

# campaign for lead free water

Testimony to the Council of the District of Columbia  
Committee on Transportation and the Environment

Agency Performance Oversight Hearing: DC Water and Sewer Authority (DC Water)

February 20, 2025

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Chair Allen, members of the Committee, I am Yanna Lambrinidou with the [Campaign for Lead Free Water](#), a national network of impacted individuals and groups working to protect our communities from lead in water.

Good morning! Thank you for the opportunity to testify.

I'd like to begin by expressing our gratitude to those staff members at DC Water who are listening to our concerns, responding to our questions, and using our input to make improvements to the agency's approach to lead in water. This relatively new development holds promise for a strong partnership that can help advance public health in our city, while ensuring equity and justice.<sup>1,2</sup>

Today, I'll highlight two points from my more extensive written testimony on which DC Water is still failing us, however, and that we believe require the Council's urgent attention:

## 1. First, DC Water's cost estimate for replacing all remaining lead service lines

We were just informed that DC Water has revised its already astronomical cost estimate of \$1.5 billion for the replacement of approximately 42,000 lead service lines to \$1.8 billion. This translates into almost \$43,000 per lead service line replacement. We have no words to communicate the perversity of this number. The Environmental Protection Agency's (EPA's) latest [estimate](#) for a single replacement in jurisdictions across the US reaches a maximum of \$15,000.

**Exhibit A-1: Summary of LSLR Costs Using Data from the 7<sup>th</sup> DWINSA (\$/SLR, 2020\$)<sup>1,2</sup>**

Statistic	SLR Unit Costs	
	Full	Partial
Number of Cost Estimates	23	10
Min	\$1,180	\$1,677
25 <sup>th</sup> percentile value (used for economic analysis, low scenario)	<b>\$6,507</b>	<b>\$1,920</b>
Median	\$7,232	\$3,273
Mean	\$6,930	\$3,803
75 <sup>th</sup> percentile value (used for economic analysis, high scenario)	<b>\$8,519</b>	<b>\$5,400</b>
Max	\$14,966	\$8,099

Acronyms: SLR = service line replacement.

Cities like [Flint, MI](#); [Benton Harbor, MI](#); [Newark, NJ](#); and [Denver, CO](#) have spent between \$5-\$11 thousand per replacement. And Safe Water Engineering, which was the Council's own independent third-party assessor, [estimated](#) that each replacement in *our* city should cost between \$12-\$15 thousand.

**TABLE ES.2: Recommended LSLR Plan Cost**

Program	Number of Test Pits	Number of LSLRs	Recommended Program Cost	Miles of WMR	WMR Cost
Neighborhood Scale LSLR program	77,809	31,319	\$386,000,000	-	\$0
CIP Water Main Replacement LSLR Program	8,875	6,771	\$45,000,000	97	\$338,000,000
Individual High-Priority LSLR Program	-	4,232	\$49,000,000	-	\$0
Total:	86,684	42,323	\$480,000,000		

Grand Total Low Estimate*		\$480,000,000
Grand Total High Estimate*		\$628,000,000

\*The low and high estimates are calculated using optimized street paving versus street paving as suggested by District of Columbia Department of Transportation regulations.

The *backdrop* to DC Water's staggering cost estimate should concern us as well:

- First, years of no line-item transparency from DC Water\* and no transparency on the assumptions behind each line-item, coupled with Safe Water Engineering's [critique](#) of DC Water's cost estimate, back when it was still \$680 million.
- Second, [evidence](#), from Safe Water Engineering, that DC Water's contractor, CDM Smith, has a history of making "flawed interpretations" of data and significantly inflating lead service line replacement cost estimates.
- Third, inclusion in the budget of excessive District Department of Transportation (DDOT) and DC Department of Licensing and Consumer Protection (DCRA) costs – namely, around \$400 million for DDOT street excavation and restoration work, which Safe Water Engineering [criticized](#) as reflecting non-optimized practices (see note at the bottom of Table ES.2 above); and around \$100 million for DCRA permitting costs, for which there is little justification that we can see.

We are bringing this backdrop to your attention because it signals potential inefficiencies and even corruption and because, in the absence of Council intervention, the financial burden of lead service line replacement is likely to fall on the *victims of unjust harm*, while protecting those who [caused](#), or were complicitous, in this harm (i.e., DC Water, DC Department of Health, and EPA Region 3; we have [testified](#) about this many times before).

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\* [Correction](#): Following the hearing, DC Water informed me that agency staff emailed us a [line-item budget](#) for the agency's \$1.5 billion cost-estimate in July 2023. Regretfully, we missed this email, possibly because the subject line did not signal that it included budget-related information. I appreciate DC Water's correction and apologize for misspeaking at the hearing.

Let's not forget that DC residents suffered the two worst, documented, lead-in-water crises in modern US history and that both crises resulted from DC Water's determination to avoid or minimize lead service line replacement costs.<sup>3</sup> They resulted in:

- over 800, and possibly up to 42,000 [childhood lead poisonings](#),
- a 37% rise in the city's [fetal death rate](#), and
- a [3-fold increase](#) in the risk of elevated blood lead levels among children in the thousands of homes that were subjected to DC Water's accelerated partial lead service line replacement program of 2004-2008. This program was carried out to supposedly remedy the first crisis, but instead created a second one, while [wasting](#) over \$93 million in ratepayer funds as well (see endnote 1).

To date, neither crisis has been acknowledged, and no support has been offered to the residents who suffered harm.

We must prevent history from repeating itself.

Toward this goal, we urge the Council to ensure that any legal mandate for lead service line replacement is fully funded. This recommendation appears in Safe Water Engineering's [Report](#) to the Council as well. DC residents, just like the residents of Flint who experienced a far less severe lead-in-water crisis, deserve maximal protection from direct and indirect costs as well as penalties for failure to pay. An unfunded mandate will work like a gun to the head of an entire city-that-has-been-harmed, forcing people to pay for remediation that should have been completed – like in Flint, Newark, and Providence – at *no cost* to residents. This failure will be immoral and a new stain in the District's history.

Yet we have a great opportunity in front of us. The impending lead-in-water bill allows us to:

- Fix the 1977 Repair Act (DC Code section 8-205(b)) on which DC Water relies to justify not using existing ratepayer funds for private-side replacement.
- Establish an oversight committee that includes Safe Water Engineering as well as DC residents with legal, budgetary, scientific, and historical expertise to oversee DC Water's lead service line replacement program.

We have already submitted to the Council our complete list of [recommendations](#) for this bill, and a summary of topline [requests](#).

## **2. The second matter that requires the Council's urgent attention is DC Water's public messaging**

DC Water recently took the historic step to break from its misleading communications and, in one letter, include scientifically sound public-health-protective information that arms people to protect themselves from routine exposures.<sup>4</sup> We applaud the agency for doing so. Yet, one statement in one letter, while a welcomed step in the right direction, doesn't go far enough.

Lead in water can be mitigated effectively, immediately, and inexpensively. But people need to know the facts about the ubiquity and severity of a contaminant that spares no one – even when there is no lead service line, even when a one-time test shows no lead, and even when DC Water meets federal requirements with flying colors.

The science is clear and the data, ample (see Appendix). DC Water’s prevailing narrative that lead service line replacement solves the problem once and for all is false, and it is needlessly leaving people in harm’s way across our city and for generations to come.

We ask this Committee to follow the example of our lead paint bill (the “[Lead-Hazard Prevention and Elimination Act of 2008](#)”) and adopt in our impending legislation the common-sensical presumption that lead-bearing plumbing is present and poses a health risk in every building – no matter its age. We also ask this Committee to heed the science and DC Water’s own data and mandate a [long-overdue](#) Filter-First messaging.<sup>5</sup> Such messaging would promote DC residents’ precautionary use of lead-certified point-of-use [filters](#) for drinking and cooking, because proper filtration has been shown to reliably [reduce](#) lead-in-water levels to, or very close to, EPA’s health-based standard of zero. By extension, they can protect residents from routine – chronic and acute – exposures and render them less vulnerable to the many factors that accelerate lead release from plumbing as well as to possible delays in lead service line replacement that DC Water has already announced and may announce again in the future.

Last, but not least, we urge DC Water to move beyond treating lead in water like a PR issue, to move beyond trying to control the message and the messengers, and to move beyond using its community partners as megaphones of misinformation. Lead in water is a serious public health threat, and DC residents have a right to know how to prevent exposures – now.

Thank you.

## Endnotes

<sup>1</sup> We use the term *equity* to refer to two phenomena that have left some DC residents at significantly greater risk of lead-in-water exposures than others:

- a) **Infrastructural, financial, and informational inequities disadvantaging residents with a lead service line:** Historically, the high cost of private-side lead service line replacement has led thousands of DC property owners to decline such replacement for two main reasons: either they [could not afford it](#) and/or they [lacked understanding](#) about the [significant health benefits](#) of full replacement and, conversely, the [significant health risks](#) of partial replacement. DC Water and Sewer Authority's (DC WASA's) 2004-2008 accelerated lead service line replacement program, alone – which took place as part of the agency's highly publicized "[Community Water Pledge](#)" and under the banner of 'remediation' – resulted in over 14,000 partial lead service line replacements, despite [prior scientific evidence](#) that replacing only a part of a lead service line can *increase* lead-in-water levels for an unknown duration, and despite [post-replacement data](#) from affected DC homes showing significant contamination problems weeks, months, and over a year after replacement. On top of this failure, DC WASA did not inform residents about the risk of having their lead service line only partially replaced. In 2010, drawing on data from Washington, DC, the Centers for Disease Control and Prevention (CDC) issued an "[Important Update](#)" for Childhood Lead Poisoning Prevention Programs (CLPPPs) across the US, announcing that partial lead service line replacement poses a greater health risk to children than both full replacement and no replacement at all. The following year, CDC published a [study](#), concluding that "For children tested after [lead service lines] in their houses were replaced, those with partially replaced [lead service line] were >3 times as likely to have [blood lead levels] ≥10 mg/dL versus children who never had [lead service lines]." CDC's findings were followed by a [call](#) from the American Academy of Pediatrics (AAP) for a moratorium on partial lead service line replacement. To date, DC Water has failed to disclose to DC residents living in a home with a partial lead service line replacement the health risks involved and ways to protect themselves from the risk of high lead-in-water exposures.
- b) **Informational inequity disadvantaging residents who lack the time and resources to study the science of lead in water, review DC Water's own LCR compliance data, and appreciate the ubiquity of lead-in-water contamination in DC:** To date, DC Water has failed to systematically inform DC residents that lead-bearing plumbing is [present](#) in most, if not all, buildings, including those without a lead service line; that this plumbing can and does release lead, posing a significant health risk to all age groups (i.e., [fetuses](#), [infants](#), [young children](#), and [adults](#)); and that currently, the best available [method](#) to reduce, if not eliminate, lead-in-water exposures is filtration with point-of-use filters that carry two certifications: NSF/ANSI 42 (for particulate Class I reduction) and NSF/ANSI 53 with a clear claim of lead reduction (for the reduction of soluble and particulate lead). As a result, those residents who rely exclusively on DC Water for information about the quality of DC's water, tend to be falsely assured that the water they use for drinking and cooking is safe in relation to lead.

<sup>2</sup> We use the term *justice* to refer to:

- a) Environmental justice – namely, the a) *equitable distribution* of environmental risks, b) *recognition* of affected individuals and communities who are systematically ignored, excluded, and/or degraded on the basis of race, gender, class, sexuality, and/or social position and whose experiential knowledge and right to survive and thrive are discounted, and c) *robust community participation* in environmental decisions based on respect for affected communities' autonomy – including physical, political, and epistemic autonomy (see, Schlosberg, D. 2003. *The Justice of Environmental Justice: Reconciling Equity, Recognition, and Participation in a Political Movement*. In A. Light and A. De-Shalit, eds., *Moral and Political Reasoning in Environmental Practice*, pp. 77-106. Cambridge, MA: The MIT Press).
- b) Reparative justice – namely, the [shift](#) of the burden of unjust harm from the victims to those who caused, or were complicitous, in the harm.

<sup>3</sup> For the crisis of 2001-2004, see the Eric H. Holder, Jr. [report](#) of 2004. For the crisis of 2004-2008, see the DC WASA 2004 “[Community Water Pledge](#).” The latter promised to replace only the portion of a lead service line in public space, even though a) DC had just suffered 2.5 years of severe, unchecked, and widespread lead-in-water contamination, and b) scientific research had established that, under certain circumstances, partial lead service line replacement can result in increased lead-in-water contamination.

<sup>4</sup> “**Filter your water for drinking and cooking**

Plumbing that has lead can contaminate your water and can be found in almost all buildings, including older buildings without lead service lines and even in some newer buildings. If you want to protect yourself and your family from lead in your water, we recommend regularly using a point-of-use (POU) water filter. These filters are installed or used at the kitchen faucet or the point where you draw water for drinking and cooking. POU filters can be faucet-mounted, pitcher-style, countertop, refrigerator, and water bottle filters. For lead removal, they must be certified under **NSF/ANSI 42 standard** for particulate Class I reduction and **NSF/ANSI 53 standard** for the reduction of soluble and particulate lead. ***The NSF/ANSI 53 standard certification must specify that the filter is certified to reduce lead.*** The filter must be used properly to be effective. Read the directions provided with the filter to learn how to properly install, maintain, and replace your cartridge. Using the cartridge after it has expired can make it less effective at removing lead. Do not run hot water through the filter. For more information on facts and advice on home water filtration systems, visit EPA’s website at [www.epa.gov/waterresearch/consumer-tool-identifying-point-use-and-pitcher-filters-certified-reduce-lead](http://www.epa.gov/waterresearch/consumer-tool-identifying-point-use-and-pitcher-filters-certified-reduce-lead).”

<sup>5</sup> DC already has a Filter-First [program](#) for city schools and daycares, which has [received](#) the highest “grade” (B+) among jurisdictions across the nation from Environment America and US PIRG.

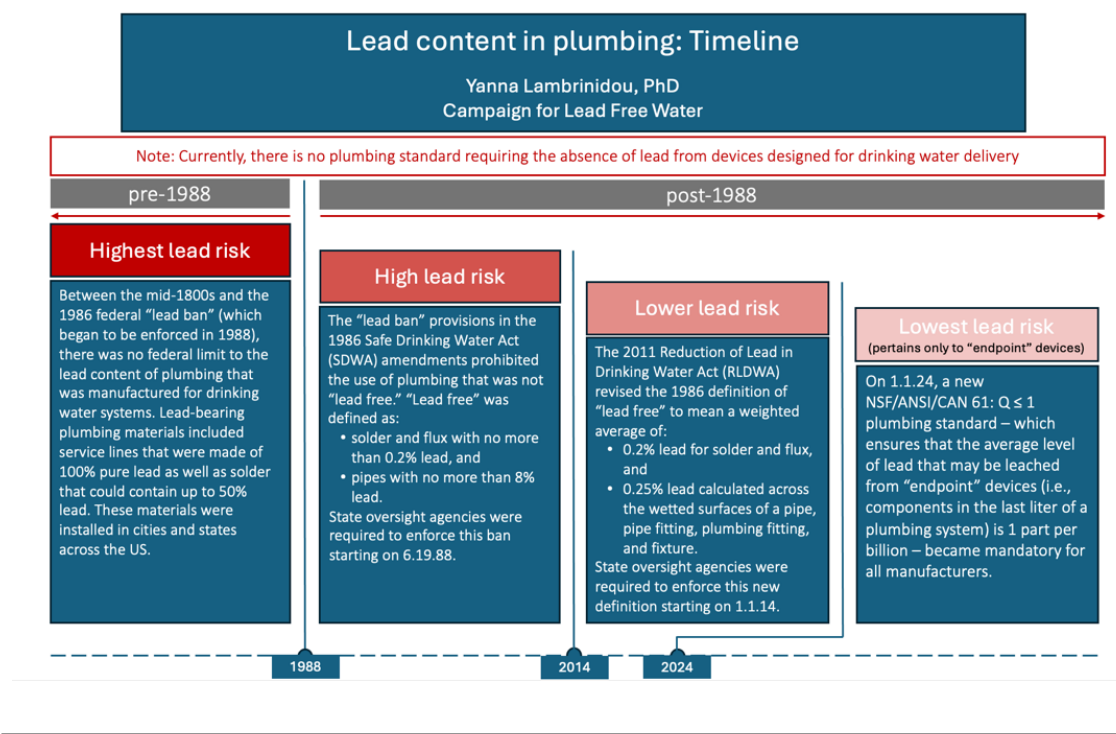
## Appendix

The data are clear that lead-bearing plumbing is present in most, if not all, our buildings (see Graphic 1) and that low and high levels of lead are dispensed routinely – albeit unpredictably – by most, if not, all our taps, even when:

- no lead service line is present,
- a one-time test shows no lead, and
- DC Water meets federal Lead and Copper Rule (LCR) requirements (see also Graphic 1 and Table 1 below).

### Graphic 1. Lead content in plumbing: Timeline

This Graphic illustrates the severity of lead risk posed by plumbing materials manufactured during four time periods: before 1988, in 1988-2014, in 2014-2024, and after 2024 for endpoint plumbing devices that meet the NSF/ANSI/CAN 61: Q ≤ 1 plumbing standard. Although the lead risk has been dropping, even brand-new devices (manufactured post-2014) do not guarantee zero parts per billion lead in water, which is EPA’s health-based standard.



**Table 1.** DC Water’s LCR compliance sampling results

This table features DC Water’s LCR compliance sampling results, from 2021 to 2023. It shows that, even though DC Water meets regulatory requirements with flying colors (i.e., its 90th-percentile lead value is reliably well below 15 parts per billion), lead is consistently detected in 70% to over



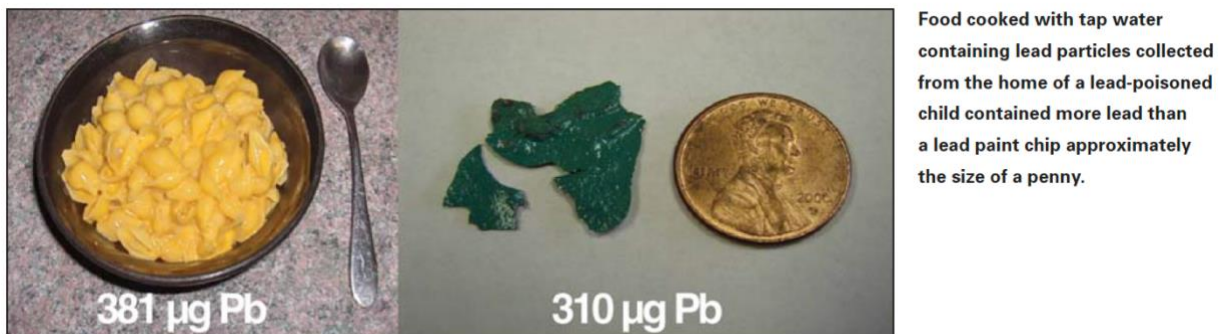
80% of 1st-draw samples. Although this lead may at times originate in lead service lines, it typically reflects corrosion of in-home plumbing. The highest first-draw readings – 35.8 ppb, 111 ppb, and 360 ppb – are exceedingly high and fly in the face of DC Water’s clear insinuations that DC’s tap water is safe. Most likely, they reflect lead particles, which can contain very high levels of lead. Research has shown that such particles can contain [more lead](#) than a lead paint chip approximately the size of a penny (see Image 1 below) and can measure at a level sufficient to classify the water as “[hazardous waste](#).”

## DC Water’s Lead and Copper Rule (LCR) Compliance Sampling Results

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		Jan-Jun 2021	Jul-Dec 2021	Jan-Jun 2022	Jul-Dec 2022	Jan-Jun 2023	Jul-Dec 2023
1	Number of homes sampled	105	107	117	108	106	107
2	90th-percentile lead value	2 ppb	3 ppb	2 ppb	2 ppb	2 ppb	2 ppb
3	% of 1 <sup>st</sup> -draw samples with detectable lead	73%	80%	70%	76%	73%	81%
4	Highest 1 <sup>st</sup> -draw reading	35.8 ppb	111 ppb	28.3 ppb	6 ppb	360 ppb	4.5 ppb
5	% of 2 <sup>nd</sup> -draw samples with detectable lead	69%	77%	65%	71%	77%	77%
6	Highest 2 <sup>nd</sup> -draw reading	8.4 ppb	182 ppb	11.2 ppb	12.2 ppb	4.6 ppb	12.5 ppb

**Image 1.** Comparison between lead in water and lead in paint



It is important to note, however, that standard testing is not designed to detect connections between [lead in water](#) and [lead in blood](#). So, we are routinely missing what, according to DC Water’s own data, must be people’s routine, low and high, lead-in-water exposures.



Research has shown that water can be the [primary](#), and even [sole](#), source of lead exposure. Indeed, a recent EPA [analysis](#) revealed that lead service line prevalence was a stronger predictor of elevated blood lead levels than EPA's and the Department of Housing and Urban Development's (HUD's) lead paint indexes (i.e., EPA's EJScreen 2017 Lead Paint EJ Index and HUD's Deteriorated Paint Index). Moreover, scientific [analyses](#) show that prevalent lead-in-water concentrations such as:

- 50 ppb lead in water is predicted to elevate lead levels in the blood of infants to >10 micrograms per deciliter ( $\mu\text{g}/\text{dL}$ ) for 50% of that population, and
- 4 ppb lead in water is predicted to elevate lead levels in the blood of infants to >2  $\mu\text{g}/\text{dL}$  for 10% of the same population.

Lastly, [research](#) has linked "increased lead exposure to higher incidence of miscarriages and fetal death, even at blood lead elevations ( $\approx 5 \mu\text{g}/\text{dL}$ ) once considered relatively low."