

Memorandum



CITY OF DALLAS

DATE September 9, 2022

TO Honorable Mayor and Members of the City Council

SUBJECT **September 14, 2022 Council Agenda Item No. 29 (22-1921)**

On the September 14, 2022 City Council Agenda, Item No. 29 (22-1921) requests authorization to enter into a two-year agreement for the purchase of various chemicals used in the water and wastewater treatment process, including hydrofluorosilicic acid (commonly referred to as fluoride) in the amount of \$1,325,000 to Univar Solutions USA, Inc., the lowest bidder of three.

Two open microphone speakers at the September 7, 2022 Council Briefing spoke in opposition to community water fluoridation, claiming such practice constitutes medicating the public without their consent. They further objected to the use of hydrofluorosilicic acid as a fluoride source, stating that it is an industrial waste and more recently, reported fluoride in drinking water presents neurodevelopmental risks to children.

Dallas has applied fluoride to drinking water since 1966, following authorization by City Council Resolution #65-4383. Naturally occurring fluoride in Dallas's raw water sources range from 0.2 to 0.3 parts per million (ppm). To effectively prevent and control dental cases, the U.S. Centers for Disease Control and Prevention, and the American Dental Association, recommend an optimal level of 0.7 ppm. To achieve this goal, fluoride is applied at all three (3) Dallas water treatment plants.

Dallas utilizes hydrofluorosilicic acid that is certified for use in drinking water by the American Water Works Association (AWWA), the American National Standards Institute (ANSI), and the National Sanitation Foundation (NSF). Below is a summary of the past year's budget projections, year-to-date expenditures, and projected expenditures for next fiscal year.

Fiscal Year	Amount
FY22 Budget	\$352,946.14
FY22 Actuals (to-date)	\$342,610.22
FY22 Projections (year-end)	\$408,610.22
FY23 Budget	\$480,237.74

For your review and consideration, attached is an FAQ on the practice of community water fluoridation in the United States, the application of fluoride in Dallas, fluoride's role

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in oral health equity, and the utilization of best available science for fluoride regulations and recommendations.

If you have any questions, please contact Terry Lowery, Director of Dallas Water Utilities.



Kimberly Bizzor Tolbert
Deputy City Manager

c: T.C. Broadnax, City Manager
Chris Caso, City Attorney
Mark Swann, City Auditor
Billerae Johnson, City Secretary
Preston Robinson, Administrative Judge
Jon Fortune, Deputy City Manager

Majed A. Al-Ghafry, Assistant City Manager
M. Elizabeth (Liz) Cedillo-Pereira, Assistant City Manager
Robert Perez, Assistant City Manager
Carl Simpson, Assistant City Manager
Jack Ireland, Chief Financial Officer
Genesis D. Gavino, Chief of Staff to the City Manager
Directors and Assistant Directors

An Established and Growing Practice in the United States

- 1950 - U.S. Department of Health and Human Services (HSS) endorses water fluoridation¹
- 1962 - HSS establishes Drinking Water Standards related to community fluoridation
- 2015 - HSS updates Drinking Water Standards related to community fluoridation²
- 2018 - 207 million people in the U.S. receive a fluoridated water supply³
- 2018 - 44 of the nation's largest 50 cities provide a fluoridated supply of water⁴

Healthy People 2030 is an HSS initiative to set data-driven national objectives to improve health and well-being over the next decade. One of the identified goals is to improve oral health by increasing access to oral health care, including preventative services. Specifically, to increase the proportion of people



whose water systems have the recommended amount of fluoride. In 2018, 73% of persons served by community water systems received fluoridated water. The target is to increase this to 77.1% by 2030.⁵

Community Fluoridation in Dallas, Texas

The Dallas Water Utilities (DWU) Department, in accordance with City Council Resolution #65-4382 dated August 9, 1965, has added fluoride to the drinking water since 1966 to improve the health of Texans by preventing tooth decay through community fluoridation.⁶ Fluoride

¹Centers for Disease Control and Prevention. Fluoridation. Timeline for Community Water Fluoridation. <https://www.cdc.gov/fluoridation/basics/timeline.html>. Accessed August 31, 2022.

² U.S. Public Health Service Recommendation for Fluoride Concentration in Drinking Water for the Prevention of Dental Caries, U.S. Department of Health and Human Services Federal Panel on Community Water Fluoridation. 2015 Jul Aug; 130 (4): 318-331. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4547570/?report=classic> Accessed August 31, 2022

³ Centers for Disease Control and Prevention. Community Water Fluoridation. Fluoridation statistics. 2018. Available at: <https://www.cdc.gov/fluoridation/statistics/2014stats.htm>. Accessed August 31, 2022

⁴ American Dental Association. Fluoridation Facts. 2018. Available at: https://www.ada.org/~media/ADA/Files/Fluoridation_Facts.pdf?la=en. Accessed August 31, 2022.

⁵ U.S. Department of Health and Human Services. Office of Disease Prevention and Health Promotion. HealthyPeople.gov. Healthy People 2030. Objectives and Data. Oral conditions. Available at: <https://health.gov/healthypeople/objectives-and-data/browse-objectives/health-policy/increase-proportion-people-whose-water-systems-have-recommended-amount-fluoride-oh-11>. Accessed August 31, 2022

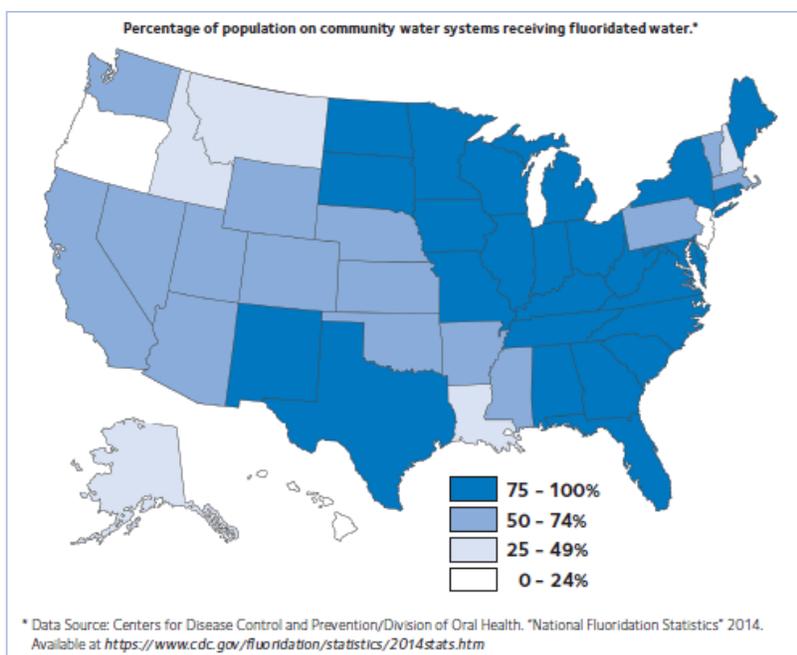
⁶ Dallas Texas, City Council Resolution, #65-4382

appears naturally in Dallas's raw water supplies ranging from 0.2 to 0.3 milligrams per liter (mg/L). Dallas adds fluoride at all three (3) water treatment plants and adjusts levels to maintain continuous compliance with the EPA drinking water regulations for fluoride as well as adhering to the HHS national water fluoridation recommendation.

DWU uses hydrofluorosilicic acid as a fluoride source and certified for use in drinking water by the American Water Works Association (AWWA), American National Standards Institute (ANSI) and National Sanitation Foundation (NSF). When used for drinking water use, fluoride cannot be manufactured from any recycled source. In addition, the AWWA, ANSI and NSF standards apply to the industrial grade fluoride chemicals to ensure they are safe.

Advancing Equity

Oral health disparities are profound within the U.S. population. Advancing equity to eliminate these disparities is central to the overall goal of improving population health. Community water fluoridation is considered one of the best population-based interventions that is safe, reaches a large portion of the population and results in cost-saving. Studies continue to show that community water



fluoridation prevents cavities and saves money, both for families and the health care system. In 2016, an economic analysis reported water fluoridation exceeded estimated program costs, with an average annual savings of \$20 per dollar invested.⁷ Consistent with prior analyses, this study supports the finding that community water fluoridation remains one of the most cost-effective methods of delivering fluoride to all community members regardless of age, educational attainment, or income level.

⁷O'Connell JM, Rockwell J, Ouellet J, Tomar SL, Maas W. Costs and Savings Associated with Community Water Fluoridation in the United States. *Health Affairs*. 2016. 1;35(12):2224-2232. Available at: <https://pubmed.ncbi.nlm.nih.gov/27920310/>. Accessed August 31, 2022

Based on Best Available Science

Policies regarding community water fluoridation are based on the best available scientific knowledge. This body of knowledge results from the efforts of nationally recognized scientists who have conducted research using the scientific method, have drawn appropriate balanced conclusions based on their research findings and published their results in peer-reviewed, professional journals that are widely held or circulated. Studies showing the safety and effectiveness of water fluoridation have been confirmed by independent scientific studies conducted by a number of nationally and internationally recognized scientific investigators.

While opponents of fluoridation have questioned its safety and effectiveness, none of their charges has ever been substantiated by scientific evidence. With the advent of the Information Age, a new type of “pseudo-scientific literature” has developed. The public often sees scientific and technical information quoted in the press, printed in a letter to the editor or distributed via an internet web page. Often the public accepts such information as true simply because it is in print. Yet the information is not always based on research conducted according to the scientific method and the conclusions drawn from research are not always scientifically justifiable. In the case of water fluoridation, an abundance of misinformation has been circulated.

Regulations vs. Recommendations

U.S. EPA drinking water standards differs from the HHS recommended optimal fluoridation level because the two benchmarks have different purposes and are set under different authorities. The EPA's enforceable standard for the highest level of fluoride is set to protect against risks from exposure to too much fluoride. The HHS recommended optimal level is set to promote public health benefits of fluoride for preventing tooth decay while minimizing the chance for dental fluorosis.

- The EPA drinking water standard for fluoride, is a maximum of 4.0 milligrams per liter (mg/L) with a secondary standard for fluoride of 2.0 mg/L.⁸
- HHS recommends an optimal fluoride concentration of 0.7 mg/L for community water systems that add fluoride.⁹

⁸ Questions and Answers on Fluoride, US Environmental Protection Agency, https://www.epa.gov/sites/production/files/2014-12/documents/2011_fluoride_questionsanswers.pdf. Accessed August 31, 2022

⁹ U.S. Public Health Service Recommendation for Fluoride Concentration in Drinking Water for the Prevention of Dental Caries, U.S. Department of Health and Humans Services Federal Panel on Community Water Fluoridation. 2015 Jul Aug; 130 (4): 318-331. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4547570/?report=classic> Accessed August 31, 2022