

Memorandum



CITY OF DALLAS

DATE May 23, 2014

TO Honorable Members of the Quality of Life & Environment Committee:
Dwayne R. Caraway (Chair), Sandy Greyson (Vice-Chair), Rick Callahan,
Carolyn R. Davis, Lee M. Kleinman, Adam Medrano

SUBJECT **Dallas Water Utilities: Community Water Fluoridation in Dallas**

On Tuesday, May 27, 2014, the Committee will be briefed on the history, purpose, sources and costs/benefits of Community Water Fluoridation in Dallas. The briefing material is attached for your review.

Please let me know if you have any questions or need additional information.

A handwritten signature in blue ink, appearing to read 'Forest E. Turner'.

Forest E. Turner
Assistant City Manager

Cc: The Honorable Mayor and Members of the City Council
A.C. Gonzalez, City Manager
Warren M.S. Ernst, City Attorney
Judge Daniel F. Solis, Administrative Judge
Rosa A. Rios, City Secretary
Craig D. Kinton, City Auditor
Ryan S. Evans, Interim First Assistant City Manager
Jill A. Jordan, P.E., Assistant City Manager
Joey Zapata, Assistant City Manager
Charles M. Cato, Interim Assistant City Manager
Theresa O'Donnell, Interim Assistant City Manager
Jeanne Chipperfield, Chief Financial Officer
Shawn Williams, Interim Public Information Officer
Elsa Cantu, Assistant to the City Manager – Mayor and Council

COMMUNITY WATER FLUORIDATION IN DALLAS

Presented to:
Quality of Life & Environment
Committee
May 27 2014



Purpose

- Provide information on the history, purpose, sources and costs/benefits of adding fluoride to Dallas' drinking water.



Outline

- Background
 - History of Fluoridation in Dallas
- Fluoride Sources, Uses and Public Benefits
- Recent Re-evaluations of Fluoride Addition
- Costs
- Appendix
 - Council Action August 9, 1965 Authorizing Fluoridation
 - January 3, 1966 Ordinance Ordering a Special Election on Fluoridation
 - DMN Article on Election Results
 - Council resolution Accepting Results of Fluoride Vote

BACKGROUND



History of Fluoridation in Dallas

- August 9, 1965 - Resolution authorizing the City Manager to proceed with fluoridation of the city's water supply
- January 3, 1966 - Dallas City Council passed Ordinance #11317, which authorized the City to hold a special election making it *"unlawful...to place..fluoride...in any water sold"*
- January 29, 1966 - City of Dallas held a special election where citizens voted *against* the proposal (27,089 to 10,940)
- August 12, 1966 – Dallas Water Utilities began adding fluoride at all three water treatment plants consistent with the initial resolution.

FLUORIDE SOURCES, USES AND PUBLIC BENEFITS



What is Fluoride?

- Fluoride is a naturally occurring mineral that has been proven to protect against tooth decay throughout a person's lifetime.



How Do We Get Fluoride?

- Primary Sources:
 - Naturally present in raw, untreated water
 - Added to drinking water
 - Toothpaste
 - Dental products, such as mouthwash
 - Dental treatment applications
 - Naturally occurs in some foods



What are the Benefits?

- Reduces number and severity of cavities.
 - Especially beneficial in low income communities with less access to alternate sources and dental care services (CDC.gov 1999).
- Less need for fillings and tooth extractions.
- Reduces pain and suffering associated with tooth decay.
- Can help maintain bone structure.



How Does Fluoride Help Prevent Tooth Decay?

- Bacteria that are present on teeth consume sugars and other carbohydrates and produce acids that remove minerals from the surface of teeth.
- Fluoride helps to re-mineralize tooth surfaces by binding with tooth enamel and producing a much harder mineral.
- The harder mineral is more resistant to tooth decay and can prevent or lessen cavities.



How Does Fluoride Get Into The Water Supply?

- Fluoride is present in geological formations and dissolves into our raw water supplies during rainfall runoff (approximately 0.3 to 0.5 ppm).
- Since 1966, Dallas has added fluoride in the treatment process to meet recommended levels.
- This is known as Community Water Fluoridation.
- Has been implemented in approximately 75% of U.S. public water systems.
 - 210 million people in U.S.
 - 20 million people in Texas.



How is Fluoride Added?

- Fluoride is added in the treatment process as hydrofluorosilicic acid (HFS).
- HFS dissociates in water to release fluoride ion.
- Like all of our treatment chemicals, the HFS is accurately metered and pumped based on the water flow rate through the plants.
- HFS is certified for use in drinking water by:
 - NSF – National Sanitation Foundation
 - AWWA – American Water Works Association
 - ANSI – American National Standards Institute

RECENT RE-EVALUATION OF FLUORIDE ADDITION



USHHS Study on Fluoride

- In 2010, US Health and Human Services (USHHS) and EPA re-evaluated the recommended levels of fluoride in tap water.
 - The availability of mouthwashes, dental products and prescriptions provided additional sources of fluoride that were not available in the 1960s.



How Did USHHS Evaluate It?

- Panel of Scientists convened in Sept 2010 and reviewed:
 - Current trends in dental care
 - Water intake in children
 - Rates of dental fluorosis
 - EPA's latest assessment of cumulative sources of fluoride exposure



USHHS Recommendations

- USHHS Panel recommended lowering the “optimal level” of fluoride in drinking water from the previous level of 0.8 ppm to 0.7 ppm fluoride.
- Meeting this recommended level is “voluntary”.
- The USHHS recommendation is NOT a regulated level; however EPA currently sets a regulated maximum level (MCL) of 4.0 ppm because of the risk of over-exposure.
- The current MCL could change in the future as a result of the USHHS Study.



USHHS Recommendations

- "One of water fluoridation's biggest advantages is that it benefits all residents of a community -- at home, work, school or play."
- "Fluoridation's effectiveness in preventing tooth decay is not limited to children, but extends throughout life, resulting in improved oral health."
 - Dr. Howard Koh, Assistant Secretary for Health, USHHS.
- Centers for Disease Control (CDC) has recognized water fluoridation as one of 10 great public health achievements of the 20th century.
- The American Dental Association "unreservedly endorses the fluoridation of community water supplies as safe, effective and necessary in preventing tooth decay. This support has been the Association's position since policy was first adopted in 1950."
- "I join with previous Surgeons General in acknowledging community water fluoridation as an effective public health strategy, and recommend its continued use and expansion to enhance the oral health of all Americans." Regina M. Benjamin, MD, MBA, VADM, U.S. Public Health Service, Surgeon General



Recent Correspondence With the Texas Department of State Health Services (DSHS)

- Adopted the 0.7 ppm fluoride recommendation, replacing 0.8 as the optimum value, with an acceptable operating range of 0.6 to 1.2 ppm.
- Any change in the future MCL would come from EPA to TCEQ and then to all public Water systems, not from DSHS.

COSTS



Costs of Feeding Fluoride

- Dallas' current contract for hydrofluorosilicic acid is \$636.86 per ton or \$0.318 per pound. For an average feed rate of 15 to 20 lbs/MG, the cost ranges from \$4.74 to \$6.33 per million gallons treated.
- Annually, DWU spends approximately \$600,000 to fluoridate water at all three water purification plants.
- Equates to approximately 25 cents per person per year.

Questions?



65-4383

OFFICIAL ACTION OF THE CITY COUNCIL

CITY OF DALLAS, TEXAS



Meeting of August 9, 1965

Councilman Golman: "I move that the City Manager be instructed to purchase the equipment for, and to proceed with, the adding or adjusting of fluorides to the Dallas Municipal Water Supply in amounts not to exceed one part per million, and that he take such other steps as are necessary to complete the orderly fluoridation of the City's Water Supply."

Motion seconded by Councilman Roberts.

Councilman Moody: "I move a substitute motion. In as much as we are attempting to treat the people and not the water, I feel that I have heard all the facts as given out by both the proponents and the opponents, and I have read material from both sides. I am not sure whether the people want it or not. It is not the question of whether it is good for them. We can't impose upon them everything we think is good for them. My substitute motion is that we submit this question to the people in a referendum at the earliest convenient time."

Mayor Jonsson declared the substitute motion died for the lack of a second.

ROLL CALL ON MOTION

Aye - Cullum, Golman, Hamilton, Hoke, Jonsson, Roberts.	-6
Nay - Cothrum, Moody, Carpenter	-3
Absent -	-0

Mayor declared motion passed.

Harold G. Shank
City Secretary

HGS:dg

cc: City Attorney
Water Department
City Manager

ORDINANCE NO. 11317

An Ordinance of the City Council of the City of Dallas, ordering a special election to be held in said City on the last Saturday in January A. D. 1966, the same being the 29th day of January, 1966, for the purpose of submitting to the resident qualified voters of the City the Ordinance hereinafter fully set out, making it unlawful for the City of Dallas or any of its employees or agents to place any fluoride or fluorine, or any chemical compound containing the same, in water distributed or furnished for domestic use by the Dallas City Waterworks within the City of Dallas; Said election is ordered in conformity with a petition calling for a referendum on the question as provided for in the Charter of the City of Dallas and Statutes of the State of Texas; Designating the Precincts and Places at which said election shall be held; Appointing Officers for said election; Prescribing the form of ballot to be used at said election; Providing for the giving of the required notice of said Election; and Declaring an Emergency.

--- o0o ---

WHEREAS, heretofore on August 9, 1965, the City Council of the City of Dallas authorized the fluoridating of the water supply distributed or furnished for domestic use by the Dallas City Waterworks within the City of Dallas, Texas; and

WHEREAS, subsequent to that time, a petition signed by less than fifteen per cent (15%) but more than five per cent (5%) of the qualified voters of the City of Dallas was filed with the City Secretary requesting a referendum, and after examination of said petition, it was ascertained by the City Secretary of the City of Dallas that said petition bears sufficient signatures of legally qualified voters to require the submission of said proposition that the Ordinance set out in said petition and set out in full below, be submitted to the qualified voters of the City of Dallas; and

WHEREAS, The City Council finds it to the best interest of the citizens of the City of Dallas to call a Special Election, submitting said proposition to the qualified voters in lieu of submitting it at the next General Election, and is of the opinion that said Special Election should be called on the last Saturday in January, A. D. 1966, same being the 29th day of January, A. D. 1966; Now, Therefore,

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That a Special Election be held on the last Saturday in January A. D. 1966, same being the 29th day of January A. D. 1966, between the hours of 7:00 o'clock A. M. and 7:00 o'clock P. M. which day is not less than twenty (20) nor more than thirty (30) days from the date of this ordinance, at which Election the following Ordinance shall be submitted to the qualified elector of the City of Dallas, to-wit:

"Proposed Ordinance

An Ordinance to be captioned 'The Dallas Pure Water Ordinance' making it unlawful for the Waterworks Department and any official, employee or agent thereof, or any agent or employee of the City of Dallas to place or cause to be placed fluoride or fluorine, or any chemical compound containing same, or other specified chemicals, gas, or substances; in any water sold, distributed or furnished for domestic use by the waterworks department within the City of Dallas; Providing for the filing of monthly reports by the Superintendent of the Waterworks Department; Providing a penalty and fine for violations; Providing for severability; Providing for repeal of ordinances in conflict and Providing for notices and providing effective date.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF DALLAS; that:

(A) The Caption of this ordinance shall be 'The Dallas Pure Water Ordinance' and it shall be so captioned on the official ballot and all publications thereof.

(B) It shall be unlawful for the Waterworks Department of the City of Dallas, any official, employee or agent thereof, and all other agents, servants and employees of the City of Dallas to place or caused to be placed any fluoride, fluorine or any chemical compound or complex containing or including fluoride or fluorine in any water sold, treated,

distributed or furnished by such Waterworks Department for domestic use within the City of Dallas.

(C) It shall be unlawful for the Waterworks Department of the City of Dallas, any official, employee or agent thereof, and all other agents, servants and employees of the City of Dallas to place or caused to be placed any chemical or chemical compound, gas or other substance whatever in any water sold, distributed or furnished for domestic use by such Waterworks Department within the City of Dallas, save and except only those chemicals, chemical compounds, gas or other substances which are necessary or desirable to reduce or eliminate the bacteriological content of such water and render such water safe and potable for human consumption, and to remove and eliminate sand, trash, or other foreign matter, and to eliminate unpleasant taste or odors.

(D) The Superintendent of the Waterworks Department of the City of Dallas shall file, or cause to be filed monthly with the City Council of the City of Dallas, a written report under oath showing what chemicals, gas or other substances have been added to, or used in, the treatment of water treated, sold, distributed or furnished for domestic use within the City of Dallas for a preceding period of one month, with a statement as to the quantities of each which were used and the part or proportion which such quantities constitute in relation to the amount of water treated.

(E) The violation by any person of the provisions of Sections (B) or (C) above shall constitute a misdemeanor and be punishable by a fine not exceeding \$50.00, and each day such offense is committed shall constitute a separate offense.

(F) All ordinances and parts of ordinances, orders and Resolutions in conflict with the provisions hereof are repealed and set aside. The invalidity of any part of any one or more provisions of this ordinance shall in no wise impair the remaining valid parts and provisions.

(G) Immediately after adoption of this Ordinance all notices required by the Charter of the City of Dallas shall be given, and this Ordinance shall become effective as in said Charter provided."

SECTION 2. That the boundaries of the Election Precincts in which the Election shall be held are defined by Ordinance No. 9454 passed and adopted by the City Council of the City of Dallas on the 15th day of October A. D. 1962, and to such Ordinance reference is here made for more complete particulars. Location of the Voting Boxes in the respective Voting Precincts, as well as the names of the Presiding Officers to conduct said Special Election are as follows, to-wit:

Dallas Voters Back Fluoride By 2½-1 Edge

38,029 Brave Bitter Cold, Cast Ballots

By GENE ORMSBY

A surprising 38,029 persons braved bitter cold and voted 2½ to 1 in favor of fluoridation Saturday.

The vote was 27,089 against to 10,940 for an ordinance that would have outlawed adding fluoride to the city's water supply.

The turnout exceeded predictions that some 35,000 residents would vote if the weather was good. That still would have been one of the largest turnouts for a single-issue referendum in Dallas' history.

Pro-fluoridation spokesmen lauded the outcome as a strong public endorsement of the City Council's original decision to fluoridate the city's water supply.

They noted that Dallas is the first city of more than 500,000 to win a fluoridation referendum the first time.

DALLAS MAYOR ERIK JONSSON said he had two reactions:

"First, this is a clear-cut enough decision that hopefully we can proceed with this and get it into being in the shortest possible time, probably sometime between three to five months."

He said getting the city water fluoridated was "mostly a matter of ordering

Fluoridated water expected
by May, Page 11A.

materials and equipment and getting it in here."

Secondly, he added, "It is simply marvelous so many people got out to the polls under such adverse conditions. I didn't even hope for so many. The people of Dallas have demonstrated that when something so important is at stake, they will get out and do what they should and must. It would be difficult to duplicate this showing in any city."

"THIS CONFIRMS the fact the council basically made the decision (for fluoridation) which the public wanted them to do and expected them to do. I'm just tired and happy."

Local medical and dental societies, joined by city officials, labor unions, business and civic leaders, supported the Dal-

las Citizens Committee for Fluoridation.

DeWayne Dallas, spokesman for the anti-fluoridation group, the Greater Dallas Association for Pure Water, said he did not plan to challenge the election's outcome.

"I think the people had the right to vote, and they voted," he said. He said he planned no new petitions.

He indicated surprise at the size of the margin of defeat.

Voting got off to a particularly slow start Saturday morning, when temperatures were just starting to climb up from a low of 11 degrees.

But by midafternoon when the thermometer reached 20 degrees the turnout picked up noticeably.

The Dallas water department was given the go-ahead on fluoridation last August, but the City Council was forced to set a referendum after a successful petition campaign opposing fluoridation.

Voters balloted for the proposed ordinance if they were against fluoridation, or against the ordinance if they favored fluoridation.

The ordinance was written so that it might also prevent the city from placing any chemical in the water to soften it or prevent pipes and heaters from corroding.

January 31, 1966

TO THE HONORABLE MAYOR AND CITY COUNCIL:

WE, the undersigned, your Committee of the City Council, heretofore appointed on January 24, 1966, to canvass the returns of the Special Election held in the City of Dallas on the 29th day of January A.D. 1966, in accordance with Ordinance No. 11317 enacted by the City Council on the 3rd day of January, A.D. 1966, calling said Special Election for the purpose of determining whether or not the Ordinance making in unlawful for the City of Dallas or any of its employees or agents to place any fluoride or fluorine, or any chemical compound containing the same, in water distributed or furnished for domestic use by the Dallas City Waterworks within the City of Dallas be enacted by the City Council of the City of Dallas, hereby report that in accordance with said Ordinance enacted on January 3, 1966, the following proposition was submitted to the qualified voters of the City of Dallas, to-wit:

PROPOSITION

"FOR: THE ORDINANCE MAKING IT UNLAWFUL FOR THE CITY OF DALLAS OR ANY OF ITS EMPLOYEES OR AGENTS TO PLACE ANY FLUORIDE OR FLUORINE, OR ANY CHEMICAL COMPOUND CONTAINING THE SAME, IN WATER DISTRIBUTED OR FURNISHED FOR DOMESTIC USE BY THE DALLAS CITY WATERWORKS WITHIN THE CITY OF DALLAS.

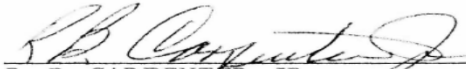
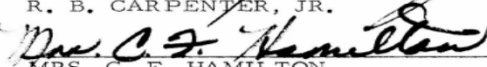
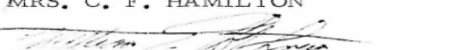
AGAINST: THE ORDINANCE MAKING IT UNLAWFUL FOR THE CITY OF DALLAS OR ANY OF ITS EMPLOYEES OR AGENTS TO PLACE ANY FLUORIDE OR FLUORINE, OR ANY CHEMICAL COMPOUND CONTAINING THE SAME, IN WATER DISTRIBUTED OR FURNISHED FOR DOMESTIC USE BY THE DALLAS CITY WATERWORKS WITHIN THE CITY OF DALLAS.

We beg to state that we have carefully canvassed the returns of said Special Election and find that the following number of votes were cast respectively "for" and "against" said proposition:

"FOR:"	<u>10,940</u>
"AGAINST"	<u>27,089</u>

That the votes by Precincts "FOR" and "AGAINST" said Proposition are tabulated as follows:

From the foregoing tabulation it appears that said Proposition did not receive the favorable vote of the majority of the votes cast by the qualified voters of the City of Dallas participating in said Special Election, and therefore failed to carry.

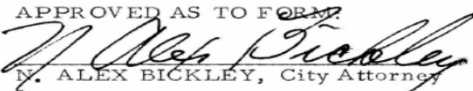

R. B. CARPENTER, JR.

MRS. C. F. HAMILTON

WILLIAM E. COTHRUM

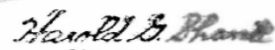
WHEREAS, the Canvassing Committee of the City Council has filed its Report canvassing the Special Election held under authority of Ordinance No. 11317, and the City Council in Regular Session has duly examined said Report of the Canvassing Committee and finds that it is in all things correct and that said Special Election was regularly held as provided by law; Now, Therefore,

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF DALLAS:

SECTION 1. That the proposition set forth in Ordinance No. 11317, passed by the City Council on the 3rd day of January A. D. 1966, was duly submitted to the qualified voters of the City of Dallas on the 29th day of January A. D. 1966 at a Special Election called by said Ordinance No. 11317 for the purpose of determining whether or not an ordinance should be enacted by the City Council of the City of Dallas making it unlawful for the City of Dallas or any of its employees or agents to place any fluoride or fluorine, or any chemical compound containing the same, in water distributed or furnished for domestic use by the Dallas City Waterworks within the City of Dallas, and that said proposition failed to receive a majority of the votes cast at said Election, and that said proposition is, therefore, declared void.

SECTION 2. That this resolution shall take effect from and after its passage as in the Charter in such cases is made and provided.

APPROVED AS TO FORM

N. ALEX BICKLEY, City Attorney

P.C.
Hoke Roberts

Harold B. Shant
City Secretary

APPROVED BY
CITY COUNCIL

JAN 31 1966