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Hood River News
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Dear Editor:

After 30 years of working for the Corps of Engineers as a Research Aquatic Biologist including 10 years of water quality sampling on the Columbia River, ballot measure 14-23 has caught my eye as having no real basis for support. This measure not only has no real support in the scientific community but appears to be based on unreasonable and unsupported US EPA goals of absolute zero tolerance.

Fluoride background levels in the Columbia River, based on NOAA Fisheries peer reviewed articles from the 1980's, were established in the 0.2 ppm range. Corps of Engineer water quality sampling completed in 1999 established fluoride background levels for Columbia River waters near The Dalles Dam to be around 0.1 ppm. The earlier NOAA Fisheries articles found Salmon to be sensitive to 0.5 ppm F (with anecdotal evidence of limited mortalities to fish during migration to McNary dam from John Day). The testing demonstrated levels of 0.2 ppm F to be below the threshold level for fluoride sensitivity of the salmon. After levels were reduced in the aluminum plant (upstream of John Day Dam) effluents from 384 kg per day in 1982 to less than 130 kg per day in 1983 and subsequent years no further effects on passage, migration, holding or mortality were expected. The normal river concentrations of fluoride associated with the lower loading were less than in the previous years, 0.1 to 0.2 ppm vs. 0.3 to 0.5 ppm for the earlier years.

The resulting fluoride concentration associated with the normal Hood River water usage and subsequent release into the Columbia River is approximately 0.000004 ppm. This is based on a daily waste effluent of 900,000 gallons per day, an average Columbia River flow of 200,000 cfs, and assuming a reduction in the fluoride concentrations from 1 ppm to 0.6 ppm due to partial removal by the solid waste. This gives an average daily loading of 2 kg from Hood River waste water as compared to the aluminum plant load of approximately 100 kg per day.

Earlier toxicity tests conducted by researchers show fluoride levels at 2.7-7.5 ppm to produce LC50's (50% mortalities) to trout and other species. These concentrations are far greater than the 1 ppm of fluoridated drinking waters. The river background fluoride levels are expected to be in the range of 0.1 to 0.2 ppm so how could an additional 0.000004 ppm result in any effect on the biological communities?

Since we have numerous supported and documented examples that demonstrate the excellent health value in community drinking water fluoridation as compared to the unsupported claims of impact to the environment by measure 14-23 then defeat of measure would definitely be in the best interest of the community. Vote no for measure 14-23.

Sincerely,

Joe H. Carroll
Limnologist
cc Raelynn Ricarte, Christian Knight