

# Ask the Experts?

Each issue, we ask members of the *On Tap* Editorial Advisory Board to answer a drinking water-related question. We then print as many responses as space permits. The opinions expressed are not necessarily those of NESCA.

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*In your opinion, are there reasons to avoid adding fluoride to drinking water? If so, what are they, and why do you believe fluoride should be avoided? Or do you think fluoridation works? Why?*

**Editor's Note:** Many public health departments and community health organizations think that the addition of fluoride to drinking water has been one of the biggest boons to public health since the polio vaccination. However, some environmental groups differ on that outlook, and think that adding fluoride to water is just asking for an increase in cancer rates and other problems (e.g., fertility problems, thyroid disease, etc.).

## What's the big deal? Fluoridation works.

Since the days of the "Colorado Brown Stain" of the early 1900s, fluoridation has been an issue in the center of public health practices. In fact, I would suggest that the addition of fluoride to public drinking water systems has been one of the most controversial public health programs that has even been implemented in the U.S. And while I try, I just don't understand why it is such a big issue.

Fluoride is a naturally occurring element in our environment and can be found in soil, water, plants, and animals; therefore, we can't avoid it. However in most cases those trace amounts are not enough. That is when we can receive its maximum public health benefit by the upward adjustment of the fluoride level that we ingest. And the most effective and practical way to accomplish that is by adding fluoride to the water we drink. I would admit that there is a right way and a wrong way to do just about everything. And fluoridation is no different. Not enough fluoride means reduced benefits, while too much can result in undesirable health effects. But that fact is the same for a whole host of other nutrients that we may find in our diets.

I have researched the literature on fluoridation; I have examined the issues; I have been involved in the design and implementation of numerous fluoridation systems. I have talked with dental professionals, and the bottom line is that fluoridation works. Fluoride helps prevent tooth decay. It has a much higher benefit during the formative years of tooth development, but it has some benefit for all of us.

Fluoridation has been very widely researched. In fact, there are close to 100

different national and international health services and professional organizations that recognize the public health benefits of optimally fluoridated water. I'm aware of situations where a water utility reduced or discontinued the addition of fluoride to their water system, and in a short time (a few years), the local dentists noticed an increase in dental decay among the young kids of that community. For a few cents worth of chemical, you can significantly reduce the costs of dental health care.

### Rod Coker

Tribal Utility Consultant  
(Retired)  
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## Leave It Up to Individuals

I think it should be up to individual consumers and families to decide whether they want to use fluoride. Fluoridated toothpastes and mouthwashes are commonly available at pharmacies and grocery stores. Individuals, in consultation with their dentist and physician, should decide whether or not they need fluoride. There are too many divergent opinions on the benefits and risks of fluoride to justify force-feeding it to people through public drinking water supplies.

### Amy Vickers

Engineer and Water Conservation Specialist  
Amy Vickers and Associates



# The Drop Box

## Need to Consider Financial Issues

Fluoride has been hotly debated for years. It was recently a highly contested issue in Pierce County, Washington, where most of Peninsula Light Company's (PLC) water systems are located. However, because of the size of our systems (the largest serving fewer than 2,000 people), recent regulation mandating fluoridating drinking water did not impact our systems.

In April 2002, the Tacoma-Pierce County Board of Health passed a regulation requiring fluoridation of public water systems that serve more than 5,000 people. This regulation affected 15 water systems and about 250,000 people. Around 300,000 people in the county already had fluoride in their drinking water, including residents in Tacoma, University Place, Fircrest, Fort Lewis, and McChord Air Force Base. The total population of Pierce County is 734,000 people.

In November 2002, the Washington Dental Service foundation donated \$420,000 to water purveyors to help defray the cost of implementing the regulation. In December, the Board of Health appropriated an additional \$850,000 for the same purpose.

Lakewood Water District, the City of Bonney Lake, and four other water utilities challenged the health department last year but lost in Pierce County Superior Court in 2003. They wanted a public vote to decide whether or not to add fluoride. They then appealed to the state superior court, which overturned the regulation in May 2004.

In the meantime, six additional water systems are currently fluoridating or under contract to fluoridate. The estimated cost for five of these systems ranges from \$69,500 to \$800,000, with the total cost being more than \$1.4 million. Of course, the more wells these systems have to treat, the higher the cost.

Bonny Lake, one of the systems participating in the litigation, estimated it would cost about \$750,000 to fluoridate but chose to spend \$116,000 in legal fees instead. But, the issues they had were not about the initial capital expense.

I am relieved that PLC did not have to participate in this process primarily from a financial standpoint. Putting aside all the pros and cons of fluoridating water, we

would never have been financially able to implement this type of regulation. We own and or manage more than 100 very small water systems. However, the entire population we serve is slightly more than 5,000 people, including the schools we operate. But it also means we would have more than 100 fluoride injection and monitoring stations.

We only have a few systems that are fluoridated, and it takes a good portion of one of our water technician's time to schedule the daily monitoring requirements and travel between systems. If you consider the potential risk associated with overdosing of fluoride, in my opinion, this would be difficult, if not impossible, to implement at the level of safety necessary to protect human health. Our water rates and contract fees would most likely have to rise significantly.

Couple that with the fact that we are also border line with the lead and copper regulation (i.e., corrosivity problem) on a few of our systems. We may have ended up having to provide corrosion control due to the fact that fluoride is corrosive.

I am a mother, and I have not been swayed by the arguments of dental health for children as the reason for medicating the entire population, considering there are other ways for children to receive fluoride. I have read enough of the studies and am aware of many respectable professionals in the medical field who are also against the addition of fluoride.

I think fluoride has its medical purposes. But the dosage ingested should be an amount that a doctor specifies for each individual's age and weight and not based on the amount of water a person drinks. Furthermore, I am also intimately familiar with hypothyroidism and osteoporosis, both of which have been shown to have a scientific correlation with fluoride. There are other ways to ensure children receive fluoride. Parents along with their dentist or family doctor should be the ones to determine the best approach.

**Lisa Raysby**  
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Do you have a suggestion for improving this magazine or an idea for an article we should explore?

Do you have a question for our "Ask the Experts" column or a Web site that you find particular helpful?

*On Tap* editors are always eager to learn from you. Here's how to contact us:

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