

From: Danny G  
To: "Cynthia Oshita, admin for Prop65 CIC Committee"  
<coshita@oehha.ca.gov>  
Date: 5/3/2009 11:19 PM  
Subject: Here's my PDF File for CIC Study/Review with Comments PROP 65  
Listing of "Fluoride & Salts"  
Attachments: Ltr\_May\_5thPROP65Fluoride.pdf

\*TIME VALUE \*

[submittal deadline May 5th]

CITIZENS FOR SAFE  
DRINKING WATER  
P.O. Box 578361  
Modesto, CA 95357-8361  
Tel 209 529-8832

eMail:

food\_farmer@sbcglobal.net

Attn:

Cynthia Oshita to fwd to CIC Members  
for \* \*Investigations, Review, Action  
Office of Environmental Health Hazard Assessment  
Proposition 65 Implementation  
P.O. Box 4010 1001 I Street, 19th floor  
Sacramento, California 95812-4010

Dear Cynthia,

Per your Request For Comments\* PROP 65 Listing of "Fluoride & Salts",  
\*attached is my PDF File of pertinent Scientific reference and Comments.  
I've tried to be additive, in addition, to ALL that Bibliography already  
listed in your letter of request for Comment [e.g. tried not to  
duplicate].

Thank You for all the precise, valuable expertise you share towards this  
hopefully successful program of California Prop 65.

Danny Gottlieb Agriculturalist, professional Food Technologist [Emeritus]

Open attached PDF file, pls.

--- Scanned by M+ Guardian Messaging Firewall ---

Citizens For Safe Drinking Water  
P.O. Box 578361  
Modesto, CA 95357-8361  
Tel. 209 529-8832

To Urgent Attention of:

Cynthia Oshita to fwd to CIC Members  
for **PROP 65** Listing of **"Fluoride & Salts" Investigations,**  
Review, VOTE

Office of Environmental Health Hazard Assessment  
Proposition 65 Implementation  
P.O. Box 4010 1001 I Street, 19th floor  
Sacramento, California 95812-4010  
FAX (916) 323-8803

Subject: This is my 'public comment' concerning the CANCER affects from 'drinking/tap water fluoridation', and other "MALPRACTICE" uses of fluoride compounds as to biochemical reactions causing reproductive toxicity, or Cancers in all ages of humans. In which causes, CA Prop 65 should list & publish Prop 65 'Danger awareness' Public NOTICES for, at least:

- Silicofluorides,
- Sulfuryl fluorides
- Cryolite (as pesticide to grapes),
- Fluoride drops & tablets, daily doses, for school children e.g., never approved by US-FDA], as potential Cancer causing agents. Thus, those compounds and there current uses of direct contact to humans should be banned from current use, or as may secondarily contact humans. \_\_\_\_\_

**Fluorine** is one of 92 naturally occurring elements. It is a member of the halogen family, which includes chlorine, bromine and iodine. It is a pale yellow gas which is extremely reactive. As a result it is never found free in nature but only combined with other elements. These compounds are called fluorides. Fluorine readily forms compounds with all elements except two: helium and neon. Despite being the thirteenth most abundant element in the earth's crust, it **is not an essential nutrient for any living thing.**

Fluorides are persistent and non-degradable poisons that accumulates in soil, plants, wildlife, and humans.

**The Agency** for Toxic Substances and Disease Registry (ATSDR) stated in 1993: "Existing data indicate that subsets of the population may be unusually susceptible to the toxic effects of fluoride and its compounds. These populations include the elderly, people with deficiencies of calcium, magnesium, and/or vitamin C, and people with cardiovascular and kidney problems... Because fluoride is ubiquitous in food and water, the potential for human exposure is substantial (ATSDR, p 112, 153, April 1993)."

Note: Although the 1993 "toxic affects" proclamation by ATSDR was very explicit; more recent attention is being put toward the effects/affects as involved with pre-natal [e.g. placental transfer of fluoride intoxicant in mothers' blood to babies in uterus]. Additional studies concluded dangers of fluoride to infants, and preschool children. URGENT: Study vast references in "HEALTH EFFECTS: Fluoride Warnings for Infants" database at:

<http://www.fluoridealert.org/health/infant/index.html>

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#### A FEW SPECIFIC FLUORIDE "CAUSES CANCER" REFERENCES

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##### **Fluoride & Osteosarcoma (Bone Cancer)**

Timeline and historical REFERENCES of peer reviewed government and other scientific testing of fluoride toxicity where Cancer is definitively detected:

<http://www.fluoridealert.org/health/cancer/osteosarcoma-timeline.html>

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"The ATSDR (Agency for Toxic Substances and Disease Registry) published its second draft *Toxicological Profile for Fluorides* in September 2001. Public comments on the draft report were due by February 22, 2002. The following are the comments submitted by Ellen and Paul Connett to ATSDR. The Connett's submitted their comments on February 26 after having received an extension from ATSDR.

ATSDR was mandated by Congress in 1987 to prepare toxicological profiles for hazardous substances at Superfund sites (on the National Priorities List) "that pose the most significant potential threat to human health, as determined by ATSDR and EPA." Currently there are 275 hazardous substances in this category. In 1987, 150 hazardous substances were identified, and fluoride was included in that list. The [first Toxicological Profile for Fluoride](#) was published in 1993."

Above [previous page] Excerpt, and further elaboration:

<http://www.fluoridealert.org/pesticides/fluorides.comments.atsdr.02.htm>

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**Dr John Yiamouyiannis**

**“How Fluoride Causes Cancer & Promotes Tumor Growth”**

John Yiamouyiannis, Ph.D.

“JOHN YIAMOUIYIANNIS, Ph.D., (deceased) Biochemistry, University of Rhode Island, was biochemical editor for Chemical Abstracts Service, and Science Director of the National Health Federation. For many years he co-edited the scientific journal "Fluoride." He and Dr. Dean Burk, former president of the National Cancer Institute, were recognized for their co-discovery of the link between fluoridation and cancer. Dr. Yiamouyiannis is a member of the International Society of Fluoride Research.

His research on the biological effects of fluoride shows that fluoridation does not reduce tooth decay, as claimed by proponents, and may cause serious immune dysfunction. He has testified before many environmental hearings, and has authored three books: Fluoride: The Aging Factor, High Performance Health and AIDS-Good News HIV Doesn't Cause It.

**IMPORTANT!** ... please view the following two Videos of a lecture where Dr. Yiamouyiannis addresses *How Fluoride Causes Cancer & Promotes Tumor Growth*:

Part 1- <http://www.youtube.com/watch?v=-Z-Y0kpm2Ok>

Part 2- <http://www.youtube.com/watch?v=Jqt8mFfw0GU&feature=related>

Dr. John Yiamouyiannis has also written an excellent book entitled, **Fluoride The Aging Factor**, Health Action Press Delaware, OH.

Copyright 1983, 210 pgs..

Excerpt from above book:

**The Aging Factor** is a morbidly exact account of how fluoride damages the body's repair rejuvenation capabilities. Written primarily for the general public, this book contains the scientific evidence that supports the age-accelerating effects of fluoride. Hundreds of references to the original scientific papers are presented to document

the statements made. Pointing to scientific evidence which indicates that there is no safe level of fluoride intake in day-to-day life and how to stop the gruesome addition of fluoride to public drinking waters."

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**Roger D. Masters, PhD**, Research Professor, Department of Government, Foundation for Neuroscience and Society, Dartmouth College, Hanover, NH 03775 tel. 603 646 1029; FAX 603 646 2153; email: [roger.d.masters@dartmouth.edu](mailto:roger.d.masters@dartmouth.edu)

Excerpt from his Silicofluorides study/report: "**NEUROTOXICANTS AND BEHAVIOR: IMPLICATIONS OF 'TOXICOGENOMICS' FOR PUBLIC POLICY**":

"...Westendorf also found that **SiF** treated water **is an acetylcholinesterase inhibitor**, perhaps due to distortion of the morphology of the acetylcholinesterase (AChE) molecule (Knappwost and Westendorf, 1974a-b).

Because this effect could well influence other cholinesterases -- and Butyrylcholinesterase (BChE) "accelerates cocaine metabolism" (Carmona et al, 2000) -- this effect might be a factor in enhanced substance abuse. Although Westendorf did not offer a precise biochemical explanation for AChE inhibition, a few years later Margolis described a chemical reaction that might explain this effect (Iler, 1979: 764).<sup>13</sup> A follow-up study by Rastädter (1978) provided further ..."

Above from Master's Report(s) link:

<http://www.dartmouth.edu/~rmasters/AHABS/docs/Neurotox66.pdf>

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## **Fluoride DOSAGE**

"All things are poisons. Dose alone makes them so." - "Paraseisus 1500s" ... as spoke by Dr. David Kennedy at Southern California – Municipal Water Treatment hearing before Board Members voted to fluoridate approx. 18 million Southern Californians.

Reference: <http://www.youtube.com/watch?v=2DTQlfiYHnY>

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Note a youtube video discussion concerning:

A 'pea size amount of fluoride toothpaste is approx equivalent to one 8 oz. glass of fluoridated water" – Dr. Bill Osmunson, DDS  
[Over 156,000 viewings since Jan 2008]:  
[http://www.youtube.com/watch?v=\\_Ys9q1cvKGk](http://www.youtube.com/watch?v=_Ys9q1cvKGk)

## **Sublingual Absorption**

Definition: **Sublingual**, meaning literally 'under the tongue' refers to a method of administering substances via the mouth in such a way that the substances are rapidly absorbed via the blood vessels under the tongue rather than via the digestive tract. The route of absorption via the highly vascularised buccal mucosa allow the substances a more direct access to the blood circulation, thus providing direct systemic administration [e.g. example: Nitroglycerin tablet under tongue being sublingually absorbed, immediately, into blood stream to stop cardiac angina pain and cause.]

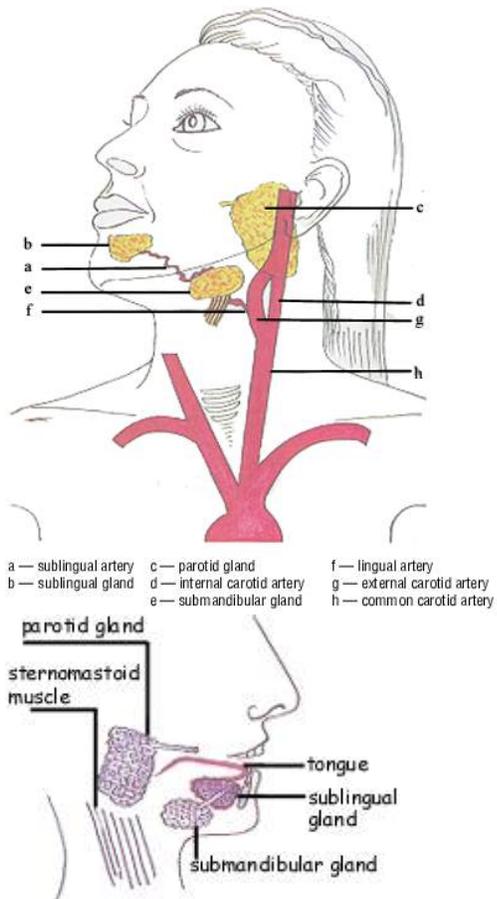
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Cumulative "fluoride toxicity" can occur when a child does not fully rinse the residual fluoride from mouth after brushing, thoroughly, all teeth. The dose of fluoride toothpaste [e.g. 900 – 1500 ppm Sodium fluoride, for example] swirling in mouth for extended can allow fluoride to invade blood stream through 'sublingual absorption'.

Newly available "over the counter" Fluoride Mouthwash, when used daily as package suggests, can 'unknowingly to the end-user, transfer fluoride to the users blood stream through "sublingual absorption.

Even more extreme dosing via "sublingual absorption" can occur in some Dentists' office procedures where "approx. 20,000 ppm fluoride gel" is applied for "not more than 1 minute" by manufacturers' "protocol". The application timing is "Critical"! Whether there occurs after gelling a "thorough rinse" varies between skills of Dentists, or dental assistant performing this dangerous procedure.

Pictorial Diagram:



Diagrams source: Sublingual Absorption by [Leilani Lea \(more info\)](#)

Photos comparing Fluorosis vs. No-fluoride poisoning



Moderate to Severe Fluorosis

[Photo of 13 yr old child in school in a China village that has approx 4ppm fluoride contamination from waters taken from various village water wells.]



No Fluorosis Detectable

[ Photo of 13 yr old child in school located in a China village having no fluoride added to drinking water, nor aquifer contaminated with any fluoride compound.]

Photos Source (with permission): International Academy of Oral Medicine and Toxicology, DVD: "Drinking Water, Let the Truth Be Told".

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**FUMIGATION – Sulfuryl fluoride**, a recent DOW-Agro EPA 'erroneously approved Pesticide/Fumigant for storage of foodstuffs. This is the fluoride based chemical that has been used for years to fumigate buildings; but now gearing up to replace outlawed 'Methyl Bromide' used in growing crops and fumigating foodstuffs. Details of DANGERS [e.g. more CANCER causing food residues?]:

<http://www.fluoridealert.org/f-pesticides.htm>

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**CRYOLITE Residue – on School Lunch Raisins. in Wines, babies' Grape Juice**

Excerpt:

“California wineries with export markets have advised their growers that they will not accept grapes which have been treated with cryolite or any other product which would affect the level of fluorides in wine. The European Community recently established strict tolerance levels of 1 ppm with respect to fluoride residues. There is a direct correlation between even limited use of cryolite on wine grapes which can result in fluoride levels in wine above 3 ppm.” <http://www.fluoridealert.org/pesticides/cryolite--page.htm>

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**Raisins with high dose fluoride** in school lunch program?

“Raisins 237 mcg/100 gms fluoride residue”

<http://www.fortcollinscwa.org/pages/fluoride.htm>

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**USDA Nationwide Water Sampling for Fluoride and Trace Element Composition Data**

[http://www.nal.usda.gov/fnic/foodcomp/Data/Other/IFDC5\\_Fluoride\\_sampling.pdf](http://www.nal.usda.gov/fnic/foodcomp/Data/Other/IFDC5_Fluoride_sampling.pdf)

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**“Fluoride/Aluminum pesticide on CA produce esp grapes...i.e wine”**  
by *lilypond10*

<http://www.curezone.com/forums/fmp.asp?i=1342552>

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# **Cryolite on grapes/Fluoride in wines - A guide for growers and vintners to determine optimum cryolite applications on grapevines** *by Gwynn Sawyer Ostrom*

California State University at Fresno, CA

<http://cati.csufresno.edu/verc/rese/96/960601/>

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**SILICOFLUORIDES are US-EPA 'Regulated Pollutants', and also designated as 'Hazardous Waste' !**

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Has 50 plus yrs. of Silicofluoride 'pollutive discharge' to San Francisco Bay been one of many PRIMARY causes of "**SALMON POPULATION COLLAPSE**"?

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**SILICOFLUORIDES [HFS] SYNERGISTIC AFFECTS w/CHLORAMINE, or any other AMMONIA SOURCE**

To & Care of Mr Al Vargas,

Copy to Each at: Ammonia Workshop

March 8, 2009

Questions & Background References for CALFED Science Program 03/10-11/2009 Workshop concerning Ammonium and Ammonia within the Sacramento-San Joaquin Delta (Delta) and Suisun Bay (Bay) ecosystem.  
QUESTIONS:

1. Since Sacramento County had started so called 'fluoridation' since Sac County voted in year 2000 for it; question is, how many TONS of Silicofluoride, and possibly chloramine is discharged to the Sacramento River, annually?

[Read scientific References below to see why an accounting to prevent Sac River 'toxic pollution' should be made.]

2. Considering there are around 57 'registered' Waste Water Treatment Plants, or around 30 cities surrounding the SF-Bay discharging waste water to the SF-Bay; has a study been done to determine if each WWTP is accomplishing 100% DECHLORAMIZATION [e.g. removal of Ammonia] before pumping waste water in the SF-Bay?

Are there now 'waivers' reluctantly allowing residual Chloramine to be discharged to the SF-Bay?

[Read discussion & see MAPS below.]

3. What studies have been done by SFPUC-Water Dept. to determine if Chloramine and Silicofluoride drinking/tap water treatment has increased the LEAD intake of school Children from school drinking fountains? This has been a major problem for schools in Washington DC, and Seattle, specifically.
4. Since Silicofluoride [EPA 'regulated pollutant' classified by ATSDR as 'Hazardous Waste'] used to treat Sacramento & San Francisco plus 29 other cities drinking/tap waters [e.g. SF-Water Dept Wholesale Customers ... see MAP below] surrounding the SF-Bay drinking waters with it's inherent 'trace toxics' [e.g. Arsenic, Lead, radionuclide's, ...has anyone in California government studied whether residuals of Silicofluoride and/or Chloramine discharged by WWTP's into our SF-Bay and incoming Rivers affected our SF-Bay and San Joaquin Delta SALMON COLLAPSE?

See science report about Silico'fluoride' 0.25 ppm affect on Northwest Salmon, below.

Add'l Ref. <http://www.fluoridealert.org/ATSDR-Fluoride.pdf>

Suggestion: In conjunction with CA Fish & Wildlife, hire SF-Bay Scientists at USGS located in Menlo Park to do studies:

- A 'material balance study' to determine the Annual TOXIC loading of residual Chloramine & Silicofluoride 'toxics' by 57 WWTP's around SF-Bay, and Sacramento River. Find out how much TONNAGE in these chemicals are purchased per year, how much is used by the water treatment plants annually.
- In field sample in SF-Bay estuary and Sacramento River WWTP discharge points for Ammonia 'water & vegetation evidence', and fish collapse evidence.

Report to be issued by USGS with meaning scientific conclusions!

Excerpt Ref 1., "...combination of Chloramine [e.g., Chlorine & Ammonia] & fluorosilicic acid, especially with extra amounts of ammonia leaches lead from meters, solder & plumbing systems, ..."

"A combination of chloramines and fluorosilicic acid, especially with extra amounts of ammonia, leaches lead from meters, solder and plumbing systems, according to Richard P. Maas, PhD and Steven C. Patch PhD, co-directors of the Environmental Quality Institute at the University of North Carolina, Asheville.

**Chloramine**, a **combination of chlorine and ammonia**, is a water supply disinfectant. Fluorosilicic acid, the chemical used by over 91% of U.S. fluoridating communities, attempts to improve dental health in those who drink it. About 2/3 of

U.S. public water supplies are fluoridated but tooth decay remains a national epidemic, according to the U.S. Surgeon General. (b)

Maas said, "Tests showed lead levels three and four times higher in water with that combination of chemicals ...About 500 systems, across the country, have switched to Chloramine treatment since 2001...and most also use fluorosilicic acid," according to the North Carolina newspaper, the News & Observer."

Ref. 1. at: <http://www2.fluoridealert.org/Alert/United-States/National/Fluoride-Chemicals-Leach-Lead-Into-Water-Supplies>

**Add'l Ref. 2.: "Effects of fluoridation and disinfection agent combinations on lead leaching from leaded-brass parts.**

[Maas RP](#), [Patch SC](#), [Christian AM](#), [Coplan MJ](#).

Environmental Quality Institute, The University of North Carolina-Asheville, One University Heights, Asheville, NC 28804, United States.

Ref. 2. at:

[http://www.ncbi.nlm.nih.gov/pubmed/17697714?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_DefaultReportPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/pubmed/17697714?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum)

EPA Union career employees petition EPA 'politically appointed mgm't for a 'moratorium' on fluoridation; especially if Silicofluoride is combined with Chloramine. Excerpt the EPA Union employees' letter:

"Another reason for a Congressional review of fluoridation is the recent work of:

Dr. Richard Maas of the Environmental Quality Institute, University of North Carolina-Ashville, which shows that use of chloramine disinfectant and silicofluoride fluoridating agents with excess ammonia increases lead concentrations in public water supplies. This may explain at least some of the increased lead levels seen in the District of Columbia's water supplies and in the blood of children drinking water fluoridated with silicofluorides. The Centers for Disease Control and Prevention says that ninety four percent of fluoridated water systems use silicofluorides." Ref link:

<http://www.fluoridealert.org/epa-unions1.pdf>

Add'l public announcement of the "moratorium request"; excerpt:

**"EPA UNIONS CALL FOR NATIONWIDE MORATORIUM ON FLUORIDATION, CONGRESSIONAL HEARING ON ADVERSE EFFECTS, YOUTH CANCER COVER UP"**

<http://www.world-wire.com/news/0830050001.html>

Ask your utilities dept. for AWWA Standard for **Fluorosilicic Acid** B703-06, the foreword notes page ix: "The transfer of contaminants from chemicals to processed water or the residual solids is becoming a problem of greater concern." Then **page 13 is an entire page of contaminants ranging from heavy metals as arsenic, lead and more down to Radionuclide's as Uranium and Radium 226-228 and Alpha and Beta particles. All low levels, but can be cumulative in the body.** Chlorine will evaporate when heated in water, but fluorine and compounds will accumulate, adding to the levels in beverages and foods.

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URGENT! ... Know that the AWWA [American Water Works Association] has reported in one of their 'Water Conservation pamphlets' that "Less than 1% of utilities treated water is ever consumed [e.g. swallowed] by human beings." The rest goes to landscape watering, washing uses, and down drains. So, think of this analogy to the AWWA statement...Would anyone purchase a bottle of 100 EXPENSIVE 'medicant' pills, take just one and throw the rest away into our habitats only to pollute our environments? Of course NOT!

Millions of Dollars are spent in USA to install 'Fluoridation' equipment & Systems and Billions per year are spent for purchasing phosphate mining industry Silicofluoride [e.g. EPA classified "hazardous waste"] and in the daily operations of delivering a 'medicant' via public water systems for falsely proclaimed 'Better Oral Health'....

**'Fluoridation' is the Worlds Most economically Wasteful, 'dose uncontrolled', illicit, illogical 'medicant' delivery system on the face of this Earth!**

**AGAIN, "Fluoridation"** is the Worlds Most Wasteful, thus NOT Cost Effective, reported "Ineffective if swallowed" [Ref 3.], Entrenched Error 'prophylactic Medicant' Delivery System on this Earth!

Major dental researchers concede that fluoride's benefits are topical not systemic (*Fejerskov 1981; Carlos 1983; CDC 1999, 2001; Limeback 1999; Locker 1999; Featherstone 2000*).

"Laboratory and epidemiologic research suggests that fluoride prevents dental caries predominately after eruption of the tooth into the mouth, and its actions primarily are topical for both adults and children" (CDC, 1999, MMWR 48: 933-940).

Ref. 3. "the major anticaries benefit of fluoride is topical and not systemic."  
SOURCE: National Research Council. (2006). Fluoride in Drinking Water: A Scientific Review of EPA's Standards. National Academies Press, Washington D.C. p 13.

[http://www.nap.edu/catalog.php?record\\_id=11571](http://www.nap.edu/catalog.php?record_id=11571)

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Second read the label on fluoridated toothpaste. With variable wording it says, "drug facts," "use a pea size," "do not swallow," "if more than brushing is swallowed contact the poison control center." Very serious warnings. **A "pea" size of toothpaste has 0.25 mg of fluoride, the same as one glass of fluoridated water.** The Food and Drug Administration has serious concerns about a very small amount of fluoride. Fluoridation is an unapproved drug and unapproved for fluoridation and considered by the FDA to be one of thousands of illegal drugs. Remember the CDC does not test the safety of drugs, the FDA does.

It makes no sense to force everyone to swallow what the FDA warns not to swallow.

'Fluoridation' is only a phosphate mining lobbied, 'illicit' means to dispose of hundreds of thousands of TONS of 'Hazardous Waste' accumulated because EPA actively this 'regulated pollutant' chemical waste. In the above instances, certain big corporations practice and Profit in the Millions of \$\$\$'s by applying the old adage of:

"The Solution to Pollution is Dilution!" ...in selling the 'Hazardous Waste', instead of paying millions to dump in Class 1 hazardous waste land fills.

And, cumulative Silicofluoride with it's toxic contaminants discharged by WWTP's into USA waters, stream, rivers and bays is an environmental nightmare that needs to be seriously addressed and banned.

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**NEVER SWALLOW ANY FLUORIDE !**

San Francisco Public Utilities Commission [SFPUC] Water Treatment Utilities switched from Chlorine to Chloramine in February 2004. Details from SFPUC viewpoints: Ref. 4

[http://sfwater.org/mto\\_main.cfm/MC\\_ID/13/MSC\\_ID/166/MTO\\_ID/399](http://sfwater.org/mto_main.cfm/MC_ID/13/MSC_ID/166/MTO_ID/399)

For decades prior, SFPUC Water treatment utilities have been adding hundreds of millions of TONS of Silicofluoride to drinking\_tap water; for which current Science has cast positive doubt as to effectiveness to meet intended goal to meet a dental industry claim that 'swallowing drinking water with added fluoride' will meet their dental claim "it's for Better Oral Health!" References:

<http://www.fluoridealert.org/health/index.html>

**See MAP** - SFPUC-Water Dept. wholesales Chloramine & Silicofluoride treated Source Waters to a listed 29 SF-Bay located cities water treating/distributing utilities. See MAP Ref. 5 at:

[http://sfwater.org/mto\\_main.cfm/MC\\_ID/13/MSC\\_ID/166/MTO\\_ID/358](http://sfwater.org/mto_main.cfm/MC_ID/13/MSC_ID/166/MTO_ID/358)

Excerpt USGS Study/Reports: "San Francisco Bay receives effluents from 46 publicly owned wastewater-treatment plants, 65 large industrial discharges, and as much as 40,000 tons of at least 65 contaminants each year. Many of these contaminants are toxic to plants or animals or pose threats to human health." Ref. 6 <http://water.usgs.gov/wid/html/sfb.html#toxic>

Excerpt: "In terms of water supply, the Master Contract provides for a **184 million gallon per day** (mgd, expressed on an annual average basis) "Supply Assurance" to the SFPUC's

wholesale customers, subject to reduction in the event of drought, water shortage,

earthquake, other acts of God, or rehabilitation and maintenance of the system. The

Master Contract does not guarantee that San Francisco will meet peak daily or hourly

customer demands when their annual usage exceeds the Supply Assurance. The

**SFPUC's wholesale customers have agreed to the allocation of 184 mgd Supply**

Assurance among themselves, with each entity's share of the Supply Assurance set

forth on a schedule adopted in 1993. This Supply Assurance survives the termination of

the Master Contract in 2009." Ref. 7:

<http://www.redwoodcity.org/publicworks/water/pdf/UWMP/draft/Draft%20UWMP%20Chapter%203.pdf>

Since SFPUC water treatment utilities treat around 184 million gallons per day, an estimated 'Material balance' of how much TONNAGE of Chloramine and Silicofluoride are added daily to the 184 million gallons should be attained, and verified with comparison with the SFPUC purchasing Contracts.

Thus, an estimate of how much Chloramine & various trace amounts of toxic chemicals are being discharged by ALL WWTP's, in Total, to the SF-Bay.

Prior to Chloramine use by WWTP's around the SF-BAY, Excess chlorine was went through a 'dechlorination' stage by adding sulfur dioxide, sodium bisulfite, sodium sulfite, or sodium metabisulfite. Thus, theoretically no- chlorine would then be discharged & thus POLLUTING the SF-Bay estuary.

It appears over 50 WWTP dischargers to the SF-Bay need to have a different process of 'DeChloramination' in place and operating 100% 24/7-365 days/yr.

It's doubtful there is any 'dechloramination program' effectively optimal! What WWTP's do not have adequate dechloramination process around the SF-Bay? Which WWTP's around SF-Bay have 'waivers' until their promise to comply with optimum dechloramination? And, accidental discharges of Chloramine to SF-Bay can and do occur, excerpt:

"A high volume direct discharge of chloraminated water to the environment can result from pipeline breaks or flushing fire hydrants. As with chlorinated water, this needs to be avoided because chlorine residual in the chloraminated water may pose a direct acute health risk to fish in creeks and streams. Water companies use dechlorinating agents to remove chloramine from the water during high volume discharges and while flushing fire hydrants." – Ref 8. [http://sfwater.org/Files/FAQs/Animals\\_environment.pdf](http://sfwater.org/Files/FAQs/Animals_environment.pdf)

Finally, go figure this about the imported supply source Silicofluoride from China. Most USA Chemical suppliers of Silicofluoride don't want Water Treatment plants to know their source of Silicofluoride is imported by them from China.

In years past, majority of Silicofluoride came from Central Florida [Polk County] until hurricane Katrina, and other hurricanes put one of 4-5 suppliers out of business, and a real domestic supply shortage from Phosphate ore mining & processing companies ensues. Reference the 'China Import' data Ref. 9

<http://www.sriconsulting.com/CEH/Public/Reports/739.1000/>

U.S. IMPORTS FOR CONSUMPTION OF FLUORSPAR, BY COUNTRY AND CUSTOMS DISTRICT1, Ref. 10

<http://minerals.usgs.gov/minerals/pubs/commodity/fluorspar/myb1-2007-fluor.pdf>

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## **“IMPACT OF ARTIFICIAL FLUORIDATION ON SALMON SPECIES IN THE NORTHWEST USA AND BRITISH COLUMBIA, CANADA”**

Ref. 11 *Fluoride* Vol.27 No.4 220-226 1994

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Presented at the XXth Conference of the International Society for Fluoride Research, Beijing, China, September 1994.  
by Richard G Foulkes and Anne C Anderson  
Abbotsford BC, Canada, and Bellingham WA, USA

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**SUMMARY:** A review of literature and documentation suggests that concentrations of fluoride above 0.2 mg/L have lethal (LC<sub>50</sub>) effects on and inhibit migration of "endangered" salmon species whose stocks are now in serious decline in the US Northwest and British Columbia. Fluoride added to drinking water, "to improve dental health", enters the fresh water eco-system, in various ways, at levels above 0.2 mg/L. This factor, if considered in "critical habitat" decisions, should lead to the development of a strategy calling for a ban on fluoridation and rapid sunseting of the practice of disposal of industrial fluoride waste into fresh water.

**Key words:** British Columbia; Fluoride; Toxicity; Salmon species; US Northwest.

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"Salmon Collapse" problem is enormously complex-biologically, administratively and economically". His article and reports in the media have stressed the problems with harvesting; loss of habitat through poor forestry practices, livestock and human settlement; and dams built for power and irrigation. Little emphasis is placed on the effects of pollution of water by toxic substances such as fluoride.

The aluminum industry is the chief beneficiary of power dams on the Columbia River System, and it is the fluoride wastes from smelters that first come to mind as sources of fluoride pollution. However, there is another potential source of contamination - the artificial fluoridation of community water supplies for the avowed purpose of improving dental health.

## Fluoride and "critical habitat"

In discussions of "critical habitat" for endangered **salmon** species, all of the possible components must be evaluated. This study examines the possibility that artificial **fluoridation** of drinking water in communities along the course of **salmon** rivers is a factor to be included.

## The POLLUTION of SF-Bay, the Sacramento River, the Merced River with Silicofluoride discharges & Chloramine...research that indicates there is "No Safe level":

"The US Environmental Protection Agency (EPA) (1) and the Province of British Columbia (BC) (2) adhere to a "permissible level" of 1.5 ppm (1.5 mg/L) for fluoride discharged into fresh water. BC's "recommended guideline" is currently **0.2 mg F/L**; but this does not have the force of legislation. Neither the Minister of the Environment nor the Washington State Department of Ecology requires fluoride estimations for sewer effluent permits as it is considered fluoride is not significantly toxic to aquatic life in concentrations expected in discharges (3,4).

A review of the literature and other documents, such as court transcripts reveals that levels below 1.5 mgF/L have been shown to have both lethal and other adverse effects on **salmon**. "Evidence" presented by the EPA and other government bodies responsible for the environment suggests that harm can come to aquatic life only at concentrations that far exceed those in discharges from fluoridated cities. Both Groth (5) and Warrington (6) point out that many factors influence susceptibility of fish to fluoride: temperature; water hardness; pH; chloride concentration; and, the strain, age and physiological and reproductive condition of the fish.

Groth points out that there are serious problems with "laboratory" experiments as opposed to "field" studies. In the former, "... many of the organisms tested for fluoride toxicity did not experience effects until levels of fluoride higher than those which might realistically be encountered in the environment were attained." Groth concluded that the finding can be misleading: the techniques of measurement may be inadequate to detect effects, and these may be at the population rather than individual level (5).

There are studies showing the effect of temperature and hardness. Angelovic and others (7) showed lethal effects on rainbow trout related to temperature. Using sodium fluoride at the same degree of hardness (estimated at 44 by Warrington (6)), the 240-h LC<sub>50</sub> at 7.2 degrees C was found to be 5.9-7.5 mgF/L;

at 12.8 degrees C, 2.6-6.0; and, at 18.3 degrees C, 2.3-7.3 mgF/L. Neuhold (8) reported the same result for 12.8 degrees C and the same degree of hardness. Pimental and Bulkley (9), using a constant temperature of 12 degrees C, found that the 96-h LC<sub>50</sub> for rainbow trout with hardness levels, in mg/L, of 17, 49, 182 and 185 was associated with fluoride levels, in mg/L, of 51, 128, 140 and 193 respectively.

Warrington (6) in British Columbia, where the softness of major salmonid watercourses is the rule, combined the findings of Angelovic (7), and of Pimental; and Bulkley (9) to calculate that the chronic threshold for rainbow trout at 12 degrees and water hardness of 10 mg/L (calcium carbonate) is 0.2 mgF/L.

In a field study, Damkaer and Dey (10) demonstrated that high **salmon** loss (Chinook and Coho) at John Day Dam on the Columbia River, 1982-1986, was caused by the inhibition of migration by fluoride contamination from an aluminum smelter 1.6 km above the dam. The average daily discharge of fluoride in 1982 was 384 kg. This was associated, at the dam, with a fluoride concentration of 0.5 mg/L and a migration time of more than 150 hours and a 55% loss. In 1983, discharge was reduced to 107 kg/day. This was associated with a reduction of concentration to 0.17 mgF/L and the migration time to less than 28 hours with a loss of 11%. In 1985, fluoride discharge of 49 kg/day was accompanied by a concentration of 0.2 mgF/L and a salmonid loss of 5%.

Damkaer and Dey confirmed the cause-and-effect relationship by means of a two-choice flume for fluoride gradient **salmon** behaviour tests. These determined that the "critical level" was 0.2 mgF/L. It is interesting that the Damkaer and Dey study was not available at the time of Warrington's review.

There are other studies that indicate that fluoride at levels below 1.5 mg/L have lethal and other adverse effects on fish. Delayed hatching of rainbow trout occurred at 1.5 mgF/L (11); brown mussels died at 1.4 mgF/L (12); an alga (*Porphyria tenera*) was killed by a four-hour fumigation with fluoride with a critical concentration of 0.9 mgF/L (13); and, levels below 0.1 mgF/L were shown to be lethal to the water flea, *Daphnia magna* (14). These latter two studies suggest that **salmon** species may be affected by fluoride induced reduction of food supply.

Documents used in the Court case involving Meader's Trout farm in Pocatello, Idaho, in 1961 (15) contain evidence that between 1949 and 1950 trout damage

and loss was related to fluoride contamination due to rain washing air-borne particles from leaves into hatchery water at levels as low as 0.5 mgF/L.

Therefore, there is evidence that the "safe level" of fluoride in the fresh water habitat of **salmon** species is not 1.5 mg/L but, 0.2 mg/L. Is this concentration exceeded by fluoridated communities on the banks of water-courses serving as **salmon** habitat?

### **Fluoride levels in water and sewer systems**

In fluoridated areas, drinking water, obtained from surface water with an average fluoride concentration of 0.1-0.2 mg/L (16), is raised to the "optimal" level of 0.7-1.2 mgF/L by the addition of sodium fluoride, hydrofluosilicic acid, or sodium silicofluoride. Fluoride, in community drinking water, enters the fresh water ecosystem in various ways. Surface run-off from fire-fighting, washing cars, and watering gardens may enter streams directly or through storm sewers at optimal concentration, 0.7-1.2 mgF/L. Most enters during waste water treatment.

Masuda (17) studied a large number of cities and calculated the concentrations in waste water that were in excess of the concentration present in the cities' water supplies. In raw sewage, this was 1.30 mgF/L; primary treatment reduced this slightly to 1.28 mgF/L; secondary treatment to 0.39 mgF/L. Singer and Armstrong (18) found 0.38 mgF/L in unfluoridated sewage and 1.16-1.25 mgF/L fluoridated sewage.

It is clear that, in the case of artificially fluoridated communities the concentration of fluoride in both surface run-off and sewer effluent exceeds 0.2 mgF/L. The concentration of fluoride in receiving waters depends on a number of factors: background level (i.e., concentration above effluent outlet); concentration of community water before **fluoridation**: amount of fluoride added; and. the rates of flow of production, discharge, and receiving water.

Studies show that elevated concentrations in fresh water receiving fluoridated effluent may persist for some distance. Bahls (19) showed that the effluent from Bozeman Montana of 0.6-2.0 mgF/L, discharged into the East Galletin River did not return to the background level of 0.33 mgF/L for 5.3 km. Singer and Armstrong (18) reported that a distance of 16 km was required to return the Mississippi River to its background level of 0.2 mg/FL after receiving the effluent of 1.21 mgF/L from Minneapolis-St Paul.

Although dilution reduces concentration over distance, the amount of fluoride in effluent is either deposited in sediment locally or is carried to the estuary where it may persist for 1-2 million years (16) or may re-contaminate if dredging were to take place. Sewage sludge, a product of secondary treatment systems must contain high concentrations of fluoride. However, this is not measured, routinely, in the jurisdictions that were contacted for this study. This also, when spread on agricultural land, including forests, is a hazard in the "critical habitat" of **salmon** species. During application, aerosols are created that may be ingested by animals or contaminate surface water. The sludge adds toxic substances to the soil. Fluoride can move into ground water and the run-off of soil particulates may enter streams that play a role in the life cycle of **salmon**. Effluent from fluoridated cities is also discharged into tidal waters. Sea water has been shown to have a higher concentration of fluoride than unpolluted surface water (16). This concentration of 1.35-1.4 mgF/L is total fluoride. Ionic fluoride is 0.4-0.7-mgF/L and a similar amount is bound in ionic form to magnesium (20).

A more meaningful measure of fluoride pollution in sea water is the ratio of fluorine to chlorine (normally,  $10^{-5}:1$ ). Contaminated rivers flowing into an estuary, as well as direct discharge of effluent, can elevate the amount of fluoride. The possible effects on **salmon** species are left for future review.

## Discussion

More research, especially field study is required. However, from information that is available, 0.2 mgF/L in the fresh water ecosystem in the US Northwest and British Columbia appears to be the appropriate safe level for **salmon** species rather than 1.5 mgF/L currently accepted. Artificially fluoridated communities discharge fluoride into this ecosystem at levels that exceed this from surface run-off, sewage effluent and, probably, from the agricultural use of sludge. Decreases in water volume and/or flow velocity have the potential to increase fluoride concentration. Increased water temperature will enhance fluoride toxicity. **Fluoridation** deserves to be looked at as a component of "critical habitat" along with the more publicized factors.

A review of **Fluoridation** Census 1985 published by the US Department of Health and Human Services (21) shows that along the course of the Snake River from the Idaho-Wyoming border to its junction with the Columbia River in Washington State, there are three water systems fluoridated at 1.0 mgF/L. Eight artificially fluoridated water systems are located on the banks of the Columbia from the Canadian border to the mouth. That is, a total of 11 artificially fluoridated communities are located along the Columbia-Snake River system into

which they release fluoride. Does this play a role in the catastrophic decline in salmonid stocks in this once highly productive ecosystem?

The declining **salmon** returns to the North Thompson, especially of Chinook and Coho, is threatening the existence of species. The City of Kamloops, which contributes run-off and sewage effluent to the North Thompson, is artificially fluoridated. Could this fluoride contribute to migration delay as occurred at the John Day Dam? Could the decline be related to loss of basic feed or hatching abnormalities associated with toxic levels of fluoride? Effluent levels in Kamloops have been measured at 0.6-1.2 mgF/L by employees of the City (personal communication) but no field studies on the effect on **salmon** species have been carried out.

The Fraser River of British Columbia begins in the Rocky Mountains, north of the origins of the Columbia. The Fraser travels west to the City of Prince George, where it is joined by the Nechako River carrying water from the western portion of the Province. From there, it flows south to enter the Strait of Georgia after it is joined by numerous tributaries, the largest of which is the Thompson River. Prince George, like Kamloops, is artificially fluoridated.

Does fluoride from Prince George contribute to reported declines in Chinook and Coho stocks in the Nechako? If the diversion of water from the Nechako River, as proposed in the "Kemano II" hydroelectric project takes place and lowers the water level, slows the flow and raises the temperature of the Nechako Fraser River system, will the fluoride from both Prince George and Kamloops be enhanced in its toxic effects not only on Chinook and Coho but on other **salmon** species such as the Sockeye upon which fishers of both the US and Canada depend?

## **Conclusion**

The decline in **salmon** stocks, especially Chinook and Coho, is a major economic problem for both commercial and sport fisheries. "Critical habitat restrictions" are currently (April 1994) being formulated. Fluoride pollution should be included. There are many questions. But, until evidence to the contrary based on impartially, conducted field studies, is available, the "critical level" of fluoride, in fresh water, to protect **salmon** species in the US Northwest and British Columbia, should be 0.2 mgF/L. Acceptance of this level would condemn both the direct metering into fresh water of fluoride wastes from such activities as smelting and phosphate fertilizer manufacture and the entry of fluoride after its deliberate addition to community water supplies.

The strategy for eliminating unacceptable levels of fluoride from the "critical habitat" of Northwest Pacific salmon consists in the immediate banning of artificial fluoridation and the rapid sunsetting of the current disposal practices of fluoride-producing industries."

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P.s. Silicofluorides should be added to California Prop 65 List and Public Notifications!

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**Additional Scientific 'fluoride' References:**

Centralized reference database(s) for peer reviewed scientific publications concerning fluoride cancer effects/affects as determined in numerous scientific studies can be found at:

<http://www.fluoridealert.org/health/cancer/>

Additional publications concerning the many ramifications of fluoride compounds as affecting humans can be found at:

"The Online Learning Center":

[http://www.geometry.net/detail/basic\\_f/fluoride.html](http://www.geometry.net/detail/basic_f/fluoride.html)