I had never seen before in a scientific meeting. The gist of it was this: if you are going to provide surface water that has not been filtered, you had better warn people so they can make a decision to drink it or not. You had also better ensure that you are not generating illness by this practice.

I suppose the City of Vancouver took that advice literally. A report released November 6 2000 suggests that from 1992 to 1998 an additional 100,000 cases of gastroenteritis (inflammation of the stomach and intestines) could be attributed to Vancouver's unfiltered drinking water.

Though Vancouver's water is low in

microbes, even a very low dose can be infectious and some of these organisms cannot be killed by chlorine. Just a few of these microbes can multiply within the human body and generate millions of new organisms - whether viruses, bacteria or protozoan parasites. An infected person can then shed in the faeces tens of millions of the disease-causing microbes several times a day. Despite this recent information on Vancouver's waterborne illnesses, rarely did the City's water not meet the British Columbia Water Quality Guidelines.

Contrast the exceptional quality of Vancouver's water supply with that of a typical rural water supply on the prairies: poor clarity, high levels of dissolved organic material (which can colour the water), high levels of inorganic material (in ground water), and high levels of microbes.

One would then think that the formidable difficulties facing rural Saskatchewan when trying to treat poor quality source waters would have awoken those with responsibility for the safety of drinking water here, namely, the province. There have been some indications that within the provincial civil service, recognition of the problem has been slowly developing. The Saskatchewan government formed a committee six years ago to study the water situation in Saskatchewan. This committee met for years and finally came up with a set of conclusions, and even money, to pursue some of the issues. An increased role for Sask Water as the province's caretaker of water was proclaimed.

Sask Water states, in its promotional pamphlets:

Good quality water is a basic requirement of health. But it's much, much more. Improving your water by properly managing and protecting your water supply and using right treatment process and equipment can improve your quality of life. That's our job at Sask Water.

Sask Water started a program to subsidize water testing for rural residents and spent \$5,000 on water quality research in 1998. A rather modest start. Compare Sask Water's tens of millions of dollars of public money invested in the potato industry during the past few years.

Indeed, many signs point to diversions of money from water quality programs to spuds. Even the solid granite sign outside three massive potato storage bins by Broderick proclaiming Sask Water's "commercial" potato effort, Spudco, cost three times more than what Sask Water invested into water quality research in 1998.

In the wake of the Walkerton tragedy, Saskatchewan Environment issued ten times as many boil water advisories in the three months since June as there were in the decade prior. Yet nowhere do we see support for research solutions to the challenging problems that are facing rural citizens. In 1998, when Sask Water splurged and spent \$5,000 on research, Saskatchewan Environment spent nothing.

We hear a lot about potholes that need to be fixed. Politicians get mileage out of personally going out and fixing the holes. Rural water treatment is in the same state as many of our roads, full of holes. The problem is that patching the holes will not solve the problem of unsafe drinking water for rural areas. We need new solutions, we need new materials, and we need new ideas.

Fixing rural water so that it meets Saskatchewan water quality guidelines is the first step towards safe drinking water. The second step needs to look into the future and making sure that microbes ranging from tiny viruses to the much larger protozoan parasites are not present in the water we drink. Neither viruses nor protozoan parasites are accounted for in Saskatchewan's drinking water quality guidelines.

Yet, according to U.S. health statistics for ground water, the number one source of waterborne illness is viruses. For surface water, the number one source of human illness is protozoan parasites. Protecting people from the ill effects of disease-causing microbes is all part and parcel of the mandate of water agencies around the world. *Nowhere have I come across a water agency with a potato mandate. Nowhere else than in Saskatchewan have I come across agencies (Sask Water, Saskatchewan Environment, and Saskatchewan Health) with a mandate in drinking water that have entrenched themselves as being part of the problem rather than part of the solution. Rural people deserve better. ■*