NYC Environmental Protection

Testimony of

Rohit T. Aggarwala
Commissioner
New York City Department of Environmental Protection

before the

New York City Council
Committee on Environmental Protection, Resiliency, and Waterfronts

June 18, 2024

Good Morning, Chair Gennaro and members of the Committee on Environmental Protection, Resiliency, and Waterfronts. I am Rohit T. Aggarwala, Commissioner of the Department of Environmental Protection (DEP). I am joined today by several of my DEP colleagues, including Deputy Commissioner of the Bureau of Water Supply Paul Rush, Director of Project & Business Operations Management for the Bureau of Water and Sewer Operations Janet Aristy to discuss the very important topic of Lead Service Lines in New York City.

This is a detailed and complex topic, so I want to make sure that everyone understands a few key takeaways from my testimony. First, New York City tap water is safe, healthy, and delicious; people should not hesitate to drink NYC water. Second, the federal Environmental Protection Agency (EPA) is issuing a new Lead and Copper Rule revision that will require all lead service lines to be replaced, regardless of whether lead is found in that building's water or not; this is not a decision that New York City has made. Third, there are at least 130,000 lead service lines in New York City, and we estimate the full number is roughly 150,000. We estimate that replacing all of the lead service lines will cost about $2 billion. These service lines are privately owned; they are part of the building. Some of them are in low-income neighborhoods; some of them are in high-income neighborhoods. We have been working to identify grants and other funding to help homeowners replace lead service lines, but we do not expect ever to have full funding to pay for all of these private replacements. Further, while the Federal government has made funding available, that funding is something like one-tenth the total need across the country and New York State places limits on what we can receive. The bottom line is that while we will of course maximize external funding, we cannot expect all the funding we need to come from somewhere else.

1. What has changed about lead?

Our current focus on lead service lines stems from the EPA's recent determination that there is no safe level of lead in drinking water. This is not universally applied; for example, the US Food and Drug Administration permits a lead level of 5 ppb in bottled water.[1] EPAs mechanism for this is the Lead and Copper Rule (LCR), which sets maximum permissible levels of lead and lays out requirements to minimize contaminant levels. The original lead and copper rule went into effect in 1991. DEP has a long record of compliance with the rule.

The LCR has been revised twice in recent years. It was revised in 2021. Those revised standards go into effect this year. Further revisions were made in 2023, creating the Lead and Copper Rule Improvements (LCRI),

which are expected to go into effect in 2027. These newest standards are the most stringent yet. We are focused on how to meet those standards.

The LCRI also sets new testing requirements and a lower "lead action level," which is the lead value that triggers action requirements by the water utility. Under the new rules, compliance testing will focus on buildings with known lead service lines; use water sitting in the service line for at least 6 hours; and have a new, lower standard of 10 parts per billion, down from 15 parts per billion. With this approach, it is likely that New York City – and, we expect, all cities with any lead service lines – will exceed the action level.

If we do, the new EPA requirement will oblige DEP to notify ALL residents in the entire city, even those who do not have a lead service line, that lead levels have exceeded the action level. This will likely cause confusion and distrust in NYC water, even among residents who face no lead exposure whatsoever.

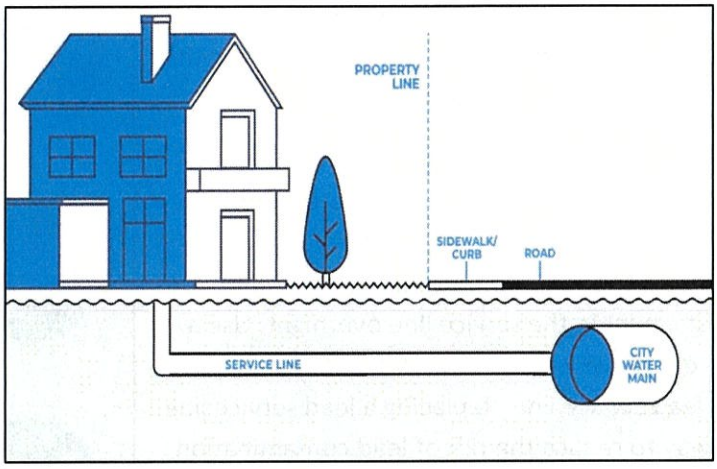
Further, the LCRI will now also require every city to develop a plan to remove lead service lines, regardless of whether water quality testing shows elevated levels of lead in tap water. Replacing all privately-owned lead service lines has not been a requirement before, so we are working now to develop this plan. The legislation being considered today, which I will discuss in depth in a few minutes, supports this goal.

2. What is New York City's lead service line exposure?

Lead does not come from New York City's drinking water supply. Our water comes from a series of reservoirs and controlled lakes upstate, where Deputy Commissioner Rush's team ensures its quality. Every day, one billion gallons of water comes down to the city through our aqueducts and water tunnels, flows through approximately 7,000 miles of water mains, and is delivered to every home and business around the city. There are no lead pipes whatsoever in the water distribution system.

Environmental Protection

Lead risk enters at the service line. A service line is the pipe that connects an individual building to the city water main under a street. In New York City, DEP is responsible for the water mains, but the service line is private property, even though it extends into the roadway.



In the past, many service lines for smaller buildings, mainly 1-4 family homes, were made of lead. When water sits in a lead pipe, particularly for several hours, the lead can leach into the water.

New York City banned lead service lines in 1961, but an estimated 150,000 buildings in the city still have old lead service lines. There are about 130,000 known lead service lines in the city. Another 200,000 or so are made of unknown material. DEP has been systematically investigating these lines to determine their makeup. Based on inspection results so far, we expect about 20,000 of the unknown lines to be made of lead, bringing the city-wide total up to about 150,000. This represents approximately 17% of the properties in NYC. We use these 150,000 estimates for replacement planning and cost estimates.

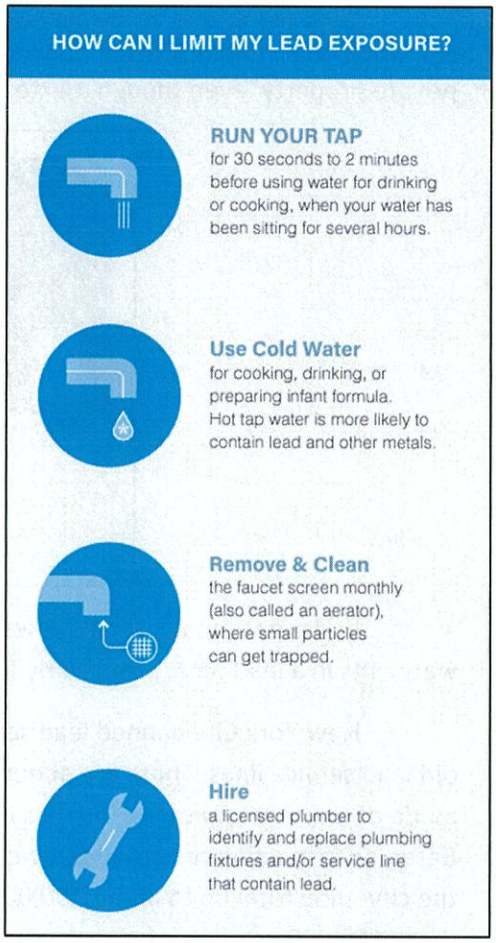
It is important to note that even homes served by lead service lines are not necessarily at immediate risk. Unlike many other cities, New York City treats our water with pH adjustments and addition of food-grade corrosion inhibitors, known as orthophosphates, to minimize the likelihood of lead leaching. The corrosion inhibitors react with lead to form a coating that seals off the lead from the water flowing within it, dramatically reducing the possibility of lead leaching into the water. While highly effective, these are not perfect, so they cannot eliminate all risk.

We maintain a public, online map that shows which buildings in the city have lead service lines, have non-lead service lines, and have service lines of unknown material. We encourage everyone to look up their building with this map.

If your home has a lead service line, we encourage you to test your water for lead. Anyone in the city can call 311 to get a free lead water test kit. DEP will mail the test kit, with instructions, to residents who request one. The recipient simply fills the provided containers with tap water, according to the directions, and sends it back to DEP using the pre-paid return label. Our team will test the water and provide the results to the resident.

If results show that there is lead in your home's water, there are simple steps you can take to reduce the exposure risk. Run your cold water, especially first thing in the morning, so that you do not drink water that has been sitting stagnant in the service line overnight. Use a water filter that is certified to remove lead for your drinking water needs. Finally, replace your lead service line. Replacing a lead service line is the single most effective way to reduce the risk of lead contamination from tap water.

All of this is not to say that water is not safe to drink, even if you have a lead service line. The New York City Department of Health and Mental Hygiene (DOHMH) has never determined that a case of elevated lead levels was caused by drinking water in New York City. Then acting-commissioner Oxiris Barbot of DOHMH testified in 2018 that "lead in water does not present a meaningful risk to New Yorkers, and we do not consider water a significant source of exposure for children."



When other cities have seen true lead emergencies, it has been because their water or their water systems either did not or could not apply the orthophosphates that provide New York City's first line of defense against lead.

3. What is NYC already doing about lead service lines?

Our work to replace lead service lines has already begun. First, there are no lead service lines in the city's water system or on any city property – including schools and public housing properties. Every two years, DEP reviews all city owned and leased properties to ensure that any properties that have entered the city's portfolio do not have lead service lines.

To address lead service lines on private property, we have enacted rules to ensure that broken lines are replaced, have implemented a program to replace lines during water or sewer main work, and have managed replacement programs using grant funding.

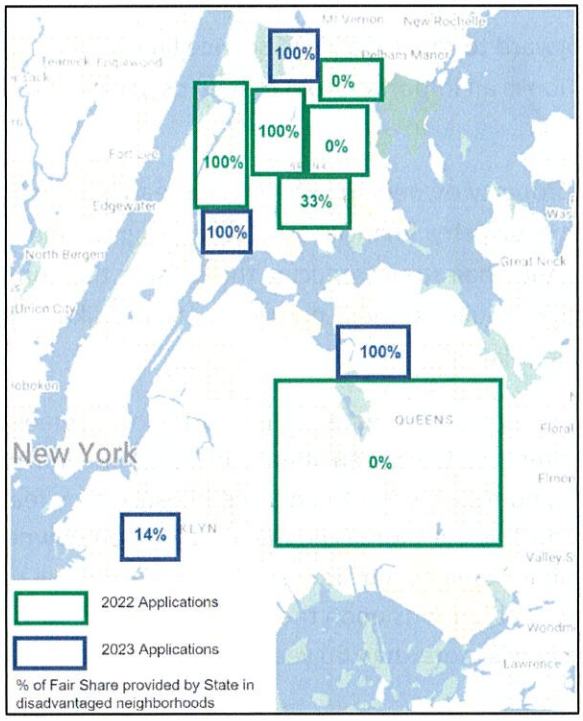
- **Wear and Tear:** In 2009, DEP clarified our rules to require a lead service line to be replaced if it is leaking or broken. In those cases, property owners are responsible for hiring a licensed master plumber to replace the whole service line from the water main in the street to the meter inside their property. This

type of job typically takes one day and costs between $10,000 to $15,000 depending on the property's configuration. If a property owner has warranty coverage for their service line, such as the Oncourse / American Water Resources service line protection that can be paid for through their water bill, these replacements are covered expenses and the property owner does not have to pay anything out of pocket. Approximately 1,500 lead service lines are replaced every year due to wear and tear.

- **Construction Driven Replacement:** Beginning next fiscal year, DDC will replace lead service lines, at no cost to property owners, for properties that are impacted by water main or sewer work in the street. DEP has already begun the same protocol on our own in-house projects. Approximately 700 lead service lines are expected to be replaced every year as part of this program.

- **Neighborhood Replacement Program:** In 2019, DEP administered a small, state-funded lead service line replacement program to replace services for about 600 low-income property owners. Since then, DEP has secured $20 million in federal grants and $24 million in zero interest loans as part of the federal Bipartisan Infrastructure Law to continue this work.

Let me spend a moment on this last point. We have applied for about $96 million to replace lead service lines in six environmental justice neighborhoods in the Bronx, Brooklyn, and Queens that demonstrated severe financial hardship, but have been limited by New York State policy to receiving just the $48 million in grants and loans I just mentioned. This represents less than a quarter of statewide distributed funds.



If New York State disbursement rules for Bipartisan Infrastructure Law funding do not change, NYC anticipates receiving only another $72 million in the future, bringing the city's total to $120 million ($50 million

in grants and $70 million in low interest loans). Over the five years of anticipated funding, DEP expects to replace about 7,300 lead service lines.

This is a great help, but it is far short of the $2 billion needed. We are receiving significantly lower funding per capita than other regions around the state. We have been in active discussions with the State to fight for our fair share.

These existing programs – replacements done due to wear and tear of old lines, the Neighborhood Replacement Program, and Construction Driven Replacement – together will replace about 3,500 lead service lines each year through 2028. At current pace, these three programs will take 50 years to eliminate all the lead service lines in the City. These efforts are not enough. An intentional, dedicated program is needed.

Based on actual bids we have received on recent lead service line replacement contracts, replacing all the estimated 150,000 lead service lines would cost around $2 billion, assuming an average replacement cost of $15,000. We are still working to understand if lead service line replacement is a water rate-eligible cost, but if it were, we expect that water rates would have to be increased to fund this work. Otherwise, funding will need to come from the City's general fund. We must carefully weigh whether this investment should be borne by all ratepayers and taxpayers. There are many low-income homes in New York City with lead service lines; there are also many homes worth $1 million, $2 million, and $3 million that also have lead service lines. It is not clear that these homes should receive a free upgrade at the expense of all ratepayers or taxpayers.

4. Intro. 942

There is no simple path forward to replace all lead service lines in the city. Doing so will be costly and will take time. City Council legislation is an important tool to help us achieve our replacement goals, and Intro. 942 is a great start.

In short, this bill requires property owners to replace their lead service lines within ten years of the date the law takes effect and the city to establish a financial assistance program and replace lead service lines for certain properties. I want to thank the Chair for introducing this bill and the Committee for hearing it. We look forward to working with the Council to build on these proposals. I would like to speak about a few pieces we would like to incorporate into the legislation:

- First, we appreciate that the legislation creates an obligation on homeowners to replace lead service lines. This is important because we have seen already in New York and elsewhere that, even when offered a free replacement, homeowners often decline because they fear it will be a hassle. We will spend public money less effectively if there is no mandate on homeowners.
- Second, we appreciate that, in some circumstances, the legislation will require property owners to replace service lines themselves, such as upon the sale of the home. It is important to remember that by definition any lead service line is more than 60 years old and should be replaced in any event over the next few decades.
- Third, we agree that some public assistance for low-income homeowners is warranted, but we would like any financial assistance program included in the bill to be flexible enough that we can create a

variety of programs for different populations and can adapt programs over time based on our experience.

- Finally, we agree that a fully centralized, fully publicly funded approach is not likely to be either the best for New York City nor the most cost-effective.

We will have other suggestions for further refining this bill and we look forward to working with you and Council staff to make this legislation as effective as possible. I want to again thank the Council, and particularly Chair Gennaro, for your partnership in this area. My colleagues and I are happy to answer any questions that you have.

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Appendix: LSLs by Property Value and Income Level

Incidence of Lead Service Lines by Market Value of Property[1]

Citywide					
Market Value	**# of Tax Lots**	**% of Citywide Tax Lots**	**# of Tax Lots with LSL**	**% of Citywide Tax Lots with LSLs**	**LSL Incidence Per 100 Tax Lots**
>=$0 - <=$500K	28,107	4%	3,347	3%	11.9
>$500K - <=$750K	207,384	30%	39,104	33%	18.9
>$750K - <=$1.0M	200,797	29%	32,417	27%	16.1
>$1.0M - <=$1.5M	161,791	23%	25,977	22%	16.1
>$1.5M - <=$2.0M	54,358	8%	9,012	8%	16.6
>$2.0M - <=$3.0M	28,580	4%	5,037	4%	17.6
>$3.0M - <=$15.0M	21,124	3%	3,456	3%	16.4
Blank	230	0%	21	0%	9.1
Total	**702,371**	**100%**	**118,371**	**100%**	**16.9**

Bronx					
Market Value	**# of Tax Lots**	**% of Bronx Tax Lots**	**# of Tax Lots with LSL**	**% of Bronx Tax Lots with LSLs**	**LSL Incidence Per 100 Tax Lots**
>=$0 - <=$500K	2,437	3%	567	3%	23.3
>$500K - <=$750K	31,935	45%	7,503	46%	23.5
>$750K - <=$1.0M	25,499	36%	6,054	37%	23.7
>$1.0M - <=$1.5M	7,619	11%	1,596	10%	20.9
>$1.5M - <=$2.0M	1,288	2%	268	2%	20.8
>$2.0M - <=$3.0M	911	1%	219	1%	24.0
>$3.0M - <=$15.0M	575	1%	100	1%	17.4
Blank	23	0%	6	0%	26.1
Total	**70,287**	**100%**	**16,313**	**100%**	**23.2**

Brooklyn					
Market Value	**# of Tax Lots**	**% of Brooklyn Tax Lots**	**# of Tax Lots with LSL**	**% of Brooklyn Tax Lots with LSLs**	**LSL Incidence Per 100 Tax Lots**
>=$0 - <=$500K	7,312	3%	532	2%	7.3
>$500K - <=$750K	34,786	16%	3,368	11%	9.7
>$750K - <=$1.0M	50,165	23%	5,498	18%	11.0
>$1.0M - <=$1.5M	65,255	29%	9,848	32%	15.1
>$1.5M - <=$2.0M	33,388	15%	6,244	20%	18.7
>$2.0M - <=$3.0M	19,374	9%	3,660	12%	18.9
>$3.0M - <=$15.0M	11,400	5%	1,801	6%	15.8
Blank	141	0%	10	0%	7.1
Total	**221,821**	**100%**	**30,961**	**100%**	**14.0**

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Manhattan					
Market Value	**# of Tax Lots**	**% of Manhattan Tax Lots**	**# of Tax Lots with LSL**	**% of Manhattan Tax Lots with LSLs**	**LSL Incidence Per 100 Tax Lots**
>=$0 - <=$500K	808	4%	104	3%	12.9
>$500K - <=$750K	1,004	5%	131	4%	13.0
>$750K - <=$1.0M	949	5%	139	4%	14.6
>$1.0M - <=$1.5M	1,764	9%	252	8%	14.3
>$1.5M - <=$2.0M	2,049	10%	348	11%	17.0
>$2.0M - <=$3.0M	4,787	24%	719	23%	15.0
>$3.0M - <=$15.0M	8,331	42%	1,482	47%	17.8
Blank	25	0%	1	0%	4.0
Total	**19,717**	**100%**	**3,176**	**100%**	**16.1**

Queens					
Market Value	**# of Tax Lots**	**% of Queens Tax Lots**	**# of Tax Lots with LSL**	**% of Queens Tax Lots with LSLs**	**LSL Incidence Per 100 Tax Lots**
>=$0 - <=$500K	5,219	2%	1,190	2%	22.8
>$500K - <=$750K	81,886	29%	23,490	39%	28.7
>$750K - <=$1.0M	97,092	34%	18,959	31%	19.5
>$1.0M - <=$1.5M	77,244	27%	13,953	23%	18.1
>$1.5M - <=$2.0M	16,426	6%	2,129	4%	13.0
>$2.0M - <=$3.0M	3,161	1%	434	1%	13.7
>$3.0M - <=$15.0M	746	0%	72	0%	9.7
Blank	35	0%	4	0%	11.4
Total	**281,809**	**100%**	**60,231**	**100%**	**21.4**

Staten Island					
Market Value	**# of Tax Lots**	**% of Staten Island Tax Lots**	**# of Tax Lots with LSL**	**% of Staten Island Tax Lots with LSLs**	**LSL Incidence Per 100 Tax Lots**
>=$0 - <=$500K	12,331	11%	954	12%	7.7
>$500K - <=$750K	57,773	53%	4,612	60%	8.0
>$750K - <=$1.0M	27,092	25%	1,767	23%	6.5
>$1.0M - <=$1.5M	9,909	9%	328	4%	3.3
>$1.5M - <=$2.0M	1,207	1%	23	0%	1.9
>$2.0M - <=$3.0M	347	0%	5	0%	1.4
>$3.0M - <=$15.0M	72	0%	1	0%	1.4
Blank	6	0%	0	0%	0.0
Total	**108,737**	**100%**	**7,690**	**100%**	**7.1**

[1] Analysis is limited to tax lots with Department of City Planning Land Use categories 1 (One & Two Family Buildings) and 2 (Multi-Family Walk-Up Buildings). These two categories account for 90% of the potential LSLs identified in DEP's records. Market Value is Department of Finance data from June 2024.

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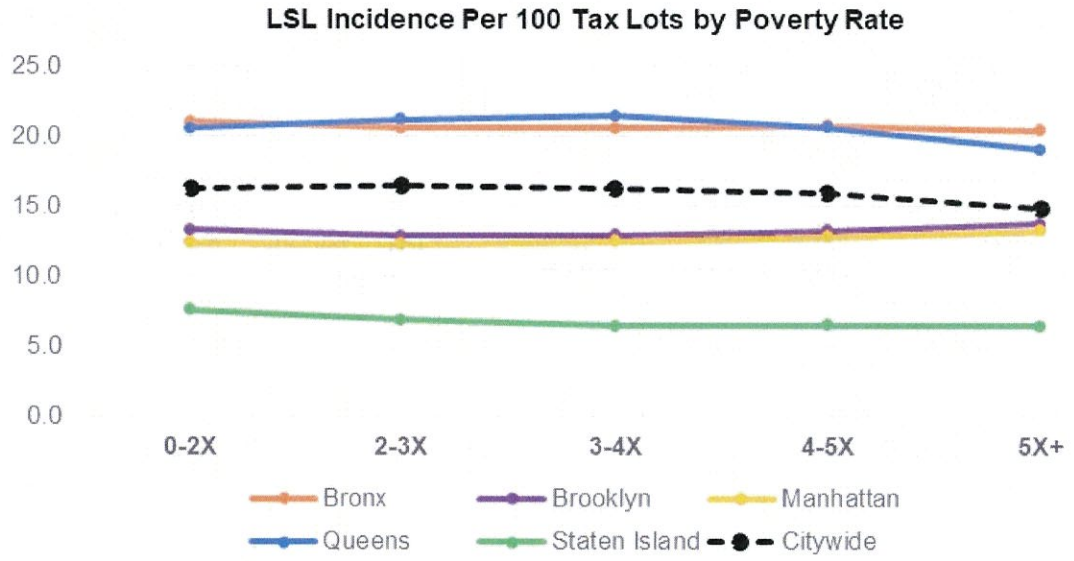
Distribution of Lead Service Lines by Poverty Level[2]

	Distribution of Tax Lots with LSLs by Poverty Level				
Poverty Level Range	**0-2X**	**2-3X**	**3-4X**	**4-5X**	**5X+**
Income Limit for 3-Person Household	*$46,060*	*$69,090*	*$92,120*	*$115,150*	*>$115,150*
Bronx	7,285	2,754	2,403	1,740	4,129
Brooklyn	11,872	4,806	4,024	3,444	12,261
Manhattan	1,320	440	441	356	2,811
Queens	17,049	10,535	9,391	7,651	20,690
Staten Island	2,009	1,032	1,034	942	3,386
Citywide	**39,534**	**19,567**	**17,292**	**14,133**	**43,277**

	LSL Incidence Per 100 Tax Lots by Poverty Level				
Poverty Level Range	**0-2X**	**2-3X**	**3-4X**	**4-5X**	**5X+**
Income Limit for 3-Person Household	*$46,060*	*$69,090*	*$92,120*	*$115,150*	*>$115,150*
Bronx	21.0	20.6	20.6	20.8	20.4
Brooklyn	13.3	12.9	12.9	13.2	13.8
Manhattan	12.4	12.3	12.5	12.8	13.2
Queens	20.6	21.2	21.4	20.6	19.1
Staten Island	7.6	6.9	6.5	6.5	6.5
Citywide	**16.2**	**16.4**	**16.3**	**15.9**	**14.9**



[2] Data source: Ratio of Income to Poverty Level by Census Tract, US Census Bureau, 2018-2022 American Community Survey – Summary File; 2022 federal poverty guidelines, US Department of Health and Human Services.
The federal poverty level is issued annually for the US Department of Health and Human Services. In the absence of income data at the tax lot level, the allocation of tax lots with LSLs by poverty level bracket was estimated based on the property's census tract-level poverty rate. Thus, this analysis is for the purpose of a high-level estimate and should be used for initial discussion purposes only.

Testimony of Valerie Baron
Senior Attorney[1] and National Policy Director, Safe Water Initiative
Natural Resources Defense Council
NYC Council Committee on Environmental Protection, Resiliency and Waterfronts
Oversight Hearing on Lead Service Lines
June 18, 2024

Chairman Gennaro and members of the Committee, thank you for the opportunity to testify today. My name is Valerie Baron and I am a Senior Attorney and the National Policy Director for the drinking water team at the Natural Resources Defense Council (NRDC). NRDC is a member of the New York City Coalition to End Lead Poisoning.

At NRDC, I look across the country and keep track of the best- and worst-in-class drinking water policies. I am sorry to say that while I applaud the intent of this legislation—to get lead pipes out and prevent lead exposure—this approach would codify some of the worst policy in the country, and we have good reason to believe it simply would not work. We need a fresh start and advocates are here to help.

Across the country the best programs that get the lead out safely and equitably have several things in common:

- They take a wholesale approach—coordinating the work throughout the jurisdiction
- There is no cost to property owners—when owners shoulder the cost, the results are highly inequitable
- They require copper, the safest material

Intro 942 does none of these things.

[1] Licensed to practice law in the District of Columbia

Also troubling is how the bill could cost New Yorkers access to the largest pot of federal funding ever allocated for lead pipe replacement. In its current form, a regulatory proposal that EPA is finalizing would allow utilities to evade liability when private property owners are solely responsible for the pipes. And New York, like most states, prioritizes distributing its federal dollars—including the infrastructure law's funds for lead pipe replacement—to utilities that need those dollars to come into compliance with federal law.

If you'll allow a mixed metaphor, this approach passes the buck to property owners, and it picks the pockets or ordinary new Yorkers at the same time.

Many of these pipes are in place because they were required. The first annual report of the Queens Water Company in 1898 notes that "Service pipe must be of extra strong " AA " lead pipe." No lead pipes were installed after 1961. Leaving property owners to fend for themselves is unfair to today's New York City residents who did not create this problem.

PLUMBING FOUNDATION CITY OF NEW YORK

To: NYC Council Committee on Environmental Protection, Resiliency and Waterfronts

From: April McIver, Executive Director, The Plumbing Foundation

Date: June 18, 2024

Re: Testimony in Support of Int. 0942-2024

INTRODUCTION

My name is April McIver and I am the Executive Director of the Plumbing Foundation City of New York, Inc. The Plumbing Foundation was founded in 1986 and is a non-profit organization of small and large, union and non-union licensed plumbing contractors, engineering associations, supply houses, and manufacturers whose mission is to protect the public health and safety of New York City through the enactment and enforcement of safe plumbing codes. We submit the below comments in support of Int. 0942-2024, requiring property owners to replace lead water service lines.

BACKGROUND

Int. 0942-2024 requires, within 10 years, private property owners to replace any lead water service line with a copper line or other material approved by the NYC Department of Environmental Protection (DEP). In the alternative, the property owner may submit a certification that such property does not have a lead service line. The legislation would allow a property owner to request DEP, at no cost to the property owner, to test their water service line to identify if it is made of lead. A financial assistance program must be established by DEP for certain owners meeting income requirements. Further, the legislation proposes no fees for the permits to replace lead water service lines.

Additionally, if DEP conducts work that impacts a property owner's lead water service line, then DEP is responsible for replacement, at no cost to the property owner. If a property is the location of a childcare program, the owner may notify DEP and DEP must then replace that lead service line with no cost to the owner of the property.

The legislation also requires the DEP to conduct outreach and education, including the involvement of licensed master plumbers. A fine will be imposed in the amount of $1,000 for failure to comply with the requirements.

COMMENTS

The Plumbing Foundation is supportive of the initiative to replace lead service water lines with a safer, healthier material that complies with our NYC Construction Code and when done by professionals licensed, insured, and certified in the applicable areas. We are also supportive of the initiatives to help aid owners in achieving the replacement of these dangerous lead pipes, and will work with the Council and DEP to continue educating our industry and the general public on the importance of such replacements. We do suggest balancing the need to help finance those owners that need assistance, with the need for a higher fine on owners for failure to comply, to properly incentivize owners—as we have seen laws fail to achieve their intent due to lack of enforcement.

CONCLUSION

We thank the NYC Council Committee on Environmental Protection, Resiliency and Waterfronts for their consideration of our comments. Please do not hesitate to contact us for any reason.

Testimony of Josh Klainberg, Senior Vice President
New York League of Conservation Voters
City Council Committee on Environmental Protection, Resiliency and Waterfronts
Oversight Hearing on Lead Service Lines
June 18, 2024

Good morning, my name is Joshua Klainberg and I am a Senior Vice President at the New York League of Conservation Voters (NYLCV). NYLCV is a statewide environmental advocacy organization representing over 30,000 members in New York City. Thank you, Chair Gennaro, and members of the Environmental Protection Committee for the opportunity to testify.

As a member of the New York City Coalition to End Lead Poisoning (NYCCELP), NYLCV stands firmly with advocates calling for the elimination of *all* forms of lead poisoning in New York City. NYCCELP has appreciated the Council's leadership when it comes to fighting lead poisoning, whether in passing Local Law 1 of 2004 or Local Law 65 of 2019, and we have previously advocated that the New York City Council pass legislation to establish a mandatory, expedient, and equitable lead service line removal program within ten years *at no cost to residents*, as outlined in NYCCELP's report, *No Excuses, NYC: Replace Lead Drinking Water Pipes Now*. **However, for the reasons outlined below, NYLCV and NYCCELP strongly oppose Intro 942 and urge the City Council to withdraw this bill from consideration.**

Lead Service Lines Background

Lead is a poisonous heavy metal that causes significant adverse health effects, particularly in children. Given its serious health implications, experts agree that there is no safe level of lead exposure. Drinking water is one pathway of exposure to lead poisoning; however, it is particularly dangerous in drinking water because it is colorless, tasteless, and odorless. Lead gets into drinking water from lead pipes and plumbing that contains lead, with lead service lines being the biggest contributor.

Lead service lines (LSLs) are the lead pipes that connect the city water mains under the street to residences. Lead leaches from lead service lines and indoor plumbing into water when a chemical reaction known as corrosion occurs. Lead exposure from drinking water is often episodic. It can be very low or zero one day, and extremely high the next day. Often, that is because small particles of lead known as "particulate lead" flake off from the inside of the pipe and cause a major spike in lead exposure. EPA modeling has shown that drinking water can constitute up to 80% of U.S. children's lead exposures with the highest levels for formula fed

infants less than a year old.[1] Symptoms of lead poisoning in children include developmental delay, learning difficulties, loss of appetite, hearing loss, and seizure. In adults, symptoms include high blood pressure, memory difficulties, and reproductive issues. Making matters worse, the effects of lead on children are not spread evenly. Black and Hispanic children are more likely than white children to have lead in their blood, and children in low-income households have higher lead levels in their blood than those in higher-income households. Lead service lines are the biggest contributor of lead in drinking water.

Despite a federal ban on lead pipes in 1986 and many states banning them even earlier, EPA does not require utilities to replace all legacy lead pipes left in the ground. The most effective way to prevent lead exposure in drinking water is to replace these pipes in a speedy, efficient, equitable, and transparent manner.

Lead Service Lines in New York City

Lead service lines are a legacy pollution issue with the last one installed in New York City in 1961, not an issue created by the current property owners or occupants. According to March 2024 data from DEP, approximately **60% of water service lines in the City are not lead** (518,122 properties), **25% of water service lines are possible LSLs**, meaning DEP has no record or conflicting records about the material type (209,321 properties), and **15% are confirmed as lead** (129,245 properties).

In July 2023, NYCCELP released a comprehensive report, *No Excuses, NYC*, laying out the case for why strong, local action was needed in the face of a weak and failed federal Lead and Copper Rule; the data concerning how many lead pipes are known (and unknown) in NYC, where they are located, and how 1 in 5 New Yorkers were drinking water from a pipe made of lead or possible lead; the costs involved and the federal and state financing options to pay for a city-operated program; and a model ordinance based on legislation in Newark, NJ.

Given the fact that this is a legacy public health threat, cities like Newark, New Jersey, Denver, Colorado, and Benton Harbor, Michigan and states like Michigan and Minnesota have replaced or are replacing all of their LSLs at no expense to homeowners. Whereas a few years ago New York City led the way on lead in drinking water, creating an inventory of LSLs ahead of its time, we believe Intro 942 would codify some of the worst drinking water policy in the country into law if it is approved.

Why Intro 942 Is Not the Solution

NYCCELP was shocked to learn of the Introduction of Intro 942, requiring property owners within a 10-year period to replace lead service lines, *at their own cost*, and impose civil penalties for failure to comply. **NYLCV and NYCCELP strongly oppose Intro 942 and urge the Council to withdraw this bill from consideration and replace it with model legislation that NYCCELP has previously championed.** Rather than solving the public health and equity

[1] Lindsay W. Stanek et al., Modeled Impacts of Drinking Water Pb Reduction Scenarios on Children's Exposures and Blood Lead Levels 54 Env't Sci. & Tech. 9474, 9474–82 (2020); see also Ronnie Levin et al., The Urban Lead (Pb) Burden in Humans, Animals and the Natural Environment 193 Env't Rsch. (2021).

crises of lead exposure from service lines, Intro 942 runs contrary to the recommendations of environmental justice and public health advocates, would worsen existing inequities, create inefficiencies, and be unnecessarily expensive—during an affordable housing crisis, no less.

- **Intro 942 treats lead service line removal as a private concern, threatening civil penalties for non-compliance.** Lead service lines are a legacy pollution issue, with the last one installed in New York City in 1961—not an issue created by the current property owners or occupants. This bill puts the financial burden of the full cost on to the property owner despite the many other federal and state financing options available to the city. This bill also creates a financial hardship for hundreds of thousands of New Yorkers for a problem that they did not create but ironically was permitted by the City up until 1961. Adding insult to injury, this bill provides no guarantee of financial assistance to financially strapped households who cannot afford to replace their pipe.
- **Intro 942 will exacerbate inequities because replacement will occur only in the homes and properties of wealthier people.** While Intro 942 mentions financial assistance for property owners whose incomes are below 50% of Area Median Income, this assistance is not guaranteed. Rather, it's subject to appropriation and requires an application. Making matters worse, the New York City Water Board recently signed off on a 8.5% water bill hike for property owners because the Adams Administration ordered the Water Board to pay a new "rental charge" to fill the City's budget gap. NYLCV has previously testified against the "rental charge" and believes this will only exacerbate inequities in New York City.
- **From a City management perspective, Intro 942 puts the burden of scheduling a lead pipe replacement on the individual property owner, potentially creating logistical headaches for agencies and residents.** Instead of having the City bid out the replacement work in a comprehensive manner, Intro 942 creates a logistical nightmare with hundreds of thousands of separate projects to dig up in New York City streets over the course of a ten-year period. Individual property owners would decide when over the course of 10 years they want to replace their line, without coordination with their neighbors. Thus, a single block may be opened up multiple times over the ten-year replacement period, with each owner paying to dig up the street at different times.
- **Intro 942 leaves the door wide open for the possibility of replacement plastic PVC pipes which, as many scientific studies confirm, is not a healthy alternative.** Intro 942 states that the replacement shall be made of copper or any other material approved by the Commissioner. We urge the Council that any future language specifically prohibit the use of plastic PVC pipes.

What an Effective and Equitable LSL Replacement Bill Should Look Like

Given the serious public health and environmental justice implications of LSLs, NYLCV and NYCCELP have steadfastly advocated that the New York City Council pass legislation to establish a mandatory LSL removal program within ten years *at no cost to residents*. We believe any LSL legislation should be coupled with long-term funding by the City.

As stated in the Principles for Lead Service Line Replacements adopted by state and national advocates, any legislation should approach lead service line removal as a public health crisis requiring government coordination. DEP must assume the cost of removal because (a) the pipes are connected to the water main which is owned by the City; (b) past service line connections to the water main were approved by the city per Administrative Code of City of New York section 24-309; (c) this is a legacy pollution issue not created by any of the current owners or occupants of properties in the city of New York, and, (d) when the cost of replacement is transferred to private owners, the results are highly inequitable. Legislation must also mandate that the material used to replace the LSL pipe must be copper and not plastic which presents other environmental concerns.

Moving Forward

New York City has an opportunity to lead other large water systems by passing a law to systematically ensure that all LSLs are replaced quickly, wisely, efficiently, equitably, affordably, and transparently and to confirm if there is lead present in the sites currently classified as Possible LSLs. Passing the cost of LSL replacement to property owners should be the *last* resort. Instead, as currently drafted, this bill makes it the first choice. NYLCV and NYCCELP look forward to working with the Council and Administration to ensure New York City takes the lead in passing a mandatory and equitable LSL replacement program at no cost to residents.

Thank you for the opportunity to testify.

Verbal Testimony of Josh Klainberg, Senior Vice President, NYLCV
NYC Council Committee on Environmental Protection, Resiliency and Waterfronts
Oversight Hearing on Lead Service Lines
June 18, 2024

Good morning, my name is Joshua Klainberg with New York League of Conservation Voters. Thank you, Chair Gennaro, and members of the Committee for the opportunity to testify.

NYLCV agrees that all lead pipes in New York City should be removed within a 10 year period. However we *strongly oppose* Intro 942 and we urge the Council to withdraw this bill from consideration.

With limited time, here are two reasons why:

- Intro 942 leaves it up to private property owners to foot the $10,000 bill for lead pipe replacement, cleaning up a mess that NYC created by allowing -- and at times encouraging -- lead pipes to be used until 1961.
- Intro 942 places the burden of scheduling lead pipe replacements onto property owners, not the city, potentially creating unsafe work practices as well as logistical headaches for your community

Allow me to share some DEP data as of March 2024 that NYLCV has mapped for today (hold up map):

- NYC has roughly 857,000 pipes delivering drinking water to properties.
- 40% of the pipes are lead or possible lead which amounts to up to 338,000 properties

If Intro 942 is enacted as written, this means that hundreds of thousands of appointments will have to be made by New York property owners, causing some streets to be ripped up a dozen times or more causing headaches and chaos in your communities.

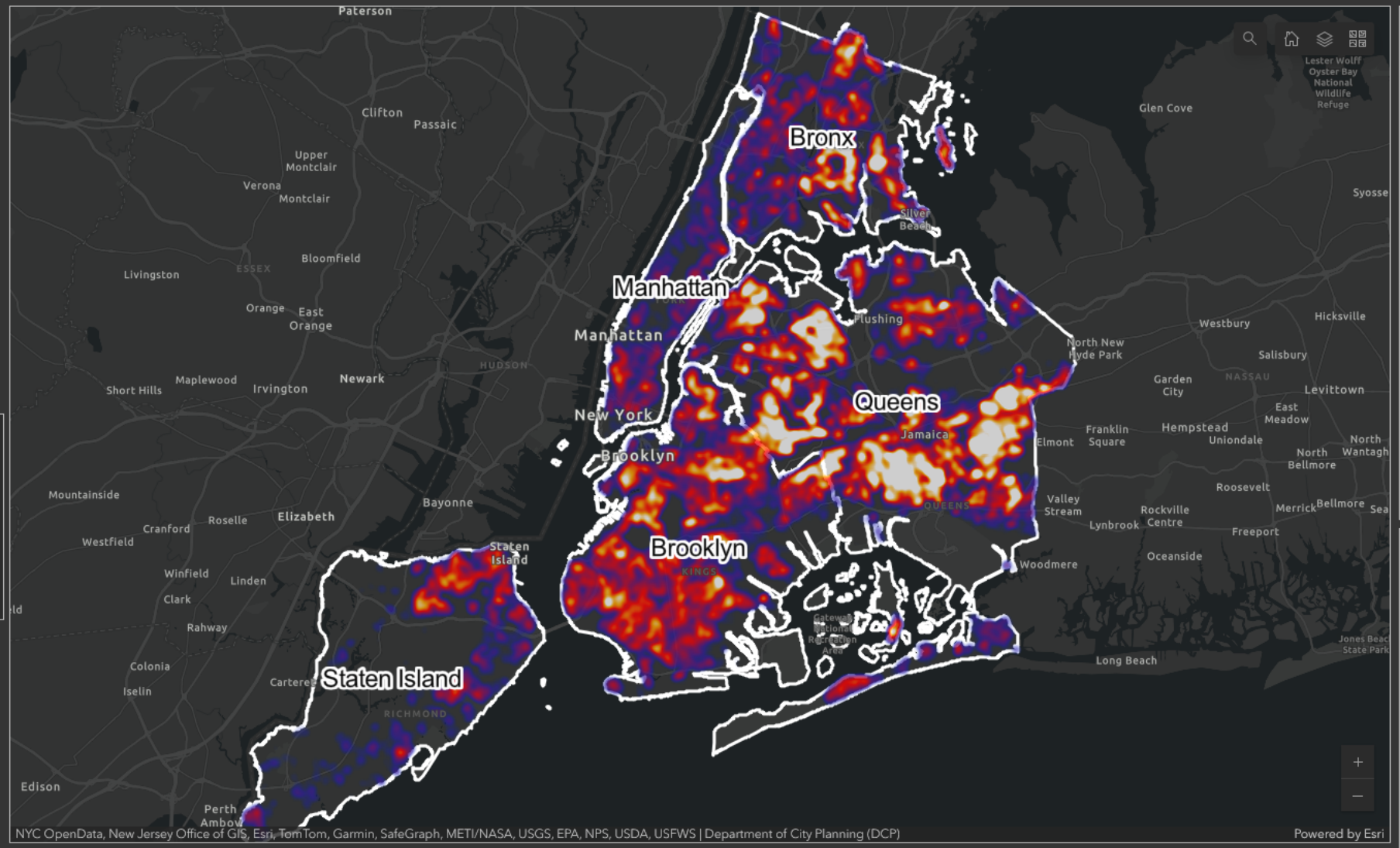
Here's an example of a neighborhood in Queens.(hold up map)

There are nearly 50 households with lead pipes along this street meaning that without coordination, a section of this street will be ripped up every two to three months on average over a ten year period. And each physical disturbance per replacement brings the possibility of lead leaching in nearby pipes causing harm.

In sum and substance, this bill is so broken, it cannot be fixed. Like a lead pipe it should be replaced with a better solution. We urge the Council to withdraw this bill and replace it with one where the city takes responsibility for the costs and logistics upfront while tapping into the robust amount of unprecedented state and federal resources available to offset the cost. Happy to answer any questions that you may have.

A Mapping of New York City's Water Service Lines

Borough	Assembly	Congressional	Council	Senate	Neighborhood
None	None	None	None	None	None



Map Legend

Zoom to the map to see water service connection lines by type

Potential Lead

High

Low

Borough

Percentage of Service Line Types per Selected Area

Possible Lead Service Lines

209,321

Lead Service Lines

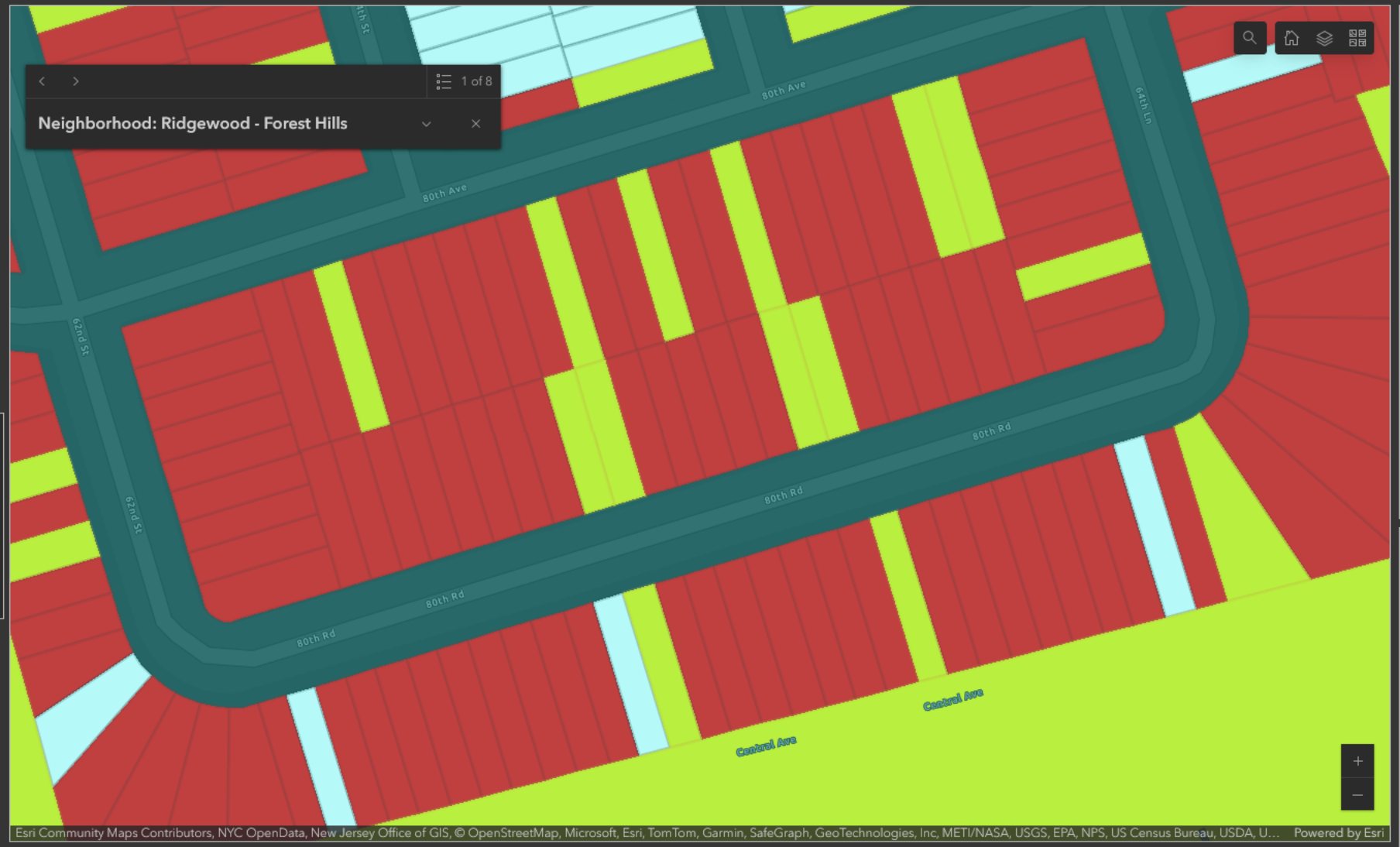
129,245

Non-Lead Service Lines

518,122

A Mapping of New York City's Water Service Lines

Borough	Assembly	Congressional	Council	Senate	Neighborhood
None	None	None	None	None	Ridgewood - Forest Hills



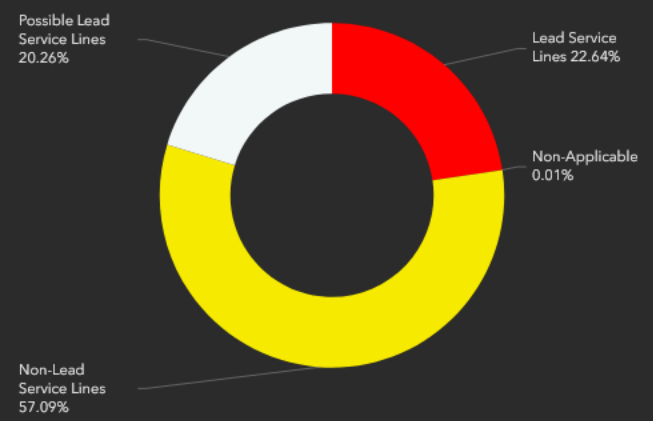
Map Legend

Zoom to the map to see water service connection lines by type

Service Line by Lot

- Non-Lead Service Lines
- Possible Lead Service Lines
- Lead Service Lines
- Non-Applicable

Percentage of Service Line Types per Selected Area



Possible Lead Service Lines

6,779

Lead Service Lines

7,576

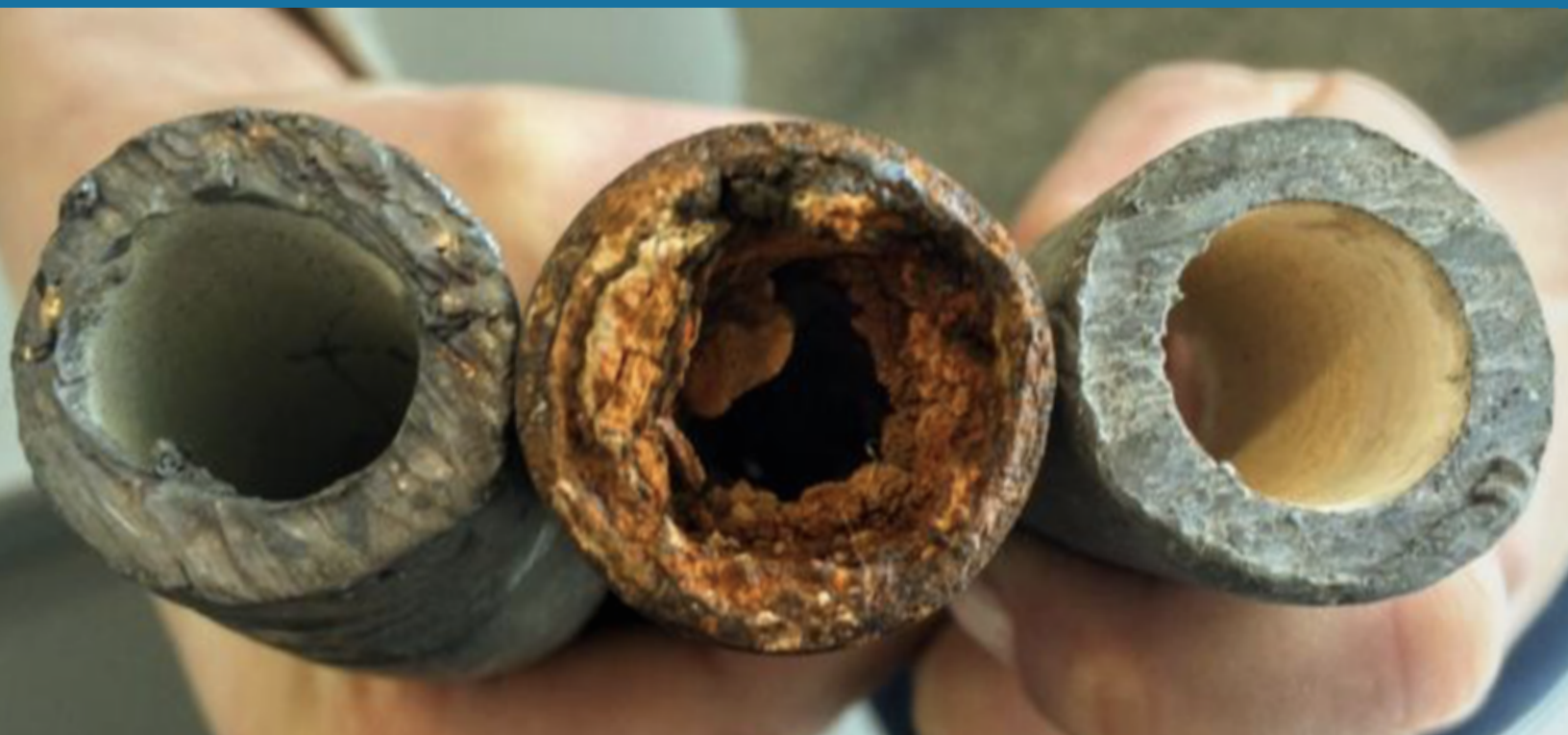
Non-Lead Service Lines

19,103

No Excuses, NYC:

Replace Lead Drinking Water Pipes Now

A Project of the **New York City Coalition to End Lead Poisoning** (NYCCELP)



The New York City Coalition to End Lead Poisoning (NYCCELP) is a coalition of advocates, doctors, and lawyers who first came together in the 1980s to create and pass Local Law 1 of 2004 to prevent childhood lead poisoning by remediating lead paint hazards in homes. Currently, NYCCELP convenes the Lead Roundtable to advocate for legislation and regulations that will close loopholes in Local Law 1 as well as create a citywide mandatory lead service line replacement program to address public health concerns about lead in drinking water. Members include Citizens' Committee for Children of New York, Cooper Square Committee, Earthjustice, The Frankel Law Firm, Legal Aid Society, Lead Poisoning Prevention and Treatment Program at the Montefiore Medical Center (Bronx NY), NRDC, New York Lawyers for the Public Interest, New York League of Conservation Voters Education Fund, Northern Manhattan Improvement Corporation, Tenants Political Action Committee, and WE ACT for Environmental Justice.

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No Excuses, NYC:
Replace Lead Drinking Water Pipes Now

A Project of the **New York City Coalition to End Lead Poisoning** (NYCCELP)

"Folks, this isn't complicated. Every person in this country deserves to be able to turn on a faucet and have clean drinking water."

Remarks by President Biden on the Administration's Efforts to Replace Lead Pipes and Provide Clean Drinking Water for All Americans,
FEBRUARY 3, 2023

LEAD IS A POISONOUS HEAVY METAL that causes significant adverse health effects, particularly in children. It is so poisonous that experts agree that there is no safe level of lead exposure. And yet, homes across the country have lead service lines that deliver drinking water from the water main in the street to residences.

The Natural Resources Defense Council (NRDC) estimates that there are between 9.7 to 12.8 million lead service lines throughout the country; EPA has recently estimated that there are 9.2 million lead service lines in the United States.[1] New York State does not yet have a complete, reliable inventory of lead service lines, but EPA has estimated that there are at least 494,000 lead service lines in the state, putting New York State as one of the top six states with the most lead service lines.[2]

The most effective way to prevent lead exposure is to replace these pipes in a speedy, efficient, equitable, and transparent manner. With record amounts of federal and state money available for this purpose, the moment to act is now. A number of states and cities have stepped up to do just that, and New York City needs to hop on that line.

This report explains what a lead service line is and the public health harms that they pose, particularly to fetuses and children. It also provides information on why the federal Lead and Copper Rule alone cannot be relied on to protect individuals from lead exposure.

This report outlines the extent of the problem in New York City: how many lead service lines there are that we know of to date and where those lead service lines are located. It also highlights the successful lead service line replacement program that Newark, New Jersey undertook with the help of political will; the change agents who carried out that political will; and Newark's strong, local legislation—all of which can serve as models for New York City.

Finally, an obstacle facing any water supplier with the will to complete this work is the means to do so. This report identifies the federal and state funding and financing sources that New York City can access to pay for a lead service line replacement program.

For the first time, the federal government is signaling to local and state partners that it stands ready to work together to accelerate the replacement of lead pipes in the next decade.[3] The public health threat is well known, and the funding and financing are available. We now need the political will, change agents, and a strong local law to meet this challenge. Simply stated, there are no excuses for missing this moment.

Lead Exposure at Any Level Presents Risk of Harm

LEAD IS A POISONOUS HEAVY METAL that can affect almost every organ and system in the human body, often with irreversible effects. People of all ages face health risks from lead exposure, but fetuses and young children are most susceptible to the adverse effects of lead. Some key findings related to the health impacts of lead include the following:

- Lead can cross the placental barrier of a pregnant person into the womb and harm the fetus. Lead exposure can cause miscarriage and stillbirths.[4]
- Even at very low levels once considered safe, lead can cause serious, irreversible damage to the developing brains and nervous systems of fetuses, babies, and young children.[5] Lead can decrease a child's cognitive capacity, cause behavioral problems, and limit the ability to concentrate—all of which, in turn, affect a child's ability to learn in school.[6]
- Even in otherwise healthy adults, lead exposure can cause adverse cardiovascular and kidney effects, cognitive dysfunction, elevated blood pressure, and infertility in both men and women.[7]

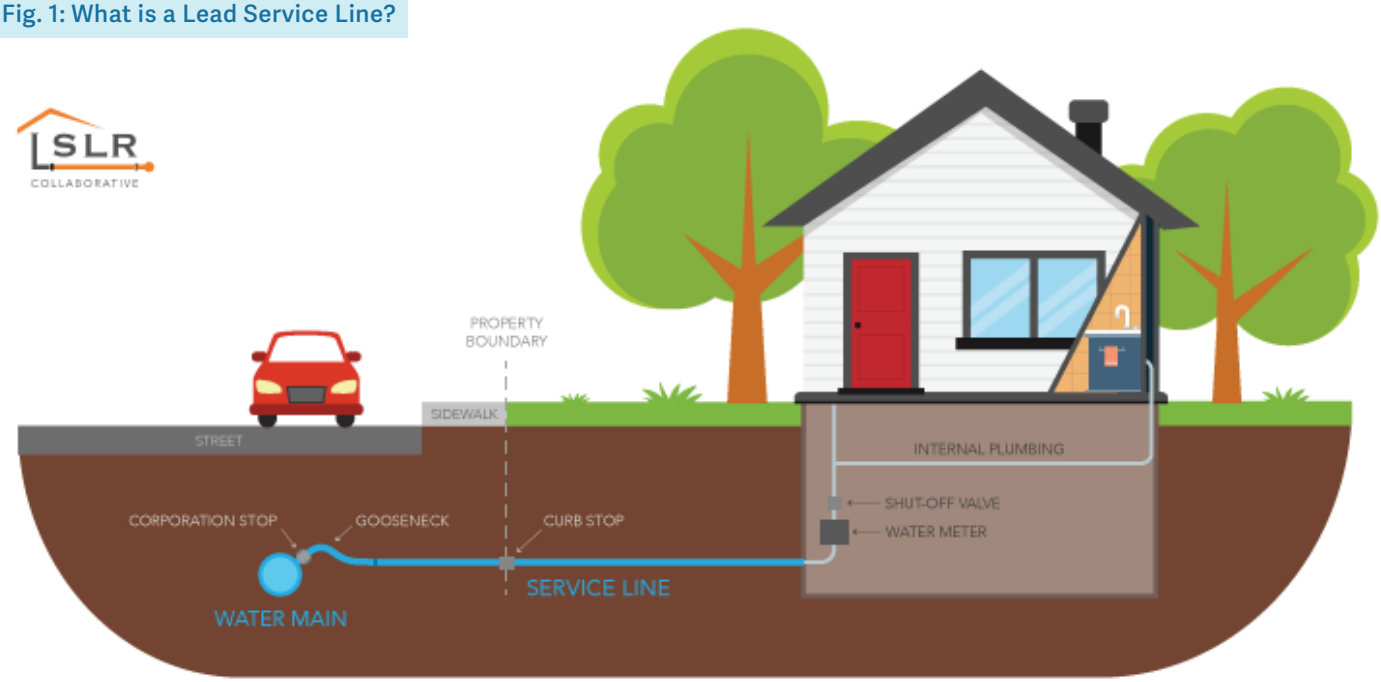
The CDC,[8] the American Academy of Pediatrics,[9] the World Health Organization,[10] and the EPA[11] all state that there is no safe level of lead exposure.

Lead Pipes Leach Lead into Drinking Water

DRINKING WATER IS ONE PATHWAY of exposure to lead. And lead pipes were heavily marketed in the last century; the lead pipe industry ran a successful decades-long campaign dating from early in the 20th century to persuade cities, plumbers, and water utilities to use lead service lines, and many cities required, strongly encouraged, and/or explicitly approved their use.[12]

What makes lead exposure particularly dangerous in drinking water is that it is colorless, tasteless, and odorless. Lead gets into drinking water from lead pipes and plumbing that contains lead. "Lead service lines" (LSLs) are the lead pipes that connect the city water mains under the street to residences (see Fig. 1 below).

Fig. 1: What is a Lead Service Line?



Graphic courtesy of Lead Service Line Replacement Collaborative

Lead leaches from lead service lines and indoor plumbing into water when a chemical reaction known as corrosion occurs. Lead exposure from drinking water is often episodic. It can be very low or zero one day, and extremely high the next day. Often, that is because small particles of lead known as "particulate lead" flake off from the inside of the pipe and cause a major spike in lead exposure.[13]

The significance of drinking water as an exposure pathway is often underestimated. According to the CDC, lead exposure risk from drinking water will vary depending on the individual, the chemical conditions of the water, and the amount consumed. EPA modeling has shown that water can constitute 10–80% of U.S. children's lead exposures with the highest levels for formula fed infants less than a year old.[14]

Despite a federal ban on lead pipes in 1986 and many states banning them even earlier, EPA does not require utilities to replace all legacy lead pipes left in the ground. Experts—including EPA—widely agree that today, the greatest contributor of lead into drinking water is lead service lines.[15] Pediatricians, health advocates, state regulators, and other experts also agree that therefore removing all lead service lines nationwide is a necessary part of any health-protective drinking water standard. EPA's National Drinking Water Advisory Council unanimously recommended that EPA require complete lead service line replacement by all water systems,[16] regardless of lead testing results (discussed below), and the American Water Works Association endorsed this recommendation.[17] However, EPA, in its Lead and Copper Rule (which regulates lead in drinking water), does not require water systems to completely replace lead service lines. This is part of what makes the rule completely ineffective in protecting the public from exposure to lead through water. It is therefore imperative that state and local governments take steps to protect their residents from this public health hazard.

Federal Law Has Failed to Protect Communities from Lead in Drinking Water

THE FEDERAL LEAD AND COPPER RULE under the Safe Drinking Water Act sets forth the mechanism by which public water systems must monitor and control lead in drinking water in an effort to protect public health.[18] But the Rule is not designed to, and thus does not, fully protect individuals from exposure to lead in their drinking water. As discussed in more detail below, it is also reactive and scientifically unsound, rarely requires lead service line replacement—the best available solution for reducing lead levels in drinking water—and misinforms the public.

The Federal Lead and Copper Rule Is Not Designed to Fully Protect Individuals from Exposure to Lead in Drinking Water

The Lead and Copper Rule is complex and, unlike most other federal rules, is not designed to protect the public from a dangerous contaminant. When EPA regulates a contaminant in drinking water, it first sets a maximum contaminant level goal, which is the level of the contam-

inant "at which no known or anticipated adverse effects on the health of persons occur" with "an adequate margin of safety."[19] For lead, the maximum contaminant level goal is zero because there is no safe level of lead. Once the goal is set, then most of the time EPA sets a "maximum contaminant level" (MCL). The MCL is an enforceable health-based limit designed to get as close to the maximum contaminant level goal as feasible.[20] Once the MCL is set, that is the maximum amount of the contaminant that can be in the water—if the amount exceeds the MCL, the water system is legally required to take immediate corrective action to lower it below the MCL. The exceedance constitutes a violation of the regulation, and a water system can be sued if it fails to lower it below the MCL.

EPA, however, chose not to set an MCL for lead in the Lead and Copper Rule. Instead, it promulgated a "treatment technique," which is a prescribed practice or set of practices designed to prevent adverse health effects from a contaminant.[21] A treatment technique sets out the steps that a water system must take with the intention of reducing lead levels in its water, but compliance with it *does not require that the water system reduce lead levels below a certain amount—or, in many cases, at all.*

The Lead and Copper Rule requires water systems to take the following steps:

- Take water samples from a disproportionately small number of sites (no more than 100, depending on the size of the water system) likely to have lead service lines.
- Determine whether more than 10% of the sites sampled have lead levels of 15 parts per billion (ppb) or higher (the "lead action level"). If they do, the water system has an "action level exceedance."
- If there is a lead action level exceedance, the water system must take corrective action, which includes corrosion control treatment,[22] public education, and may include lead service line replacement.

As long as the water system takes these steps, then it is complying with the Lead and Copper Rule even if those steps do not reduce the levels of lead in the drinking water. Thus, a lead action exceedance by itself, is not a violation of the Rule, meaning a water system cannot be sued about that (unlike an MCL exceedance). A water system also is not required to replace lead service lines when fewer than 10% of samples are below 15 ppb.[23]

The Federal Lead and Copper Rule Is Scientifically Unsound

The Lead and Copper Rule's method of "measuring" lead in drinking water, and requirements for when corrective action is required, are scientifically unsound and therefore do not protect the public. The Lead and Copper Rule requires that water systems sample water from as few as five sites (for small systems) and up to 100 sites (for the largest ones),[24] and at least half of the samples need to be from sites that are thought to contain lead service lines.[25]

While semi-annual or annual testing is required for some systems, many only have to test every few years, and some test only once every nine years. This limited and infrequent sampling gives only a snapshot of lead levels at that exact moment, and no further sampling is required, even though lead levels are highly variable and levels

in samples collected from the same tap may vary dramatically from one day to the next. Therefore, just because lead levels are low at a site when the sample is taken does not mean that lead levels are always low at that site.

As noted above, there is no safe level of lead in drinking water. Because water systems are not required to take systemwide corrective action unless 10% or more of sites sampled exceed 15 ppb,[26] this means that even if *all* the sites sampled showed lead levels at 14 ppb, no corrective action would be required. Nor would such action be required if 9% of the samples had astronomically high levels such as 1,000 ppb, but no other samples had lead levels at 15 ppb or higher. Given the 8.5 million population of New York City, this can amount to disregarding high lead levels in the water of over 750,000 New Yorkers.

Even a determination that there is no lead action level exceedance is unreliable for a number of reasons. First, the testing protocols are not designed to capture the highest levels of lead at a site, which is contrary to the intention of the Rule.[27] Second, it is well known that some water systems game the system with regards to sampling. For example, some samplers "flush" the water (that is, they let the faucets run) before testing, so that the lead levels will test at a lower level than if they did not flush the system.[28] And some water systems take samples from more sites than the minimum required, which can "dilute" the sampling pool and keep the percentage of sites testing over 15 ppb to below 10%, thus avoiding an action level exceedance.[29]

Events in Clarksburg, West Virginia, in 2021 demonstrate that the design of the Lead and Copper Rule is ineffective for preventing lead exposure and even lead poisoning. EPA declared an emergency in Clarksburg, West Virginia, after extremely high lead levels (over 1,000 ppb) were found in the water of homes of three lead-poisoned children.[30] These samples were taken outside of Lead and Copper Rule testing. Even if these samples had been taken through Lead and Copper Rule sampling, however, such high samples in those three homes would not necessarily have required the water system to take corrective action because Clarksburg was required to sample only a minimum of 30 sites. Thus, the three sites with very high lead levels would not themselves have constituted a lead action level exceedance (because 3 does not constitute more than 10 percent of the number of sites required to be tested (30)). And as mentioned before, even if additional sampling was done and the system exceeded the action level, the exceedance of the action level would not constitute a violation of the Lead and Copper Rule. That lead exposure severe enough that EPA deems it an emergency would not constitute a violation of the Lead and Copper Rule demonstrates its ineffectiveness.

Testing in Clarksburg also shows the unreliability of sampling permitted under the Lead and Copper Rule. With respect to variability, testing at one residence on three different dates over five weeks showed the following lead levels: 285.2 ppb, 30 ppb, and 2,130 ppb.[31] With respect to how "gaming" can affect results, on one of those dates lead levels were measured before and after flushing.[32] The 2,130 ppb lead level was reduced to 163.5 ppb on the same day after flushing. While these samples all exceed 15 ppb, they exemplify the enormity of variability in lead levels depending on when and how a sample is taken. Such variability in oth-

er instances can mean the difference between exceeding the action level and not doing so.

The Federal Lead and Copper Rule Does Not Require the Best Available Solution to Combat Lead in Drinking Water

As stated above, the best way to reduce lead in drinking water is to replace lead service lines. The current Lead and Copper Rule, however, does not mandate this. Even when there is a lead action level exceedance, the Lead and Copper Rule does not mandate the immediate use of the most effective corrective measures. Removing a lead service line means that the biggest source of lead is permanently removed and can no longer cause lead contamination. But that is not what the Lead and Copper Rule requires. The first step that water systems must take after a lead action level exceedance is to install or optimize corrosion control. Studies, however, have shown that lead service lines are vulnerable to fluctuations in lead concentrations in numerous ways that corrosion control cannot fix or account for. Physical disturbances, such as meter installation or replacement, service line leak repair, partial service line replacement, or significant street excavation near homes with lead service lines, can instigate spikes of lead in water.[33] Varying water use patterns between homes, seasonal variables such as water temperature, and differing types and ages of plumbing materials also contribute to potential lead exposure that cannot be ameliorated by corrosion control.[34]

Only if water systems still exceed the lead action level with optimized corrosion control must they begin replacing lead service lines. But given the formula for a lead action level exceedance, and loopholes that permit water systems to halt lead service line replacement after they have started, only a small number of systems are ever required to replace them.[35]

The Federal Lead and Copper Rule Misinforms the Public

Because the Lead and Copper Rule is not an MCL, but rather a complex treatment technique, the public is often confused about the risk of exposure to lead in their drinking water when they receive information required under the Rule. Water systems regularly distribute documents to the public that indicate that they are "in compliance with" the Lead and Copper Rule and use unfamiliar terms such as "action level" and "action level exceedances." Understandably, people often construe "compliance" as meaning they are not exposed to harmful levels of lead.[36] And EPA itself also does not affirmatively inform the public about the widespread nature of lead in drinking water, the shortcomings of the Lead and Copper Rule, or measures that people can take to decrease their and their family's exposure to lead.

State and Local Governments Must Remove All Lead Service Lines to Protect Their Residents from Lead in Drinking Water

Because the Lead and Copper Rule is failing to protect people and communities from exposure to dangerous levels of lead—in particular, by failing to require the removal of lead service lines—

it is incumbent on states and localities to take steps to adequately protect their residents from this dangerous threat to their health. New York City is well positioned to take on the removal of lead service lines because, as discussed below, it has begun to inventory and map the locations of service lines.

Lead Service Lines in New York City

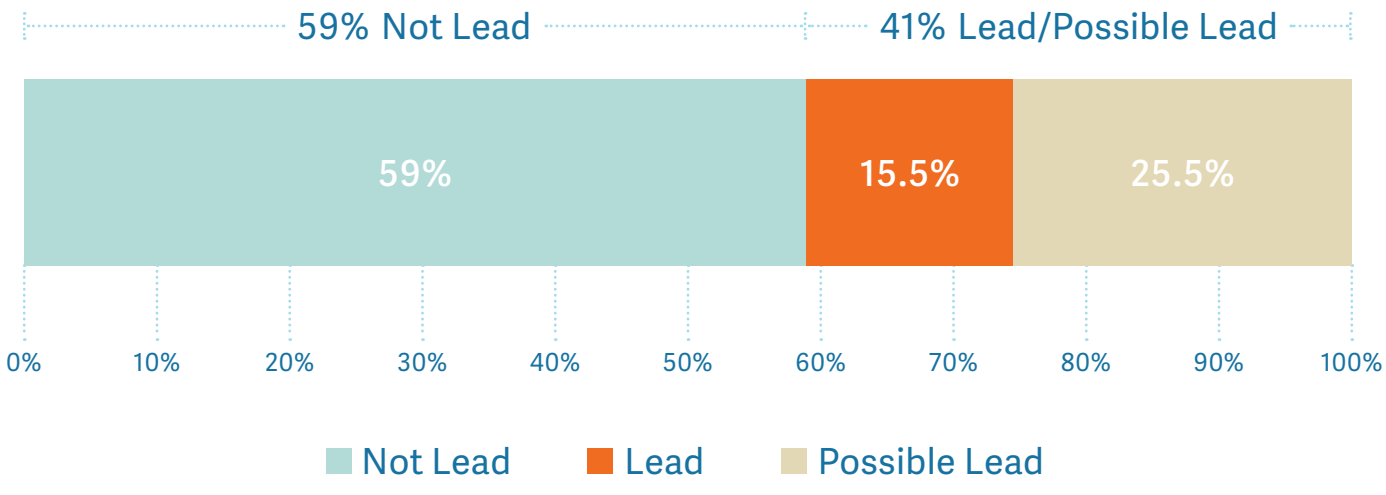
NEW YORK CITY'S DRINKING WATER

comes from 18 reservoirs spread across a 2,000 square-mile watershed in upstate New York.[37] Every day, more than a billion gallons of fresh drinking water are delivered to 9 million residents (about half the population of New York State) at some 857,000 properties via service lines.[38] NYC has the largest unfiltered water supply in the United States,[39] and its water is delivered from the upstate reservoir system virtually lead-free.[40] In 1961, NYC banned lead service line installations and in 1987, the use of lead solder in plumbing systems.[41]

The water supplier for NYC is the Department of Environmental Protection (DEP), the largest of over 2,800 public water supply systems registered with the New York State Department of Health.[42] While water suppliers maintain a record of connection to the system for all of their customers, knowing the material of any given service line is a challenge due to poor recordkeeping and repairs over the years which might not have been properly recorded.[43] DEP records maintain information about the material that the drinking water service line is made from.[44] However, until recently, information about how complete DEP's records were was not public knowledge.

In April 2019, the NYC Council enacted NYC Local Law 65, which requires DEP to compile an inventory of each service line and the material it was made of and to publish this information both as a data set and an online interactive map. In August 2021, the inventory and maps were released. The law also requires DEP to update the data every six months based on its "best available records."

Fig. 2: NYC Service Lines Citywide by Material



According to February 28, 2023 data from DEP,[45] here is what is known (and not known) about service lines in NYC:

- Citywide:
  - 59% of water service lines at 504,215 properties are "Not Lead"
  - 41% of water service lines at 351,870 properties are "Lead/Possible Lead" meaning that they are either "Lead"[46] as confirmed by DEP records[47] or "Possible Lead"[48] as DEP has no record or conflicting records about the material type;
    - 16% of water service lines at 132,988 properties are "Lead"
    - 26% of water service lines at 218,882 properties are "Possible Lead"

Citywide Population Estimate

When the above property addresses are matched against consumer and voter databases[49], we are able to better understand how many households and individuals are receiving water from a service line that is Lead/Possible Lead as such:

- Estimated number of Lead/Possible Lead Households: 902,974
  - Lead Households: 318,812
  - Possible Lead Households: 584,162
- Estimated number of Individuals in Lead/Possible Lead Households: 1,845,119 or 21% of the NYC population[50]
  - Individuals in Lead Households: 669,218
  - Individuals in Possible Lead Households: 1,175,901

Fig. 3: Number of Estimated Lead/Possible Lead Households and Population

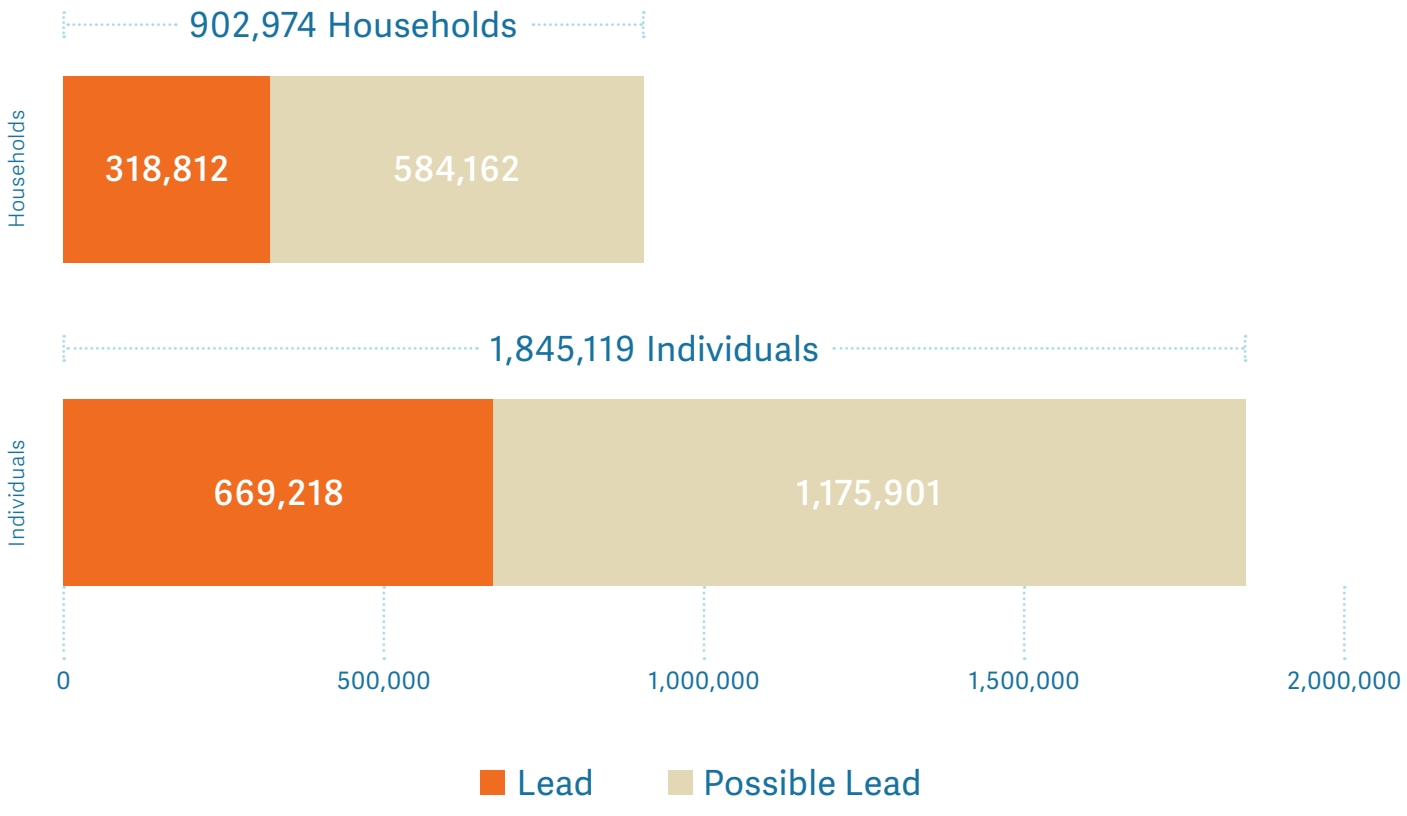


Fig. 4: Lead/Possible Lead Service Lines by Borough

In an old city like New York, it is not surprising to find the Lead/Possible LSLs all over. Compared to the citywide Lead/Potential LSL average of 42%, two boroughs are below the average—Staten Island (39%) and Queens (40%),—while three are at or above the average—Brooklyn (46%), Manhattan (44%), and the Bronx (42%).

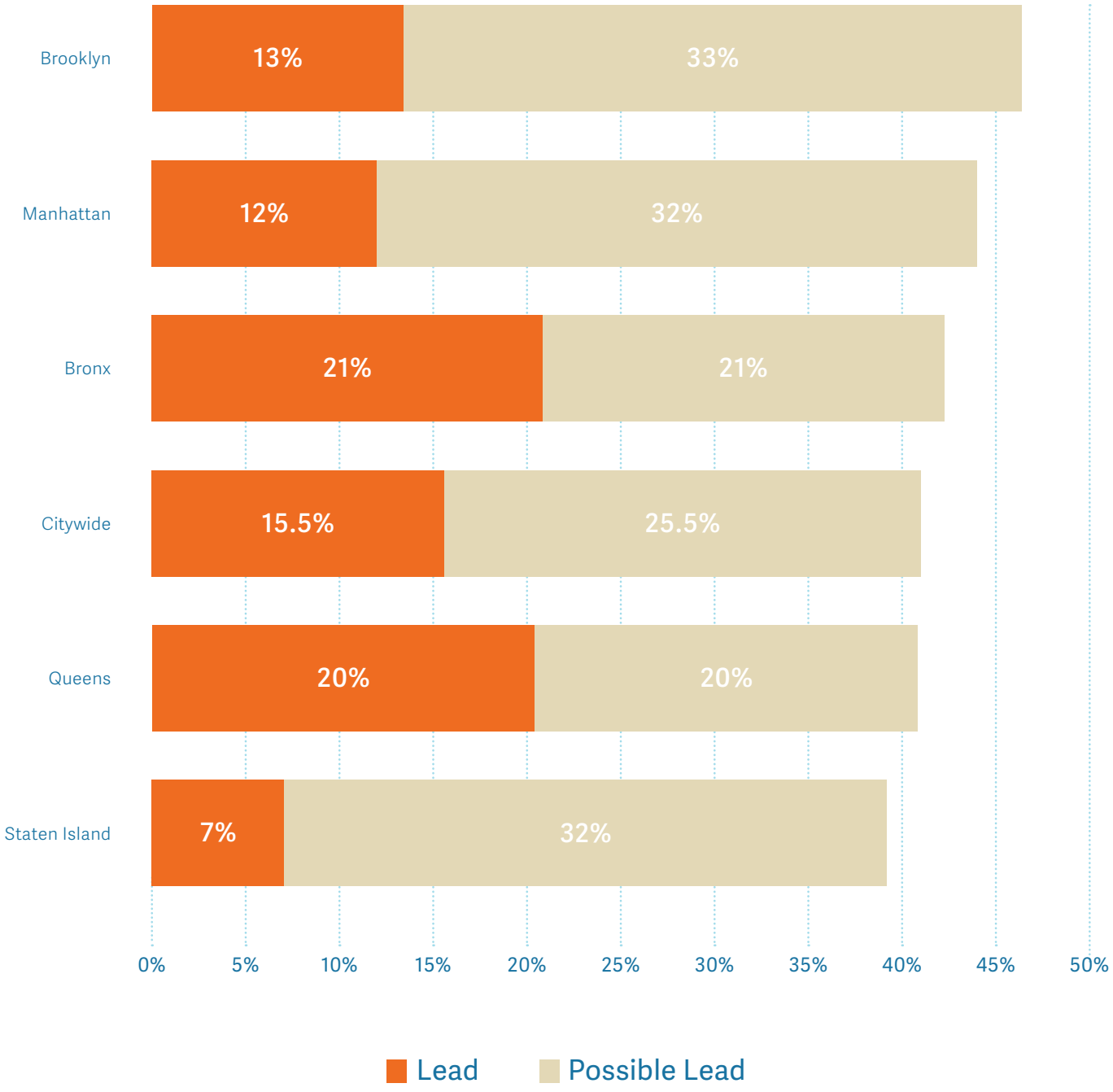


Fig. 5: Lead Service Line "Hot Spots" by Neighborhood

A closer look at the data at the Neighborhood level reveals “hot spots” within each Borough. For instance, while Staten Island may be at the bottom of the list as a Borough, a look at the neighborhood-scale data offers a different picture.

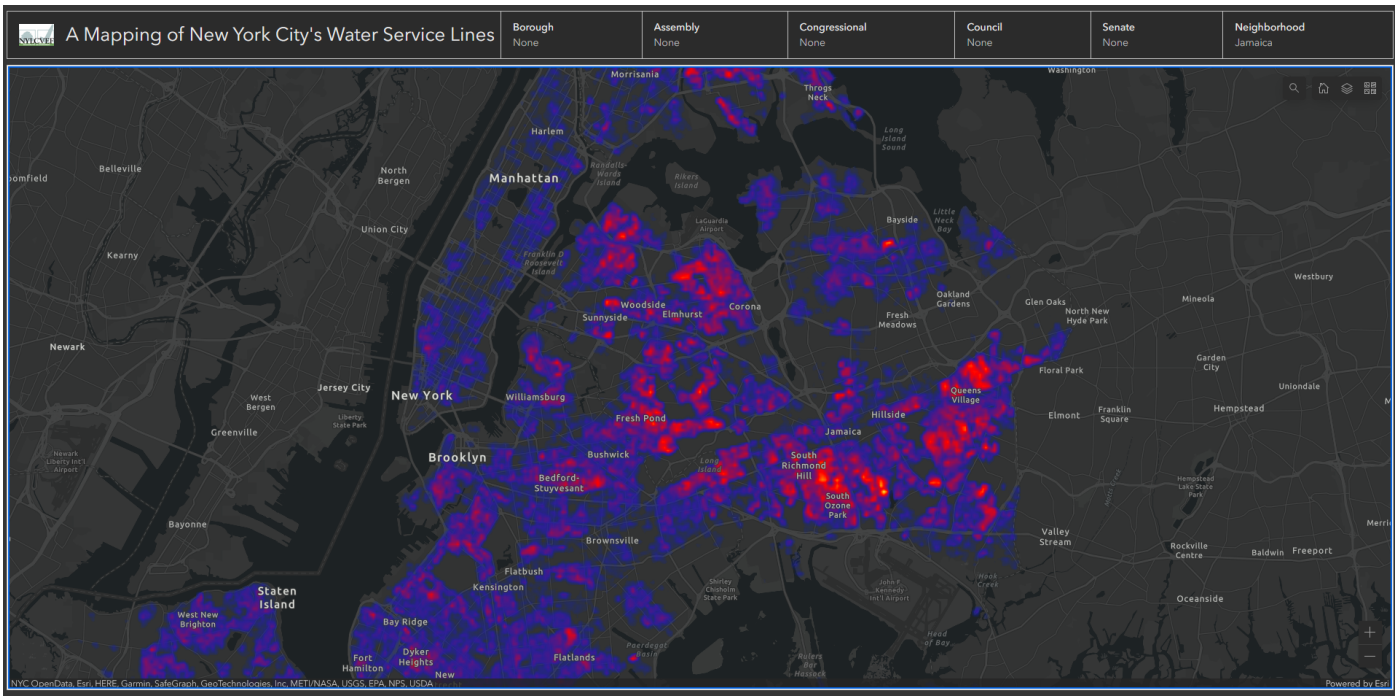


Fig. 6: Lead Service Line "Hot Spots": Jamaica

A view of the Jamaica, NY, neighborhood which shows clusters of Lead/Possible LSLs:[52]

Fig. 7: DEP Service Line by Neighborhood

NYC Neighborhoods[51]

The following table shows the DEP service line data broken down by Neighborhood. Port Richmond in Staten Island has the highest rate (60.67%) in the entire city while Fresh Meadows in Queens has the lowest rate (20.56%)

RANK	BOROUGH	COMMUNITY	LEAD / POSSIBLE LEAD %	LEAD / POSSIBLE LEAD PROPERTIES
1	Staten Island	Port Richmond	60.67%	9,838
2	Manhattan	East Harlem	52.60%	1,608
3	Brooklyn	Coney Island - Sheepshead Bay	51.53%	17,111
4	Queens	Jamaica	46.30%	22,774
5	Staten Island	Willowbrook	45.70%	9,500
6	Bronx	Hunts Point - Mott Haven	45.65%	3,351
7	Brooklyn	Borough Park	45.58%	15,183
8	Bronx	Crotona - Tremont	45.52%	3,646
9	Manhattan	Greenwich Village - Soho	45.26%	2,140
10	Brooklyn	East Flatbush - Flatbush	45.15%	13,202
11	Bronx	Kingsbridge - Riverdale	45.13%	2,225
12	Manhattan	Union Square - Lower East Side	44.97%	2,195
13	Queens	Ridgewood - Forest Hills	44.91%	15,027
14	Brooklyn	Canarsie - Flatlands	44.40%	15,198
15	Brooklyn	Sunset Park	44.14%	5,208
16	Bronx	Pelham - Throgs Neck	44.09%	13,732
17	Brooklyn	Williamsburg - Bushwick	43.98%	8,207
18	Brooklyn	Bedford Stuyvesant - Crown Heights	43.61%	13,159
19	Brooklyn	Greenpoint	43.00%	5,273

RANK	BOROUGH	COMMUNITY	LEAD / POSSIBLE LEAD %	LEAD / POSSIBLE LEAD PROPERTIES
20	Manhattan	Chelsea - Clinton	42.99%	2,506
21	Brooklyn	Downtown - Heights - Slope	42.87%	10,503
22	Bronx	High Bridge - Morrisania	42.86%	2,453
23	Manhattan	Central Harlem - Morningside Heights	42.83%	2,146
24	Manhattan	Upper East Side	42.64%	2,335
25	Brooklyn	East New York	42.53%	9,789
26	Manhattan	Lower Manhattan	42.36%	355
27	Brooklyn	Bensonhurst - Bay Ridge	41.99%	11,074
28	Queens	Long Island City - Astoria	41.61%	8,787
29	Queens	Southwest Queens	41.50%	18,886
30	Manhattan	Gramercy Park - Murray Hill	40.64%	1,403
31	Queens	West Queens	40.23%	17,761
32	Staten Island	Stapleton - St. George	39.89%	11,227
33	Queens	Southeast Queens	37.98%	17,116
34	Manhattan	Washington Heights - Inwood	37.25%	1,649
35	Manhattan	Upper West Side	37.21%	1,723
36	Brooklyn	Rockaway	36.37%	5,461
37	Bronx	Fordham - Bronx Park	34.15%	3,093
38	Queens	Flushing - Clearview	33.71%	12,845
39	Bronx	Northeast Bronx	33.46%	7,915
40	Staten Island	South Beach - Tottenville	28.02%	16,599
41	Queens	Bayside - Little Neck	25.99%	4,659
42	Queens	Fresh Meadows	20.56%	3,008
			GRAND TOTAL	**351,870**

Fig. 8: Neighborhoods with a High % of Lead/Possible LSLs and Elevated Blood Lead Levels (BLLs)

RANK	TOP 10 NEIGHBORHOODS (LEAD/POSSIBLE LSL'S)	TOP 10 NEIGHBORHOODS (BLL'S)
1	Port Richmond	Greenpoint
2	East Harlem	Borough Park
3	Coney Island - Sheepshead Bay	East Flatbush - Flatbush
4	Jamaica	Coney Island - Sheepshead Bay
5	Willowbrook	Williamsburg - Bushwick
6	Hunts Point - Mott Haven	Southwestern Queens
7	Borough Park	Fordham - Bronx Pk
8	Crotona - Tremont	Bensonhurst - Bay Ridge
9	Greenwich Village - Soho	Jamaica
10	East Flatbush - Flatbush	Southeast Queens

The only way to know if someone has been poisoned by lead is by a blood test. Almost half of the neighborhoods with the highest percentage of Lead/Possible LSLs are also neighborhoods with the highest percentage of elevated blood lead levels (BLLs) for children under the age of six, according to the latest data from the NYC Environmental and Health Data Portal.[53]

Often, children who live in older homes may get multiple sources of exposure including from lead paint, lead soil, and lead in tap water. While it is not possible to link any one source of exposure to poisoning, the prevalence of lead service lines in neighborhoods where there are also high elevated blood levels in children merits a closer look by DEP and the NYC Department of Health.

Thanks to the work of the City Council, NYC is ahead of all other water suppliers in the state of New York as it already has an inventory and map. What New York City needs now is a plan to systematically ensure that all lead service lines are replaced quickly, wisely, efficiently, equitably, affordably, and transparently and to confirm if there is lead present in the sites currently classified as Possible LSLs. NYC has an opportunity to lead other large water systems in lead service line removal. For inspiration on how to craft its program, it need only look across the Hudson River to the city of Newark, New Jersey, which achieved amazing results in a brief period of time.

Fig. 9: DEP Service Line by NYC Council District

NYC Council Districts:

The following table shows the DEP service line data broken down by NYC Council district. Council District 48 has the highest rate in the city (52.61%) while Council District 51 has the lowest (25.74%).

COUNCIL DISTRICT	COUNCILMEMBER	LEAD / POSSIBLE LEAD %	LEAD / POSSIBLE LEAD PROPERTIES
48	Inna Vernikov	52.61%	9,441
49	Kamillah Hanks	52.21%	17,260
28	Adrienne E. Adams	49.09%	14,637
8	Diana Ayala	48.62%	2,616
46	Mercedes Narcisse	47.57%	15,498
27	Nantasha Williams	47.42%	16,392
44	Kalman Yeger	46.26%	8,187
18	Amanda Farías	45.79%	5,104
45	Farah N. Louis	45.59%	9,776
34	Jennifer Gutiérrez	45.56%	6,598
35	Crystal Hudson	45.34%	5,420
3	Erik Bottcher	45.27%	3,265
2	Carlina Rivera	45.15%	2,039
38	Alexa Avilés	44.88%	7,244
17	Rafael Salamanca Jr.	44.85%	3,872
37	Sandy Nurse	44.82%	8,111
36	Chi Ossé	44.63%	7,076
9	Kristin Richardson Jordan	44.56%	2,490
21	Francisco Moya	44.49%	5,839
11	Eric Dinowitz	44.38%	3,992
43	Justin Brannan	44.31%	10,335
15	Oswald Feliz	44.24%	3,207
30	Robert F. Holden	44.16%	13,985

COUNCIL DISTRICT	COUNCILMEMBER	LEAD / POSSIBLE LEAD %	LEAD / POSSIBLE LEAD PROPERTIES
1	Christopher Marte	43.97%	2,198
5	Julie Menin	43.86%	1,361
41	Darlene Mealy	43.74%	6,130
39	Shahana Hanif	42.42%	8,417
47	Ari Kagan	41.88%	7,854
16	Althea Stevens	41.79%	1,662
33	Lincoln Restler	41.62%	5,786
26	Julie Won	41.13%	5,405
25	Shekar Krishnan	40.90%	4,415
13	Marjorie Velázquez	40.70%	9,852
42	Charles Barron	40.48%	6,256
40	Rita Joseph	40.07%	3,544
50	David Carr	39.99%	17,949
14	Pierina Ana Sanchez	39.90%	1,650
29	Lynn Schulman	39.19%	5,642
4	Keith Powers	39.09%	2,158
7	Shaun Abreu	38.26%	1,163
22	Tiffany Cabán	37.94%	6,797
10	Carmen De La Rosa	36.79%	916
6	Gale A. Brewer	36.17%	1,378
32	Joann Ariola	36.02%	10,384
31	Selvena N. Brooks-Powers	34.25%	9,399
19	Vickie Paladino	33.52%	12,021
20	Sandra Ung	33.44%	5,439
23	Linda Lee	33.02%	9,257
12	Kevin C. Riley	30.53%	5,553
24	James F. Gennaro	26.34%	4,945
51	Joseph C. Borelli	25.74%	11,955
	GRAND TOTAL	**41%**	**351,870**

Case Study: Newark NJ Removed All Lead Service Lines in Less Than Three Years

THE RESULTS THAT WERE ULTIMATELY achieved by a lead service line replacement program in Newark, New Jersey, warrant considering Newark's approach as a model for other water systems. After initially denying that it had a lead problem, resisting calls for prompt action, and fighting a lawsuit that NRDC filed on behalf of local schoolteachers, Newark replaced all 23,000 of its known lead service lines. And it replaced the lead service lines with speed—in under three years.

To get there, in 2019, the city adopted an ordinance that mandated the replacement of lead service lines and provided full funding for the construction.[54] These provisions led to a very successful program for *all* residents that did not get bogged down in debates about ownership and funding.[55] [56] Some of the provisions of that ordinance are discussed below.

Mandating Lead Service Line Replacements

Newark's lead service line replacement program was simple and straightforward. It required all property owners to replace lead service lines on their property. They could do that by either: (1) hiring a contractor to do the work at the property owner's expense; or (2) taking advantage of the City's replacement program that paid for the replacement of the entire service line, including the portion located on private property. Newark's mandatory program led to replacements of all of its lead service lines with speed and efficiency.

The Newark ordinance contained additional provisions that ensured the program's success. One was to allow occupants, not just the property owner, to grant consent to the service line replacement.[57] Like NYC, Newark has a high percentage of rental housing stock and many absentee landlords could have stymied effective outreach and ultimately failed to give consent. Giving occupants of rental units the ability to consent to the work gave them the power to protect their health and ensured success of the program.

Another provision required a property owner to provide a Certificate of Occupancy or Certificate of Code Compliance that includes the service line replacement when selling or transferring ownership of the structure. This simple measure further helped to ensure the success of the program—lack of the documentation could hold up a sale.

Key Provisions of an Effective Lead Service Line Replacement Ordinance

AS DISCUSSED ABOVE, NEWARK, New Jersey recently replaced all of its lead service lines in just under three years. Key to this speedy success was the city's adoption of an ordinance that mandated the replacement of all lead service lines.[58]

Because it was so effective and successful, the Newark ordinance serves as a model for other municipalities,[59] such as New York City, and contains several key provisions that New York City should include in such an ordinance of its own:

- A prohibition of lead or galvanized service lines or connectors made of lead, making it clear the priority to remove this public health threat.
- A requirement that all property owners replace their lead service lines by a certain date and with a yearly timetable. Property owners can do that by either (1) hiring a contractor to do the work (at the property owner's expense) or (2) taking advantage of the city's replacement program, under which the city covers the full cost.
- A provision for full funding by the municipality, from one or more funding sources (see the discussion of funding sources in this report).
- A provision that occupants of a residence can consent to the work rather than only the property owner.
- A requirement that a property owner, upon the transfer of a property, demonstrate that the lead service line was replaced in order to receive a Certificate of Occupancy or a Certificate of Compliance, or that the property owner applied for the water utility to replace it, and the replacement has not yet been completed.

Communities that adopt an ordinance with these simple provisions can be as successful as Newark in replacing all of their lead service lines.

Lead Service Line Programs That Fail

Voluntary Lead Service Line Replacement Programs and a Focus on "Ownership" of Lead Service Lines Do Not Protect the Public Health

Unlike Newark, most water systems do not mandate the replacement of lead service lines, and instead have voluntary lead service line replacement programs. Voluntary programs, however, are inefficient and do not address the imperative that *all* lead service lines need to be replaced. In other words, they don't solve the problem.

And some water systems' voluntary programs are set up where residents apply for the replacement but have to pay for replacing the portion of the service line under the residents' private property. Many water systems justify this cost sharing by claiming that the city "owns" only the part of the line that runs from the street to the curb or to the property line and that the remaining line from the curb to the house belongs to the property owner.

This "ownership" claim may not have any legal basis. Moreover, low-income residents will not be able to afford the replacement—which often costs thousands of dollars per service line—and most landlords are unlikely to pay for it. This will perpetuate a two-tiered system: people with more means will be able to remove the threat that lead service lines present, while people with less means will not, a scenario that disproportionately impacts people of color.[60]

Fig. 10: Service Line Location by Material

LOCATED UNDER PRIVATE PROPERTY	
MATERIAL	# OF SERVICE LINES
Non-Applicable	680
Lead	132,826
Possible Lead	209,779
Not Lead	499,393
TOTAL	**842,678**

LOCATED UNDER CITY PROPERTY	
MATERIAL	# OF SERVICE LINES
Non-Applicable	771
Lead	162
Possible Lead	9103
Not Lead	4,822
TOTAL	**14,858**

New York City is no exception. New York City does not claim responsibility for the vast majority of lead service lines. Per the DEP LSL FAQ site, "Water service lines in New York City are owned by the individual property owners, from the water main in the street to the meter in the home."[61] This means that of the potential lead service lines identified in its 2023 inventory, which the NYC Council required DEP to compile, DEP asserts that it is only obligated to replace the LSLs on city-owned properties. That's 9,265 Lead or Possible LSLs, or a mere 2.6%, and not any of the other (at least) 351,870, or 97.4% of the remaining potential lead service lines. DEP, however, has failed to provide any basis for this assertion, despite advocates' repeated requests for that information.[62]

The ownership theory is a distraction and an unnecessary impediment to addressing the compelling public health threat that lead service lines present. Water systems usually at least control the full service line from the water main in a street to an individual house and sometimes (as in Chicago), the use of lead in service lines was mandated. The need to replace lead service lines—the biggest contributor to lead in drinking water—is now a public health imperative.

Partial Lead Service Line Replacement

Replacing only part of a lead service line—the part that a city claims it owns—is not a step forward in reducing lead in drinking water. Indeed, partial replacement can increase the amount of lead that gets into drinking water. The replacement construction process can dislodge the lead in the part that is not replaced, sending even more lead into drinking water. Additionally, if the remaining lead pipe is fused together with another metal, such as copper, the two different metals can spur a chemical reaction called galvanic corrosion, which can cause further corrosion to the pipe, increasing the risk of lead-contaminated drinking water.[63] EPA's Science Advisory Board

found that partial lead service line replacements "have not been shown to reliably reduce drinking water lead levels in the short term . . . [and are] frequently associated with short-term elevated drinking water lead levels . . . suggesting the potential for harm, rather than benefit during that time period."[64]

Replacing an entire lead service line is not only more protective of public health and more efficient, but it also allows for the use of federal funds. Because of the downsides of partial replacement, EPA's guidance for using federal funding provided by the Infrastructure Investment and Jobs Act (IIJA) and the Treasury Department's rules for using American Rescue Plan Act funding (both of which are discussed in more detail below) prohibit funding partial lead service line replacements. Congress also prohibited partial lead service line replacements from being funded under the EPA grant program for reducing lead in drinking water. Even the Trump administration's otherwise flawed revisions to the Lead and Copper Rule did not allow a partial lead service line replacement to "count" as a replacement if a utility was required to replace lead service lines after a lead action level exceedance.[65]

The Economics of Lead Service Line Replacement

Cost of Replacing Lead Service Lines

We expect the cost of replacing lead service lines in New York City to be no more than $10,000 per LSL and very likely $8,800 per LSL based on New York City's recent experience. NYC DEP recently replaced approximately 600 lead service lines in Brooklyn, Queens, the Bronx, and Staten Island through a pilot program for low-income homeowners funded by the State's Clean Water Infrastructure fund.[66] DEP received $5.3 million for this project, which means that the average cost of each replacement was approximately $8,800. This cost, however, is higher than EPA or industry average cost estimates; EPA says the average cost of full lead service line replacement is $4,700,[67] while the American Water Works Association estimates the average cost of planned full lead service line replacement at $5,204,[68] and the NYSDOH[69] and Newark[70] estimate the cost at between $5,000 and $10,000. Based on our estimate, the cost to replace New York City's known lead service lines will be at least $1.35 billion, and the cost will be higher depending on how many Possible LSLs are discovered.

Achieving Economies of Scale

A mandatory replacement program can reduce the costs for lead service line replacements through economies of scale. Contractors can be assured of a certain number of replacements, and proceed neighborhood-by-neighborhood, block-by-block, promoting the efficient placement of personnel and equipment. These results will permit contractors to charge less for the replacement of each service line. One reason why NYC's estimated cost to replace lead service lines may be high is that it apparently has used a hopscotch approach of replacing individual

service lines one-by-one rather than the more efficient and cost-effective method of planning and deploying equipment and personnel to replace all the lead service lines on entire streets and neighborhoods simultaneously.

Multiple Sources of Funding Available for Lead Service Line Replacements

Multiple federal, state, and local funding mechanisms are available to help pay for lead service line replacements. Some of the federal, state, and local programs are discussed briefly below and are set out more fully in Appendix A of this report.

Federal Funding Sources

Chief among the federal funding sources is $15 billion in the federal Bipartisan Infrastructure Law, known formally as the Infrastructure Investment and Jobs Act (IIJA), enacted in November 2021.[71] This is the largest amount of funding ever from the federal government devoted specifically to address the public health problem of replacing lead service lines, making **now** the time for state and local governments to act. This funding is available to states as grants and low-cost loans. New York State is slated to receive at least $113.7 million of these federal IIJA funds in this first year of the program; that funding is likely to hold for each of the next four years of the program, for a total amount of $568 million over five years.[72] The NYS Environmental Facilities Corporation receives these funds from EPA and, following an application and review process, distributes them to water systems through the Drinking Water State Revolving Fund.

Some other key federal funding sources for lead service line replacements include annual Drinking Water State Revolving Funds; Water Infrastructure Finance & Innovation Act; Water Infrastructure Improvements for the Nation Act; HUD Community Development Block Grants; and American Rescue Plan Act (ARPA).[73]

State Funding Sources

New York State funding sources available for lead service line replacements include the Drinking Water State Revolving Fund; the Clean Water Infrastructure Act; and the 2022 Clean Water, Clean Air, and Green Jobs Environmental Bond Act.

Local Financing and Funding Sources

Local sources of financing and funding for NYC include direct appropriations from the New York City Council; the issuance of New York City municipal bonds,[74] and water rates.

Water rates (water fees paid by the utility customers) can likely be used to pay for lead service line replacement in NYC. Indeed, the New York Court of Appeals, the highest court in the state, recently upheld the broad authority of the New York City Water Board and the New York City Department of Environmental Protection to set water rates and determine what they will be used for. The Court clarified that water rates may be determined "in accordance with public policy goals" instead of or along with economic goals.[75]

As this report demonstrates, greatly reducing the amount of lead in drinking water is an important public health policy goal. And

implementing a lead service line replacement program designed to accomplish complete lead service line replacement right now would also serve economic goals. A significant portion of the cost could be funded through the one-time IIJA federal funding offered now, and a lot of the cost could be offset through achieving economies of scale, as explained above.[76]

LSL Replacements as Capital Improvement Expenses

Water utilities like New York City's Department of Environmental Protection can, and should, include lead service line replacements in their capital improvement plans, just as they do with water main replacements and other drinking water infrastructure projects. This is not a separate funding source (the funding sources are set forth above), but rather represents a paradigm shift for current drinking water infrastructure prioritization. Water utilities generally do not include lead service line replacements in their capital improvement plans, thus often leading to the complaint that there is no adequate funding for those projects. Including lead service line replacements in capital improvement plans demonstrates that water utilities are committed to that work and will fund it in one or more ways set out above. Removing sources of lead from our drinking water is paramount for public health and should be an utmost priority in asset management planning.

Conclusion

WE KNOW LEAD IS A POISONOUS heavy metal that can cause significant public health effects, and there is no level at which exposure to lead is safe. Ingesting drinking water is a significant pathway of lead exposure; lead can get into drinking water when it leaches from lead service lines.

We are asking the New York City Council to follow the lead from Newark, New Jersey, and pass a local law mandating the replacement of all lead service lines in the city within ten years, at little or no expense to New Yorkers. (Model ordinance is attached as Appendix B).

We know what the problem is, what the solution is, and that funding is available to solve it. We just need the political will to get this job done.

Federal Funding[1]

- Bipartisan Infrastructure Law (BIL) (also known as the Infrastructure Investment & Jobs Act (IIJA)), enacted in November 2021 $15 billion to the States for lead service line replacements.
  - Drinking Water State Revolving Fund (DWSRF) General Supplemental - $11.7 billion for drinking water infrastructure, including lead service line replacements: combined_srf-implementation-memo_final_03.2022.pdf (epa.gov), pp. 10, 30-35.
  - Funds are distributed to the states by USEPA.
  - NYS will distribute the funds through its DWSRF program.
  - NYS is slated to receive $113.7 million in this first year of the BIL 5-year funding. We expect this amount to be awarded each of the four following years of the BIL funding for lead service line replacement, for a total of $568.5 million.
  - 49% of the $15 billion in BIL funding for lead service line replacements is required to be distributed as principal forgiveness or grants to "Disadvantaged Communities" (as that term is defined by the state). (This requirement does not apply to the $11.7 billion for the general Drinking Water SRF.)
- American Rescue Plan Act (ARPA) funding is explicitly available for full lead service line replacements under January 2022 Treasury Dep't Rules. 87 Fed. Reg. 4338, 4372 (January 27, 2022) (authorizing full lead service line (LSL) replacement and prohibiting use of ARPA funding for partial replacements) - govvinfo.gov/content/pkg/FR-2022-01-27/pdf/2022-00292.pdf
  - Most states have significant ARPA funds that are still unspent.
  - See NYS tracker of these funds: covid-19-relief-program-tracker-10-31-22.xlsx (live.com).
  - Localities may also have unspent ARPA funding.
- Water Infrastructure Finance & Innovation Act (WIFIA) (EPA). WIFIA is a tool to enable EPA to increase water infrastructure investments by leveraging public and private sources of funds to maximize the reach of federal funds. As of February 2022, the WIFIA program has issued 72 loans totaling $13.3 billion in credit assistance to help finance nearly $28 billion for water infrastructure projects. The FY 2023 request for the WIFIA program would enable EPA to provide up to $8 billion in direct credit assistance.
- Water Infrastructure Improvements for the Nation (WIIN) Act (EPA), created 2 programs that can help communities pay for LSL replacement:
  - An EPA grant program to remove lead service lines for disadvantaged property owners and communities (codified as section 1459B of the Safe Drinking Water Act). Funded through annual EPA appropriations. ($40 million in 2021; President's FY23 budget proposed $182 million)
  - An EPA grant program for small, underserved and disadvantaged communities to address water infrastructure needs (codified as section 1459A of the Safe Drinking Water

Act). ($45 million in 2021; President's FY23 budget proposed $80 million)

- Annual appropriations to various federal agencies
  - EPA has annual (base) Drinking Water State Revolving Fund (SRF) funding it provides to states that can be used for lead service line replacements. Recently about $1.1 billion/year. Most are loans, though lately 14% to 35% available for grants/principal forgiveness for some systems.
  - As noted above, to implement the WIIN Act, EPA also gets a small annual appropriation for federal direct grants to disadvantaged communities for lead service line replacements under Safe Drinking Water Act section 1459B and for water infrastructure for small and disadvantaged communities under SDWA section 1459A.
  - USDA's Rural Utility Service gets hundreds of millions per year for small and rural water systems that can be used for lead service line replacements.
  - HUD Community Development Block Grants (CDBG) program provides communities with funds to address a wide range of community development needs. The CDBG program provides annual grants (about $3.3 billion in 2022) on a formula basis to local governments and States.

New York State Funding

- Drinking Water State Revolving Fund (DWSRF) (Environmental Facilities Corporation (EFC))
  - In addition to the BIL funds specifically for lead service line replacement, the DWSRF provides a general pot of money for drinking water projects that NYS should allow for lead service line replacements. We expect to follow up with NYS officials to allow this additional funding from the base DWSRF grant.
  - A portion of these funds are made available as grants, principal forgiveness, and/or negative interest loans. The remainder of the funding is provided as below market-rate loans.
  - Details on funding availability and terms are provided in annual Intended Use Plans issued by EFC.
- Clean Water Infrastructure Act (CWIA)
  - 2017-2022 - $4.5 billion was invested.
  - 2023 - an additional $500,000 appropriated
  - Two grant programs have been funded under CWIA for the replacement of lead service lines:
    - NYS Department of Health Lead Service Line Replacement Program: Since 2017, the NYS Department of Health has provide $30 million in grants to 44 municipalities to conduct full lead service line (LSL) replacements at no cost to homeowners or tenants.
      - As of July 2022, 28 municipalities had spent $14.1 million in LSLRP funds (47% of the $30 million total) to replace 2,385 LSLs, with an average cost to replace each LSL of $5,918. 10 of these communities had expended 100% of their funds by July 2022 and have been eager for more.

    - Water Infrastructure Improvement Act (WIIA): This grant program is administered by the Environmental Facilities Corp and is for wastewater and drinking water projects that improve water quality and/or protect the public health. Rochester has received $3,660,000 and Niagara Falls has received $3 million in WIIA grants for LSL replacements.
- 2022 Clean Water, Clean Air, and Green Jobs Environmental Bond Act
    - Passed overwhelmingly by NYS voters in November 2022
    - Includes $650 million for water projects:
        - $200 million for wastewater improvements
        - $250 million for stormwater improvements
        - $200 million for other water quality improvements, such as LSL replacements

Water Utility Self-Funding (including municipal bonds or pay-as-you-go)

- Utilities can also pay for lead service line replacements using their own resources, either financed by municipal bonds (repaid from rate revenues), or without borrowing (i.e., pay-as-you-go, aka PAYGO). Where borrowing is possible, implementation can be expedited significantly.
- NYS recently amended Local Finance Law section 11.00(a)(109) to allow for municipalities to bond for lead service line replacements. L. 2023, c. 58, section UU, enacted May 3, 2023.

Appendix B: Model Ordinance for Lead Service Line Replacement [BASED ON NEWARK, NJ ORDINANCE]

Note: an ordinance may require state enabling legislation

§ 1. Definitions - For the purposes of this Chapter:

CITY—Shall mean the [City].
CONTRACTOR—Shall mean a licensed vendor that contracts with the [City] to replace lead service lines.
DEPARTMENT—Shall mean the [Water Department of the City]
DWELLING—Shall mean a building or structure or part thereof containing one or more dwelling units. This chapter shall also apply to buildings and structures that are not used for residential purposes.
DWELLING UNIT—Shall mean any room or groups of rooms or any part thereof located within a building and forming a single habitable unit with facilities that are used or designed to be used for living, sleeping, cooking, eating, or bathing.
LEAD SAFE—Shall mean any condition that does not allow access or exposure to lead, in any form, to the extent that adverse human health effects are possible.
LEAD SERVICE LINE—Shall mean a water line that is not lead-free (including a galvanized pipe that is or has been connected to any upstream component made of lead or unknown material) and that runs from the water main into the structure or building.
OCCUPANT—Shall mean a person or persons in actual possession of and living in the building or dwelling unit.
OWNER—Shall mean any person who has legal title to any dwelling, with or without accompanying actual possession thereof; or, who has equitable title and is either in actual possession or collects rents therefrom; or, who is executor, executrix, trustee, guardian, or receiver of the estate of the owner; or as mortgagee; or as vendee in possession either by virtue of a Court order or by agreement or voluntary surrender of the premises by the person holding the legal title; or as collector of rents has charge, care, or control of any dwelling or rooming house.

§ 2. Prohibition of Lead Service Lines - It is hereby established that lead service lines are prohibited in the [City] and any existing lead service lines are required to be replaced.

§ 3. Exclusion - A property owner may be excluded from the mandatory replacement of its lead service line by providing the [Water Department], within 90 days of the effective date of this ordinance, with written proof from a licensed and certified plumber that it does not have a lead service line on its property, and/or that the lead service line was previously removed and replaced.

§ 4. Property Owner Responsibility to Replace Lead Service Line -

a. The owner of any dwelling, building, or structure serviced by a lead service line is required to replace the lead service line on their property. The replacement of the lead service line must be completed within 90 days of the effective date of this ordinance. An extension of time may be granted where the owner can demonstrate, to the [Water Department] designee, that a good faith effort has been made to comply with the ordinance.

b. The owner of a dwelling, building, or structure shall replace their lead service line by any of the following methods:

1. Signing up for the Lead Service Line Replacement Program offered by the [City] at the expense of the [City/water system] and allowing contractors to access their property to conduct the replacement. The Contractor will provide the owner with a Right of Entry form for completion. The Right of Entry form will provide the contractor with access to the property to verify the existence of a lead service line; or

2. Replacing the lead service line on their own and at their own expense. If an owner selects this option, then replacement must be completed within 90 days of the effective date of this ordinance. An extension of time may be granted where the owner can demonstrate, to the [Water Department] designee, that a good faith effort has been made to comply with the ordinance. An owner is required to provide the [Water Department] with proof that the lead service line has been replaced. Proof must include at a minimum: (i) a permit issued by the [Water Department] to a licensed plumber authorized to do the work; (ii) an invoice from the contractor who completed the work; (iii) a copy of the estimate along with any report of the work completed; and (iv) an inspection report [by the Water Department or the Buildings Department] verifying the removal.

§ 5. City Responsibility to Replace Lead Service Lines - Notwithstanding section 4, if an owner of the dwelling, building, or structure does not sign up for the Lead Service Line Replacement Program or does not replace its lead service line within 90 days of the effective date of this ordinance (or within the time frame provided in an extension) or is inaccessible or otherwise denies access to the property to enable the replacement of the line, then the following procedure shall be followed:

a. The City shall secure entrance to the property from the owner or current occupant of the dwelling, building, or structure, and the City shall incur no liability from the owner. The contractor will provide the owner or occupant with a Right of Entry form for completion. The Right of Entry

form will provide the Contractor with access to the property to verify the existence of a lead service line. The City shall restore the property to its original condition, or as close as possible to its original condition; and

b. If access is granted by the occupant of the dwelling, building, or structure, the occupant shall be held harmless and no liability shall incur to the City or occupant due to the replacement of the lead service line by the [City]; and

c. If access is denied by the current occupant or owner, then the City shall commence procedures, including filing a Court action, to conduct the replacement of the lead service line.

§ 6. Timeline for the Replacement of Lead Service Lines -

a. All lead service lines shall be replaced as soon as possible, but in no event later than ten years from the effective date of this law.

b. A municipality shall ensure no less than a ten percent rate of lead service line replacements each year to ensure compliance with the overall ten-year replacement timeline.

§ 7. Owner and Buyer Responsibilities -

a. Upon the sale or transfer of ownership of any dwelling, building, or structure, the owner must provide proof that the lead service line has been replaced in order to secure a Certificate of Occupancy or Certificate of Code Compliance.

b. If an owner of a dwelling, building, or structure that has a lead service line signs up for the city's Lead Service Line Replacement Program, and the lead service line has not yet been replaced when the owner sells the dwelling, building, or structure, the owner shall provide the buyer with proof of enrollment in the city's Lead Service Line Replacement Program as satisfying the owner's obligation to replace a lead service line under this law.

c. Upon the sale of any City-owned property, within 90 days of the closing, the buyer is responsible for replacing the lead service line, by either enrolling in the Lead Service Line Replacement Program or in accordance with section 4(b)(2) above.

§ 8. Enforcement - The [City/water system] may shut off water to any property for which access has been denied to replace a lead service line. The [City/water system] shall record in property records for such property that it has a lead service line and that access to replace that line was denied.

Endnotes

1 Erik D. Olson & Alexandra Stubblefield, *Lead Pipes Are Widespread and Used in Every State,* NRDC (July 8, 2021), https://www.nrdc.org/resources/lead-pipes-are-widespread-and-used-every-state. *Fact Sheet*, Drinking Water Infrastructure Needs Survey and Assessment, USEPA (April 2023), https://www.epa.gov/system/files/documents/2023-04/Final_DWINSA%20Public%20Factsheet%204.4.23.pdf.

2 *Fact Sheet*, Drinking Water Infrastructure Needs Survey and Assessment, USEPA (April 2023), https://www.epa.gov/system/files/documents/2023-04/Final_DWINSA%20Public%20Factsheet%204.4.23.pdf.

3 *FACT SHEET: The Biden-Harris Lead Pipe and Paint Action Plan,* The White House (Dec. 16, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/12/16/fact-sheet-the-biden-harris-lead-pipe-and-paint-action-plan/.

4 Nat'l Center for Env't Health, Centers for Disease Control & Prevention (CDC) et al., *Guidelines for the Identification and Management of Lead Exposure in Pregnant and Lactating Women* 30 (2010), www.cdc.gov/nceh/lead/publications/leadandpregnancy2010.pdf.

5 Advisory Comm. on Childhood Lead Poisoning Prevention, CDC, *Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention* (2012), www.cdc.gov/nceh/lead/acclpp/final_document_030712.pdf; *Lead: Information for Workers*, Nat'l Inst. for Occupational Safety & Health, CDC, https://www.cdc.gov/niosh/topics/lead/workerinfo.html (last updated Jan. 6, 2023).

6 *Lead: Information for Workers,* Nat'l Inst. for Occupational Safety & Health, CDC, https://www.cdc.gov/niosh/topics/lead/workerinfo.html (last updated Jan. 6, 2023).

7 *Id.*

8 *Lead Poisoning Prevention*, CDC, https://www.cdc.gov/nceh/lead/prevention/default.htm (last updated Sept. 2, 2022).

9 *Pediatrics* (2016) 138(1): e20161493, American Academy of Pediatrics, Prevention of Childhood Lead Toxicity | Pediatrics | American Academy of Pediatrics (aap.org).

10 *Lead Poisoning,* World Health Organization (WHO) https://www.who.int/en/news-room/fact-sheets/detail/lead-poisoning-and-health (last updated Aug. 31, 2022).

11 *Basic Information about Lead in Drinking Water,* U.S. Env't Prot. Agency (EPA), https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water (last updated Jan. 27, 2023).

12 See Richard Rabin, *The Lead Industry and Lead Water Pipes: "A Modest Campaign,"* 98 Am. J. Pub. Health 1584 (2008); Werner Troesken, *The Great Lead Water Pipe Disaster* (MIT Press 2008).

13 Raymond J. Santucci Jr & John R. Scully, *The Pervasive Threat of Lead (Pb) in Drinking Water: Unmasking and Pursuing Scientific Factors That Govern Lead Release* 117 Proc. Nat'l Acad. Sci. (2020).

14 Lindsay W. Stanek et al., *Modeled Impacts of Drinking Water Pb Reduction Scenarios on Children's Exposures and Blood Lead Levels* 54 Env't Sci. & Tech. 9474, 9474–82 (2020); *see also* Ronnie Levin et al., *The Urban Lead (Pb) Burden in Humans, Animals and the Natural Environment* 193 Env't Rsch. (2021).

15 EPA, *supra* note 11.

16 EPA, *Report of the Lead and Copper Rule Working Group to the National Drinking Water Advisory Council* 13–14 (Aug. 2015), https://www.epa.gov/sites/default/files/2017-01/documents/ndwaclcrwgfinalreportaug2015.pdf.

17 *AWWA Policy Statement on Lead Service Line Management,* Am. Water Works Ass'n, https://www.awwa.org/Policy-Advocacy/AWWA-Policy-Statements/Lead-Service-Line-Management (last updated Jan. 14, 2017).

18 42 U.S.C. § 300g-1(b)(2); 40 C.F.R. § 141, Subpart I et seq.

19 42 U.S.C. §§ 300g-1(b)(2)(A), (b)(4)(A).

20 42 U.S.C. § 300g-1(b)(4)(B). Unfortunately, the Safe Drinking Water Act was weakened in 1996 to allow EPA to set MCLs in some cases that are less protective of health than is feasible to attain, based on cost-benefit analysis. *See* 42 U.S.C. § 300g-1(b)(6). Such a process is amenable to substantial subjectivity and manipulation.

21 42 U.S.C. § 300g-1(b)(7)(A).

22 Corrosion control treatment is a type of water treatment designed to prevent corrosion of lead service lines and lead-bearing plumbing.

23 The revised Lead and Copper Rule (LCRR), which water systems will need to comply with starting in October 2024, also does not require corrective action when fewer than 10% of samples have lead levels above 15 ppb. 40 C.F.R. § 141.80(a)(3). However, when 10% or more of samples meet or exceed 10 ppb, the LCRR does require water systems to set a voluntary goal for lead service line replacement and make a plan for corrosion control treatment. The LCRR also mandates a "find and fix" requirement, which sets out procedures to follow when a tap sample site exceeds the lead action level. 40 C.F.R. § 141.80(j). In this find and fix procedure, additional samples are taken from the tap sample site and samples are evaluated to determine which adjustments of the optimal corrosion control treatment or distribution system actions are necessary to lower lead levels. 40 C.F.R. § 141.80(j)(1); 40 C.F.R. § 141.80(j)(3). The State then approves the treatment recommendation or specifies a different approach. 40 C.F.R. § 141.80(j)(4).

24 40 C.F.R. § 141.86(c).

25 *Id.* We are describing the LCR as currently in effect as of early 2023; EPA did make some revisions in January 2021, slated to become enforceable in October 2024, but the agency has publicly stated that it will be overhauling that January 2021 rule by October 2024.

26 40 C.F.R. § 141.80(c).

27 *See* 40 C.F.R. § 141.80(c); *see also* Elin Betanzo et al., *Lessons from the First Year of Compliance Sampling Under Michigan's Revised Lead and Copper Rule and National Lead and Copper Rule Implications*, 3 AWWA Water Sci. (2021) (finding that only testing the first- or fifth-liter draw is likely "to miss significant lead detections.") EPA's current LCR, enforceable until October 2024, requires testing only of the "first draw" water from the tap, rather than the water that has been sitting in a lead service line collecting lead contamination. The new January 2021 LCR Revisions will require testing of only the 5th liter of water but not the first draw water.

28 *See, e.g.,* Mark Edwards et al., *Gaps in the EPA Lead and Copper Rule That Can Allow for Gaming of Compliance* (2009), https://mediad.publicbroadcasting.net/p/michigan/files/201511/Gaming_the_LCR_WASA_2003-2009_Oct_2009.pdf.

29 For example, in New York City, the water system sampled 375 sites in 2021. Even though 24 of those sites tested at lead levels higher than 15 ppb, that did not constitute a lead action level exceedance requiring corrective action since those sites comprised only 6.4% of the samples. *See* DEP, *New York City Drinking Water Supply and Quality Report* 14 (2021), https://www.nyc.gov/assets/dep/downloads/pdf/water/drinking-water/drinking-water-supply-quality-report/2021-drinking-water-supply-quality-report.pdf; *see also, e.g.,* Brenda Goodman et al., *Lax Oversight Weakens Lead Testing of Water,* WebMD (June 12, 2017), https://www.webmd.com/special-reports/lead-dangers/20170612/lead-water-testing.

30 Press release, NRDC, *Lead Found at Exceedingly High Levels in West Virginia Drinking Water* (July 15, 2021), https://www.nrdc.org/press-releases/lead-found-exceedingly-high-levels-west-virginia-drinking-water.

31 Emergency Administrative Order, *In re Clarksburg Water Board,* Docket No. CWA-03-2021-0110DS (EPA Region III, July 14, 2021), https://yosemite.epa.gov/oa/rhc/epaadmin.nsf/Filings/5D20FEB828000B4585258713004866662/$File/Clarksburg%20Water%20Board.%20PWS%20Emergency%20Administrative%20Order.%207.14.2021.pdf

32 Hannah Northey, 'Jaw-dropping': EPA issues rare lead order in W.Va., E&E News (July 15, 2021), https://www.eenews.net/articles/jaw-dropping-epa-issues-rare-lead-order-in-w-va/.

Endnotes

33 Miguel A. Del Toral et al., *Detection and Evaluation of Elevated Lead Release from Service Lines: A Field Study* 47 Env't Sci. & Tech. 9300 (2013).

34 *See* Roger B. Arnold & Marc A. Edwards, *Potential Reversal and the Effects of Flow Pattern on Galvanic Corrosion of Lead* 46 Env't Sci. & Tech. 10941 (2012); G. E. Lagos et al., *Aging of Copper Pipes by Drinking Water* 93 J. Am. Water Works Ass'n 94 (2001); Marc A. Edwards, et al. *The Role of Pipe Aging in Copper Corrosion By-Product Release,* 1 Water Sci. & Tech: Water Supply, 25 (2001).

35 The revised Lead and Copper Rule, which water systems will need to comply with starting in October 2024, reduces the rate at which water systems with action level exceedances must replace their lead service lines from 7% per year to 3% per year. As a result, it would take 33 years to completely replace all of the lead service lines [in NYC?] (rather than 15 years with a replacement rate of 7%). In addition, EPA's own calculations indicate that most lead service lines will remain in use under this revised rule, because there are so many ways for water systems to avoid being required to replace them. This exposes future generations of children to dangerous levels of lead in their drinking water.

36 Memorandum from Robert A. Kaplan, Acting Regional Administrator, EPA, to Michael H. Shapiro, Acting Assistant Administrator, Office of Water, *Region 5's Experience in Implementation of the Lead and Copper Rule* (Dec. 29, 2017).

37 *History of New York City Drinking Water,* N.Y.C. Dep't of Env't Prot. (DEP), https://www1.nyc.gov/site/dep/water/history-of-new-york-citys-drinking-water.page (last visited Mar. 24, 2023).

38 *Lead Service Line Coordinates,* NYC Department of Environmental Protection, https://data.cityofnewyork.us/Environment/Lead-Service-Line-Location-Coordinates/bnkq-6un4 (last visited Mar. 28, 2023).

39 *Id.*

40 DEP, *Lead Free NYC: Get the Facts on Tap Water* (Feb. 2019), https://www1.nyc.gov/assets/dep/downloads/pdf/water/water-monitoring/monitoring-for-lead/lead-free-nyc-brochure.pdf.

41 *Lead in Household Plumbinwg FAQs*, DEP, https://www1.nyc.gov/site/dep/water/lead-in-household-plumbing-faq.page (last visited Mar. 24, 2023).

42 *Public Water Supply Contact Information,* N.Y. State Dep't of Health (NYSDOH), https://www.health.ny.gov/environmental/water/drinking/pws_contacts/map_pws_contacts.htm (last updated Aug. 2022).

43 *EPA Researchers Share Approaches to Identify Lead Service Lines*, EPA, https://www.epa.gov/sciencematters/epa-researchers-share-approaches-identify-lead-service-lines (last updated Mar. 08, 2023).

44 *Water Service Line Map FAQs,* Lead Free NYC, https://www.nyc.gov/content/leadfree/pages/maps-faq (last visited Mar. 26, 2023). The information is based on one of the following record types:

- Historical records based on the latest plumbing records filed by a licensed master plumber for a property;
- Observations from visual inspections by DEP at the meter inside a home; or
- Excavations, the result of external visual inspections conducted by city agencies at the point where the water service line connects with the City-owned water main in the street.

45 Lead Service Line Coordinates. New York City Department of Environmental Protection. https://data.cityofnewyork.us/Environment/Lead-Service-Line-Location-Coordinates/bnkq-6un4

46 Which DEP classifies as "Potential Lead."

47 *See supra* note 43.

48 Which DEP classifies as "Unknown."

49 Data match of Lead Service Line Coordinates. New York City Department of Environmental Protection. https://data.cityofnewyork.us/Environment/Lead-Service-Line-Location-Coordinates/bnkq-6un4 performed by AlertTek/Link2Tek, Inc. on April 26, 2023. http://www.alerttek.us

50 According to the April 1, 2020 Census Data, NYC's population was 8,804,190. NYC Department of Planning. https://www.nyc.gov/site/planning/planning-level/nyc-population/nyc-population.page

51 Neighborhoods as defined by the United Hospital Fund.

52 *A Mapping of NYC Lead Service Lines*. New York League of Conservation Voters Education Fund. https://nylcvedfund.maps.arcgis.com/apps/dashboards/342497b697cf4994ab64652e4dbdc4fc (last visited May 4, 2023).

53 New York State Law requires all health care providers to test children one and two years old and it is recommended that children at risk be tested until age six. *Childhood Lead Poisoning Prevention*, NYSDOH, https://www.health.ny.gov/environmental/lead/ (last updated Dec. 2022).

Each year, the NYC Health Department receives blood lead test results and publishes data for more than 300,000 children younger than six *years old. Lead Poisoning Reports, Publications and Surveillance Data*, N.Y.C. Dep't of Health & Mental Hygiene, https://www.nyc.gov/site/doh/data/data-sets/lead-pubs.page (last visited Mar. 26, 2023). Special attention is paid to children with elevated blood lead levels (BLLs), which are currently set at 3.5 micrograms of lead per deciliter of blood (mcg/dL). *Lead Poisoning: Information for Health Care Provider*, N.Y.C. Dep't of Health & Mental Hygiene, https://www.nyc.gov/site/doh/health/health-topics/lead-poisoning-for-healthcare-providers.page (last visited Mar. 26, 2023).

54 Newark, N.J., Code § 16:23 (2019).

55 New Jersey subsequently enacted a law requiring water systems to replace all lead service lines in the state. *See* N.J. Stat. Ann. §§ 58:12A-40, 58:12A-44 (2021). Michigan and Illinois have enacted similar laws. *See* Mich. Admin. Code r. 325.10604f(6) (2018); 415 Ill. Comp. Stat. 5/17.12(v) (2022). New Jersey requires all service lines to be replaced within 10 years and Michigan requires all to be replaced within 20 years. N.J. Stat. Ann. § 58:12A-44; Mich. Admin. Code r. 325.10604f(6)(b).

56 Joan Leary Matthews, *Meeting the Challenge of Lead Service Line Replacements*, NRDC (May 16, 2022), https://www.nrdc.org/bio/joan-leary-matthews/meeting-challenge-lead-service-line-replacements.

57 In 2020, New Jersey took this concept one step further, enacting legislation granting municipalities authority to adopt an ordinance allowing entrance to private property to replace LSLs without property owner permission, after notifying residents. N.J. Rev. Stat. § 58:12A-39 (2020).

58 Newark, N.J., Code § 16:23 (2019), https://ecode360.com/36709572?nosponsive=false.

59 *See Model Ordinance for the Replacement of Lead Service Lines*, Nat. Res. Def. Council, https://www.nrdc.org/sites/default/files/model-ordinance-replacement-lead-service-lines-20220506.pdf (also attached as Appendix B to this report).

60 See Environmental Defense Fund and American University, School of Public Affairs, *Lead Pipes and Environmental Justice: a study of lead pipe replacement in Washington, D.C.* (March 2020), https://www.edf.org/sites/default/files/u4296/LeadPipe_EnvironJustice_AU%20and%20EDF%20Report.pdf.

61 Advocates have repeatedly asked DEP the basis for this assertion, but it has failed to provide any.

62 FOIL Request from Earthjustice to DEP (April 22, 2022), https://a860-openrecords.nyc.gov/request/view/FOIL-2022-826-02178.

63 Cyndi Roper, *The Hidden Costs & Dangers of Partial Lead Pipe Replacements*, NRDC (Mar. 12, 2018), https://www.nrdc.org/experts/cyndi-roper/hidden-costs-dangers-partial-lead-pipe-replacements.

Endnotes

64 Letter from EPA Science Advisory Board to Lisa P. Jackson, EPA Administrator, *Subject: SAB Evaluation of the Effectiveness of Partial Lead Service Line Replacements*, (Sept. 28, 2011), https://www.epa.gov/sites/default/files/2015-09/documents/sab_evaluation_partial_lead_service_lines_epa-sab-11-015.pdf.

65 40 C.F.R. § 141.84(g)(3), as promulgated January 15, 2021, 86 Fed. Reg. 4290 (note this does not become enforceable until October 2024).

66 NYC Department of Environmental Protection, *Lead Service Line Replacement Program Strategy* (Sept. 2022) (slide deck on file with the authors).

67 EPA, *Strategies to Achieve Full Lead Service Line Replacement 5* (Oct. 2019), https://www.epa.gov/sites/default/files/2019-10/documents/strategies_to_achieve_full_lead_service_line_replacement_10_09_19.pdf.

68 Comments by Am. Water Works Ass'n on Proposed Lead and Copper Rule Revisions, Docket No. EPA–HQ–OW-2017-0300 (Feb. 5, 2020) at 117 tbl.7, https://www.regulations.gov/comment/EPA-HQ-OW-2017-0300-1018.

69 *Lead Service Line Replacement Frequently Asked Questions,* NYSDOH, https://health.ny.gov/environmental/water/drinking/lslrp/faq.htm (last updated Aug. 2021).

70 *Lead Service Line Replacement Program,* City of Newark, N.J., https://www.newarkleadserviceline.com/replacement#:~:text=Typically%2C%20the%20cost%20of%20replacing,no%20cost%20to%20the%20homeowner (last visited Mar. 26, 2023).

71 Infrastructure Investment and Jobs Act of 2021, Pub. L. No. 117-58.

72 *EPA Fact Sheet,* supra note 1.

73 Coronavirus State and Local Fiscal Recovery Funds, 87 Fed. Reg. 4338, at 4372, 4414 (Jan. 27, 2022) (codified at 31 C.F.R. § 35). ARPA funds distributed to states and localities, which Treasury Department rules explicitly state that ARPA funds are authorized for use for lead service line replacement, and only full replacement can be funded.

74 For example, the funding to replace all of the 23,000 lead service lines in Newark, came from bonds issued by the county. Leah Mishkin, *Replacement of lead service lines in Newark pays off,* New Jersey Spotlight News (Sept. 30, 2021). The New York State Legislature also amended the Local Finance Law on May 3, 2023, to allow municipalities and other local government entities to bond for lead service line replacements. NY Local Finance Law § Section 11.00(a)(109), added by L. 2023, C. 58, section UU.

75 *Prometheus Realty Corp. v. N.Y.C. Water Bd.,* 30 N.Y.3d 639, 646 (2017); *see also* N.Y. Pub. Auth. L. § 2824(1). The Court in *Prometheus* upheld the Water Board's differing treatment of classes of customers, with some benefitting from the differential treatment and some not. *Prometheus,* 30 N.Y.3d at 646-647. The Court explained that a utility has "unfettered discretion" to set rates, as long as they are not arbitrary and do not constitute invidious illicit discrimination. *Id* at 646. It further held that the distinction between beneficiaries need not be drawn with surgical precision. *Id.* at 647. Despite having prevailed in the *Prometheus* litigation, DEP claims, without providing any authority, that it cannot use water rates for a lead service line replacement program because not all customers have lead service lines and water rates cannot be used to benefit some, but not all customers. NYC Department of Environmental Protection, Lead Service Line Replacement Strategy (Sept. 2022), slide 9 (slide deck on file with the authors). *See also* Testimony of Angela Licata, Deputy Commissioner, Department of Environmental Protection submitted on behalf of the Association of Metropolitan Water Agencies before the United States House of Representatives, "Hearing on EPA's Lead and Copper Rule Proposal: Failing to Protect Public Health" (Feb. 11, 2020), https://docs.house.gov/meetings/IF/IF18/20200211/110501/HHRG-116-IF18-Wstate-LicataA-20200211.pdf; *see also,* Shaun A. Goho et al., Emmett Env't L. & Policy Clinic & Env't Def. Fund, *Rates Could Fund Lead Pipe Replacement in Critical States* 46–48 (2019), http://clinics.law.harvard.edu/environment/files/2019/04/Rates-Fund-LSL-Replacement-States_Harvard_EDF_2019.pdf (concluding that it is likely that New York State "policy would support using rate funds to replace lead service lines (LSLs) on private property based on public health and efficiencies of replacing entire service line at one time").

76 Too often, water systems, including DEP's, do not consider lead service line replacements as capital improvement projects, and hence do not include them in their capital improvement plans. Water rates can fund capital improvement projects.

Earthjustice is the premier nonprofit public interest environmental law organization. We wield the power of law and the strength of partnership to protect people's health, to preserve magnificent places and wildlife, to advance clean energy, and to combat climate change. We are here because the earth needs a good lawyer.

NRDC (Natural Resources Defense Council) is an international nonprofit environmental organization with more than 3 million members and online activists. Since 1970, our lawyers, scientists, and other environmental specialists have worked to protect the world's natural resources, public health, and the environment.

New York League of Conservation Voters Education Fund (NYLCVEF) educates, engages, and empowers New Yorkers to be effective advocates for the environment.

Examples (from left) of a lead pipe, a corroded steel pipe, and a lead pipe treated with protective orthophosphate

A Project of the **New York City Coalition to End Lead Poisoning** (NYCCELP)

ISSUE	A "GREEN APPLE" PLAN	A "ROTTEN APPLE" PLAN	Why it matters:
What choice is New York City facing when adopting a lead pipe replacement plan?	**A public health and equity centered policy that has proven to work** promoted by environmental justice and public health advocates. Throughout the country other states and cities are launching effective policy efforts to safely and equitably remove lead. We know what works, and New Yorkers are looking to Council to be leaders on lead.	Int 0942-2024, introduced into New York City Council, a punitive response, making property owners fully responsible for replacing lead water pipes, many of which were originally installed because they were required by code.[i] We also know what does not work. Unfortunately, this bill contains some of the "worst in class" policies that have failed other jurisdictions.	New York City has one of the largest numbers of lead pipes of any water system in the country. Whereas in the past, New York City Council has taken a progressive, leadership approach (e.g. a 2019 law requiring an inventory of pipe materials) to drinking water, this "Rotten Apple" bill could codify some of the worst drinking water policies of any large city nationally. The stakes are high with at least 131,000 known lead pipes all around the city. And that number is likely to increase as the city figures out which of the remaining 215,000 possible lead pipes in its system are confirmed to be lead.
Who Pays	**Lead pipe replacement should be free.** In Michigan utilities are required to pay. Newark (NJ), Benton Harbor (MI), Denver (CO), and the state of Minnesota are some of the many places replacing lead pipes without charging homeowners.	Homeowners are on their own, fully responsible for all costs, which can typically cost around $10,000 per property, sometimes more. Assistance, if available at all, would be available only to individuals (excluding any landlord that operates as an LLC), and only based on gross AMI (adjusted), excluding more	We have seen this before! When homeowners must pay out of pocket, people of color (especially Black people) and people experiencing poverty are disproportionately exposed to lead in water. Organizing the work on a block-by-block basis also saves money overall, with the work getting more efficient and a better reception from the public as the programs mature. Investing in infrastructure is always a challenge, but fortunately there are once-in-a-generation federal funds available.[ii]

NYC Coalition to End Lead Poisoning (June 2024)
Contact: Josh Klainberg (jklainberg@nylcv.org); Marissa Lieberman-Klein (mlieberman-klein@earthjustice.org), or Valerie Baron vbaron@nrdc.org

		landlords and imperiling renters.	
Pipe Material	**Copper** (should be required for the ***full*** pipe).	Copper "or any other material approved by the Commissioner"	Copper is the best, safest material. Allowing for other materials to be approved opens the door for pipes made from risky PVC or lined pipes that are not durable and can leach toxins into water. Replacing one toxic material with something else that can cause serious harm is not a green solution.
Renter Safeguards	A **comprehensive program** where the water systems and state or local government are accountable best protects renters. The best practices are to **allow residents (not just owners) to approve work for lead pipe replacements** as part of a comprehensive effort**.**	Renters have no say in this approach. Making things worse, landlords likely will not have access to funding assistance. In many instances, under this approach it will be cheaper for a landlord to pay a fine than to replace the pipe, incentivizing bad outcomes.	In New York City, sixty nine percent of residents are renters, which is more than twice the national average. Placing drinking water quality solely in the hands of property owners endangers renters. Not all landlords have the wherewithal, means, or desire to arrange for the construction and pay out of pocket to replace pipes. Indifference to the risks faced by renters experiencing poverty, who often lack recourse when landlords do not look out for their health and safety, is dangerous and inequitable.
Community Involvement	**Community oversight and engagement** has worked well in Pittsburgh and should be a part of any high-quality program.	In contrast with best practices, there is not mechanism here for robust community engagement.	Community engagement is critical to the success of a program. Community engagement rather than landlords and owners arranging any work on their own, without guidance, gives these programs credibility and gets buy in from vulnerable residents, improving outcomes. Community input guides prioritization, outreach about health safeguards (e.g. filtration during and after construction), language access, and credibility.
Enforcement	The most successful programs **have allowed for water shutoffs as the least harmful enforcement penalty.**	Fines of $1,000 for failure to replace a lead pipe, or $500 for failure to report pipe materials.	A comprehensive, free program is necessary to make enforcement fair and equitable. When homeowners/landlords have had every chance to replace the pipe but still refuse, it is appropriate to consider drastic measures like shutting off the

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	For example, the Newark, NJ, ordinance provides for a monetary fine or imprisonment, or both, for failure to replace a lead service line. We think those penalties are unnecessarily punitive, particularly for low-income residents.	In many ways this is a "worst of both" approach. Families that cannot afford replacements will still have to pay a fine, and some owners (including some landlords) may choose to pay the fine rather than a more expensive replacement regardless of ability to pay.	water temporarily until the utility gets consent to replace the pipe. But when property owners are expected to bear the full cost and the coordination to complete the replacement, fines will largely punish people who are already struggling to make ends meet. But some penalty should be exacted, and a temporary water shutoff pending consent is appropriate. Front-line advocates in other states, particularly Michigan, agree with this approach.
Filtration—have lead pipes	Households with lead pipes should receive **filters free of charge** as soon as the pipes are identified	N/A	The science is clear that lead pipes are a hazard and cause exposure. For properties with lead pipes, filtration for all drinking and cooking water is necessary to protect public health. There is no safe level of lead for anyone.
Filtration—post replacement	Proper filtration should be provided **for at least 6 months after the replacement.**	N/A	Moving around old pipes shakes things up, literally. After pipe replacements, levels of lead in household water spike very high, but temporarily. New York City should educate constituents about and provide free filters for 6 months after the replacement so that residents know to follow pipe flushing instructions and filter all drinking and cooking water.

[i] The City of New York Dept. Of Water Supply First Annual Report 1898, Queens Water Service .
[ii] See Appendix A: Funding Sources for Lead Service Line Replacement NoExcusesNYCReplaceLead.pdf (nylcv.org)

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New York City Coalition to End Lead Poisoning

To Council Members, Public Advocate Williams:

The New York City Coalition to End Lead Poisoning (NYCCELP) has been advocating for an expedient and equitable replacement plan for lead service lines in New York City, including meeting with council members over the past few years and issuing a comprehensive report on the issue. That report, No Excuses, NYC: Replace Lead Drinking Water Pipes Now, documents the public health threat in NYC that the City needs to address. It explains why the federal lead rule is insufficient to solve the crisis; documents how other cities and states have stepped up to solve such crises; reveals how many lead and possible pipes there are in NYC and where they are located; and, sets forth a roadmap for solutions, including a model ordinance and available funding streams. NYCCELP has also been involved for decades in drafting and vetting legislation to address lead poisoning, including Local Law 1, and values our role in working with City Council on this issue.

Thus, we were shocked to learn of the introduction of Int. 942, which constitutes an abdication of government responsibility and penalizes low-wealth tenants and property owners, in direct contravention of best practices that have worked in other cities. Rather than solving the public health and equity threats of lead exposure from service lines, Int. 942 would worsen existing inequities, create inefficiencies, and be unnecessarily expensive—during an affordable housing crisis, no less. The approach in Int. 942 is so broken that an entirely different approach is needed. Like with a lead pipe, it should be replaced with something we know works. New York City has been a leader in this area before, and there are other excellent, proven approaches that would equitably reduce lead exposure for New York City residents.

Lead Exposure Is a Public Health Threat that Governments Have Tackled and Must Continue to Tackle

Lead is a poisonous heavy metal linked to significant adverse health effects in both children and adults. Experts agree that exposure to even a miniscule amount of lead presents risk. Lead exposure can decrease a child's cognitive capacity, cause behavioral problems, and limit the ability to concentrate—all of which affects a child's ability to learn in school. Recent studies also have shown that even low-level lead exposure may be responsible for nearly 10 times more adult deaths in the U.S. than previously thought, causing 400,000 deaths per year in the U.S. from cardiovascular disease. EPA modeling has shown that water can constitute 10-80% of U.S. children's lead exposures with the highest levels for formula fed infants less than a year old. And the effects of lead on children are not spread evenly. Black and Hispanic children are more likely than white children to have lead in their blood, and children in low-income households have higher lead levels in their blood than those in higher-income households. Lead service lines are the biggest contributor of lead in drinking water.

The White House, states, and municipalities have risen to the moment and recognized lead pipes make drinking water unsafe and are a public health issue that warrants government action and solutions. Lead service lines are a legacy pollution issue with the last one installed in New York City in 1961, not an issue created by the current property owners or occupants. The lead industry waged a concentrated campaign in cities and states in the first half of the twentieth century to promote lead as the best material for service lines, and many municipalities responded by requiring or purchasing lead service lines for residents. Taking the public health issue and the history behind the use of lead service lines into account, cities like Newark, New Jersey, Denver, Colorado, and Benton Harbor, Michigan and states like Michigan and Minnesota have replaced or are replacing all of their lead service lines at no expense to homeowners. Whereas a few years ago, New York City led the way on lead in drinking water, creating an inventory of lead service lines ahead of its time, Int. 942 is bucking this trend and would codify some of the worst drinking water policy in the country into law.

Int. 942 Is an Unjust and Punitive Approach to a Public Health Threat

This bill, if enacted, completely absolves New York City of its responsibility to address this public health threat and treats lead service lines like a private issue for individual property owners to address, and to be punished if they cannot afford to replace them, cannot navigate complex permitting and construction requirements, or have a landlord who simply does not care. Int. 942 will not change the status quo—property owners who can afford and have the knowledge and wherewithal to replace lead service lines will replace them at their own expense. The only thing Int. 942 changes is to slap a $1000 penalty on owners that cannot or will not pay roughly $7000 to replace their line and to leave all the members of such households (including renters) stuck drinking water through a lead straw.

That roughly $7000 price tag is thanks to New York City's backwards assertion about who has responsibility for replacing lead service lines. Unlike in other places and with other utilities where it is common for homeowners to have zero to partial responsibility for water distribution pipes, New York City is one of just a few places that claims (with no known legal basis) that private property owners own the entire water service line—even the part that runs through the middle of the street! And now New York City seeks to transfer the *entire* cost of replacement to property owners.

Forcing Property Owners to Pay for Service Line Replacement Will Exacerbate Existing Inequities

By transferring the burden of solving this public health threat from New York City to individual families, replacement will occur only in the homes and properties of wealthier people and exacerbate the health gap between communities. This is exactly what happened in Washington, D.C. When the District replaced service lines only if the homeowner paid, a disproportionate burden fell on Black and brown residents and people experiencing poverty. To this day, these residents have water distributed through lead service lines at higher rates than District residents who are white and wealthy. While Int. 942 mentions financial assistance for property owners whose incomes are below 50% of Area Median Income, this assistance is not guaranteed. Rather, it's subject to appropriation and requires an application. Nor is the amount or timing of funds spelled out, which would leave property owners unable to gauge whether they might be able to afford replacement or must resign themselves to pay the less expensive $1000 fine. In sum, such assistance is subject to a program that has not been created and thus it is not possible to evaluate what impact it might have.

Sixty-nine percent of City residents are renters, more than double the national average. Yet Int. 942 entrusts landlords to decide whether their tenants should remain exposed to the biggest source of lead in drinking water. Landlords might consider replacing lead pipes if they think they can pass the cost of replacement along to their tenants through increased rent. But it is more likely, especially in low-wealth areas, that landlords will just opt to pay the fine. After all, if a landlord were inclined to replace lead service lines for the tenants, there is nothing stopping them from doing so now.

Int. 942 Will Create an Extraordinarily Inefficient and Expensive Method of Service Line Replacement

To the extent any property owners would replace their lead service lines under Int. 942, such replacement would be inefficient and unnecessarily expensive. There are at least 131,000 known lead pipes all around the city and that number is likely to increase as the city figures out which of the remaining 215,000 possible lead pipes in its system are confirmed to be lead. If the City were to take charge of replacing lead service lines – in coordination with the NYC Department of Transportation (DOT) that routinely mills and paves roadways –it could ensure the replacement is done systematically—block by block, neighborhood by neighborhood, maximizing efficiency, minimizing inconvenience, and reaping economies of scale. Indeed, in other places where lead pipes have been replaced successfully, costs have gone down over time. Contractors got better at doing the work, the community became more aware, and replacement became more efficient.

By contrast, Int. 942's approach maximizes both disruption and expense. Individual property owners would decide when over the course of 10 years they want to replace their line, without coordination with their neighbors. Thus, a single block may be opened up multiple times over the ten-year replacement period, with each owner paying to dig up the street at different times. Having the road ripped up that often is also bad for both traffic and pedestrians, especially those with mobility challenges, and repaving the road often would be expensive for whoever has to pay, homeowners or NYC DOT. Processing the permit requests alone would be extremely expensive for the NYC DOT and take significant staff time.

Int. 942 also doesn't ensure quality control. While property owners are required to file certificates with DEP that they've had their lead service lines replaced by a Licensed Master Plumber, some property owners may decide to risk a fine and hire less reputable contractors. This can result in the work being done poorly, incorrectly, without critical health safeguards, or at significantly inflated costs. We have seen in other places that when homeowners must arrange the work themselves, it creates opportunities for unscrupulous contractors to overcharge and creates a constituent services nightmare for legislators.

Int. 942 Fails to Prevent Lead Service Lines Being Replaced by Materials that also Present Significant Health Risks.

Int. 942 also allows for problematic materials to replace lead service lines. It states that lead service lines must be replaced with copper "or any other material approved by the commissioner." Thus, the commissioner is permitted to approve replacement pipes made of PVC or other forms of plastic that, like lead, threaten human health and the environment.

***

New York City needs and deserves a better and more equitable solution to lead exposure from service lines than Int. 942 provides. NYCCELP included a draft model ordinance in our July 2023 report and is available to discuss a proposal that follows the principles in our report or to discuss the problem of lead service lines in New York City more generally.

Sincerely,

NYCCELP

New York City Coalition to End Lead Poisoning

NYC Council Int # 942-2024 (Gennaro): A Local Law to amend the administrative code of the city of New York, in relation to the replacement of lead water service lines

Background:

The health effects of lead are acute and damaging, yet preventable with the proper infrastructure funding and public education campaigns. Children are especially vulnerable to lead poisoning via drinking water. Symptoms of lead poisoning in children include developmental delay, learning difficulties, loss of appetite, hearing loss, and seizure. In adults, symptoms include high blood pressure, memory difficulties, and reproductive issues. According to this article, the health effects attributed to lead prematurely kill 412,000 Americans each year. **There is no safe level of lead.**

Drinking water is one pathway of exposure to lead and can constitute up to 80% of U.S. children's lead exposures in bottle-fed infants. What makes lead exposure particularly dangerous in drinking water is that it is colorless, tasteless, and odorless. Lead gets into drinking water from lead pipes and plumbing that contains lead, with lead service lines being the biggest contributor. "Lead service lines" (LSLs) are the lead pipes that connect the city water mains under the street to individual residences.

FAQs

1. **What would this bill do?**

    - Require property owners within a 10-year period to replace lead service lines, at their own cost, to be certified by a master plumber, and imposes civil penalties for failure to comply.

    - Potentially offer financial assistance to financially strapped property owners who cannot afford to replace their lead pipe, if outside funding is available.

    - Require the replacement to be made of copper "or any other material approved by the commissioner."

    - Offer free replacement of lead service lines to properties with a childcare center, of if the city conducts work on or affecting a water service line belonging to a property owner that is made of lead.

- Mandate outreach and education efforts by the city to property owners, licensed master plumbers, contractors that specialize in water service line replacement, and childcare programs.

2. Why is this bill a "Rotten Apple" Plan for NYC?

- This bill runs contrary to the recommendations of environmental justice and public health advocates, as well as the best practices of communities that have successfully protected public health by replacing lead service lines efficiently and equitably.

- Its major deficiencies are:

    - It treats this public health crisis as a private problem, justifying the shift of financial responsibility for a problem not of their making to property owners, which is unjust. These pipes were installed before 1961 and approved by the city.

    - It shamefully does not guarantee assistance to financially strapped property owners who cannot afford to replace their lead pipe, but rather takes a "wait and see" approach.

    - Foregoes conducting the replacement of several hundred thousand lead pipes efficiently and less costly by the City bidding out the work for coordinated replacement of all lead service lines and instead has each property owner separately scheduling their own pipe replacement from different companies at different times.

    - It will create a logistical nightmare and tie up city streets unnecessarily. Because each homeowner would be scheduling their own pipe replacement, the construction work would thus happen in a hopscotch manner throughout NYC, bringing about massive and unnecessary disruption – construction crews could be present on each street for an entire 10-year period.

    - Foregoes quality control, because various unvetted construction crews would be doing the work.

    - Permits the use of cheaper PVC and other plastic for replacement pipes instead of copper, even though many scientific studies confirm (*see, e.g.*, REPORT: The Perils of PVC Plastic Pipes — Beyond Plastics - Working To End Single-Use Plastic Pollution) plastic materials harm human health and the environment.

3. What is a better solution?

- The Council should approach lead service line removal as a public health crisis requiring government coordination and financing – it should adopt a "Green Apple" Plan for the Big Apple.
- Have NYC, like many other cities, assume the cost of removal because (a); the pipes are connected to the water main, which is owned by the city (b) past service line connections to the water main were approved by the city per Administrative Code of City of New York section 24-309; (c) this is a legacy pollution issue not created by any of the current owners or occupants of properties in NYC; and (d) research shows how when the cost of replacement is transferred to private owners, the results are highly inequitable.

- Mandate that the material used to replace the pipe must be copper and make clear that the use of other materials that present other environmental concerns, such as plastics, is not permitted.

4. **Why should the Council adopt a fairer, less costly, more efficient, and more practical approach – a "Green Apple" Plan for NYC?**

- A Green Apple Plan is needed to ensure the successful and orderly replacement of lead service lines and the consequent reduction of New Yorkers' exposure to lead in drinking water. According to DEP records, at least 131,000 lead service lines are in NYC and that number keeps growing as the NYCDEP updates its inventory every six months. This Rotten Apple Plan will ensure that those that cannot afford to replace lead service lines are penalized, but not the removal of lead pipes. Lead service line replacements should not depend upon your zip code and wealth.

5. **Why should the City of New York pay for lead service line replacements?**

- Lead in drinking water from lead service lines is a public health crisis not of the current property owners' making. This is the essence of government responsibility. NYCDEP does not separately charge individual customers when one part of the water system, affecting only a certain portion of customers, needs fixing.

- The cost of replacing lead service lines is out of reach for most New York City residents, disproportionately people of color.

    - The average cost of replacing a lead service line is between $5,000 and $10,000, according to the DOH and the Lead Service Line Replacement Program. NYC DEP recently replaced 600 lead service lines in Brooklyn, Queens, and Staten Island in a project funded by the state; the average cost for each replacement was $8,800. However, the average New York household is unlikely to

have this amount of savings, let alone a fund for emergency repairs like water service line replacements. According to CNBC, 58% of Americans live paycheck to paycheck. A further 50% of working-age individuals in New York City struggle to cover their basic needs (see Ford Foundation report published in 2023).

- Additionally, in 2022, the NYS Office of the Comptroller found that 14% of all New Yorkers live in poverty, ranking 13th out of 50 among all states measuring poverty. New Yorkers of color are more likely to face poverty, with Black, Native Hawaiian/Pacific Islander and American Indian New Yorkers experiencing poverty at twice the rate of white New Yorkers.

- Service lines are under the jurisdiction of water utilities and municipalities. There are funding sources, which are elaborated below, available to these entities to perform safe, equitable, and timely replacements with construction/plumbing professionals.

6. How can the City of New York pay for lead service line replacements?

- As the NYC Coalition to End Lead Poisoning demonstrated in its July 2023 report: No Excuses, NYC: Replace Lead Drinking Water Pipes Now, myriad sources of federal, state, and local funding and financing are available to the City of New York for the replacement of lead service pipes. These sources include grants, low interest or no interest loans, bonding, and water rates.

- Instead of carefully examining these existing funding mechanisms, this bill takes the unjust route and puts the full financial burden on homeowners. This abdication of government responsibility for the welfare of its citizens puts the city at the bottom of the apple barrel for lead service line replacements.

Oral Testimony of Fabiana Castillo, Senior Litigation Assistant, Earthjustice
NYC Council Committee on Environmental Protection, Resiliency and Waterfronts
Oversight Hearing on Lead Service Lines
June 18, 2024

Good morning, my name is Fabiana Castillo, and I am a Senior Litigation Assistant in Earthjustice's New York Office.

As others have testified, this bill is the wrong approach for any city that both wants its lead service lines replaced and wants to narrow, rather than broaden, health disparities between different neighborhoods.

But I would like to explain why this approach is exponentially wrong for New York City, in particular.

Sixty nine percent of New Yorkers are renters, more than double the national average. Yet Int. 942 entrusts ***landlords*** to decide whether their tenants should remain exposed to the biggest source of lead in drinking water.

Int. 92 presents two options—replace lead service lines or pay a one-time $1,000 fine.

Nothing is currently stopping landlords from replacing lead pipes if they were so inclined. But let's say landlords chose that first option under Int. 942—replacing lead service lines at their properties. Those landlords would most likely then pass that cost on to their tenants, deepening the historic affordable housing crisis in the City. And even though the bill does not guarantee financial assistance ***to anyone*** for replacing lead service lines, under no circumstances would it provide such assistance to the ***tenants*** of landlords replacing lead service lines. But those tenants would most likely be paying the cost of replacement through increased rent. And again, the vast majority of New Yorkers are renters.

But it is very likely that landlords will choose the second option under the bill. That is, they will not replace lead pipes. They will likely take the chance of a $1000 fine, which would just be the cost of doing business to avoid arranging for the pipe replacement, fronting the money, raising rents, managing complaints from tenants about raised rents, and risking vacancy from higher rents.

Transferring the obligation to tackle a public health threat—a core responsibility of government—to the discretion of landlords for the vast majority of New Yorkers is not a strategy that the City Council should stand behind—indeed, it is mind boggling that such an approach even made its way into proposed legislation.

We urge the Council to withdraw Int. 942 and develop a bill that builds on successful experiences of other cities, is workable, and that will result in the actual and equitable replacement of lead service lines for all.

Oral Testimony of Suzanne Novak, Senior Attorney, Earthjustice
NYC Council Committee on Environmental Protection, Resiliency and Waterfronts
Oversight Hearing on Lead Service Lines
June 18, 2024

Good afternoon, my name is Suzanne Novak. I'm a senior attorney at Earthjustice's New York office located just a few blocks from here.

Earthjustice is a member of the New York City Coalition to End Lead Poisoning and a core focus of my work is advocacy concerning lead in drinking water at the Federal, New York State, and New York City level.

I wanted to start off with saying that lead exposure comes from many sources: soil, paint, water, air. We know that it's dangerous even in very small amounts. Thus, any exposure pathway must be ameliorated. Also, EPA modeling has shown that water can constitute 10-80% of U.S. children's lead exposures with the highest levels for formula fed infants less than a year old.

And while New York City may not determine lead poisoning is from lead in drinking water, for certain children, water is often not considered or looked at when a child presents with lead poisoning. And again, there is usually no one source.

I also want to clarify that the federal "lead action level" is not, and never has been, health based. EPA does not claim otherwise. In fact, the federal Office of Inspector General has criticized the Lead and Copper Rule for creating confusion regarding whether the action level is health based, like it seems to have done maybe here this morning. And the same with the FDA allowing five parts per billion in bottled water: that is not health based. There is no safe lead level in drinking water.

Flint and Newark were not isolated events. There is lead in drinking water in high levels all over the country. The Lead and Copper Rule requires one-time testing of 100 sites in a city of nine million people. It's not exact science at all, and eleven parts per billion, what the Commissioner said is that they would surpass, is obviously a lot more than zero. So we do have an issue on our hands to deal with. And although New York City, like other large water systems uses corrosion control treatment to reduce lead levels, even the best corrosion control treatments cannot prevent lead pipes from leaching into the water because:

- Various use patterns and water temperature can affect lead levels

- Lead particles from a lead service line can and do flake into water, leading to high variability in lead levels
- Physical disturbances, such as meter installation or replacement, service line leak repair, or significant street excavation near homes with lead service lines can cause spikes of lad in water. Indeed, a study of homes with low lead levels in Chicago found that physical disturbances to the lead lines cause lead levels to spike to up to more than 60 parts per billion, four times the lead action level

Please see the attached letter, **Exhibit 1**, that discusses this issue.

It is also clear that EPA, in its Lead and Copper Rule Improvement proposed rule, intended for *water systems* to replace lead service lines, not for water systems to transfer that responsibility to landlords and other homeowners.

New York City should follow the lead of other cities that have prioritized lead service line replacement and found money for such capital improvements. Because lead service line replacement serves a public purpose, it is permissible in New York State to use water ratepayer funds to pay for such replacement, although the use of such funds should be a last resort. The attached letter, **Exhibit 2**, discusses this issue in more detail. The New York State Attorney General's Office—the top legal officer of the State—supported the finding that water systems in New York may use ratepayer funds for such replacement in its comments to the proposed federal Lead and Copper Rule Improvements rule. *See* pages 19-21 of **Exhibit 3**, attached hereto.

And while we know that programs where water system solely offer free lead service line replacement are not always successful, we know that when government issues a mandate for replacement *and* offers free lead service line replacement, such programs *are* successful. That is exactly what happened in Newark, NJ.

Earthjustice would welcome the opportunity to work with the City Council to create an equitable lead service line replacement that builds on the success of programs in other cities and states.

Exhibit 1

December 06, 2022

Via Email

Rohit Aggarwala, Commissioner
NYC Department of Environmental Protection
59-17 Junction Blvd., 19th Fl.,
Flushing, NY 11373

Re: Corrosion Control Techniques and Expeditious Lead Service Line Replacement ("LSLR")

Earthjustice, Natural Resources Defense Council, and New York League of Conservation Voters would like to provide the New York City Department of Environmental Protection ("DEP") with some additional technical comments regarding corrosion control, after our September 19, 2022 meeting about lead service line replacement. During that discussion, a point was raised by DEP that the effectiveness of their corrosion control treatment ("CCT") made lead service line replacement less urgent than in other locations. However EPA itself has recognized that lead service lines "are the greatest contribut[o]r of lead in drinking water," and the removal of all of them is "critical" and "urgently needed" to protect public health.[1] This letter provides more technical information to further support that it is in both DEP's and the public's best interests to replace all lead service lines ("LSLs") in New York City as expeditiously as possible, even with the current corrosion control treatment in place. Corrosion control efforts are a beginning point. They are just one method for *reducing* lead in drinking water, and many studies and reports have revealed the flaws and limitations of corrosion control treatment techniques. Thus, an aggressive LSLR program is the best way to provide New Yorkers with the best level of health protection from lead exposure and delayed LSLR will risk continued potential exposure to lead in drinking water for millions of New Yorkers in homes throughout the city.

As you are aware, corrosion control techniques are meant to serve as an initial line of defense against lead in drinking water from lead piping. Studies have shown, however, that lead service lines are vulnerable to fluctuations in lead concentrations in numerous ways that corrosion control cannot fix or account for. Physical disturbances, such as meter installation or replacement, service line leak repair, partial service line replacement, or significant street excavation near homes with LSLs, can instigate spikes of lead in water.[2] A study conducted in Chicago found that such physical disturbances to LSLs caused lead levels—that were otherwise

[1] *See* U.S. Env't Prot. Agency, *Strategies to Achieve Full Lead Service Line Replacement* 4 (Nov. 19, 2019), https://www.regulations.gov/document/EPA-HQ-OW-2017-0300-0010; 86 Fed. Reg. 71,574; 56 Fed. Reg. 26,507.
[2] Miguel A. Del Toral et al., *Detection and Evaluation of Elevated Lead Release from Service Lines: A Field Study* 47 Env't Sci. & Tech. 9300 (2013).

testing low in homes—to increase to values more than four times higher than the federal lead action level.[3]

There are other reasons lead concentrations in drinking water fluctuate or spike that corrosion control cannot ameliorate. For example, research has shown that a "consistent flow" of water usage is necessary for corrosion control treatment to optimally perform.[4] But homes have varying water use patterns.[5] Other reasons include seasonal variables such as water temperature,[6] and differing types and ages of plumbing materials.[7] Such variations may prevent corrosion inhibitors from effectively passivating films in plumbing.[8] Thus, these causes, along with physical disturbances, make it hard to measure the success of corrosion control methods.[9]

Indeed, a study conducted to test the effectiveness of corrosion control found that LSLs showed "high inherent variability" in lead levels, with a prime reason being the "semi-random detachment of particulate lead to water."[10] Thus, one-time lead testing does not present the full picture of potential lead exposure from lead service lines. Particles are particularly dangerous because they can either pass through or remain trapped behind faucet aerator screens, untreated by corrosion control methods in both cases and at times undetected in sampling protocols.[11]

While CCT might be the first line of defense, it is limited and, in some cases, flawed and thus the endgame here is to quickly and completely remove LSLs so New Yorkers can live healthier lives. Expeditiously removing LSLs will prevent unintended and avoidable long-term lead exposure and health risks in homes and will lower treatment costs in the long run, as corrosion control treatment is a costly and continuous endeavor.[12] For these reasons, President Biden has repeatedly called for removal of all lead service lines within 10 years.[13] Earthjustice,

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[3] *Id*. at 9300.
[4] Am. Water Works Ass'n, *Corrosion Control for Operators; American Water Works Association: Denver, CO* 128 (1986).
[5] Arnold, R. B. & Edwards, M. *Potential Reversal and the Effects of Flow Pattern on Galvanic Corrosion of Lead* 46 Env't Sci. & Tech. 10941 (2012).
[6] Roger B. Arnold & Marc Edwards, *Potential Reversal and the Effects of Flow Pattern on Galvanic Corrosion of Lead* 46 Env't Sci. & Tech. 10941 (2012).
[7] G. E. Lagos et al., *Aging of Copper Pipes by Drinking Water* 93 J. Am. Water Works Ass'n 94 (2001); M. A. Edwards, et al. *The Role of Pipe Ageing in Copper Corrosion By-Product Release*, 1 Water Sci. & Tech: Water Supply, 25 (2001).
[8] Am. Water Works Ass'n, *Corrosion Control for Operators; American Water Works Association: Denver, CO* 128 (1986).
[9] *The Science Behind the Flint Water Crisis: Corrosion of Pipes, Erosion of Trust*, The Conversation (Jan. 28, 2016), https://theconversation.com/the-science-behind-the-flint-water-crisis-corrosion-of-pipes-erosion-of-trust-53776.
[10] Sheldon Masters et al., *Inherent Variability in Lead and Copper Collected During Standardized Sampling* 188 Env't Monit Assess 176 (2016).
[11] Simon Triantafyllidou et al., *Lead Participles in Potable Water* J. Am. Water Works Ass'n 107, 112 (2007).
[12] Env't Prot. Agency, *Final Report of the Lead and Copper Working Group to the National Drinking Water Council* (2015), https://www.epa.gov/sites/default/files/2017-01/documents/ndwaclcrwgfinalreportaug2015.pdf.
[13] *See e.g.*, The White House, *Fact Sheet: The Biden-Harris Lead Pipe and Paint Action Plan* (Dec. 16, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/12/16/fact-sheet-the-biden-harris-lead-pipe-and-paint-action-plan/.

Natural Resources Defense Council, and New York League of Conservation Voters are eager to work with DEP to prioritize and expedite citywide replacement of lead service lines.

Thank you for your time and please do not hesitate to reach out to us with any questions.

Sincerely,

Suzanne Novak
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cc: Angela Licata, Deputy Commissioner for Sustainability

Exhibit 2

EARTHJUSTICE

March 1, 2023

The Honorable Patrick Madden
Mayor of Troy
433 River Street
Troy, NY 12180

Re: Paying for LSLR and the legal authority for the use of rate funds to replace lead service lines on private property

Dear Honorable Patrick Madden:

Earthjustice was pleased to hear your proposed plan for 100% lead service line replacement at zero cost to homeowners during the Troy City Council's Public Utilities Committee meeting on February 16th. We write today to commend this effort and to encourage Troy to obtain as much funding as possible for this endeavor, and to set forth authority for the use of water rate funds to make up for any shortfall, if necessary.

We understand that there are concerns about the City's ability to use water rate funds towards the replacement of lead service lines on private property due to Article 8, Section 1 of the New York State Constitution. **Earthjustice holds the view that water rates can be used to pay for lead service line replacement to further the commendable public policy goal of eliminating this known source of lead exposure.**

Indeed, just a few years ago, the New York Court of Appeals, the highest court in the state, upheld the broad authority of the New York City Water Board and the New York City Department of Environmental Protection (DEP) to set water rates and determine what they will be used for. The Court clarified that water rates may be determined "in accordance with public policy goals" instead of or along with economic goals. *Prometheus Realty Corp. v. New York City Water Bd.*, 30 N.Y.3d 639, 646, 92 N.E.3d 778 (2017); *see also* NY Pub. Auth. L. sec. 2824(1).

Our organization is not alone in this assessment of the *Prometheus* court decision. The Environmental Defense Fund (EDF) and the Emmett Environmental Law & Policy Clinic concluded in a 2019 report (the "2019 Report") that "this very broad discretion to establish rates and especially the explicit authority to consider public policy goals suggests that water authorities should be able to use ratepayer funds for LSL replacement." [1]

The 2019 Report also reviewed the Public Purpose Doctrine in New York's Constitution (Article 8, Section 1) and found that New York Courts have broadly interpreted what constitutes a public purpose. For example, one court held that even though a municipality may not expend money for the benefit of an individual, it may do so in furtherance of a "public purpose," and that the sale of a public building to a private entity that would convert the building into a museum furthered such a purpose. *See Landmark West! v. City of New York*, 9 Misc. 3d 563, 569, 802 N.Y.S.2d 340, 347 (N.Y. Sup. Ct. 2005); *see also*

[1] Shaun A. Goho, Marcello Saenz, and Tom Neltner, "Rates could fund lead pipe replacement in critical states: Laws in states with the most lead service lines support the practice," Environmental Defense Fund and Emmett Environmental Law & Policy Clinic, Harvard Law School, p. 48, http://clinics.law.harvard.edu/environment/files/2019/04/Rates-Fund-LSL-Replacement-States_Harvard_EDF_2019.pdf

Schulz v. Warren Cty. Bd. of Sup'rs, 179 A.D.2d 118, 121, 581 N.Y.S.2d 885, 887 (N.Y. App. Div. 1992). Another court upheld the use of public funds to lay pipes under private streets in order to supply water to customers of the town water district. *Horsfall v. Schuler*, 217 A.D. 146, 149, 216 N.Y.S. 391, 393 (App. Div. 1926).

While we believe the City *can* use water rate funds towards lead service line replacement, we join our partner organizations and Troy residents in urging you to **secure as much grant funding and other revenue as possible before raising water rates to pay for Troy's LSL replacement program**. It is critical for water to remain affordable for Troy residents, and they should not face an inordinate burden for water that is clean and safe to drink. Funding can be obtained through several channels, including, but not limited to, the Bipartisan Infrastructure Law (BIL), New York's Clean Water Infrastructure Act (CWIA), and the Clean Water, Clean Air, and Green Jobs Bond Act.

Thank you for your consideration of our comments, and we look forward to working with the City toward a strong and equitable program to replace lead service lines as rapidly as possible.

Sincerely,

Suzanne Novak
Senior Attorney

Liz Moran
New York Policy Advocate

cc: Members of the Troy City Council

Exhibit 3

Comments of the Attorneys General of New York, California, Connecticut, Illinois, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, Oregon, Pennsylvania, Rhode Island, Wisconsin, and the District of Columbia,

on

the Environmental Protection Agency's Proposed National Primary Drinking Water Regulations for Lead and Copper: Improvements (LCRI)
88 Fed. Reg. 84,878 (Dec. 6, 2023)
EPA-HQ-OW-2022-0801

February 5, 2024

Table of Contents

EXECUTIVE SUMMARY

The Attorneys General of New York, California, Connecticut, Illinois, Maryland, Massachusetts, Michigan, Minnesota, New Jersey, Oregon, Pennsylvania, Rhode Island, Wisconsin, and the District of Columbia (together, "Attorneys General") submit these comments on the Environmental Protection Agency's proposed National Primary Drinking Water Regulations for Lead and Copper: Improvements (LCRI), 88 Fed. Reg. 84,878 (Dec. 6, 2023) (Proposed Rule).

We commend EPA for the Proposed Rule, which represents a significant improvement over the previous rule the agency finalized in 2021. We particularly applaud the agency's decision to generally require the replacement of all lead service lines within ten years. We also support revisions EPA has made to strengthen its 2021 rule in several areas, including lowering the lead action level, increasing protections for customers of small water systems, and improving public education on the dangers of lead.

Despite these significant improvements, the Attorneys General remain concerned that the Proposed Rule does too little to protect public health generally and specifically to address the disparate impacts of lead-contaminated drinking water on underserved communities. Therefore, as discussed in the comments below, we advocate for EPA to strengthen several aspects of the proposal.

Below we highlight some of the main points in our comments:

- ***Lead service line replacement.*** Mandatory replacement of all lead service lines within ten years is the heart of the Proposed Rule's public health protections. Based on the experience of several of our states and cities, such a deadline is achievable provided adequate funding is available. We generally support EPA's proposal to allow water systems with a large number or percentage of lead service lines additional time to complete replacements, subject to state oversight and ability to compel more expedited compliance. However, to increase the likelihood that lead service line replacements will in fact occur in all communities—regardless of income levels—we urge EPA to consider reviving its previous presumption that water systems control the entirety of the lead service line and/or narrowing the circumstances under which lack of access can be used to excuse mandatory replacements. EPA should also provide incentives to water systems to ensure that full replacements of service lines happen in all communities. As to other aspects

of lead service line replacement, we generally support the Proposed Rule's requirements on reasonable attempts by water systems to secure access to private property to do replacements, to mitigate lead concentrations after a lead service line has been disturbed, and to prepare and publish online lead service line replacement plans that (i) set forth strategies for replacement and (ii) identify barriers to full replacements. EPA should take the following additional steps to ensure that the final rule remedies longstanding inequities from lead exposure in drinking water by: (i) providing more specific language directing water systems on how to identify underserved communities and to prioritize replacing lead service lines in these communities; (ii) finalizing its proposed prohibition on water systems counting disconnections at vacant buildings toward their annual replacement requirements; (iii) adopting its proposed ban on partial service line replacements unless conducted in response to emergency repairs or planned infrastructure work; and (iv) finalizing its proposed provisions requiring that water systems develop funding strategies for (a) achieving full service line replacement that accommodates customers who are unable to pay for the replacement of private services lines, and (b) replacing lead service lines in rental properties and informing renters about the quality of their water.

- ***Revised lead action level and corrosion control treatment.*** We strongly support EPA's proposal to reduce the lead action level to 0.010 milligrams per liter (mg/L) to better protect public health, and encourage EPA to consider a more protective level of 0.005 mg/L in the near future. We also support eliminating the current regulations' trigger level in conjunction with reducing the action level to 0.010 mg/L. Focusing on a single, health-protective number for systems to reach will be simpler to implement and reduce confusion. With respect to whether water systems should be allowed to defer optimal corrosion control treatment requirements based on plans to replace lead service lines, we suggest that EPA tighten up the final regulations to ensure that water systems first have concrete plans to promptly replace lead service lines.

- ***Small water system compliance flexibility.*** We support EPA's proposed changes to compliance flexibility for small systems that exceed the lead action level, including (i) narrowing the eligibility for compliance flexibility from water systems serving 10,000 people to systems serving 3,300 or fewer people, and (ii) eliminating lead service line replacement as an option (instead of a requirement). Both of these changes will better protect public

health. Regarding the compliance alternatives to optimizing corrosion control treatment—installing point-of-use filters and replacing lead plumbing—we provide some suggestions for ensuring that these alternatives result in equivalent reductions in lead concentration as corrosion control treatment.

- ***Public education.*** We support EPA's improvement of several public education requirements, including shortening the period for mandatory notice of lead tap sampling testing results, modifying lead hazard warning language to better inform the public about the health effects from lead in drinking water, and adding language translation requirements to increase the likelihood non-English speakers understand the risks of lead exposure.

- ***Lead sampling at schools and childcare facilities.*** The Proposed Rule's provisions concerning lead sampling at schools and childcare facilities are inadequate and should be significantly strengthened. First, EPA should adopt a lead action level of 0.005 mg/L for schools and childcare facilities. This would obligate for community water systems serving these buildings and schools and childcare facilities that operate their own water systems to take corrective action if the level is exceeded. Second, EPA should require a more robust sampling program for these facilities, such as mandatory sampling in secondary schools, improved outreach, increased sampling frequency and quantity, and improved reporting of test results. Third, in lieu of requiring increased sampling frequency and quantity, EPA should consider giving water systems the alternative of installing and maintaining point-of-use water filters, similar to the "filter first" approach that Michigan adopted last year. EPA has the authority to require water systems to adopt this method, which could be a more cost effective approach to removing lead until a more permanent solution (e.g., removal of lead service lines and lead plumbing fixtures) is implemented.

Our comments are organized as follows: Section I is an introduction, which discusses our interest in protective drinking water standards and related advocacy in EPA's rulemaking and in litigation. In Section II, we present our comments on the following aspects of the Proposed Rule: (A) lead service line replacement; (B) revised lead action level and corrosion control treatment; (C) compliance flexibilities for small water systems; (D) public education; and (E) lead sampling at schools and childcare facilities. Finally, we offer some concluding thoughts in Section III.

I. INTRODUCTION

A. States' Interest in Addressing Lead in Drinking Water

Lead is a highly toxic heavy metal that can adversely affect almost every organ and bodily system.[1] In adults, lead exposure can cause brain damage resulting in problems with thinking (cognition), difficulties with organizing actions, decisions, and behaviors, abnormal social behavior (including aggression), and difficulties in coordinating fine movements, such as picking up small objects.[2] Adults have increased risks of heart disease, high blood pressure, muscle and joint pain, reproductive problems, kidney damage, and nervous system problems including those related to memory and concentration.[3] According to one multi-year study on the impacts of low-level lead exposure, "of 2.3 million [cardiovascular] deaths every year in the U.S., about 400,000 are attributable to lead exposure."[4] This study concludes that lead, even at low levels, is a key risk factor for deaths from cardiovascular disease.[5] In women exposed to lead before or during pregnancy, lead can transfer to the fetus through the placenta, increasing the child's risk of harmful health effects.[6]

The health risks associated with lead exposure are even more dire for children. In particular, there is abundant evidence that links high lead levels in children's blood with "increased diagnosis of attention-related behavioral problems, greater incidence of problem behaviors, and decreased cognitive performance as indicated by (1) lower academic achievement, (2) decreased intelligence quotient

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[1] Agency for Toxic Substances and Disease Registry (ATSDR), "Toxicological Profile for Lead," (Aug. 2020) at 14, https://www.atsdr.cdc.gov/toxprofiles/tp13.pdf. The most studied effects of lead exposure are: neurological, renal, cardiovascular, hematological, immunological, reproductive, and developmental. Other health effects associated with lead exposure are: respiratory, hepatic, endocrine, gastrointestinal, musculoskeletal, ocular, and cancer. *Id*. at 14-16.

[2] U.S. Environmental Protection Agency (EPA), "What are the Health Effects of Lead?" https://www.epa.gov/lead/learn-about-lead#effects; Centers for Disease Control, "What are Possible Health Effects from Lead Exposure?" https://www.atsdr.cdc.gov/csem/leadtoxicity/physiological_effects.html.

[3] ATSDR, Toxicological Profile for Lead, *supra* note 1, at 14.

[4] Lanphear, et al., "Low-Level Lead Exposure and Mortality in US Adults: a Population-Based Cohort Study," 3 *Lancet Public Health* e177, e182 (Mar. 12, 2018), https://www.thelancet.com/journals/lanpub/article/PIIS2468-2667(18)30025-2/fulltext.

[5] *Id*.

[6] EPA, What are the Health Effects of Lead?, *supra* note 2.

(IQ), and (3) reductions in specific cognitive measures."[7] Childhood lead poisoning can cause health effects for individuals later in life including hypertension, renal effects, reproductive problems, and developmental problems with their offspring.[8]

The American Academy of Pediatrics states that no amount of lead exposure is safe for children, and recommends that state and local governments take steps to reduce lead levels in school drinking water to less than or equal to 1 part per billion (ppb).[9] Similarly, a 2017 paper concluded that three decades of studies have shown that certain toxins, including lead, do not exhibit a threshold and are proportionately more toxic at the lowest levels of exposure.[10] The paper noted that "an increase in blood lead from <1 µg/dL to 30 µg/dL (<10 ppb to 300 ppb) was associated with a 9.2 IQ deficit, but the largest fraction of the deficit (6.2 IQ points) occurred below 10 µg/dL (100 ppb)."[11] Based on these findings, the author recommends that "regulatory agencies should strive to achieve near-zero exposures" for several toxins, including lead, to better protect public health.[12]

Drinking water can be a significant source of lead exposure. EPA estimates that drinking water can make up at least 20 percent of a person's total exposure to lead.[13] However, infants who consume mostly formula mixed with tap water can receive 40 to 60 percent of their exposure to lead from the water used in the formula.[14] An analysis of EPA data by the Natural Resources Defense Council found that between 2018 and 2020, 186 million people in the United States were served by water systems detecting 90th percentile lead levels exceeding the level of 1 ppb recommended by the American Academy of Pediatrics to protect children from lead

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[7] National Toxicology Program, "Health Effects of Low-Level Lead, xviii (June 2012), https://ntp.niehs.nih.gov/ntp/ohat/lead/final/monographhealtheffectslowlevellead_newissn_508.pdf.

[8] Centers for Disease Control, What are Possible Health Effects from Lead Exposure?, *supra* note 2.

[9] American Academy of Pediatrics, "Prevention of Childhood Lead Toxicity," 138(1) *Pediatrics* 1 (July 2016), https://pediatrics.aappublications.org/content/138/1/e20161493.

[10] Lanphear, "Low-Level Toxicity of Chemicals: No Acceptable Levels," 15(12) *PLoS Biology* 1, 5 (Dec. 19, 2017), https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.2003066.

[11] *Id.* at 3.

[12] *Id.* at 6.

[13] 88 Fed. Reg. at 84,897.

[14] *Id.*

in water.[15] More than 61 million people were served by water systems that detected 90th percentile lead levels that exceeded 5 ppb and 7 million people were served by systems that detected 90th percentile lead levels that exceeded 15 ppb.[16]

While the data show that large areas of the country have a higher potential for lead exposure due to drinking water contamination, underserved communities[17] are affected at even greater rates due to lack of infrastructure and investment in their communities and cumulative impacts of environmental problems. Studies show that "income is associated with exposure to a wide variety of environmental quality indicators in the ambient environment, at home, in school, on the job, and in one's neighborhood."[18] Relatedly, aging housing stock—often found in communities lacking sufficient investment—likewise correlates to increased lead exposure from a variety of sources.[19] The Environmental Justice Coalition for Water found, in California, "the lack of access to quality water resources and exclusion from water decision making has resulted in the disproportionate exposure of people of color and

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[15] Natural Resources Defense Council, "Millions Served by Water Systems Detecting Lead," (May 13, 2021), https://www.nrdc.org/resources/millions-served-water-systems-detecting-lead. Note, these results are the 90th percentile value of tap water samples, meaning that 90 percent of tap water samples for each water system did not exceed the 1 ppb level and 10 percent of samples exceeded 1 ppb.

[16] *Id*.

[17] "Underserved communities" refers to populations sharing a particular characteristic, as well as geographic communities, that have been systematically denied a full opportunity to participate in aspects of economic, social, and civic life, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. *See* Executive Order 13,985, Advancing Racial Equity and Support for Underserved Communities Through the Federal Government, 86 Fed. Reg. 7,009 (Jan. 25, 2021). In this comment letter, we use the terms "underserved communities" and "environmental justice communities" synonymously.

[18] Evans & Kantrowitz, "Socioeconomic Status and Health: The Potential Role of Environmental Risk Exposure," 23 *Annual Review of Public Health* 303, 323 (May 2002), https://www.annualreviews.org/doi/10.1146/annurev.publhealth.23.112001.112349.

[19] EPA, Executive Summary of EPA 747-R-96-002, (May 1996), https://www.epa.gov/lead/executive-summary-epa-747-r-96-002 (lead in soil); Massachusetts Department of Public Health, 2021 Annual Childhood Lead Poisoning Surveillance Report, 5-6 (Nov. 17, 2022), https://www.mass.gov/doc/2021-annual-childhood-lead-poisoning-surveillance-report-0/download (lead in paint).

low-income communities to contaminated drinking water."[20] A lack of resources in these communities leads to an inability to "construct, operate, and maintain water infrastructure."[21] Similar disproportionate burdens have been found among migrant farmworkers in North Carolina and low-income Chicano populations living along the United States and Mexico border.[22] In fact, EPA's environmental justice analysis for the Proposed Rule found that Black, Indigenous, People of Color (BIPOC) and low-income populations are at higher risk of lead exposure and associated health risks.[23]

Given the harm caused by ingesting lead-contaminated water and the disproportionate impacts of lead exposure on underserved communities, our states have a strong interest in replacing lead service lines with safer alternatives. To this end, several states have already enacted laws and regulations mandating lead service line replacement. For example, in 2018, Michigan revised its Safe Drinking Water Act regulations to require the replacement within 20 years of all lead service lines and galvanized service lines if the service line is or was connected to lead piping.[24] In 2021, New Jersey enacted legislation declaring that the presence of lead in drinking water represents a threat to public health and requiring that all lead service lines and galvanized service lines be replaced within 10 years.[25] In 2021, Illinois enacted the Lead Service Line Replacement and Notification Act, which declares that, for the general health, safety and welfare of its residents, all lead service lines in Illinois should be disconnected from the drinking water supply, and requires the replacement (in a timeframe ranging from 15 to 50 years) of all lead service lines and galvanized service lines that are or were connected to downstream

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[20] Environmental Justice Coalition for Water, Thirsty for Justice: A People's Blueprint for California Water, 72 (Aug. 5, 2005), https://www.issuelab.org/resources/2885/2885.pdf.

[21] *Id.* at 78, 80.

[22] Cieselski, et al., "The Microbiologic Quality of Drinking Water in North Carolina Migrant Labor Camps," 81 *American Journal of Public Health* 762 (June 1991), https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1405149/; Calderon, et al., "Health Risks from Contaminated Water: Do Class and Race Matter?," 9 *Toxicology and Industrial Health* 879 (Sept. 1, 1993).

[23] 88 Fed. Reg. at 84,927.

[24] Mich. Admin. Code R 325.10604f.

[25] N.J. Stat. Ann. §§ 58:12A-40 to 12A-47.

lead piping.[26] In 2023, Rhode Island and Minnesota also enacted laws requiring the replacement of all lead service lines and galvanized service lines within 10 years.[27]

B. Procedural History

As further context for our comments on the Proposed Rule, this section highlights relevant points from our comments on the 2019 proposal and our opening brief in litigation over the 2021 rule.

1. Comments on 2019 Proposal

In November 2019, EPA issued proposed revisions to its lead and copper drinking water regulations.[28] Our state coalition submitted comments,[29] expressing concerns about the proposal in several areas:

- ***Lead service line replacement rate.*** For water systems that exceed the lead action level, the 2019 proposal called for reducing the mandatory replacement rate of lead service lines from 7 percent annually to 3 percent. Although the agency contended that by not counting partial replacements or "test outs," the actual number of replacements would not decrease, we argued that EPA could make those changes while keeping the same replacement rate in place.[30]
- ***Stronger measures to address noncompliance with lead service line replacement rate.*** Under the proposal, a water system that failed to replace

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[26] 415 Ill. Comp. Stat. Ann. 5/17.12. The Office of the Illinois Attorney General has also taken major steps to address the serious health hazards presented by lead in drinking water. For instance, it has brought legal action against a water utility in University Park in Will County, Illinois that failed to provide residents with safe drinking water uncontaminated by lead. Illinois Attorney General, Attorney General Raoul and Will County State's Attorney Glasgow Announce Consent Order with Aqua Illinois Over Water Contamination, (Oct. 5, 2023), https://www.illinoisattorneygeneral.gov/news/story/attorney-general-raoul-and-will-county-states-attorney-glasgow-announce-consent-order-with-aqua-illinois-over-water-contamination.

[27] 23 R.I. Gen. Laws Ann. § 23-24.6-28; Minn. Stat. Ann. §§ 446A.077-446A.078.

[28] National Primary Drinking Water Regulations: Proposed Lead and Copper Rule Revisions, 84 Fed. Reg. 61,684 (Nov. 13, 2019).

[29] Comments of the Attorneys General of California, Oregon, Minnesota, Connecticut, Pennsylvania, Wisconsin, Illinois, Maryland, New York, and New Jersey (Feb. 12, 2020) ("2020 Multistate Comments"), https://www.regulations.gov/comment/EPA-HQ-OW-2017-0300-1468. These comments are attached as ***Attachment A***.

[30] 2020 Multistate Comments at 10-11.

lead service lines at the mandatory rate was not required to notify its customers and could instead choose other, less targeted communication methods such as to conduct a social media campaign. We recommended mandatory notification by certified mail to each customer in addition to holding public meetings and distributing education materials about the required replacement.[31]

- ***Disparate impacts.*** Although EPA proposed not to allow partial lead service line replacements to count toward a system's compliance obligation, the agency otherwise failed to address disparate impacts associated with replacements. To the contrary, the proposal incentivized water systems to prioritize replacement in communities where private homeowners had the resources to cover the out-of-pocket cost of replacing the private portion of the lead service line. We urged EPA to evaluate and adopt methods to help ensure full lead service line replacements in low-income communities to reduce disparate impacts.[32]
- ***Small system compliance flexibility.*** Under the proposal, smaller water systems (which represent 91 percent of community water systems) that exceeded lead action levels could opt out of lead service line replacement and choose other compliance options, such as optimized corrosion control treatment. We advocated for EPA to eliminate this opt-out provision because these other compliance options are not as effective as lead service line replacement.[33]
- ***Mandatory replacement after exceedance of lead action level.*** Under the proposal, water systems that experienced an exceedance of the lead action level could avoid having to replace lead service lines if subsequent sampling showed levels below the action level for four consecutive monitoring periods (*i.e.*, two years). We advocated for EPA to discard this approach, arguing that it would create inefficiencies and could substantially delay the timeline for complete removal of lead service lines and that any existing lead service lines remain a threat to public health and safety, even if they temporarily do not cause lead exposures.[34]
- ***Lead action level.*** EPA proposed to leave the lead action level—which activated systems' obligation to undertake remedial measures—at

[31] *Id.* at 14.

[32] *Id.* at 11-13.

[33] *Id.* at 18-19.

[34] *Id.* at 13-14.

15 micrograms per liter (µg/L), but to create a "trigger level" of 10 µg/L, pursuant to which water systems would have to undertake additional testing. We urged EPA instead to lower the lead action level, which would provide a more protective and simpler approach.[35]

- ***Making lead service line inventories available online.*** In the proposal, water systems serving over 100,000 customers would have to make their lead service line inventories available online. Although we supported this provision, we urged EPA to broaden its scope to cover at least water systems that served more than 500 customers.[36]
- ***More protective requirements for schools and daycare facilities.*** The proposal included new lead education and testing provisions for K-12 schools and childcare facilities built prior to January 1, 2014. We supported these provisions but advocated for more protective measures, including: rejecting the "upon request" option in the proposal that would make lead testing a voluntary program; requiring systems to post all lead test results online as soon as practicable after testing occurs; including a health-protective lead action level and requiring water systems to send schools and childcare facilities with lead test results above that action level specific information on how to respond to high lead levels; and mandating testing of as many drinking water outlets in schools and childcare facilities as feasible.[37]

2. Litigation Over 2021 Rule

After EPA issued its final rule,[38] which failed to remedy many of the deficiencies discussed in our comments, many of our states—along with several public health and environmental organizations—filed a lawsuit in the D.C. Circuit challenging the rule (*Newburgh Clean Water Project v. EPA*, D.C. Cir. No. 21-1019 and consolidated cases). In our opening brief, the state petitioners discussed how several aspects of the 2021 rule were unlawful.

First, we argued that the rule's lead service line replacement provision impermissibly allowed "backsliding" from the previous rule, contrary to the Safe

[35] *Id.* at 9.

[36] *Id.* at 15-16.

[37] *Id.* at 16-18.

[38] National Primary Drinking Water Regulations: Lead and Copper Rule Revisions, 86 Fed. Reg. 4198 (Jan. 15, 2021).

Drinking Water Act's anti-backsliding provision, 42 U.S.C. § 300g-1(b)(9).[39] We cited both the rule's elimination of the previous rule's mandate that small water systems replace their lead service lines when the water in their systems exceeds the lead action level and the reduction in the annual mandatory minimum rate of lead service line replacement for large systems from 7 percent to 3 percent of the system's total lead service lines.

Second, we argued that EPA failed to reasonably explain its conclusion that the rule would not disproportionately harm minority and low-income populations within the meaning of Executive Order 12,898.[40] We explained that replacement of privately-owned portions of lead service lines under the rule generally would be available only where the homeowner paid thousands of dollars to replace that portion of the line. And that minority and low-income populations, who face greater lead exposure, would be less likely to be able to pay for the replacement of privately-owned service lines and more likely to live in rental housing where a landlord refuses to pay for replacement of privately-owned service lines. Under those circumstances, EPA failed to explain how the rule's lead service line replacement provision would not exacerbate these disparate impacts.

After the petitioners' opening briefs were filed, EPA filed a motion for a voluntary remand. EPA stated that although it believed that the 2021 rule improved on the prior rule in several respects, it nonetheless had commenced a new rulemaking "to revise and strengthen the rule" and "[g]iven that EPA's new rule could address all of Petitioners' concerns about the Rule," EPA requested remand without vacatur.[41] Although the D.C. Circuit denied the motion, it placed the case in abeyance pending the completion of EPA's rulemaking.

II. COMMENTS ON PROPOSED RULE

In Section II, our comments on the Proposed Rule are set forth in the following subsections: (A) lead service line replacement; (B) lead action level and corrosion control treatment; (C) compliance flexibilities for small systems; (D) public education; and (E) lead sampling at schools and childcare facilities.

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[39] Initial Opening Brief of State Petitioners in *Newburgh Clean Water Project v. EPA*, D.C. Cir. No. 21-1019 (Aug. 8, 2022), Doc. # 1958332, at 19-20.

[40] *Id.* at 20-21.

[41] Respondents' Consent Motion for Voluntary Remand in *Newburgh Clean Water Project v. EPA*, D.C. Cir. No. 21-1019 (Dec. 9, 2022), Doc. # 1977031 at 1-2.

A. Lead Service Line Replacement

Our comments on the proposed lead service line provisions include seven aspects: (1) mandatory replacement; (2) deferred deadlines; (3) "under control" provision and cost sharing; (4) "reasonable attempt" to access; (5) mitigation activities; (6) service line replacement plans; and (7) environmental justice.

1. Mandatory Replacement

The Proposed Rule would require full service line replacement of all lead service lines and galvanized requiring replacement (GRR) service lines[42] under a water system's control within 10 years.[43] This requirement is a much-needed improvement over the 2021 rule, which did not mandate full replacement, and that EPA projected would, over 35 years, result in replacing only 854,000 to 1.3 million of the estimated 9.2 million lead service lines in the United States.[44] Under the 2021 rule, lead service lines accounting for 50 to 75 percent of lead contamination in drinking water would have remained in active use.[45] In contrast, the Proposed Rule would require 96 percent of systems nationwide to replace all lead service lines under their control on a 10-year timeline, with only four percent of systems being potentially eligible for additional time to complete replacement.[46]

Given the danger that lead-contaminated water poses to the health of our states' residents, the Attorneys General strongly support EPA's proposal to mandate the full replacement of all lead service lines because: (1) lead service lines are a major source of lead-contamination in tap water; (2) prior EPA rules that did

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[42] The Proposed Rule applies both to lead service lines and galvanized requiring replacement (GRR) lines. Galvanized service lines are iron or steel pipes that have been dipped in a protective zinc coating to prevent corrosion and rust. As EPA explains, "[g]alvanized service lines that are or ever were downstream of an [lead service line] can adsorb upstream lead particulates and contribute to lead in drinking water even after the original lead source has been removed." 88 Fed. Reg. at 84,918. Where systems are unable to demonstrate that a galvanized service line was never downstream of a lead service line, it would be categorized as a GRR service line and be subject to the Proposed Rule's mandatory replacement requirement. For ease of reference, we use the term "lead service lines" as referring to both types of lines.

[43] 88 Fed. Reg. at 84,910. As will be discussed below, there are limited exceptions from the 10-year timeframe for very large water systems and for systems with a high proportion of LSLs and GRR service lines.

[44] *Id.*

[45] *Id.*

[46] *Id.* at 84,912.

not mandate replacement proved insufficient to protect public health; and (3) not all systems are proactive in replacing lead service lines, especially in underserved communities.

First, it is critical to mandate the removal of lead service lines because, when present, they are the main contributor of lead contamination in water, contributing an average of approximately 50 to 75 percent of the total lead mass measured at the tap.[47] In comparison, premise piping (*i.e.*, piping within the home or other building) contributes about 20 to 35 percent of total lead mass, while faucets contribute about 1 to 3 percent.[48]

Second, as EPA acknowledges based on its over 30 years of implementing the 1991 Lead and Copper Rule, prior measures such as requiring lead service line replacements based on 90th percentile lead levels[49] have proved insufficient at protecting public health.[50] One major problem with the prior approach is that the rule structure—which the 2021 rule kept—only compelled protective actions *after* public health threats were identified—that is, after periodic tap sampling results showed an exceedance of the action level for lead.[51] Moreover, EPA found that "the sampling and process steps of that rule created implementation uncertainties, difficulties, and errors that, in some cases, resulted in significant lead exposures."[52] Although actions such as corrosion control treatment and risk mitigation measures can provide some protection from lead contamination, the former can be prone to error and the latter are not always applied. EPA notes that improper implementation of corrosion control treatment has been one of the primary causes of significant lead exposures in multiple water systems.[53] And although water systems must take risk mitigation measures to prevent disturbances of lead service lines

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[47] *Id.* at 84,880 (citing a 2008 study by Sandvig et al.).

[48] *Id.*

[49] In 1991, the Lead and Copper rule established action levels of 0.015 mg/L for lead and 1.3 mg/L for copper. If more than 10 percent of tap sample results (*i.e.*, the 90th percentile value of tap sample concentrations), collected during any monitoring period, exceed the action level, water systems had to take actions including corrosion control treatment and replacing lead service lines if the system continued to exceed the action level after completing corrosion control treatment. *Id.* at 84,898.

[50] *Id.* at 84,880.

[51] *Id.* at 84,899.

[52] *Id.* at 84,911.

[53] *Id.*

that can cause lead particulates to be released to drinking water, other utilities, heavy traffic, or even cold weather can also disturb lead service lines, in which case there would be no risk mitigation measures taken.[54] As long as lead service lines remain in place, they pose a threat to public health.

Third, while some states and water systems have been proactive in replacing all lead service lines without a federal mandate, EPA cannot assume that all systems will take such initiative on their own, even when funding is available. A nationwide mandate ensures that all water users—including those in states that do not require replacement or where systems are not proactively replacing lead service lines—will be free of the major source of lead contamination in tap water.[55] This is particularly significant for underserved communities, as discussed more specifically below, which tend to bear the impacts of lead infrastructure disproportionately in every state.

The Attorneys General also agree with EPA's conclusion that most water systems nationwide can feasibly replace all lead service lines within 10 years.[56] Three states—New Jersey, Rhode Island, and Minnesota—recently enacted laws requiring the replacement of all their lead service lines within 10 years.[57] New Jersey and Rhode Island are among the states with the most lead service lines, with 14 and 25 percent, respectively, of all their service lines requiring replacement.[58] The fact that these states found it feasible to replace all lead service lines in 10 years shows that this timeline is possible for most states, which likely have many fewer lead service lines, by comparison.

In addition, the experience of several cities supports EPA's conclusion that—with adequate funding—full lead service line replacement is possible for most systems within 10 years and, for some systems, even sooner. The cities of Stoughton, Wisconsin; Mayville, Wisconsin; Tucson, Arizona; and Spokane, Washington each had less than 1,000 lead service lines and completed their replacement programs in one to two years. Most water systems in the country (96.5

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[54] *Id.*

[55] *Id.*

[56] *Id.* at 84,912.

[57] N.J. Stat. Ann. §§ 58:12A-40-12A-47; Minn. Stat. Ann. §§ 446A.077-446A.078; 23 R.I. Gen. Laws Ann. § 23-24.6-28.

[58] 88 Fed. Reg. at 84,911.

percent) also have less than 1,000 lead service lines.[59] For this reason, the Attorneys General agree with EPA's decision to retain the proposed requirement that states set a faster replacement rate where feasible for systems.[60] Many small systems will not need 10 years to complete replacement and, as states are better positioned than EPA to assess the conditions facing local water systems, states should make such feasibility determinations. To that end, guidance from EPA would assist states in making these determinations in a consistent manner.

Even large systems with greater numbers of lead service lines have completed replacement in less than ten years. Newark, New Jersey replaced its approximately 23,000 lead service lines in four years.[61] Flint, Michigan replaced approximately 12,000 lead service lines in seven years.[62] Furthermore, the Proposed Rule does not require that systems start their replacement programs until three years after promulgation of the final rule, effectively giving them 13 years to complete replacement from the effective date of the rule. Madison, Wisconsin and Lansing, Michigan replaced their lead service lines in 11 years and 12 years, respectively, providing further evidence of the feasibility of EPA's proposed replacement timeline for most water systems.[63]

The Attorneys General also agree with EPA's conclusion that it will be feasible for service line replacement to be conducted by all systems simultaneously.[64] Five stated—Illinois, Michigan, Minnesota, New Jersey, and Rhode Island—all enacted state-wide mandatory, accelerated lead service line replacement programs between 2018 and 2023. These states have more than one-fifth of the lead service lines in the country.[65] In these states' experience, it is possible to have a broad service line replacement mandate in effect across a large geographic region without running into workforce or materials shortages.

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[59] *Id.* at 84,912.

[60] *Id.*

[61] EPA notes that a 2019 ordinance that allowed entry to private property to evaluate service line materials and replace lead service lines likely contributed to Newark's fast replacement rate. *Id.*

[62] EPA notes that Flint's replacement program was slowed by the paper format and unreliable accuracy of its service line material records. *Id.*

[63] *Id.*

[64] *Id.* at 84,913.

[65] *Id.* at 84,911.

2. Deferred Deadlines

Under the Proposed Rule, water systems are eligible for deferral of the 10-year deadline for mandatory full service line replacement if they meet one of two eligibility criteria. The first eligibility criterion applies to systems with a high proportion of lead service lines in their distribution systems relative to the total number of households served. EPA determined that the fastest feasible replacement rate for systems is 0.039 replacements per household per year (equivalent to 39 service line replacements for every 1000 households).[66] Therefore, under the first criterion, a system qualifies for a deferred deadline if it would need to achieve a replacement rate of more than 0.039 replacements per household per year to meet the 10-year deadline. EPA estimates that 1.1 to 4.4 percent of water systems (716 to 2,174 systems) would meet this criterion.[67] Of those systems that qualify for deferred deadlines under this criterion, 74 percent would receive between one and five additional years to complete replacement.[68]

The second eligibility criterion applies to the largest water systems nationally. EPA determined that the maximum feasible annual replacement threshold is 10,000 service lines per system. Therefore, under the second criterion, a system is eligible for a deferred deadline if it would be required to replace more than 10,000 service lines per year to meet the 10-year replacement deadline. EPA identified four cities that would meet this criterion and noted the total time each city would require for full lead service line replacement under this threshold: Chicago (44.6 years), Houston (33.1 years), Cleveland (18.5 years), and New York (13.8 years).[69] Alternatively, EPA proposes an 8,000 service line maximum threshold, which would allow three additional systems to qualify for deferred deadlines: North Texas MWD (11.9 years), Detroit (10.6 years), and Wichita (10.1

[66] *Id.* at 84,913.

[67] EPA, Technical Support Document for the Lead and Copper Rule Improvements, at 11 (Nov. 2023).

[68] *Id.* at 12.

[69] *Id.* at 15. EPA estimated New York City's replacement timeline based on 137,542 known lead service lines, but recent data show over 227,000 service lines of unknown composition. *See* Anne E. Nigra et al., "Geospatial Assessment of Racial/Ethnic Composition, Social Vulnerability, and Lead Water Service Lines in New York City," 131(8) Envtl. Health Perspectives 087015-1, 087015-4 (Aug. 2023). Depending on the number of these unknown service lines that turn out to be lead, New York City's compliance timeline could be significantly extended under the Proposed Rule's deferred deadlines approach.

years).[70] Utilizing an 8,000 service line replacement threshold would also increase the deferred deadlines for Chicago (55.8 years), Houston (41.5 years), Cleveland (23.2 years), and New York (17.2 years).[71] Also, EPA requests comment on whether the maximum feasible replacement threshold should increase from 10,000 to 20,000 service lines after the first 10 years.

The Attorneys General support deferred deadlines that are no less stringent than what EPA has proposed (0.039 replacements per household or 10,000 replacements total per year). Systems with a high proportion of lead service lines or with a high number of lead service lines may need additional time to complete replacement. However, the Attorneys General believe there should be limits placed on these provisions. First, as EPA proposes, systems should be permitted to count only known lead service lines reported in their baseline inventory for their replacement rates and/or thresholds. This condition would prevent systems from qualifying for deferred deadlines by overestimating the number of lines that need replacement. Second, a state, as a condition of primacy, should be required to approve the use of the deferred deadline provision where a water system qualifies for it. As part of this approval process, the state should determine whether it is feasible for a system to replace all of its lead service lines by the 10-year deadline and only if it finds that it is not feasible should the deferred deadline be approved.

Third, EPA should not lower the proposed 10,000 service line minimum feasibility threshold to 8,000 service lines. There is support for the 10,000 service line threshold from large cities that are currently or have previously replaced their lead service lines: Detroit plans to replace 10,000 service lines per year and Newark achieved replacement rates equivalent to 12,000 lines per year.[72] Fourth, after 10 years, the maximum replacement threshold for large cities should be increased to 20,000 lines per year. After 10 years, 96 percent of systems will have completed their replacements, freeing up contractors to perform replacements and making materials more readily available, which should allow the remaining systems to speed up their replacement rates. Moreover, as EPA notes, after 10 years, supply chains will have expanded to meet demand, replacement efficiency will have

[70] Technical Support Document, *supra* note 67, at 15.

[71] *Id.*

[72] 88 Fed. Reg. at 84,914.

increased following a decade of experience, and there could be new technology or procedures to expedite replacement.[73]

3. "Under Control" Provision and Cost Sharing

In this subsection, we discuss the proposed regulations that trigger the obligation of water systems to replace lead service lines and the related issue of who should pay the costs of full replacement (including the line sections that are located on private property). Although we appreciate EPA's consideration of how its regulatory approach could address longstanding inequities associated with lead service line replacement, we are concerned that the proposed regulations fall significantly short in that respect. After outlining those proposed regulations, we provide information on relevant state laws, and then offer some proposed changes to the regulations to better address inequity in lead service line replacements.

Proposed Rule Provisions Regarding Control/Access and Cost Sharing

EPA proposes to condition mandatory replacements on "service lines under the control of the water system."[74] The question of "control" turns on whether a water system has access to the service line. Specifically, "[w]here a water system has access (*e.g.*, legal access, physical access) to conduct full service line replacement, the service line is under its control, and the water system must replace the service line."[75] If a water system does not have "access to conduct full service line replacement," it is not required to replace the line, but must document the reason(s) it lacks access and provide that documentation to the relevant state agency.[76] EPA further states that it is not establishing criteria for determining whether a system has access to conduct full service line replacement "because of the wide variation of relevant state and local laws and water tariff agreements as well as the potential for these to change over time."[77] Relatedly, "where a water system has legal access to conduct full service line replacement only if property owner consent is obtained, the water system must make a 'reasonable effort' to obtain property owner consent."[78]

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[73] *Id.*

[74] 40 C.F.R. Proposed § 141.84(d)(1).

[75] *Id.*, Proposed § 141.84(d)(2).

[76] *Id.*

[77] 88 Fed. Reg. at 84,920; *see also* 40 C.F.R. Proposed § 141.84(d)(2)(i).

[78] *Id.*, Proposed § 141.84(d)(3).

Regarding whether a water system should bear the full cost of lead service line replacement or can share the cost of replacing the section on private property with the landowner, EPA states that it has considered—but rejected—the idea advanced by certain advocates that the agency has the authority under the Safe Drinking Water Act to ban cost sharing. Although acknowledging that the practice of cost sharing can disproportionately impact low-income populations, EPA states that it "is not aware of a factual basis to support" the assertion that water systems control all portions of service lines and concludes that banning cost sharing "would be met with a protracted legal challenge that would delay implementation of the rule."[79] Instead, EPA proposes to "remain[] neutral on this matter of state and local law."[80] At the same time, the agency states that it "strongly encourages customer-side service line replacement to be offered at no direct cost to the customer wherever possible to achieve higher customer participation rates and reduce potential environmental justice impacts."[81]

Based on our experience, the Attorneys General are concerned that the proposed regulations will perpetuate the pattern of fewer lead service line replacements occurring in low-income communities and on rental properties. Prior to recommending suggested changes to attempt to remedy this problem, we provide some information below on relevant state laws and experiences.

Relevant State and Local Laws and Experience

In this section, we discuss state and local funding laws that proactively seek to address inequities associated with lead service line replacements as well as the status of laws that may be relevant to whether water system ratepayer funds or municipal bonds can be used to fund full lead service line replacements. In discussing these types of state and local laws in the preamble to the proposal, EPA referred to a 2019 study by Harvard Law School and the Environmental Defense Fund, which evaluated the laws of thirteen states (Florida, Illinois, Indiana, Massachusetts, Michigan, Minnesota, Missouri, New Jersey, New York, Ohio, Pennsylvania, Texas, and Wisconsin) that have the most lead service lines in the U.S. As EPA notes, the authors concluded that six states (Indiana, Michigan, Missouri, New Jersey, Pennsylvania, and Wisconsin) have expressly authorized the

[79] 88 Fed. Reg. at 84,923.

[80] *Id.*

[81] *Id.*

use of ratepayer funds for lead service line replacement on private property.[82] The study further found "no explicit barriers" to using water rates to fund replacements on private property in the state laws and policies of these thirteen states.[83] The undersigned Attorneys General are not aware of any flaws in this finding as to their respective states, with the exception of those corrections, clarifications, and updates summarized below.

- ***Massachusetts.*** Massachusetts is proposing to increase the availability of loan forgiveness on its loans to its community water systems for the purposes of full (public and private) lead service line replacements.[84]
- ***Michigan.*** Michigan updated its regulations in 2018 to effectively make full lead service line replacements available to all customers, regardless of their income.[85] The Harvard study noted that these rules were the subject of ongoing litigation. That litigation has now been resolved, with state courts upholding the rules. Those courts rejected, among other arguments, that the rules ran afoul of the state constitution's prohibition of requiring municipalities to give something away for free. Because the rules conferred a benefit on municipalities by reducing lead contamination systemwide, the prohibition did not apply. Furthermore, the rules had a public purpose in that they required removal of lead service lines and promoted of public health.[86]
- ***Minnesota.*** Minnesota passed a law last year that establishes a goal of replacing all lead service lines within ten years and allocates $240 million for replacements.[87] The statute was amended to allow for public funds to be used for the specific purpose of replacing private lead service lines.[88]

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[82] 88 Fed. Reg. at 84,926.

[83] *Id.* at 84,926-27.

[84] Mass. Dept. of Envtl. Protection, 2024 Draft Intended Use Plan For the Drinking Water State Revolving Fund, at 10-11 (Dec. 2023).

[85] 88 Fed. Reg. at 84,926.

[86] *Shaw v City of Dearborn*, 329 Mich App 640 (2019); *Oakland Cty Water Resources Comm et al v Dep't of Environmental Quality*, Court of Claims No. 18-000259-MZ, Oct. 9, 2019, Opinion and Order; *Oakland Cty Water Resources Comm et al v Dep't of Environmental Quality*, Court of Claims No. 18-000259-MZ, Jul. 26, 2019, Opinion and Order.

[87] Minn. Session Laws, Ch. 39—H.F. No. 24 (2023)

[88] *See id.*

- ***New Jersey.*** New Jersey passed additional legislation related to lead service lines in 2021. In July 2021, Governor Murphy signed into law P.L.2021, Ch. 183, which requires community water systems to identify all lead service lines, provide public notification regarding the presence of all lead service lines, and replace all lead service lines by 2031. Additionally, a section of the statute addresses who bears the cost of the project, and explicitly states that, "100 percent of the costs associated with undertaking and funding the replacement of lead service lines pursuant to this act, excluding any portion funded by grants or other subsidies, shall be borne by all of the customers, in the State, of an investor-owned public community water system and shall be included in the investor-owned public community water system's rate base or otherwise be recoverable from the system's customers."[89]
- ***New York.*** In addition to the legal authority cited in the Harvard study, the New York Attorney General is aware of both municipal water systems and privately owned utilities in New York that have funded lead service line replacement on customer property. New York's Public Service Commission (which regulates privately owned water utilities) has specifically authorized the use of rate revenue for this purpose, stating: "Water safety, particularly related to the dangers of potential lead poisoning, is of utmost importance. No customer should suffer the risk associated with lead service lines because they lack the resources to have the line replaced."[90]

Regarding states that were not included in the Harvard report, we provide the following information: Rhode Island, which EPA discusses in the Proposed Rule in the context of the state's mandatory lead service line replacement law,[91] requires all water systems in the state to create a lead water supply replacement program for both public and private service lines.[92] The District of Columbia prohibits the use of ratepayer funds for water utility work on private property.[93]

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[89] N.J.S.A. § 58:12A-45.

[90] *In re SUEZ Water New York Inc. et al.*, Cases 19-W-0168, 19-W-0269, Order Adopting Terms of Joint Proposal, Approving Merger, and Establishing Rate Plan, at 54 (N.Y. Pub. Serv. Comm'n July 16, 2020).

[91] 88 Fed. Reg. at 84,911.

[92] *See* R.I. Gen. Laws § 23-24.6-28.

[93] D.C. Code §§ 8-205(b), 34-2158(c).

Proposed Approaches to Address or Mitigate Inequities

The most effective way to address the longstanding inequities in lead service line replacement would be to prohibit cost sharing. As EPA notes in the preamble, advocates argue that EPA has the authority under the statute to take this action because water systems exert control over the entire service line and full service line replacement is the best available technology to address lead contamination in drinking water.[94]

If EPA adheres to its position in the Proposed Rule rejecting the idea of prohibiting cost sharing, it could revise the Proposed Rule in other ways to better address inequity than the "neutral" stance toward cost sharing set forth in the proposal. First, EPA could make changes to the proposal's interpretations of control and access. Second, the agency could include in the final rule one or more alternatives to incentivize full replacements where cost sharing would otherwise pose an obstacle.

First, EPA could consider reverting to the presumption in the 1991 Lead and Copper Rule that a water system controls the full length of a lead service line, including any portion on private property.[95] The original rule provided that "control" for the purpose of lead service line replacement came in the forms of "authority to set standards for construction, repair, or maintenance of the line, authority to replace, repair, or maintain the service line, or ownership of the service line."[96] These forms of control continue to hold true as a factual matter. Under various applicable sources of authority—state law, local law, easement rights, or water tariffs or other service agreements—utilities can generally exercise control over customer service lines through one or more of the following rights, among others:

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[94] 88 Fed. Reg. at 84,923.

[95] *See* Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper, 56 Fed. Reg. 26,460, 26,504-05 (June 7, 1991) (preamble); *id.* at 26,553 (rule text).

[96] *Id.* at 26,553. As EPA explained in the preamble to the rule:

> Water systems generally retain authority to specify standards for construction, maintenance, and composition of service lines to be able to safeguard the integrity of the distribution system and, thereby to ensure the delivery of safe water to the consumer. . . . The Agency believes, moreover, that it is reasonable to interpret "control" as being present in cases where a system has authority to replace or repair or maintain the line since lead service line replacement under the final rule is a form of "repair" or "maintenance" which is necessary to prevent further exposures to elevated levels of lead.

Id. at 26,504.

(1) dictating the specifications of service lines on customer property;[97] (2) requiring customers to provide access for maintenance purposes;[98] (3) shutting off water to a service line for failure to maintain the line or provide the utility access;[99] or (4) unilaterally entering customer property for purposes that may include service line maintenance or replacement.[100] These types of rights provide utilities with control over the full length of a lead service line to the extent necessary to effectuate line replacement.

With respect to access, the Proposed Rule leaves it solely to state and local law to determine what constitutes legal and physical access. Alternatively, EPA could specify that for purposes of lead service line replacement, the only permissible basis to excuse a water system from performing full replacement would be a lack of owner or resident consent to physical access if such consent is required by state or local law. Under this approach, EPA would strike the language in proposed (d)(2)(i) that states "[t]his rule does not establish the criteria for determining whether a system has access to conduct full service replacement" and add language to the effect that access may only depend on "receipt of consent, if required by state or local law, from (a) the owner of any property to which the system requires physical access to complete full lead service line replacement, or (b) any other person who

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[97] *See, e.g.*, 15 Rules of the City of N.Y. §§ 20-02, 20-03 (regulations promulgated by city-run water system governing the specifications, connection, and installation of service lines).

[98] *See, e.g.*, Pittsburgh Water and Sewer Authority, Rates, Rule, and Regulations Governing the Provision of Water Service to the Public in the Territory Described Herein Part III § B(12)(e) ("Should the condition of a customer service line be such that there is a risk to public health or safety or of damage to public property, and the property Owner fails to take prompt action to cure the problem following notice to do so, the Authority shall have the right . . . to make the necessary repair or replacement[.]").

[99] *See, e.g.*, West Valley Crystal Water Co., Inc., Schedule for Water Service Applicable in Village of West Valley, County of Cattaraugus § 12(A)(2) (allowing utility to discontinue service "for failure to protect and maintain the service pipe or fixtures on the property of the customer in a condition satisfactory to the company" or "[f]or failure to provide the company's employees reasonable access to the premises supplied"); *see also* Erie Cty. Water Authority Tariff § 2.31(F) (allowing utility to discontinue water service "[f]or refusal of reasonable access to the property for the purpose of . . . replacing service lines containing lead or galvanized requiring replacement").

[100] *See, e.g.*, Wis. Stat. Ann. § 196.171(1) ("Any officer or agent of any public utility furnishing or transmitting water . . . to the public or for public purposes may enter, at any reasonable time, any place supplied with . . . water by the public utility, for the purpose of inspecting, examining, repairing, installing or removing . . . pipes . . . for supplying or regulating the supply of . . . water[.]").

may be authorized by state or local law to provide such consent." The rule could also provide that a request for access consent cannot be conditioned upon the owner or resident's agreement to bear costs associated with the service line replacement. Such an approach would prevent utilities from using an owner's inability to share costs as a purported reason for lack of access and provide direct benefits to communities least able to afford lead service line replacement.

Second, we present some alternatives that are logical extensions of concepts included in the Proposed Rule. These alternatives are not mutually exclusive, so EPA could choose to adopt one or some combination of the three.

Funding exhaustion approach. Under this approach, a water system would not be relieved of its mandatory lead service line replacement obligation unless it first exhausted federal and state funding opportunities. EPA recognizes in the Proposed Rule that there is significant funding available to pay for replacement of lead service lines (some of it directed to disadvantaged communities least likely to afford full service line replacement) and that using such funding for full replacements "would mitigate or eliminate any barrier to full service line replacement as a result of customer cost-sharing."[101] The agency spends several pages in the preamble listing the numerous funding sources available and notes that it has developed a guidance document describing strategies to achieve full service line replacement and discussing available funding sources.[102] In light of these resources, EPA could add a condition that, before a water system could be relieved of its obligation to do mandatory replacement, it would have to demonstrate that it has sought—and failed to secure—funding under the Bipartisan Infrastructure Law and other relevant sources identified by the agency. Such a requirement would need to include specific criteria that would demonstrate any claimed funding exhaustion.

Incentive approach. EPA should evaluate a mechanism that would incentivize water systems to fund full service line replacements by giving them "extra credit" for not pursuing cost sharing. Specifically, systems could receive extra credit (*e.g.*, 1.5 times) toward their annual replacement rate target for any full lines they replace at no cost to the property owner. This approach (which could be used in conjunction with the funding exhaustion approach described above) would apply where a system uses sources of funding such as municipal bonds, rate revenue, or federal or state grants to replace both the public and private portion of a given lead

[101] *See* 88 Fed. Reg. at 84,924, 84,926.

[102] *Id.* at 84,903-05.

service line. In such instance, the system would be able to count that replacement as greater than one (*e.g.*, 1.5:1) for the purpose of calculating the annual lead service line replacement rate. This would create an incentive for systems to proactively secure funding to complete line replacement at properties with low-income residents—rather than concluding they lack access to such lead service lines—because it would make it easier to hit the system's annual replacement targets. The system would still need to achieve 100 percent replacement, but may be given additional time beyond the 10-year baseline as a result of the extra credit. EPA could also cap this additional time for such systems at a certain point (*e.g.*, 13 years total). If it decides to pursue this approach, EPA should carefully evaluate whether it would, on net, result in more replacements in underserved communities relative to a cost-sharing approach, and would not inequitably delay replacement in such communities.

Additional testing and filtration approach. Under this approach, EPA would require water systems to do testing and, as warranted, filtration, where cost sharing poses the obstacle to full lead service line replacement. If a water system is excused from mandatory replacement because the landowner refuses or is unable to pay for the necessary costs of private service line replacement, the water system would be required to attempt to gain access to that property for the purpose of lead testing on some set interval (*e.g.*, twice a year). If the system either fails to gain access for testing, or the testing indicates lead in drinking water above the action level (or some other threshold), then the system would be required to provide pitcher filters or point-of-use filtration equipment to the property—and, if given access, to install and maintain that equipment—and to conduct repeated testing and supply of filtration equipment on a periodic basis. This would reduce the risk of lead exposure at properties where lead service lines remain in place.

4. Reasonable Attempts to Access

A s discussed immediately above, we recommend changes to the proposed regulations related to the issues of control, access, and cost sharing. Depending on whether EPA adopts any of those approaches, the concept of water systems needing to attempt reasonable access to obtain property owner consent to replace the portion of lead service lines on private property could be obviated or changed. Under the assumption that the reasonable access concept continues to be used, we offer the following comments.

EPA proposes that water systems would make a "reasonable attempt" to engage property owners about lead service line replacement, which would entail at

least four attempts using at least two different communication methods (*e.g.*, in-person conversation, phone call, text message, email, letter).[103] EPA also proposes that states "may require systems to conduct additional attempts and may require specific outreach methods to be used."[104] Systems would have to comply with these requirements again within six months of a change in ownership of a property.[105]

We generally support the proposed reasonable attempt provisions. As EPA notes, there are numerous examples of municipal water systems successfully using multiple methods of outreach (*e.g.*, brochures, community meetings, social media, in-person follow ups) to achieve high levels of customer participation in lead service line replacements.[106] We also support the approach that states may require additional attempt measures beyond the four attempts using two different methods that EPA has proposed.

We further suggest that EPA consider requiring that water systems renew some form of access attempts annually, even in the absence of a change in ownership of the property on which access is being sought.

5. Mitigation Activities

For situations in which a lead service line has been disturbed, such as due to partial replacement or replacement of a lead connector, EPA proposes that water systems undertake several mitigation actions before returning the line to service. As the agency has previously found, these types of disturbances can result in short-term spikes in lead levels, posing harms to human health. We support these mitigation requirements, which build on measures EPA put in place in its 2021 rule.

First, EPA proposes to maintain the requirement from the 2021 rule that water systems provide pitcher filters or point-of-use devices certified to reduce lead levels.[107] This requirement would apply following full and partial replacement of lead service lines, lead connectors, inline water meters, and water meter setters.[108] As EPA explains, filtering is necessary to protect public health in light of studies

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[103] 40 C.F.R. Proposed § 141.84(d)(3)(i).

[104] *Id.*

[105] *Id.*, Proposed § 141.84(d)(3)(ii).

[106] *See* 88 Fed. Reg. at 84,921 (discussing experiences in Lansing (MI), Quincy (MA), Green Bay (WI), Denver, Chicago, Philadelphia, and Pittsburgh).

[107] 88 Fed. Reg. at 84,924.

[108] *Id.*

that found that flushing the line is insufficient to adequately reduce lead levels following these types of disturbances.[109]

Second, EPA is proposing to change the 2021 rule by requiring that water systems provide filters and replacement cartridges to every occupancy, rather than to every residence.[110] As EPA notes, this change should ensure that tenants and businesses also receive filters following replacement or disturbances.[111] Filter replacement cartridges would need to be provided for six months, which would allow consumers to continue drinking filtered water while waiting for the results of a follow up tap sample, which EPA proposes be taken between three and six months following the replacement.[112]

Third, EPA proposes a new mitigation requirement that, following partial service line replacement, water systems would have to install a dielectric coupling separating the remaining lead service line and replacement service line unless the replaced service line is made of plastic.[113] This requirement would address the risk of lead being released as a result of galvanic corrosion between lead and other metallic pipes.[114] As EPA explains, multiple studies have shown that if the electric connection between the pipes is broken or a dielectric coupling is inserted, this results in a reduction in lead levels in drinking water.[115] Although we support this provision, we note that EPA could instead require that systems use the best available technology, which would serve the same purpose but allow for alternatives as the technology develops.

In sum, we support these proposed mitigation requirements, which should improve existing protections to public health in the scenario in which a lead service line is partially replaced or disturbed.

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[109] *Id.*

[110] *Id.*

[111] *Id.*

[112] *Id.*

[113] *Id.* As noted in the following subsection, we have concerns about the use of plastic materials in replacement piping and urge EPA to issue guidance on appropriate replacement materials that do not pose public health concerns. *See* Section II.A.6, *infra*.

[114] *Id.*

[115] *Id.*

6. Service Line Replacement Plan

Under the Proposed Rule, water systems would have to prepare lead service line replacement plans, a concept EPA introduced in the 2021 rule. EPA explains that a well-developed plan can facilitate timely compliance with mandatory lead service line replacement, therefore providing greater public health protection and replacement program efficiency.[116] In addition to maintaining plan elements from the 2021 rule that remain relevant (*e.g.*, a procedure for conducting full lead service line replacement, a strategy for determining the composition of lead status of unknown lines in the system's inventory), EPA proposes to add additional elements requiring (i) the identification of state and local laws relevant to a water system's ability to gain access to complete full service line replacement, and (ii) a communication strategy to inform both customers and consumers.[117]

Regarding the first additional element, by requiring water systems to identify any state and local laws and water tariff agreements relevant to the system's ability to gain access to conduct full service line replacement, EPA seeks to accomplish two objectives: First, to facilitate water systems' compliance by making sure that they know the actual law and do not make decisions on whether they have "control" to do full lead service line replacement based on perceived barriers.[118] Second, to facilitate public engagement on the effect that existing state or local laws or water tariff agreements have on a system's access to full service line replacement and how any barriers to full replacement can be overcome.[119]

With respect to the second element, EPA explains that broadening the scope of the communication strategy for lead service line replacements to encompass consumers (in addition to customers) would ensure that renters and tenants, as well as landowners and landlords, would be made aware of the water system's replacement program.[120]

Subject to our comments in subsection 3, above, suggesting different alternatives or approaches to better promote full lead service line replacements, we support the lead service line replacement plan requirement, including the two additional elements EPA has proposed. The additional requirements should result

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[116] *Id.* at 84,925.

[117] *Id.*

[118] *Id.* at 84,920.

[119] *Id.* at 84,921.

[120] *Id.* at 84,925.

in better communications between water systems and their customers and consumers, including identifying any actual barriers to full replacements that could then be addressed.

Finally, we note that EPA proposes that the replacement plans include "plans for procurement of materials" as part of identifying a standard operating procedure for conducting full service line replacement.[121] Given that replacement piping will be in the ground for many years, we ask that EPA thoroughly evaluate and provide guidance to water systems on recommended material to use or to avoid in the replacement service lines. We have specific concerns, for example, with replacement piping comprised of plastic materials, such as polyvinyl chloride (PVC) and chlorinated polyvinyl chloride (CPVC), given the potential health concerns associated with using such piping to supply drinking water.[122]

7. Environmental Justice

As EPA has recognized and as discussed in the introduction to these comments, underserved communities, including low income, people of color, rural, and Tribal communities, have historically shouldered a disproportionate burden of harm caused by exposure to lead in water.[123] The Proposed Rule includes several important provisions that aim to achieve more equitable outcomes in service line replacements that are essential to protect the communities most affected by lead contamination. These efforts are improvements over the current regulations and should be adopted and strengthened to better protect to underserved communities from lead.

a. Prioritizing lead service line replacement in underserved communities

Given the detrimental effects of lead contamination on underserved communities and the historical underinvestment in improvements, it is imperative that EPA include provisions that will compel water systems to prioritize replacement of lead service lines in these communities. Numerous studies of lead exposure across the country have demonstrated that children with high levels of lead in their blood tend to live in neighborhoods with high rates of poverty, high

[121] 40 C.F.R. Proposed § 141.84(c)(1)(ii).

[122] *See* Meg Wilcox, et al., "The Perils of PVC Plastic Pipes," (Apr. 2023), https://static1.squarespace.com/static/5eda91260bbb7e7a4bf528d8/t/6491ce414930f2385aedb80c/1687277125680/The_Perils_of_PVC_Plastic_Pipes-April_2023_Digital.pdf.

[123] EPA, EPA Strategic Plan FY 2022-2026, at 59 (March 2022).

concentrations of racial minorities, and low rates of homeownership and education.[124] While lead exposure can come from multiple sources, these studies are consistent with EPA's findings in its seven-city case study that areas with lead service lines often have higher percentages of low-income residents, renters, and people of color.[125] Furthermore, EPA has previously recognized that communities of color and low-income communities are more likely to live in older homes with lead service lines,[126] while also less likely to be able to bear the cost of replacing them. Without intervention from EPA specifically designed to eliminate these disparities, water systems may decide not to prioritize replacements in underserved communities. Therefore, the Attorneys General strongly support the retention of the requirement in the 2021 rule that water systems identify a replacement strategy that includes prioritizing disadvantaged consumers and the populations most sensitive to the effects of lead.

We are concerned, however, that the Proposed Rule does not effectively direct water systems on how to prioritize underserved communities, or create enforceable requirements for that prioritization. The Proposed Rule provides that water systems must develop a "strategy to prioritize service line replacement" based on several factors, including communities "disproportionately impacted by lead, and populations most sensitive to the effects of lead."[127] No further guidance on how to identify these communities or what actions constitute prioritization are specified.[128]

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[124] *See, e.g.*, Carmen M. Dickinson-Copeland et al., "Increased Risk of Sub-Clinical Blood Lead Levels in the 20-County Metro Atlanta, Georgia Area – A Laboratory Surveillance-Based Study," 18 Int. J. Environ. Res. Public Health 5163 (2021) (finding that children in metro Atlanta who lived in geographical areas with higher proportions of renters and lower proportions of people with a GED/high school diploma were at a higher risk for having lead in their blood); Emily E. Lynch & Helen C. S. Meier, "The Intersectional Effect of Poverty, Home Ownership, and Racial/Ethnic Composition on Mean Childhood Blood Lead Levels in Milwaukee County Neighborhoods," 15 PloS One e0234995 (2020) (analyzing average level of blood in children by area and finding that the census tracts with the highest average childhood blood levels were areas with low home ownership, high poverty, and majority non-white); Jessie A. Gleason et al., "Drinking Water Lead and Socioeconomic Factors as Predictors of Blood Lead Levels in New Jersey's Children Between Two Time Periods," 169 Environ. Res. 409 (2019) (finding that race, older housing, and poverty were predictors of children's blood lead levels).

[125] 88 Fed. Reg. at 84,927.

[126] Review of the National Primary Drinking Water Regulations: Lead and Copper Rule Revisions (LCRR), 86 Fed. Reg. 71,574, 71,575 (Dec. 17, 2021).

[127] 88 Fed. Reg. at 85,064.

[128] *Id.*

Without more specific, enforceable language directing water systems on how to identify underserved communities and to replace lead service lines in these communities before addressing other areas, we are concerned that these communities may continue to be overlooked.[129]

b. Disconnections at vacant buildings

We do not support EPA's proposal to permit water systems to count disconnections at vacant buildings toward their annual replacement requirements.[130] Disconnecting pipes that are not in use does not contribute to the overall goal of reducing lead exposure now, since out-of-use pipes are not currently contributing to lead exposure. Counting these disconnections would allow water systems to artificially meet their requirements and discourage or delay conducting replacements in the communities that need them most, while generating no public health benefits. Furthermore, because the Proposed Rule does not prohibit reconnection to these lines in the future, this runs the risk of potentially increasing exposure to lead if state law later allows these buildings to become occupied and the water service to be turned back on. The priority should be on replacing lead service lines that are causing risk of lead exposure as soon as possible, and allowing disconnection of lines at vacant buildings detracts from this goal.

c. Banning of partial replacements

The Attorneys General strongly support the proposed ban on partial service line replacements, unless conducted in response to emergency repairs or planned infrastructure work.[131] Partial replacements only remove the portion of the lead service line owned by the water system and leave in place the portion used to deliver water to homeowners and renters, which leaves them vulnerable to lead exposure. As EPA has recognized, partial replacements can cause elevated levels of lead in drinking water in the period after the replacement, and do not reduce long-term levels of lead in drinking water.[132] Therefore, a ban on partial replacements furthers the goal of reducing lead exposure.

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[129] EPA's EJScreen mapping tool is one method available to identify overburdened communities. *Available at* https://www.epa.gov/ejscreen.

[130] *See* 88 Fed. Reg. at 84,917.

[131] *See id.* at 84,917-18.

[132] *Id.* at 84,917.

We recognize that emergency situations may arise that would require water systems to conduct partial service line replacements. In these situations, water systems should be required to make every effort to do full service line replacements. For this reason, we support the Proposed Rule's additional requirements for water systems to provide advance notice to customers (where possible) when an emergency partial replacement will occur as well as an offer to replace the customer-owned portion of the lead service lines.[133] After an emergency partial replacement, we agree that water systems must be required to take mitigation actions to avoid the consequences of partial line replacements, such as providing public education and water filters. This is especially important in underserved communities, where there is a higher risk of partial service line replacements occurring.

d. Funding strategy for full service line replacement

The Attorneys General also strongly support the requirement that water systems identify a funding strategy for achieving full service line replacement that accommodates customers who are unable to pay for the replacement of private services lines. As we highlighted in previous comments, typically the water system owns the portion of a service line that connects to the main water line, but the landowner owns the portion of the line that connects to the premise piping.[134] Under the Proposed Rule, water systems are not required to fund the cost of replacing the landowner-owned portion, potentially placing the burden of this cost instead on the landowner. As discussed above, lower-income homeowners may be unable to afford to pay the thousands of dollars it may cost to replace these lines, and landlords of rental buildings may be unwilling to pay that cost.[135] As a recent study in Washington, D.C. demonstrated, when homeowners bear the cost of replacing private service lines, low income neighborhoods are significantly less likely than wealthier neighborhoods to pay for replacements.[136] It is therefore critical that water systems be required to have a complete and detailed strategy for funding full lead service line replacement, including privately owned portions, to avoid further disparities in lead exposure.

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[133] *Id.* at 84,929

[134] *See* 2020 Multistate Comments at 7-8.

[135] *Id.*

[136] Karen J. Baehler et al., "Full Lead Service Line Replacement: A Case Study of Equity in Environmental Remediation," 14 *Sustainability* 352 (2022).

We note with concern that the Proposed Rule would allow water systems to pass the cost of replacing the private portion of service lines on to homeowners, merely requiring that the funding strategy "include a description of whether and how the water system intends to assist customers who are unable to pay to replace the portion of the service line they own."[137] Without a requirement that water systems provide funding or create a funding strategy for when homeowners are unable to pay for their portion of the replacement, there is a very serious risk—as discussed at length above—that lead service lines will remain in place in low-income and other at-risk communities. With the availability of federal and state funding for lead service line replacement,[138] water systems should be required at a minimum to seek such funding for full service line replacement before being allowed to forgo replacement in cases where a homeowner is unable to provide funding.[139]

e. Strategy for full service line replacements on rental properties

As discussed in Section II.A.3 above, EPA proposes that water systems replace lead service lines that are under the "control" of water systems.[140] In some situations, this will require obtaining consent from homeowners to conduct replacement of private service lines. Renters living in these homes do not have ownership rights and may be unable to provide "control" to water systems under the Proposed Rule's definition to enable replacement of private lead service lines. Landlords, who may own the home but not live in it, have the ability to deny consent to water systems and tenants have little recourse to stop them, while bearing the risk of lead exposure. This increases the risk of lead exposure to renters, who may be living in homes affected by lead service lines but lack the power to consent to replacement of those lines.

This is a significant environmental justice issue, as a higher proportion of low-income households rent rather than own their homes.[141] Furthermore, the number of households that rent rather than own their homes has been increasing in the United States in recent years, with lower-income households renting nearly

[137] 88 Fed. Reg. at 85,064.

[138] *Id.* at 84,903-04.

[139] *See* Section II.A.3, *supra*.

[140] 88 Fed. Reg. at 84,920.

[141] Peter J. Mateyka & Jayne Yoo, U.S. Census Bureau, "Low-Income Renters Spent Larger Share of Income on Rent in 2021" (Mar. 2, 2023).

two-thirds of units with substantial quality issues.[142] Given that the responsibility for water infrastructure typically falls on the landlord in a rental situation, tenants may not be aware of the potential risks associated with lead pipes. Therefore, EPA should adopt measures that not only require water systems to ensure that private lead lines are replaced in rental properties, but also to ensure that renters are informed about the quality of the water in their homes.

Although the preamble to the Proposed Rule states that EPA is adding a requirement that would "require systems to create a strategy to achieve full [lead service line replacement] at rental properties,"[143] the proposal falls short of this goal. Under the Proposed Rule, water systems are required to develop a communication strategy to inform renters of the water service line replacement plan,[144] but there are no further requirements related to renters. The Attorneys General strongly support EPA's adoption of additional alternatives, such as those discussed in Section II.A.3, above, that could increase the likelihood that full lead service line replacements occur even if a landlord refuses to pay for service line replacement. EPA could require that water systems build these approaches into their replacement plans and communicate that information to tenants.

f. Online publishing of lead service line replacement plans

We support the Proposed Rule's requirement that water systems make their service line replacement plans publicly available.[145] Online publication would allow community members to be aware of the water system's plan for replacement and provide them with the opportunity to take action if they disagree with the design or implementation of the plan. This requirement is especially important for renters, who may otherwise not have any information about service line replacement offered to their landlords, and gives them the opportunity to advocate for full service line replacement when landlords refuse to pay for private-side piping replacement.

We disagree, however, with the proposed requirement that only water systems serving 50,000 people or more be required to publish service line replacement plans online. All water systems, or at least those serving a lower threshold number of customers, should be required to post service line replacement

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[142] U.S. Government Accountability Office, "Rental Housing: As More Households Rent, the Poorest Face Affordability and Housing Quality Challenges" (May 27, 2020).

[143] 88 Fed. Reg. at 84,928.

[144] *Id.* at 85,064.

[145] *See id.* at 84,928.

plans online. Accessing plans online is the easiest way for the public to gain quick access to the plan, rather than requiring customers to physically obtain the plan directly from the water system. Online availability would greatly increase the public's access to the plan while placing a very small burden on water systems.

g. Identification of potential barriers to full replacement

Water systems should also be required to identify potential barriers to access for full replacement in local ordinances and make this information available to the public in the service line replacement plan, as EPA proposes.[146] Water systems must make every effort to achieve full service line replacement, and in order to do so, they need to be aware of local ordinances affecting replacement. Furthermore, if water systems are going to rely on local ordinances as a justification for failing to conduct full service line replacement, they should be required to explain this to the state.

Relatedly, the Attorneys General generally support the proposed requirement that in order for states to have primacy enforcement of public water systems, they must identify any state laws creating a barrier to full service line replacement.[147] In order to achieve the goal of full service line replacement, barriers must be identified so that they can be addressed. States that are taking on the responsibility of enforcement must also be fully aware of these barriers, or the lack thereof, in order to ensure water systems are complying with all requirements. However, rather than being required to identify all state laws "*that pertain to* a water system's access to conduct full service line replacement," states should only be required to identify known barriers.[148]

B. Revised Lead Action Level and Corrosion Control Treatment

1. Revision of Lead Action Level

The Attorneys General strongly support EPA's proposal to reduce the lead action level to 0.010 milligrams per liter (mg/L), and encourage EPA to consider methods to feasibly achieve a lower lead action level of 0.005 mg/L in the near future. In general, corrosion control treatment connotes steps that a water system can take to reduce the amount of lead and copper that is leached into drinking water from service lines and other drinking water equipment. The 2021 rule defined "optimal corrosion control treatment" as corrosion control treatment that minimizes

[146] *See id.*

[147] *See id.*

[148] *See* 40 C.F.R. Proposed § 142.16(d)(8) (emphasis added).

lead and copper in drinking water while complying with national primary drinking water standards.[149] Under existing rules, water systems are generally required to implement these treatment methods when an exceedance of the lead action level or lead trigger level occurs—exact requirements vary based on the size of the water system, previous steps already taken, and other factors.

EPA established the current lead action level of 0.015 mg/L in 1991 to generally represent "effective corrosion control treatment" and to "simplify implementation."[150] In other words, EPA set the lead action level at 0.015 mg/L because it could be feasibly implemented, rather than basing this level on the impact to public health.[151] EPA proposes to reduce the lead action level to 0.010 mg/L because it found that water systems have made great improvements to corrosion control treatments and can feasibly achieve lower levels of lead.[152] These improvements are reflected in data EPA collected from systems that have used corrosion control treatment.[153]

Given these findings, EPA must lower the lead action level, which has remained at the same level as when it was established decades ago. The Safe Drinking Water Act requires continuous review and revision of the lead action level and other standards to ensure it is the most health protective, feasible standard.[154] As EPA recognizes, there have been significant advances in corrosion control treatment options, as well as overwhelming evidence showing the serious health impacts caused by exposure to lead in even small quantities.

The Attorneys General also suggest that EPA consider methods to feasibly achieve a lower lead action level of 0.005 mg/L in the near future. EPA requested comment on setting the lead action level to 0.005 mg/L,[155] the level at which lead can be reliably detected.[156] EPA's analysis predicts that 31.4 percent of systems would exceed this lower action level, mostly consisting of small and medium

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[149] *See* 88 Fed. Reg. at 84,936.

[150] Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper, 56 Fed. Reg. 26,460, 26,490 (June 7, 1991).

[151] *See* 84 Fed. Reg. at 61,691.

[152] 88 Fed. Reg. at 84,939-940.

[153] *Id.* at 84,940.

[154] *See* 42 U.S.C. §§ 300g-1(b)(7)(A), 300g-1(b)(9).

[155] 88 Fed. Reg. at 85,036.

[156] *Id.* at 84,943.

systems.[157] Because no level of lead is safe, EPA should explore methods to feasibly achieve the more protective lead action level of 0.005 mg/L as soon as practicable.[158]

2. Elimination of Lead Trigger Level

While the 2021 rule maintained the original 1991 lead action level of 0.015 mg/L, it introduced a new regulatory value called the "lead trigger level" at 0.010 mg/L.[159] Under that scheme, systems would have to take different sets of actions based on whether they exceeded the action level or trigger level. Citing administrative complexity, implementation issues, and communication challenges, the Proposed Rule would eliminate the trigger level and establish the lower action level instead.[160]

The Attorneys General support eliminating the trigger level in conjunction with reducing the action level to 0.010 mg/L (if not lower). Focusing on a single, health-protective number for systems to reach will be simpler to implement and reduce the risk of confusion about the necessary regulatory requirements.

3. Deferring Requirement to Optimize Corrosion Control Treatment

Although EPA's proposal generally requires water systems with an exceedance of the lead action level to install or re-optimize corrosion control treatment, EPA would allow a water system to defer implementation until after all lead service lines are replaced, if such replacement is completed within five years and at a rate of at least 20 percent per year.[161] Other requirements that a water system must comply with in the case of an exceedance, such as public education and making filters available, would continue to apply while lead service line replacement proceeds. The Attorneys General urge EPA to address several major shortcomings of these provisions, which could allow water systems to significantly defer optimal corrosion control treatment requirements even while doing little or nothing to replace lead service lines.

EPA explains that the process of installing optimal corrosion control treatment generally takes five years to complete, and the public health benefits of

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[157] *Id.* at 84,941-942.

[158] The Attorneys General urge EPA to set the action level for childcare facilities and schools at 0.005 mg/L in the LCRI, as described *infra*, Section II.E.

[159] 86 Fed. Reg. at 4207-08.

[160] 88 Fed. Reg. at 84,939.

[161] *Id.* at 84,937-38.

complete lead service line replacement exceed those from installing this treatment.[162] Because the exact methods of implementing optimal corrosion control treatment depend on the types of pipes in a water system, the proper treatment may change after replacing lead or galvanized pipes in a system. Systems that are allowed to defer the treatment requirement and ultimately fail to meet their lead service line obligations would then be subject to the treatment requirements.[163]

The lack of any verification or enforcement method at the beginning of this process is a major concern that EPA must address. For instance, a water system could opt-in to the proposal's treatment deferral and do nothing to replace any lead service lines for a full year before the Proposed Rule would impose any requirements. In other words, these provisions offer water systems an automatic one-year deferral of installing optimal corrosion control treatment. We recommend that EPA require water systems that seek to defer treatment installation to demonstrate that they have the necessary funding available and access to service lines in order to remove all their lead service lines within five years at a rate no slower than 20 percent per year.

The Proposed Rule also allows small water systems or water systems with relatively few lead service lines to defer optimal corrosion control treatment for five years without making significant progress toward lead service line removal. For example, a water system with 50 lead service lines would only need to replace 10 per year to take advantage of the proposed treatment deferral. To avoid this situation where a water system would be incentivized to conduct lead service line replacement more slowly, EPA should only allow deferral for water systems that remove some minimum specific number of lead service lines per year, or 20 percent of the entire system—whichever number is higher.

Because removal of all lead service lines is the best method of reducing the public health impacts of lead exposure, the Attorneys General support EPA's proposal to defer optimal corrosion control treatment when water systems commit to rapid lead service line replacement. Importantly, the 2021 rule continues to impose all other requirements on the water system in response to an action level exceedance. This provision will allow systems to focus their resources and reduce the public health threat in an effective manner.

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[162] *Id.* at 84,938.

[163] *Id.*

C. Compliance Flexibilities for Small Water Systems

The Attorneys General support EPA's proposal mandating service line replacements for all systems, including small systems. By including small systems in this replacement mandate, drinking water consumers in these systems would be protected from lead- tainted waters caused by lead service lines. This would advance EPA's goal of protecting human health by reducing the well-documented harms to children and adults caused by lead contamination.

Until such time that water systems replace lead service lines, an exceedance of the lead action level (discussed in Section II.B, *supra*), will trigger the requirement that the water system optimize corrosion control treatment.[164] The Safe Drinking Water Act requires EPA to identify affordable compliance technologies for all categories of small systems and, if none are available, identify variance technologies for compliance in accordance with section 1412(b)(15).[165] EPA has determined that corrosion control treatment is an affordable compliance technology for all categories of small systems in accordance with the Act, but the agency has also found that it is often difficult for small systems to find and retain operators that have the skills to implement and maintain corrosion control treatment.[166] Therefore, in the 2021 rule, EPA proposed several compliance options for small systems, as discussed above in Section I.B, *supra*.

In the Proposed Rule, EPA made two significant changes to the small system compliance flexibility provisions. First, EPA changed the eligibility requirements. Compared to the small system flexibility provision in the 2021 rule, EPA proposes to reduce the eligibility threshold from water systems serving 10,000 people to systems serving 3,300 or fewer people.[167] We support this revised approach, which would result in more lead service lines being replaced, thereby better protecting public health.

Second, the agency revised the compliance alternatives by eliminating lead service line replacement as an option (as discussed above, under the Proposed Rule, those replacements are mandatory for all water systems, regardless of size). The agency proposes to retain two compliance options it included in the 2021 rule: point-

[164] 40 C.F.R. § 141.81(a).

[165] 42 U.S.C. § 300g-1(b)(4)(E)(ii).

[166] 88 Fed. Reg. at 84,942.

[167] 40 C.F.R. Proposed § 141.93.

of-use filtration and replacement of lead-bearing plumbing.[168] Eligible systems—those small water systems serving 3,300 or fewer customers and all non-transient, non-community water systems[169]—could choose to use these alternatives instead of optimizing corrosion control treatment.[170] EPA justifies this flexibility on the grounds that "these alternatives to the [optimizing corrosion control treatment] requirements are as effective at preventing known or anticipated health effects as [optimizing corrosion control treatment]."[171]

The point-of-use device installation option would require that filtration devices be installed and maintained in every household, at every tap used for cooking and/or drinking.[172] Although research shows that point-of-use devices can effectively eliminate lead from drinking water,[173] such devices still require regular maintenance, including monitoring water use patterns, testing for lead, and conducting filter replacements, in order to maintain maximum efficiency. EPA estimates that point-of-use device maintenance would require water systems to conduct filter cartridge replacements in up to 1,000 homes three-to-four times per year, and sample over 300 devices per year to monitor for action levels exceeding .010 mg/L.[174]

We generally support the installation of point-of-use devices (properly installed and maintained) and removal of lead-bearing plumbing alternatives, so long as the devices remain safe and effectively eliminate lead from drinking water, and as long as the states have the ability to decide which small water systems should have this alternative compliance option. We have concerns about the inherent complications involved with obtaining access to private premises in order to conduct such installation and maintenance. Obstacles to gaining access, like

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[168] 88 Fed. Reg. at 84,945.

[169] As compared to community water systems, which supply water to the same population year round, "non-transient, non-community water systems" are public water systems that regularly supplies water to at least 25 of the same people at least six months annually. *See* EPA, "Information About Public Water Systems," (last visited Jan. 23, 2024), https://www.epa.gov/dwreginfo/information-about-public-water-systems

[170] 88 Fed. Reg. at 84,945; 40 C.F.R. Proposed § 141.93(c).

[171] 88 Fed. Reg. at 84,945.

[172] *Id.*

[173] Valerie Bosscher, et al., POU Filters Effectively Reduce Lead in Drinking Water: A Demonstration Field Study in Flint, Michigan, 54 J. Env't Sci. & Health 484 (2019)

[174] 88 Fed. Reg. at 84,945.

unreachable or uncooperative homeowners or landlords, could impede water system operators' ability to perform the work that is necessary to satisfy the Proposed Rule's compliance requirements. Even small systems with 3,300 or fewer people have a large number of outlets for point-of-use installation and maintenance, which could potentially overburden small system operators.

To address concerns about access to private property, we recommend that EPA issue robust public education requirements and guidance that will aid small water system operators in property access, as well as to inform the public of the significant benefits that point-of-use devices and lead fixture replacements can yield. We also recommend that EPA issue guidance to small water systems to inform operators about how to conduct regular maintenance on point-of-use devices, and guidance to states concerning how to ensure small systems are in compliance. On the latter point, EPA might also consider revising the Proposed Rule to add criteria that states can rely on to determine whether to adopt either of the proposed alternatives in lieu of optimized corrosion control treatment, depending on the circumstances of the communities that water systems are serving. These criteria might include population density, population demographics, levels of water consumption, compliance history, and other factors that might help elucidate whether point-of-use devices or removal of lead-bearing plumbing, or both, is an appropriate alternative.

Either of the alternatives, if adopted by non-transient, non-community water systems, such as childcare centers, large schools and commercial office spaces, would presumably not result in the same access issues as private residential properties since these systems are more likely to have control over the premise plumbing and more likely to be able to implement the point-of-use filtration and plumbing replacement options. For this reason, we agree that the Proposed Rule's compliance alternatives would be an appropriate means of reducing lead contamination for these water systems, provided the devices are properly maintained. However, point-of-use devices are still temporary fixes; total replacement of lead service lines (or replacement of lead plumbing fixtures) is the only permanent solution to lead-contaminated drinking water.

Finally, EPA should consider requiring that small water systems and non-transient, non-community water systems that choose the filtration compliance option to adopt approaches to ensure that filters are regularly replaced as they reach the end of their effective lifespan. Two such approaches would be to require the use of filters equipped with signal lights to show when replacement is necessary or the installation of water meters in premises with point-of-use devices where

water consumption may be higher than what is otherwise typical. This could ensure that filters are checked in a more frequent basis in areas of high volume water use.

D. Public Education

1. Testing Notification Requirements

The Attorneys General support EPA's proposal to broaden the requirement that water systems provide notice of lead tap sampling testing results to persons served by that tap. Under the existing regulations, there are different notice requirements based on whether the testing results exceed the lead action level (currently 0.015 mg/L). Where there is an exceedance, the water system must provide notice within three days; where there is no exceedance, notice must be provided as soon as practicable but no later than 30 days.[175]

The Proposed Rule would instead require notice within three calendar days of *any* lead tap sampling, regardless of whether the results exceed the lead action level or not.[176] Strengthening this requirement is sensible because, as EPA acknowledges, when lead is found at any level, including levels below the action level, it presents a risk to public health. Increased communication of this kind will keep the public informed and in turn provide a health benefit. That being said, we believe it would be reasonable to afford water systems a bit more time (*e.g.*, seven calendar days) to notify customers of testing results when there is no exceedance of the action level. EPA also proposes to require written follow-up when a water system provides initial notification by phone.[177] The Attorneys General support this aspect of the proposal.

2. Language on Lead Hazard Communications

Under existing regulations, water suppliers must provide public education in certain circumstances, such as when the lead action level is exceeded.[178] Among other requirements, this public education material must include specific language describing the health effects of lead. The Proposed Rule would modify this required language in several ways to better inform the public about the health effects from lead in drinking water—especially to specifically and unequivocally state that there

[175] 40 C.F.R. § 141.85(d)(2).

[176] 88 Fed. Reg. at 84,949.

[177] *Id.*

[178] 88 Fed. Reg. at 94,953.

is no safe level of lead in drinking water. We support the proposed revision for that reason.

3. Language Translation Requirements

Existing regulations impose language translation requirements for public education materials provided by water systems serving "a large proportion" (a quantity determined by an individual state) of non-English speakers.[179] The public education materials must include either a translated statement about their importance or, in the alternative, contact information for obtaining a translated copy of the materials or translation assistance. EPA's proposal strengthens these requirements, to help inform and protect people who have limited English language capabilities. Because expanding public education among non-English speaking communities will improve public health, the Attorneys General support EPA's proposed provisions.

Under the Proposed Rule, water systems would be required to provide both a translated statement about the importance of the public education materials, as well as contact information for obtaining a translated copy or translation assistance, rather than one or the other.[180] The number of states that already assemble templates and otherwise assist water systems in providing translated education materials, as noted by EPA, show that this requirement is achievable.[181] EPA also is seeking comment on whether to require states to provide translation support to water systems, as a condition of primacy.[182] The Attorneys General support adding this requirement to the regulations because it would help further ensure that non-English speaking communities are being informed about the health risks presented by lead in drinking water.

E. Lead Sampling at Schools and Childcare Facilities

Additional Background on Lead-Contaminated Drinking Water in Schools

As discussed in the introduction, exposure to lead is hazardous to everyone's health, and it is particularly harmful to young children. Children under the age of 6 years are at the greatest risk for developing health problems related to lead

[179] 40 C.F.R. § 141.85(b)(1).

[180] 88 Fed. Reg. at 84,953.

[181] *Id.* at 84,953-54.

[182] 88 Fed. Reg. at 85,037.

exposure.[183] This is due to the physiological vulnerabilities present in young children, such as not-yet fully developed blood-brain barriers, increased gastrointestinal absorption, and frequent hand-to-mouth behaviors, each of which contributes greatly to increased levels of lead exposure.[184] As EPA is already aware, even minimal levels of lead exposure in children can result in significant adverse health effects, including slowed growth, reduced IQ, difficulties with hearing and speech, anemia, and behavior and learning problems.[185] Indeed, lead toxicity accounts for an estimated total loss of 23 million IQ points among children in the U.S.[186] Many of the devastating effects of lead that develop in early childhood persist well into the second decade of life.[187] Furthermore, pregnant and breastfeeding school administrators and faculty experience heightened risks of lead exposure, since lead consumption can lead to adverse effects on maternal health and infant outcomes, including gestational hypertension, spontaneous abortion, low birth weight, and impaired neurodevelopment.[188] Given these serious health complications that lead exposure poses to children and mothers, it is crucial that the final rule meaningfully addresses lead exposure in schools and childcare facilities.

Most schools in the United States were built prior to 1986, before the federal requirement that public water systems use "lead free" pipes and plumbing.[189] A

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[183] CDC, Childhood Lead Poisoning Prevention, https://www.cdc.gov/nceh/lead/prevention/children.htm (last visited Jan. 10, 2024).

[184] Mary Jean Brown & Stephen Margolis, Centers for Disease Control and Prevention, "Lead in Drinking Water and Human Blood Lead Levels in the United States," 61 *Morbidity & Mortality Weekly Rpt.* 1, 2 (2012).

[185] EPA, Basic Information about Drinking Water, https://www.epa.gov/ground-water-and-drinking-water/basic-information-about-lead-drinking-water#health (last visited Jan. 10, 2024).

[186] American Academy of Pediatrics Council on Environmental Health, "Prevention of Childhood Lead Toxicity," (July 2016) at 4, available at https://publications.aap.org/pediatrics/article/138/1/e20161493/52600/Prevention-of-Childhood-Lead-Toxicity.

[187] Brown & Margolis, *supra* n. 184, at 2.

[188] American College of Obstetricians and Gynecologists, "Committee Opinion: Lead Screening During Pregnancy and Lactation," (Aug. 2012) at 2, https://www.acog.org/-/media/project/acog/acogorg/clinical/files/committee-opinion/articles/2012/08/lead-screening-during-pregnancy-and-lactation.pdf.

[189] Caroline Pakenham & Bethany Olson, "How States Are Handling Lead in School Drinking Water," National Association of State Boards of Education, *Education Leaders*

recent study found that, in a dozen states, 44 percent of schools that tested their water sources for lead discovered one or more taps with a lead concentration level above the state's lead action level.[190] In Pennsylvania, for example, a survey of 65 public school districts found that 91 percent of schools testing drinking water found lead contamination.[191] In Philadelphia, 61 percent of school district water outlets tested showed lead levels exceeding 1 ppb, with one school in particular showing a level of 8,768 ppb.[192] The issue of lead contamination in the drinking water at American schools has been well known, yet there was no federal requirement until 2021 that water systems test any schools for lead levels in drinking water except for those schools and childcare facilities that own and/or operate their own public water system. In sum, lead in the drinking water of our nation's schools and childcare centers presents a significant and immediate public health threat to students and staff that needs to be addressed.

EPA's Regulatory Approach

To specifically address the problem of lead-contaminated drinking water at schools and childcare facilities, EPA proposes to retain some of the 2021 rule's provisions and to add others. As a general matter, EPA takes the position that it lacks statutory authority to directly require schools or childcare facilities to sample or treat drinking water for lead contamination unless those facilities constitute public water systems.[193] Therefore, requirements related to lead sampling at schools

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Report (Nov. 2021) at 4, https://nasbe.nyc3.digitaloceanspaces.com/2021/12/Pakenham-et-al_School-Lead-Testing-Report.pdf.

[190] Angie Cradock, et al., "Early Adopters: State Approaches to Testing School Drinking Water for Lead in the United States," Prevention Research Center on Nutrition and Physical Activity at the Harvard T.H. Chan School of Public Health (2019), available at https://www.hsph.harvard.edu/prc/projects/early-adopters/.

[191] Kara Rubio, "The State of Environmental Health in Pennsylvania Schools," Women for a Healthy Environment, (June 2021), at 3, https://womenforahealthyenvironment.org/wp-content/uploads/2021/08/SOSexecsummaryREV-002.pdf.

[192] Emma Horst-Martz, et al., "Lead in the Water: Data reveals elevated levels of lead in Philadelphia school drinking water," *Penn Environment Research & Pol'y Ctr.*, 1 (Feb. 2022), https://publicinterestnetwork.org/wp-content/uploads/2022/02/Lead-in-the-Water.Feb2022.pdf. The school district response to this study points out that outlets testing positive for lead have been taken out of service.

[193] *See, e.g.*, 88 Fed. Reg. at 84,956 ("EPA is authorized under SDWA to establish . . . legally enforceable standards that apply to public water systems . . . [the agency] does not have the authority under SDWA section 1412 to require schools and child care facilities that are not regulated as public water systems to act" under the statute).

and childcare facilities under the Proposed Rule would be imposed upon water systems. As part of this general framework, EPA recognizes that some states and municipalities have laws that require sampling and filtration at schools and childcare facilities, and therefore allows water systems to obtain waivers of EPA regulations in certain circumstances if those facilities are regulated under state or local law.[194] Although the Proposed Rule would improve on the 2021 rule's provisions concerning lead sampling at schools and childcare facilities, there are several areas in which we urge EPA to strengthen its requirements to better protect our children.

Below, we provide specific comments on improving the Proposed Rule in the following areas: (1) lead action level; (2) sampling; and (3) filtration.

1. Lead Action Level

In the Proposed Rule, EPA considered, but decided not to propose, a school-specific action level and/or remediation requirements for community water systems.[195] We urge EPA to reconsider that approach, and to adopt a lead action level for schools and childcare facilities of 0.005 mg/L. Because there is no safe level of lead and children are more vulnerable to lead exposure, a lower action level for the facilities that serve our nation's children is warranted.

In the context of rejecting a 0.005 mg/L (or 5 parts per billion (ppb)) action level for all water systems, EPA expressed concern that lowering the action level below 0.010 mg/L may pose an additional administrative burden on states' ability to provide meaningful input to individual systems and adequately oversee optimal corrosion control implementation.[196] EPA also asserts that larger buildings such as schools have a higher potential for elevated lead levels due to conditions such as complex plumbing arrangement that may not be improved by further changes to optimal corrosion control treatment.[197] However, many states have already implemented the equivalent of a 0.005 mg/L action level or lower for schools and childcare facilities, demonstrating the feasibility of such an approach.[198]

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[194] *See id.* at 84,958.

[195] *See id.* at 84,957.

[196] 88 Fed. Reg. at 84,942.

[197] *Id.* at 84,957.

[198] *See e.g.,* Cal. Health & Safety Code § 1597.16 (requiring drinking water testing in licensed childcare facilities constructed before 2010); Cal. Dept. of Social Services, Written

Furthermore, the American Academy for Pediatrics suggests that state and local governments take steps to ensure that school hydration locations do not exceed water lead concentrations of 0.001 mg/L, given the significant adverse health effects children encounter from lead exposure.[199] And the Food and Drug Administration requires that bottled water not exceed 0.005 mg/L.[200] Because EPA's ultimate goal is to achieve a lead concentration level of 0 mg/L in our schools and childcare facilities (and elsewhere), and because many states have already demonstrated their ability to accommodate the administrative responsibility of maintaining lead levels below 0.005 mg/L in schools, we urge EPA to consider instituting a lead action level of 0.005 mg/L for schools and childcare centers.

2. Sampling

Under the Proposed Rule, at least once a year, systems would have to contact all schools and childcare facilities they serve to provide information about the health risks of lead in drinking water. And within five years, systems would have to notify schools and childcare facilities that they are eligible to be sampled for lead by the water system.[201] Water systems would be required to sample for lead at elementary schools and childcare facilities at a certain frequency (typically 20 percent annually) so that sampling of all of these facilities generally would be

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Directives for Lead Testing of Water in Licensed Child Care Centers, Provider Information Notice 21-21.1-CCP (notifying providers of lead action level of 5 ppb), www.cdss.ca.gov/Portals/9/CCLD/PINs/2021/CCP/PIN-21-21_1-CCP.pdf; *see also* Colo. Rev. Stat. § 25-8-903(2) (instituting a lead action level of 5 ppb in childcare centers and schools); Mo. Rev. Stat. § 160.077(3) (requiring schools to provide drinking water with lead concentration that is less than 5 ppb); Mich. Comp. Laws Serv. § 722.113i (instituting a lead action level of 5 ppb in childcare centers); D.C. Code § 38-825.01a (instituting a lead action level of 5 ppb in public schools); Md. Code Ann., Envir. § 6-1501 (instituting a lead action level of 5 ppb in schools); Wash. Rev. Code Ann. § 28A.210.410 (defining "elevated lead level" as exceeding 5 ppb); N.H. Rev. Stat. Ann. § 485:17-a (requiring water lead concentrations at less than 5 ppb in schools and childcare facilities); Vt. Stat. Ann. tit. 18, § 1242(1) (defining lead action level at 4 ppb).

[199] American Academy of Pediatrics Council on Environmental Health, Prevention of Childhood Lead Toxicity (May 5, 2018) at 11, https://publications.aap.org/pediatrics/article-pdf/138/1/e20161493/929122/peds_20161493.pdf.

[200] Food and Drug Administration, Bottled Water Everywhere: Keeping it Safe, https://www.fda.gov/consumers/consumer-updates/bottled-water-everywhere-keeping-it-safe (current as of Apr. 22, 2022).

[201] *Id.*, Proposed § 141.92(c)(1), (2).

completed within five years.[202] EPA is not proposing a specified frequency of sampling at secondary schools, which water systems would only need to sample if requested by the school.[203] Sampling at schools and childcare facilities would have to be conducted pursuant to certain protocols, including collection of five samples per school and two samples per childcare facility at outlets typically used to provide water for human consumption.[204] The results of sampling would have to be provided within 30 days to the school or childcare facility, along with information about potential options to remediate lead in drinking water.[205]

The Attorneys General are concerned that the Proposed Rule's sampling requirements are too limited to address lead exposure in schools. As described in detail below, we recommend that EPA institute a more robust school and childcare facility sampling program by making the sampling program mandatory in all schools, including secondary schools. We urge EPA to increase sampling frequency requirements and increase sampling location requirements. Further, following EPA's "whole of government" approach of its 2023 Strategy to Reduce Lead Exposures and Disparities in U.S. Communities,[206] we advocate for EPA to work together with the U.S. Department of Education and any other relevant federal agency to develop and implement these testing requirements. In the rest of this subsection, we set forth more specific comments on several aspects of the Proposed Rule.

- ***Mandatory sampling in secondary schools.*** We encourage EPA to treat secondary schools the same as elementary schools and childcare facilities. Rather than merely allowing secondary schools the option to request that their water systems sample for lead, sampling should be mandatory for water systems. Although not as at risk as younger children, older children continue to be vulnerable to exposure to elevated levels of lead.[207] In addition, school

[202] *Id.*, Proposed § 141.92(d).

[203] *Id.*, Proposed § 141.92(e).

[204] *Id.*, Proposed § 141.92(f)(1).

[205] *Id.*, Proposed § 141.92(g).

[206] EPA, Final Strategy to Reduce Lead Exposures and Disparities in U.S. Communities," (Oct. 2022), https://www.epa.gov/lead/final-strategy-reduce-lead-exposures-and-disparities-us-communities.

[207] *See* American Academy of Pediatrics Council on Environmental Health, *supra* note 199, at 4 (noting that national study of 8- to 15-year old children found that having a blood lead concentration of >13 ppb was associated with an elevated risk of attention-deficit/hyperactivity disorder (ADHD)).

buildings, regardless of grade level, are often utilized for community gatherings where children of all ages, parents, and staff congregate for extracurricular events. The efforts to address lead exposure in communities should be equally administered across all K-12 schools, to protect the secondary school students, and to account for community use of schools.

- ***Improved outreach.*** The Proposed Rule retains the requirement from the 2021 rule that community water systems conduct educational outreach once per year to schools and childcare facilities, while only requiring sampling outreach to schools and childcare facilities once every five years.[208] We suggest that EPA require increased sampling outreach such that all schools and childcare facilities are contacted every three years. EPA also should consider increasing the number of required outreach attempts to schools and childcare facilities to greater than two before the water system can classify a school or childcare facility as non-responsive.
- ***Sampling frequency and number.*** EPA proposes to retain the 2021 rule's requirements for frequency and number of samples for schools and childcare facilities,[209] but those provisions are insufficiently protective. There are three ways in which the agency should strengthen those provisions.
    - First, EPA should require increased sampling frequency. Under the existing regulations, water systems have to sample only 20 percent of elementary schools and childcare facilities they serve annually, translating into sampling at each once every five years. Testing once every five years is inadequate, particularly in larger schools where the potential for lead exposure is greater given the higher number of water outlets and that water use patterns at each outlet vary substantially. Instead, EPA should mandate that water systems sample all schools and childcare centers—with the exception of those that do not respond or refuse testing—over the course of a three-year period (*i.e.*, a minimum of 33.33 percent per year).
    - Second, EPA should compel water systems to sample more locations. The current rules require that at least five samples be taken at each school and at least two samples from each childcare center.[210] EPA recognizes that "larger buildings, such as schools and childcare facilities, can have a higher potential for elevated lead levels due to

[208] 88 Fed. Reg. at 84,957.

[209] *Id.*

[210] 40 C.F.R. 141.92(f)(1).

complex plumbing arrangements."[211] This alone supports requiring sampling at more locations given that water stagnation times will vary depending on a water outlet's frequency of use, particularly in a building that is intermittently used, like a school. EPA should consider requiring sampling at all outlets used for drinking water or at least adding a percentage requirement (*e.g.*, 75-85 percent of drinking water outlets). More water quality data collected from a representative group of sample locations would provide the information needed to determine if children are being exposed to lead through the ingestion of drinking water at schools and childcare centers.

  - Third, should EPA tighten the regulatory language that allows water systems to treat schools and childcare centers as "non-responsive" and thereby not covered by sampling requirements. At present, water systems are permitted to include toward their minimum annual percentage sampling total those schools and childcare facilities that did not respond to outreach to conduct sampling.[212] We suggest that EPA not permit systems to include lack of responses (or refusals) in the annual minimum sampling requirement (which we suggest, as noted above, EPA should increase from 20 percent per year to 33.33 percent annually).

- ***Reporting of sampling results.*** Finally, EPA should require water systems to promptly make available the results of any sampling so that the results are communicated to parents, guardians, teachers, and school staff. Some water systems may already be required to report sample results to their respective states. However, parents, guardians, teachers, and staff may not learn of the results after lead sampling. Publicizing results annually is not sufficient given the health hazards of lead contamination. As such, we suggest that EPA require that consumers—including parents, guardians, teachers, and other school staff—receive notices of lead tap sampling results within three calendar days of when the water system receives of the results, regardless of whether those results exceed lead action levels.

3. Filtration

As an alternative to imposing the suggested changes we discuss above with respect to increased sampling frequency and number at schools and childcare

[211] 88 Fed. Reg. at 84,957.

[212] 40 C.F.R. § 142.92(d)(i)(B).

centers, EPA could consider allowing community water systems the option of installing and maintaining point-of-use water filters. The State of Michigan, for example, enacted a law in 2023 that adopts this type of "filter first" approach at schools and childcare centers.[213] The bipartisan law, signed by Governor Whitmer into law last October, requires schools and childcare facilities to install filtered water faucets within 15 months of the law's enactment.[214] The "filter first" method is expected to save the state more than $300 million over ten years compared to the "test and tell" approach embodied in the Proposed Rule.[215]

Allowing such an approach as a compliance option would be within EPA's authority under the Safe Drinking Water Act. The statute allows, for example, small water systems to use point-of-use filters in complying with maximum contaminant levels or treatment techniques.[216] Furthermore, the 2021 rule specifically listed point-of-use filters as a compliance option for small water systems that exceed the lead action level and specifies procedures the water system must follow, among other things, to maintain the filter.[217] And given that the Proposed Rule already includes requirements for outreach to schools and childcare facilities regarding education about lead hazards and obtaining access to sample for lead, water systems could convey information to these consumers about water systems accessing schools and childcare facilities to install and maintain filters.[218]

EPA acknowledges, as noted above, that it has authority to apply requirements directly to schools and childcare facilities that are regulated public water systems and to impose these obligations on public water systems that have

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[213] Gov. Whitmer Press Release (Oct. 19, 2023), https://www.michigan.gov/whitmer/news/press-releases/2023/10/19/whitmer-signs-bipartisan-legislation-to-ensure-clean-drinking-water-in-schools

[214] *See* House Bill No. 4341, https://www.legislature.mi.gov/documents/2023-2024/publicact/pdf/2023-PA-0154.pdf, and House Bill No. 4342, http://www.legislature.mi.gov/documents/2023-2024/publicact/pdf/2023-PA-0155.pdf.

[215] *See* Natural Resources Defense Council, *Michigan Filter First Cost Estimate* (2020), https://www.nrdc.org/sites/default/files/media-uploads/michigan-filter-first-cost-estimate-202001.pdf.

[216] *See* 42 U.S.C. § 300g-1(b)(4)(E)(ii).

[217] *See* 40 C.F.R. § 141.93(a)(3).

[218] As noted further below in this subsection, EPA has proposed that states may waive EPA sampling requirements for community water systems at schools and childcare facilities if point-of-use filters have been installed pursuant to state or local law and the system or the school or facility is maintaining the filters.

schools and childcare facilities as customers. Although the latter would require a water system to take actions at facilities that it does not own or operate, the Proposed Rule, as discussed above, similarly authorizes small water systems to install and maintain point-of-use devices at customers' homes – requiring repeated access to private property.[219] Moreover, such requirements would be easier to implement as schools and childcare facilities have normal hours of operation and thus would be easier for an operator to access.

Although installing filter point-of-use devices would result in upfront costs for the water system, a recent analysis conducted by the Natural Resources Defense Council concerning Michigan's "filter first" approach showed that, over time, installing filters and conducting maintenance twice a year is more cost effective than testing and follow up remediation,[220] with the added public health benefits of an immediate reduction in lead contamination, and thus less costs incurred by health insurance and social welfare programs addressing the adverse effects of lead.

Despite these benefits, point-of-use filters may not be appropriate in all circumstances, and can also cause problems if improperly maintained. Therefore, if EPA were to allow this compliance option, the agency should require safeguards similar to those it already requires for small water systems that choose point-of-use filters as a compliance option.[221] First, EPA should require that point-of-use filters be certified. For example, filter devices that are certified by NSF International to meet NSF/ANSI Standard 53 for lead removal and NSF/ANSI Standard 42 for particulate lead reduction could be used to prevent child lead consumption.[222] Second, EPA should require that water systems sample filtered water right after installation to make sure that filters are effectively eliminating lead to below the lead action level (as noted above, we recommend a level of 0.005 mg/L for schools and childcare facilities). Third, EPA should require regular sampling and maintenance (*e.g.*, filter replacement) to ensure that the filters are operating efficiently. As discussed above, the use of filters equipped with signal lights indicating the need for replacement can help make sure that filters are replaced in

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[219] *See* Section II.C, *supra*.

[220] *See Michigan Filter First Cost Estimate*, *supra* note 215.

[221] *See* 40 C.F.R. § 141.93(a)(3).

[222] *See* NSF, Drinking Water Treatment Units Must Now Meet Stricter Requirements for Lead Reduction Certification (last visited Feb. 3, 2024), https://www.nsf.org/news/drinking-water-treatment-units-stricter-requirements-lead-reduction-cert.

timely fashion.[223] Fourth, EPA should require that in the event that filtration fails to reduce lead to below the lead action level, the water system promptly takes the necessary corrective actions.

Relatedly, we support EPA's proposal that where a school or childcare facility is being sampled for lead under a state or local law, states could waive EPA's sampling requirements under certain conditions, such as where the school or childcare facility maintains point-of-use filters on all outlets used to provide water for human consumption.[224] EPA should consider modifying the testing waiver option related to point-of-use devices to require that schools and childcare facilities that meet the criteria for the waiver adhere to appropriate periodic maintenance and sampling to measure point-of-use device efficacy. We further urge EPA to issue guidance for states and water systems to assist with implementation and enforcement in schools and childcare centers where point-of-use devices are installed.

Finally, it is important to recognize that a risk of requiring point-of-use filters is that these devices may be viewed as permanent solutions rather than temporary fixes until the source of lead is removed. Without proper maintenance and ongoing confirmatory sampling, consumers may falsely conclude that lead is being removed when, in fact, it is not. Therefore, removal of all lead-containing plumbing and fixtures in schools and childcare facilities must be the end goal.

III. CONCLUSION

We commend EPA's efforts in the Proposed Rule to address many of the flaws in the 2021 rule. The agency's decision to mandate the replacement of all lead service lines in the country within ten years could have critical and lasting health benefits, and should be coupled with measures to ensure effective and equitable implementation. We urge EPA to make revisions in the final rule to increase the likelihood that full lead service line replacements will in fact occur in all communities, regardless of income levels. These changes and the additional improvements to the Proposed Rule recommended above would go a long way toward eliminating the threat posed by lead-contaminated drinking water.

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[223] *See* Section II.C, *supra*.

[224] *Id.*, Proposed § 141.92(h)(iv).

Sincerely,

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Testimony for Oversight Lead Service Lines - June 18, 2024

Thank you to the City Council for bringing this critical legislation to the forefront. A recent report revealed a staggering statistic: one in five New Yorkers may be consuming water contaminated by lead pipes. This is a serious concern impacting 21% of our city's residents across all five boroughs. Given NYC's aging infrastructure, it's encouraging to see this issue addressed.

However, I'm concerned about the 10-year timeframe for property owners to replace lead pipes. What happens to residents currently experiencing discolored, smelly, or even toxic water? NYCHA Not limited to lead. A 10-year wait can be a lifetime for those struggling with these issues.

Councilwoman Zhuang asked a question about whether or not folks should be concerned about taking showers... Lead can enter the body through both ingestion and absorption through the skin. The skin is our largest organ, and when our pores open, contaminants can easily penetrate. This is especially concerning for residents taking showers, as they may be inhaling lead particles along with water vapor. The tragic experience in Flint, Michigan, highlights this danger, as residents who showered were exposed to both Legionella and lead.

I urge the City Council to consider immediate relief measures for impacted residents. This could include:

- Accelerated testing and replacement programs for vulnerable households.
- Financial assistance for low-income homeowners.
- POU/POE water filtration systems
- Temporary alternative water sources for residents with confirmed lead contamination.

Addressing lead contamination is a priority for public health, and we need to ensure immediate relief for those most affected while simultaneously working towards a long-term solution.

- The commissioner of the DEP quoted that there was only 17% lead service lines. However, the “No Excuses Report” https://www.nrdc.org/press-releases/report-estimated-one-five-new-yorkers-may-be-drinking-water-lead-service-lines, says that up to 41% of water service lines are lead or possible lead service lines,
- As many as 902,974 households have lead or possible lead service lines,
- As many as 1,845,119 individuals, or 21% of the city’s population, live in a household with lead or possible lead service lines,
- Compared to the citywide lead/possible lead service line average of 41%, two boroughs are below the average (Staten Island at 39% and Queens at 40%), while three are at or above the average (Brooklyn at 46%, Manhattan at 44%, and the Bronx at 42%),
- And the Port Richmond neighborhood in Staten Island has the highest lead/possible lead service lines (60.67%) in the entire city, while Fresh Meadows in Queens has the lowest rate (20.56%).

Educating the public
Besides the city's website, how does city council plan to educate the public about this legislation, infrastructure replacement, and free lead testing kits?

New Yorkers deserve to trust the water flowing from their taps. The recent issues with discoloration, odor, and taste have understandably shaken confidence in the city's water system. While bottled water may provide a temporary fix, it's a costly and environmentally unsustainable solution.

To rebuild trust, the City Council/Department of Environmental Protection (DEP) needs to take a multi-pronged approach:

1. Transparency and Communication:

- Open and honest dialogue: City council and DEP should proactively communicate with residents about the root causes of the issues, the steps they're taking to address them, and the timeline for improvements.
- Regular updates: Provide frequent updates on water quality testing, system repairs, and progress towards solutions.
- Community forums: Hold regular public forums where residents can voice their concerns, ask questions, and receive direct answers from City council and DEP staff.

2. Addressing the Root Causes:

- Comprehensive System Assessment: Conduct a thorough assessment of the entire water system to identify and address underlying problems that contribute to water quality issues.
- Infrastructure Upgrades: Invest in necessary infrastructure improvements to ensure the system is robust and resilient.
- Enhanced Maintenance and Monitoring: Implement a rigorous maintenance schedule and strengthen water quality monitoring programs to prevent future problems.

3. Public Education and Outreach:

- Educate the Public: Provide clear and accessible information about NYC's water system, including its history, how it works, and the rigorous testing processes in place.
- Promote Tap Water: Develop public awareness campaigns to highlight the benefits of drinking tap water and dispel misconceptions.
- Partnerships with Community Organizations: Collaborate with local organizations and community leaders to build trust and address concerns.

By taking these steps, New York City/DEP can demonstrate their commitment to providing safe, reliable, and high-quality water for all New Yorkers.

To: **Honorable Chair Gennaro**
Department on Environmental Protection (DEP)
Committee on Environmental Protection, Resiliency, and Waterfronts
City Council
Commissioner Rohit Aggarwala, DEP

From: AlertTek LLC, Juliana Lam, CEO, Michael Zahorsky, David Gibson

Subject: Written Testimony with regards to Intro 942

Thank you for holding this hearing on the important issue of lead remediation and replacing lead water service lines. AlertTek, LLC, is an authorized U.S. government provider, a New York City registered vendor and a female- and minority-owned company. We respectfully submit our testimony regarding addressing the replacement of lead water service lines in New York City with a particular focus on the need to deliver related messages to affected residents and homeowners.

AlertTek offers a unique, experienced, and powerful omni-channel mass communications platform to deliver targeted messages to mobile communication devices, through voice and text formats, unlike any other provider in the country. AlertTek stands ready to assist the City of New York in providing vital information via targeted mobile communications on behalf of the City and the Department of Environmental Protection (DEP). Having carefully analyzed the building-by-building data DEP has publicly shared and concatenated those maps with nearly seventy-two percent of (72%) of the affected residents within the five boroughs (see appendices 1 and 2), AlertTek can today reach a significant number of households with known or possible lead water service lines to deliver whatever message DEP desires. AlertTek can assist DEP in ensuring that vital lead-related messages promptly and accurately deliver key information that reaches the vast majority of the affected households and residents, such as how to reduce lead exposure from their drinking water; available mitigation and remediation programs (filters, testing kits, etc.); or to provide notice when DEP is replacing lead water service lines in their community. We also stand ready to offer expert advice to the City and DEP on how best to format and structure these communications to better ensure that the recipients will actually read them and take the City's desired action in response to the same.

As a comprehensive data provider to U.S government agencies and political clients, AlertTek, and its sister company, Link2Tek have data agreements with the U.S. Telco Repository for contact information, which is the comprised of phone numbers and verified email addresses,

which is updated in real-time, 24/7 by the various telecoms for use by 911 and emergency first responders.

Again, AlertTek thanks the Chairman and Committee for holding this hearing and hope to be a part of multi-pronged effort to address the issues related to lead water service lines, notably by providing vital communications and information to those most affected.

Appendix A: Known Lead DAC

Community	Column Labels Homeowner Voters	Individuals	Contact Points	Resident Voters	Individuals	Contact Points	(blank) Voters	Individuals	Contact Points	Total Voters	Total Individuals	Total Contact Points
+Bronx	**13,875**	**23,477**	**66,938**	**25,836**	**49,590**	**127,448**	**411**	**862**	**2,151**	**40,122**	**73,929**	**196,537**
Crotona - Tremont	1,174	2,016	5,721	4,145	8,088	20,778	35	89	191	5,354	10,193	26,690
Fordham - Bronx Park	1,349	2,415	6,520	8,114	15,173	38,220	76	182	420	9,539	17,770	45,160
High Bridge - Morrisania	502	897	2,664	3,444	6,600	16,872	23	62	113	3,969	7,559	19,649
Hunts Point - Mott Haven	466	815	2,405	1,935	3,945	9,879	26	50	133	2,427	4,810	12,417
Kingsbridge - Riverdale	410	612	1,840	980	1,729	4,303	14	23	62	1,404	2,364	6,205
Northeast Bronx	2,391	4,184	12,359	1,453	3,010	8,019	50	94	319	3,894	7,288	20,697
Pelham - Throgs Neck	7,583	12,538	35,429	5,765	11,045	29,377	187	362	913	13,535	23,945	65,719
+Brooklyn	**12,094**	**19,808**	**56,178**	**17,243**	**31,129**	**77,685**	**745**	**1,267**	**3,139**	**30,082**	**52,204**	**137,002**
Bedford Stuyvesant - Crown Heights	2,136	3,411	10,367	3,367	6,004	16,835	159	283	753	5,662	9,698	27,955
Bensonhurst - Bay Ridge	302	513	1,186	285	603	1,327	6	11	18	593	1,127	2,531
Borough Park	419	606	1,452	176	340	659	7	12	23	602	958	2,134
Canarsie - Flatlands	71	132	376	22	55	162	1	1	1	94	188	539
Coney Island - Sheepshead Bay	574	961	2,204	287	718	1,480	8	21	40	869	1,700	3,724
Downtown - Heights - Slope	538	791	2,387	1,036	1,716	4,421	96	146	380	1,670	2,653	7,188
East Flatbush - Flatbush	412	743	2,370	561	1,082	2,824	11	19	57	984	1,844	5,251
East New York	3,842	6,552	18,677	2,694	5,307	13,826	65	130	400	6,601	11,989	32,903
Greenpoint	761	1,201	3,397	2,567	4,287	9,764	132	214	475	3,460	5,702	13,636
Sunset Park	1,167	1,823	4,475	1,292	2,309	5,064	46	87	217	2,505	4,219	9,756
Williamsburg - Bushwick	1,872	3,075	9,287	4,956	8,708	21,323	214	343	775	7,042	12,126	31,385
+Manhattan	**1,714**	**2,672**	**7,930**	**9,004**	**15,734**	**39,365**	**316**	**578**	**1,366**	**11,034**	**18,984**	**48,661**
Central Harlem - Morningside Heights	615	934	2,957	1,310	2,322	6,662	69	121	307	1,994	3,377	9,926
Chelsea - Clinton	142	224	699	679	1,276	3,047	56	92	253	877	1,592	3,999
East Harlem	235	359	1,098	1,613	2,862	7,613	49	91	219	1,897	3,312	8,930
Greenwich Village - Soho	66	96	195	195	344	735	5	9	14	266	449	944
Union Square - Lower East Side	252	405	1,015	1,922	3,324	7,288	60	112	219	2,234	3,841	8,522
Upper East Side	66	120	305	41	74	167	6	14	26	113	208	498
Upper West Side	43	76	232	282	571	1,312	26	38	86	351	685	1,630
Washington Heights - Inwood	295	458	1,429	2,962	4,961	12,541	45	101	242	3,302	5,520	14,212
+Queens	**26,287**	**47,115**	**117,747**	**12,657**	**27,253**	**59,026**	**471**	**914**	**2,264**	**39,415**	**75,282**	**179,037**
Flushing - Clearview	975	1,808	4,085	635	1,474	3,046	32	54	134	1,642	3,336	7,265
Fresh Meadows	30	78	137	21	35	60	2	2	5	53	115	202
Jamaica	5,133	9,433	25,720	1,430	3,302	8,087	29	60	199	6,592	12,795	34,006
Long Island City - Astoria	1,564	2,723	6,940	2,927	5,819	12,428	149	253	577	4,640	8,795	19,945
Ridgewood - Forest Hills	1,163	1,942	5,191	1,174	2,226	5,327	27	69	150	2,364	4,237	10,668
Rockaway	522	882	2,673	242	528	1,537	11	16	45	775	1,426	4,255
Southeast Queens	180	325	947	52	107	282	-	3	3	232	435	1,232
Southwest Queens	9,757	17,437	44,297	2,137	4,864	11,126	103	197	538	11,997	22,498	55,961
West Queens	6,963	12,487	27,757	4,039	8,898	17,133	118	260	613	11,120	21,645	45,503
+Staten Island	**3,165**	**5,020**	**16,503**	**1,247**	**2,719**	**7,590**	**49**	**81**	**243**	**4,461**	**7,820**	**24,336**
Port Richmond	1,119	1,748	5,768	320	748	2,046	15	28	76	1,454	2,524	7,890
South Beach - Tottenville	228	352	1,117	66	117	325				294	469	1,442
Stapleton - St. George	1,759	2,817	9,305	832	1,800	5,051	34	53	167	2,625	4,670	14,523
Willowbrook	59	103	313	29	54	168				88	157	481
Grand Total	**57,135**	**98,092**	**265,296**	**65,987**	**126,425**	**311,114**	**1,992**	**3,702**	**9,163**	**125,114**	**228,219**	**585,573**

Appendix B: Possible Lead DAC

Community	Column Labels H Voters	Individuals	Contact Points	R Voters	Individuals	Contact Points	(blank) Voters	Individuals	Contact Points	Total Voters	Total Individuals	Total Contact Points
Bronx	**10,525**	**16,973**	**51,294**	**33,942**	**59,634**	**167,408**	**501**	**958**	**2,546**	**44,968**	**77,565**	**221,248**
Crotona - Tremont	883	1,453	4,323	6,727	12,098	32,367	38	112	262	7,648	13,663	36,952
Fordham - Bronx Park	1,016	1,640	4,774	5,408	9,942	26,547	68	148	388	6,492	11,730	31,709
High Bridge - Morrisania	1,142	1,708	5,512	8,145	13,968	39,460	131	226	608	9,418	15,902	45,580
Hunts Point - Mott Haven	1,317	2,082	6,285	5,131	8,872	25,374	56	116	273	6,504	11,070	31,932
Kingsbridge - Riverdale	257	406	1,210	812	1,369	3,802	21	37	104	1,090	1,812	5,116
Northeast Bronx	1,951	3,421	10,170	1,722	3,396	9,724	28	49	107	3,701	6,866	20,001
Pelham - Throgs Neck	3,959	6,263	19,020	5,997	9,989	30,134	159	270	804	10,115	16,522	49,958
Brooklyn	**27,534**	**44,567**	**125,720**	**43,155**	**76,932**	**196,492**	**1,942**	**3,296**	**8,131**	**72,631**	**124,795**	**330,343**
Bedford Stuyvesant - Crown Heights	4,443	7,182	22,786	9,598	16,890	49,092	402	677	1,779	14,443	24,749	73,657
Bensonhurst - Bay Ridge	1,005	1,630	3,878	942	1,736	3,790	37	73	130	1,984	3,439	7,798
Borough Park	672	1,034	2,247	543	966	1,894	25	41	98	1,240	2,041	4,239
Canarsie - Flatlands	576	963	3,024	640	1,102	3,497	10	21	53	1,226	2,086	6,574
Coney Island - Sheepshead Bay	3,490	6,091	14,527	5,029	11,145	22,886	137	343	689	8,656	17,579	38,102
Downtown - Heights - Slope	2,813	4,110	12,253	3,618	5,834	14,517	454	705	1,762	6,885	10,649	28,532
East Flatbush - Flatbush	1,895	3,140	9,988	3,709	6,610	18,419	111	192	499	5,715	9,942	28,906
East New York	5,643	9,660	27,691	5,085	9,764	27,361	103	193	529	10,831	19,617	55,581
Greenpoint	1,632	2,518	6,762	4,052	6,443	14,799	261	409	1,045	5,945	9,370	22,606
Sunset Park	1,793	2,801	6,638	1,758	3,049	6,586	80	134	334	3,631	5,984	13,558
Williamsburg - Bushwick	3,572	5,438	15,926	8,181	13,393	33,651	322	508	1,213	12,075	19,339	50,790
Manhattan	**6,270**	**9,582**	**30,100**	**27,498**	**46,875**	**126,966**	**1,060**	**1,829**	**4,850**	**34,828**	**58,286**	**161,916**
Central Harlem - Morningside Heights	1,463	2,164	7,113	5,476	9,329	27,978	208	348	977	7,147	11,841	36,068
Chelsea - Clinton	563	932	2,927	2,321	4,264	11,093	131	240	679	3,015	5,436	14,699
East Harlem	702	1,112	3,455	4,652	7,850	22,358	133	236	601	5,487	9,198	26,414
Gramercy Park - Murray Hill				5	33	64				5	33	64
Greenwich Village - Soho	3	6	11	126	249	524	5	10	26	134	265	561
Union Square - Lower East Side	922	1,422	3,987	3,459	5,952	13,880	158	274	667	4,539	7,648	18,534
Upper East Side	340	466	1,625	328	532	1,408	37	55	150	705	1,053	3,183
Upper West Side	1,152	1,795	5,693	2,623	4,823	12,728	183	325	887	3,958	6,943	19,308
Washington Heights - Inwood	1,125	1,685	5,289	8,508	13,843	36,933	205	341	863	9,838	15,869	43,085
Queens	**18,735**	**32,664**	**80,282**	**19,123**	**37,259**	**83,582**	**618**	**1,198**	**2,698**	**38,476**	**71,121**	**166,562**
Flushing - Clearview	2,172	3,878	7,436	2,389	4,831	8,941	71	205	354	4,632	8,914	16,731
Fresh Meadows	23	48	89	132	219	582	5	5	20	160	272	691
Jamaica	3,340	5,957	16,023	2,236	4,457	10,956	39	77	199	5,615	10,491	27,178
Long Island City - Astoria	2,198	3,737	9,891	3,454	6,573	14,762	264	464	1,081	5,916	10,774	25,734
Ridgewood - Forest Hills	554	886	2,406	817	1,480	3,512	11	23	43	1,382	2,389	5,961
Rockaway	1,063	1,634	5,150	2,100	3,677	10,690	84	121	348	3,247	5,432	16,188
Southeast Queens	259	435	1,426	111	237	741	5	8	25	375	680	2,192
Southwest Queens	4,785	8,343	21,120	1,414	3,141	7,273	49	99	224	6,248	11,583	28,617
West Queens	4,341	7,746	16,741	6,470	12,644	26,125	90	196	404	10,901	20,586	43,270
Staten Island	**9,819**	**15,735**	**50,261**	**3,526**	**7,393**	**21,008**	**192**	**372**	**1,090**	**13,537**	**23,500**	**72,359**
Port Richmond	6,679	10,653	34,605	1,927	4,220	11,939	118	217	657	8,724	15,090	47,201
South Beach - Tottenville	308	552	1,521	86	191	488	4	9	28	398	752	2,037
Stapleton - St. George	2,033	3,348	10,404	1,348	2,678	7,683	48	110	298	3,429	6,136	18,385
Willowbrook	799	1,182	3,731	165	304	898	22	36	107	986	1,522	4,736
Grand Total	**72,883**	**119,521**	**337,657**	**127,244**	**228,093**	**595,456**	**4,313**	**7,653**	**19,315**	**204,440**	**355,267**	**952,428**

I belong to the 51-year-old Liz Christy Garden, the founding site of the New York City community-garden system, and of the Green Guerillas non-profit. We enjoy participating in the core economic structure of that system, now within the Parks Department.

GreenThumb, within Parks, requires that we open to the public 10 posted hours and 10 more varied hours each week. Since the gardens are entirely volunteer, Parks gains an additional 600 green spaces without paying any staff other than the small administrative unit at GreenThumb. In exchange, the gardeners are allowed to have a country weekend of cultivating these very valuable lots. We have always felt that this economic exchange is fair and that it is extremely beneficial for the city.

During tulip time in the spring, the Liz Christy Garden hosts around 400 visitors each weekend day. Once vacations begin after Memorial Day, we see the same number stretched over the longer day. We usually stay open from noon until dark.

I hope the Council will provide ample funding for all of the city's greening organizations. That money lessens other expenditures in physical and mental health, environmental problems, cooling, and food banks that the city would otherwise have to cover. The gardeners are genuinely happy to afford the city our free services. We are proud to have all of our visitors see our beautiful work.

Thank you,
Penny Jones

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 6/18/24

(PLEASE PRINT)

Name: Syuth Scott

Address: 144-32 183rd Street Jamaica, NY 11413

I represent: National Clean Water Collective

Address: 144-32 183rd Street Jamaica NY 11413

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. 942 Res. No. _____

☐ in favor ☑ in opposition

Date: 6-18-24

(PLEASE PRINT)

Name: [redacted]

Address: [redacted]

I represent: Earthjustice

Address: 48 Wall St 15th Fl New York NY

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 6/18/24

(PLEASE PRINT)

Name: Rohit Aggarwala

Address: Commissioner

I represent: DEP

Address: _____

Please complete this card and return to the Sergeant-at-Arms

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Janet Aristy

Address: Director of Project and Business Operations Management, Bureau of Water and Sewer Operations DEP

I represent: _____

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 6/18/24

(PLEASE PRINT)

Name: Paul Rush

Address: Dep. Commissioner, Bureau of Water Supply

I represent: DEP

Address: _____

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. _____ Res. No. _____

☐ in favor ☐ in opposition

Date: 6/18/24

(PLEASE PRINT)

Name: Kathryn Mallon

Address: Chief Operating Officer

I represent: DEP

Address: _____

Please complete this card and return to the Sergeant-at-Arms

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. 942 Res. No. _____

☐ in favor ☐ in opposition

Date: _____

(PLEASE PRINT)

Name: Suzanne Novak

Address: Earthjustice 48 wall St NY NY

I represent: Earthjustice

Address: _____

Please complete this card and return to the Sergeant-at-Arms

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. 942 Res. No. _____

☐ in favor ☑ in opposition

Date: 6/18/24

(PLEASE PRINT)

Name: Marissa Lieberman-Klein

Address: 48 Wall St. Ste. 15 New York, NY 10005

I represent: Earthjustice

Address: 48 Wall St.

Please complete this card and return to the Sergeant-at-Arms

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. 942 Res. No. _____

☐ in favor ☒ in opposition

Date: 6/18/21

(PLEASE PRINT)

Name: Joshua Hamberg

Address: 30 BROAD ST FL 30 - NY, NY 10004

I represent: ~~NYLCV~~ NYLCV

Address: _____

Please complete this card and return to the Sergeant-at-Arms

THE COUNCIL
THE CITY OF NEW YORK

Appearance Card

I intend to appear and speak on Int. No. 942 Res. No. _____

☐ in favor ☒ in opposition

Date: _____

(PLEASE PRINT)

Name: Valerie Baron

Address: 40 W 20th St 10011

I represent: WRDC

Address: _____

Please complete this card and return to the Sergeant-at-Arms