February 5, 2024

The Honorable Michael S. Regan
Administrator
Office of Water
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue NW
Washington, DC 20460

RE: Docket No. EPA-HQ-OW-2022-0801: National Primary Drinking Water Regulations for Lead and Copper: Improvements (LCRI)

Dear Administrator Regan:

On behalf of the Environmental Defense Fund (EDF), we appreciate the opportunity to provide comments to the U.S. Environmental Protection Agency (EPA) on its proposed Lead and Copper Rule Improvements (LCRI).[1]

Environmental Defense Fund's mission is to build a vital Earth. For everyone. EDF's Healthy Communities impact area is committed to improving the public's health by dramatically reducing exposures to and health impacts of toxic chemicals and air pollution among communities and individuals that bear the greatest burden of exposure and/or health risk. By advancing scientific insights, policies, and market-based leadership and working with diverse partners and collaborators from companies, researchers, and community-based groups to government agencies and elected officials, we seek to make evident inequities in chemical- and pollution-related health impacts, and to develop, support and implement solutions that promote healthy communities and individuals. EDF is a member organization and on the Steering Committee of the Lead Service Line Replacement Collaborative. EDF is also a member of the White House Get the Lead Out Partnership.

Introduction and Statements of Support

EDF strongly supports EPA's proposed Lead and Copper Rule Improvements (LCRI). We firmly believe that everyone deserves access to safe drinking water. There are an estimated 9.2 million lead service lines (LSLs) delivering drinking water to families across the nation and we support getting these pipes out as quickly as possible. We commend the numerous public health and socioeconomic benefits this proposed rule would provide through several key provisions, including:

- Replacing 100% of LSLs for most water systems by 2037, and strictly limiting partial replacements.
- Lowering the action level, triggering more aggressive action when sampling finds high levels of lead.
- Requiring water systems to communicate more frequently and proactively with consumers about LSL replacement and the system's plans for replacing LSLs at the lowest cost.

[1] EPA, "National Primary Drinking Water Regulations for Lead and Copper: Improvements (LCRI)," 88 Fed. Reg. 84878, December 6, 2023, https://www.regulations.gov/document/EPA-HQ-OW-2022-0801-0036.

In addition to correcting past shortfalls of the 2021 Lead and Copper Rule Revisions (LCRR),[2] the relative success of this rule will turn on the extent to which precautions are taken to fully protect the most vulnerable.

EDF urges EPA to finalize this rule no later than October 16, 2024, the effective date of the LCRR, to reduce compliance challenges and ensure that water systems begin taking action as soon as possible.

We would like to express strong support for each of the provisions listed below:

- **Replacing Lead Pipes in Ten Years:** Lead service lines should be removed as quickly as possible to protect infants, children, and future generations from the harmful effects of lead in drinking water. We strongly support the establishment of a ten-year replacement deadline.
- **Mandatory Full Service Line Replacement:** We highly commend EPA for requiring mandatory full service line replacement and strictly limiting partial replacements to protect public health.
- **Lowering the Lead Action Level:** Recognizing that there is no safe level of lead in drinking water, we support EPA's proposal to lower the lead action level. We further encourage EPA to adopt the strongest possible standard achievable and ensure that water systems are acting sooner.
- **Expanded Sampling**: At sites served by an LSL, we support the requirement for systems to collect first and fifth liter sampling. This will inform systems and regulators about the condition of drinking water that resides in the service line. However, sampling can have shortcomings and should not be relied upon solely for evaluating a resident's exposure to lead from drinking water.
- **Lead Connectors:** Lead connectors are yet another source of drinking water and must be replaced. We support EPA's proposed requirement to remove lead connectors whenever they are encountered.
- **Multiple Action Level Exceedances (ALEs):** We support EPA's proposal to require water systems that experience three ALEs during a five-year period to provide additional outreach to affected residents and distribute lead-certified filters to protect consumers.

Recommendations to Strengthen the Proposed LCRI

The following are our recommendations for areas of improvement in the proposed LCRI.

I. Access and Consent

In general, we strongly support many of EPA's proposed improvements to LCR. To meet EPA's goal of replacing all lead and galvanized requiring replacement (GRR) service lines we strongly encourage EPA to modify the definition of "service line" to include ownership type, establish criteria for "access" and require a written waiver documenting refusal of access for the purpose of full service line replacement.

a. Modify the definition of "service line" to include reference to ownership.

EPA's proposal modifies 40 C.F.R. § 141.2 by simplifying the definition of "lead service line," removing the definition of "full lead service line replacement," and adding a definition of "service line." EDF supports simplifying the definition of a lead service line, however by removing reference to ownership water systems which could define a service line, regardless of its material type, as if it were in multiple parts based on ownership. The core function of a pipe is to deliver drinking water from the water main to the building it is connected to. The function does not change based on ownership. Additionally, by

[2] EPA, National Primary Drinking Water Regulations: Lead and Copper Rule Revisions (LCRR), 84 Fed. Reg. 61684, November 23, 2019, https://www.regulations.gov/document/EPA-HQ-OW-2017-0300-0001.

requiring that systems categorize the *entire* service line into one of four material types and only count each service line once regardless of ownership,[3] EPA reinforces the view that the entire service line is one single piece.

Therefore, EPA should modify the definition of a service line to include reference to ownership types. The same language used to define a lead service line in the LCRR should be included: "…may be owned by the water system, owned by the property owner, or both."[4]

We suggest the following changes to Proposed 40 C.F.R. § 141.2:

> *Service line*, for the purpose of subpart I of this part only, means a portion of pipe which connects the water main to the building inlet. Where a building is not present, the service line connects the water main to the outlet. A service line may be owned by the water system, owned by the property owner, or both.

b. Establish the criteria for determining whether a water system has "access" to conduct full service line replacement.

The proposed rule requires that water systems conduct full lead and GRR service line replacement as long as the water system has control of the service line.[5] "Control" is based on "access" to the service lines, however the proposal specifically does not establish criteria that water systems can follow to determine whether they have access to a service line. Without clear criteria established by the rule, the determination of whether there is access is left entirely up to the water system. This could result in a narrow definition where service lines that are owned in part or in whole by a property owner are not their responsibility. This is a critical issue that could potentially undermine the goal of this rule, which is to protect public health and address disproportionate impacts of lead in drinking water in communities.[6]

The EPA states in the preamble that the Agency included "requirements and flexibilities to increase access and expedite full service line replacement."[7] While we appreciate that the EPA tries to address this by requiring water systems to identify barriers to access in their service line replacement plans, without guidance in the rule, this may not help them go far enough. Therefore, we suggest that EPA establish criteria that a water system should use to determine if they have sufficient access, and, therefore, control.

We recommend the following changes to Proposed 40 C.F.R. § 141.84(d):

> (1) All water systems must replace all lead and galvanized requiring replacement service lines under the control of the water system ~~unless the replacement would leave in place a partial lead service line~~.
>
> (2) Where 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 regardless of ownership of the line or the property on which it is located. Where a water system does not have access to conduct full service line replacement, the water system is not required by this rule to replace the line, but the water system must document the reasons that the water system does not have access and include any specific laws, regulations, and/or water tariff agreements that affect the water system's ability to gain access to conduct full lead and

[3] Proposed 40 C.F.R. § 141.84(6)(iii)(A)
[4] 40 C.F.R. § 141.2
[5] Proposed 40 C.F.R.§ 141.84(d)(1)
[6] 88 Fed. Reg. at 84878
[7] 88 Fed. Reg. at 84920

galvanized requiring replacement service line replacement identified pursuant to paragraph (c)(1)(viii) of this section. The water system must provide this documentation to the State pursuant to § 141.90(e)(10).

(i) ~~This rule does not establish the criteria for determining whether a system has access to conduct full service line replacement.~~ The criteria for determining whether a water system has access to conduct full service line replacement include: whether the water system can safely enter the property; whether the water system can safely conduct the replacement; and whether the water system has obtained the property owner's consent, if consent is required for access. Presence of a lead service line on private property does not, by itself, determine whether a water system has access to conduct full service line replacement for purposes of this rule. Any State or local laws or water tariff agreement requirements to gain access to conduct full service line replacement must be identified in the service line replacement plan as described in paragraph (c) of this section and in the notification provided to persons served by lead, galvanized requiring replacement, and unknown service lines as described in § 141.85(e).

c. Require a written waiver documenting refusal of access in cases where the property owner refuses full lead service line replacement.

In general, we support EPA's proposal to require that water systems contact a property owner four times using two different methods, constituting a "reasonable effort."[8] However, we are concerned that if systems determine they do not have access and therefore control of the service line, they will likely bypass any "reasonable effort" to gain property owner consent, further relinquishing them from the responsibility of lead and GRR service line replacement.

Under the proposed LCRI, water systems are relinquished from responsibility for replacing a customer-owned LSL after four attempts to contact the property owner.[9] Resistant and/or absentee landlords may elect to simply not respond during this period. This is particularly worrisome given the high rate of rental housing in many of the nation's cities, where a large portion of the known and suspected lead and GRR service lines are located. For example, the 2022 American Community Survey published by the U.S. Census Bureau found that 70% of residents in Newark and Jersey City are tenants, and that the percentage is also high in cities such as New York (67%), Cleveland and Cincinnati (60% respectively).[10] This could leave a significant portion of vulnerable communities at continued risk of lead exposure.

While four attempts to contact the property owner seems reasonable, the LCRI should require water systems to formally notify recalcitrant property owners that their rejection of an offer to have the customer-owned LSL replaced does not eliminate their liability for adverse health impacts. And for landlords of rental property, this likely increases it. This liability should be made explicit in communications to property owners.

If a property owner refuses to have their LSL replaced, EPA could adopt the approach authorized in Illinois' Lead Service Line Replacement and Notification Act (amending the Opportunity Law of the Civil Administrative Code of Illinois)[11] whereby a waiver is presented to the property owner by the water system outlining the consequences of rejecting LSL replacement. The waiver must be signed by both the water system and the property owner, and a copy is submitted to the Illinois Department of Public Health.

[8] 88 Fed. Reg. at 84923
[9] *Id.*
[10] Gatea, M., "Owning vs. Renting: Ranking the Top 100 U.S. Cities by Homeowner and Renter Prevalence," *StorageCafe,* April 20.2023, https://www.storagecafe.com/blog/owners-vs-renters-in-the-100-largest-us-cities/
[11] Codified at 415 ILCS 5/17.12

We believe that presenting this type of information signals the weight of opting out of LSL replacement to a property owner and forces them to consider the impacts on the residents. This would be a beneficial recommendation for all systems to adopt.

We suggest the following changes to Proposed 40 C.F.R. § 141.84(d)(3):

> Where a water system has ~~legal~~ access pursuant to § 141.84(d)(2)(i) 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 or written waiver documenting refusal of access for the purpose of full service line replacement. If such a water system does not obtain consent after making a "reasonable effort" to obtain it from any property owner, then the water system is not required by this rule to replace any portion of the service line at that address.

II. Deferred Deadlines

We recognize the careful thought and analysis that EPA used to arrive at the two eligibility criteria specified in proposed 40 C.F.R. § 141.84 (5)(v). We firmly believe that all systems should be on the same ten-year timeline to replace all lead and GRR service lines and recommend that EPA finalize the rule with that requirement. However, if EPA determines that they will allow certain systems to go beyond the ten-year timeline, we urge EPA to consider the following.

EPA is proposing to use this eligibility criteria to set annual replacement rates that remain static for the entire duration of the deferral period based on what is believed to be feasible under existing conditions. It is unreasonable to assume that existing conditions will persist ten years from the compliance date. It is, however, reasonable to assume that trained workforce, contractor availability, new technology, and operational efficiencies will be gained over time. Furthermore, operational efficiency will likely result in lower costs. Where affordability is a concern, market forces may shift to make service line replacement more affordable. Ultimately, what is seen as "feasible" today should be easier to achieve with time. The focus should be on efficiency and incentives, rather than on deferrals.

a. Set a minimum annual replacement threshold with a framework to reevaluate replacement rates over time.

Determine eligibility. EPA should only use the proposed eligibility criteria of systems with more than 100,000 lead and GRR service lines to identify the systems that would need more time. Communities determined to be eligible for a deferred deadline would be strongly encouraged to participate in the EPA's Lead Service Line Replacement Accelerator Program where they would receive an intensive level of technical assistance. In addition, EPA and States should explore creative ways to direct federal funding, such as unobligated dollars from the Bipartisan Infrastructure Law (BIL) and/or American Rescue Plan Act (ARPA), towards these communities.

Increase the annual replacement threshold. The proposed 10,000 annual replacement threshold is based on the flawed assumption that cities with more than 100,000 lead and GRR service lines such as Chicago or Cleveland cannot do better than Denver or Newark. Service line replacement is not typically complex work relative to other capital improvement projects. Programs will likely prove to be scalable operations that can grow to meet the need in most localities. Contractor capacity can be expected to increase over time in response to the number and extent of contracts issued by local water systems, particularly if water systems proactively engage contractor associations and unions. It is reasonable to conclude that future improvements in technology will sharpen the efficiency of the system's replacement efforts. Mayor Johnson of Chicago set a goal to "achieve replacement of 40,000 LSLs" by 2027, scaling up the number of replacements each year: 8k by end of year 2024, 10K in 2025, 12K in 2026, and 14K by

end of 2027.[12] This shows that cities are committed to scaling up their programs – and this is only the beginning.

EPA should consider that water systems can reasonably complete service line replacement at a faster rate than the maximum annual threshold of 10,000 service line replacements. In its technical support document, EPA assumes that service line replacement can only be completed in a five-month-long season (i.e., 20 weeks)[13] even though, in many states, far more time is available based on usual weather patterns. To establish an annual replacement rate, two key factors must be considered: contractor availability and construction season length in any given year.

EPA's proposed maximum annual threshold of 10,000 service line replacements is based on Newark's *peak* daily replacement rate of 100 confined to a five-month construction season (20 weeks). For most states, this limits work to a very small portion of the year, even when weather-related restrictions in some regions are considered.

Our recommended approach is more closely aligned with the statutory requirement established by the Safe Drinking Water Act that EPA's proposal "prevents known or anticipated adverse effects on the health of persons to the extent feasible."[14] The calculation below conservatively and realistically assumes Newark's *average* daily replacement rate of 81 would be sustained for eight months (32 weeks):[15]

$$\textit{Average LSL replacements per day } (Jan - Mar\ 2020) = \mathbf{81}$$
$$\textit{Number of days worked during construction season } = 32\ \textit{weeks} * 5\ \textit{days} = \mathbf{160}$$
$$\mathbf{81}\ \textit{avg daily replacements} * \mathbf{160}\ \textit{days worked} = \mathbf{12,960}\ \textit{LSL replacements per year}$$

The calculation above uses a similar rationale to EPA. It supports a higher annual replacement rate by extending the construction season from five months to eight months, a much more realistic timeframe and one that more accurately reflects what is "feasible" and "technically possible." We believe that systems can do better. Therefore, we strongly suggest that EPA increases the replacement rate for these water systems from 10,000 to at least 13,000.

Remove the per-household replacement rate eligibility criteria. The LCRI proposal notes that EPA lacks evidence that the ten-year deadline would be affordable for water systems with a high proportion of lead and GRR service lines relative to households served.[16] However, the availability of a record amount of federal funds, including from BIL, State Revolving Fund, and Water Infrastructure Finance and Innovation Act, as well as appropriations put forth by many states should help address the affordability issue. Just because there is little data on which to judge long term performance among states does not mean that they cannot achieve reasonable annual targets while building a program that is cost efficient

[12] Chicago for the People, "Building Bridges and Growing the Soul of Chicago: A Blueprint for Creating a More Just and Vibrant City for All; Transition Team Report to Mayor Brandon Johnson," July, 2023, https://www.chicago.gov/content/dam/city/depts/mayor/TransitionReport/TransitionReport.07.2023.pdf, at page 78.
[13] EPA, "USEPA (2023) Technical Support Document for the Proposed Lead and Copper Rule Improvements," December 6, 2023, https://www.regulations.gov/document/EPA-HQ-OW-2022-0801-0709 at page 14.
[14] 42 U.S.C. § 300g–6 (d)(1)
[15] Brune, G., "Lead Service Line Replacement at a Blistering Pace Newark, New Jersey." *Jersey Water Works, February 10, 2022,* https://www.jerseywaterworks.org/latest-news/lead-service-line-replacement-at-a-blistering-pace-newark-new-jersey/.
[16] 88 Fed. Reg. at 84913

and responsive to public health concerns. We recommend that EPA removes the per-household replacement rate criteria. EPA should set a rate that does not impede the achievement of 100% replacement of lead and GRR service lines as quickly as feasible.

Set a minimum replacement rate, require regular assessments, and increases to the replacement rate. As opposed to setting an annual maximum replacement rate for these systems, EPA should consider a minimum starting rate in the first three years. At the end of the first three years and after technical assistance resources have been provided and more is known about the system's relative performance, the relevant state agency should determine if the minimum target can be increased. Every three years thereafter, the system will calculate an increased replacement rate based off an analysis of efficiencies gained, not to exceed 20 years based on these improved efficiencies.

We suggest the following changes to Proposed 40 C.F.R. §141.84 (5)(d)(v):

> *Deferred deadlines and associated replacement rates.* Subject to the State determination in paragraph (d)(5)(iv) of this section, a water system may defer service line replacement past the deadline in paragraph (d)(4) of this section not to exceed 20 years if ~~the system meets one or both of the following conditions: (A) If~~ 10 percent of the total number of known lead and galvanized requiring replacement service lines in a water system's replacement pool as described in paragraph (d)(6)(i) of this section is greater than 10,000 service lines~~, the system is eligible may complete replacement of all lead and galvanized requiring replacement service lines by a deadline that corresponds to the system replacing 10,000 lead and galvanized requiring replacement service lines annually~~.
>
> (A) In the first three years after promulgation of the final rule, the system must replace a minimum of 13,000 lead and galvanized requiring replacement service lines annually. At the end of the third year and annually thereafter, the system must increase the annual replacement rate via a reassessment framework set forth in the replacement plan subject to EPA and State determination.
>
> ~~(B) If a water system replacing 10 percent of the total number of known lead and galvanized requiring replacement service lines in a water system's replacement pool, on an annual basis, results in an annual number of replacements per household served by the water system that exceeds 0.039, the system may complete replacement of all lead and galvanized requiring replacement service lines by a deadline that corresponds to the system replacing 0.039 average annual replacements per household served calculated over a rolling three-year period in accordance with paragraph (d)(5)(iii) of this section. To calculate the minimum average annual replacement rate, the system must divide 100 by the number of years needed to achieve replacing 0.039 average annual replacements per household, expressed as a percentage.~~

We also suggest the following changes to Proposed 40 C.F.R. §141.90(e)(13):

> ~~No later than the compliance date in § 141.80(a)(3),~~ A~~a~~ny water system eligible for ~~either of~~ the ~~following~~ deferred deadline condition~~s~~ in accordance with § 141.84(d)(5)(v) must submit the following information to the State and EPA:
>
> (i) Within 90 days following promulgation of the final rule, notification of eligibility for a deferred deadline and public hearing details including date, time, location, and methods used to advertise notice of the hearing to the public. ~~The number of years needed to reach the deferred deadline when the system replaces 10,000 lead and galvanized requiring replacement service lines annually in accordance with § 141.84(d)(5)(v)(A); or~~

(ii) No later than the compliance date in § 141.80(a)(3), documentation of the outlining a framework to regularly reassess and update the annual replacement rate, not to exceed 20 years. ~~Documentation that shows that ten percent of the known lead and galvanized requiring replacement service lines in the inventory results in the annual number of replacements per household served by the system to exceed 0.039 as well as the number of years needed to reach the deferred deadline in accordance with § 141.84(d)(5)(v)(B).~~

b. Deferred systems should be subject to additional requirements to ensure maximized protections to public health.

There is an important tradeoff between deferred deadlines and prolonged lead exposure. The prevalence of lead and GRR service lines is not evenly distributed among states, and we understand the need for some degree of flexibility in setting compliance deadlines. However, the basic goal is to replace lead and GRR service lines as quickly as possible. Prolonged deadlines will increase the risk of lead exposure for residents living in areas with higher concentrations of lead and GRR service lines, which is particularly worrisome for young children.

If EPA must choose to adopt a deferred deadline provision, eligible systems should be subject to additional requirements to ensure maximum protections to public health. We recommend that EPA include the following requirements:

- Require public notification of the system's eligibility for a deferral. Specifically, the system must hold a public hearing within 60 days of notifying the State and advertise details of the public hearing via its website and press release to local media outlets. The intention of this is to increase transparency and engagement with customers and the public across the region.

- Require that disadvantaged neighborhoods according to the relevant Intended Use Plan under the relevant State Revolving Fund program are prioritized for full lead and GRR service line replacements under such a deferral. Otherwise, wealthy, owner-occupied homes are likely to be addressed first, particularly in communities that do not cover the full cost of replacement, pushing those who cannot afford to pay to the end of the line.

- Offer free, lead-certified point-of-use (POU) filters and filter replacements to residents living in a home served by a lead or GRR service line until the line can be replaced. Denver Water's Lead Reduction Program is an excellent example of successful implementation of this practice. This measure would protect public health and create an incentive to accelerate LSL replacement.

III. Lead Action Level

We support EPA's proposal to reduce the lead action level from 15 ppb. The current lead action level is not a health-based standard, it is based on what is achievable by water systems through corrosion control treatment for compliance purposes.[17] There is no safe level of exposure to lead, and the American Academy of Pediatrics recommended that water fountains in schools do not exceed a maximum lead level concentration of 1 ppb for drinking water.[18] We recommend that EPA pursues the strongest protections possible by lowering the lead action level to 5 ppb.

[17] EPA, "Lead and copper Rule Revisions White Paper" October 26, 2016, https://www.epa.gov/sdwa/lead-and-copper-rule-revisions-white-paper, at page 6.
[18] Lanphear, B. P., Lowry, J. A., Ahdoot, S., Baum, C. R., Bernstein, A. S., Bole, A., Brumberg, H. L., Campbell, C. C., Lanphear, B. P., Pacheco, S. E., Spanier, A. J., & Trasande, L. (2016). Prevention of Childhood Lead Toxicity. *Pediatrics*, *138*(1), 1-15, https://doi.org/10.1542/peds.2016-1493.

IV. Full Service Line Replacement

a. Prohibit the reconnection of lead and GRR service lines.

We agree with EPA's proposal to allow disconnections of lead and GRR service lines to be counted towards full service line replacement.[19] However, EPA mentions that water systems are only precluded from reconnecting the service line subject to State or local law or written policy.

The LCRI should ensure the elimination of all sources of lead in drinking water, including an explicit ban of reconnection of LSLs, regardless of State or local law or written policy for the following reasons:

- Field work that cuts, bends, or reshapes the service line can release lead[20] – disconnection falls under this category, constituting a disturbance. If it is reconnected, the risk for exposure to lead greatly increases.

- In 1986 Congress amended the Safe Drinking Water Act, prohibiting the use of pipes, solder or flux that were not "lead free" in public water systems or plumbing in facilities providing water for human consumption.[21] Once an LSL is disconnected, it is no longer "in use". By reconnecting the LSL after it has been disconnected, it potentially poses a violation of the federal SDWA.

EPA should remove mention of state, local, or written policy and outright prohibit the reconnection of lead and GRR service lines once they are disconnected from service.

We recommend the following changes to the Proposed 40 C.F.R. § 141.84 (6)(iii):

> (B) A full service line replacement is counted where a non-lead service line is installed for use and the lead or galvanized requiring replacement service line is disconnected from the water main or other service line. If the lead or galvanized requiring replacement service line is disconnected from the water main or system-owned portion of the service line but not removed, the water system ~~must be subject to a State or local law or have a written policy to preclude the water system from~~ may not reconnect~~ing~~ the lead or galvanized requiring replacement service line to the water main or other service line.
>
> (C) A full service line replacement may be counted where a system physically disconnects a service line that is not in use and the water system does not install a new non-lead service line because there is no service line in use (*e.g.,* at an abandoned property). If the disconnected lead or galvanized requiring replacement service line is not removed, the water system ~~must be subject to a State or local law or have a written policy to preclude the water system from~~ may not reconnect~~ing~~ the disconnected service line (*i.e.,* a new non-lead service line must be installed if active use is to resume).

[19] Proposed 40 C.F.R. § 141.84 (6)(iii)(B)
[20] Lead Service Line Replacement Collaborative, "Disturbing Lead Service Lines," (Accessed [January 5, 2024]), https://www.lslr-collaborative.org/disturbing-lead-service-lines.html.
[21] 42 U.S.C. § 300g–6 (1)(A)

b. Require full lead and GRR service line replacement in all circumstances, except during emergency repairs.

We understand how partial replacement of LSLs is often necessary during emergency repairs and support that aspect of the LCRI. In all other cases, EPA should require full replacement, especially during planned infrastructure work.

When a system works on aging water mains that have LSLs attached to them, we appreciate the obstacles that would prevent a system from securing approval from some homeowners to replace their portion of the LSL. However, it is extremely inefficient to plan infrastructure work in this way and the practice is inconsistent with recent EPA guidelines and federal goals.

Specifically, the practice raises three serious concerns:

Health risks: Disturbance of LSLs releases lead into the drinking water. With partial LSL replacements, residents have significantly increased risk of exposure to lead without the long-term benefit of full replacement. And when the remainder of the line is replaced in the future, they are at risk – albeit a much lower one – of exposure again.

Recent studies highlighting the costs associated with lead exposure strongly suggest that the benefits from avoiding partial replacements far outweigh the projected additional costs of replacing the full service line during planned infrastructure work. This work should address the lead in drinking water problem, not help perpetuate it.

Environmental justice issues: Partial replacement of LSLs poses serious environmental justice issues. Customers who are expected to pay to replace the portion of the LSL running from the property line to their house may not be able to afford the cost when the system comes down their street. They are then left with little choice but to accept higher risk of lead exposure because of partial replacements. This can result in discrimination against low-income communities of color, which is prohibited by the Civil Rights Act of 1964[22] if the entity receives any federal funds. EPA is currently investigating this situation against Providence Water.

As evidenced in the Lead Pipes and Environmental Justice report, communities that require water customers to pay a share of the cost of replacing the privately-owned portion of LSLs put low-income and African American households at greater risk of lead exposure. In fact, residents in wealthier areas are over two times more likely to pay to have their lead pipe fully replaced in such programs.

In the case of absentee landlords, this approach will also put vulnerable tenants at risk, particularly in the nation's urban areas where older rental housing is likely to be served by LSLs. There are strong legal arguments relating to rental properties. As described in Lead and Landlords,"...the accepted practice of requiring the consent of the landlord before replacing the lateral service line is at least questionable law."[23] Property rights are subject to limits affecting a landlord's autonomy concerning LSL replacement, particularly given the associated public health risks.

Waste of limited funding: When you have already dug up the street to replace a water main, fully replacing attached LSLs at the same time is the most efficient use of funding. In 2018, Indiana American Water demonstrated that they were able to reduce the cost of LSL replacement by 25% or more by

[22] 42 U.S.C § 2000d.
[23] Czapanskiy, Karen, "*Lead and Landlords*", Belmont Law Review, University of Maryland, Legal Studies Research Paper No. 2022-14, December 9, 2022, https://ssrn.com/abstract=4298512, at page 2.

replacing the full service line in one visit. This estimate primarily reflects the benefit of having the requisite equipment on site as other LSLs are replaced in the same neighborhood. Indiana American Water estimated that having to de-mobilize and re-mobilize field crews as different customers gradually agree to participate in the LSL replacement program could increase replacement costs up to $2,000 per site based on 2017 costs.

To maximize efficiency, programs that typically include a customer cost share should pay to replace the entire lead or GRR service line when the replacement is part of a standard water main replacement project. Through future distribution of BIL funding, EPA should provide financial incentives to communities that adopt ordinances mandating service line replacement, since that approach is the most efficient use of federal funds.

We recommend the following changes to Proposed 40 C.F.R. § 141.84(g):

> *Requirements for conducting partial service line replacements* —(1) *Partial service line replacement.* This rule prohibits water systems from conducting a partial lead service line replacement or a partial galvanized requiring replacement service line replacement as defined under § 141.2 unless it is conducted as part of an emergency repair ~~or in coordination with planned infrastructure work~~, excluding planned infrastructure work solely for the purposes of lead or galvanized requiring replacement service line replacement. Where a water system conducts partial service line replacement, the system must comply with the notification and mitigation requirements specified in paragraphs (h)(1) and (2) of this section.

V. Service Line Inventory

One of the most important and least expensive tools for protecting public health is to share critical information appropriately. We support EPA's proposal to require a subset of water systems to host their service line inventory and replacement plan online, however, we recommend lowering the threshold for water systems subject to this proposed requirement from 50,000 to 10,000 to include small and medium systems, which comprise the vast majority of water systems.

a. Lower the threshold for mandatory online publication of service line inventory from 50,000 to 10,000 customers served.

We support EPA's proposal to require a subset of water systems to host their service line inventory and replacement plan online. We recommend lowering the threshold for water systems subject to this proposed requirement and an alternative method of compliance. EPA's threshold of 50,000 customers served for mandatory online publication of inventories and plans should be lowered to 10,000 customers served (i.e., a medium water system).[24]

Both documents are critical for public transparency and educating the public on the harmful impacts of lead in drinking water. As an alternative method to compliance, States should be authorized to post these documents on their own website for individual water systems that agree to this approach, serving as a central database. These documents are already submitted to the state for compliance purposes,[25] therefore the extra step that state would need to take to post these online is minimal. Systems could post an external link to the state's website on their own website for their customers to easily access. Transparency is vital to maximize customer participation and to alert tenants about the condition of rental properties. Public awareness of the lead in drinking water issue is still lacking in many communities across the country,

[24] Proposed 40 C.F.R. § 141.2
[25] Proposed 40 C.F.R. § 141.84 (7)(b)

therefore one the most important and least expensive tools for protecting public health is to share critical information appropriately.

We recommend the following changes to Proposed 40 C.F.R. § 141.84(a)(5)(ii)

> Water systems serving greater than ~~50,000~~ 10,000 persons must make the publicly accessible inventory available online.

We also recommend the following changes to Proposed 40 C.F.R. § 141.84(c)(2)

> The service line replacement plan must be made available to the public. Water systems serving greater than ~~50,000~~ 10,000 persons must make the plan available to the public online.

VI. Lead-Lined Galvanized Steel Service Lines

In the proposed rule, EPA defines LSLs to include all or a portion of service lines composed of lead (excluding lead connectors) and galvanized iron or steel pipe that was or is presently located downstream of an LSL.[26] Some communities, however, are served by a unique type of pipe: lead-lined galvanized steel. These pipes can be difficult to detect because they may appear to be galvanized steel at first glance but lead coats the interior of the service line.

While there is limited information on this type of service line and its prevalence, it has been unearthed in at least one system. As noted on Trenton Water Works website, lead-lined galvanized steel pipe was commonly installed in Trenton until 1960 and is thought to account for nearly one-third (approximately 20,000) of the system's 62,000 total residential service lines.[27]

The LCRI considers lead-lined galvanized service lines to be LSLs as noted in its "Guidance for Developing and Maintaining a Service Line Inventory":[28]

"A lead-lined galvanized service line is covered by the definition of an LSL under the LCRR and this remains true under the proposed LCRI. Therefore, any lead-lined pipe would be required to be categorized as an LSL in the inventory and would be subject to the same proposed LCRI requirements as other LSLs in the inventory, such as mandatory service line replacement, public education, tap sample tiering, and risk mitigation."

EPA also states in the "Guidance for Developing and Maintaining a Service Line Inventory systems that attempt to identify lead-lined pipes by visual observation (such as excavation) may not see an interior lead lining, and the guidance contains recommendations for systems to consider information available that indicates the possible presence of lead-lined service lines when categorizing their service lines and choosing material investigation techniques."[29]

---

[26] 88 Fed. Reg. at 84965

[27] Trenton Water Works, "*Trenton Water Works Lead Service Line Replacement Program*" ("Accessed [February 4, 2024]"), https://www.twwleadprogram.com/.

[28] EPA, "USEPA, 2022b Guidance for Developing and Maintaining a Service Line Inventory," August 4, 2022,https://www.epa.gov/system/files/documents/202208/Inventory%20Guidance_August%202022_508%20compliant.pdf, at page 2-7.

[29] *Id.*

Lead-lined galvanized steel service lines will be the most difficult material type to verify. Therefore, EPA should implement the following measures to ensure public health is protected:

- In cities where at least one lead-lined galvanized steel service line is uncovered, all galvanized pipes should be assumed to be lead and categorized as such. These lines should be replaced regardless of their location.

- Require water systems and contractors to check for lead lining in galvanized steel service lines by using handheld technology, such as x-ray fluorescence (XRF) and laser analyzers, and by visually inspecting the inside of service lines after they are cut.

- Update the EPA guidance to incorporate lessons learned from Trenton Water Works and identify additional affected systems.

VII. Enforcement

Past problems with gathering comprehensive compliance data from states and water systems reinforce the notion that the LCRI should require that enforcement-related data be submitted electronically.

a. Mandate electronic reporting of compliance data to ensure proper enforcement.

Even with a reduced action level, enforcement is expected to remain weak without a universal requirement for water systems to report test results and violations electronically. While enforcement efforts typically focus on health violations, poor reporting can mask serious health issues. Past audits of EPA's data found that 92% of lead-related health-based violations and 71% of lead-related monitoring/reporting violations were not reported to EPA by states[30]. This does not consider potential underreporting by water systems to the states.

This is summarized in EPA's 2013 National Drinking Water Compliance Report:

"EPA has evaluated state and regional program data quality by conducting data verification audits and national data quality assessments, comparing primacy agencies' files and records with information in SDWIS/FED to verify accuracy, completeness and whether appropriate compliance determinations are made (that is, in accordance with federal regulations). These audits and assessments have shown that violation data are substantially incomplete."[31]

Without reliable and accurate data reporting, EPA's efforts to implement a successful LCRI may fall short. By maximizing existing information technology tools, EPA can improve effectiveness and efficiency while ensuring it has the full picture on compliance.

- Change the current system where water systems report directly through their primacy agencies. Water systems should conduct mandatory electronic reporting of compliance information directly into a database shared by states and EPA. Direct reporting will eliminate data lags and potential underreporting of serious violations that pose a public relations problem. As noted in GAO's 2011 report, many states and water systems will only use electronic reporting if required to.

[30] EPA, "2006 Drinking Water Data Quality Analysis and Action Plan For State Reported Public Water System Data in the EPA Safe Drinking Water Information System / Federal Version (SDWIS/FED)," March, 2008, https://nepis.epa.gov/Exe/ZyPURL.cgi?Dockey=P1001KJO.txt, at page 20.
[31] EPA, "2013 National Public Water Systems Compliance Report," ("Accessed [February 4, 2024]"), https://www.epa.gov/sites/default/files/2015-06/documents/sdwacom2013.pdf, at page 3.

- Implement a modern database such as upgrading the existing Safe Drinking Water Information System (SDWIS) to provide the following benefits:
    - Effectiveness: the system will assess data quality, automate violation determinations, flag the most serious problems, and expand transparency.
    - Efficiency: save money by minimizing manual processing and data input by state agencies, water systems, and affected laboratories.

- In 2015, EPA established a similar electronic reporting system for its NPDES program which monitors companies discharging water pollutants to surface waters.

Additional Points for Consideration

In addition to the major issues raised above, EDF recommends the following.

a. Consider measures to facilitate consent for service line replacement.

EPA should encourage water systems to engage with customers to secure access to private property for LSL replacement. Improvements to how water systems communicate with water customers could help secure access to private property for service line replacement work. A report Tapping into Success: Strategies for Effective Lead Service Line Replacement Communications by Elevate, found that persistence is key, as it often takes several touch points to convince residents to participate in a LSL replacement program.[32]

The strategies and lessons learned in the report should be taken into consideration by both EPA and water systems.

EPA should also encourage states to adopt laws that facilitate consent in environmental justice communities. To address negative impacts on environmental justice communities, the rule should require full service line replacement whenever the system is performing work in "disadvantaged communities" (according to relative state definitions), either as part of a replacement program or in conjunction with planned water infrastructure work. This could be limited to communities that are currently operating under or have experienced an action level exceedance in the past. Working with individual states, EPA should prioritize federal BIL funds for this purpose.

As noted in the LCRI, states should be encouraged to adopt laws similar to those enacted by the State of New Jersey and the City of Newark, as highlighted below:

- State of New Jersey: Authorized municipalities to adopt an ordinance allowing water systems to enter private property to conduct LSLR (P.L. 2019, c.291, enacted January 9, 2020). The state also authorized the replacement of LSLs on private property if the work is an environmental infrastructure project and funded either by loans from the New Jersey Infrastructure Bank or by loans issued through the Department of Environmental Protection. (P.l.2021, c.184)

- City of Newark: Local ordinance authorized access to private property for LSLR purposes and, to handle instances where property owners refuse to participate, conditioned the issuance of certificates of occupancy and code compliance for property that is sold or transferred on proper LSLR.

[32] Elevate, "Tapping into Success: Strategies for Effective Lead Service Line Replacement Communications," December 7, 2023, https://www.elevatenp.org/publications/tapping-into-success/ at page 10.

b. Reduce barriers to full service line replacement at tenant-occupied buildings.

EPA should encourage states to adopt legislation that requires water systems to provide filters to residents in tenant-occupied buildings where the property owner refuses LSL replacement. For rental properties, section 605-870(ff)(1)(D) of the Illinois law also requires recalcitrant landlords to install lead-certified, point-of-use filters:

"If complete repair of a lead service line cannot be completed due to denial by the property owner, the community water supply commencing the repair shall request the affected property owner to sign a waiver developed by the Department. If a property owner of a nonresidential building or residence operating as rental properties denies a complete lead service line replacement, the property owner shall be responsible for installing and maintaining point-of-use filters certified by an accredited third-party certification body to NSF/ANSI 53 and NSF/ANSI 42 for the reduction of lead and particulate at all fixtures intended to supply water for the purposes of drinking, food preparation, or making baby formula. The filters shall continue to be supplied by the property owner until such time that the property owner has affected the remaining portions of the lead service line to be replaced."[33]

c. Service line replacement plans should be updated regularly.

Service line replacement plans should be seen as a "living" document, the same way inventories are used. Regular updating of plans is necessary to account for statutory or policy changes, updated service line inventory records, and lessons learned from risk communication in the affected communities. More specifically, most programs will be somewhat fluid as service lines of unknown composition are resolved, financial resources are pursued, and practical obstacles (e.g., property access) are identified and eventually resolved. See section 5 of the New Jersey Statute for an example.

d. To ensure the accuracy of inventory data, historic records of service line composition should be randomly checked.

As proposed, the service line inventory process outlined includes a validation process that requires water systems to confirm the accuracy of service line composition by visually inspecting a random sample of pipes at a minimum confidence level of 95 percent.[34] The LCRI would require this by year seven of the replacement program. However, the rule does not take a similar approach to historic service line records. In keeping with the LCRR, EPA continues to assume that states are best positioned to judge the appropriateness and accuracy of historic records.

The LCRR does not require systems to track the records, methods, and techniques they use to categorize individual service lines. By maintaining continuity, EPA understandably seeks to avoid complications as water systems seek to update their inventory while also providing flexibility for them to adopt new methods and technologies. However, because of the extent to which communities rely on historic records when developing their service line inventory, the LCRI should be amended to require a random sampling of that data. This measure would help maximize efficiency of that effort because the data in the service line inventory forms the bedrock for all service line replacement programs.

e. Consider incidents of non-compliance with local policy regarding reconnections.

Relying on state and local policy is not a sufficient mechanism to ensure residents are not unnecessarily exposed to lead from the reconnection of disturbed lead and GRR service lines. EPA must consider incidents of self-report non-compliance with local policy on reconnections. Otherwise, there is not enough disincentive to ensure that the LSL is not ultimately reconnected.

[33] Codified at 415 ILCS 5/17.12

[34] Proposed 40 C.F.R. § 141.84 (5)

Some existing LSL replacement contracts unrealistically expect contractors to self-report violations of local policy on reconnections, and related water main inspections are unlikely to cover all such instances**.** In recent years, EDF has noticed that some systems replace aging drinking water mains without addressing customer-owned LSLs. Homeowners often refuse to accept the water systems' offer to replace the LSL because they are asked to pay a cost share to replace their portion of the line. In such cases, contractors may bend the customer-owned LSL out of the way when the old water main is replaced and then reattach it to the new main. This action could trigger a lead spike into the drinking water. Often, the customer is not formally notified about this possibility or its potential health impacts.

For example, New York City, where the entire water service line is owned by individual property owners, provides a case in point. A typical water main replacement contract with the NYC Department of Environmental Protection (NYCDEP) includes the following provision:

"If the damaged or cut water service pipe is lead, galvanized steel, or galvanized iron, the service pipe must not be partially replaced, but fully replaced from the main to the house control valve. If the service pipe was damaged, cut, or otherwise interrupted due to the Contractor's actions or means & methods (including selection of shoring systems), the water service pipe will be replaced at the Contractor's own cost."[35]

The NYCDEP does not consistently inspect customer-owned LSLs for damage before they are reattached or require contractors to report when damage occurs. Since they incur the cost of replacement, even if proper precautions are taken, it seems highly unlikely that contractors would unilaterally flag instances where a water service line was cut, bent, or disrupted during normal water main work. It stands to reason that such instances are not reported and the existing LSL or GRR is simply reconnected. Thus, EDF recommends that there be a general prohibition in the final rule on reconnecting such lines.

Conclusion

We ask that EPA consider our recommendations to strengthen the proposed LCRI by:

- Modifying the definition of a service line by including: "*A service line may be owned by the water system, owned by the property owner, or both*" to explicitly include reference to ownership types. This change will prevent water systems from defining a service line as only the portion they own or is on public property.
- Establishing clear criteria for determining whether a water system has "access" to conduct full service line replacement. This is a critical issue that could potentially undermine the goal of this rule, without this clarification, whether there is access is left entirely up to a water system to determine, which could result in a narrow definition where LSLs that are owned in part or in whole by a property owner are not their responsibility.
- Requiring a written waiver documenting refusal of access for the purpose of full service line replacement. We believe that presenting this type of information signals the weight of opting out of LSL replacement to a property owner and forces them to consider the impacts on the residents.
- Only using the proposed eligibility criteria for systems with more than 100,000 LSLs to identify the utilities that need more time. Communities determined to be eligible for a deferred deadline would be strongly encouraged to participate in the EPA's Lead Service Line Replacement Accelerator Program.

[35] Oriental Boulevard Between Corbin Place and Pembroke Street, Manhattan Beach Area, Brooklyn (Volume 3 – Specifications; Project ID: BED819, Nov 5, 2021), page SW-13, subsection 10.24

- Increasing the minimum starting replacement rate threshold: Water systems can reasonably complete service line replacement at a faster rate than the maximum annual threshold of 10,000 service line replacements. We recommend that the minimum starting rate is increased to 13,000 lead and GRR service lines replaced in the first three years after promulgation of this rule.
- Pursuing the strongest protections possible by lowering the lead action level to 5 ppb.
- Lowering the system size threshold for mandatory online publication of service line inventory from 50,000 to 10,000 customers served.
- Prohibiting the reconnection of lead and GRR service lines and require full lead and GRR service line replacement in all circumstances, except during emergency repairs.
- Considering the instance of lead-lined galvanized steel service lines.
- Mandating electronic reporting of compliance data to ensure proper enforcement.

* * * * *

EDF appreciates EPA's consideration of these comments. If you have any questions, please contact Roya Alkafaji at ralkafaji@edf.org.

Sincerely,

Roya Alkafaji

Roya Alkafaji
Manager, Healthy Communities

Maria J Doa

Maria J. Doa, Ph.D.
Senior Director, Chemical Policy

Sara Hull

Sara Hull
Project Manager, Safer Chemicals

Gary J Brune

Gary J. Brune
Consultant