

Testimony of Dr. Mona Hanna-Attisha

House Democratic Steering and Policy Committee

“The Flint Water Crisis: Lessons for Protecting America's Children”

February 10, 2016

Good afternoon. I would like begin by thanking Leader Nancy Pelosi, Co-chairs Congresswoman Rosa DeLauro and Congresswoman Donna Edwards, and of course Congressman Dan Kildee, for the opportunity to speak to the Democratic Steering and Policy Committee regarding the Flint Water Crisis. This is a very important topic and I am pleased you have chosen to devote this hearing to discuss the situation and the urgent needs of the Flint community.

Background

On April 26, 2014, the city of Flint changed its water source from Detroit-supplied Lake Huron to the Flint River water as a temporary measure until a new pipeline to Lake Huron was completed. Water from the Detroit Water and Sewage Department had very low corrosive potential for lead, while the Flint River water had a higher corrosive potential. This is due to a number of factors, including higher levels of chloride, a high chloride-to-sulfate mass ratio, and most importantly, a lack treatment with corrosion inhibitor. Additionally, due to population loss and high water rates, water usage in Flint decreased significantly. The change in the water corrosivity - coupled with the decreased water usage and aging lead-based infrastructure - resulted in a perfect storm for lead to leach into the water.

Lead is a potent, irreversible neurotoxin with lifelong, multigenerational impacts. Blood lead levels (BLL) 5 ug/dL and greater are considered elevated blood lead levels (EBLL). Increasing evidence shows that there is no safe blood lead level and that lead disproportionately impacts low income children. Lead has been linked to decreased IQ and an increased likelihood of ADHD, delinquent behaviors, total arrests, and increased rates of arrests involving violent offenses. There are other adverse effects on health attributable to lead exposure, including but not limited to hematological, cardiovascular, immunological, and endocrine. To examine the impact of the water switch on young children's lead levels, we examined the blood lead levels of children less than 5 years old living in the city of Flint before and after the change in water source. We looked to see what proportion of children had elevated blood lead levels in each time period. We limited the time period to January to September 15, 2013 for the pre-period and January to September 15, 2015 for the post-period. We found that 2.4% of children had elevated blood lead levels in the pre-period compared to 4.9% in the post-period. This doubling was a statistically significant change. When we looked at those areas with the highest reported water lead levels, we found that the rates of elevated blood lead levels in young children more than tripled. (For example, in ward 5 of Flint, there was an increase of 4.9% to 15.7%.) There was no statistically significant change in blood lead levels outside of Flint water limits.

A link to the research publication is provided for reference:

<http://ajph.aphapublications.org/doi/pdf/10.2105/AJPH.2015.303003>

Our data greatly underestimates the number of children affected by lead in the water. We routinely measure blood lead levels for children around age 1 and 2 years. This is because these ages represent when hand-to-mouth behaviors are strongest and children may be exposed to lead through old paint and dust, the “traditional” sources for lead exposure. Lead in water disproportionately impacts developmentally-vulnerable formula-fed infants and pregnant mothers who were not screened for lead in our community.

We know that for about 25% of infants drinking formula made from tap water at 10 ppb, blood lead would rise above the CDC level of concern of 5 ug/dL. Also, blood lead levels may have peaked before being measured as the half-life of lead in the blood is only 20-30 days.

Our data is just a snapshot of a small group of children at one point in time. Due to the extended time period of potential exposure, the likelihood that most living in the area ingested the water directly or cooked with it, and the short time period in which we are able to detect blood lead levels in children, it is highly likely that there are a large number of children whose elevated blood lead levels have gone undetected. All of this has resulted in our need to treat this crisis as a population-wide exposure.

We now have a known population-wide exposure and a traumatized population due to governmental betrayal and the unknown consequences of lead exposure. There is an existential fear among the Flint community, and others, that their children have been poisoned and will have life-long irreversible effects.

Moving Forward

We are now focused on moving forward. Although state of emergency has been declared, it is sadly two years too late. Those of us in the medical and public health fields have an obligation and professional responsibility to help our community rebuild and create a sanctuary where the community's children can recover and flourish. We are now attempting to build a model public health program, the Pediatric Public Health Initiative, to help the children of Flint thrive.

The Pediatric Public Health Initiative is a joint venture between Michigan State University, a land grant university, and Hurley Medical Center, a public academic children's hospital located in the city of Flint. The Pediatric Public Health Initiative has three main aims: we want to assess what has happened; we want to monitor the effects from the water lead exposure, and most importantly and where our greatest energy is focused, we want to intervene so that these children can have the brightest future possible. It is through evidence-based interventions that we believe we can mitigate the effects of the lead exposure and make a difference in a community and in a generation of children. And finally, we hope to use our experiences from this crisis to share best practices with the nation.

The evidence-based interventions we have proposed span the domains of education, nutrition, and medical/health. These are proven interventions to optimize children's health, especially for children with toxic stress. This is a population that faces multiple stressors on a daily basis, given the lower socioeconomic status of over 40% of Flint's population. We are considering the lead exposure essentially one more toxic stress that these children were exposed to.

Within education, these high priority, evidence-based interventions includes universal early education, school nursing, and early intervention (Early On in Michigan). Early education can help to mitigate toxic stress, buffer potential cognitive impact of lead exposure, and promote school readiness. These strategies have a proven return on investment. For school nursing, it is recommended that the minimum student to school nurse ratio should be 1 nurse to 750 well students. Tragically, Flint schools have one general nurse for every 6500 students (1:6500). Unfortunately this is a state-wide problem - Michigan ranks last in the nation in nurse to student ratio. Finally, early interventions (Early On), which provide early developmental services for children with delays, is hamstrung by chronic underfunding. This has created limited capacity and long waitlists for an important program to tackle these problems head on.

Within nutrition, there are both short term and long term needs. We need to address the issues of food insecurity, availability, and access. To put it bluntly, Flint is a food desert. We need to increase capacity of food bank resources to address food insecurity, which could be accomplished through a voucher system. If established, we could create a model program to allow physicians to provide vouchers to families with children when a food insecurity is assessed and recognized as a clear barrier for that family. We should also consider establishing innovative ways to subsidize neighborhood stores. Finally, we should implement

mobile food markets to reach all city wards on a recurring basis with use of centers especially in targeted, at-risk areas.

Within medical/health, we want to promote caregiver capacity. Genesee County runs several evidence-based state, federal, and foundation-funded home visiting programs. All of them have the potential to increase their capacity to serve more families. We also would like to see relaxed eligibility criteria so more mothers and infants can participate in these programs. And finally, we want to increase pediatric healthcare access to a patient centered medical home and encourage initiatives between Medicaid HMOs and Flint/Genesee County medical homes.

These are important interventions to create the wrap around services needed for the lead-exposed people of Flint, both in the short and the long term. I firmly believe that it is imperative for public policy makers at all levels of government, regardless of party or affiliation, to act quickly to address the urgent needs of the Flint community. We need congressional lawmakers to respond to this man-made disaster with the same impetus and robust response as they would for any other kind of disaster. It is my hope that our discussion today, and this committee's interest in Flint, will help spur action by Congress.

Thank you again for the opportunity to address the committee today and I look forward to your questions.

Testimony of Dr. Yanna Lambrinidou

House Democratic Steering and Policy Committee

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February 10, 2016

Congresswoman Pelosi, Congressman Kildee, and members of the House Democratic Steering and Policy Committee, I thank you for inviting me to testify at this hearing.

My name is Yanna Lambrinidou, I am the president of Parents for Nontoxic Alternatives, a children’s environmental health organization in Washington, DC, and affiliate faculty in Science and Technology Studies at Virginia Tech. In my capacity as researcher, teacher, and advocate, I have spent the last 9 years conducting ethnographic, investigative, and policy research on lead in drinking water, locally and nationally. In 2014 and 2015, I served on an Environmental Protection Agency (EPA) National Drinking Water Advisory Council (NDWAC) working group convened to develop recommendations for how to best strengthen the federal Lead and Copper Rule (LCR). The working group issued its final report this past August. I filed the group’s sole dissent (attachment 1).

LEAD IN US DRINKING WATER

The science of lead in drinking water and the history of the LCR point to a sobering reality that we cannot continue to ignore:

Flint and Washington, DC twelve years ago are not outliers. They are canaries in a coalmine. I am not the first to deliver this message. Serious weaknesses in the LCR and evidence of its often suboptimal implementation and enforcement have been noted steadily for the past 12 years in Congressional testimonies,^{i,ii,iii} independent governmental and non-governmental investigations,^{iv,v} and many media reports.^{vi,vii,viii,ix,x,xi}

The LCR is a public health law. It was enacted under the Safe Drinking Water Act (SDWA) of 1974 to protect consumers from lead and copper in drinking water. Yet 25 years after its promulgation, we know this: just in the 4-year period between 2000 and 2004, 274 water utilities exceeded the Rule’s Lead Action Level (LAL) and triggered its remediation requirements.⁷ These exceedances alone placed 11.5 million residents at risk of exposure to lead for weeks, months, and potentially even years.^{7 1}

What separates these cases from Flint and DC, is that in Flint and DC the contamination was first discovered through lead poisoned children and their parents at a time when the utility met federal standards and assured everyone that the water was safe to drink.^{4,xii,xiii} In Flint, it took 18 months for the problem to be confirmed, not by the City but by Virginia Tech;^{xiv} in the District it took 2.5 years for the problem to be made public, not by the water utility but by the *Washington Post*.^{xv} Subsequently, large-scale health harm was confirmed.² When we couple scientific evidence of increased miscarriages, fetal deaths,^{xvi} and elevated

¹ Under the current LCR, water utilities on reduced monitoring are required to sample for lead only once every 3 years. This means that lead-in-water contamination that occurs between sampling rounds can go undetected and unaddressed for extended periods of time.

² It is estimated that between 6,000 and 12,000 Flint children and 42,000 DC children may have suffered prolonged exposures (Sanchez, M. 2016. Poisoning Flint’s Water: Political Contempt in Action. *Chicago Tribune*, 1/22; Leonnig, C. D. 2009. High Lead Levels Found in D.C. Kids. *Washington Post* 1/27).

blood lead levels among children^{xvii,xviii} with documented deficiencies in the LCR’s design, implementation, and enforcement, we are confronted with the harrowing possibility that Flint and DC may have been the “lucky” ones to have gotten caught.³

Evidence is mounting that the problem of lead in US drinking water is underestimated and inadequately addressed. Most homes in the country are likely to contain some lead-bearing plumbing – lead solder, leaded brass, a lead service line, or other plumbing components that did not contain lead at first but with time “picked up” lead migrating from other materials. Although all these sources pose a potentially serious health risk to consumers, there is consensus that full and partial lead service lines are the most dangerous. Indeed, current knowledge about these lines ought to give us pause:

- EPA estimates that there are approximately 10 million lead service lines across the country.^{xix}
- A 2011 Centers for Disease Control and Prevention (CDC) study found that children in a home with a lead service line were twice as likely as children in a home with no such line to have elevated blood lead levels; and children in a home with a partially replaced lead service line were four times as likely to have elevated blood lead levels as children in a home with no lead pipe.^{xx 4}
- A 2013 EPA study found that in water systems with lead service lines, the LCR sampling protocol misses worst-case lead to which consumers may be exposed through routine drinking and cooking practices. The same study reported that lead from service lines tends to peak for indeterminate durations following physical disturbances of these lines.^{xxi} In most jurisdictions, such disturbances take place daily (e.g., water main work, other infrastructure work, home renovations, heavy traffic in a home’s vicinity). Consequently, chronic and acute exposures to very high lead in water could be occurring in lead service line homes far more frequently and for far longer periods of time than has been documented to date, even in jurisdictions that meet LCR standards.⁵
- A 2015 water industry study found that if the LCR testing protocol for lead were changed to capture water that sat in lead service lines prior to sampling, 50% to 70% of water utilities would exceed the LCR lead action level.^{xxii} This means that up to 96 million consumers who are currently being told their tap water is safe, would need to receive urgent alerts about widespread lead contamination and guidance on steps they can take to protect themselves.

As important as this new science is, it comprises only one of many signals that without significant revisions, the current LCR is incapable of preventing large-scale health harm and even death to fetuses, infants, and young children across the US. For example, in 2006, a Government Accountability Office (GAO) investigation found that, “The experiences of EPA, states, and water systems in implementing the lead rule have revealed weaknesses in the regulatory framework, including both oversight and the regulations themselves, which may be undermining the intended level of public health protection. Consequently, some changes to the regulatory framework are necessary.”⁵ Most of the holes that GAO

³ There are more cities with similar fates that received media attention due to the fact that knowledge about large-scale contamination was withheld from the public (see Durham, NC in 2006-2007, Sebring, OH in 2015-2016, and Jackson, MS in 2015-2016).

⁴ This association stood even when the water met the LCR lead standard; CDC controlled for confounding factors.

⁵ This means that chronic and acute exposures to high lead in water could be occurring in lead service line homes far more frequently and for longer periods of time than we have ever documented. According to Miguel Del Toral, EPA Region 5, there is reason to suspect that work by Flint’s electric utility company near Lee Ann Walters’ lead service line may have contributed to the exceedingly high levels of lead in Ms. Walters’ tap water (personal communication).

exposed have still not been closed.⁶ That same year, EPA's own review of lead in water in the US revealed that over 2/3 of water utilities that exceed the LAL fail to inform consumers about the contamination.^{xxiii} I have seen no evidence that this problem has been fixed. To the contrary, news about Sebring, OH^{xxiv} and Jackson, MS^{xxv} just in the last few weeks fuel my concern that it has not.

In 2010, EPA's audit of the Michigan Department of Environmental Quality (MDEQ) Water Bureau found significant deficiencies in the agency's capacity to enforce the LCR and ensure the Rule's correct implementation.^{xxvi} Six years later, we are faced with a catastrophic lead-in-water crisis, enabled in large part by MDEQ. In 2004 and 2016 the *Washington Post* and the *Guardian* respectively revealed that irregularities in how water utilities monitor for lead and report test results are widespread, and may leave millions of consumers falsely assured about the safety of their tap water.^{7,8,9} The same message was delivered to the NDWAC LCR working group in 2014 by Virginia Tech lead corrosion expert Dr. Marc Edwards who emphasized that current levels of lead in US drinking water pose an "unacceptable acute and chronic health threat to consumers," in large part because our water utilities conduct LCR compliance sampling in ways known to miss lead.^{xxvii} I have personally uncovered irregularities in water utility sampling methods many times.⁷ To date, EPA has taken no decisive measures to put an end to these deficiencies.

WHY HAS THE LCR NOT BEEN FIXED YET?

The honest answer is, I do not know.

Surely, we must take into account the 15% cut in EPA's drinking water budget since 2006 and the resulting reductions in agency staff.^{xxviii} But these developments do not explain EPA's long-standing inertia on lead in water or the agency's persistent mantra that "lead in water is not a national problem," even in the face of a steady stream of contradictory evidence from affected communities, independent scientists, the news media, and EPA itself.

For example, two years after the DC lead-in-water crisis that EPA was found to have abetted,⁴ the agency received notice that a child in Durham, NC had been lead poisoned from the water, and that Dr. Edwards had expressed concern that similar contamination problems were widespread. EPA's response was that "there is no evidence of a huge public health threat originating from lead in drinking water," and that "[Edwards] wants to say there is an emerging problem" in the absence of evidence.^{xxix} Two weeks later, the agency issued its 2006 report on the state of lead in water nationally.²³ Even though this report revealed serious deficiencies in the LCR's implementation and enforcement, EPA concluded that its investigation "did not find a nation-wide problem of high lead levels in drinking water."^{xxx}

Nine months later, EPA endorsed a citywide lead-in-water testing initiative in DC public schools that employed a sampling protocol requiring a 45-minute pre-flush at every building the night before water collection.^{xxxi} This practice was recognized to be, even at the time, as a remedial measure to temporarily minimize established contamination problems, not to identify whether problems existed in the first place. To this day the agency also allows partial lead service line replacement, a practice that occurs daily in jurisdictions across the US and affects million of consumers, even though studies both in the US and Canada have associated this intervention with short- and long-term lead spikes.^{xxxii,xxxiii,xxxiv,xxxv,xxxvi,xxxvii,xxxviii} Perhaps EPA's most ironic failing in relation to lead in water is that 25 years after the LCR's promulgation,

⁶ Examples include the need for comprehensive inventories of service line materials that many utilities continue to lack, and procedures to ensure that the homes targeted for LCR-compliance sampling are indeed highest risk for lead in water.

⁷ See, for example, <http://flintwaterstudy.org/2016/01/lead-sampling-national-concerns-lambrinidou-letter-to-philly-residents/> and <http://www.washingtonpost.com/wp-dyn/content/article/2008/08/01/AR2008080102964.html>.

the agency cannot claim success in the most fundamental responsibility that that the Rule assigns to the nation's large water systems: implementation of corrosion control treatment that minimizes lead levels at the tap to the greatest degree possible. According to EPA lead corrosion expert Mike Schock, to date no large water utility has implemented the corrosion control studies necessary to achieve this goal as specified by the Rule (see attachment 1).

Against this backdrop, EPA's delayed reaction in Flint was not a complete surprise to me or to my colleagues. Our experience with the agency and its state counterparts is that they have placed the water utility industry in the driver's seat, with one simple rule for the ride: "Anything goes." They have also granted utilities almost complete authority to write the narrative about the supposed success of the LCR in protecting public health. I have heard this narrative many times. It is built on exaggerated claims about how corrosion control treatment has been "optimized" and is effectively addressing lead at the tap. It is filled with unsubstantiated rejections of (or persistent failure to address) evidence revealing suboptimal implementation and enforcement of the Rule in jurisdictions across the nation.⁸ More disturbingly, it tends to attribute lead contamination problems to consumers who are the "owners" of leaded plumbing, or who collected water from the wrong tap, or who could not follow simple sampling instructions, or who would not agree to full lead service line replacement against their own best interests.^{xxxix}

This is the cultural context in which DC's and Flint's crises unfolded. It is a context that allows for the treatment of innocent people as incompetent and subhuman, their lives and futures as expendable, and any harm inflicted on them from lead in their water as banal. Alternative perspectives are rarely invited to the table or given credence when they are expressed. The end result is an EPA and state apparatus trapped in an echo chamber of assurances that are divorced from the science and the history of harm. One EPA employee I know who stepped out of this echo chamber is Miguel Del Toral of EPA Region 5. In March 2014, Mr. Del Toral cancelled his membership with the powerful trade and lobby group the American Water Works Association (AWWA) in protest against the group's positions on lead in water. In his letter to AWWA, he wrote that he could not support their agenda "in good conscience as a scientist and public servant" (see attachment 2). I think that in our efforts as a nation to prevent more DCs and Flints, we would be remiss to overlook EPA's and the states' relationship with the water utility industry.⁹

WHAT IMPROVEMENTS ARE NEEDED?

My October 2015 dissenting statement to the EPA NDWAC offers a detailed discussion of the regulatory improvements I recommend. My position is echoed in separate recommendations from the Northeast-Midwest Institute and a national coalition of groups and individuals spearheaded by Earthjustice (see attachments 3 and 4). For the purposes of this testimony, I would like to highlight the following five points:

1. The current Rule allows for every home to dispense up to 15 ppb lead, and for up to 10% of homes to dispense any concentration of lead whatsoever. The end result is that water claimed to be safe from a strictly regulatory standpoint can, in reality, dispense high enough levels of lead to cause miscarriages, fetal deaths, and chronic and acute exposures to lead in infants and young children. This contradiction must be eliminated immediately through revisions to the Rule that link utility compliance to public health protection, both in terms of lead level minimization and in terms of robust public education.

⁸ See, for example, the 2/8/16 PA Department of Environmental Protection misleading assurance to the public that Pennsylvania tap water is safe because it meets the LCR lead action level, despite current concerns about Philadelphia's lead-in-water monitoring program: <http://www.prnewswire.com/news-releases/pennsylvania-water-systems-not-the-cause-of-lead-exposure-300216823.html>; <http://www.theguardian.com/environment/2016/jan/22/water-lead-content-tests-us-authorities-distorting-flint-crisis>.

⁹ In 2014, Dr. Edwards also terminated his membership with AWWA due to similar concerns (see attachment 5).

2. On a related note – unlike any other drinking water regulation, the LCR is a “shared responsibility” rule that renders consumers partly responsible for protecting themselves from lead at the tap. The catch? It does not tell consumers about this arrangement. For the LCR’s shared responsibility regime to work, the public must be treated as a partner who has a right to complete and accurate information about lead in water, easy access to all of utility lead-related data and interventions, and a seat at the table at all discussions about lead in water, locally and nationally. It is now all too clear that consumer perspectives and oversight are essential for achieving necessary improvements to the LCR.
3. We must demand that EPA bans all irregularities in lead-in-water monitoring and that for areas with lead service lines, it requires utilities to capture lead service line water.
4. We must make it a national priority to remove all lead service lines – intact and partially replaced – as soon as possible. In the meantime, we must ensure first, that corrosion control treatment is strengthened to address the high lead that leaches from these lines, and second, that robust public education is delivered to alert the millions of people in lead service line homes to the risk involved.
5. We must fund EPA’s severely underfunded water infrastructure research branch (i.e., Mike Schock and Darren Lytle) for work on lead in drinking water that can offer direct support to utilities, states, and the community of engineering consultants, who are trying to balance complex corrosion control treatment requirements with all other drinking water regulations in an aging infrastructure.

WHAT COULD HAVE BEEN DONE TO PREVENT THE HARM IN FLINT?

Preventing public health harm in a city with lead service lines where the utility and/or state ignore the requirements of the LCR can be difficult. However, I think that measures can be taken to increase the chances that improper implementation of the LCR and potential problems with lead in water are identified and addressed sooner than they were in Flint.

These measures would include:

- Complete transparency in accessible language (and with links to the Rule’s actual language) describing the LCR’s requirements both in terms of corrosion control treatment and monitoring for lead at consumer taps.
- Complete transparency of all lead-related data and interventions, including what corrosion control treatment is used; what (if any) changes to this treatment are made, when, why, and who approved them; which homes are sampled for LCR-compliance purposes (with disclosure of full addresses upon resident consent); what protocol is used for the sampling; and what the lead-in-water test results are.
- Citizen involvement in the design and execution of lead-in-water monitoring for every monitoring cycle.
- Regular training of utility and state staff about the science, health effects, and history of lead in water in the US, the LCR, and their responsibilities as employees of regulated entities or oversight agencies respectively.
- Regular training of EPA employees about the agency’s responsibility in relation to the LCR’s implementation and enforcement, as well as about the agency’s authority to issue violations and emergency orders when the public’s health is at imminent risk.

We must keep in mind that Flint's lead-in-water problem was uncovered because Lee Anne Walters thought to contact EPA, EPA brought her in touch with Mr. Del Toral, and Mr. Del Toral took the time to explain to Ms. Walters how lead leaches into water and what the LCR requires utilities to do to minimize human exposures. This partnership between informed and active consumer, on the one hand, and informed and conscientious public servant, on the other, was key to preventing worse harm in Flint than what we are confronted with today. In fact, it is what enabled Ms. Walters to discover that corrosion control treatment had not been used after the City's switch to Flint River water. According to Mr. Del Toral, hearing this discovery from Ms. Walters was confusing, if not hard to believe.^{x1} And yet it turned out to be true.

Without significant revisions to the LCR and changes to institutional cultures of alienation from consumers, I fear that more generations of innocent people will continue to get harmed unnecessarily.

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Testimony of Dr. Eric Scorsone

House Democratic Steering and Policy Committee

“The Flint Water Crisis: Lessons for Protecting America's Children”

February 10, 2016

Good Afternoon,

My name is Eric Scorsone and I am an Associate Professor and Director of the Center for Local Government Finance and Policy at Michigan State University. My work has focused on the city of Flint since 2011 and that work includes assisting city officials and the city council with strategic planning, financial analysis and training.

The tragic situation in Flint has many causes. Currently, much of the focus has been on the regulatory process, the question of individual culpability and the water switch. These are all critical questions for which we are still seeking clear answers in many cases. I would like to turn your attention to a root cause that has led to the fiscal distress of Flint, MI and cities like it.

Municipal governments across the country, but especially in Michigan, face the difficult task of maintaining a balanced budget while providing public services to residents. For economically disadvantaged communities like Flint, this tight rope can force a nearly impossible tradeoff between high local taxes or a cut in services. Deep cuts to public services can lead to service level insolvency. Service level insolvency was defined by Judge Rhodes in the city of Detroit bankruptcy case as a situation where, “what this means is that the City is unable to provide basic municipal services such as police, fire and EMS services to protect the health and safety of the people here”¹⁰.

In short, Flint, MI is an example of where policies to resolve the financial balance sheet crisis have only deepened the lack of critical public services especially important in economically disadvantaged communities. The crux of this crisis lies in the architecture of the local public finance system and our response when that system fails.

Like all states, the state of Michigan is the architect of the local public finance system. As an architect, it decides questions such as what local tax options will be made available and under what restrictions, debt issuance policies, mandated spending and service responsibilities, budget and accounting rules, the amount and type of state aid and even has oversight over the type of local city charter that can be adopted. These rules set the very framework from which local officials must operate and make decisions.

Because of the Michigan Constitution, these local public finance rules must be general for all communities. This means that the rules may favor some communities over others. In Michigan, the local public finance system we have built places our older, central cities at a severe and significant disadvantage¹¹. Let us examine several specific factors of how this system works.

First, property taxes are the financial mainstay for most Michigan city governments. The Michigan property tax system severely restricts the ability of city governments to grow their tax base to maintain

¹⁰ <https://www.mied.uscourts.gov/PDFFiles/DBOralOpinionSummary.pdf>

¹¹ <http://community-wealth.org/sites/clone.community-wealth.org/files/downloads/paper-mallach-scorsone.pdf>

vital services¹². MSU research reveals that Michigan ranks 49th amongst all states for restricting local property taxes¹³. Today, many urban communities will see property tax revenue growth of barely one half of one percent. Not only does it restrict the growth of property taxes, but in a deep recession can force an almost permanent reduction in the tax base for a generation.

Flint's property tax base has shrunk from over \$1.5 billion ten years ago to just over \$750 million in 2015 and it is still shrinking. Flint property tax revenues have fallen \$10 million in the past decade. Flint's tax base is now smaller than many of its suburban neighbors. Because of Michigan property tax laws, the city's tax base will now only be to grow at the rate of inflation under the best of circumstances meaning several generations before it is anywhere near where it was ten years ago. Current estimates are that Flint's property tax base will not reach its former peak in 2007 until about 2045.

Second, another important revenue source is state aid. A bargain was made in the 1930's that Michigan cities would not levy lots of local taxes in exchange for state revenue sharing. This bargain was particularly important for funding critical local public service such as police and fire. The state has massively reduced revenue sharing over the past decade (over \$5 billion in total for Michigan communities since 2001) in an attempt to balance its own budget¹⁴. Flint city government has experienced a nearly \$54 million in accumulated cuts in revenue sharing since 2001¹⁵. Even now as the economy is growing, revenue sharing is barely keeping up with local costs.

Finally, the state mandates a great deal of costs and cost pressures on communities. This combination of cost pressures and restricted revenues leads to an ongoing structural deficit for many city governments. In some urban communities, this structural deficit may be manageable but for those places facing long term economic distress and divestment it is a vice grip.

For these communities, and Flint is a prime example of such a community, there are very few fiscal options. Raising local taxes, as limited as those options are, will simply lead to an outflow of investment and people to surrounding communities. Best estimates are that raising tax rates or leaving new taxes can actually reduce overall local revenues in these communities over time. The surrounding jurisdictions have a lower tax rates and larger tax bases and are at natural advantage at this point in time.

These fiscal policies have had a direct impact on Flint. Flint city government provides the basic public services that citizens use everyday such as police and fire protection, street travel and road safety, neighborhood development, parks and recreation and of course sewer and water service. The city's governmental funds to pay for these services was just about \$100 million in 2005 and as of 2015, ten years later, stands at \$80 million. Revenue losses were felt in state aid (-12%), city income taxes (-32%) and city property taxes (-35%).

The city of Flint has lost 20 percent of its purchasing power before accounting for inflation. Once inflation adjustments are made, the city of Flint lost double or 40 percent of its purchasing power for municipal services. The reduction in purchasing power shows up as direct reductions in services including cuts to public safety. The city has cut two-thirds of its staffing and reduced maintenance for infrastructure and other capital items.

¹² https://www.michigan.gov/documents/FINAL_Task_Force_Report_5_23_164361_7.pdf

¹³ http://msue.anr.msu.edu/resources/beyond_state_takeovers

¹⁴ http://www.mlive.com/lansing-news/index.ssf/2014/03/michigan_revenue_sharing_strug.html

¹⁵ *ibid* 5

The city was forced to make up for deficits in the governmental funds by diverting money from the water and sewer enterprises. These diversions from the water and sewer system help partially explain the policy decisions that were to come later. According to state financial review team report in 2011, the city had drained millions from the water and sewer system in an attempt to maintain solvency¹⁶. Essentially, Flint was using the water and sewer system (and some other pots of money) as an internal loan mechanism to keep itself afloat. All told, the city's water and sewer system were losing millions of dollars via operations and then being drained further through diversions to the governmental funds. These financial decisions were necessary and unavoidable given the ongoing fiscal pressure the city was experiencing from rapidly declining property and income taxes and cuts to state revenue sharing.

These diversions caused a financial crisis in the water supply and sewer system whose balance sheets were running significant deficits in 2011. Flint's Emergency Managers, beginning in 2012, were then forced into a situation of massive increases in water and sewer rates. In total, rate hikes in 2011 and 2012 amounted to a nearly 200 percent increase and the average Flint sewer and water bill was \$168 a month by the summer of 2012¹⁷. These rate hikes, while creating a degree of temporary financial stability in the city sewer and water balance sheets, had the consequence of creating some of the most unaffordable water rates in the nation¹⁸. In these rate decisions, the consequences of being forced to address balance sheet solvency while ignoring the implications for public services to residents are in clear view.

Even as Michigan cities are operating under severe fiscal constraints, the state has designed a policy to address local financial emergencies via the emergency manager (EM) law. The law is premised on the concept that the basic problem is local mismanagement and inefficiencies. These local inefficiencies are then presumed to translate into budget deficits. If this is the only source of fiscal troubles, the law may purport to work as stated. However, as we have documented above, Michigan cities are operating with a set of policies that create a structural deficit. In this environment, EM's will be of limited use at best.

Emergency managers are "an accounting solution to a structural problem". They are unable to change state policies, redirect state aid or force consolidation with their neighboring jurisdictions. The one tool that EM's may be said to have that city councils and mayors do not is the power to terminate contracts and disregard city charter provisions. However, even some of those powers are being challenged on constitutional grounds in federal court.

Flint's emergency managers, lacking any real tools to address the underlying economic and fiscal distress facing the community, have been forced to take actions to partially restore fiscal stability at the expense of citizen's economic interests and public service provision. EM's focus most of their efforts at cost cutting and every EM has left a city with a balanced budget. The EM's have been able to restore balance sheet solvency, but at what cost?

The cost has clearly come in the form of service level insolvency. Today, the city of Flint can barely manage to provide the most critical public services that one would expect in a modern American city. The private sector has not come in and restored those services because there is no market that exists. In 2013, Flint was tallied as having the nations highest arson rate and only one full time arson inspector¹⁹. At the same time, a 2015 report indicated that Flint had the highest homicide rate in the nation. This is the face of a nearly 60 percent reduction in overall police staffing for the city over the last decade²⁰. According to

¹⁶ http://www.michigan.gov/documents/treasury/Flint-ReviewTeamReport-11-7-11_417437_7.pdf

¹⁷ http://www.mlive.com/news/flint/index.ssf/2012/05/drill_baby_drill_flint_water_r.html

¹⁸ http://www.mlive.com/news/flint/index.ssf/2015/03/erin_brockovich_associate_says.html

¹⁹ http://www.mlive.com/news/flint/index.ssf/2013/03/burning_flint_10_cities_with_t_1.html

²⁰ http://www.mlive.com/news/flint/index.ssf/2015/09/homicide_rate_spikes_as_flint.html

engineering studies, the city has water loss rate from poor infrastructure of upwards of 35 percent annually. Across the board, spending cuts have directly impacted city services.

Flint's Emergency managers have left the city in 2015 with a balanced budget. Balance sheet solvency does not necessarily translate into service level solvency. The reality is that the financial balance sheet, unlike in the case of a private corporation, cannot capture the true value of the services provide by a city government. Michigan, and many other states, need to begin the process of crafting an urban fiscal policy that rebuilds the state-local government relationship. As the architect of the local public finance system, the state can seek out a different set of plans that foster fiscal and service level solvency. Such a plan might include enhanced and stable revenue sharing, relaxation of some local tax options, partnerships for intergovernmental cooperation and infrastructure development and the elimination of some state mandates²¹. In so doing, Michigan may be able to prevent many of these municipal financial emergencies from occurring in the first place. As in medicine, prevention can be a much better cure than remediating the problem after the fact.

²¹ https://www.michigan.gov/documents/FINAL_Task_Force_Report_5_23_164361_7.pdf

Testimony of Superintendent Bilal Kareem Tawwab

House Democratic Steering and Policy Committee

“The Flint Water Crisis: Lessons for Protecting America's Children”

February 10, 2016

Minority Leader Pelosi, Representative Kildee, and Honorable members of the committee, my name is Bilal Tawwab, Superintendent of the Flint Community Schools, and I am pleased to testify on behalf of the more than 5,400 students of Flint Community Schools, and the emergency situation facing our educational community as a result of the Flint water crisis.

Permit me to clarify the impact of this emergency from the point of view of our students. In August 2015 I started as superintendent of Flint Community Schools and in September 2015 I was faced with making a decision that no one should have to make. In September 2015, after listening to the press conference lead by Dr. Mona Hanna-Attisha, I made the decision that no student of Flint Community Schools will drink the water. Since my decision we have supplied students with bottled water. Flint Community Schools has been operating in crisis mode since last September. Now when I visit a classroom I may find cases of water for student consumption or a bottle of water on a student's desk. My students cannot walk to the nearest fountain to quench their thirst. This has become their new normal.

For our students, life has changed. There is the constant stress over unsafe water that disrupts the life of a community that already face a multitude of challenges. These circumstances make providing a sound and joyful education even more difficult when students cannot use the drinking fountains or wash an apple to eat. We are counseling students and families on managing the risks of lead contamination. There is an inherent struggle between trying to balance the educational needs of the students while meeting their physical and emotional needs in light of this crisis. Across the city, the threat of significant disability is even more serious for Flint's youngest students, those not yet in school, or the unborn. We have to be practical and organized to support these children, and as Dr. Hanna-Attisha has argued, education and a nutritional diet can help mitigate the effects of lead exposure. We must stay ahead of this aspect of the water crisis so that we do not create additional complications. These children will require our dedicated support as much as two years before they would normally be enrolled in early child education. Some young children who are not yet school age will have unknown health and educational needs that the Flint Community Schools will need to address. While the effects of lead poisoning on our children cannot be fully reversed, there are things we can do to assist our children and provide them full wraparound services.

The Flint Community Schools will need additional support in the form of expanded special education resources. We need lead-free facilities for all students so time can be spent on what matters most – teaching and learning. We need resources to measure the intellectual and emotional damage done to each, and possibly every child. This will require complete testing – both medical and intellectual assessment – to understand the magnitude of our issues. We need early intervention programs to provide the educational support so that each student will have the opportunity to lead a productive life, and year-round schooling to deliver these services. We need the resources to attract and retain talented specialists who are trained in special learning needs. These needs are crucial at time when the district has a looming deficit over ten million dollars. We need your leadership in realizing that this is an evolving educational emergency and we haven't the time for five year planning cycles – we need support now and into the future.

I am asking the members of this Committee and your colleagues in the Congress to join me, our teachers, principals, and parents in remediating this crisis, and in making Flint a better, safer, and more secure place to raise and educate a child. Our current situation is an anxious, heartbreaking challenge, but it is the challenge we face now and well into the foreseeable future. As superintendent, I am dedicated to providing a quality education to all of our students – every child matters. And therefore, I conclude by reminding you that Flint has lost jobs; we have lost infrastructure; we have lost families from our public schools; and now our students have lost faith in our institutions.

The day has come to stop asking the children of the Flint community to pay the price for the mistakes of others. On behalf of the children of Flint, the students that we serve, and the employees of the Flint Community Schools, I thank you for your interest and support.

Testimony of Flint Mayor Karen Weaver

House Democratic Steering and Policy Committee

“The Flint Water Crisis: Lessons for Protecting America's Children”

February 10, 2016

To the Honorable Leader Nancy Pelosi, the Honorable Co-Chair Rosa DeLauro, the Honorable Co-Chair Donna Edwards and all the other esteemed Members of this Committee:

Let me begin by thanking the Honorable Chairman Jason Chaffetz and the Honorable Elijah Cummings for starting the Congressional Hearings on this important issue last week. I would like to thank the U.S. Conference of Mayors for standing with me today—and thank you to the President of the Conference, Baltimore Mayor Stephanie Rawlings-Blake, for offering and lending your support. I would also like to thank Congresswoman Brenda Lawrence and Congressman Dan Kildee.

Thank you Leader Pelosi for giving me the opportunity to come before you today, I am humbled and also honored. My name is Dr. Karen Williams Weaver, Mayor of the City of Flint in the Great Lakes State of Michigan. The Great Lakes happen to be the largest fresh surface water system on earth.

I am hoping my presence as well as my testimony today will help move this process forward. On December 14 of 2015, I held a press conference in Flint where I declared a “man-made” disaster: My beloved hometown has had its water supply poisoned by lead, which means it is undrinkable, it cannot be used for cooking, and although the experts claim it is safe to bathe in, and to wash one’s clothes in, the citizens of Flint complained of skin rashes, hair loss and other ailments that they attribute to the water. The water supply in Flint is also unsafe for animals, and pet owners have been instructed to give their pets’ bottled water only. The most vulnerable people have been pregnant mothers, babies and children up to age 6, as well as those with compromised immune systems and the elderly.

As a licensed, clinical psychologist, I know firsthand the effects of lead poisoning on children. It is toxic to many organs and tissues, resulting in permanent learning and behavior disorders, lowered IQ, developmental delays, cognitive deficits. As Mayor of Flint, I have witnessed businesses closing, people getting sick, people moving out. Our tax base has eroded; fear, frustration and anger are beginning to consume the residents who were already dealing with high unemployment, lack of jobs, and a loss of trust and confidence in government officials who have had charge over them.

We are a people who have had our democratic rights taken away from us by the Emergency Manager Law that has been imposed on us in Michigan. Our elected officials have no power to govern themselves and there is no accountability for what these managers do, because they only report to the Governor. We have been subjected to this law since 2011 and because of decisions made under this law, we now find ourselves in this situation. Flint has faced challenges before, but this situation has taken our rights away as citizens of this great nation. When these decisions are made, the people of Flint basically have taxation without representation.

We are living day-to-day getting bottled water from fire stations and other designated sites thanks to the generous donations of people from across the country. Let me say that we are grateful for the outpouring of our fellow citizens for the water donations, however, this is a Band-Aid fix, and the people want a more

permanent solution in regard to fixing our pipes and service lines to individual homes. I have submitted a plan to do this. I believe this is a solution and that it can expedite an end to this manmade disaster.

Flint is ready to move now on a \$55,000,000 “Fast Start” program to address the immediate needs of removing 15,000 local service lines at our houses. I am pleased that, this morning, the Office of the Governor announced it would move to create a \$25 million fund to begin Fast Start; we need that other \$30 million too, whether from the state or the federal government or both. Beyond the Fast Start effort to address the immediate crisis at the service lines, we will need what may be hundreds of millions of dollars to address the broader crisis to the overall Flint water system. I am grateful that the State of Michigan will consider an additional package of \$195 million, announced today, and I am hopeful that the Congress will take up our Congressman Dan Kildee’s proposed “Families of Flint Act” to provide more resources for critical water infrastructure.

But our needs and our crisis go far beyond the immediate drinking water contamination. I support the Michigan Congressional delegation’s efforts for federal funding that includes funding for infrastructure, education, health services and many other things that my community needs. The “Families of Flint Act” that has been proposed in the House is a step in the right direction because it would provide resources to address the short-term water infrastructure crisis, as well as resources for our longer term challenges to children’s health, children’s development, jobs and economic development, and other key factors necessary for dignified and productive family lives for the people of Flint – all of which have been put at tremendous risk by the water crisis. Flint needs to address the short-term water crisis, and the longer-term challenge of rebuilding, revitalizing, and remaining a viable and sustainable community. We need the resources in the Families of Flint Act from the federal government, we need the State of Michigan to lead with resources to rectify this crisis, and we need bipartisan support now to move Flint forward.

I implore you on behalf of the citizens of Flint to help us restore our city and rebuild trust and confidence in our government. I submit to you that we are not a disposable people. We deserve equal protection under the law. Safe and clean water is a basic right to all people, including the citizens and residents of Flint, Michigan. We need you on this journey to restore clean water to Flint, and restore trust and confidence to our community who have been poisoned by this man-made disaster.

Thank you. I am happy to address any questions or comments you have.

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