



UP THE CREEK

October 1, 2010

From time to time, we are consulted by our customers, or prospective customers, about our water quality. During these conversations, we often get re-educated about the perceptions of people who live on the other side of the tap, so to speak, from us. At Up The Creek, our judgments on water quality are generally made by taking our laboratory reports and comparing them to the rule book, known as “Colorado Primary Drinking Water Regulations,” to see how the numbers match up. If our numbers stay below the MCLs (maximum contaminant levels), the water is presumed safe, in the eyes of the law, and in fact.

But people on the drinking end of the pipe sometimes see it differently. One of the most common questions asked is “Do you fluoridate?” The tone of the question makes us pause to consider which answer is least likely to get our hide taken off, but in the end, we must state truthfully, “No.” The reason we don't, besides the fact that it is politically loaded, is that it does not improve the safety of the water. We believe our limited resources are best focused on that issue first. Some are glad to hear that, some are not.

Another common inquiry is about sodium content. The answer is legally irrelevant to us, because there is no MCL established for sodium, and we can't say if it's “safe” in the legal sense or in the nutritional sense. We do know the typical sodium concentration in our water - four parts per million. We can calculate that if you attempt to get just 10% of a daily sodium intake of 1500 mg solely from this water, you will have to drink ten gallons. Sadly, you will expire at around the eighth gallon from water intoxication. In our opinion, despite the fact that sodium aversion has been well inculcated into our culture, its presence in water should not be of concern.

By far, most of the water quality objections brought to us pertain to chlorine. No doubt there is vast interest in the subject worldwide. I just now typed “dangers of chlorinated water” into the Bing search box on my computer, and it returned more than 46 thousand pages devoted to the subject. So chlorine is widely despised, and frankly, we would be glad not to use it. But we have not yet learned of an acceptable substitute. Some have suggested to us that we should switch to the alternative disinfection methods that are being used “everywhere else.” Suggestions include ozonation, ultraviolet irradiation, chloramination, and reverse osmosis filtration (removes everything that ain't water from the water). It's true that each of these methods is effective *at the treatment plant*. But, except for chloramination, the effect stops there. There is no residual disinfectant to protect the distribution system. Chloramination is the injection of chlorine and ammonia. It produces a persistent but weaker disinfectant. Chloramine has its own school of detractors – a web search turned up 355 pages, and the level of outrage seemed a little higher than the anti-chlorine articles. The simple truth is that chlorine is still regarded as the most practical disinfectant, and that is likely to continue into the foreseeable future.

The subject of chlorine, and water disinfection in general, brings us to the closing thought in this minor essay. Many people live with a dark suspicion that humankind is being weakened, sickened, or poisoned by a large number of environmental contaminants, in the absence of which we might approach immortality. It is in the interest of many elements of our culture to encourage that suspicion. It sells articles, it fosters political action, it creates lawsuits, it generates grants. Collectively, it's an industry – one of the most successful in the world.

It is not the intent here to speak against this industry, merely to identify it for what it is, and encourage you to do the same. In that way, you might be more receptive to our suggestion for discerning the safety of drinking water, which is – think biological – life. Yes, life in the water. Don't be distracted by worrying what fluoride or chlorine or sodium or disinfection by-products *might* do to you. Focus instead on the known effects of hepatitis and cholera. Think about documented results of parasites such as *giardia* or *cryptosporidium* in your gut. Study the many reports of waterborne bacterial infections, such as *E. coli* or *salmonella*, and you will find what we have found, that the greatest threat to drinking water safety and public health is the biological pathogen – life. Ask your water provider what they are doing about *that*. The conversation will be a lot more worthwhile.

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