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Guest Opinion

## Residents given no say in use of water additive

by Barbara LaRaia

The human body is more than 70 percent water. To believe that what is in our drinking water has little or no bearing on our health is irresponsible. Tales of Miletus (640-546 B. C.) described water as the only true element from which all other bodies are created. Native American elders had the philosophy that whatever we do to Mother Earth we do to ourselves.

Peninsula cities have recently converted their water disinfectant processes from chlorine to chloramine—a combination of chlorine and ammonia. The reason given is that the managers of the Hetch Hetchy water system—where some cities get all or part of their water—have decided to change their disinfection process. Cities supported and touted this decision, and citizens were not given the opportunity to vote on this conversion, despite the fact that our tax money is funding this chemical experiment.

### Concern over nitrification

According to San Bruno's Jan. 27 staff report on chloramine, the major concern is the potential for "nitrification." This happens when chloramines break down to release ammonia into the water, and the ammonia is oxidized by bacteria that produces nitrates and nitrites—proven carcinogens.

In 1996, Los Angeles had to shut down its reservoir due to nitrification. More than 50 percent of utilities using chloramine have no monitoring system for nitrification. City handouts also state that chloramine will kill fish, amphibians and reptiles, and the lives of kidney dialysis patients are at risk if used in dialysis. Chloramine binds to hemoglobin causing reduced cell capacity to carry oxygen. It also states that

beverage manufacturers, high tech and biotech labs should not use chloramine-treated water.

Chloramine has a tendency to degrade some rubber plumbing components, toilet floats and water heater parts. The recommendation is that we should replace the parts as needed. It is also implicated in hormonal disruption of fish. Half of your daily exposure to chloramine occurs while showering because the chemical is absorbed through our pores and inhaled. Chloramine decomposes at 60 degrees Celsius. The most troubling aspect of chloramine is that—unlike chlorine—it cannot be taken out of the water by boiling or by letting it stand uncovered overnight. According to the Public Utilities Commission, it is extremely difficult to remove—and if it is possible, it is extremely expensive, and should be monitored by a licensed professional. In a nutshell, we the people have no choice in the matter of our health.

And the irony is that records state: "Chloramines are a much weaker disinfectant than chlorine." The Water Quality Association states that it is weak for inactivating certain viruses. And for cities which have both Hetch Hetchy and their own well water to treat, the challenge of proper dosages of the chemical is exacerbated. In last week's news, a South Bay man had his water tested after experiencing skin burning while showering, and the test results showed he had three times the amount of chloramine that should be in his water.

### Alternatives available

There are proven, safe, effective alternatives to chloramine for water treatment. Many have been used for years in Europe, Japan, and even in small "pockets" in this country. Ultraviolet radiation interferes with the DNA of the contaminant, impairing its ability to reproduce. It does not add chemical components to the water, and does not generate harmful by-products. Ozonation is another alternative. Since the early 1900s, Europe has been on the leading edge of using ozone for water purification. A few small California water systems, and some state Parks and Recreation, and Divisions of Forestry use this system. Hydrogen peroxide, a natural metabolite of many organisms, is a powerful water disinfectant used throughout Europe.

It is argued that chloramine has been around since 1916, yet how does one explain that only 18-20 percent of all U.S. municipalities are using it? Maybe because the federal government, in its material safety data sheets says it decomposes violently, is light and air sensitive, and its use is listed as an *emergency* water disinfection, only.

Gasoline additive MTBE was touted by the government and some environmental groups as a way to reduce air pollution. Yet it has polluted ground water, which will cost billions to clean up.

Like MTBE, chloramine will likely be shown to have harmed the health of many. And like MTBE, the clean up will be expensive.

With all the chemicals that have been introduced into our water, food, mattresses, clothes, air and water, we don't want to prove Nikita Krushchev right when he predicted America will "bury itself." Barbara LaRaia is active in San Bruno politics. She researches and writes about environmental issues.