

**COLUMBIA/BOONE COUNTY BOARD OF HEALTH
FLUORIDATION SUBCOMMITTEE MEETING MINUTES
January 24th, 2013**

The Columbia/Boone County Board of Health fluoridation subcommittee met at 5:30 p.m., Thursday, January 24th, 2013. The meeting was held at the Columbia/Boone County Department of Public Health and Human Services, 1005 W. Worley St. Public Health & Human Services Director Stephanie Browning represented the staff. Administrative Support Assistant Dawna Mavel recorded the minutes of the meeting.

MEMBERS PRESENT:

Dr. Colin Malaker
Dr. Sally Beth Lyon
Lynelle Phillips
Mahree Skala
Dr. Michael Szewczyk
Harry Feirman

MEMBERS EXCUSED:

MEMBERS NOT EXCUSED

CALL TO ORDER

Chair Mahree Skala called the meeting to order at 5:30 p.m.

APPROVAL OF AGENDA:

The agenda was approved as submitted.

NEW BUSINESS:

Ms. Skala introduced John Conway, Chair of the City Water & Light Advisory Board. Mr. Conway asked to join the group and learn more about the information that is being presented. Mr. Conway said he is a licensed professional engineer and has been involved with the board for 23 years and has followed public water supply issues throughout the state of Missouri.

Ms. Skala reinforced the subcommittee purpose as it was defined at the January 2013 Board of Health meeting. In order to assist the Board of Health in making a recommendation to the City Council regarding fluoridation of the city water supply, the subcommittee will:

- 1) examine the available evidence and make a recommendation as to whether there is substantial, strong evidence that the level of fluoride in city water should be changed from the current level of 0.7 ppm to 0.3 ppm (the background rate), and
- 2) if the recommendation is to continue fluoridation at the 0.7 ppm level, evaluate whether the city should switch from using HFSA to sodium fluoride

As a result of the discussion at the January 2013 Board of Health meeting there were a number of questions raised so the current agenda is set up for the subcommittee to address those questions. Ms. Skala briefly reiterated the background of the problem as follows. Dental caries has been recognized as a significant public health problem that impacts both dental and physical health as it is associated with a higher risk of heart disease. Water fluoridation came about because there are wide variations in naturally occurring fluoride content of water supplies and there were observations made starting in the mid-20th century that higher fluoride levels were correlated with lower levels of dental caries. This led to community based studies in the post WWII period into

fluoridation research and practices as we know it now. Columbia implemented water fluoridation in 1974. In conjunction with the development of research and practice, the roles of federal agencies have evolved over time. The three agencies involved in fluoride and drinking water are:

1. The (EPA), Environmental Protect Agency regulates public drinking water supplies; they establish maximum contaminant levels for a wide variety of chemicals. Those regulations state water supplies cannot go over that maximum contaminant level and be in compliance with the law.
2. The (FDA) Food and Drug Administration performs a similar function as the EPA for bottled water.
3. The (DHHS) Department of Health and Human Services looks at the oral health aspect and research and makes recommendations regarding the optimum level of water fluoridation to achieve maximum caries reduction while minimizing fluorosis.

The landscape is always changing and in recent years there is more public exposure to fluoride and dental products such as toothpaste and mouth rinses, etc., and there have been documented increases in dental fluorosis. The EPA is required to review all of its maximum contaminant level standards every six years to take into account new research.

Ms. Skala proceeded with discussing agenda items in the order listed, but first mentioned that a leading opponent of water fluoridation Dr. Hirzy will not be joining in on a previous scheduled teleconference due to a last minute conflict. At the end of the subcommittee discussion a decision will be made on how to proceed with getting that information. Ms. Skala mentioned that public comments will be in the order of how people signed in with a time limit of 4 minutes each. An option to provide written comment was also offered. If time did not allow everyone to provide comment, another session will be scheduled to allow this to happen in the same fashion.

The first topic discussed (based on the information requested to be reviewed from the BOH meeting on January 10th) was information on a dental health assessment completed in Missouri in 2005 which studied the status of caries and fluorosis in the state. The survey was done by selecting random elementary schools and classrooms around the state (8 to 9 year olds in the third grade). Key findings showed that tooth decay is a significant health problem for Missouri children. While dental sealants have proven to be a good method in preventing decay, the majority of Missouri's third grade children did not have access to this preventive service at the time this survey was done. Other findings showed that African American and children from low-income school's oral health status and access to preventive dental sealants was less than the general population. The survey also showed 1 in 4 third graders and more than 1 in 5 special health care needs children in Missouri has untreated tooth decay, and many children in the state are attending school with infection or pain from dental disease. More details on this survey can be viewed from the following link: <http://health.mo.gov/living/families/oralhealth/pdf/ShowMeSmile2005.pdf>

Another study done around the same time period, 1999 to 2004, was done by the National Health and Nutrition Examination Survey (NHANES). Random samples of various age groups received intensive physical exams and the data was analyzed over the years. The study found that there was a prevalence of dental caries in children two to eleven year olds. This group had 42% dental caries in their primary teeth; blacks and Hispanic children and lower income children had a higher level of untreated and more severe decay; 59% among adolescents had dental caries; 92% adults ages 20 to 64 had dental caries. More detailed information on this survey can be viewed at the following link: <http://www.nidcr.nih.gov/DataStatistics/FindDataByTopic/DentalCaries/>
There is no specific data available for Boone County.

The topic moved to EPA Fluoridation standards. EPA's current drinking water regulations set a maximum level of 4mg/L of fluoride or 4 parts per million (ppm) for both mcl (maximum contaminant level) and mclg (maximum contaminant level goal). The EPA also has a secondary standard (SMCL) for fluoride at 2.0mg/L or 2.0 ppm. These standards are non-enforceable guidelines regulating contaminants that may cause cosmetic effects such as skin or tooth discoloration or aesthetic effects such as taste or odor in drinking water. Further information on EPA standards can be viewed from the following link:

<http://water.epa.gov/drink/contaminants/basicinformation/fluoride.cfm>

Ms. Lyon asked for clarification on a news release dated January 2011. The release discusses the EPA and Department of Health and Human Services (HHS) new scientific assessments and actions on fluoride where the HHS has proposed a recommendation of lowering the amount of fluoride to 0.7 mg. The EPA is the regulatory body. Mr. Feirman mentioned that the EPA and HHS standards are for two different things. The EPA standards are in relation to skeletal fluorosis (potential damage to bones), not discoloration of teeth. The HHS recommendation is the highest level that would prevent dental caries that would not contribute to dental fluorosis. Dr. Szewczyk mentioned that they are two different organizations with two different perspectives. The EPA's concern is toxicity levels, not what is good or not good for teeth. The HHS wants what is good for teeth and would like to see the level stay at 0.7 mg per liter. HHS wants the lowest level that is safe and effective to prevent dental caries. 2400 public comments have been responded to on this subject matter and a ruling is still in process at the federal level. The following two links provide further details on this topic.

1. https://www.federalregister.gov/articles/2011/01/13/2011-637/proposed-hhs-recommendation-for-fluoride-concentration-in-drinking-water-for-prevention-of-dental#table_of_contents
2. <https://petitions.whitehouse.gov/petition/prohibit-all-federal-agencies-promoting-endorsing-or-funding-fluoridation-public-drinking-water/SRYL4NwC>

Ms. Skala introduced Mike Anderson, Engineering Supervisor for the City of Columbia. One question proposed was based on the level of fluoride in well water. Mr. Anderson said historically the level has ranged from .3 and .6 mg. Dr. Szewczyk mentioned that the city's baseline varies and wanted to know how much it varies. Mr. Anderson said there had not been any big spikes in the last several months. The average is around .24 mg versus the river level which is .37 mg.

Mr. Anderson moved on to discussing how the city decides how much fluoride to add to the water. He said it was based on monitoring the output. The state does confirm readings monthly. The resulting output samples are run between every two to four hours. Adjustments normally do not have to be made more than twice a day. A question was raised if everyone in the city limits get water from city water or is some provided by consolidated water districts? The city limit boundary is the same as the water service territory. The university has its own water system for the most part; a few buildings are served by the city. There are three remaining well sites within city limits providing their own water (grandfathered in) that Mr. Anderson said he was aware of. The fluoride levels of the university water, based on leak samples and information prior to 1970 is around 1 part per million (natural occurring fluoride). Ms. Skala asked Mr. Anderson to explain the chemical used to fluoridate the water and safety regulations used. Mr. Anderson said the city uses hydrofluorosilicic acid and said it was a very mild acid in its concentrated form. Staff does have to wear gloves and eye protection but does not suit up to work with it. Mr. Anderson did mention that the staff has no contact with the solution. It comes in a tanker trunk, goes into an outside tank, then into and inside tank. It is not touched at all. The day tank onsite holds approximately 150 gallons

of this chemical and around 50 gallons is added to 10 million gallons of water so the amount added is very minimal. Dr. Malaker asked if this chemical is ever tested prior to adding it to the water. Mr. Anderson said no, but the trucking company gives a test report that says what is in it and what is not in it. No independent testing has ever been done. Ms. Skala asked if there are any routine tests done to measure the levels of things like arsenic and lead. Mr. Anderson said samples are pulled and regularly tested through the water quality lab and are done annually or at special requests. Anytime there is a spill, tests do have to be done. A question was raised whether the strength of the fluoride changes based on how far down the distribution system the water goes and if it is checked at monitoring points throughout the system. Mr. Anderson said it is checked monthly at monitoring points and remains very stable once it is in the water. It does not break down or recombine. Further information on Columbia's 2011 water testing results can be viewed from the following link: <http://www.gocolumbiamo.com/WaterandLight/Documents/watertest.pdf>

Ms. Lyon asked Mr. Anderson what his response was to the concern that there might be other contaminants in the hydrofluoric acid received from the supplier. He said the city has to rely and trust the suppliers to use contaminant free containers and that is confirmed by the annual testing. Dr. Malaker mentioned a concern that the city does not know how reliable the tests are that are done by the manufacturers and trucking companies and asked the board think about doing some independent testing. Mr. Anderson said the only time the water would be tested for contaminants would be if there is a spill. One spill that was tested did not show any contaminants. Dr. Szewczyk recommended that the board could have someone call the vendor and ask them if they do testing and if they could send us results of that testing; and if we don't trust the vendor is being honest we could have an independent test done. Ms. Skala said there is an independent standards organization called (ANSI/AWWA) American National Standards Institute/American Water Works Association that assures chemicals used meet industry standards. Mr. Feirman asked Mr. Anderson what the rationale was for choosing HFSA rather than any other means of adding fluoride. Mr. Anderson said that it was before his time, but he understands it as being the easiest to add with the least amount of exposure to staff.

Ms. Skala mentioned an article that had some good information about the topic of chemicals used to add fluoride to water. It is called **Water Fluoridation and the Environment** and can be viewed from the following link: <http://www.cdc.gov/fluoridation/pdf/pollick.pdf> Dr. Szewczyk shared a specific sentence from that article he found interesting; *"While there may be evidence of toxicity in these substances when workers involved in the production are now projected, there is no credible evidence of toxicity when they are diluted for use in fluoridated water."* It is a worthy article to read and was in a peer reviewed journal containing several references.

Additional reference materials were supplied by Ms. Skala for the group to review at their convenience. The links are below:

NOTE: These are in addition to the materials supplied for the January 10, 2013 BOH Meeting

General information about dental caries

<http://www.nlm.nih.gov/medlineplus/ency/article/001055.htm>

Dental infection and vascular disease

<http://www.ncbi.nlm.nih.gov/pubmed/21455852>

Dental caries, water fluoridation and social class
<http://www.ncbi.nlm.nih.gov/pubmed/17436972>

General information about dental fluorosis
http://www.cdc.gov/fluoridation/safety/dental_fluorosis.htm

National Kidney Foundation statement, April 2008
http://www.kidney.org/atoz/pdf/fluoride_intake_in_ckd.pdf

In Their Own Words: What Respected Organizations Say about the Safety and Effectiveness of Community Water Fluoridation (The Campaign for Dental Health)
http://www.ilikemyteeth.org/wp-content/uploads/2011/03/RespectedOrgs-noPics_v2a.pdf

Proposed HHS Recommendation for Fluoride Concentration in Drinking Water for Prevention of Dental Caries, January 13, 2011
<https://www.federalregister.gov/articles/2011/01/13/2011-637/proposed-hhs-recommendation-for-fluoride-concentration-in-drinking-water-for-prevention-of-dental#h-8>

Joint Response Statement by HHS Asst. Secretary and Acting Asst. Admin for the EPA Office of Water, 2011
<https://petitions.whitehouse.gov/petition/prohibit-all-federal-agencies-promoting-endorsing-or-funding-fluoridation-public-drinking-water/SRYL4NwC>

Additional Information re EPA Six-Year Drinking Water Standards Review

Joint HHS/EPA Press Release, 2011

<http://yosemite.epa.gov/opa/admpress.nsf/3881d73f4d4aaa0b85257359003f5348/86964af577c37ab285257811005a8417!OpenDocument>

Fluoride: Dose-Response Analysis for Non-cancer Effects (160 pp, 820-R-10-019)
http://water.epa.gov/action/advisories/drinking/upload/Fluoride_dose_response.pdf

Fluoride: Exposure and Relative Source Contribution Analysis (210 pp, 820-R-10-015)
<http://water.epa.gov/action/advisories/drinking/upload/Fluoridereport.pdf>

Ms. Skala introduced Dr. Lori Henderson. Dr. Henderson directed everyone to the document she provided with several links about fluoride prior to beginning her presentation. If you would like further detail the links are provided below.

SAFE AND OPTIMAL FLUORIDATION OF COLUMBIA'S WATER, Brief List of References 1/22/2013 Lori Henderson, DDS

Board Certified Pediatric Dentist

drlori@ident.com

ADA Fluoridation Facts

http://www.ada.org/sections/newsAndEvents/pdfs/fluoridation_facts.pdf

pages 58-67 contain 359 peer-reviewed references

Creating a Healthier Missouri: A State Oral Health Plan 2009

<http://health.mo.gov/living/families/oralhealth/pdf/OralHealthPlan.pdf>

American Academy of Pediatric Dentistry

<http://www.aapd.org/policies>

2013 National Call to Action to Promote Oral Health, under the leadership of the Office of the Oral Surgeon

<http://www.surgeongeneral.gov/library/calls/oralhealth/nationalcalltoaction.html>

CDC Division of Oral Health

<http://www.cdc.gov/oralhealth/topics/child.htm>

Trends in Oral Health Status: US 1988-1994 and 1999-2004

http://www.cdc.gov/nchs/data/series/sr_11/sr11_248.pdf

Reconstitution of Infant Formula

http://www.cdc.gov/fluoridation/safety/infant_formula.htm

Mild Fluorosis Images

<http://www.ada.org/5172.aspx?currentTab=2>

CDC/NCHS 2010; Prevalence and Severity of Dental Fluorosis

<http://www.cdc.gov/nchs/data/databriefs/db53.htm>

CDC Water Fluoridation Additives, updated 2012

http://www.cdc.gov/print.do?sessionId=B6C2750D24A031966FF0BD454618E7AA.node1?url=http%3A%2F%2Fwww.cdc.gov%2Ffluoridation%2Ffact_sheets%2Fengineering%2Fwfadditives.htm

Columbia City Water and Light, Water Quality Reports.

<http://www.gocolumbiamo.com/WaterandLight/Water/WaterQualityReport.php>

<http://www.gocolumbiamo.com/WaterandLight/Documents/watertest.pdf>

American Academy of Pediatrics Endorsement of Water Fluoridation, 2013

<http://www.healthychildren.org/English/healthy-living/oral-health/Pages/Water-Fluoridation.aspx>

American Academy of Family Physicians Endorsement of Water Fluoridation, 2012

<http://www.aafp.org/online/en/home/clinical/clinicalrecs/guidelines/fluoridation.html>

National and International Organizations that Recognize the Public Health Benefits of Community Water Fluoridation for Preventing Dental Decay

<http://www.ada.org/4051.aspx>

Ms. Henderson introduced herself as a board certified pediatric dentist in Columbia. Prior to coming to Columbia she worked with the US Public Health Service. Dr. Henderson mentioned she is the public policy advocate for the state of Missouri for the American Academy of Pediatric Dentists. The discussion started with Dr. Henderson mentioning she would like to talk in favor of continuing safe optimally fluoridated water in Columbia with a current level of approximately 0.65 ppm. The optimal has been set to 0.7 to 1.2 ppm. The science and recommendations over the past 60 years, the U.S. Public Health Service, CDC, American Academy of Family Physicians, etc. (over 100 organizations) endorse safe regulated optimal water fluoridation. Science and data

continue to confirm that in fluoridated communities, even in the presence of the use of fluoride toothpaste and rinses, we can still benefit from a 20 to 40% reduction in tooth decay in fluoridated vs. non-fluoridated communities. There is a range because some communities have been fluoridating longer. The common wisdom in the reduction in cost of dental care is for every dollar invested in water fluoridation is a \$38 savings in dental care.

Dr. Henderson said that there has been a lot of talk about a decreasing trend in tooth decay over the last 20 years. This decrease was pretty solid for all age groups until 1999 at which time tooth decay started increasing in two and five year olds. The National Health and Nutrition Examination Survey (NHANES) shows tooth decay has increased from 1 out 4 children by the time they are 5 years olds by to 28%. 4 percent is a significant increase. This survey is a program of studies designed to assess the health and nutritional status of adults and children in the United States. The survey is unique in that it combines interviews and physical examinations.

Dr. Henderson showed a photo of one child with tooth decay and mentioned it is five times more common than asthma. It is a bacterial infection that can't be treated with antibiotics until it becomes a medical problem and leaves the tooth and goes into the body. Dr. Henderson said that this is not a small problem and that she sees significant tooth decay much more frequently than fluorosis in our community.

Dr. Henderson showed a bar graph from the CDC's Healthy People 2010 review that showed that our nation's 2 to 5 year old children did not reach the goal set for oral health. More information on this review can be viewed from the following link:

http://www.cdc.gov/nchs/healthy_people/hp2010/hp2010_final_review.htm

Dr. Henderson asked if anyone had any questions. Dr. Malaker commented that his understanding on dental fluorosis is that it is caused by inhibition of certain enzymes, specifically "G" proteins during the enamel formation. His question/concern was if fluoride consumed in our body goes in and does this during tooth development, what other "G" proteins are being inhibited for other development such as neurological in developmental aged children. If we are seeing *mild* fluorosis during tooth development, the concern is the "G" protein being prohibited causing fluorosis based on a study by Matsuo in 1998. Ms. Henderson said she would like to go back and look at that and mentioned studies like that are based on speculation because we can't do human studies. Ms. Skala said she would like to see if there is any published information on this particular issue and Dr. Henderson said there is no cause and effect data on what causes fluorosis, and that it is important that a child's medical history also needs to be reviewed when looking at dental fluorosis cases. Dr. Malaker said he would send the article mentioned above to Dr. Henderson for review.

Ms. Skala welcomed everyone requesting public comment and said we would do our best to accommodate as many folks as possible based on the time allotted.

Public Comment 1: Dan Redmond

Dr. Redmond approached the Board as a concerned citizen. His concern was if .7 ppm concentration fluoride level was safe for the general population including his pregnant wife. He mentioned that some of the city water logs show at one point the level went up to .82 ppm. He felt we should be looking at dosage: mg/kg of body weight as these variables change over time. He also mentioned we need to look at the cumulative sources of fluoride such as how much food and water is consumed, and the length of bath/showers taken. Other sources of fluoride come from processed foods, prepared beverages, medications, food packaging adhesive, fluoride-based pesticides, mechanical deboning process in the meat industry. We need to take into account a

person's age, weight, nutritional status, medical conditions, etc. when looking at cumulative fluoride consumption.

Dr. Redmond mentioned the HHS and EPA's newest scientific assessments. The goal of these assessments is to balance the benefits of limiting tooth decay while limiting any unwanted health effects. At EPA's request, in 2006 the NAS reviewed new data on fluoride and issued a report recommending that EPA update its health and exposure assessments to take into account bone and dental effects and to consider all sources of fluoride. The HHS also considered current levels of tooth decay and dental fluorosis and fluid consumption across the U.S. Further information on the HHS and EPA assessment can be viewed from the following link:

<http://www.hhs.gov/news/press/2011pres/01/20110107a.html>

Next, Dr. Redmond mentioned briefly a link from the ADA that gives more in depth information on whether topical fluoride decreases tooth decay:

http://www.ada.org/sections/newsAndEvents/pdfs/fluoridation_facts.pdf

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.

Some other highlights of Dr. Redmond's presentation included information from the NHANES survey and CDC/NCHS Study, both mentioned in earlier discussions of the meeting. He also mentioned Infant formula consumption and if it could be reconstituted with tap water. The following links give more detail on this subject: <http://www.aapd.org/policies> and www.cdc.gov/fluoridation/safety/infant_formula.htm.

The final topic covered HFSA contaminants and if there was arsenic, mercury and/or lead in our water as a result of fluoridation. More information on this can be viewed at:

<http://www.gocolumbiamo.com/WaterandLight/Documents/watertest.pdf>

In conclusion, Dr. Redmond said the government and independent experts do not agree therefore there is reasonable doubt regarding the safety and efficacy of adding chemicals to the water supply to artificially increase the concentration of fluoride. He would like to see the city consider alternative solutions for the \$50K/year spent on fluoridation such as vouchers for toothpaste and/or fluoridated bottled water.

Public Comment 2: Bethany Baillargeion Marx, DDS

Bethany Baillargeion Marx, DDS. Dr. Marx works at the Community Health Center located in Jefferson City and has been practicing community health dentistry for three years. Prior to dentistry she was a trained chemist. Dr. Marx said she was here in support of those people who can't afford to buy things such as toothpaste. She said she represents kids from low income families who **don't** have cavities, and one of the main reasons she felt was because they live in the city and drink fluoridated city water. A lot of those kids have parents who do not teach them about brushing. She told a story about a young woman, 17 years old with severe decay that had to have one of her front teeth extracted. After getting to know her better, Dr. Marx learned that her family did not have water and had to go elsewhere to even take a shower. If a family can't afford to buy water, then it is very doubtful they will spend money on toothpaste as their only other source of fluoride. There are people in dire situations that need to be protected.

Public Comment 3: Elizabeth Wiles

Elizabeth Wiles is a homemaker, mother of two children and one more child on the way, and a citizen of the first Ward in Columbia. Ms. Wiles said she is extremely vigilant and dedicated to the best health for her family. After very careful consideration she said her family has chosen to use fluoridated toothpaste and mouth rinse for themselves and five year old daughter. They have also chosen to use a drinking water filter that removes fluoride because after much consideration and research they could not find sufficient evidence that ingesting fluoride was effective in preventing dental caries and could not find information as to what was a safe fluoride exposure for herself and unborn child and entire family for ingesting and bathing. Ms. Wiles mentioned that the fluoride added to our water supply is not the same pharmaceutical grade fluoride added to toothpaste. As a family living on a single very modest income in the first Ward, she felt her family may be the type of people that health officials might worry about not having sufficient means to make sound health and dental choices; however, we live in the U.S. of America (not the Soviet Union, North Korea, China, etc.) where government appointed health experts make medical decisions for the entire population. That is exactly what we are doing by adding fluoride to our water. Entire populations are being force medicated without a diagnosis or consent. Money could be better spent on things like education and vouchers for fluoridated toothpaste for low income families. We could all come up with creative ideas that promote dental health that are more economical and empowering than dumping something in the water supply. More than anything, Ms. Miles mentioned she wants children to grow up in a world where free will to make the best choices is recognized and respected. Top down approaches of centuries past must be abandoned if we want to see real change that is lasting. We should embrace attitudes and policies that favor knowledge, education and respect for every person's rights regardless of their backgrounds or beliefs.

Public Comment 4: Kevin Gamble

Mr. Gamble is a father of two and Columbia resident for 38 years and is here as a concerned citizen who is not a member of the medical profession. Water fluoridation is being used as a medical treatment; a controlled substance is being dispensed to people to address a health issue. There are no studies of our specific community and there has been no identification as to the need or lack of need for this treatment. In the absence of that information, the primary defense of water fluoridation comes to the question of whether it causes harm. This is not the reason we give a medication to someone; because it doesn't cause harm. We give medication to someone because their individual health has been analyzed and determined that the individual has a health issue that needs to be addressed. In the case of vaccines, an analogous situation to fluoridation, treatment is done on a one on one basis and carefully adjusted based on age and health specifics of each individual being treated. The health professional, not the patient, determines the amount of medication the patient ingests and the patient gives consent. Mr. Gamble felt that if the board votes in favor of fluoridation, they would be prescribing a mandatory medical treatment to people they have never met and know nothing about. The stated intent of the board is to evaluate the merit of the difference in the base amount of fluoride in our water vs. the added amount. The ultimate responsibility is beyond how the board is framing the issue. The power you have been given is to stop or continue fluoridation based on the city council's decision to follow your recommendation.

Public Comment 5: P.B. MacPherson

Was not here

Public Comment 6: H. Eugene Elkin

Mr. Elkin, a citizen of Columbia, helped bring Habitat for Humanity to Columbia in 1988. He gave a quick update from the last meeting and said he spoke to the dentist here who showed him pictures of fluorosis. Just recently he was at a Wendy's restaurant in town and surprisingly noticed that the

young man serving him, around age 17 and noticed he had fluorosis. He said "Sir, you have fluorosis." The young man responded that there is a very large population of this. Mr. Elkin went on to read a letter addressed to you by Monta Welch, a member of the grassroots organization in Columbia called "A People's Visioning." It reads: This communication is to inform you that most of the people in the grassroots People's Visioning effort here in Columbia are supportive of full removal of the added fluoride in Columbia's and the county's water supplies.

There has been much and substantial evidence and testimony to support such an action. Our discussion and topic group on water and food security as part of the People's Visioning feels that the naturally occurring amounts of fluoride are sufficiently supportive for those who contend it must be ingested to get the supposed beneficial benefits and certainly when if dentists and individuals choose to recommend or use topical fluoride so prolific and readily available in our over the counter oral products. For this reason we ask that you save the approximately \$50K spent on this additive and designate that amount to be used for the research and development of new cutting edge natural methods of water purification and assistance for any children unable to find appropriate funds for dental assistance. Thank you for taking this position of a sizeable number of citizens who significantly care about our community to participate in the grassroots people visioning. Respectfully requested, Monta Welch, the director of People's Visioning as well the co-founding president of Interfaith Care for Creation in Columbia.

Mr. Elkin said he feels that there is more and more evidence that we need to stop the fluoridation. What if the natural occurring amount of 3 ppm of fluoride? As the center of the nation of the United States of America and we need to set the first example that fluoride needs to be stopped. Mr. Elkin said because of the last meeting he takes this matter very seriously and mentioned that if he as one person can walk out and find one child with fluorosis, end of discussion.

Public Comment 7: Paul Modesitt

Mr. Modesitt is a citizen of Columbia. Mr. Modesitt said most of the topics he had have been well covered but did have some questions. One being what is the source of our fluoride? There are two sources, aluminum waste from Alcoa and from phosphate fertilizer. He thought there was some discussion that it was coming from phosphate fertilizer. Another question was related to the environmental factors of fluoride in that it does not break down. Mr. Modesitt mentioned that as you go through the river systems there are higher levels of fluoride the further you go away from the municipal discharges. He then shared that prior to 1960 fluoride was used as an insecticide and pesticide. The topic then moved to a concern that hot water heaters contain a high concentration of fluoride, not calcium like many people think. If this is in fact true, folks drinking their morning coffee using that water are receiving high levels. Mr. Modesitt mentioned that he would be interested in actually going to a junk yard and getting an old hot water heater to tear apart and have it analyzed. He then mentioned that fluoride is toxic to plants. It will completely stunt a plant. He recommended people grow two plants, use the same dirt, but water one with tap water and one with rain water, or water from a lake or something and see what happens.

Mr. Modesitt's final point was that he lives on a dead end on the city water line and fluoride is at a toxic level because of the dead end. He would rather see the \$50K spent on fluoridating city water be used to get rid of the dead end. Toxic levels of fluoride are accumulating in areas around the city where there are slow spots such as dead ends and many people are being affected by it. Mr. Modesitt said his water is very toxic and is not drinkable, very bitter and has a horrible taste.

Subcommittee Discussion – final agenda item

Dr. Malaker said he felt the group has received a lot of both good and opposing information on the fluoridation topic and feels like he needs more time to take a much closer look at all of the details. He is concerned that from some of the things he has read it does appear there is a possibility of

side effects from fluoridation, even in small amounts and felt it was VERY important to spend more time for solid thought, writing things down, researching, etc. prior to any decision being made. He also said he would like for the group to meet again.

Ms. Phillips asked to clarify that the goal of the group was still to examine the available evidence and make a recommendation as to whether there is substantial, strong evidence that the level of fluoride in city water should be changed from the current level of 0.7 ppm to 0.3 ppm. Ms. Skala said she felt that is still the purpose. Ms. Phillips then mentioned that she has been reviewing the studies and categorizing the studies that pose a theoretical risk versus studies that contribute to balancing evidence of a true risk.

Dr. Szewczyk thanked everyone for coming and commented that the fact that we saw the same bar graph from a study from two different presenters from different sides of the issue shows us that this is a difficult issue. True public policy is not self-driven and felt those attending today were there because they are concerned not only about themselves but others as well. Dr. Szewczyk said he agreed with Dr. Malaker that there is a lot of evidence that we have heard and more articles coming in. He wants more time as well, step back and look at everything. He reiterated that he stands by what Ms. Phillips said that it is a call that has to be made because there is a really good reason to make that call; looking for substantial evidence, something that says that there is a reason why all those people that say we shouldn't fluoridate are wrong. He pointed out some information he remembered looking at that pointed to the International Academy of World Medicine and Toxicology. This prompted him to look at their website at which time he dug deeper to see how many members they had. They had 8 in Missouri, 4 in Iowa, and 477 total overall members. The ADA has 120,000 members. We need to think about where all the data comes from.

Mr. Feirman agreed that the group needs more time to examine all the evidence. The burden of proof is to overturn what some of the more leading sources say is an appropriate level of fluoridation. We need evidence to show that it isn't appropriate. The second question is if we go with that, we still need to look at the HFSA, is that appropriate or inappropriate. The same kind of criteria needs to be used when looking at that as well.

Ms. Skala asked the group what they felt the next step should be. Mr. Feirman mentioned to Ms. Skala that he would like to see if the responses from the CDC to the public comments on the proposed rule revision are publicly available. Ms. Skala said she could find that out. Dr. Szewczyk would like to know where the HSFA is coming from and what kind of testing is being done on it prior to the city receiving it. Ms. Skala asked Mike Anderson if he could contact the supplier and find out if they can give the group any detail. Ms. Phillips gave clarification as to what regulatory levels are. She said they are NOT toxicological thresholds; in other words, if you are exposed to water that exceeds a regulatory level, that does not mean you are going to get sick. The regulatory levels are set many magnitudes below the toxic level threshold. Ms. Phillips just asked the group to please keep this in mind as the group moves forward.

The next Board of Health meeting will be merged together with a meeting with the subcommittee on fluoridation.

NEXT MEETING DATE To be determined via a Doodle poll

ADJOURN: There being no additional business; the meeting was adjourned at 7:30 p.m.