

Alderman Tony Zielinski  
City of Milwaukee Common Council  
City Hall  
200 E. Wells Street, #205  
Milwaukee, WI 53202

**Re: Milwaukee, Lead Pipes and Flushing**

7/11/2017

To whom it may concern,

I have researched the subject of lead in drinking water since 1990. My work on this subject was externally recognized when Time Magazine named me “The Plumbing Professor” in 2004 and listed me amongst the 4 most important “Innovators” solving water problems in the world. I was also awarded a Presidential Faculty Fellowship in 1996 and a MacArthur Fellowship in 2007. My paper on lead poisoning of children in Washington D.C., due to elevated lead in drinking water, was judged the outstanding science paper in *Environmental Science and Technology* in 2010. I was also the 9th recipient (in a quarter century) of the IEEE Barus Award for “courageously defending the public interest at great personal risk,” and in 2016 I was named amongst TIME Magazine’s 100 Most Influential people in the World, the World’s 50 Greatest Leaders by Fortune Magazine, Politico Magazine’s Top 50 visionaries who have transformed American politics, and Foreign Policy Magazine’s 100 World’s Greatest Thinkers. I was also short-listed for Time Person(s) of the Year for 2016 (along with others who exposed the Flint water crisis) and also received the David P. Rall Award for Public Health Advocacy from the American Public Health Association amongst other recognitions.

I am very familiar with the history of lead pipes, lead in water, and childhood lead poisoning in Milwaukee—in fact, I was invited to give a keynote address on this subject last year at Marquette, where I appeared in a forum with mayor (Tom Barrett) and the head of the Department of Natural Resources Cathy Stepp. We had a very productive and collegial panel discussion that concluded [“Wisconsin must do more to protect residents from lead in water.”](#) This informed panel also reached a conclusion that outdated health advice, [including the idea that flushing water for a few minutes to reduce lead exposure in homes with lead pipe, was no longer adequately protective. It was unanimous that additional protection should be offered residents, by encouraging use of low cost lead filters to protect at risk groups \(i.e., women of child bearing age, developing fetus and young children\) from lead, until such time as the lead pipes could be fully replaced.](#)

It is unfortunate that in the aftermath of this very positive and common sense public exchange, I received contacts from concerned citizens in Milwaukee about potential backsliding and resistance to evolving understanding of the lead in water public health threat. I therefore wish to go on record with the Milwaukee Common Council on the matter of lead in water. Please include my letter within the Water Transparency file #168367-1 and share this letter with members of the Public Safety and Health Committee as well as the media.

Specifically, I have reviewed the May 8, 2017 letter of Bevan Baker, Commissioner of Health. I am very disappointed at this misguided attempt to downplay the health threat from lead in water and shirk public responsibility for addressing it. Your health department receives funding and training to monitor, uncover and remediate serious health problems arising from lead paint and dust in homes. While this is a valuable public health goal that I strongly support, like too many other health departments in the United States, they have the unfortunate attitude that discussing and rationally addressing lead in water problems poses a direct threat to their goal of addressing lead paint health risks, instead of considering it as another source of harmful lead exposure that must be minimized to the extent possible. ***The fact that lead pipes directly contaminate a product intended for human consumption, and also represents the only government***

*owned and controlled lead source*, creates a serious conflict of interest, that has produced more than 150 years of government deceit as has been documented in [\*The Great Lead Water Pipe Disaster\* by Werner Troesken](#). Your local health department seems to have learned nothing from recent peer reviewed research, the Flint MI water disaster and its aftermath, or its own long, sad history covering up water lead problems to the detriment of Milwaukee residents.

On the basis of this unfortunate letter, no one should rely on the Milwaukee Health Department to honestly inform the local medical community of evidence based research about water lead dangers to at risk individuals (women of child bearing age, parents of infants and children younger than six) in homes with lead pipe. The laudatory statistics they cite to downplay water as a lead source, have been designed to monitor the children at greatest risk for lead paint and dust exposure—they are not designed to track the blood lead of pregnant women or infants using formula who are known to obtain most of their lead exposure from water. In fact, my prior research has demonstrated that health department have little or no blood lead data for these groups most at risk for water lead exposures (see Edwards et al., 2009).

The Common Council should also not accept their outdated opinion, that “flushing” is an adequate response to reduce lead exposure in homes with lead pipe. My research and that of the U.S. EPA, has demonstrated that 1-2 minutes flushing before collecting water used for drinking or cooking, ***can actually worsen lead exposure compared to first draw (see Edwards et al., 2004). It is one thing to tell people that flushing a minimum of three minutes will reduce lead exposure on average, but it is quite another to have people actually do it, especially given that 1-2 minutes flushing will actually worsen lead exposure in many homes.*** I would ask everyone on the Common Council who is considering this advice seriously, to actually take a stop watch, go to their faucet, and run the water for a minimum of 3 minutes and think carefully about how the advice will play out in practice. During that 3+ minutes, ask yourself if you were a busy parent with other stress in your life and young children to care for, “Would I actually follow that advice every time I collect water for cooking or drinking?” Or, would you sometimes collect the water after one or two minutes, and instead of reducing water lead exposure, actually increase it?

Your health department is now on record opposing honest and common sense warnings to consumers about a significant health risk, and they are recommending impractical and outdated guidance that is likely to do as much harm as good. I support the recommendations of the Hunger Task Force, to accurately inform the public about the risks associated with lead pipe hazards, and to educate them about proven self-help steps that allow consumers to protect themselves from government owned/controlled lead sources that directly contaminates their drinking water.

Please contact me at 540 320-8740 if you should have questions about this letter.

Regards,

A handwritten signature in black ink that reads "Marc Edwards". The signature is written in a cursive, flowing style.

Marc Edwards

Cc: Council President Ashanti Hamilton  
Alderman Robert Donovan