ASSOCIATION OF METROPOLITAN WATER AGENCIES

LEADERS IN WATER

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February 12, 2020

The Honorable David P. Ross
Assistant Administrator
Office of Water
Environmental Protection Agency

Re: Docket ID: EPA-HQ-OW-2017-0300, *National Primary Drinking Water Regulations: Proposed Lead and Copper Rule Revisions*

Dear Assistant Administrator Ross,

The Association of Metropolitan Water Agencies (AMWA) is an organization representing CEOs and general managers of the largest publicly owned drinking water systems in the United States. Any changes to national primary drinking water regulations will significantly impact our members. AMWA appreciates the opportunity to comment on the Environmental Protection Agency's proposed rule, *National Primary Drinking Water Regulations: Proposed Lead and Copper Rule Revisions* (EPA-HQ-OW-2017-0300).

The association has been involved with the Lead and Copper Rule since its inception and values all the work that EPA has done to decrease the risk of lead and copper to public health. The proposed revisions are an important next step and AMWA appreciates EPA's efforts to update the rule. Due to the importance of this rulemaking, AMWA is pleased to submit the attached comments for EPA's consideration. If you have any questions, please contact me at 202-331-2820 or Stephanie Hayes Schlea (schlea@amwa.net), AMWA's Director of Regulatory and Scientific Affairs.

Sincerely,

Diane VanDe Hei
Chief Executive Officer

Attachment

cc: Jennifer McLain, Director, Office of Ground Water and Drinking Water;
Eric Burneson, Standards and Risk Management Division Director, OGWDW

Introduction

The Association of Metropolitan Water Agencies (AMWA) is pleased to offer these comments on EPA's National Primary Drinking Water Regulations: Proposed Lead and Copper Rule Revisions. AMWA acknowledges the thought and hard work that EPA has put into the proposed revisions to the Lead and Copper Rule and supports EPA's efforts to address this complicated issue. AMWA has been involved with the Lead and Copper Rule since its inception and values all the work that EPA has done to decrease the public's exposure to lead through drinking water. We were pleased to identify a number of strengths in the proposed rule, but we also encourage EPA to make a number of changes to improve its clarity and the ability of water systems to implement and comply with the rule's requirements.

Among the strengths of the rule is the new requirement for water systems to complete an inventory that specifies the composition, if known, of public and privately owned service lines connected to the distribution system. While many water systems will face challenges in accurately determining the makeup of some service lines – particularly those on private property – on balance it is important and worthwhile for water systems to document what materials are in the service lines that deliver water to their customers. Once an inventory is completed, we agree that all water systems serving more than 100,000 people should make their inventories available to the public online. Our comments include several constructive suggestions to improve the inventory requirements, but overall we welcome its addition to the Lead and Copper Rule.

AMWA appreciates that the proposal avoids setting unattainable mandates such as a deadline for the replacement of all lead service lines nationwide. Compliance with such a mandate would take decades, cost billions of dollars, and would prevent water systems from allocating their limited budgets to other projects and initiatives that may deliver greater public health benefits. However, the rule also empowers individual homeowners to compel their water system to replace the publicly owned portion of a lead service line when the homeowner simultaneously replaces their privately owned lead line. AMWA has a number of suggestions to make this process as seamless as possible, but giving homeowners a pathway to have their water system replace a lead service line connected to their property is one of the most important new features in the proposed rule.

AMWA also agrees with steps the proposal takes to discourage partial lead service line replacements – such replacements carry few public health benefits and allow lead pipes to remain in the ground. But a total ban on partial replacements, as some would advocate, is ill-advised and not feasible. For example, emergency water main replacement work may offer an opportunity for a water system to simultaneously replace the publicly owned portion of a household's lead service line. Likewise, a planned water main replacement project may result in a new alignment or spacing of the main, necessitating replacement of at least part of a lead service line. Ideally the privately owned portion of the lead line would be replaced at the same time, but a water system's ability to do so is often contingent upon that customer's willingness to allow work on his or her property (and, in many cases, for the customer to pay the costs associated with replacing the privately owned portion). The proposal recognizes that there will be situations where customer consent cannot be quickly obtained, and in those limited cases

permits a water system to at least remove the publicly owned portion of a lead service line when the emergency main repair projects or other scheduled infrastructure work has provided an opportunity to do so.

AMWA further appreciates that the proposed rule would not require water systems to cover costs associated with the replacement of privately owned service lines, though they would retain the option to do so. While some water systems are able to subsidize private-side replacement, the ability of many others to do so is legally questionable or banned outright. In fact, a 2017 University of North Carolina Environmental Finance Center report commissioned by AMWA and other water sector organizations found that the laws of three states expressly prohibit water systems from using ratepayer funds on initiatives that benefit specific customers, and laws in at least 19 others make the practice highly questionable.[1] A mandate in the Lead and Copper Rule for a water system to pay the cost of replacing a privately owned portion of a lead service line would therefore leave many water systems in the position of either violating the rule, or violating state or local laws barring the use of ratepayer dollars for infrastructure projects that benefit individual residents. The proposed rule wisely avoids this scenario.

However, other parts of the proposed rule fall short of recognizing that any successful effort to address lead in drinking water must be the result of collaboration and cooperation between water systems and their customers. AMWA has strong concerns with aspects of the proposed rule that would penalize water systems for failing to achieve full service line replacement targets that can only be met with the cooperation of individual property owners.

We have also identified a number of shortcomings with portions of the proposed rule related to testing water in school and child care facilities. These deficiencies include the failure to recognize that significant numbers of school administrators and licensed child care center employees may very well not respond at all to water system outreach regarding water testing opportunities – in which case AMWA believes a water system should not be penalized for failing to meet an arbitrary testing target proposed by the rule. As a signatory on EPA's Memorandum of Understanding on Reducing Lead Levels in Drinking Water in Schools and Child Care Facilities, AMWA agrees with EPA's prioritization of protecting our children from lead exposure and applaud EPA for taking further steps to accomplish this goal. However, EPA has not considered crucial aspects and restrictions related to the proposed rule and risks holding water systems out of compliance for reasons outside of their control.

AMWA's comments offer suggestions on these and several other areas of the proposed rule which we believe should be improved. These include:

- The definition of "lead service line" (Section 141.2)
- 24-hour notification following a 90th percentile lead action level exceedance (Section 141.80(h)(3))

[1] Navigating Legal Pathways to Rate-Funded Customer Assistance Programs: A Guide for Water and Wastewater Utilities. https://efc.sog.unc.edu/sites/default/files/2018/FINAL_Pathways%20to%20Rate-Funded%20CAPs.pdf.

- Find-and-Fix (Section 141.82(j))
- Lead service line inventory and replacement requirements (Section 141.84)
- Customer-initiated lead service line replacement (Section 141.84(d)(3)-(5))
- Provision of filters to customers (Sections 141.84 and 141.86)
- Public education and monitoring requirements (Section 141.85)
- Monitoring for lead in schools and licensed child care facilities (Section 141.92)

Finally, our comments offer several suggestions on portions of EPA's economic analysis accompanying the proposal that we believe require additional consideration.

Beyond these components, we believe further explanation and clarification is necessary for Sections 141.81 and 141.82 of the proposed rule, which govern when a water system would have to install or re-optimize corrosion control treatment based upon the 90th percentile results of tap water monitoring. Based on our reading of the proposal, a water system with corrosion control treatment that exceeds the lead trigger level of 0.010 mg/L at the 90th percentile – but not the action level of 0.015mg/L – would have to study and re-optimize its corrosion control. This would effectively make the trigger level the new standard at which a water system would have to take further action related to corrosion control – leaving the action level somewhat less relevant. We therefore request that EPA more fully explain its reasoning for having corrosion control changes contingent upon a trigger level exceedance rather than an action level exceedance.

Overall, AMWA believes our comments will provide EPA with valuable suggestions which, if adopted, will ensure the proposed rule is achievable, practical, and enforceable. We thank you in advance for your consideration.

Lead service line definition (Section 141.2)

Summary:

- EPA's proposed definition for "lead service line" is imprecise and should be modified to ensure that the agency's intention is clear, and the definition can be implemented throughout the rule.

- AMWA is concerned with the inclusion of "ever was" within the determination of galvanized pipe which is downstream of a lead service line or a pipe of unknown material. This distinction is problematic as water systems may not have specific records for service lines that go back to the initial installation, and may be unable to definitively prove or disprove what material may have been upstream of the galvanized line throughout the life of the service line.

- AMWA suggests a revised definition of "lead service line" that provides clarity that a galvanized service line that is not otherwise considered a lead service line, and that is downstream of a lead gooseneck, pigtail, or connector, will not be considered a lead service line. AMWA also suggests allowing a water system to use tools such as water system records, city codes, and building records to draw a reasonable conclusion about whether a galvanized service line is likely to have been connected to a lead line at some point in the past, and use this information to determine whether that galvanized line is to be treated as lead.

- EPA should include more information within the preamble, including visual representations, to better inform the public, regulating entities, and water systems as to the classification of the different real-world scenarios these entities might find when working with service lines.

Comments:

AMWA appreciates EPA's attempt to better clarify what constitutes a lead service line under this rule. The proposed language improves upon the definition used in the current Lead and Copper Rule, as seen below. AMWA also supports the addition of galvanized lines downstream of lead pipe to the definition of lead service line due to the fact that galvanized pipe can absorb lead particles, as this designation is the most protective of public health.

However, as currently written, the circumstances when a service line is considered a lead service line is still not entirely clear. As this definition informs all other parts of this rule, it is critical that the definition be as clear and detailed as possible.

Present Lead and Copper Rule definition:

> *Lead service line* means a service line made of lead which connects the water main to the building inlet and any lead pigtail, gooseneck or other fitting which is connected to such lead line.

Definition in proposed rule:

> *Lead service line* means a service line made of lead, which connects the water main to the building inlet. A lead service line may be owned by the water system, owned by the property owner, or both. For the purposes of this subpart, a galvanized service line is considered a lead service line if it ever was or is currently downstream of any lead service line or service line of unknown material. If the only lead piping serving the home or building is a lead gooseneck, pigtail, or connector, and it is not a galvanized service line that is considered an LSL the service line is not a lead service line.

AMWA suggests the following language as a substitute:

> *Lead service line* means a service line, which connects the water main to the building inlet, comprised in any part of lead, excluding a service line where the sole component of lead is either a lead gooseneck, pigtail, or connector. A lead service line may be owned by the water system, owned by the property owner, or both.
>
> For the purposes of this subpart, a galvanized service line is considered a lead service line if it is currently, or is known or likely to have been in the past, downstream of a lead service line or service line of currently unknown material. If the only lead known, presently or in the past, to be upstream of a galvanized service line is either a lead gooseneck, pigtail, or connector, then the galvanized line is not considered a lead service line. If a galvanized line is downstream of a service line of unknown material, the galvanized line shall no longer be considered a lead service line if the upstream unknown material is subsequently determined to be nonlead, unless the galvanized line is otherwise determined likely to have been downstream of a lead service line in the past.

The above language maintains the majority of EPA's intent while providing a clearer and more defensible definition. The language is also consistent with the language used to categorize service lines for purposes of an inventory in Section 141.84.

The most significant change within the suggested language involves the replacement of text regarding if the portion of the service line upstream of a galvanized line "ever was" lead, or an unknown material. The "ever was" standard is problematic because if a water system does not have a complete record for a service line that dates back to the initial installation, it would not be able to definitively prove or disprove what material may have been upstream of the galvanized line throughout the life of the service line – even if the galvanized line is known to currently not be downstream of a lead line. AMWA therefore suggests allowing a water system to use other tools such as other related water system records, city codes, and building records to draw a reasonable inference about whether a galvanized service line was or was not likely to have been connected to a lead line at some point in the past. If this review leads to a conclusion that the galvanized line was likely to have been downstream of a lead line at some point in the past, the galvanized line should presently be considered lead. Conversely, if the review concludes that the galvanized line was unlikely to have been downstream of lead in the past, it should not count as lead in the system's present-day inventory. We will discuss this process further in our comments on lead service line inventory and replacement requirements.

AMWA's revised definition also provides clarity that if a galvanized service line is not otherwise considered a lead service line, and is downstream from a lead gooseneck, pigtail, or connector, that galvanized line will continue to not be considered a lead service line.

Finally, AMWA also believes that it would be beneficial to have additional information included in the preamble so as to better describe the different scenarios that water systems may experience

in their own distribution systems. As seen in the table below, under the proposed definition it appears there are, at minimum, sixteen different configurations that a service line could have. This configuration determines whether the service line is considered lead under the inventory, if it may be included in a water system's sampling pool, and if the line would count towards a water system's replacement goal or three percent mandated replacement rate. AMWA suggests EPA include the table below within the preamble. This table will also help with the language used to categorize service lines for purposes of an inventory in Section 141.84.

PUBLIC	PRIVATE	INVENTORY STATUS	COMPONENTS NEEDING REPLACEMENT	INCLUDED IN TIER 1 SAMPLING POOL	COUNTS TOWARD REPLACEMENT GOAL/RATE
L	L	L	B	Y	Y
L	NL	L	P	Y	Y
L	U	L	PR	Y	Y
L	G	L	B	Y	Y
G	L	L	R	Y	Y
G	NL	NL	NR	N	N
G	U	L	DN	N	D
G	G	NL	NR	N	N
U	L	L	PR	Y	Y
U	NL	L	DN	N	D
U	U	L	DN	N	D
U	G	L	DN	N	D
NL	L	L	R	Y	Y
NL	NL	NL	NR	N	N
NL	U	L	DN	N	D
NL	G	NL	NR	N	N

L = lead	G = galvanized	U = unknown	NL = nonlead/galvanized	Y = yes
P = public	R = private	B = both sides	NR = no replacement needed	N = no
DN = determination of unknown(s) needed before decision to do replacement				D = depends on status of identified unknowns
PR = determination needed to decide if one or both components need replacing				

24-hour notification following a 90th percentile lead action level exceedance (Section 141.80(h)(3))

Summary:

- AMWA recognizes that the Water Infrastructure Improvements for the Nation (WIIN) Act of 2016 amended the Safe Drinking Water Act to add a "lead action level exceedance" to the list of events after which a water system must give notice to persons

served by the system. In the case of a lead action level exceedance "that has the potential to have serious adverse effects on human health as a result of short-term exposure," the Safe Drinking Water Act, as amended by the WIIN Act, requires EPA to issue regulations to require a notice to "be distributed as soon as practicable, but not later than 24 hours, after the public water system learns of the … exceedance."

- AMWA does not believe that every 90th percentile lead action level exceedance necessarily poses serious adverse human health effects as a result of short-term exposure but acknowledges EPA's finding that it would be difficult for the agency to delineate between lead action level exceedances that meet this threshold, and those that do not.

- AMWA also believes that EPA should take all steps practicable to avoid mandating expedited public notifications about exceedances that may unnecessarily alarm the public or undermine their confidence in the quality of their drinking water.

- AMWA is confident that EPA could fulfill the congressional mandate of the WIIN Act and appropriately focus expedited exceedance alerts by targeting those alerts to households that, based upon information uncovered through a water system's lead service line inventory, are known to receive their water through lead service lines or service lines of unknown material.

Comments:

Section 141.80(h)(3) of the proposed rule would require any water system that exceeds the lead action level at the 90th percentile to "notify the public in accordance with the public notification requirements in Subpart Q" of the National Primary Drinking Water Regulations. In practice, this would require a Tier 1 public notification under the Public Notification Rule for any 90th percentile lead action level exceedance, meaning that water systems would have to notify all customers within 24 hours of learning of the exceedance. While we agree that the public should be promptly notified of water quality conditions that may pose severe and acute human health risks, the rule should avoid unnecessarily alarming members of the public (such as those whose homes are not served by lead service lines) who are not expected to be significantly impacted by an exceedance. AMWA believes this is an achievable objective.

AMWA understands that EPA's proposal for public notification following a lead action level exceedance must abide by the Water Infrastructure Improvements for the Nation (WIIN) Act of 2016 (P.L. 114-322). That law amended the Safe Drinking Water Act to require a notice to "be distributed as soon as practicable, but not later than 24 hours, after the public water system learns of the … exceedance," provided that the exceedance "has the potential to have serious adverse effects on human health as a result of short-term exposure."

No statutory notice distribution timeframe applies in the case of a lead action level exceedance that does not have the potential to have serious adverse effects on human health as a result of

short-term exposure. In that case, the Safe Drinking Water Act directs EPA to issue a regulation to prescribe the "manner, frequency, form, and content" of such notice after taking "into account the seriousness of any potential adverse health effects that may be involved" (See SDWA Sec. 300g-3(c)(2)(A)).

EPA contends in the preamble to the proposed rule (page 61710) that it "cannot define the subset of [action level] exceedances that could result in serious adverse health effects due to short-term exposure." As a result, the proposed rule "would require Tier 1, 24 hour notification" through methods outlined in the Public Notification Rule anytime a water system exceeds the lead action level at the 90th percentile. These methods include notices through broadcast media, posting at conspicuous locations throughout the service area, hand delivery to persons served, or other methods approved by the state.

While AMWA acknowledges that EPA would face a difficult task in separating those 90th percentile action level exceedances that present serious adverse health effects from those that do not, requiring a 24-hour notification of all customers following a 90th percentile lead action level exceedance goes far beyond the congressional directive and would not be ideal in several respects. First, unlike an MCL violation with the potential to carry serious human health effects in the short term, all users of the water system would not necessarily be equally vulnerable to health effects related to a lead action level exceedance. Instead, sampling results indicating an action level exceedance by the water system would have the most relevance to the health of customers who are served by lead service lines. It is then reasonable to prioritize this universe of customers for the fastest notification following an action level exceedance.

A community-wide 24-hour notification following a 90th percentile action level exceedance, utilizing mechanisms such as broadcast media or hand-delivery, would certainly capture all households that are served by lead service lines. But in the case of metropolitan water systems this broad notification would also capture perhaps tens or hundreds of thousands of households without lead service lines that are less likely to experience elevated lead levels regardless of the results of the community's tap sampling. Notifying these customers with an urgent communication within 24 hours of obtaining the lead sampling results could lead them to avoid their drinking water unnecessarily, or otherwise cause alarm even though their own water quality is unlikely to be affected. This would likely undermine the public's confidence in their drinking water and runs counter to the Safe Drinking Water Act's direction for EPA to "take into account the seriousness of any potential adverse health effects that may be involved" when setting the form, frequency, and manner of the required notice.

AMWA's recommended alternative approach to customer notification following a lead action level exceedance:

AMWA envisions a modified notification approach that maintains compliance with the requirements of the Safe Drinking Water Act as amended by P.L. 114-322. In short, AMWA recommends that the rule's requirement to distribute notification to customers within 24 hours of

learning of a lead action level exceedance at the 90th percentile be limited to those households served by a lead service line (including a galvanized line downstream of a lead service line), or a service line of unknown material.

This approach would be made possible by the lead service line inventory that would be required under Section 141.84 of the proposed rule. That provision would require water systems to "develop and maintain a publicly accessible inventory of lead service lines and service lines of unknown materials in its distribution system." With that inventory in hand, a water system would have a readily accessible list of customers to promptly notify in the event of a lead action level exceedance.

The proposed rule also includes several other scenarios where a water system would be required to deliver a targeted communication specifically to customers served by lead service lines, or service lines of unknown material. For example:

- Section 141.85(e) would require water systems to annually "provide notification to all customers with a lead service line or a service line of unknown material informing them they have a lead service line or a service line of unknown material." This annual notice would have to be delivered to these customers by mail or another method approved by the state, indicating that water systems would need to maintain a database of contact information for this subset of households.

- Section 141.85(f) would further require that all water systems that exceed the lead trigger level of 0.010 mg/L at the 90th percentile "must provide customers that have a lead service line information regarding the water system's goal-based lead service line replacement program and opportunities for replacement of the lead service line." This required notice, which would have to be delivered via mail (or another method approved by the state) within 30 days of the end of the monitoring period within which the trigger level was surpassed reiterates the necessity of water systems to maintain a database of contact information for households served by lead service lines.

- Section 141.85(g) would require water systems that fail to meet their annual lead service line replacement goals to conduct outreach to the public utilizing at least two methods from a prescribed list of options. One such option (found in clause (1)(iii)) is to "send certified mail to customers with lead service lines to inform them about the water system's goal-based lead service line replacement program and opportunities for replacement of the lead service line."

Based on these requirements, it is clear that to ensure compliance with the proposed rule water systems would need to maintain a database that includes contact information for households with lead service lines, or service lines of unknown material. With this database available, a water system would have the ability to initiate a targeted notification to these customers within 24 hours of learning of a lead action level exceedance at the 90th percentile. AMWA therefore recommends that EPA give water systems the option of distributing the required notification

within 24 hours of learning of a lead action level exceedance to only those households that are served by lead service lines, or service lines of unknown material.

Even with the ability to target distribution of this notice to customers most likely to be affected, AMWA believes the WIIN Act mandate will impose a substantial burden on water systems. To use the example of a water system that learns of its 90th percentile exceedance on a Friday afternoon, the system would be in violation if it distributed the required notice to customers the following Monday. However, unlike EPA's proposed notice to residents of individual households where tap samples were collected, AMWA recognizes that the WIIN Act does not give EPA flexibility to alter the timeline of when a notice following an exceedance must be distributed.

However, EPA does have a degree of flexibility on how to interpret the WIIN Act mandate. Section 300g-3(c)(2)(C)(i) of the Safe Drinking Water Act, as amended by the WIIN Act, provides that the notice about exceedances with the potential to have serious adverse effects on human health as a result of short terms exposure must "be distributed as soon as practicable, but not later than 24 hours, after the public water systems learns of the … exceedance." The law does not necessarily require that this notice be in the hands of customers within 24 hours. Therefore, in the case of a water system that aims to meet its WIIN Act notification obligation by issuing a targeted communication to customers served by lead service lines or service lines of unknown material, EPA should consider a water system to be in compliance with this requirement if it begins the process of distributing the notice to relevant customers within 24 hours of learning of the exceedance. Steps that may fulfill this requirement could include initiating printing of a letter to be mailed to customers, or (in the case of customers for whom the water system has electronic contact information) sending them the notice electronically. After initiating the process of printing letters for mail distribution, the water system would be expected to complete distribution as soon as practicable in order to remain in compliance with the statutory deadline.

In this scenario, it is important to remember that the samples themselves would have been collected at least several weeks prior to the moment at which the water system learned of its action level exceedance at the 90th percentile. After such an amount of time, there would be a minimal difference from a public health perspective of whether a customer actually received the notice within 24 hours of the water system learning the result, or a few days later.

AMWA's recommendation and compliance with the WIIN Act:

AMWA's recommendation to target lead action level exceedance notices to customers who are served by lead service lines would be consistent with the congressional mandate of the WIIN Act. Under Section 300g-3(c)(2)(C) of the Safe Drinking Water Act, as amended by the WIIN Act, EPA's regulations must "specify notification procedures for [each MCL violation or lead action level exceedance] that has the potential to have serious adverse effects on human health as a result of short-term exposure." While the proposed rule aims to achieve compliance with this

mandate by treating all lead action level exceedances as Tier 1 public notification events that "reach all persons served" by the system, the statutory language allows greater flexibility – as long as water systems provide distribution to those individuals with the potential to suffer serious adverse health effects as a result of short-term exposure "as soon as practicable, but not later than 24 hours" after learning of the exceedance.

AMWA believes that the portion of a water system's customer base most likely to be at risk of incurring serious adverse health effects as a result of short-term exposure following a lead action level exceedance at the 90th percentile are those customers who receive their water through a lead service line. Customers who are found (via the water system's service line inventory) to not be served by lead service lines have a much lower potential to experience adverse health effects as a result of levels of lead measured in water that spur an action level exceedance. The WIIN Act therefore does not require water systems to expedite a notice about an action level exceedance to these customers. While AMWA believes that the water system's entire service population should be made aware of a 90th percentile exceedance following the conclusion of the monitoring period (or another time period EPA identifies after taking into account the seriousness of any potential adverse health effects to the general population), neither statutory nor public health objectives necessitate all customers to receive a notice about a 90th percentile lead action level exceedance at the same time as customers who do in fact receive their water through a lead service line.

AMWA understands that there may be hesitation on the part of some water systems to divide their post-exceedance public notification in this manner, so the final rule should allow the option for a water system to distribute its notice to the entire service population, as the rule currently proposes. In fact, some water systems may find it preferable to simply utilize broadcast media to broadly deliver this notice to the public, and the final rule should not restrict them from doing so. But because ensuring compliance with other aspects of the proposed rule will require water systems to maintain databases of contact information for households with service lines made of lead and/or unknown materials, these databases could also be utilized to begin distribution of a required notification within 24 hours of a water system learning of a lead action level exceedance. This would quickly and directly get the information to the households where it is most needed, without alarming other customers with an expedited notice that may not be relevant.

Find-and-Fix (Section 141.82(j))

Summary:

- AMWA agrees with the proposed rule's intent to encourage water systems to identify the cause when high levels of lead are detected at an individual tap sampled as part of required monitoring activities.

- AMWA also agrees with the proposal's limitation of Find-and-Fix requirements to only those samples taken pursuant to the monitoring program under Section 141.86 and not to other samples that may be voluntarily collected by water systems through customer-requested drinking water lead testing programs.

- AMWA objects to EPA's requirement that all new water quality parameter testing sites identified under these provisions be permanently added to a water system's catalog of sites. This is unnecessary and is not a constructive use of limited resources.

- AMWA strongly objects to EPA's suggestion that adjustments to a water system's corrosion control treatment should be carried out based on a single sample that is above the action level. In some cases, an elevated level of lead discovered in an individual sample may often relate to lead coatings or other factors that are unique to the specific sampling site, and beyond the control of the water system.

- Requiring a water system to make corrosion control changes due to only one or a small number of individual samples exceeding the action level could actually expose the public to elevated lead levels and corresponding public health risks and provide limited benefits.

- Should EPA proceed with requiring corrosion control adjustments following a single sample exceedance, AMWA makes the following suggestions:

    - The final rule must include greater clarity about EPA's vision for adjustments to "localized" corrosion control, as neither the rule nor the preamble define this term or explain how a water system would implement it.

    - AMWA questions whether "six months after the end of the monitoring period in which the site exceeded the action level" is enough time for a water system to make an informed and scientifically justified decision on changes to corrosion control treatment without the possibility of jeopardizing public health.

    - EPA should ensure that the proposed rule only requires a water system to make a single determination of whether adjustments to corrosion control treatment are necessary, following a round of required monitoring activities. EPA should further ensure that adequate time and resources are available to study and decide upon any adjustment to corrosion control treatment. As currently drafted, the proposed rule suggests that a water system would have to make a separate determination on potential corrosion control changes for each individual sample that detects lead in a home's water above the action level.

Comments:

AMWA understands that the "Find-and-Fix" provision in Section 141.82(j) would go beyond the Lead and Copper Rule's current requirements, which direct water systems to notify individual customers of the sampling results from their taps within 30 days. The proposed rule, in addition to requiring water systems to deliver a notification within 24 hours to individual customers whose water was found to have lead exceeding the action level, would also require water systems to take steps to identify and rectify underlying issues that may have contributed to elevated lead levels measured in an individual customer's tap, and to determine whether system-wide corrosion control changes are necessary. AMWA generally agrees with EPA's intent to encourage water systems to assist in uncovering the cause of elevated lead levels in individual homes, but has significant concerns regarding the agency's proposal for water systems to consider changes to their corrosion control based solely on a small number of individual tap samples that exceed the action level.

We also note that Section 141.82(j) would only require steps outlined in the Find-and-Fix procedure "when a tap sample site exceeds the lead action level *under monitoring conducted under Section 141.86*" (emphasis added). We interpret this to mean that Find-and-Fix requirements would not apply to any tap samples voluntarily collected by a water system outside of monitoring required under Section 141.86, but urge EPA to confirm this interpretation. If the Find-and-Fix process were to apply to all samples collected by a water system – both voluntarily and pursuant to monitoring requirements – it would create a strong disincentive for community water systems to perform voluntary sampling for customers. In the case of large water systems that may voluntarily collect samples from thousands of locations (as opposed to 100 or less samples collected pursuant to required monitoring), directing the water system to attempt to identify the cause of each and every individual high sampling result encountered would pose a tremendous burden, and would likely cause many large water systems to cease offering voluntary sampling to customers at all. We therefore encourage EPA to clearly reiterate that the Find-and-Fix process would only apply to samples conducted pursuant to Section 141.86 monitoring.

While AMWA appreciates EPA's effort to develop the Find-and-Fix process, we believe components of the proposed requirements could lead to redundant analysis and reporting exercises. Further, we harbor strong concerns about requiring the consideration of corrosion control changes when a water system has not exceeded a 90th percentile threshold.

Requirements of the proposed rule:

Section 141.82(j) would require water systems to take a number of steps "when a tap sample site exceeds the lead action level under monitoring" conducted pursuant to Section 141.86. These steps include:

- Sampling at a new water quality parameter site on the same size water main in the same pressure zone and located within one half mile of the original sampling location, within

five days of receiving the original sampling results;

- Collecting a follow-up sample at the original sampling location, within 30 days of receiving the sampling results; and

- Evaluating the results of monitoring "to determine if either localized or centralized adjustment of the optimal corrosion control treatment … is necessary." If a water system determines that changes to corrosion control are necessary, it would have to make this recommendation to the state "within six months after the end of the monitoring period in which the site[s] exceeded the action level."

Concerns with the proposed rule:

AMWA has several concerns with the proposal. First, as written this complete process appears to be required each time that "a [singular] tap sample exceeds the lead action level." This means that water systems would have to make repeated, separate determinations on whether changes to corrosion control treatments are necessary. For example, consider a water system that had five sites exceed the action level in a given round of testing. Not only would that system have to conduct five additional samples at new or nearby water quality parameter sites within five days, and at the five original sampling locations within 30 days, but it would also have to make five separate determinations of whether adjustments to optimal corrosion control treatments are necessary to address each case. Each of these five determinations would have to be submitted to the state, and then the water system would have to separately act on any state requirements for each. These determinations would come in addition to evaluations of corrosion control treatment that the proposed rule would require all community water systems to carry out every three-to-five years as part of their sanitary surveys. This process would be redundant and could lead to conflicting recommendations regarding a community's corrosion control treatment.

Even more importantly, we do not believe it is appropriate to require a water system to consider or implement changes to its systemwide corrosion control treatment when its sampling results do not exceed a 90th percentile level -- which possibly indicates a widespread shortcoming in corrosion control effectiveness. Although AMWA reiterates its earlier request for additional information regarding EPA's proposal to use a 90th percentile exceedance of the new trigger level, rather than the action level, as the point at which a system must study and re-optimize corrosion control, the association strongly believes that consideration of corrosion control changes at either of these 90th percentile figures is far more appropriate than requiring such consideration in response to a Find-and-Fix investigation of a small number of individual tap samples that exceed either level.

As proposed, even a single tap sample result that exceeds the action level could prompt a water system to consider or implement systemwide corrosion control changes. This could prompt adjustments that have unintended consequences elsewhere in the distribution system and expose the public to elevated lead levels and corresponding public health issues. Simply put, corrosion

control adjustments should only be made in response to data demonstrating that current corrosion control is deficient throughout the distribution system, and not in response to a small number of samples where other, household-specific factors may have influenced the results.

We question the feasibility of requiring sampling at a "new water quality parameter site that is on the same size water main in the same pressure zone and located within a half mile of the location with the action level exceedance within 5 days of receiving the sample results." It will take time for a water system to identify such an appropriate testing site, make contact with the property owner, and carry out the test. In particular, it may take much more than five days for a property owner to respond to a water system's initial outreach and make their property available for testing. The five-day timeframe – from the point of obtaining the initial results to carrying out another test at another nearby location – may therefore be unrealistic.

Additionally, the proposal seems to direct a water system to establish a new permanent water quality parameter testing site nearby to each sampling site that was found to exceed the action level of 0.015mg/L. "Step 1" as explained in paragraph (1) following the discovery of an individual sample that exceeds the action level simply states that a water system "shall sample at a *new* water quality parameter site that is on the same size water main in the same pressure zone and located within a half mile of" where the high sample was taken (emphasis added). Section 141.87(g) of the proposed rule later states that this "new" water quality parameter site must be permanently added to the system's catalog of water quality parameter testing sites pursuant to Section 141.82(j). This is problematic as water systems could end up with an abundance of new permanent water quality parameter testing sites simply because they are near a monitoring location where a single sample above 0.015mg/L was collected at some point in the past. Over time this would lead to an irrational, unwieldy, and unnecessary number of water quality parameter testing sites. AMWA does not believe that this is a practical or beneficial use of a water system's limited resources.

In terms of making decisions about changes to corrosion control treatment, identifying new or optimized corrosion control treatment often requires a study involving pipe loops or jar tests that can take several months to prepare, carry out, and analyze. We therefore question whether "six months after the end of the monitoring period in which the site exceeded the action level" is enough time for a water system to make an informed and scientifically justified decision on changes to corrosion control treatment.

Finally, AMWA seeks greater clarity on what EPA means when it refers to "localized corrosion control treatment." This term is not defined in the proposed rule or the preamble, yet water systems would be directed to explore it as an option in response to individual samples collected that test above the action level. While in theory a water system could potentially add small chemical feed stations in various locations throughout its distribution system to supplement phosphate levels in certain neighborhoods, in practice this would be extremely challenging to plan, implement, operate, and maintain. Failure to contain the "localized treatment" to its intended zone could result in variable water quality in surrounding areas that destabilizes lead

coatings and results in lead releases. AMWA recommends that the proposed rule should focus on evaluations of possible system-wide corrosion control adjustments.
AMWA's suggested alternative approach:

As an alternative, AMWA recommends that the Find-and-Fix portion of the final rule clearly articulate a process that follows these guidelines:

- Each tap sample collected as part of monitoring conducted pursuant to Section 141.86 that exceeds the lead action level should trigger one-time follow-up testing from the same sample site, and at a nearby site in the same water pressure zone.

- For each individual tap sample collected as part of monitoring conducted pursuant to Section 141.86 that exceeds the lead action level, the water system should determine whether there is a remedy unique to that site, such as an aggressive flushing routine for the service line, replacement of premise plumbing or service lines, or flushing nearby portions of the distribution system. A water system should not be required to carry out any remedy that is beyond its control (such as the replacement of premise plumbing or the privately owned portion of a lead service line), the water system's responsibilities under Find-and-Fix should end once any site-specific remedies are identified and shared with the property owners.

Again, AMWA reiterates its objection to EPA's proposal that could lead to adjustments to a water system's corrosion control treatment based on a single sample that is above the action level. Instead, we believe that either an exceedance of the 90th percentile trigger level or 90th percentile action level should be the point at which a water system must consider adjustments to its corrosion control treatment. But if EPA nevertheless proceeds with the proposed requirement to consider corrosion control adjustments when the water system has not exceeded one of these 90th percentile levels, AMWA has the following suggestions to make the requirement as workable as possible:

- When a round of monitoring conducted pursuant to Section 141.86 discovers one or more individual tap samples that exceed the lead action level for which a remedy unique to the site is not identified, a water system should be required to conduct an analysis of the sampling results to identify any patterns that could indicate a deficiency in the system's corrosion control treatment.

- This analysis should include data points that reflect voluntary lead sampling conducted by the water system, in addition to data collected through required monitoring.

- Based on this analysis, the water system should be given adequate time – at least one year after the conclusion of the monitoring period – to make a single determination of whether there is a deficiency in the system's corrosion control treatment that requires adjustment.

- If a corrosion control adjustment is determined to be necessary, the system shall submit the recommendation to the state. If a state approves the water system's recommendation – or specifies an alternative approach – it should be implemented on a timeline mutually agreed to by the state and the water system.

AMWA believes the above-stated approach is consistent with the framework of the proposed rule, but streamlines the process by having a water system first attempt to identify property-specific factors that could cause elevated lead levels, before considering adjustments to corrosion control treatment. Only if property-specific fixes cannot be identified would a water system have to dialogue with the state about potential broader corrosion control changes. Just as importantly, AMWA's suggestion eliminates the uncertainty in the current proposal that could force water systems to repeatedly consider an overlapping series of changes to corrosion control practices for each sampling site found to have an elevated lead level, but recognizes that all proposed corrosion control adjustments should be carefully studied, vetted, and communicated to customers prior to implementation.

Lead service line inventory and replacement requirements (Section 141.84)

Summary:

- *Lead Service Line Inventories:*
    - AMWA supports EPA's goal for lead service line inventories and appreciates the flexibility the agency has included by allowing for a wide variety of informational resources to create the inventories.
    - AMWA urges EPA to recognize that some water systems are very likely to have no lead service lines in their distribution networks, even if they have a number of lines of unknown composition. The rule should attempt to reduce burdens for these systems where possible.
    - AMWA supports EPA's alternative for including specific addresses with lead service lines rather than location identifiers and supports the requirement for water systems serving greater than 100,000 persons to make their inventories available online.
- *Lead Service Line Replacement:*
    - AMWA supports EPA's objectives for full lead service line replacement (not partial) and agree that the end goal should be for the entire lead service line to be

removed. We also appreciate EPA's understanding that partial lead service line replacements will, at times, be necessary when doing emergency repairs, routine maintenance, and capital improvement projects if the customer is unable or unwilling to replace their portion of the service line.

- AMWA is supportive of water systems developing lead service line replacement plans.

- AMWA has concerns that the provisions within the proposed rule regarding lead service line replacement are not realistic and fail to recognize the significant limitations created by the most common scenario of a shared ownership of the service lines.

- AMWA appreciates and supports EPA's decision that water systems will not be expected to cover the costs of replacing the customer's portion of a lead service line.

- EPA should consider using a "rolling average" over multiple years to determine a water system's compliance with the mandated three percent target or replacement goal, rather than determining compliance on an annual basis.

- *Customer-initiated lead service line replacement:*

  - AMWA supports empowering homeowners to initiate full lead service line replacements.

  - The proposed 45-day timeline for a water system to replace the public portion of a lead service line following a customer's notification of intent to replace the privately owned portion of a lead service line may not be achievable for water systems because of factors such as work crew availability, seasonal work limitations, and long-term infrastructure planning.

  - The final rule should promote a collaborative process through which customers and water systems can work together to replace lead service lines on a mutually agreeable schedule that is unencumbered by artificial deadlines.

Lead service line inventories

AMWA supports EPA's goal for lead service line inventories and agree that this is a crucial step for informing the public as to the extent and scope of the lead service lines within their community. Information on lead service lines is also important to water systems in order to target those areas for potential lead service line removal.

AMWA applauds the flexibility EPA has included within this proposal regarding inventories. AMWA agrees with the agency's understanding that many systems do not have complete records and would struggle to quickly obtain this data. With this in mind, the proposed rule would provide water systems with three years, after the final rule date, to complete these inventories, and would allow water systems to initially meet this requirement by completing a records search.

Within this section of the rule, EPA requires water systems to review sources of information including:

- Plumbing codes, permits, and records in the files of the building department(s) which indicate the service line materials used to connect water system- and customer-owned structures to the distribution system;
- Water system records, including distribution system maps and drawings, historical records on each service connection, meter installation records, historical capital improvement or master plans, and standard operating procedures;
- Inspections and records of the distribution system that indicate the material composition of the service connections that connect a structure to the distribution system; and
- Any resource required by the State to assess service line materials for structures built prior to 1989.

AMWA supports and appreciates EPA's allowance of the above examples of records for determining the identity of the material used for service lines. This is especially important for lines listed as "unknown" as it allows water systems to reasonably infer the material of a given service line based on reliable data about similar homes and/or structures built around the same time. In particular, we applaud the proposed rule's flexibility in allowing states to identify (in the case of structures built prior to 1989) additional resources that water systems may draw upon to identify the composition of service lines. Some water systems, for example, have reported success in identifying service line materials through water quality tests conducted at particular properties. While such methods may not be practical in every situation, we appreciate that the proposed rule would give states the ability to allow them when appropriate.

AMWA understands EPA's decision to classify unknown service lines as lead until determined to be otherwise so that a water system may have a "complete" inventory even if it lacks sufficient records for every service line within its distribution system. AMWA appreciates that EPA is not proposing to require water systems to identify service lines outside of their normal operations and agrees with EPA's assessment in the preamble that "excavating test pits can be expensive and may disturb lines, resulting in lead release" (page 61696). AMWA supports water systems that take the initiative to go beyond these parameters in order to more quickly identify the unknown lines within their distribution system but is appreciative of EPA's understanding that this will not be feasible for every water system.

Consideration of systems unlikely to have lead service lines:

We believe the rule should go further to recognize that some systems very likely do not have any lead service lines in their distribution networks, even if their inventory includes a number of lines of unknown composition. For example, one AMWA member in North Carolina has never found a lead service line in its distribution system and has no evidence to indicate that lead service lines were ever present in the past. However, under the proposal, if the system's inventory was not able to positively identify the composition of every individual line, those remaining unknown lines would all be classified as lead, and would be the basis of calculations to develop this system's replacement rate. Using these unknown lines to calculate a lead service line replacement rate, in the absence of any present or historical evidence suggesting lead in the system, is illogical.

In such limited circumstances, AMWA believes the rule should allow water systems to certify to the state that they do not currently have, and are never believed to have had, lead service lines anywhere in the distribution system. Upon approval by the state, these water systems should be allowed to draw a reasonable conclusion that lead is not currently present among their service lines of unknown composition, and the system's replacement rate should be calculated as if there is no lead currently present. However, if subsequent evidence demonstrates the presence of lead currently or in the past, all of the water system's unknown service lines should be treated as lead for the purposes of calculating the system's replacement rate.

Identification of privately owned service lines:

AMWA believes that the final rule must also recognize that water systems will be significantly limited in their ability to identify the composition of privately owned portions of service lines. In some cases, the water system will be completely dependent upon individual property owners' willingness to cooperate with requests to inspect the line or otherwise document what it is made of. Should any individual property owner not agree to this review, the water system would have to classify the privately owned portion of the line as an "unknown" material and include it within the system's lead service line inventory and replacement calculations. This would subsequently trigger additional reporting requirements for water systems under other sections of the rule.

AMWA agrees that a privately owned portion of a service line whose composition is unable to be determined due to lack of cooperation or response by the property owner, should be considered "unknown" in the water system's inventory. However, AMWA believes this line should be excluded from calculations used to develop system's lead service line replacement goals. This scenario recognizes that, if the lack of property owner cooperation is the only impediment to identifying the composition of the line, no reasonable assumption can be made about what the line is made of, and so including the line in the system's replacement calculations could artificially inflate the system's required three percent replacement rate, in the event of an action level exceedance.

AMWA appreciates and agrees with EPA's decision to allow a service line of unknown material to be removed from the number of lead service lines required to be replaced each year should the water system exceed the action level, if the service line is determined or reasonably inferred to be non-lead.

Treatment of galvanized lines:

As stated in our discussion of the proposed definition of a "lead service line," AMWA has concerns with EPA's inclusion of galvanized lines that ever were downstream of a lead service line. This would seemingly mandate that water systems without records dating back to the original installation of a galvanized line would be required to treat the line as lead and include the service line within the water system's replacement schedule and goals. AMWA requests that EPA allow water systems to utilize data such as building records and plumbing permits pertaining to the neighborhood surrounding the line in question to draw a reasonable conclusion about the history of a given service line upstream of a galvanized line. For example, if a neighborhood was constructed at a date after a community or water system is known to have ceased installation of lead service lines, but the water system does not have specific records detailing the material that was upstream of galvanized lines in the neighborhood at the time of installation, the water system should be allowed to draw a reasonable conclusion that those upstream lines are not likely to be lead. In cases where a water system makes such a good faith determination, AMWA suggests allowing the water system to remove this galvanized line from its lead service line inventory. If the water system subsequently obtains new information indicating that the galvanized line had in fact previously been downstream of a lead service line, then the line shall be restored to the system's lead service line inventory.

Public identification of homes with lead service lines:

EPA's proposal seeks comment on whether publicly accessible lead service line inventories pertaining to customer-owned portions should include only a "location identifier" such as a street or intersection, as opposed to an exact street address. In most cases, AMWA supports including exact street addresses for customer-owned portions of lead service lines within publicly accessible inventories. It is important to consider that the rule proposes to include both the public and privately owned side of a lead service line within the definition of the term, and individuals will incur the same health effects whether lead that enters their drinking water does so via the public or privately owned portion of the service line connecting their home to the water main. A primary purpose of the publicly available inventory is to inform both current and potential homeowners and tenants about the risks associated with having a lead service line, and omitting specific addresses from this dataset would leave potential homeowners and tenants unable to make fully informed decisions about whether to reside in that property. Conversely, including the specific address data in the publicly available information would encourage homeowners and landlords to take action to address their privately owned lead service line, particularly before

putting their home up for rent or sale. Over time, this will prod progress toward the larger objective of replacing lead service lines nationwide.

When considering the publication of individual addresses within lead service line inventories, it is important to note that a service line of unknown material will be classified as "unknown" in the inventory, even though the water system would be required to count that unknown line as lead for the purposes of calculating its service line replacement rate. So, there is little risk that a property served by a service line of unknown material – which in reality is not lead – would be publicly misidentified in the inventory as being served by lead.

AMWA understands that including this information about privately owned portions of lead service lines in the publicly available inventory may raise privacy concerns. However, public real estate databases presently include a wealth of information about the characteristics of private homes, such as the square footage, number of bedrooms and bathrooms, whether a basement is finished, and roofing and siding materials. Moreover, federal law requires home sellers to disclose the known presence of lead paint in the home prior to the sale. If a water system has information about the presence of lead in the privately owned portion of a property's service line, making it available alongside information about the materials on the publicly owned side of the service line is consistent with this other publicly available information.

AMWA does recognize that a public disclosure of a lead service line may make it more difficult to sell or rent certain properties. But we do not believe that the sale or rental of a home – particularly to a new owner or tenant who may have small children – should be facilitated through the suppression of information that could affect the health of the new owner or tenant. Other sections of the proposed rule provide new mechanisms to enable individual homeowners to work with water systems to replace lead service lines, so AMWA would encourage homeowners concerned about the public disclosure of their lead service line to pursue this replacement opportunity. AMWA also supports EPA's requirement for water systems serving greater than 100,000 persons making their inventories available online. Making this information easily accessible helps educate the public and increase transparency.

We are aware that some states have laws that may prohibit water systems and other governmental entities from publicly disclosing the addresses of their customers. For example, a water system in Colorado that publishes an inventory that allows individuals to look up customer addresses could potentially be in violation of the Colorado Open Records Act. In situations where the disclosure of specific street addresses could violate similar state or local laws, the rule should give the state agency the option to waive the street address publication requirement and allow water systems to use location identifiers as an alternative.

Lead service line replacement

AMWA supports EPA's objectives for full lead service line replacement (not partial) and agree that the end goal should be for the entire lead service line to be removed. AMWA appreciates

EPA's acknowledgement of situations where a partial lead service line replacement would be unavoidable. In general, AMWA supports avoiding partial replacements and agrees with the Science Advisory Board's assertation that partial replacements "have not been shown to reliably reduce drinking water lead levels and may even increase lead exposure in the short-term" (page 61697). However, emergency repairs, routine maintenance, and normal capital improvement work should not be impeded due to customers being unwilling or unable to replace their portions of the service line.

Replacement plan guidelines:

AMWA is supportive of water systems developing lead service line replacement plans. However, AMWA is concerned that the proposal could allow states to impose a goal replacement rate in the event of a trigger level exceedance that is greater than the three percent annual replacement rate that would apply in the event of an action level exceedance. Some individual water systems may wish to develop lead service line replacement plans that set targets above the three percent threshold, but the final rule should specify that a state may not require a replacement plan to include a goal replacement rate that exceeds the three percent target of the action level replacement rate.

Paying for private lead service line replacement:

AMWA supports the component of the proposed rule specifying that water systems will not be expected to cover the costs of replacing the customer's portion of a lead service line. As previously discussed, many water systems are prohibited by state law or local ordinance from using ratepayer dollars to carry out an infrastructure project that benefits a particular private party, so these systems would be unable to comply with a federal mandate requiring them to fund the replacement of privately owned portions of lead service lines. However, water systems generally may offer to arrange for the replacement of privately owned lead service lines, as long as the customer ultimately covers the cost. In these cases, the water system may offer customers extended repayment plans or other financing aids to reduce the customer's burden. Additionally, through Section 2105 of the Water Infrastructure Improvements for the Nation (WIIN) Act of 2016 (P.L. 114-322) Congress authorized grant funding that may be used by water systems for "providing assistance to low-income homeowners to replace lead service lines." Through fiscal year 2020 Congress has appropriated nearly $45 million for these grants, so AMWA hopes that EPA will soon begin seeking applications for these funds so communities can begin to offer this important assistance to their low-income ratepayers.

Inability to achieve replacement rate or goals:

AMWA has concerns with water systems being able to meet both the replacement goals for passing the trigger level and the three percent mandated by triggering the action level. AMWA

requests that EPA include language stating that there may be scenarios in which a water system may not be able to meet the goal or mandated replacement level for reasons completely beyond the system's control. For example, because the entire – public and private – lead service line must be replaced to count toward the replacement mandate following an action level exceedance, in some circumstances a water system would be completely reliant on a customer to act to replace their private side in order for the replacement to count. In particular, customers who may be unable to afford replacing their portion of the service line or who may choose to not have their side replaced regardless of cost would prevent water systems from achieving their replacement goals or mandates. AMWA would also like to highlight that even water systems which may be able to cover the cost of replacement may still struggle getting buy-in from all customers as some will still choose to forgo replacement.

Use of rolling average when determining replacement compliance:

AMWA recommends that EPA consider using a "rolling average" for determining a water system's compliance with the mandated three percent target or replacement goal. It is likely that a water system will have more success finding customers who will agree to pay for the replacement of their portion of the service line during the water system's initial outreach efforts. As the water system's replacement program continues, the pool of willing customers will likely diminish as the water system goes through subsequent rounds of outreach to customers who have previously chosen to forgo replacement. A scenario which may occur could see a water system replacing five percent of their lines the first few years followed by a significant drop to one or two percent in its final years as the system struggles to find participants.

Allowing for a rolling average will ensure that water systems are given credit for their previous accomplishments and are provided flexibility for the difficulties which may arise through no fault of the system. Allowing for this flexibility could lead to the replacement of lead service lines at a faster rate, because a water system would know that any additional lines beyond three percent replaced in one year would still count toward its replacement mandate in future years (when various circumstances could cause a system to fall short of the three percent target). In other words, if a rolling average were not taken into account, a water system would have no incentive, from a regulatory compliance standpoint, to keep replacing lines in a single year after reaching the three percent figure. The rolling average would allow the system to focus on removing the greatest number of lines feasible, regardless of how many lead service lines have already been replaced in a given year.

AMWA also suggests that EPA include criteria for determining when a water system has made a good faith effort to replace the required percentage of lead service lines but was unable to do so due to factors outside of the water system's control. In these circumstances, water systems should not be considered to have violated their replacement mandate, particularly if the mandate would have been achieved had each customer who declined to replace a private lead service line actually done so. As part of this provision, EPA should define what type of outreach to a

customer is sufficient to demonstrate that the water system made a good faith effort to encourage replacement of the private lead service line.

As an example to highlight the complexities of these mandates, one AMWA member reports that it no longer has any lead service lines on the public side and therefore is entirely dependent on customers agreeing to pay for and schedule the replacement of their portion of the service line. This could make achieving a three percent replacement rate, or similar replacement goal, each year increasingly difficult as a water system's replacement program progresses. Because the water system would be limited to working with a shrinking pool of customers – many of whom that have declined earlier offers to coordinate the replacement of their lead service line – it will become progressively challenging for a water system to convince enough of these remaining customers to agree to private side replacement in a given year. Allowing for flexibility, a rolling average, and a well-defined threshold for when a water system has made a good faith effort will ensure that water systems are not considered out of compliance for circumstances beyond their control.

Customer-initiated lead service line replacement

AMWA applauds provisions in the proposed rule that would allow individual homeowners to request a water system to replace the publicly owned portion of a lead service line connecting to their property following, or in conjunction with, the customer-initiated replacement of the private portion of that same service line. This process will empower individual customers to compel replacement of the entire service line serving their home – provided they are willing to finance the cost of replacing the privately owned portion of the line (though in some circumstances the water system may be able to assist with covering this cost as well).

Notification of a customer's intent to replace private lead service line:

AMWA has serious reservations about the proposal's stated process for steps that a water system must follow when notified of a customer's intent to replace his or her portion of a lead service line. According to Section 141.84(d)(3) of the proposal (emphasis added):

> When a water system is notified by the customer that he or she *intends* to replace the customer portion of the lead service line the water system has 45 days from the day of their notification to conduct the replacement of the system-owned portion.

AMWA believes it is misguided to set a timetable for replacement of a publicly owned portion of a lead service line based upon the date that a customer notifies the water system of his or her plans to replace their privately owned portion. A customer's mere statement of intent has no bearing upon the date on which the privately owned portion of the service line might actually be replaced, and does not necessarily indicate that such work may be imminent or ever carried out. Conceivably, a customer could notify a water system of a vague intent to replace the private

portion of the service line at an undetermined date in the future. Or a customer could submit this notification to the water system and subsequently not follow through with the private-side replacement. In either case, the clock for the public-side replacement would begin ticking on the day that the customer provided the initial notification, thus requiring the water system to complete replacement of the public-side portion within 45 days. This could lead to situations where a water system is required to carry out a partial lead service line replacement, either because the customer did not follow through with the private-side replacement, or failed to schedule it within the inflexible 45 day window offered to the water system. Such an outcome would clearly run counter to the intent of the rule.

Should any deadline for public-side lead service line replacement be included in the final rule, at minimum it should specify that the window within which the public line must be replaced shall not begin until the customer demonstrates to the water system that he or she has obtained a plumbing permit to allow replacement of the private side of the lead service line to proceed.

But even with such a requirement, forcing the public-side replacement to be completed on an arbitrary timeline would not be ideal for a number of reasons. AMWA does agree, as is proposed in the rule, that water systems should make a good faith effort to coordinate simultaneous replacement of both the public and privately owned portions of a service line following a notification of intent by the customer. AMWA therefore recommends that the final rule promote a collaborative process for customer-initiated service line replacements that is based upon this concept. We suggest the following:

1. When a customer notifies a water system of his or her intent to replace the privately owned portion of a lead service line, the water system should offer to arrange replacement of both the public and privately owned portions of the lead service line (though the customer may be required to pay for costs associated with the private-side replacement). If the customer agrees to coordinated replacement arranged by the water system, the water system shall work with the customer to identify a mutually agreeable work date that is as early as practicable based upon factors such as seasonal considerations, work crew availability, and long-term infrastructure planning.

2. When a customer notifies a water system of his or her intent to replace the privately owned portion of a lead service line, but rejects the water system's offer to coordinate work to replace both the public and privately owned portions of the lead service line, the water system shall attempt to ascertain the date on which the customer plans to replace the privately owned portion.

    a. If the customer fails or refuses to provide such date, the customer shall not be considered to have provided a valid notification that triggers action by the water system under the rule. No further action should be required by the water system.

    b. If the customer does provide an estimated private-side replacement date that is in the future, the water system shall subsequently contact the customer on or about

that date to verify that the planned private-side replacement has in fact occurred.

i. If the customer fails or refuses, in response to this query from the water system, to confirm replacement of the private-side line, then the customer shall not be considered to have provided a valid notification that triggers action by the water system under the rule. No further action should be required by the water system.

ii. If the customer confirms replacement of the private-side line to the water system, then the water system should proceed to plan replacement of the publicly owned portion of the service line as if the customer had notified the water system of his or her replacement of the private-side line on the date of such replacement.

The final rule should require a water system to maintain records that log its interactions with customers related to the coordinated replacement of lead service lines, and these records should be made available upon request to the state. Water systems should not be required to separately report on each interaction with a customer to the state.

Notification that a customer has already replaced the private lead service line:

AMWA has similar concerns about language in the proposed rule governing the process a water system would follow when notified by a customer that he or she had previously (within the past three months) replaced the privately owned portion of their lead service line. Section 141.84(d)(4) of the proposed rule states:

> When a water system is notified by the customer that he or she has replaced the customer-owned portion and that replacement has occurred within the previous three months, the water system must replace its portion within 45 days of the date of their notification.

AMWA recommends replacing the proposed rule's 45-day deadline for public-side replacement by the water system with a more flexible timeline that recognizes the many variables that could come into play to affect the feasibility of replacement projects. For example, consider a customer that independently replaces the private-side portion of his or her lead service line on October 1. The customer could then notify the water system of this replacement on December 31 – just within the three-month window that triggers mandatory public-side replacement under the proposed rule. Then, under the proposed rule, the water system would be required to complete the public-side replacement of that lead service line within 45 days of receiving that notification, which would put the deadline in mid-February. This would cause the disturbance of lead within the public side of the service line four-and-a-half months after the customer originally replaced his or her portion of the service line, and would require the water system to carry out the replacement in the middle of winter when such work may not be feasible in some climates.

Rhode Island's Providence Water, for example, is under a city mandated moratorium on routine service line work between December and March each winter due to the lack of availability of paving materials during these months. The hard timelines in the proposed rule fail to account for these practical considerations.

AMWA suggests a simpler and more workable alternative. If a customer notifies a water system that he or she replaced the privately owned portion of a lead service line within the previous three months, then the water system shall determine whether, based upon factors such as seasonal considerations, work crew availability, and long-term infrastructure planning, it would be feasible to replace the publicly owned portion of that lead service line within three months of the date on which the customer replaced their privately owned side (This three-month timeframe is based upon the reasoning explained on page 61698 of the preamble to the proposed rule, which suggests that public-side service line replacements that occur more than three months after a private-side replacement should not be prioritized "because the elevated lead levels associated with partial LSLR would be expected to have subdued").

1. If the water system determines that replacement of the publicly owned portion within three months of such date is feasible, then the replacement shall be carried out as early as practicable.

2. If the water system determines that replacement of the publicly owned portion within three months of such date is not feasible, then the water system shall still replace the publicly owned portion if requested to do so by the customer. But the water system may assign this replacement a lower priority than other replacement projects that have been or may be scheduled to occur:

    a. In conjunction with a customer's notification of intent to replace his or her privately owned lead service line, or

    b. Within three months following a customer's independent replacement of a privately owned lead service line.

AMWA proposes to assign a lower priority to these replacement projects because it is preferable for customers and water systems to work together to replace entire service lines concurrently, or at minimum replace the public side within three months of replacement of the private side so as not to re-disturb lead in the line. Projects that cannot be completed within this three-month timeframe should not take precedence over other replacement projects on which the water system may be coordinating other customers elsewhere in the community.

As was recommended above, AMWA believes that the final rule should require a water system to maintain records that log its interactions with customers who have reported that they have replaced their privately owned portion of their lead service line, and these records should be made available upon request to the state.

In summary, AMWA believes it is important for customers and water systems to work cooperatively to replace lead service lines, and customers should have the ability to initiate the complete replacement of lead service lines supplying water to their homes – provided they are willing to cover any necessary costs associated with the private-side replacement. Our recommendations are intended to build on the framework in EPA's proposed rule to ensure a system of customer-initiated replacements is workable for all parties involved.

Filter requirements (Sections 141.84 and 141.86)

Summary:

- AMWA has significant concerns with EPA's proposed mandates for water systems to provide pitcher filters and three months' worth of filter cartridges to customers whenever work is carried out on the public or private portion of a lead service line.

- The proposed rule's definition of "pitcher filter" in Section 141.2 explains that a qualifying filter must be "certified to remove lead in accordance with applicable standards established by the American National Standards Institute [ANSI]." However, ANSI itself does not "establish" standards, so this could lead to confusion about which filters do in fact comply with the definition.

- AMWA has concerns about the availability of sufficient supplies of certified filters to meet EPA's many mandates within the proposed rule.

- AMWA asks that EPA grant state agencies the ability to allow water systems to offer customers other options, in addition to pitcher filters, to address lead issues in the near term. Because of the limited supply and limited capacity of pitcher filters, they may not be the best option for some households, and some water systems may therefore wish to provide customers with other alternatives.

- AMWA requests that EPA expand on the agency's reasoning for requiring water systems to provide pitcher filters and cartridges when "disturbing" lead service lines through normal maintenance and operational activities such as meter replacement and requests that the agency provide data showing the cause for concern for lead exposure via these activities and why an aggressive flushing regime is insufficient to address these concerns.

- AMWA asks EPA to clearly articulate what it envisions as an acceptable "pitcher filter tracking and maintenance system."

Comments:

AMWA understands and is appreciative of the public health protection goals that EPA is attempting to achieve through providing pitcher filters to customers in conjunction with lead service line replacement work or disturbances. However, we have significant concerns about the efficacy of mandates for water systems to provide these filters under other varying circumstances. When considering these scenarios, EPA should be cognizant of the fact that it is extremely challenging for a water system to persuade customers to use pitcher filters correctly, even when provided with the appropriate instructions and resources. In many cases, it may be preferable for water systems to direct customers to carry out an aggressive flushing regime, both because those directions may be easier for many customers to follow, and because flushing could achieve similar results to filter usage.

Uncertainty about the definition of "pitcher filter":

Secondly, we believe the proposed rule's Section 141.2 definition of "pitcher filter" is unclear, specifically in reference to which filters are properly "certified" to remove lead from drinking water. The proposed rule's definition of "pitcher filter" is as follows:

> *Pitcher filter* means the filtration insert for water pitchers that removes lead in drinking water, and that is certified to remove lead in accordance with applicable standards established by the American National Standards Institute.

We question the meaning of the proposed definition's reference to applicable standards "established" by ANSI. According to its website, ANSI "facilitates the development of American National Standards (ANS) by accrediting the procedures of standards developing organizations."[2] In turn, those accredited organizations (such as NSF International and the Water Quality Association) "work cooperatively to develop voluntary national consensus standards."

Another section of ANSI's website states plainly that the organization "itself does not develop standards."[3] The proposed rule's reference to "applicable standards *established* by" ANSI is therefore unclear at best and inaccurate at worst, and invites questions about the universe of filters that are covered by the definition. AMWA recommends that the definition be amended to read as follows:

> *Pitcher filter* means the filtration insert for water pitchers that removes lead in drinking water, and that is certified to remove lead in accordance with applicable standards established by an organization accredited for that purpose by the American National Standards Institute or any other accrediting body deemed appropriate by the Administrator.

[2] https://www.ansi.org/standards_activities/domestic_programs/overview?menuid=3
[3] https://www.ansi.org/about_ansi/faqs/faqs

AMWA's proposed definition would make clear that a qualifying pitcher filter could be certified to any relevant standard established by a standard-setting body accredited by ANSI, rather than ANSI itself, thus eliminating a potential source of confusion. Moreover, AMWA's definition would give EPA the authority to recognize lead removal standards developed by a body whose accreditation comes from an appropriate organization other than ANSI. This would instill flexibility within the definition, should ANSI ever be renamed or cease to exist, and is consistent with the administrative requirements of the National Technology Transfer and Advancement Act of 1995, as discussed in Section VIII(J) of the preamble (page 61740). Here, EPA notes that the agency's "approved monitoring and sampling protocols generally include voluntary consensus standards developed by agencies such as [ANSI] *and other such bodies wherever EPA deems these methodologies appropriate for compliance monitoring"* (emphasis added).

Availability of sufficient quantities of filters:

Even under a "pitcher filter" definition that clarifies the scope of organizations that may certify drinking water filters appropriate for the removal of lead, AMWA has serious questions about whether water systems will be able to procure sufficient quantities of certified filters when necessary – particularly on short notice. For example, in April of 2016 an AMWA member in Kentucky determined that approximately 500 lead-removing pitcher filters were needed based on the number of water main projects that were planned and which could be anticipated to potentially involve the replacement of a lead service line. The water system ordered the pitchers along with two replacement cartridges for each, but could only find one supplier able to meet this volume. Ultimately, it took two months for the water system to receive the order.

EPA should provide flexibility within the rule to account for these possible difficulties in obtaining sufficient quantities of certified filters and refrain from declaring water systems out of compliance for factors outside of their control. One way to do this would be to grant state agencies the authority to allow water systems to make alternative arrangements if ample quantities of such certified pitcher filters are not readily available when needed. Alternative arrangements could include providing customers with other types of filters that are certified to be effective at removing lead from drinking water or instructing customers to complete an aggressive flushing regime when undertaking activities other than lead service line replacement. In seeking an alternative arrangement, a water system could be required to demonstrate to the state agency that it is unable to procure the number of certified filters that are needed, and to suggest an alternative approach.

AMWA has further concerns with the capacity of pitcher filters to meet the drinking water needs of a customer's household. Currently, the largest pitcher filter certified by NSF International is 11-cups. EPA should allow for variations in acceptable alternatives that would mitigate lead issues, such as large "blue bottle" dispensers or other bottled water, for homes that have needs beyond what is capable using a pitcher filter. AMWA suggests that EPA allow state agencies to determine these acceptable alternatives.

Provision of filters following the disturbance of lead service lines:

AMWA has significant concerns with the subsection (e)(5)(ii) of Section 141.85, which would require water systems to provide pitcher filters and three months of replacement cartridges to customers served by a lead service line following "the replacement of the water meter or gooseneck, pigtail, or connector." As stated above, there are already concerns with availability of sufficient inventories of certified filters. Expanding the mandates for water systems to provide filters for these normal operational and maintenance activities would exacerbate this issue further. Water meter replacement, for example, typically consists only of shutting off water for a short time and replacing the meter without any cutting of the pipe itself. That same AMWA member in Kentucky referenced above changes approximately 10,000 meters, around 12 percent of the total number of meters in its system, every year. A requirement to provide pitcher filters and three months of replacement cartridges after every meter replacement would amount to a significant cost burden on this water system even if it were able to procure a sufficient number of filters and cartridges.

AMWA requests that EPA provide data on the exposure of dissolved or particulate lead when "disturbing" lead service lines through these normal operational and maintenance activities and further expand on the agency's reasoning for requiring water systems to provide pitcher filters to their customers under these circumstances. As these activities do not involve any cutting of the pipe, AMWA is not aware of a cause for concern for a significant increase in lead exposure that could not be alleviated by providing homeowners with clear instructions to properly execute the flushing of their pipes. If water systems are required to provide filters under these circumstances it would significantly increase their resource needs.

Finally, AMWA believes that EPA must define a "pitcher filter tracking and maintenance system" under the proposed rule. Each lead service line replacement plan completed pursuant to Section 141.84(b) of the proposed rule would have to include such a system, but neither the proposed rule nor the preamble offers any insight as to what precisely constitutes an acceptable system. AMWA therefore requests that EPA provide guidance which clearly states what the agency envisions to be a proper pitcher filter tracking and maintenance system, and articulate a system that is minimally burdensome on water systems.

Public education and supplemental monitoring requirements (Section 141.85)

Summary:

- AMWA agrees that individual household tap sample results that exceed the lead action level should be shared with the home's occupants in an expedited manner but believes

that 24 hours after learning of the results is unnecessarily restrictive. Two business days is more workable for several reasons.

- When an individual home's tap sampling results do not exceed the lead action level, we agree with EPA that an urgent delivery of the results is not necessary. The proposed requirement to notify the customer within 30 days of receiving results that do not indicate an exceedance – consistent with the timeframe required in the current rule – is appropriate.

Comments:

AMWA appreciates that the proposed rule makes great strides in ensuring timely public notification of testing results that indicate elevated levels of lead in the system, but we would like to share our feedback and recommendations on several aspects of the proposal.

Section 141.85(d)(2)(ii): 24-hour notification of an individual household when a sample collected from the household exceeds the action level:

AMWA agrees that water systems should notify the occupants of a household whose tap sample results exceed the lead action level of 0.015 mg/L in an expedited manner. Furthermore, it is appropriate for subsection (d)(4)(ii) to require this targeted notice be delivered to an individual household by phone, electronic means, or another method approved by the state. Because the water system will have had to coordinate with the occupants of that household to arrange for the tap monitoring to take place, it should not pose a challenge for a water system to obtain electronic or phone contact information for that household to use in the event that the building's sample results exceed the action level.

However, the proposed mandate for this notice to be delivered within 24 hours of when a water system learns of the tap monitoring results leaves unreasonably little flexibility for the varying circumstances that a water system might face. For example, if a water system learned of a home's tap monitoring results on a Friday afternoon, but did not notify that home's residents until the following Monday morning, that system would be in violation of the rule. Especially considering that individual tap samples would have been collected at least several weeks prior to when a water system learned of the results, an inflexible 24-hour notification deadline is not necessary.

AMWA recommends that the final rule direct water systems to notify the residents of individual households whose sample exceeded the action level as soon as practicable, but not later than two business days, after the system learns of the individual household results. This will still deliver the notice to households in an expedited manner but avoid an unreasonably strict timeframe on the notice's distribution.

Section 141.85(d)(2)(i): 30-day notification of an individual household when a sample collected from the household does not exceed the action level:

We also agree with EPA's stance that a less urgent notification timeline is appropriate when an individual home's tap sample results do not exceed the action level. We believe that notification of these results within 30 days, by mail or another method approved by the state, as proposed in the rule, is appropriate. We further anticipate that a homeowner would be told to expect a notice from the water system within 24 hours (or two business days, as we recommend) of the system receiving the results should they indicate a level of lead above the action level. Therefore, a homeowner who does not hear from the water system within a few days of the expected results should be able to infer that their home's water tested below the action level – well ahead of the 30-day notification deadline that applies in that circumstance.

Monitoring for lead in schools and licensed child care facilities (Section 141.92)

Summary:

- AMWA believes that school and licensed child care facility administrators should pursue the testing of drinking water within their facilities. Local water systems should be willing to assist in carrying out this testing when requested.

- The Safe Drinking Water Act provides EPA with no authority to broadly regulate the water testing practices of schools or licensed child care facilities, and local water systems have no ability to demand access to such facilities for the purpose of carrying out water quality testing. The proposal therefore errs in attempting to hold water systems responsible for achieving school and child care facility testing targets.

- AMWA supports the proposed rule's alternative option of requiring water systems to aid the testing of the water in local school and licensed child care facilities upon request, and we oppose the proposed requirement for water systems to meet a target of testing 20 percent of schools and 20 percent of licensed child care facilities in the service area each year.

- School and licensed child care center testing procedures should match EPA's recommended testing procedures in its *3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities* manual, and must recognize that any testing carried out by water systems in school or child care facilities will be the result of a collaborative process.

- Should EPA proceed with requiring water systems to meet a 20 percent target for testing schools and licensed child care facilities each year, we recommend clarifying how water systems may achieve compliance with this target, describing what actions are required when schools do not respond to outreach about testing, giving water systems the option to utilize local educational departments to serve as liaisons between water systems and individual school facilities, and ensuring that testing is a fully collaborative effort between water systems and facility officials. If a school or child care center already operates its own water testing program that is at least as stringent as the proposed rule, a water system should not be required to pursue duplicative testing.

Comments:

AMWA recognizes that the presence of lead in the drinking water of schools and licensed child care facilities is an issue of concern to the public. While virtually all lead that is present in the drinking water of these facilities comes from premise plumbing, we understand that school officials and parents may look to their local water systems for guidance in identifying the scope of lead contamination in the water of a given school or licensed child care facility building. AMWA believes that water systems should be willing to help school officials carry out desired water quality testing, upon request.

However, the proposed rule makes the mistake of designating water systems as the appropriate entity to attempt to compel schools and licensed child care facilities to carry out testing to detect lead in the water of their buildings. In attempting to encourage schools and child care facilities to test their water for lead, the proposal charges water systems with the task, while also holding water systems accountable for a school or child care facility's compliance. In reality, because the Safe Drinking Water Act includes no authority for EPA to require schools and child care facilities to test their water for lead - unless that school or child care facility is itself a non-transient non-community water system - it is patently unfair for the proposed rule to create a school and child care facility testing regime that is only enforceable against community water systems.

AMWA therefore believes that the final rule should eliminate all annual school and child care facility testing benchmarks, and only require water systems to assist in the testing of a school or child care facility's water when requested to do so by that facility. Those who wish for EPA to go further in requiring water quality testing in schools and child care facilities should encourage Congress to give the agency that authority directly.

Previous efforts to promote school testing:

In 2019 AMWA was a signatory along with EPA and other federal agencies and water sector stakeholders to a memorandum of understanding on "Reducing Lead Levels in Drinking Water in Schools and Child Care Facilities." As part of this MOU, AMWA and EPA agreed "to

facilitate actions that reduce children's exposure to lead from drinking water at schools and child care facilities." Agreed-upon actioned included "encourag[ing] schools and child care facilities to" test their drinking water for lead, and "encourag[ing] the drinking water community to assist schools and child care facilities in their efforts to understand and reduce lead exposure from drinking water."

Additionally, in 2018 EPA published a revised manual entitled *3Ts for Reducing Lead in Drinking Water in Schools and Child Care Facilities: A Training, Testing, and Taking Action Approach.* According to EPA, this *3Ts* manual "is intended to serve as a resource to help schools and child care facilities implement a voluntary program for reducing lead in drinking water." The manual recommends that schools and child care facilities follow a prescribed "2-step sampling procedure" when testing individual outlets.

Both the MOU and *3Ts* manual recognize that local school officials are primarily responsible for testing the quality of their buildings' drinking water, but AMWA appreciates that public drinking water systems are in a unique position within their communities to provide guidance and facilitate effective testing. However, while local water systems should be available to help individual schools and licensed child care centers carry out water testing and understand the results, AMWA has concerns that the proposed rule promotes unrealistic expectations and goes too far in transferring the responsibility for school testing onto individual water systems.

Details of the proposed rule:

Section 141.92 of the proposed rule directs each water system to:

1. "[C]ompile a list of schools or licensed child care facilities served by the system";

2. Contact such schools or licensed child care facilities; and

3. Deliver "notification that the water system *will be conducting* sampling for lead at the facility" (emphasis added).

The process as described is challenging for several reasons. Especially in the case of large metropolitan water systems, a comprehensive and accurate list of all schools and licensed child care facilities in the system's service area will number in the thousands. For example, Greater Cincinnati Water Works, a water system serving more than 240,000 residential and commercial accounts, provides water to roughly 400 schools and an estimated 4,000 licensed child care centers. While that system currently carries out a program to assist these facilities with lead testing, it reports that identifying licensed child care facilities in particular for testing is a significant challenge, in part because the precise number of such facilities is always in flux as new licensed child care centers open within the city, and others close. Similarly, most water systems would have no existing inventory of such schools and facilities, so it would be a tremendous exercise to initially develop such a list. Under the proposed rule, this exercise would

have to be repeated every five years as water systems would be required to "submit a revised list" of school and licensed child care facilities to the state.

We are also concerned that the proposed rule includes an unnecessarily adversarial requirement that water systems "notify" a public school or licensed child care facility that the water system "will be conducting sampling for lead at the facility." A water system has no legal basis upon which to demand entrance to a school or licensed child care facility, including for the purpose of conducting testing pursuant to the Lead and Copper Rule. Any water system that conducts testing of school or licensed child care facility water as proposed by the rule would have to do so with the cooperation of the facility's ownership or management, so a water system's initial communication with the facility about the opportunity for testing should not come in the form of a notice that the testing "will" take place.

AMWA's suggested alternative approach:

AMWA proposes another approach to identifying and interacting with schools and licensed child care facilities that should be more comfortable for all parties involved, and more in line with the school-led testing process highlighted in the MOU and the *3Ts* manual. Primarily, AWMA believes that rather than requiring water systems to attempt to conduct testing in 20 percent of schools and 20 percent of licensed child care facilities in the system's service area each year, the final rule should adopt EPA's proposed alternative of requiring water systems to conduct outreach to local schools and licensed child care facilities to make them aware of the water system's availability to carry out water testing in a school or licensed child care facility upon request.

This approach is justified based on EPA's own data. In the preamble to the proposed rule (page 61732), EPA states that the amount of testing conducted under the "upon request" option "is highly dependent on the percentage of facilities that request to participate in the sampling program." EPA goes on to estimate that only five percent of schools and licensed child care facilities would volunteer for a sampling program offered by a community water system. However, the mandatory 20 percent testing program would be equally dependent on schools positively responding to outreach from the water system, and there is no reason to think that the response rate under one scenario would dramatically differ from the other. In each case, the water system would have to alert schools and licensed child care facilities to the opportunity for testing, and school or facility administrators would have to agree to allow the testing to occur.

It is therefore unclear how the agency expects that water systems would achieve a mandate to conduct testing at 20 percent of schools and 20 percent of licensed child care facilities in a given year. A higher level of participation on the part of schools and licensed child care facilities cannot be expected simply because of a target imposed upon water systems, so following EPA's own assumptions even if a water system was required to attempt to test 20 percent of schools in a year, only a small subset of those schools will agree to the testing.

An "upon request" school and licensed child care facility testing program should be consistent with the MOU and the *3Ts* manual, while also establishing a recurring pattern of communication between local school and water system officials. Under this system, water systems should be required to periodically conduct outreach to schools and licensed child care facilities, encouraging them to take advantage of the option to have water system officials test their facility's water for lead. With time, schools and licensed child care facilities will come to know that they have an opportunity for their local water system to assist with the testing of their water, while water systems will be relieved from (as the rule currently proposes) spending significant resources attempting to attain participation from 20 percent of schools and 20 percent of licensed child care centers on an annual basis. AMWA strongly believes that this is the most practicable and beneficial approach and encourages EPA to incorporate the "upon request" school testing structure into the final rule.

Additionally, AMWA appreciates that the school and licensed child care facility testing procedures outlined in subsection (b) of Section 141.92 reflect those recommended in the *3Ts* manual, in so far as requiring a 250 ml first-draw sample following a stagnation period of between 8 and 18 hours. It is less clear why the proposed rule would require samples to be collected from five different locations in schools and two different locations in licensed child care facilities, as the *3Ts* manual does not recommend that schools conduct any particular number of samples in a building. Furthermore, the *3Ts* manual recommends that a school collect a subsequent 250 ml "30-second flush sample" if the initial test results indicate elevated levels of lead. This second test is recommended "to determine if the lead contamination results are from the fixture or from interior plumbing components," but this step is absent from the testing requirements of the proposed rule. To help ensure that schools nationwide are receiving consistent testing advice and assistance from EPA and their local water systems, AMWA suggests amending the school testing procedures in the proposed to conform with the recommendations in the *3Ts* manual.

In sum, the "upon request" option should ensure that school and licensed child care center administrators are made aware of opportunities to receive assistance with water testing consistent with EPA's *3Ts* manual. It will relieve water systems of attempting to meet an arbitrary target of completing tests in 20 percent of such facilities each year when the actual participation rate among these facilities is projected to be much lower. However, the final rule should also specify that if more schools and licensed child care centers request testing assistance in a given year than a water system can accommodate, the system should prioritize carrying out tests in elementary schools and licensed child care centers that serve young children. This prioritization would be appropriate because younger children would be most at risk of experiencing negative health effects as a result of exposure to lead in drinking water.

AMWA's second alternative:

While we believe that the above recommendations are preferable, AMWA has additional suggestions should EPA proceed with its proposed framework of requiring water systems to

pursue testing in 20 percent of schools, and 20 percent of licensed child care facilities, in the service area each year. While we oppose this option, AMWA has a number of suggestions to make it as workable as possible.

Rather than requiring every water system to identify and individually contact 20 percent of all schools and 20 percent of all licensed child care facilities within its service area each year, AMWA recommends that the rule should allow water systems the option to instead communicate with the local educational or regulatory agencies charged with operation or oversight of the community's schools and licensed child care facilities. Even if the final rule does not include the requirement to test a certain percentage of facilities each year, AMWA believes that outreach to schools and licensed child care facilities about opportunities for testing could be more successful – particularly in metropolitan communities that may host hundreds of different schools – if coordinated through local educational or regulatory oversight agencies.

Under AMWA's alternative approach, a water system would have the option to provide the appropriate regulatory agencies with a notice about the opportunity to have individual school and licensed child care facilities tested for lead in drinking water by the water system. A water system utilizing this option should further request the agency to share this information with each school or licensed child care facility, or compile a representative list of such facilities that should be tested in a given year (making up at least 20 percent of such facilities in the water system's service area).

There are several benefits to this approach. First, local educational or regulatory agencies would be expected to have up-to-date lists of schools and licensed child care facilities that fall under their oversight readily available – or at least more easily available than a water system could produce through its own research. AMWA expects that these regulatory agencies will have open and ongoing lines of communication with individual school facilities, so a notice or directive about water quality testing may be more well received from the school or licensed child care facility's oversight agency, as opposed to if it was received in the form of a "cold call" from the water system. The local educational agency would essentially act as a liaison between the water system and individual facilities, likely doing more to increase participation by facilities than the water system could achieve alone.

Additionally, as is suggested above, if a water system chooses to contact individual schools and licensed child care facilities directly, the rule should require notification that the facility has an opportunity to have its drinking water voluntarily tested by the water system, not that the water system "will be conducting sampling" at the facility. This approach respects the right of the facility to decline participation, but lays the groundwork for a collaborative testing effort.

Aside from the mechanics of how schools and licensed child care facilities are identified and contacted, AMWA believes a rule that requires water systems to test in at least 20 percent of such facilities must be clear about how achievement of that standard will be calculated. The proposed rule is lacking in several respects. Subsection (c)(1) states that each year a water system will be required to annually collect samples until 20 percent of such facilities "have been

sampled or have declined to participate." AMWA understands this to mean that a water system has met its school testing obligation in a given year once the sum of the number of schools tested by the water system, and the number of schools declining testing, reaches 20 percent of the number of schools in the service area. However, we urge EPA to make this explicitly clear to give water systems full confidence that they do not need to pursue additional "replacement" schools to test in a given year following a decline from a school that was originally invited to receive testing.

Also concerning is the lack of recognition in the proposed rule of circumstances where a school or licensed child care facility offers no response to a water system's outreach about the opportunity for lead testing. Given the thousands of individual schools and licensed child care facilities that water systems may have to contact to achieve compliance with the rule, it is reasonable to expect that a substantial number of these will not respond to a communication from the water system. However, a nonresponse is not the same as an explicit decline, which is addressed in the proposed rule and which AMWA believes would count toward the water system's 20 percent target. If a water system does not receive a response from a facility to its initial communication and a follow-up within a reasonable amount of time, AMWA believes the rule should specify that this nonresponse should be treated as a decline, and also count toward the water system's 20 percent target in a given year. The rule should direct a water system to document when it has not received a response to outreach to particular identified facilities, and to make such records available to state regulators when requested to do so.

If testing at a particular school or licensed child care facility demonstrates a low or nondetectable level of lead during one round of testing, the final rule should include a mechanism for that facility to either:

- Receive a lower priority for testing in subsequent rounds, compared with facilities that demonstrate higher levels of lead in their initial testing; or
- Be removed from future testing rounds, if that facility has removed all lead bearing plumbing components from the premises.

In other words, after the first five-year cycle of testing of all school and licensed child care facilities is completed, later cycles should prioritize testing in schools and licensed child care facilities that were previously found to have elevated lead, before additional rounds of testing are carried out in schools that were found to not have elevated lead levels initially. Similarly, schools that are found to have very low or no detectable levels of lead in their initial tests, and which have removed all lead bearing plumbing components from their building, should be removed from the pool of locations for future rounds of water system testing. Just as the proposal recognizes that non-transient non-community water systems may wish to achieve compliance with the rule by removing all of their lead bearing plumbing components, it is reasonable to conclude that an individual school that has taken this action does not require assistance from a community water system to conduct future screenings for lead in its water supply.

Finally, the rule should better address procedures to follow when a state or community already has in place an equivalent law or regulation that requires testing of water in schools and licensed child care facilities. Subsection (d) addresses "Alternative School Sampling Programs" this way (emphasis added):

> If a Local or State law or regulations require schools and licensed child care facilities to be tested, by *either the school or the water system*, in a way that is at least as stringent [as the proposed rule], the *water system* may execute that program to comply with the requirements of this section.

In this construct, the proposed rule suggests that a water system should take over execution of an already existing school and licensed child care center testing regime that is currently carried out by school or facility officials, in order for the water system to maintain compliance with the rule. But if state or local regulations require a school to conduct its own testing, these regulations would not be superseded by the proposed rule. Regardless of whether a water system stepped in to "execute" the testing program, state or local regulations may still require school officials to directly carry out tests as well. This scenario would lead to duplicative water testing conducted by both the school and by the water system.

To avoid these complications, we agree with the proposed rule's specification that compliance with the rule may be achieved through an existing water-system-administered testing regime in schools and licensed child care centers that it is at least as stringent as the rule. However, if a qualifying school or licensed child care center testing regime is already required to be carried out by schools or local educational agencies, the rule should give the local water system the option to certify this fact to the state agency.

Again, AMWA appreciates that the proposed rule strives to promote water testing at schools and licensed child care facilities, and we maintain our support for the MOU and *3Ts* manual outlining how to best accomplish this goal. We further believe that water systems can and should actively engage with local schools, licensed child care facilities, and the local regulatory agencies that oversee them to make certain that the owners and administrators of these facilities are informed of opportunities for assistance in screening their water for lead.

But we also must recognize the limits of the Lead and Copper Rule, particularly that both EPA and local drinking water systems lack the authority to compel any school or licensed child care facility to submit to testing of the water on their property. The rule must therefore encourage a collaborative approach between water systems, individual facilities, and educational agencies, and AMWA believes this can best be accomplished through water system testing in schools and licensed child care facilities that occurs "upon request" by a facility administrator, following outreach from the water system. However, we believe that our above suggestions would make the rule as workable as possible should EPA choose to proceed with its proposed requirement that water systems attempt to meet a minimum testing threshold each year.

Economic Analysis

AMWA has comments on two of EPA's assumptions and conclusions within the "Economic Analysis for the Proposed Lead and Copper Rule Revisions" included in the docket: the estimated average number of schools and child care facilities served by each community water system, and the frequency of corrosion control changes made as a result of the Find-and-Fix policy.

Estimated number of school and child care facilities:

AMWA believes that EPA's estimated average number of K-8 (public and private), secondary schools (public and private), and child care facilities per water system may be too low to accurately capture the true cost of implementing the proposal's school and child care facility testing requirements. We have already expressed concerns about the efficacy of mandating water systems to meet prescribed school and child care center testing targets, but our concerns are exacerbated because the economic analysis appears to offer little help in identifying precisely what it would cost for a water system to meet such a mandate. To better illustrate this problem, AMWA has developed the following table which includes both the estimated numbers provided by EPA within the economic analysis and multiple examples provided by AMWA's membership.

Table 1. Comparison of EPA's estimated average number of schools K-8 (public and private), secondary schools (public and private), and child care facilities per water system and actual estimated figures from five AMWA members. EPA data was collected from exhibits 5-53, 5-54, and 5-55 from section 5.3.1.5.2 of EPA's Economic Analysis for the Proposed Lead and Copper Rule Revisions – Number of Schools and Child Cares. For the purposes of comparison, EPA's numbers for K-8 and secondary schools (both public and private) were combined in order to better align with the figures given by AMWA's members.

Water System	**Population Served**	**Estimated Number of K-12 Public and Private Schools**	**Estimated Number of Child Cares Facilities**
EPA Estimate	100,000 – 1 million	100.6	610
EPA Estimate	1 million +	831.8	5,044.5
AMWA Member A	255,750	104	121
AMWA Member B	324,238	62	Unknown
AMWA Member C	975,400	400	4,000
AMWA Member D	~ 1 million	300-400*	800-900
AMWA Member E	~ 8.3 million	1,866	2,227

* Private schools not included in this figure.

Table 1 demonstrates that these values have a large amount of variation, making it difficult to make an informed generalization about a typical number of schools and child care facilities in a community of a given size. However, AMWA believes these figures show that EPA's

methodology for determining the cost of implementing this requirement of the proposed Lead and Copper Rule is consistently lower than figures provided by AMWA members. In particular, the estimates of the number of schools for a population served of 100,000 – 1 million appears to be problematic.

With EPA's use of ranges, it can be inferred that if a water system's service population falls within the middle of that range, say 550,000, it would be expected to serve approximately 100 schools. AMWA Member A's population served falls far below the middle of this range at 255,750 but is still above EPA's derived number at 104 schools. Similarly, although AMWA Member C is at the top of the 100,000 – 1 million range, a total number of schools which is four times greater than EPA's estimate seems far out of range for this analysis to be accurate and useful in determining the costs of implementing testing in schools.

Although EPA's estimate for water systems serving 1 million or more would be expected to be skewed due to the large variation in population served above this level, at 8.3 million served AMWA Member E's number of 1,866 schools is more than double EPA's estimate and therefore, again, raises questions about the reliability of EPA's figures. Given our other concerns about holding water systems responsible testing water quality in schools and child care facilities, our lack of confidence in the data purported to demonstrate the cost of such a mandate strengthens our belief that any school and child care testing program should only be carried out at the request of individual facilities.

Another factor to consider is the enormous variation within the numbers of child care facilities between systems, regardless of size. AMWA Member E's service population of 8.3 million would appear to be on the higher end of water system size but their estimated number of child care facilities at 2,227 is far below EPA's estimate of 5,044. AMWA believes this showcases not only the difficulty water systems might have in developing inventories of licensed child care facilities within their communities, but also the difficulty in EPA's ability to determine the true cost of implementing this provision.

Corrosion control changes resulting from Find-and-Fix:

We also have questions about another portion of EPA's economic analysis. In section 5.3.2.3 Find-and-Fix (page 5-139), EPA appears to assume that water systems will adjust the pH levels, at one or more entry points, in response to a single sample result that falls above the action level. EPA has previously indicated that it viewed corrosion control treatment adjustments based on Find-and-Fix to be a rare occurrence, but this section of the economic analysis suggests otherwise. As has been previously stated, EPA's suggestion that adjustments to a water system's corrosion control treatment should be carried out based on a single sample that is above the action level risks disrupting water quality, destabilizing lead coatings, and threatening public health as a result of lead releases. Any adjustments to corrosion control should be carefully vetted in order to avoid unintended consequences.

As we previously recommended, AMWA urges EPA to remove this requirement from the Find-and-Fix language to avoid these consequences. If EPA maintains this requirement within the rule, AMWA reiterates our previous suggestion that water systems should first attempt to identify property-specific factors that could be the cause of a single action level exceedance before considering adjustments to corrosion control treatment. Only if a property-specific fix cannot be found should a water system have to dialogue with the state agency about potential broader corrosion control changes.

Conclusion

AMWA thanks EPA for the opportunity to provide input on these critical and long-awaited revisions to the Lead and Copper Rule. AMWA's members are public health leaders in their communities and the protection of their customers is their highest priority. We reiterate our support for lead service line inventories and the ability of individual customers to compel a water system to replace a publicly owned lead service line connected to their property. We also express our appreciation that the proposal avoids setting unattainable mandates such as a deadline for the replacement of all lead service lines nationwide, a total ban on partial lead service line replacements, and a requirement for water systems to cover the cost of replacement for the private side of the service line.

While AMWA supports many of the ambitious and vital requirements under this proposal, the concerns outlined in these comments highlight the multitude of complications which could hinder the implementation of this rule. EPA must work to resolve the components of this rule that have placed unrealistic expectations on water systems, particularly those which hold water systems accountable for achieving benchmarks which may be outside of their control. Requiring water systems to meet standards that rely significantly on the cooperation of schools, licensed child care centers, and homeowners may set up water systems to fail through no fault of their own, and despite making their best effort to comply.

The association believes that our comments will help the agency ensure the final rule is achievable, practical, and enforceable. AMWA is appreciative of all the work EPA has done to bring this proposal to fruition and looks forward to working with EPA to best protect the health of the millions of people that depend on their local water systems for safe and reliable drinking water.