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BOARD OF HEALTH**

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**BOARD OF HEALTH**

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## Interim Report on the Fluoridation of Burlington's Water August 31, 2005

“Should the City of Burlington continue to fluoridate its water supply?” is not a rhetorical question. In fact, since January of this year the Board of Health has been examining the matter thoroughly. We have prepared this interim report as a preliminary response to the question.

It should be noted that after many hours of personal and cooperative time considering both sides of fluoride use, we have concluded for now with a divided opinion among the Board. A majority of three (Ian Galbraith, Mary Hart, and past member, Debra Clemmer) agreed that the use of fluoride should be continued. A minority of two (Alan Sousie and Jay Vos) remain committed to complete removal of fluoride from the water. The Board's newest member, Kevin Lunn, stands with the majority.

The Board of Health began its open, public investigation of the issue on March 9<sup>th</sup> of this year. The Board received information from Michael Connett, Project Director of Fluoride Action Network. The Network is opposed to the use of fluoride in our water. Then on April 13, in order to balance its examination, the Board invited Dr. Donald Swartz, Director of Oral Health Improvement at the Vermont Department of Health to present a proponent's perspective. Dr. Swartz was accompanied by Alida Lund, the Fluoridation Technician for the VDH. Dr. Swartz has since been replaced as director by Dr. Steve Arthur. Dr. Arthur contributed to subsequent discussions and testimonies. It is noteworthy that there were about 40 members of the public and City Councilors Blais and McDonough who attended this meeting to observe and question during discussion.

The number of questions asked and the complexity of issues raised convinced the Board that much more time was needed to thoroughly examine the City's continued fluoridation of the water supply. The Board opined that time was needed for both public education and public testimony about the use of fluoride. Our investigation found that it has been many years since a full, public evaluation of the use of fluoride in our water was conducted. Consequently, the

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Board met on May 4<sup>th</sup> and considered strategies for continuing study. At this meeting, it was decided to conduct a public debate between the pro and con positions. We also decided to control the debate tightly by process delineated in advance and by way of a moderator who managed the presentations and the public question and answer period that followed. In addition, we decided to hold a second hearing when all testimonies would be accepted by the Board without discussion. The Board intended to listen attentively and attempt to assess the public opinion about fluoridating our water. On June 15<sup>th</sup> an informational debate was completed before an audience of approximately 100 citizens. The follow-up, opinion hearing was completed on June 23<sup>rd</sup> in the presence of about 85 citizens. Both of these meetings were taped in their entirety by Channel 17.

After completing these events, the Board became more clearly divided as to the meaning and interpretation of data, literature and testimony. Nevertheless, the Board proceeded and met on June 29<sup>th</sup> when it openly deliberated its position about the use of fluoride. At this time, minority members recommended by motion that a public referendum vote on the matter be taken during the next available balloting opportunity. This motion was defeated by a close vote of 3 to 2. Following this vote, the Board then defeated a second motion offered by the minority to "discontinue fluoridation of the water in Burlington". This recommendation was defeated by a 3 to 2 decision and qualified by adding our recommendation to lower the quantity of fluoride in our water. The quantity of reduction is yet to be determined. The qualification applies based on the notion that increased exposure from sources other than water occurs throughout the population, despite socio-economic, geographic and cultural differences. Each person's use, and thus, his exposure to fluoride are unique. It is possible that we are contributing to exposure of citizens to more fluoride than they need to achieve optimal dental health, and in turn exposing them to potentially harmful, long-term effects. Fluoride is known to have a significant potential for toxicity with overexposure. Of course, certainty about the degree of harm, if any, for each exposure is not discernable at this time due to the absence of reliable data. Nevertheless, the Board believes that scrutiny of the city's existing water fluoride level should be forthcoming.

On a related matter, the entire Board holds serious concerns about the current fluoride exposure of infants between the ages of zero and six months. We deem this exposure to be a "significant public health risk", and one that should be given immediate attention by the city and state. Our concerns are supported by the Institute of Medicine, the American Dental Association and the Academy of General Dentistry who have directed that infants of this age group should receive no fluoride supplementation at all due to its lack of benefit and the risk of dental fluorosis. Uninformed parents who feed a child formulas mixed with tap water are exposing their child to a conclusively harmful dose of fluoride. The Board assumes that once informed about the dangers of fluoride and when directed to or given alternative sources of non-fluoridated water, parents would gladly stop using tap water. It is our advice that Burlington immediately finds and uses all

possible means to better educate parents of newborns and young infants about the hazard of fluoride. We also urge consideration of our suggestion to provide non-fluoridated water to parents who are currently receiving assistance from WIC or similar support services. This small but critical group of citizens deserves our help to avoid being harmed.

It has been studied and reported that topical application of fluoride achieves positive dental health results. In fact, some dental researchers are now of the opinion that fluoride's main benefit is topical, not systemic from ingestion as previously believed. While dental researchers do not totally discount that water fluoridation is a way to deliver fluoride topically, the experience from Europe, where water fluoridation remains uncommon, suggests that topical fluoride products and Xylitol products have proven equally sufficient for reducing caries. In the United States, this opinion has not been readily accepted. Thus, the push to increase fluoridated communities continues nationwide.

Some members of the Board of Health believe that promotion of topical applications of fluoride or replacement of fluoride with an alternative like Xylitol should be encouraged. The Board has recently obtained very helpful information about Xylitol. As a whole the Board agrees that Xylitol use has significant potential for good results. Approved by the FDA, whereas fluoride is not, Xylitol sugar has been deemed to be harmless even for infants. There is no quantity considered detrimental that could be consumed by an individual alone. Xylitol tastes good and is available in the form of gum, mints and powder for household and commercial use. It also is available as an ingredient of toothpaste and mouth rinse. Xylitol is known to produce long-term preventative results in oral health studies and even contributes to the reduction of ear infections in children who consume it regularly. This is due to its antimicrobial effect on the Streptococcus organism that causes harm to teeth, gums and bones. Xylitol is so effective that the US military recently included Xylitol products in field packs of soldiers fighting overseas in Iraq and Afghanistan. Since they have higher incidents of caries due to living conditions and the absence of hygiene opportunities chewing Xylitol gum and mints between brushings has decreased the oral health problems of these men and women. Clearly, according to Catherine Hayes, a well-respected dental health researcher at Harvard, "With all that is known about the positive results of using Xylitol, it is unethical to withhold it from the public." The Board of Health strongly recommends that ways be found to encourage broader use of Xylitol among Burlingtonians. By way of example, it could be tried in school based programs, nursing care facilities, and mental health programs. The city could also provide information about Xylitol in booklet or pamphlet forms at City Hall and other appropriate locations.

The Board wants to reiterate that this report and its recommendations are held as interim in nature. We believe there are still many facts and ideas to be investigated. Among them are the results of a major study by the National Research Council's Committee on Toxicology. The study will review toxicological, epidemiologic and clinical data, particularly data published since 1993, and exposure data on orally ingested fluoride from drinking water and other sources like

food, toothpaste and dental rinses. The relative contribution of these various fluoride sources to total exposure to fluoride will be considered. The study group will identify gaps and make recommendations for future research relevant to setting the maximum contaminant level goal and the secondary maximum contaminant level for fluoride in drinking water. The study will not address questions of economics, risk-benefit assessment or water-treatment technology. The Board expects to obtain the results of this review sometime after February 2006.

In conclusion, we urge everyone to remain open minded about the subject and to continue a constructive dialogue for the sake of determining the safest, common answer to the original question, "Should the City of Burlington continue to fluoridate its water supply?" The Board of Health remains committed to being an integral part of such dialogue.