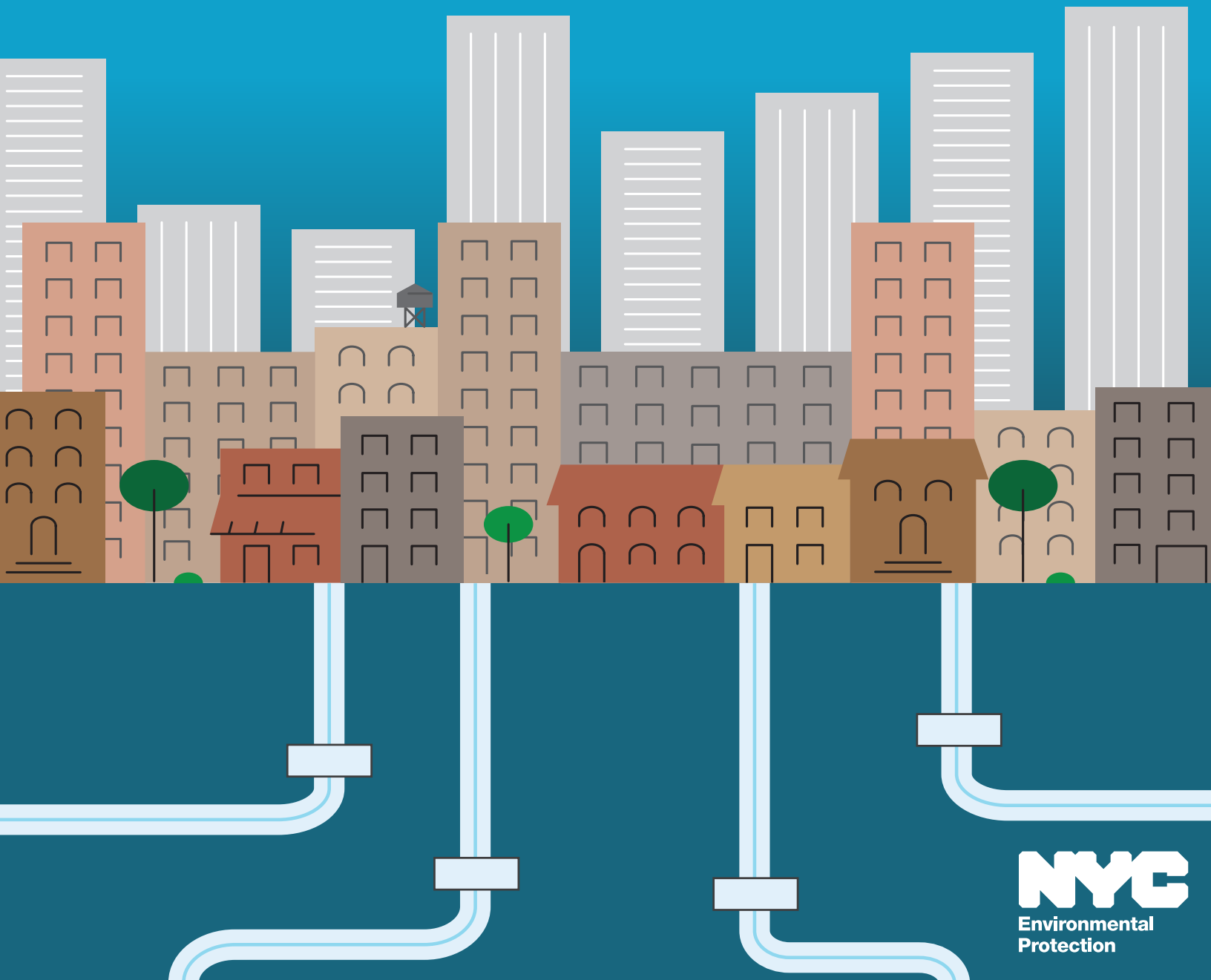


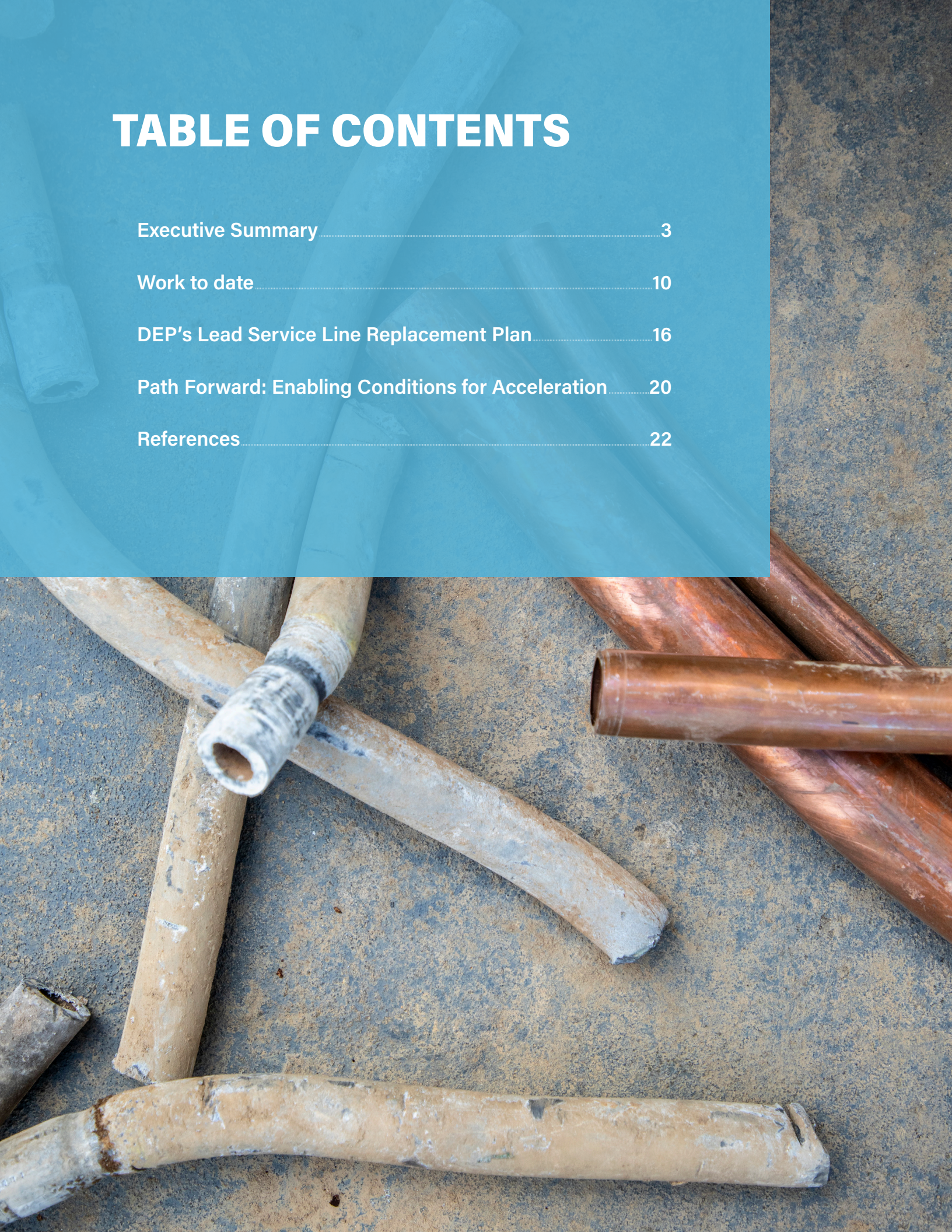
# NEW YORK CITY LEAD SERVICE LINE REPLACEMENT PLAN 2025





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Lead service line  
being replaced

New Copper service line  
installation replacing  
lead service line

## EXECUTIVE SUMMARY

The New York City Department of Environmental Protection (DEP) has developed this Lead Service Line (LSL) Replacement Plan in advance of the U.S. Environmental Protection Agency's 2027 deadline under the Lead and Copper Rule Improvements (LCRI). While New York City's drinking water is delivered lead-free and consistently ranks among the highest quality in the nation, lead exposure may occur when water passes through privately owned LSLs or internal plumbing in older homes.

Our inventory indicates that there are ~121,100 lead or galvanized requiring replacement (GRR) service lines, collectively referred to herein as LSLs in New York City. DEP has conducted notifications, but because all known LSLs in New York City are privately owned, DEP cannot mandate replacement without property owner consent. To address this, DEP supports legislation requiring replacement at the time of property sale, during major renovations, or when a no-cost replacement is offered. Without legislative changes, DEP will comply with the LCRI but expects that full citywide replacement could take 40–50 years. With targeted reforms, DEP estimates full citywide replacement could be achieved in 16 years, with 60% completed by 2037.



## EXECUTIVE SUMMARY

Although EPA has determined that there is no safe level of lead in water, undisturbed lead service lines (LSLs) do not pose an immediate health risk to New Yorkers due to DEP's highly effective orthophosphate treatments.

The importance of reforms is underscored by lessons learned from DEP's ongoing Lead Service Line replacement program. Because no legal mandate exists to compel owners to participate, only 63% of owners have chosen to receive a free lead service line replacement. Based on the length of the service line and other site-specific variables, service line replacement cost could be between \$5,000 and \$10,000 per lead service line.<sup>1</sup> City contracting often comes at a premium, DEP is paying 25-50% more than private contractors.<sup>2</sup> Finally, many service lines identified as lead have turned out not to be lead. All these factors have reduced the expected cost savings of a district-based city-contracted approach.<sup>3</sup>

The LSL Replacement Plan outlined in this document is consistent with DEP's existing legal authority and is drafted to be fully compliant with LCRI requirements for service lines not under City control. This Plan reaffirms the agency's commitment to ensure every New Yorker has access to safe, clean drinking water.

DEP's plan is as follows: DEP will conduct no-cost replacements when the City disturbs an LSL during water main replacement work. DEP will implement an LCRI-compliant outreach program requesting that homeowners replace their LSLs at their own expense, with communications structured to inform and guide them through the replacement process. DEP and the NYC Water Board will seek to make financing options, such as loans or the inclusion of installment amounts on DEP's bill, available to help low-income New Yorkers manage the cost of LSL replacements. In addition, DEP is committed to pursuing state and federal funding opportunities that support meaningful progress towards replacement at no cost to homeowners, as well as advocating for legislative changes to drive faster citywide replacement.

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1 New York State Department of Health. (2021). What is the anticipated cost to replace a lead service line? In Lead Service Line Replacement Program: Frequently Asked Questions.

2 Pricing is based on estimated Lead Service Line Replacement (LSLR) contract bid items.

3 City contracting costs are influenced by statutory requirements, including the obligation to pay prevailing wages under New York State Labor Law and municipal rules. These wages often exceed market rates and are coupled with additional mandated benefits, compliance measures, and administrative overhead. Collectively, these factors contribute to higher overall costs compared to private-sector contracting



In New York City, LSLs were legal until 1961, and patch repairs to lead lines were allowed until 2009. The stock of water service lines in the City is comprised of copper, galvanized steel, lead, brass, and ductile iron or a combination of the above. LSLs were generally manufactured in diameters of two inches or less and therefore are typically found in buildings with fewer than six units. DEP estimates that there are ~121,000 potential LSLs, ~118,000 service lines where the material is unknown, and ~579,000 services that are not lead. Many LSLs are approaching the end of their useful life due to age-related deterioration—commonly referred to as “wear and tear” and are, therefore, being replaced by property owners.

Despite the presence of aging infrastructure on private property, New York City’s tap water is consistently ranked as having among the highest quality in the nation, delivered lead-free through 7,000 miles of aqueducts, tunnels, and water mains. While drinking water is delivered lead-free to consumers, the risk of lead exposure arises only if the water travels through a privately-owned LSL or internal lead plumbing, most often found in older one- to four-family homes; very few apartment buildings are affected. However, in NYC, lead-based paint hazards, not drinking water, are the primary source of lead exposure and the most commonly identified cause of elevated blood lead levels in children.<sup>4</sup>

DEP continues to demonstrate that its water is among the safest in the nation. Routine lead testing shows that most homes with LSLs have no detectable lead in their drinking water<sup>5</sup>. DEP safeguards the City’s water supply and works to minimize potential lead exposure from private plumbing by adding food-grade orthophosphate to the water before distribution. Nearly 70% of homes tested through the City’s Lead in Water Programs have no detectable lead in their drinking water. Unlike cities such as Flint, Newark, and Pittsburgh – where corrosion control failures led to serious public health crises – New York City has maintained a robust and effective corrosion control program for decades. Through orthophosphate treatment, a protective coating forms inside a building’s pipes, preventing lead in the building’s pipes from entering the building’s water supply.

**LSLs are found citywide; data indicate that they are distributed relatively evenly across neighborhoods, rather than being concentrated in environmental justice communities.**

DEP believes that tap water continues to be the healthiest and cheapest source of hydration for New York families. While there have not been studies comparing New York City tap water to bottled water, many studies have demonstrated that bottled water contains significantly more microplastics than originally thought. In one study researchers found an average of 240,000 plastic fragments in a liter of bottled water.<sup>6</sup> As a result, efforts that have the impact of reducing confidence in tap water are likely to reduce, not improve, public health.

<sup>4</sup> New York City Department of Health and Mental Hygiene. (n.d.). Lead poisoning prevention. NYC.gov.

<sup>5</sup> Based on DEP’s 2025 Lead in Water Program lead results data

<sup>6</sup> 2024 Proceedings of the National Academy of Sciences



## EXECUTIVE SUMMARY

Since 1961, the City has prohibited the installation of new LSLs, and most lines remaining today are found in older, 1- to 4-family homes. However, they are distributed broadly across all boroughs, neighborhoods, and property values, as demonstrated in Figures 1a and 1b below.

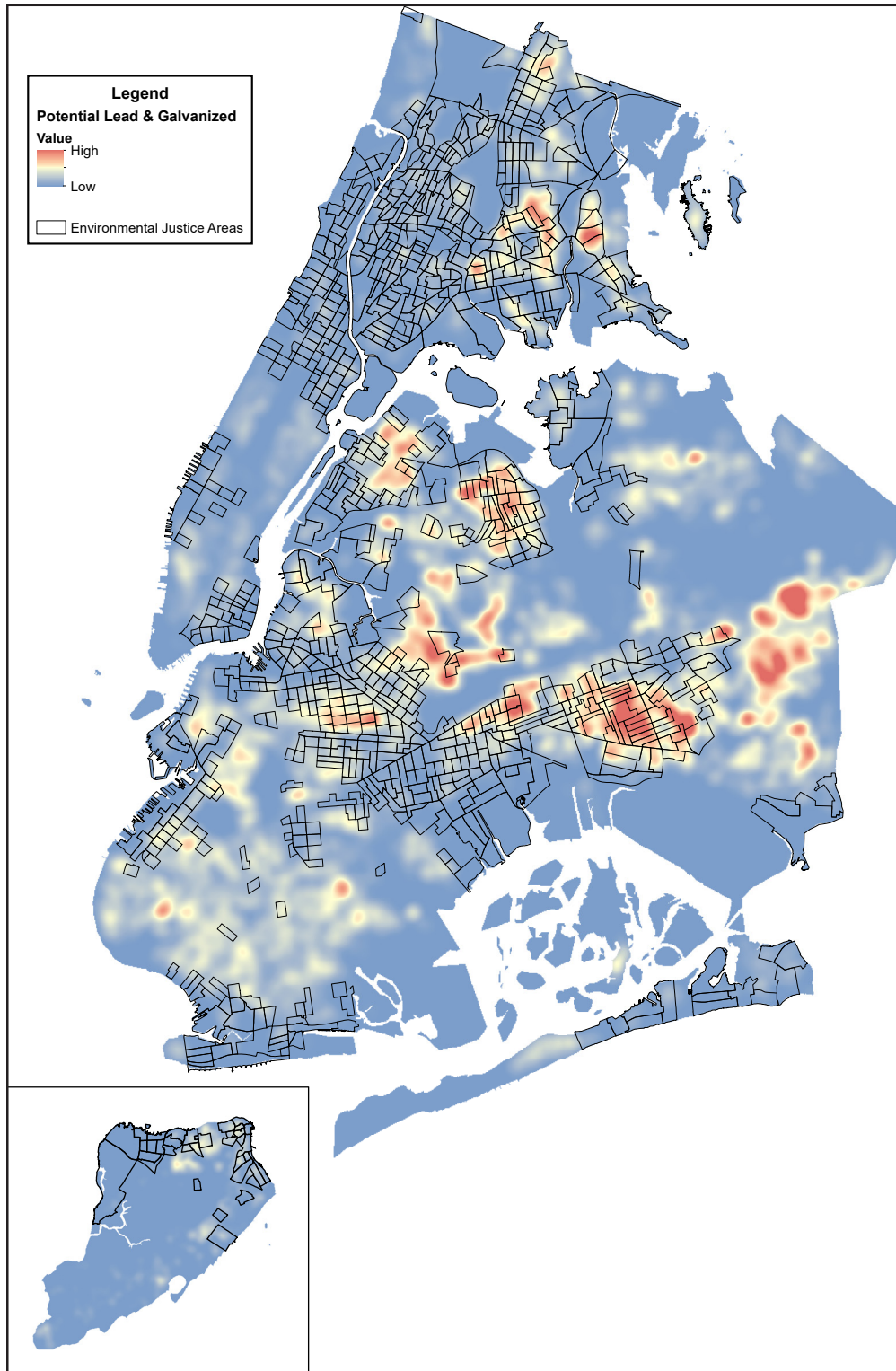


Figure 1a,  
Potential Lead and  
Galvanized services heat  
map in comparison to  
Environmental Justice Areas



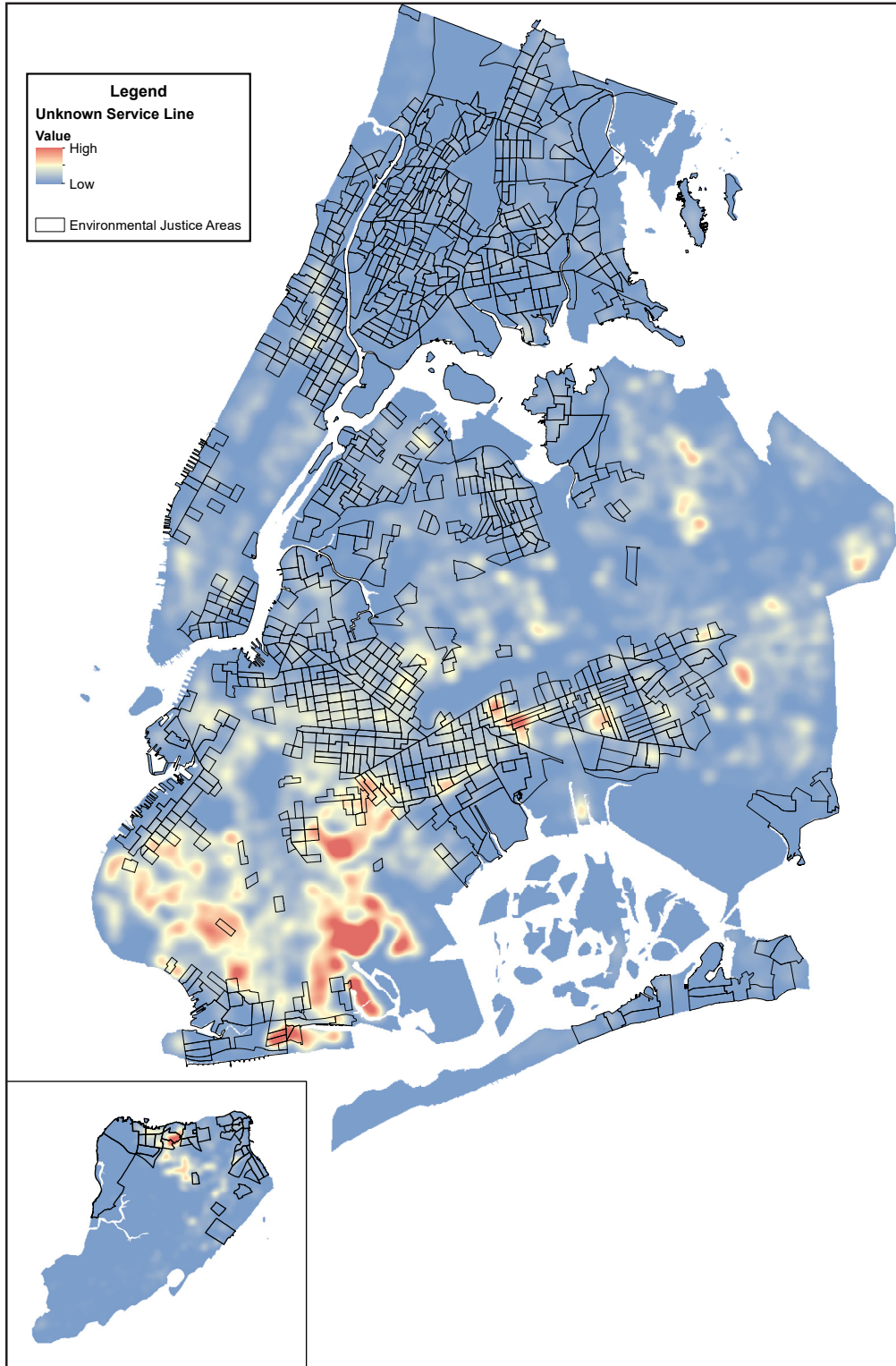


Figure 1b,  
Unknown services heat  
map in comparison to  
Environmental Justice Areas

## EXECUTIVE SUMMARY

DEP's compliance plan reflects the fact that all lead service lines are privately owned, with none under City control.

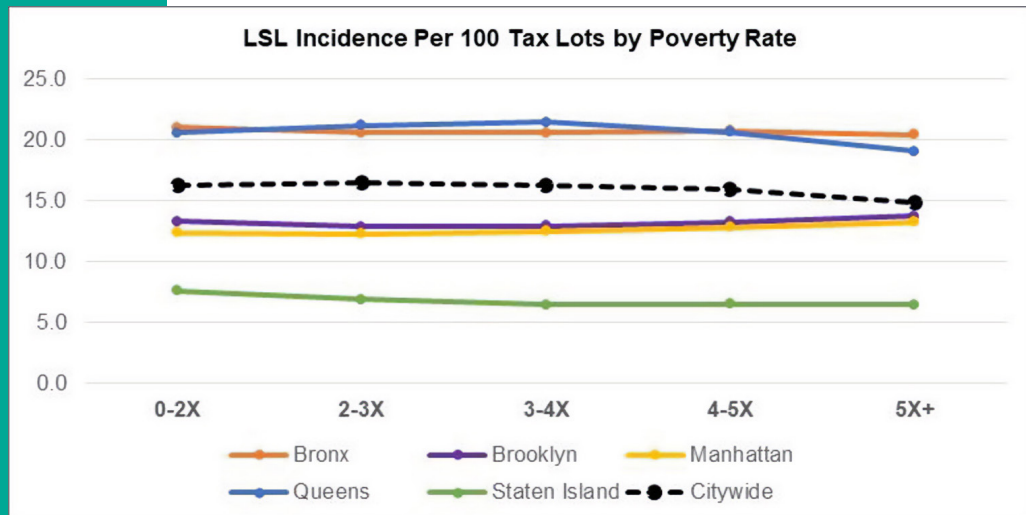


Figure 2, LSL Incidence Per 100 Tax Lots by Poverty Rate

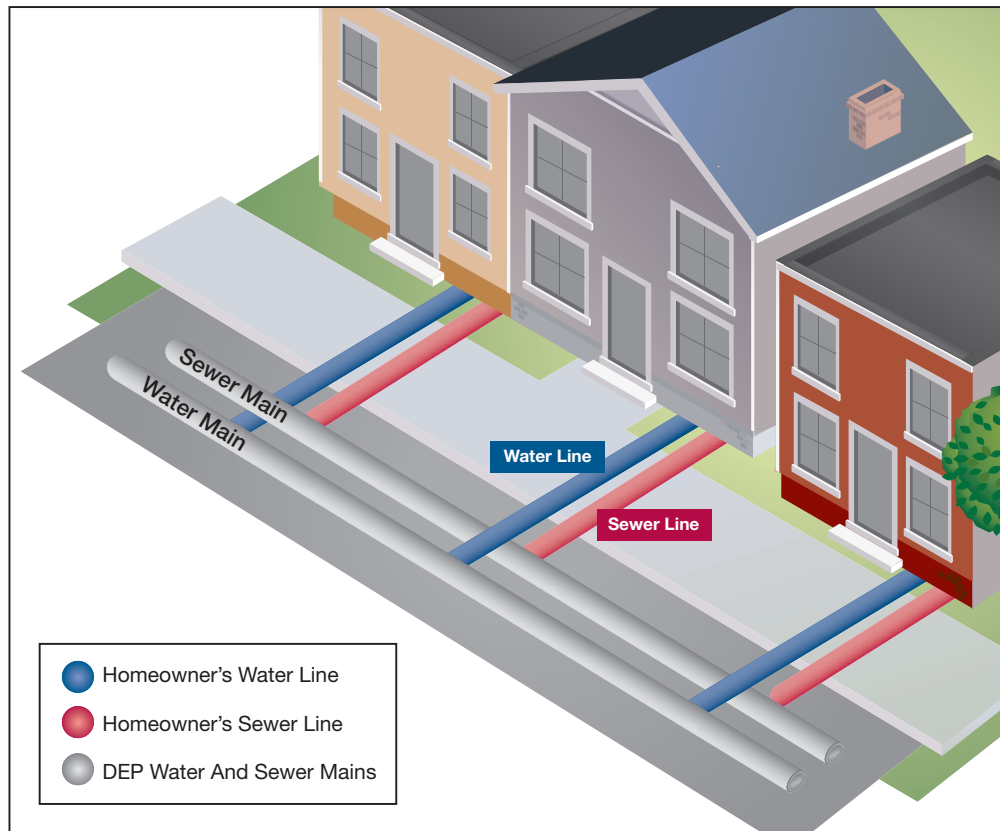
In fact, interior plumbing components – such as lead solder and fixtures – are also sources of potential lead exposure. As noted above, and as shown in Figure 2, the presence of lead in plumbing correlates primarily with the age and size of housing stock, not with property owner income or poverty level.<sup>7</sup>

The City eliminated its own LSLs and does regular checks to ensure no LSLs serve City property. The LSLs that remain in the City are on private property. This ownership structure presents challenges. The LCRI has different requirements for LSLs under the City's control and those not under the City's control. Because the City does not own the LSLs, the LCRI requires NYC to complete inventories, conduct outreach, and develop and implement its replacement plan; the LCRI requires the City to conduct the replacement work when homeowners grant access to their property but does not oblige the City to bear the cost of replacing privately owned lead service lines. NYC will comply fully with these provisions concerning service lines that are not under the City's control.

<sup>7</sup> 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.



Figure 3,  
Service Line Diagram



In addition, DEP is committed to supporting property owners — especially those most in need — by pursuing external funding, creating cost reduction programs, and advocating for legislation to make replacements easier and more affordable. There are no laws, regulations, or tariff provisions that expressly govern the City's authority to access private property for the purpose of conducting full replacement of lead or galvanized requiring replacement (GRR) service lines, collectively referred to herein as LSLs.



## WORK TO DATE

Understanding where LSLs exist is a first step; accordingly, DEP offers an online public map to provide residents and property owners with information regarding their water service lines. DEP has combined historical data, field inspections, excavation observations, and homeowner reporting to build an online inventory map. DEP has also developed an

**DEP has developed one of the most comprehensive LSL inventories in the nation and timely completed required notifications.**

innovative self-reporting program for homeowners and is implementing a machine learning model to predict the likelihood of lead or galvanized composition for unknown service lines. The model will incorporate installation year, neighborhood construction patterns, as well as historical service line material and pipe diameter. All findings will be used to update DEP's service line inventory and map, which are being refined continually and may change significantly as new data become available. The inventory will be reported to NYSDOH annually, as required by the LCRI.



DEP has successfully completed the first round of notifications required in the LCRI and will continue to do successive required annual notifications through regular mailings. Between October 18, 2024, and November 14, 2024, DEP timely distributed approximately 250,000 notifications (this number may include all customers with LSLs or unknown service lines), fulfilling the requirements under 40 CFR 141.85(e), which further requires the annual notifications. These notifications include detailed information about the presence of LSLs, potential health risks, and steps homeowners can take to identify and replace LSLs. Beginning with the 2025 notification cycle, letters also instruct property owners to share this information with their tenants, either by distributing copies directly or by posting the notice in a conspicuous location within the property. The City continues to work with the State and EPA on an expanded program of tenant notifications.

In 2021, President Biden signed the Bipartisan Infrastructure Law (BIL), which dedicates \$15 billion to LSL replacements nationwide. EPA's strategy to address lead in drinking water will prioritize communities with the highest lead levels and those with environmental justice concerns. New York State received \$428 million in federal funding under the BIL in the first round of a five-year investment authorized by this new law. Since 2019, DEP has secured the maximum BIL LSL replacement funding allowed for a single municipality under current New York State policy: more than \$72 million (grants and zero-interest loans) awarded, with \$48 million more anticipated. DEP has aggressively sought federal funding received by the state and has argued for a higher share of this funding. NYC has several programs already in place to undertake LSL replacements at no cost to the homeowner when DEP's actions disturb an LSL during watermain replacement work.

**Ahead of the LCRI, DEP has implemented LSL replacement programs for which federal funding has been made available.**

As of 2024, DEP has launched BIL-funded replacement programs in several Bronx neighborhoods, including Concourse-Concourse Village, Kingsbridge Heights-Van Cortlandt Village, Melrose, Mott Haven-Port Morris, Mount Eden-Clermont, University Heights-Fordham, University Heights-Morris Heights, Norwood, Williamsbridge-Olinville, and Soundview-Bruckner. These areas were selected based on environmental justice criteria, LSL density, and median household income. While construction is underway in many of these areas, other neighborhoods in Brooklyn and Queens have been identified for future phases, and those replacements are currently pending contractor mobilization (Figure 4, below).

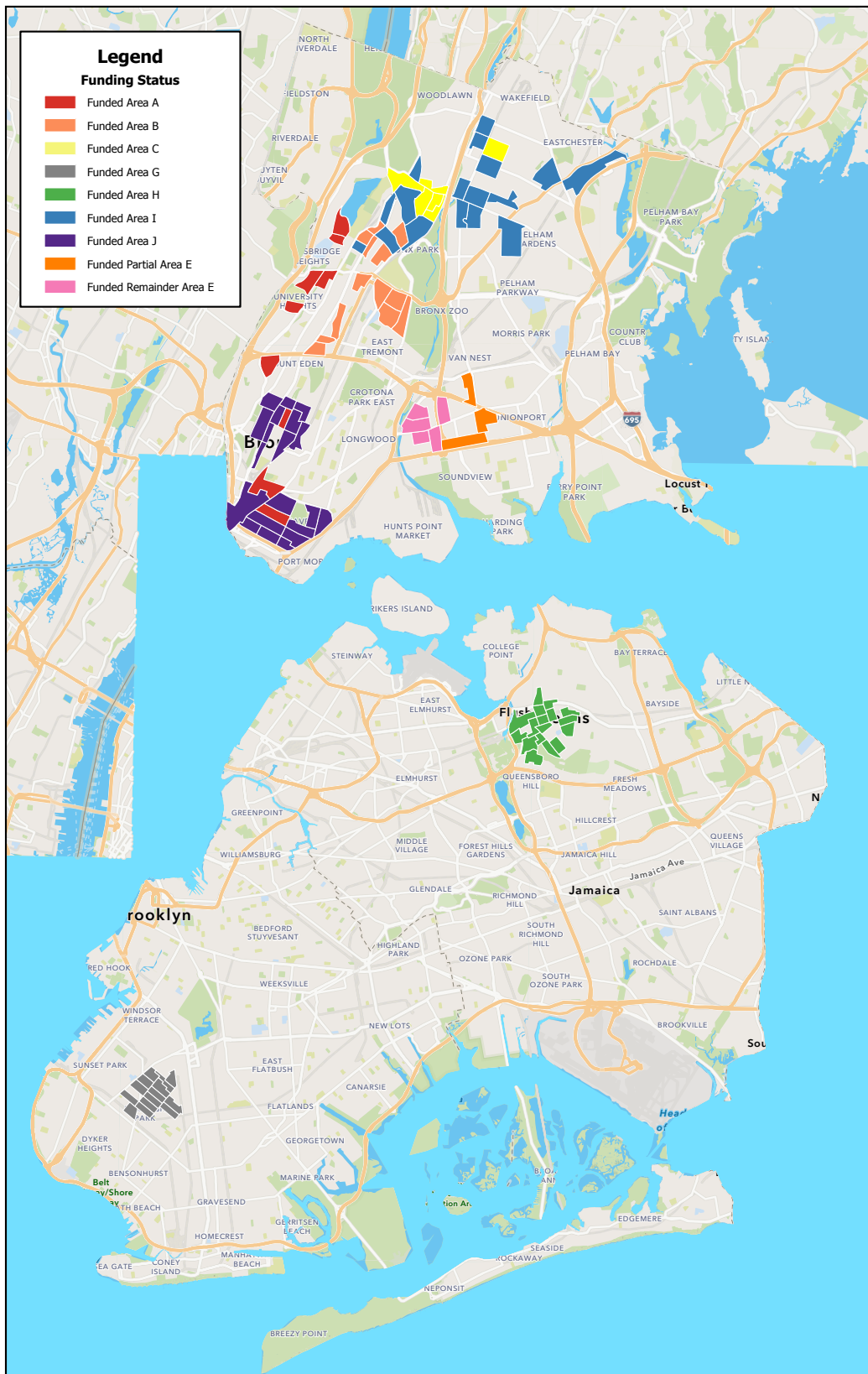


Figure 4, BIL-funded replacement areas



DEP provides New Yorkers with clear, practical information on simple steps to further minimize potential lead exposure and encourages participation in LSL replacement efforts.

Communications include targeted mailings to inform landlords and tenants about replacement opportunities, multilingual materials to ensure accessibility across all communities, citywide outreach using free and paid media, and direct engagement with elected officials, community boards, and faith-based organizations to build awareness and encourage participation. These communication efforts are designed to build awareness, encourage voluntary participation, and create the foundation for long-term, citywide progress toward full citywide LSL replacement. Figures 5a and 5b below are visuals of DEP's Lead Service Line Replacement communication documents.

Figure 5a, Flushing Instructions and Informational Flyer

## Lead in Household Plumbing



New York City's award-winning tap water is delivered lead-free from the city's upstate reservoir system, but drinking water can absorb lead from solder, fixtures, and pipes found in the plumbing of some buildings or homes. This could increase the potential for lead exposure.

### What is a water service line?

Water service lines connect your home's plumbing to the city's water main in the street. Homeowners own and are responsible for their service line in its entirety.

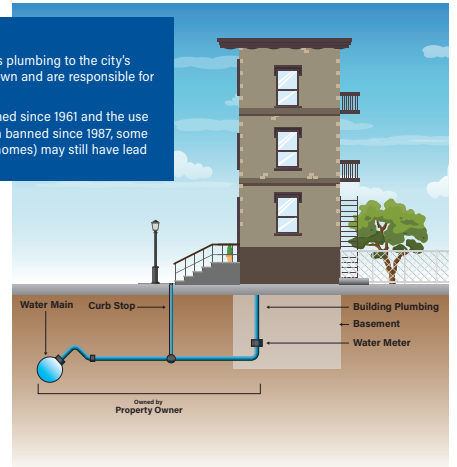
While lead service lines have been banned since 1961 and the use of lead in household plumbing has been banned since 1987, some older homes (particularly 1-to-4-family homes) may still have lead pipes and fixtures.

### How can I find out if my service line is made of lead?

Visit [nyc.gov/dep/lead](http://nyc.gov/dep/lead) to view a Service Line Material Map and search your address.

### What does the City do to protect you?

NYC DEP treats the city's water supply by adjusting the pH and by adding orthophosphate, a common food additive, which forms a protective barrier on plumbing. NYC DEP regularly tests tap water throughout the five boroughs to monitor the effectiveness of this treatment.



### Testing Children for Lead

New York State Law requires primary health care providers test the blood of every child for lead at one and two years of age as part of routine well visits. Primary providers must assess all children six months to six years of age for lead exposure and test those found to be at risk.

### Health Effects of Lead

Exposure to lead in drinking water can cause serious health effects in all age groups. Infants and children can have decreases in IQ and attention span. Lead exposure can lead to new learning and behavior problems or exacerbate existing learning and behavior problems. The children of women who are exposed to lead before or during pregnancy can have increased risk of these adverse health effects. Adults can have increased risks of heart disease, high blood pressure, kidney or nervous system problems.



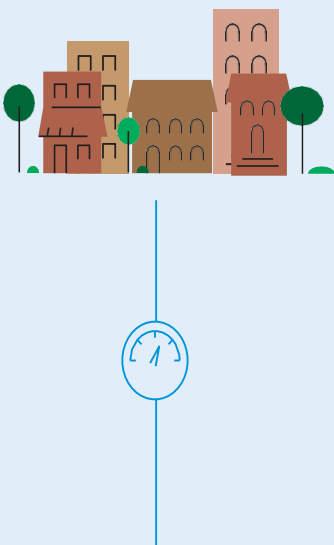
For more information on lead in household plumbing, visit [nyc.gov/dep/lead](http://nyc.gov/dep/lead) or scan this QR code.



## Steps to Reduce Your Risk of Exposure to Lead Through Your Drinking Water

<p><b>Run cold water before using.</b> If the water in the faucet has been sitting for more than six hours, run water for at least five minutes before using it. Showering and flushing the toilet also help clear out your water line.</p>	<p><b>Remove and clean faucet strainers.</b> Every three months, remove and clean strainers at the tip of faucets to remove build up. 1. Remove the faucet strainers from all taps. 2. Rinse the faucet strainers. 3. Run the water without a strainer for 3 to 5 minutes. 4. Replace faucet strainers.</p>
<p><b>Use cold water for cooking, drinking, and making baby formula.</b> Lead dissolves into hot water more easily than cold water. If you need hot water, draw cold water and then heat it. It is safe to shower, wash dishes, and do laundry with hot water from the tap. Lead does not affect humans through the skin. Boiling water does NOT reduce lead.</p>	<p><b>Test your water for lead.</b> If you have a lead or galvanized service line, you can request a FREE lead test kit to be mailed to your home to test your drinking water. Call 311 or visit <a href="http://nyc.gov/311">nyc.gov/311</a>.</p>
<p><b>Replace your home's internal plumbing that may have lead.</b> Potential lead sources include lead pipes, lead-based solder, and brass fixtures and valves (including faucets).</p>	<p><b>Use filters.</b> Consider using a water filter. Be sure the filter you choose (faucet, refrigerator or pitcher filter), is approved to reduce lead (NSF 53/42-certified). Visit <a href="http://NSF.org/water">NSF.org/water</a> to learn more about water filters.</p>
<p><b>Test your child's blood for lead.</b> Your local doctor or pediatrician can perform a blood test for lead and provide you with information about the health effects of lead. Call the <b>New York City Department of Health</b> at 646-632-6023 to learn more, including where you can have your child's blood tested.</p>	

For more information on health effects of lead, contact the NYC Health Department by calling 311 or [nyc.gov/lead](http://nyc.gov/lead).





Questions about replacing your lead service line?

**Phone:**  
(718) 595-5322

**Email:**  
leadservices@dep.nyc.gov


**DEP's Website**  
nyc.gov/leadpipe

## Water Service Line Replacement at Your Home: Flushing Instructions

Your new copper water service line has been installed, replacing your old lead water service line. Please follow the instructions below to minimize your risk of lead exposure through your plumbing.

### 1



**Beginning TODAY, before using your water; Flush all plumbing in your house following these instructions.**

**Continue to flush your water once every 2 weeks for 3 months:**

- ☐ Remove ALL faucet screens (aerators).
- ☐ Run all faucets including sinks, showers, bathtubs, and laundry tubs.
- ☐ Start by running COLD water from all of the faucets in the lowest floor of your house (such as the basement) and then open the faucets on the next highest floor of the house. Continue until all faucets are open on all floors.
- ☐ After all of the faucets are opened, leave the COLD water running for at least 30 minutes.
- ☐ After 30 minutes, turn off the first faucet you opened and continue to turn off the other faucets in the same order you turned them on.
- ☐ Put back the faucet screens after flushing.


**Flush daily for the next 6 months:**

- ☐ Run faucet for 5 minutes each morning or after 6 hours of non-use.

**After 6 months:**

- ☐ Clear debris from faucet screens 2 times per year.


### 2



**3-6 Months after your service line is replaced:**

- ☐ If you have not already received a test kit in the mail, 3 to 6 months after your service line replacement, you can request a free lead test kit, by calling 311 or at [nyc.gov/311](http://nyc.gov/311)
- ☐ The kits come with easy-to-follow instructions and a pre-paid label to send it to a laboratory for lead analysis.
- ☐ Results will be mailed to you within 30 days of the sample arriving at the laboratory.

### 3



**To continue to reduce your risk of lead exposure through your plumbing:**

- ☐ Run your water for at least 2 minutes or until it gets cold. Once the water is cold, run it for 15 seconds more.
- ☐ Use COLD water for cooking, drinking, or preparing infant formula. Hot tap water is more likely to contain lead and other metals.
- ☐ Remove and clean the faucet screens regularly, where small particles can get trapped.
- ☐ Use the provided pitcher filter for your drinking water for 6 months.

Rev.04/2025

Figure 5b, Flushing Instructions and Informational Flyer

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DEP’s BIL-funded LSL replacement program has highlighted the high costs and operational challenges associated with voluntary participation. Contractors were awarded geographic zones with high concentrations of LSLs on each block, and property owners were offered LSL replacements free of charge. Even so, homeowner participation was much lower than expected, demonstrating that without a mandate for homeowners to replace their LSLs, voluntary programs will not achieve the scale or speed required. Fortunately, many suspected LSLs turned out not to be lead, but this fact also unexpectedly led to an undermining of the economies of scale originally planned in our block-to-block construction plans.

DEP’s experience shows the limits of top-down voluntary replacement efforts

Estimated Direct Homeowner Cost of LSL Replacement	Estimated Cost of DEP Contractor LSL Replacement
\$10,000	\$15,000

Figure 6, Estimated Cost Comparison of LSL Replacements

The program also highlighted the higher cost of government-contracted replacements. Based on contracting to date, costs of LSL replacement work performed by the City are roughly 50% higher than costs when property owners hire their own contractors. Government-contracted replacements, if scaled citywide, could add approximately \$50 to \$150 per year to the average household water bill – currently \$1,244 – on top of other necessary rate increases. If rate increases are not pursued, costs would have to be absorbed by diverting funds from other priorities such as stormwater or other City-owned infrastructure.

These lessons have directly shaped DEP’s proposed compliance plan, which includes both targeted City-led replacements and homeowner responsibility with financing support.



Figure 7, Lead service line replacement and copper service line being installed

# DEP'S LEAD SERVICE LINE REPLACEMENT PLAN

DEP submits this lead service line replacement plan consistent with its existing legal authority; it is drafted to be fully compliant with LCRI requirements for service lines not under City control.

This Plan reflects both the limits of current law, and the lessons DEP has learned from past replacement programs. This replacement plan, therefore, focuses on practical actions DEP is currently taking and establishes a foundation for broader legislative and financial solutions. This plan includes the following:

## 1. Ensuring Regulatory Transparency: AI-Driven Material Identification and Public Accessibility

DEP will continue to maintain and enhance its comprehensive LSL inventory to uphold transparency and ensure public accessibility of service line information. Building upon the existing online public map, DEP will continue to integrate historical records, field inspection data, excavation findings, and homeowner reports to refine and expand the inventory. The Department will further advance its machine learning model to predict the likelihood of lead or galvanized service line materials, utilizing variables such as installation year, neighborhood construction patterns, and pipe characteristics. All updates will be reflected in the public-facing inventory and reported annually to NYSDOH in accordance with the LCRI.



### 2. DEP's Standard Operating Procedure (SOP) for LSL replacements ensures consistent and safe execution of City-led replacement work before, during and after replacement.

Service line replacements that are conducted through City-led programs follow these established procedures and are carried out in accordance with Title 15 of the Rules of the City of New York (RCNY), Chapter 20. The procedures outlined below apply to both in-house staff and contractors working on behalf of the City.

City-led replacement programs follow a three-phase approach including pre-replacement, replacement and post-replacement. DEP provides timely, clear communication to residents before, during, and after LSL replacement through direct outreach.

- **Pre-replacement Communication:** The replacement process begins with proactive outreach to the homeowner. Because the service lines in DEP's system are customer-owned, written consent to replacement is required. DEP employs a multi-touch outreach strategy to secure consent: homeowners are contacted by mail, phone calls and emails (if available), as well as in person. These efforts continue until the homeowner consents, the homeowner formally declines participation, or the homeowner fails to respond after DEP makes at least four attempts to obtain consent. Once consent is secured, a site inspection is performed to confirm the material composition of the existing service line and to conduct an obstruction analysis. The obstruction analysis identifies potential barriers that may complicate replacement, such as mature trees, retaining walls, driveways, or structures constructed over the service line.
- **Replacement:** Prior to excavation, all underground utilities are located and marked in accordance with 811 "call-before-you-dig" requirements, and safety barriers are installed to protect the work area. There are various techniques used to replace services, depending on available equipment and field conditions. Current techniques include open trench, borings, and tow lines.
- **Post-Replacement Flushing Procedure:** Once the new pipe is installed, it is flushed with high-velocity water to clear out any small particles that may have entered during construction. DEP also provides homeowners with a certified pitcher filter (NSF/ANSI Standard 53) and three replacement cartridges, enough for at least six months of use. In addition, three to six months after the service line is replaced, if the homeowner has not already received a test kit in the mail, a free lead test kit can be requested by calling 311 or at [nyc.gov/311](http://nyc.gov/311). Finally, DEP gives simple written and verbal instructions for a one-time flushing of all cold-water taps in the home. These steps are consistent with federal rules under the LCRI and are meant to give homeowners extra peace of mind that their water remains safe after construction.

Once the replacement and flushing are complete, the area is restored. This restoration includes backfilling and compacting excavated areas. All work is documented thoroughly. Documentation includes the signed homeowner consent form, and a record of the service line material removed, as well as the generation of a new tap card with details on the new line (material, length, installation date). The tap card records are used to update the service line inventory.

## DEP'S LEAD SERVICE LINE REPLACEMENT PLAN

### 3. Prioritization Strategy and Framework (Subject to Available Funding)

If funding becomes available, the Lead Service Line Replacement Program will prioritize properties and households most vulnerable to lead exposure. Program implementation will depend on the level and source of available funding, and any awarded grants may include additional prioritization requirements.

The following hierarchy will guide replacement efforts:

1. Households with children under age five
2. Households with elevated lead results identified through DEP testing or confirmed elevated blood lead levels in occupants
3. Critical facilities, such as childcare centers and day cares
4. Lower-income households
5. Residential properties owned by individuals rather than corporate entities or LLCs, including both owner-occupied and tenant-occupied homes. Tenant-occupied properties will require the property owner's consent prior to replacement.
6. Homes with lower assessed Department of Finance market values.

To ensure equitable distribution of resources, properties with a Department of Finance market value of \$1 million or higher or higher household incomes may be considered for replacement only after the priority populations identified above have been addressed and if sufficient funding remains available.

### 4. Funding Strategy, Legal Access & Cost-Sharing Framework

No-cost replacement when the City disturbs an LSL during water main replacement work: DEP's water distribution system consists of 7,000 miles of pipes as well as thousands of valves, hydrants, and fittings that date back to the 1900s. To address the needs of this extensive system, DEP replaces and upgrades portions of the water distribution system through a proactive water main replacement program. These water main replacements require DEP to reconnect privately owned service lines to the newly installed mains.

Studies have shown that reconnecting LSLs to new water mains can damage the ortho-phosphate coating and can allow for greater levels of lead to enter a home's drinking water. In addition, although DEP does not consider these reconnections to be "partial lead service line replacements" there is a risk that the public or our regulators may deem them to be such; partial lead service lines have been proven to increase lead and are expressly targeted for elimination by EPA.

To minimize/mitigate this risk, DEP proposes to replace all privately owned LSLs that are encountered when DEP replaces a water main. The cost of this program is ~\$87M (in addition to the cost of the water main work) and is estimated to replace 5,800 LSLs over a ten-year period. This work is capitably eligible.

With this approach, LSL replacement is at no cost to residents, regardless of income. The LSL replacement work will require notifying property owners about the program, obtaining consent from property owners for replacement and performing full replacements. This initiative is expected to be incorporated into all water main contracts delivered by the NYC Department of Design and Construction (DDC).



DEP and the NYC Water Board will explore the feasibility and effectiveness of making a financing option available to help low-income New Yorkers manage the cost of lead service line (LSL) replacements. This effort may include evaluating loan structures and mechanisms such as installment payments through DEP's water billing system. DEP expects to fulfill the LCRI replacement requirements by contacting homeowners to notify them of the need to replace their LSLs and offering, through our contracted partner, a financing option. These replacements would be at the homeowner's expense.<sup>8</sup> DEP anticipates that the compliance period will need to be spread out over several years, requiring all properties to comply by 2040. This approach accounts for factors such as market capacity and availability of qualified plumbers, which may limit the pace of replacements.

Recognizing that DEP's compliance with LCRI requirements alone may not achieve the broader public health goal of eliminating LSLs as quickly as possible, DEP also plans to undertake a set of actions that position the City to accelerate replacement as new tools become available.

### **DEP is committed to:**

- Pursuing state and federal funding opportunities that advance no-cost replacement efforts—prioritizing support for populations most impacted by LSLs.
- Advocating for legislative changes to drive faster citywide replacement.

Through these combined efforts, DEP aims to ensure that every New Yorker can benefit from the safe, clean water the City's system provides.

### **5. Public Communication Plan: An LCRI-compliant outreach program requesting that homeowners replace their LSLs at their own expense, with communication structured to inform and guide them through the replacement process.**

DEP provides New Yorkers with clear, practical information on simple steps to further minimize potential lead exposure and encourages participation in LSL replacement efforts. Communications include targeted mailings to inform landlords and tenants about replacement opportunities, multilingual materials to ensure accessibility across all communities, citywide outreach using free and paid media, and direct engagement with elected officials, community boards, and faith-based organizations to build awareness and encourage participation. DEP will continue to update dedicated webpages with information on lead in drinking water and marketing assets including educational videos. These communication efforts are designed to build awareness, encourage voluntary participation, and create the foundation for long-term, progress toward full citywide LSL replacement.

### **6. Annual Updates:**

DEP will also periodically review, revise, and submit updates to this plan to ensure ongoing compliance with the LCRI and related regulatory requirements. Updates will incorporate new data, program performance metrics, and feedback obtained through engagement and public participation. Revisions will be submitted to NYSDOH as required, ensuring that all outreach materials, communication strategies, and implementation activities remain accurate, effective, and reflective of current program objectives and regulatory guidance.

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<sup>8</sup> Cost-sharing is permitted by Public Authorities Law § 1045-j, which authorizes the New York City Water Board to charge customers for services provided by the water system. See also Const Art IX, § 1, which authorizes the City to seek a fair return for the operation of the New York City Water System.



# PATH FORWARD: ENABLING CONDITIONS FOR ACCELERATION

## Laws and provisions that affect the water system's ability to gain access to conduct full replacement

Unlike in many cities, service lines in NYC are privately owned all the way to the main; this understanding as to ownership has a long history of being upheld by the courts. There are no laws, regulations, or tariff provisions that expressly authorize the City to access private property for the purpose of conducting full replacement of LSLs without consent from the property owner. The NYC Administrative Code<sup>9</sup> requires builders and developers to construct service lines (i.e., water laterals) and makes property owners responsible for their

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<sup>9</sup> New York City Administrative Code, Title 24, Chapter 3 and Title 28 Plumbing Code Chapter 6



## PATH FORWARD: ENABLING CONDITIONS FOR ACCELERATION

maintenance and repair.<sup>10</sup> In addition, case law<sup>11</sup> has held that the fact that the City supplies water does not make it responsible for the service line. Accordingly, NYSDOH previously confirmed that the City had established to NYSDOH's satisfaction that the City has no direct control over privately-owned service lines for the purposes of the City's LSL replacement program. Therefore, absent property owners' consent or a local law, the City cannot compel access or unilaterally replace privately owned portions of service lines.

In addition, DEP cannot currently compel a property owner to replace an LSL. As detailed above, voluntary participation in LSL replacement efforts has historically been limited, even when work is offered at no cost to property owners. DEP therefore supports local legislation that would require replacement at time of property sale or major renovation, or when DEP offers a no-cost replacement. Such statutory changes could dramatically accelerate replacement timelines and make it possible to capture the benefits of economies of scale – for example, through block-by-block efforts – improving cost efficiency.

**With legislative changes, DEP estimates that all LSLs in NYC could be replaced in fewer than 20 years – more than twice as fast as under current law.**

If the NYC City Council enacts legislation requiring replacement at property sale, during major renovations, or when DEP offers a free replacement – DEP estimates that all LSL replacements in NYC could be completed within 16 years, with nearly 60% of replacements complete by 2037. Without such legislation, full citywide replacement of privately owned LSLs could take up to 47 years.

Mechanisms	Replacements per Year	Program Duration (years)	Total Services Replaced	% of LSLs
Water Main Replacement	1,380	10	13,800	9.94%
Wear & Tear	1,600	10	16,000	11.53%
Major Renovations	3,150	10	31,500	22.69%
Home Sales	2,800	10	28,000	20.17%
<b>Total with legislation</b>	<b>8,930</b>		<b>89,300</b>	<b>64.34%</b>
<b>Total without legislation</b>	<b>2,980</b>		<b>29,800</b>	<b>21.47%</b>

Figure 8, Chart of estimated lead service line replacements projected over 10 years

DEP's plan establishes a strong operational and regulatory framework for LSL replacement, but its full potential is limited by current legal and funding constraints. Accelerating progress will require policy changes that align with DEP's readiness to scale and engage communities more effectively.

<sup>10</sup> The City has maintained for over 100 years that it does not own or have a possessory interest in privately owned service lines. See *Am. Water Resources v. Liu*, 2013 NY Slip Op 33903[U], \*6-7 (Sup Ct, NY County 2013) (citing *John R. Terry v. the Mayor, et al.*, 8 Bosworth Reports 504 (NY Superior Court 1861) as evidence of the City's historical position). Consistent with this position, property owners are responsible for maintenance and repair of such privately owned service lines. 15 RCNY 20-03 (v) Protection of service connection and house control valve. ("(1) The property owner and not the Department, is responsible for: ...ii) Repairing or replacing equipment, service or distribution piping to allow maintenance, proper operation or replacement of the meter; and (iii) The maintenance of the service and distribution pipe and its associated fittings and equipment."); See also Ad. Code 24-316 Leaking tap or service pipe to be repaired (authorizes DEP to shut off the tap and backfill the excavation but does not grant access to the privately owned service line, consistent with the City's historic position).

<sup>11</sup> *Terry v. the Mayor*, 8 Bosworth Reports 504 (NY Superior Court 1861) and *Leonhardt v. City*, 109 NYS 24 (Sup Ct 1906)

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Figure 1. Potential lead, galvanized, and unknown services heat map in comparison to environmental justice areas.

Source: New York City Department of Environmental Protection (2025).

Figure 2. LSL incidence per 100 tax lots by poverty rate.

Source: U.S. Census Bureau (2018–2022); U.S. Department of Health and Human Services (2022).

Figure 3. Service line diagram.

Source: New York City Department of Environmental Protection (2025).

Figure 4. BIL-funded replacement areas.

Source: New York City Department of Environmental Protection (2025).

Figure 5. Flushing instructions and informational flyer.

Source: New York City Department of Environmental Protection (2025).

Figure 6. Estimated Cost Comparison of LSL Replacements

Sources: New York State Department of Health (2021) and New York City Department of Environmental Protection (2025).

Figure 7. Lead service line replacement and copper service line being installed.

Source: New York City Department of Environmental Protection (2025).

Figure 8. Estimated lead service line replacements projected over 10 years.

Source: New York City Department of Environmental Protection (2025).



# TYPICAL SERVICE LINE TYPES



Lead Service



Galvanized Service



Copper Service



Brass Service



