

# ARAB WATER WORKS

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November 10, 2015

Mayor Bob Joslin and City Council of the City of Arab, Alabama  
740 North Main Street  
Arab, AL 35016

RE: AWW Decision to Cease Fluoridation of the Community Water Supply

Dear Mayor Joslin and City Council:

As previously committed, please accept this letter as a brief summary of the reasoning of The Water Works Board for the City of Arab ("AWW") for ceasing to add hydrofluorosilicic acid, or fluoride, to the community water supply effective August 1, 2015.

AWW began adding fluoride to the water supply in 1972. During the last two to three years, AWW has studied from time to time the debate over whether the dental benefits of adding fluoride to the water supply for the prevention of dental caries, or cavities, is outweighed by the possible negative health impact on the human body, particularly from long term ingestion of fluoride. In April 2015, the U.S. Department of Health and Human Services (HHS) proposed a recommendation to decrease the amount of fluoride from the then current range of between 0.7 milligrams per liter and 1.2 milligrams per liter to a set 0.7 milligrams per liter of water. This updated recommendation is based on recent U.S. Environmental Protection Agency (EPA) and HHS scientific assessments to balance the benefits of preventing tooth decay while limiting any unwanted health effects. This assessment found that two out of five adolescents have dental fluorosis, a condition in which tooth enamel begins to decay, causing streaking, spottiness and some pitting. Additionally, HHS also stated that the public has access to more sources of fluoride than they did when water fluoridation was first introduced. Examples being dental products (toothpaste and fluoride rinse), prescription fluoride supplements, and fluoride applied by dental professionals. Following the proposed recommendation of HHS to reduce the level of fluoride, AWW began to investigate this recommendation and whether there were any available alternatives; one of which was to cease adding fluoride to the water supply.

In terms of acute toxicity, which would be the dose that can cause immediate toxic consequences, fluoride is an acute toxin with a rating higher than that of lead, but slightly less toxic than arsenic. According to "Clinical Toxicology of Commercial Products," 5th Edition, 1984, lead is given a toxicity rating of 3 to 4, and Fluoride is rated at 4 (3 = moderately toxic, 4 = very toxic). On December 7, 1992, the new EPA Maximum Contaminant Level (MCL) for lead was set at 0.015 ppm, with a goal of 0.0 ppm. The MCL for fluoride is currently set for 4.0 ppm – over 250 times the permissible level of lead. However, concerns about water fluoridation are not about fluoride's acute toxicity, but its chronic toxicity, which is the dose of fluoride that if regularly consumed over an extended period of time can cause adverse effects. People consume different amounts of water,

and with fluoride also being in soft drinks, sports drinks, and processed food it is impossible to control the dose.

The Centers for Disease Control and Prevention (CDC) has determined the benefit from fluoride is topical, not systemic:

“Fluoride’s caries-preventive properties initially were attributed to changes in enamel during tooth development because of the association between fluoride and cosmetic changes in enamel and a belief that fluoride incorporated into enamel during tooth development would result in a more acid-resistant mineral. However, 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.” (Centers for Disease Control and Prevention, *“Achievements in Public Health, 1900—1999: fluoridation of drinking water to prevent dental caries,”* Morbidity and Mortality Weekly Report, vol. 48, no. 41, 1999)

In 2006, the National Research Council (NRC) issued a comprehensive 507 page report entitled *“Fluoride in Drinking Water: A Scientific Review of EPA’s Standards”* reviewing the issue of fluoridation of the community water supply. The Chairman for the panel of twelve (12) scientists selected to prepare the NRC report, Dr. John Doull, has stated that:

*“What the committee found is that we’ve gone with the status quo regarding fluoride for many years—for too long, really—and now we need to take a fresh look. In the scientific community, people tend to think this is settled. I mean, when the U.S. surgeon general comes out and says this is one of the 10 greatest achievements of the 20th century, that’s a hard hurdle to get over. But when we looked at the studies that have been done, we found that many of these questions are unsettled and we have much less information than we should, considering how long this [fluoridation] has been going on. I think that’s why fluoridation is still being challenged so many years after it began. In the face of ignorance, controversy is rampant.”* (*“Second Thoughts About Fluoride – New research indicates that a cavity-fighting treatment could be risky if overused”*, Scientific American, January 2008, Page 80-81)

A copy of the NRC’s report can be downloaded at no charge at <http://www.nap.edu/catalog/11571.html>.

AWW did not set out to and has not determined which side of the debate is correct regarding the dental health benefits versus the possible negative health implications arising from fluoridation of the community water supply. AWW continues to leave that debate to the researchers and scientists who continue to research this issue. However, it is clear and cannot be denied that this scientific debate is real and not based in “pseudoscience.” This continuing scientific debate is documented and summarized very well in the enclosed “peer reviewed” article entitled *“Water Fluoridation:*

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*A Critical Review of the Physiological Effects of Ingested Fluoride as a Public Health Intervention*”, The Scientific World Journal, Volume 2014, Article ID 293019. This review article published in February 2014 describes in more detail the ongoing and unsettled debate of proven and possible negative health effects of adding fluoride to the community water supply and the need for additional research of the physiological effects of ingested fluoride.

As we've stated previously, there is no state or federal regulatory requirement to add fluoride to the water supply and whether to add fluoride to the water supply is strictly voluntary. According to the CDC, of the 538 public water systems in Alabama 271, or roughly half, of the public water systems in Alabama do not add fluoride to their water supply. AWW has confirmed, that since 2005, the following eleven (11) cities in Alabama have voluntarily ceased the addition of fluoride in the community water supply due, at least in part, to the conflicting studies regarding the possible negative health impacts of water fluoridation: West Morgan – East Lawrence Water Works; Oneonta Utilities Board; Oxford Water Works; Red Bay Water & Gas; Winfield Water Works; Pell City Water Works; Millbrook Utilities; Taylor Water System; Greenpond Water Board; Piedmont Water Works; and Leeds Water Works Board.

AWW has the responsibility to provide safe, reliable potable water to approximately 11,900 customers, including two wholesale customers (Union Grove Water Authority which serves an additional approximately 950 customers and Joppa-Hulaco-Ryan Water Authority which serves an additional approximately 1,550 customers) in the counties of Marshall, Morgan, Blount and Cullman. In consideration of the ongoing legitimate scientific debate regarding the safety of fluoridation of the community water supply, AWW determined, as a matter of operational prudence and responsibility to all consumers of potable water provided by AWW, including AWW customers, their families, and the public at large, that the better approach for addressing fluoridation of the community water supply was to cease adding fluoride until this debate is better resolved among the scientific communities. However, as previously stated, AWW remains open to considering any additional studies or views regarding this debate as may be brought to our attention.

Please let us know if you would like for AWW to provide you with copies of the studies and sources cited above.

Sincerely,



Rodney Hyatt  
Board Chairman

The Water Works Board for the City of Arab

One (1) Enclosure