U.S. Environmental Protection Agency
National Drinking Water Advisory Council (NDWAC) Public Meeting

January 31, 2024

(virtual only)

Meeting Summary

Chair's Welcome and Council's Introductions

Elizabeth Corr, the NDWAC's Designated Federal Officer with EPA's Office of Ground Water and Drinking Water, opened the meeting and introduced the NDWAC's Chair, Lisa Daniels, former (retired) Director of the Bureau of Safe Drinking Water, Pennsylvania Department of Environmental Protection. Ms. Daniels welcomed everyone and invited NDWAC members to introduce themselves as follows.[1]

- **Yolanda Barney** - Environmental Program Manager of the Navajo Public Water System Program, Navajo Nation Environmental Protection Agency
- **Elin W. Betanzo** - Founder and Principal for Safe Water Engineering, LLC
- **D. Scott Borman** - General Manager of Benton/Washington Regional Public Water Authority
- **Shellie R. Chard** - Director of the Water Quality Division for the Oklahoma Department of Environmental Quality
- **Steven B. Elmore** - Program Director of the Bureau of Drinking Water and Groundwater, Wisconsin Department of Natural Resources
- **Eagle Jones** - Director of Water Operations for the Pechanga Tribal Government
- **Jana Littlewood** - Board of Directors – Alaska Representative for the National Rural Water Association
- **Alex Rodriguez** - President and Chief Executive Officer for Diversity Consulting Group, LLC
- **Jeffrey W. Szabo** - Chief Executive Officer for the Suffolk County Water Authority

Centers for Disease Control (CDC) liaison to the NDWAC **Dr. Arthur S. Chang**, Chief Medical Officer for the Division of Environmental Health Science and Practice, National Center for Environmental Health, introduced himself at Ms. Daniels' invitation.[2] Ms. Corr introduced **Eric Burneson**, Director of EPA's Standards and Risk Management Division in the Office of Ground Water and Drinking Water (OGWDW).

Office of Ground Water and Drinking Water's Welcome

Mr. Burneson shared that he was pleased to be at the NDWAC's first meeting of 2024. He welcomed everyone, thanked the NDWAC members with special thanks to Lisa Daniels for her continued work as

[1] All Council members were present for the meeting.

[2] Ms. Corr noted that CDC liaison Dr. Vincent Hill, Chief of the Waterborne Disease Prevention Branch for the Division of Foodborne, Waterborne, and Environmental Diseases, National Center for Emerging and Zoonotic Infectious Diseases, would not be at the meeting.

NDWAC chair, and recognized the Council's work under Ms. Daniel's leadership while looking forward to continuing to working with the NDWAC on important drinking water priorities. He affirmed that the meeting purpose was consultation on the Lead and Copper Rule Improvements (LCRI) and reminded Council members that EPA consulted with the Council in November 2022 and considered the Council's input as the agency developed the proposed LCRI, published in the *Federal Register* on December 6, 2023. Mr. Burneson stated that EPA is consulting with the NDWAC with the benefit of having the proposal out and will consider the NDWAC's input along with public comments as the agency develops the final LCRI.

Mr. Burneson provided some context and high level information, describing how EPA's Office of Water has been taking a comprehensive approach to protect people from lead in drinking water, including investing historic funding through the Bipartisan Infrastructure Law with $15 billion dedicated to lead; setting up "Get the Lead Out" programs and providing technical assistance to underserved communities; working to develop implementation tools to help local municipalities and water systems; and under statutory authority of the Safe Drinking Water Act proposed the improvements to the Lead and Copper Rule. Mr. Burneson touched on the proposed rulemaking and the five key provisions on the meeting agenda for NDWAC feedback, noting that there would be more discussion of these later. He also provided a brief overview of the proposal's cost-benefit analysis. Mr. Burneson concluded by noting that the comment period is still open and closes on February 5, re-emphasizing that EPA will consider the NDWAC's input along with public comments. He looked forward to the discussion and thanked the members for their time.

Public Comment to the National Drinking Water Advisory Council

Ms. Corr invited each of the four public commenters to provide comments to the Council: **Steve Via** with the American Water Works Association; **Sarah Bloom Anderson,** with the City of Columbus Department of Public Utilities; **Ashley Voskuhl,** Senior Policy Analyst at the Association of State Drinking Water Administrators; and **Jeff Tanner**, Chief Technical Officer for Flow-Liner Systems located in Zanesville, Ohio. Please see their comments, attached.

Ms. Corr thanked all for their comments and introduced **Michael Goldberg**, Lead and Copper Rule Improvements Team Lead in the Regulatory Assessment and Development Branch of EPA's Standards and Risk Management Division, and **Hannah Holsinger**, Supervisor of the Regulatory Assessment and Development Branch, to continue the meeting with a presentation on the proposed LCRI.

Consultation on a Final National Primary Drinking Water Regulation (NPDWR): Lead and Copper Rule Improvements

Mr. Goldberg provided a presentation on the proposed LCRI, including a brief overview on the background of the proposed rule and topics that were discussed at the pre-proposal NDWAC consultation.[3] Ms. Daniels then facilitated discussion of the five key requests for NDWAC consultation.

[3] Mr. Goldberg's presentation is attached.

Achieving 100% Lead Pipe Replacement

Mr. Borman opined that from a utility standpoint shortening the timeframes to less than 10 years is not feasible, highlighting that utilities were starting from different points in terms of management, resources and when they may have made the commitment. He recognized the need to get the lead out, but thought that further shortening the timeframes would increase current problems with long lead times for materials, supplies, and contractor availability, citing an ongoing procurement challenge at his utility as an example, and create a bigger bottleneck impacting the ability to do day in day out work. He thought that 10 years is a very feasible approach and that the logic behind the deferment is good. He also thought that small systems, especially those 10,000 and under, will need additional resources and help and are not going to get it done in the same timeframe, adding that EPA has a good path for that, and that would need to stay.

Mr. Borman had a lot of concern about the control aspect and said that mandating that service lines are within the control of the water utility would be a seismic shift for almost every utility. He recognized that lead and copper is different, as samples are taken in houses, but raised questions about whether, if you deem the water utility is in control of service lines as part of the Lead and Copper Rule, responsibilities such as repairing service line leaks and other breakages that happen, for example as during a recent freeze in his area, would then transfer to the utility.

Ms. Chard added that they are already seeing huge delays and 25% to 35% cost overruns with pipe purchase, delivery, and installment due to demand and suggested not shortening the 10 year timeframe. She recognized the need to take action and get lead out of drinking water. She suggested that instead of strictly focusing on EPA's drinking water regulatory authority there be some significant efforts with Code Council or individual state plumbing code agencies to remove leaded faucets that are in older homes.

Mr. Szabo followed up on Mr. Borman's comments related to private service lines, saying that it is an issue that his agency and many others across the country struggle with. He discussed trying to connect private wells impacted by PFOS and PFOA, saying that extending the water main may be the easy part, alongside working out federal and state financing, but they run into a grey area regarding who will pay for and maintain the private service line. He noted that there have been inconsistencies in how the state has viewed this and thought that, if replacement is required, suppliers across the country will need clarification on whose future responsibility it would be to maintain the line.

Ms. Betanzo thought that because of the control issue the lead service line replacement requirement will leave vast quantities of lead service lines in the ground by utilities asserting they lack access to portions that are under private property and expressed concern that the requirement to replace would be rendered ineffective. She thought that relying on trust that utilities will follow through is not enough, knowing that utilities could have but haven't been replacing lead service lines for the past 30 years. She suggested that EPA affirmatively state that water systems have control over all portions of lead service lines, since EPA, states, or utilities generally required or approved their use, retain physical access to them in an emergency, and can shut off water through the service line, ending service to the house.

Commenting on the deferral provisions, **Ms. Betanzo** verbally offered some data from Michigan. She looked at the household 0.039 trigger for lead service line replacement deferrals, using service lines—the known lead, unknown likely lead, unknown, and galvanized requiring replacement—as a surrogate since she did not find a clear definition of households in the proposed rule. Based on Michigan's initial

service line inventories, she found that 74 out of 275 Michigan water systems—about 25%--that reported having potential lead service lines would qualify for deferrals. Ms. Betanzo expressed concern that that's a lot of water systems and wanted to make sure EPA has and considers data.

Ms. Betanzo appreciated City of Columbus' comments about prioritizing water systems with greatest health risk and thought that if those systems—especially small systems—have a feasible total number of lead service lines then you can get through them. She concluded that especially if they have lead action level exceedances not deferring those and even having the earlier replacement deadline would be really appropriate.

Mr. Elmore supported comments that the 10 year replacement timeframe is feasible; he thinks it is reasonable, although not without struggles. He understood the comments on supply chain and all that's involved in lead service line replacements and noted that Wisconsin has a lot of experience with lead service line replacements. Mr. Elmore's first comment was that EPA should clarify what factors the state needs to or should consider when deciding whether it is feasible for a system to replace lead service lines at a faster rate; states need to know exactly what criteria should be used.

Mr. Elmore's second comment, related to inventory, was about identifying unknown service lines in the lead service line replacement plan. As he understands the proposal, if a line is listed as unknown or unknown material, that would be requiring replacement. He did not think it makes sense to have suppliers definitively define that a service line is or is not a lead service line, especially as they get towards the end of their replacement plan; if they are going to have to replace it anyway effectively that would require them to excavate twice, to visually confirm that it is a lead service line, and then, if they are not ready to replace at that time, excavate later to replace it. He concluded that the requirement seems unnecessary.

Mr. Elmore's third comment was that EPA needs to further define control. He highlighted that they don't want partial lead service line replacements; to date in Wisconsin they have had plenty of full service line replacements—not without effort to make sure they obtain full access, but they have gotten it done. Allowing an out in the rule that would allow utilities to say that they don't have control and so are not going to replace the line is a dangerous slope for him. He advocated emphasizing full service line replacement from the water main to the meter in the house. Although not sure how that should look in the rule, he is very concerned about the language on control.

Ms. Barney explained how based on her experience on the Navajo Nation she would have to ensure that the language is right in terms of control and ensure there is an understanding that there is concern with leaded pipes; that is one issue. She also advocated extending the timeframe for the work that still needs to get done for the full 10 years and longer if possible. Deferred replacement then would depend on the time extension that they could have. Ms. Barney closed by sharing that there are leaded pipes on the Navajo Nation, but a lot of it is getting replaced by other federal entities—so they are working hard.

Ms. Littlewood agreed that a timeframe less than 10 years is not feasible. She observed that the systems that can come into compliance quicker will do that, but she wanted to remind everyone that not every water system is a utility; many are owned and controlled by homeowner associations, and access to funding is difficult. Some systems do not have the experience a utility would have in handling a project of this size. Planning and permitting timeframes are out of the system's control, and some really small systems will not have access to the lower-cost supplies that a large utility would have and will be paying

premium costs to replace lines; cost overruns would be crippling for these small water systems. Ms. Littlewood thought that 10 years, and even more for some very small systems, needs to be maintained and re-emphasized that a shorter time period is not feasible.

Ms. Betanzo thanked Ms. Littlewood for an interesting perspective. She wondered how many of the non-utility systems have lead service lines and galvanized requiring replacement, saying that in Michigan the majority of systems that have lead service lines and galvanized requiring replacements are community water systems; a lot of them are municipalities. She suggested quantifying the impact of this on particularly small, particularly challenged non-utility water systems to make sure we are not extending deadlines for a group of water systems that might be a very small magnitude. There might be another way of handling them and making sure their needs are met.

Ms. Littlewood agreed that it needs to be quantified, emphasizing that the purpose of her comment was to raise the issue for really small systems that are not utilities. She provided an example, sharing that while Alaska does not have a lot of lead service lines, in her lead service line project inventory she does have one small water system, a homeowner's association, that has galvanized requiring replacements; she saw difficulties ahead there.

Ms. Daniels agreed with several members that 10 years is doable and probably the best that some systems will be able to do given all the reasons already mentioned. She observed that the LCRI is expected to be final before the key October 2024 inventory deadline for water systems to complete their inventory. A large number of water systems will just be completing their inventory in that timeframe because the previous LCRR rules never required a complete inventory. If water systems are gathering their inventory information or at least their first cut in 2024, 2024 will be the first time we will get a sense of the distribution of lead service lines. She added that we may not know for sure whether non-utility water systems have lead service lines until they look at their records and validate the information. Ms. Daniels thought it would likely have more to do with when the water system was installed, did it predate ordinances getting rid of leaded plumbing. Ms. Daniels observed that if the rule is final in 2024, there is a three-year deferred effective date to give states time to put those rules into place at the state level, so that the 10-year replacement would not begin until 2027 and would then continue to 2037. She stated that one of the challenges is that that window does not match up with the Infrastructure Investment and Jobs Act (IIJA) five-year funding window, which is through 2026. Ms. Daniels thought that the ability of water systems, especially disadvantaged water systems, to meet the 10-year replacement schedule could be dependent on continued funding for lead service line replacement beyond 2026.

Regarding Ms. Betanzo's concerns about the control aspect, **Ms. Daniels** thought that homeowners and water systems would be much more willing to accept responsibility for things that they don't own but have access to. She thinks that funding is a big part of that conversation. If there is available funding, especially for disadvantaged communities, then it becomes much more doable in terms of water systems taking on that responsibility for the purposes of the Lead and Copper Rule.

Ms. Daniels closed by reiterating that funding is key, she thinks 10 years is doable, and that shortening that will be challenging for many systems. She didn't think there will be systems that will wait 10 years if there is available funding, and those that can do it quicker will.

Locating Legacy Lead Pipes

Ms. Betanzo commented that records review needs to be included in the validation of accuracy of non-lead service lines, noting as an example that her third-party review of DC Water's lead service line replacement program inventory found that 20% of their historic copper sites that they had, based on their records review, were lead when they dug those up. She concluded that, even when there is records review, it is important to include those records review records in the validation pool.

Regarding two points along the line, **Ms. Betanzo** described Michigan's validation guidance that says three, maybe four points, and that's on the public and private side when excavating a curb box, checking inside the house, and the potential for a lead goose neck, with detail that a water system can assume that there is a lead gooseneck and not validate it, or they can validate that they don't have one while they do their inventory. She thought that, when doing just inventory or when verifying composition of a service line and potentially replacing it on the spot because it is lead, those are important points to check. She commented that the two-point validation is much better than the Lead and Copper Rule Revisions, so she commends EPA on adding it, but she would like to seriously consider more.

Ms. Betanzo found that the proposed definition of a lead service line does not clearly include any portion that is inside the house and contrasted that with long standing guidance to residents to check for lead where the service line enters the house. She commented that the definition of a lead service line has to include a portion of pipe that is visible inside the house, otherwise water utilities could say that they replaced all of the lead service line even if a resident sees lead in the service line where it enters their house. She explained that in Michigan the definition of a service line is to the first shut off valve inside the house or 18 inches, whichever is shorter, which accounts for checking the service line material in the house, properly validating it, and having information from a resident potentially as a validation point.

Ms. Betanzo discussed validation pools, sharing that they have been doing this in Michigan to meet various inventory deadlines. She has observed communities that started their validation pools with a random sample of service lines, but sometimes cannot get to the first address in the pool and go to an equivalent house on that block rather than the random number generated address; if doing that too often, it is no longer a random sample. She suggested ensuring a much larger validation pool and much larger random sample to help avoid moving from the random sample to a potentially biased sample.

Ms. Betanzo discussed the seven year timeline for systems on a 10-year replacement deadline, which concerned her because seven years is 70% of a 10-year replacement deadline. She first commented that the proposal is not clear on what you do if your validations unexpectedly turn up lead and that the remedy for what happens next has to be made clear. She asked what the trigger for doing something different would be, saying that to have confidence to accept records you have to be 100% non-lead in the validation pool and asking what do you do if not at 100%. Returning to the seven year timeline, Ms. Betanzo discussed how, if you are doing validations over seven years while replacing over 10 years, and in year seven there's a validation where you find lead and you were expecting non-lead, you potentially have to explore all of your lines categorized as non-lead and might be revisiting all of the neighborhoods where you've been doing lead service line replacement. Ms. Betanzo concluded that there's potential to have to completely re-start a lead service line replacement program in year seven. She recommended having that requirement much sooner than seven years and commented that the seven-year timeline is

not going to be useful for replacing lead service lines cost efficiently and efficiently meeting the 10-year deadline.

Mr. Elmore emphasized some of Ms. Betanzo's comments. He thought it makes sense to have more than two access points along the line, explaining that when he thinks of a service line, he thinks of the point in the home, points on either side of a curb valve, and the point where it connects the main in the street as probably the most important. He thinks two points is better than one, but that EPA should consider all four key points in a service line connection. He agreed that a seven year timeline for validations seems long when implementing a 10-year replacement plan if you determine in year seven that you have a lot more to replace. He thought that the proposal assumes that the plan is likely correct and that this is a final check and he did not think this will be the case, building on Ms. Betanzo's example in Washington D.C. to characterize the potential challenge. He thought that the seven years should be much less, maybe three years.

Mr. Elmore added a comment related to systems that may control the entire system, such as non-community water systems that own the well and the pipes connecting the buildings and homes to that well. When it is all connected, he thought that a two-point verification may not be necessary; specifically, if they own the whole portion there. He suggested thinking about how you treat non-community water systems in terms of verification and whether that should be the same criteria as with community water systems.

Ms. Chard shifted gears to discuss that in the proposal a connector, goose neck, pig tail, etc, is defined as not exceeding two feet in connecting the service line to the main. Looking at their systems and talking to others they have found that most of theirs are between the two to three feet range. She suggested that EPA change it to three feet.

Ms. Chard raised another issue, explaining that with the inventories being due in October 2024 and now adding the connector inventory, which is in 141.84(a), they are finding that their systems that did a good job and did not wait until the last minute did not necessarily include that in their inventories. She observed that it is not in the templates for small systems and said that they are seeing the likelihood of repeated work or additional resources having to be spent to include those. She noted that Oklahoma did not have a mandatory requirement for an inventory until this rule, so their systems that did it feel like they are being punished by the proposal. Ms. Chard shared that a lot of the comments that they are getting from the regulated community in her state are about this.

Regarding communities past the master meter, **Mr. Szabo** pointed out that they are not his utility's direct customers; the utility has no relationship with them and no records. He thought that asking drinking water suppliers to engage them and determine what service they have is unrealistic and a potentially extremely burdensome workload, and that there has to be a better way to address that issue.

Mr. Szabo agreed with Ms. Chard's comments about adding the connectors, noting that many suppliers, including his utility which is about two-thirds through 400,000 accounts, have been well on their way with getting the inventory completed over the last 14 to 16 months; adding the connectors is going to be problematic from a data-collecting standpoint.

Ms. Daniels agreed that public health protection really hinges on a complete and accurate inventory and that validation is really key because records are only as good as subsequent records. If tap cards, for

example, exist from 40 or 50 years ago, what has happened since then? She agreed with Mr. Elmore that seven years may be too long to wait to complete those validation steps. She suggested maybe five years so that half the time would be remaining to make course corrections if needed. She also thinks that systems using modeling instead of physical records or physical inspections also need to look at validation. With modeling systems are trying to make assumptions for an entire section of a neighborhood based on confirming a couple of homes within that neighborhood.

Ms. Daniels also agreed with the comments made about the lead connectors. She observed that they were not part of the LCRR, and were not part of templates that states provided and water systems are using. She thought that will be a challenge and expressed the need to recognize that there will need to be catch up now that lead connectors are being added.

Ms. Daniels discussed the additional records that water systems need to maintain--not just the inventories, but the provision that requires water systems to identify a state law, ordinance, or tariff that prevents them from replacing the customer's portion of the line. She thinks that it is going to be challenging for state drinking water agencies to track local ordinances and local tariffs. She wondered if EPA could consider a public water system certification form and self-reporting to the state rather than making the state responsible for gathering the local ordinance information.

Mr. Elmore thought that the proposal needs to clarify the definition of service line. He believes that the proposed LCRI defines the service line with respect to the water main connecting to a building inlet and asked whether the definition includes lines that connect one building to a water source like a well; from one building to another; if a set of buildings are in series, is that a service line between buildings that are served by the same water source?

Ms. Betanzo viewed the validation pool as an opportunity to take everything off the table that is not lead and commented that validation has to be really strong and have the data to support that. She described working with many communities in the Midwest that have a lot of lead service lines where they found that excavating every lot going down a block to find out whether or not lines are lead and replacing as you go is thorough, cost-efficient, and supports economies of scale. She perceived balanced and opposite spectrum concepts that check everything and expressed interest in knowing whether there is a cost analysis to be done to look at the cost efficiency of doing validations in a given area to ensure 100% accuracy versus spreading it out over time and scattering it across the water utility. She envisioned a place where your expected number of lead service lines might make it more efficient to validate as you go and then there's a place where it is scattered enough that it is no longer cost-effective to do that. She did not know what that analysis looks like, but thought it is worth considering to inform the final rule.

Ms. Daniels recognized that the LCRI will be going into effect the same time as the federal PFAS rule. Having systems do inventories by October 2024 assumes that the inventory will be static or changing slightly each year thereafter. She described how in their experience several water systems with PFAS contamination abandoned their sources and installed interconnections with nearby water systems. Inventories for systems and the workload to keep them current may change as a result of the PFAS rule as additional consecutive systems could be created. She noted that it is highly unusual to have two major rulemakings that overlap the same compliance dates and reminded everyone how that impacts workload, tracking information, and water systems' abilities to stay on top of changes to inventories.

Ms. Barney added that there is a provision in the proposal that talks about installing treatment and said that if we are looking at PFAS or even microplastics in the future she thinks the industry needs to develop an at-home treatment system that may remove as much as possible.

Ms. Chard asked whether there would be an opportunity to talk about corrosion control or public education language. **Ms. Holsinger** affirmed that EPA welcomes any feedback on the other parts of the rule not highlighted in the key requests and **Ms. Daniels** confirmed that there would be opportunities for members to bring up other points they would like to make.

Dr. Chang shared some thoughts and perspectives on the LCRI based on his experience in the health field, emphasizing that this work and prevention of lead poisoning are very important to CDC, while recognizing successes in reducing exposure to leaded gasoline or lead paint. He noted that CDC's programs are more focused on the health side, but that being said, primary prevention like the work here is a lot more impactful for the general population. His personal experience with medical toxicology, treating children and adults with lead poisoning, is that while earlier the acute cases were seen more, we are now focusing more on lower level exposures, making this work really important. His program collaborates with state health departments and environmental health departments, so any way that they can help with these projects and initiatives, they would be happy to.

Improving Tap Sampling

Mr. Jones thought it is relevant to include the galvanized premise plumbing and treat them the same, especially if there is any possibility of being exposed to lead, as a possible acceptor of lead deposits. He didn't necessarily know if that needs to be included in the regulation. It could be a best practice. He thinks the sampling protocols, locations, and times right now are adequate, but reiterated that this could be included as a best practice and he would support that.

Ms. Chard raised development, review, and approval of sampling plans as a workload and primacy agency conversation, clarifying first that she agrees with the need for new, updated sampling. She described challenges in her state of having all systems submit new sampling plans to the primacy agency at the same time with respect to numbers of systems, staffing, timing, and the need for back and forth, particularly with small systems, and noted the volume of trainings that her agency does to help with that across the state. She suggested that if there is a way to stagger or tier the timing, either by size or allow the states or primacy agency to figure it out, that would be very helpful; and highlighted wanting to move as quickly as possible from implementation planning to actual implementation, but in a fair way, as implementation is what protects public health.

Ms. Daniels raised that, as mentioned before, this is the only rule where we have to rely on homeowners to collect samples. With every other drinking water rule water suppliers, labs, or trained and approved sample collectors collect the samples. She thought that this component of the rule is going to be the biggest change for homeowners as we are going to first and fifth-liter samples. She emphasized the importance of having clear instructions and great trainings that the water systems can provide to their homeowners to make sure sampling is done correctly. Thinking about the various iterations of the Lead and Copper Rule, a lot of homeowners are probably not aware that the rules have been changing, but certainly the first time they are being asked to take samples differently it will be a big deal for them. She concluded it will be important to pay attention to that aspect of sampling.

Ms. Daniels also mentioned the issue of including schools and child care facilities in the rule, because there is a component tied to sampling. She fully agreed that schools and day care centers absolutely need to be protected from lead because they are the target age group where lead can do the most harm. She wondered, looking at the rule as a whole and at the workload and new requirements, whether there is an opportunity to tap other federal agencies to implement programs for schools and child care facilities, noting that departments of education and departments of health and human services interact with schools and child care facilities on a continuing basis because they license the facilities or otherwise approve them. In the case of schools, they also provide grants for other programs. Thinking about the health and welfare of children, she always thought that lead is only one component of something that should be a comprehensive look at these facilities that would include mold, asbestos, and radon. She wondered whether EPA has exhausted all other options to maybe have more appropriate agencies oversee lead in schools and child care facilities along with a more comprehensive program for health of our kids. She added that she raised the issue because many provisions are changing in this rule alongside a PFAS rule and we will be ramping up water suppliers' roles and states' roles in overseeing sampling at schools and day care facilities. Ms. Daniels also raised that there are so many differences in how that sampling would take place. One of the biggest concerns is that sampling at schools is different than compliance sampling at other connections across the distribution systems. She pointed out that they are talking about the difference between first and fifth-liter samples, whereas schools are supposed to sample under the 3Ts guidance, which is a totally different method of taking samples; water suppliers that are responsible for sampling at schools and daycares may or may not be aware of those sampling protocols. Ms. Daniels also mentioned that more and more schools are putting in water bottle filling stations and in some cases are taking advantage of Water Infrastructure Improvements for the Nation (WIIN) school grants in terms of funding. She pointed out that as we see more and more bottle filling stations put in, it is not clear where that sampling should take place. For example, if a school has replaced all of their drinking fountains and now uses bottle filling stations, where exactly do you sample under the school sampling requirements for the Lead and Copper Rule Improvements? She thought that sampling is problematic. She also raised concerns about the comingling of data, explaining that school sampling should not be comingled with Lead and Copper Rule compliance samples and pointing out that laboratory workload, where all of the data will be sent for analysis, will expand tremendously with these new requirements. She added that some states already have school sampling programs. It will be up to the lab to figure out what is compliance data, what isn't, where do the sample results go; and how do we make sure that the data is not comingled, for example, with action level data. She concluded that there are some challenges with sampling that we continue to look to water suppliers to do that maybe could be done under another federal agency or sister agency.

Lastly, **Ms. Daniels** flagged the second bullet on the slide about alternate sampling protocols and said that to her that is a bit challenging because random, daytime sampling may or may not meet the first draw criteria, so, she is not sure what that would show us. She explained that if we are looking at monitoring to assess CCT performance, she still continues to think that compliance and tracking of water quality parameters (WQPs) that are associated with optimized treatment is the best way to do that; if you are doing pH adjustment, you should be tracking pH; if you are using something that is also adding alkalinity, you should be tracking alkalinity. If you are using an inhibitor, you should be tracking those inhibitor concentrations. She stated that utilities that do not pay attention to WQPs throughout their entire distribution system have a much harder time maintaining CCT and a much harder time maintaining and controlling lead solubility; if it comes to assessing CCT performance, there should be

more emphasis on WQP monitoring with more locations and more frequency, because it is really all about controlling consistent water quality throughout the entire distribution system. She added that members who were on the microbial and disinfection byproducts (MDBP) rule working group know what happens with a large distribution system in terms of long residence times and what happens to water quality when there are water age issues. She concluded that for CCT performance we probably should be focusing more on WQPs.

Mr. Szabo seconded Ms. Daniels on the issue of sampling at schools and child cares and commented further, emphasizing that this is extremely problematic for his service area and suppliers across the country and that he does not think it is very clear. He described a broad scope of sampling at his utility and contrasted adding burden to suppliers when there are other likely state divisions or agencies that are better equipped to do this work in licensed day cares and certainly schools. He was not sure if EPA has the legal ability to mandate this testing with those groups; he thought it very well may be. He also expressed concern about comingling of data, agreeing with Ms. Daniels, and hoped this would be thought out before the rule is approved.

Mr. Elmore explained that any lead in the service line should be replaced and if there is galvanized downstream of any lead at any point that should be requiring replacement. Regarding alternate protocols, he did not have enough information to determine what the tier designations should be. For other protocols he thought that there is a need to think about the number of sampling sites that are required and expressed concern that, if a system is kept on a standard number of sites rather than reduced, then systems, if they don't have applicable tier 1 sites, will potentially dilute sample results by taking additional samples that may not be highest tier; they may be tier 2 or other types of sites, which ultimately would reduce their 90th percentile level and not achieve adequate or as good public health protection. He thought that the criteria for invalidation of tap samples that are taken as a part of compliance sampling need to be very clear and is not convinced that the proposed LCRI corrects that problem. He pictured it leading to difficult situations where the water system may claim that a sample should be invalidated; without clear criteria the state may be pushed to invalidate based on some technicality in the tap sampling. He particularly expressed concern and wanted clarity regarding excessive stagnation time as a reason for invalidating a sample and suggested that the easiest solution would be for EPA to require stagnation time to be recorded for every tap sample taken. Lastly, Mr. Elmore said that he did not see how random daytime sampling would work and that we want first draw samples. He thought that tap sampling can be a factor in assessing CCT performance but agreed with Ms. Daniels that the optimal water quality parameters is a better check; keeping track of and having requirements around those are important. He explained how in Wisconsin they have had some success with sequential samples – say, 12 liters in succession -- taken in order to check effectiveness of CCT.

Ms. Betanzo verbally shared data from a paper she had published a few years ago with the first year of compliance sampling under the revised Michigan Lead and Copper Rule. They had about a 3:1 ratio of lead action level exceedances in systems with lead service lines with systems that started taking fifth-liter samples compared to non-lead service line systems. Looking at 90th percentiles in the State of Michigan, if using a 10 part per billion lead action level they would have 43 lead action level exceedances, and 23 of those would be at systems collecting first and fifth-liter sampling, approximately half. Ms. Betanzo thought it could mean a few different things; she would like to think it means that taking that fifth-liter sample has resulted in better corrosion control treatment at the lead service line systems, bringing down the lead levels so that there aren't so many action level exceedances at the lead service line systems

compared to non-lead service line systems. She pointed out that she has not presented this as percentages of total system sampling, but there is still a significant number of lead action level exceedances at those that are not taking fifth-liter samples; and added that it drives homes the importance of good corrosion control to bring down the lead levels at those systems without lead service lines. Ms. Betanzo found that there are a lot of things to consider when she looks at the implementation burdens of adding in first and fifth-liter sampling, and new sampling plans. Thinking about the whole rule, she was thinking about where to put the effort in implementation to get the greatest public health benefit. She concluded that comparatively speaking she is really interested in making sure that lead service line replacement requirement is 100% effective and we are doing everything we can with corrosion control treatment to bring lead levels down as low as possible, especially when we are talking about the remaining first liter samples.

Lowering the Lead Action level

Ms. Betanzo expressed enthusiasm that the proposed LCRI would reduce the lead action level to 10 parts per billion. She would like to consider whether the 90th percentile is the right metric to be using to determine whether or not you have a lead action level exceedance. She described seeing in many locales lead action level exceedances in places where they are meeting the lead action level and yet they are up to 10% of sampled homes that have any level of lead, including hundreds of parts per billion. She strongly conveyed that she believes this is not taken seriously. She pointed to the preamble of the LCRI as affirming how lead levels vary and commented that we know that individual compliance sampling results over the lead action level are indicative of other occurrences that happen every day in the water system. Ms. Betanzo verbally shared data for a specific example in Benton Harbor, Michigan, which had six consecutive lead action level exceedances. She described an EPA response that all of the lead service lines were removed in Benton Harbor and compliance sampling at non-lead service lines afterwards resulted in a 90th percentile of 1 part per billion, which she characterized in positive terms. She also saw individual compliance sampling results showing that there were still homes with 28 parts per billion, which she noted was not in the press release and represents water that people are drinking in their home. She emphasized her concern that measuring compliance at the 90th percentile level is allowing people to drink lead in their water, which will never get addressed because it will never get triggered with a lead action level exceedance. She shared that currently there are approximately 40 water systems in Michigan that have a 90th percentile greater than 10 parts per billion, but there are 140 community water systems with at least one sample greater than 10 parts per billion and expressed concern that measuring compliance with the lead action level that's 100 water systems that would never be triggered into additional corrosion control or additional public education; there would be nothing ever to remedy lead exposure for that 10% of residents in those systems. She stressed how it is recognized that there is no safe level of exposure to lead and yet that is allowed to continue. She commented that she would like that to not continue with the Lead and Copper Rule Improvements and said she would be very interested in exploring using the maximum lead level detected if that's above the 10 parts per billion to be the lead action level exceedance, saying that that trigger is needed for new provisions in the Lead and Copper Rule Improvements to kick in, as a true incentive to optimize corrosion control, and for public education. Ms. Betanzo summarized that the whole reason for doing this is to minimize lead exposure, saying that as long as we allow 10% of the population to get any level of lead whatsoever in their drinking water, we are not doing anything to protect public health.

Mr. Elmore supported reducing the action level from 15 to 10 ppb and removing what was the trigger level in the LCRR. He thought that the highest lead results should be used in determining whether there is a lead action level exceedance, regardless of the sampling site tier or whether it is a first or fifth-liter sample; otherwise it will complicate compliance determinations and not be indicative of the levels found in the system. He commented generally that the rule's level of complexity, which he saw as already a problem, has not been reduced and that the LCRI is actually more complex. He called on EPA to continue to try to clarify and simplify requirements and to provide adequate implementation support and guidance to states.

Ms. Daniels agreed that she, too, is supportive of lowering the action level to 10. She emphasized that, although the original trigger level did come from some states and ASDWA and at the time seemed like a good idea to ramp up public health protection, getting rid of the trigger level streamlines the rule. She noted that we are not actually implementing the LCRR, so comparing the proposed LCRI to the LCRR is kind of odd, and agreed with Mr. Elmore that comparing the proposed LCRI to the original Lead and Copper Rule is still more complex. She also expressed her thought that the 90th percentile is the difference between the treatment technique and the maximum contaminant level (MCL). When looking at a treatment technique, it is not unlike, for example, the requirements for turbidity in some of the Surface Water Treatment Rule requirements where you are relying on the statistical look at public health protection and whether you are meeting it 90% or 95% of the time, and applying that to the entire distribution system. Ms. Daniels expressed that she is actually okay with that because this is in the context of also mandating lead service line replacement. Before, an action level exceedance was what triggered lead service line replacement, so that number was really important for lots of different reasons. Ms. Daniels expressed that she is okay with going down to an action level of 10 ppb; that is definitely improving public health protection. She stated that when you add on that the proposed LCRI would also mandate lead service line replacement, there are further protections throughout the entire rule. She added that she believes that those homes that are above 10 would still get a consumer tap notice; the people who need to get that information to take steps to protect public health will be doing that. Ms. Daniels pointed out that even though the individual homes maybe are not included in a press release about an action level being met, those homes are still getting direct notification from the water system with steps that they can take; and add to that the whole lead service line inventory aspect, whereby homeowners are also getting notified when they have lead service lines and also getting notified when that service line is unknown. She concluded that she thinks that added together all of the components of the proposed LCRI improve public health protection. She said that she thinks that going from 15 to 10 is great, but she also thinks you need to think about all of the other improvements in the proposed rule that really are improving public health protection, even for those homes that are above 10 because those folks will get that information.

Ms. Betanzo appreciated Ms. Daniels' perspective and agreed fully that these are all incredible improvements. She verbally offered data to give some idea on scope and who is being left out, sharing that seventy-six of the 140 systems that have at least one sample greater than 10 part per billion in Michigan are water systems that are not taking fifth-liter samples; in other words, are pretty sure they don't have lead service lines, so the lead service line replacement requirements will do nothing for them. Ms. Betanzo expressed her concern that there is no trigger to do anything for the residents who consume water from those water systems. She discussed how public notice will go to the houses that were sampled ,observing that we don't know where the other homes are located that are likely receiving

the same water quality and saying that represents people who will never have the opportunity to know since the notice goes only to houses that were sampled.

Ms. Daniels said that she really appreciates the data and because some states are ahead of EPA with collecting first and fifth-liter data she thinks that is going to be great data for folks to analyze. She added that the other important point here is that the public needs to understand that removing all of the lead service lines does not mean we are lead-free; we need to make sure the public does not believe that is true. She thinks there's always going to be a place for corrosion control treatment because we are still going to have plumbing, fittings, and fixtures with lead. She said that she does not think that we know yet or talked much about what life looks like after the lead service lines are removed; as this rule continues, and certainly as we get a better sense of how many lead service lines are out there, and how that compares to the first and fifth-liter data, it will give us a much better picture. She concluded that the only thing she can say for sure is there is going to be another iteration of the Lead and Copper Rule, at least one more, because there's life after lead service line replacement. We have to figure out what that looks like. She emphasized that she does not want the public to get the sense that we are solving 100% of the lead problems by eliminating the lead service lines. She agrees that lead service lines are a huge component and are definitely associated with some of our higher lead levels, but that is not the only source of lead. Ms. Daniels stated that we all have to make sure that is a component of how we communicate with this rule.

Strengthening Protections to Reduce Exposure

Mr. Goldberg noted that topics not included in the key requests for comment are also open for discussion.

Ms. Chard commented that making daycare and schools testing data publicly available should be a licensing agency rather than a public water system requirement. That led into her comments on record keeping and data management. She stated that this is just another piece of data management and asked if community water systems are required to make this information available what kind of certification would that be, or would it be another data element that has to be managed? She discussed that good data is critical to state decision making on water systems operations and compliance determinations and expressed concerns that the federal data system is not sufficiently equipped to handle most of this data we are talking about, emphasizing that it will be important for EPA to complete SDWIS modernization especially for states that are reliant on the federal data system.

Under the public education topic, **Ms. Chard** raised questions about the meaning of the term *a large proportion of … consumers* from 141.85(b)(1), asking is it a majority, is it residents, is it those who live in or visit a building. She emphasized that that will be important when we talk about EPA's language to take reasonable steps to provide meaningful access to limited English proficient consumers; we have to know what these terms mean. She also discussed how some states know they will need assistance to make translation available and commented that anything that EPA can do to make that more meaningful is going to be very, very helpful moving forward.

Ms. Chard recommended that EPA make sure the language regarding one-time re-optimization of corrosion control is clear so that any time it is appropriate based on change of water source, treatment, or some other change that may make re-optimization appropriate -- and not just that they have done it before so they don't have to do it again. She advised that EPA be very clear that water quality

parameters are very important; systems should continue to use WQPs to determine treatment and system maintenance. She also wanted to have the opportunity to forgo pipe loop studies when a system could just adjust treatment and immediately improve performance and contrasted that option with the time and expense of an additional pipe loop study.

Mr. Borman said that if systems are required to take additional steps then the entire tool box should be open to them. He offered utility insights about how he would deal with the highest levels first and then work back down doing corrosion control or adding orthophosphate to take care of the entire system as they work their way down from the highest sites. He thought that flexibility would be key for EPA to include in that, adding that they would have to do something if they exceed the level multiple times, a big indicator you have to do something. He thought that the full tool box should be open to them, at least to get the system into compliance, and raised the issue of simultaneous compliance with other regulations and needing to find the optimal treatment or solution that will fix the problem – emphasizing that the problem has to be addressed.

Mr. Borman completely agreed with allowing systems up to 10,000 to be eligible for small system compliance, saying that 10,000 population systems are still small systems in the big realm of this and should have the same flexibility and tools that are available to very small or even just small systems with population 3,300. He did not think that the rule needs to require information to be made publicly available, explaining that this is already addressed through freedom of information requirements and practices at state and water system levels.

Mr. Borman continued to express concern about the control aspect and emphasized that he does not want to see that aspect of the rule open the door to other aspects concerning service lines. To Ms. Betanzo's point, he noted that a shut off would be done at the meter; the utility controls the meters. He concluded that he is fine with the service line aspect if it only applies to control as it applies to this rule and lead service line replacement or galvanized replacement. He did not think that stating utilities have total control of the service lines and leaving it at that should be part of the rule, as that would open a big pandora's box for all utilities.

Mr. Elmore thought that the definition of a small system, which he generally thinks is a problem across the board, should remain consistent in the rule and be 3,300 persons. He clarified that he does not disagree with comments that flexibilities should be allowed up to 10,000, but that we should be consistent with the small system definition, which he would say should be 3,300 or less and non-community water systems.

Mr. Elmore agreed that school and child care facilities should be regulated and addressed by other agencies, noting agencies that are in Wisconsin and explaining how any requirements directly for a school or child care facility would be difficult to implement because state drinking water programs regulate the public water system, not schools. He recognized that you could have regulations that require the public water system to do something with schools and daycares, but that then puts the state a step removed from the final result and entity. Mr. Elmore concluded it works best if these sorts of requirements, while important, are handled by other agencies and with other regulatory mechanisms.

In terms of actions that systems will be required to take with multiple action level exceedances, **Mr. Elmore** commented that states should be allowed to modify a system's existing corrosion control treatment, which could speed up improvements to the water quality, rather than, say, waiting two years

plus for a system to conduct a study that would then lead them towards a change in their corrosion control treatment. He thought that if the treatment changes are consistent with EPA-optimized corrosion control treatment guidance that the state should be allowed to modify corrosion control treatment requirements in order to get an improvement without performing a study at the system.

Ms. Betanzo shared Michigan's "filter first" approach to drinking water in schools and child cares. This is a requirement going into effect this year for schools -- not for water systems -- to install filter stations or faucet filters that are certified to reduce lead in all taps intended for drinking water use in schools and to mark taps that are not drinking water use; and to have a filter maintenance program and annual sampling to ensure that everything is working as intended. She observed that the program has been implemented in the school district where she lives and her children attend school, and since installing the filter stations in all the schools they haven't had a single detection of lead in drinking water. Ms. Betanzo observed that the big challenge is that we want high quality drinking water in our schools and child cares, and EPA has the authority to regulate water systems. She wanted EPA to be aware of Michigan's strategy and figure out how it could be a model to do more to ensure very low lead in water in schools and child cares, without placing the burden on water systems for the reasons already shared.

Ms. Betanzo pivoted to corrosion control treatment, describing her concern that the corrosion control studies that would be triggered in the proposed LCRI look more like a paperwork exercise, rather than working towards the goal of getting lead levels as low as possible and ensuring that that corrosion control can be consistently maintained in the water system. She thought that, to get to the goal of low lead level outcomes, appropriate incentives to ensure study quality might be more important than being super explicit about what the studies should include. She suggested, while the studies are happening, requiring filters with a single lead action level exceedance, which she expected would be a very strong incentive for systems to use corrosion control. She was concerned about the potential to waste time, money, and public health protection opportunity with the corrosion control studies, especially when doing pipe loop studies on lead service lines while removing them. She pointed to Denver's lead service line replacement program -- where they proactively provided filters to all the lead service line, galvanized, and unknown service line homes while they optimize corrosion control treatment for premise plumbing sources of lead -- as an approach that puts public health protection first and is not delaying public health protection for a corrosion control study. She acknowledged that costs a lot, but thought that if the rule has the right incentives in the right places, we can do a lot to reduce exposure to lead in drinking water.

Ms. Littlewood felt that EPA's current small public water system definition is population-based, not connections-based, and that 10,000 people calculates out to a far smaller number of service connections, depending on population density. She added that EPA currently broadly characterizes systems serving 10,000 or fewer customers as small systems, and public water systems that have populations of 10,000 all the way down to 25 deal with many of the same economic problems. She advised that keeping the accessibility to the small system compliance flexibility provision for systems with populations up to 10,000 is very important saying that we need to give all these systems the best possibility of achieving compliance and public health.

Weighing in on corrosion control, **Ms. Littlewood** emphasized the need to be as flexible as possible and cited the need for water systems to be able to move as quickly as necessary. She noted that in her state

systems are not allowed to make broad changes to corrosion control treatment without going through private engineering and then additional review by the state.

Ms. Daniels thanked Ms. Littlewood very much and jumped in with a couple of thoughts while waiting for members to gather their thoughts, saying she is probably going to come down on the side of keeping it at 3,300, the reason being: What are the options and how do they apply to systems that are larger than 3,300? Her understanding with the small system alternatives is that we have point-of-use devices or we have removal of plumbing materials like premise plumbing, fittings, and fixtures. Those compliance alternatives become incredibly challenging, first for water suppliers to do those things when we're talking about ownership and control, and also very challenging for states to oversee those kinds of alternatives. She absolutely understands that EPA is charged with coming up with flexibility for small systems, but she also thinks there is a threshold under which you can actually do this and have it be effective and implementable and able to be tracked. She thought that in some cases states also are limiting even the use of point-of-use devices to maybe systems that only have a couple of hundred people, because of the very things that she is talking about in terms of how challenging it is to actually implement those provisions and ensure maintenance and replacement of filters and so forth. So she did not think those two options work well for systems serving up to 10,000 because she does not think there's any way that water systems could actually effectively do and manage that, and she certainly thinks states couldn't track it. 3,300 makes the most sense because that is the more typical definition of a small system. She thought that 10,000 came out under the Surface Water Treatment Rules, but that the Lead and Copper Rule has always recognized less than 3,300 for small systems. She thought it would be challenging to try to expand that again. She also discussed that, again, as already mentioned several times, it would be really great if we could make some other agency responsible for overseeing schools and daycare facilities, for lots of different reasons so she just reiterated that thinking. She recognized that the Council already also talked about the challenges with optimized corrosion control treatment and the things that are triggering re-optimization, and that Ms. Chard mentioned we really need to make sure that the rule is clear on that; but that she would say, even outside of the rule construct, we already know in terms of simultaneous compliance that rolling out the PFAS rule at the same time as rolling out the LCRI in and of itself will trigger a look at treatment. And so we have those catch-all's in the regulations that talk about anytime you change sources, change treatment or, in some extreme cases, communities abandon their systems and become a consecutive. That's also going to trigger the need to go back and revisit lead and copper sampling and also corrosion control treatment. So, she thinks that we also need to make sure that we continue to properly train both water systems and states to make sure that everybody understands how you look at simultaneous compliance and what kind of an analysis you need to do to ensure that whatever that change may be isn't adversely affecting corrosion rates.

The last thing that **Ms. Daniels** mentioned is that it's not clear to her where we stand with authority to require risk mitigation measures, noting that the discussion started off the first topic with lead service line replacement. Risk mitigation measures are tied to anybody doing lead service line replacement or even disturbing the lead line; for example, if they're doing potholing or some of the other things to try to identify lead service lines. The risk mitigation measures are not part of the original Lead and Copper Rule, and if the LCRR is not in effect, what authority do states have to require risk mitigation, understanding that systems are probably going to try to take advantage of the IIJA funding now, as opposed to waiting until 2027, because the money is available? She wants to make sure that EPA is clear on what authority states have to require risk mitigation during lead service line replacement. Is that

somehow attached to IIJA funding, and is that sort of how we require it? Because again, that ensures that while pipes are being replaced, those homes are being protected from increased lead levels. It's not clear to her if risk mitigation is covered or not because of the things that are going to be sort of in limbo until LCRI is finalized and understanding that LCRI has a deferred effective date of three years.

Looking at child care facilities, **Ms. Barney** described decisions that her program made including having the school be in compliance with the Lead and Copper and not the 3Ts requirement, which she found a bit confusing; and noted the difficulties of explaining what an action level is and how it impacts children. She agreed that other entities should be responsible for the child care facility, adding that they still went out and did sampling at child care facilities and make the information known; and had asked the major utility on the Navajo Nation to include a child care facility within their sampling protocol.

Ms. Barney emphasized the need for as much regulatory flexibility as they can have in terms of timelines to do the work and in terms of small system compliance. She highlighted that there are challenges with alternate sampling protocols, for instance difficulties with an operator taking samples at a school that had automatic dispensers at the fountains, and the time that it takes to ensure that operators understand what they're sampling for and how to collect samples. She added that small systems really do need to comply with the Lead and Copper Rule and talked about adjusting pH to control corrosion at particular facilities.

In terms of generally strengthening protections to reduce exposure, **Mr. Elmore** was concerned about an option in the proposal that would allow water systems to delay optimized corrosion control treatment until after the system has replaced all its lead service lines and galvanized requiring replacement service lines. He noted that there may be situations where action level exceedance results from a water system are based on the first liter results, indicating premise plumbing or faucets as the cause, and that lead service line replacement in general wouldn't correct that problem. He thought that action would need to be taken earlier and optimized corrosion control treatment installed to correct that particular problem. It seemed like a small flaw in the proposal with respect to reducing exposure.

Ms. Betanzo returned to an earlier topic, first saying that she heard ASDWA, AWWA and NDWAC members' comments and she agrees that simplifying implementation is critical to public health protection with the LCRI. She revisited her comment that to make this work a lead action level exceedance has to have a meaningful intervention for protecting public health and has to incentivize water systems to be as proactive as possible to first prevent and then have a meaningful response to the lead action level exceedance. She advocated that having filters be mandatory with the lead action level exceedance would be an appropriate incentive for both public health protection and for avoiding the exceedance in the first place and also that a lead action level exceedance should be a trigger for increasing the pace of lead service line replacement if a water system has a deferred schedule. She added that even if the system does not have a deferred schedule it might be worth exploring whether there is an opportunity to speed up replacement.

Ms. Betanzo voiced concerns that a consecutive system that does not have its own treatment can have lead service lines and have a lead action level exceedance; but the responsibilities of the wholesale system that is providing the treated water are unclear and have been implemented inconsistently. She explained that she has seen many examples of this play out among systems in the Detroit metro area that buy water from the Great Lakes Water Authority, which she estimated has a service area that covers about 4 million people and, by her estimates from lead service line inventories, maybe up to around

300,000 lead service lines. She explained that since there is no regulatory trigger to evaluate corrosion control treatment at the wholesale system– which she does not see has changed in the proposed LCRI – then huge populations do not benefit from improved corrosion control and further noted, in talking about the limitations of the rule, that there is no regulatory trigger that applies whenever there is a lead action level exceedance at any of the Great Lakes Water Authority's consecutive systems. Ms. Betanzo wanted to be clear that this needs to be addressed in the rule.

Ms. Betanzo appreciated the proposed LCRI focus on and new proactive requirements to address lead, and discussed that there are no targeted copper sampling provisions. She stated that the greatest risk of copper exposure is from new installed copper and saw a built-in opportunity in the LCRI as water systems would be installing new copper pipe that she thought would need to be monitored for corrosion effects when newly installed. She suggested having a compliance sampling pool for newly installed copper when lead service lines are replaced and hoped to see that resolved in the final Lead and Copper Rule Improvements.

Ms. Betanzo was concerned that the school sampling requirements in the proposed LCRI are not scientifically defensible and that the results could be easily misleading, misconstrued, and misinterpreted. She thought that the requirements are a waste of money and an implementation burden, with a potential negative public health result. She strongly suggested doing something different because it's going to take a lot of attention away from public water systems improving corrosion control and removing lead service lines. She thought that doing the small sample of school water will not tell families and children what they need to know about lead exposure in their schools.

Ms. Betanzo talked about public education and protection from lead in water, first noting that she spoke earlier about the limitations of using the 90th percentile to determine compliance with the lead action level and how it leaves an unknown 10% of the population always at risk of exposure. She commented that as long as we use the 90th percentile all of our "right to know" reports, public notifications, and public education materials need to include language that is clear about the possibility of lead exposure from drinking water, even when the system as a whole is in compliance. She perceived that no information is available for those 10% of households about the potential for lead and that they are repeatedly assured the water is safe because the system is in compliance, even though the data shows a different outcome. She recommended that the information include annual messaging about the risks of contamination from lead service lines and also from lead plumbing, adding that first liter sampling data in Michigan water systems that do not have lead service lines show how ubiquitous that is and why messaging needs to be clear. She advised that public education include information about the effectiveness of lead-certified point-of-use filters as a way for families to reduce lead levels in their drinking water; and that EPA should forbid messaging that suggests that tested lead levels below the action level are safe and should always emphasize that there's no safe level of lead exposure. She elaborated that messaging to consider flushing your water before you drink it and always use cold water is important, but we know that lead-reducing filters are effective and should be clear about them as a sure bet intervention for providing public health protection in the home, especially a home that may be at increased risk of lead in the water. She suggested that the public education materials required since the original Lead and Copper Rule have been misleading and incomplete, leaving a large portion of the population unprotected because they lack good, clear information about how to reduce their risk of exposure to lead in drinking water, and described how this makes it difficult for people to know what to

do. She concluded by saying that it's not okay to put residents in the position of trying to guess what their water system is telling them about their water.

Ms. Daniels offered remarks while giving Council members an opportunity to gather any remaining thoughts, starting with the issue with consecutives to follow on some of Ms. Betanzo's comments. She first clarified that her perspective is Pennsylvania and what they have done. Consecutives have always been considered to be their own water system. They're responsible for complying with all of the rules just like any other water system. Pennsylvania definitely has had situations where consecutives exceeded the action level, even if the wholesale system didn't. Obviously, they would try to have the two systems work together to see if there was anything the wholesaler could do in terms of water quality and water quality parameters, but ultimately if the selling system wasn't exceeding and wasn't going to change treatment, then yes, the State had to require the consecutive to install treatment, and Pennsylvania does have consecutives with their own treatment. Ms. Daniels said that she was wondering, though, whether EPA could address the concerns with consecutive systems by considering a renewed focus on WQPs. She previously mentioned WQPs a couple of times and how important they are. The Lead and Copper Rule relies on corrosion control treatment as a very important component of the treatment technique, and while we can't sample every tap for lead and we don't have continuous sampling for lead, what we do have are WQPs; and if the appropriate work was done to show that treatment can be optimized at a pH of "X" or an inhibitor concentration of "Y" then maybe what we can do is really make sure the WQP requirements are as strong as they can be. And again, she noted that one of the things that they have often thought is that monitoring should be more often, in more locations. She suggested that maybe we need a definitive requirement for a WQP monitoring plan so that water systems are taking those locations into consideration. For example, maybe we need to make sure there's a WQP monitoring location near schools. Thinking back to what we did with the MDBP rule, she posed requiring wholesalers, for example, to monitor at a tap as close to a meter pit as possible so that they're ensuring that they're meeting WQPs throughout their entire distribution system, including the water being delivered to the consecutive system that they're selling their water to. So, she thinks there could be some things done with WQPs to ensure that wholesalers are doing everything they can to control water chemistry within their systems and make sure that the water going to that meter pit meets WQPs.

Ms. Daniels also thanked Mr. Elmore for pointing out that there appears to be a loophole with systems maybe not being required to install corrosion control treatment, and instead just wait and see if they get improvements through lead service line replacement. Ms. Daniels stated that she would not really be supportive of that either because they did make a concerted effort to try to close CCT loopholes with the LCRR--for example, getting rid of the allowance to let systems do special monitoring to avoid having to put treatment in place. And lead service line replacement is going to take time, and she doesn't think we should give anybody an out for installing CCT while they're replacing lead service lines. To her, that is just one more loophole in the proposed rule that she does not think is all that protective of public health.

Ms. Littlewood raised some points that were unclear to her in the LCRI, first noting that many of her systems are doing triennial sampling. She understood that if the proposal is promulgated then systems over 10 ppb would start over with six-month sampling and wondered if all systems including those under 10 ppb would have to do that. She was also interested in whether all systems would have to redo their sample site plans for lead and copper sampling. **Ms. Holsinger** provided some clarification on the proposal and **Ms. Littlewood** asked if the requirement would be based on the inventory that is due in October. **Ms. Holsinger** indicated with respect to the proposed requirement that it would.

Ms. Littlewood was concerned about whether EPA would allow records to be considered as a basis by which to validate service line material, envisioning a community water system with 60 homes that would have to validate inventory done by records by digging down 10 feet to service lines. She was concerned that would substantially impact their water systems, which were almost entirely done by records. She explained that they have new systems where they know what materials were used and suggested that including flexibility for the state to assist with the determination of how to validate those inventories might be appropriate; she foresaw a huge mess with holes everywhere in the neighborhood. **Ms. Holsinger** provided some clarification and expressed interest in hearing Ms. Littlewood's thoughts on earlier discussion about records that were incorrect in some cases.

Ms. Littlewood thought that a primacy state would have a pretty good feeling for how accurate records are and offered examples, from on the ground experience, of information in records used in inventories that she thought a state could use to reassure EPA that there is no lead in the lines; for instance, that the house was not built before a certain year, or the year the water system, which could be a brand new system, was built.

Ms. Betanzo wanted to be clear that she is not suggesting that anybody question homes built after the lead ban, the only exception being a new home using an old service line where there is previous service. She also followed up on Ms. Daniel's remarks about opportunities to build on water quality parameters, with an observation about water quality parameters and implementation. She described how Michigan sets only a minimum, which she thought is in the federal rule, but no maximum when they're setting optimal water quality parameters; so there can still be some really big swings in water quality. She shared that she was looking at individual water systems' pH and orthophosphate data over time and observed that their entry point orthophosphate concentrations can vary from 4.5 to 6 mg/L and that there were some wide swings. She emphasized that for corrosion control to be effective consistency is key and the most important part. She elaborated the scenario where the water system is always meeting the minimum but is going up and down at the entry point, meeting that one requirement for which we have regulatory mechanisms, but still not getting the consistency. In conclusion, she voiced understanding that making anything more prescriptive and reducing flexibility creates one whole set of problems, but wanted to ensure recognition that we probably need to have boundaries on both sides of the water quality parameters for them to be as useful as possible.

Ms. Daniels agreed, especially if those WQPs are necessary, and suggested, for example, that if there's a particular orthophosphate out there and the manufacturer recommends that pH is between 7.2 and 7.8, then maybe we do need that maximum to make sure that systems are staying within the appropriate range. She also expressed support for ensuring that WQPs are monitored frequently enough and at the right locations, and using the appropriate approved methods and instrumentation, because we also need to make sure that we have good confidence in the data. She added that when we're looking at the instrumentation out there to measure things like pH and alkalinity and orthophosphate residual, sometimes we're outside the scope of accredited labs because those kinds of things need to be done in the field. She voiced that she would be all for making sure that WQP data is valid, that we're sampling appropriately and in the right locations, because you're going to get those wide swings, and if you're not even monitoring, you're not even aware that you're getting those wide swings. So, step one would be making sure that we have enough data across the entire distribution system to be representative; maybe monitoring in those same areas where we know we've got low flow or where we're having problems maintaining disinfectant residual would be really good locations, or where we have nitrification. But if

we're going to rely so heavily on WQPs because we can't sample lead everywhere, then she thinks we really need to raise the bar on the whole WQP data and ensure we have some confidence in that data, because that gives us additional confidence that even if we're not sampling everywhere for lead and we're maintaining WQPs, then water systems are absolutely doing the best they can to maintain that stable water quality and protect everybody from lead.

Ms. Daniels checked to see if members had other questions, comments, or concerns that they would like to share with EPA before turning to Ms. Holsinger to close out the presentation.

Closing

Ms. Holsinger thanked the NDWAC members and public commenters for their time, participation, and feedback. **Ms. Daniels** also thanked everyone for their participation and input. **Ms. Corr** adjourned the meeting.

Attachment 1

Public Comments to the NDWAC
January 31, 2024

Presented by commenters at the January 31, 2024 meeting:

Steve Via, American Water Works Association

Sarah Bloom Anderson, with the City of Columbus Department of Public Utilities

Ashley Voskuhl, Senior Policy Analyst at the Association of State Drinking Water Administrators

Jeff Tanner, Chief Technical Officer for Flow-Liner Systems located in Zanesville, Ohio

Provided in writing only:

Gerard. M. Waites, Esq., United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada, AFL-CIO (United Association or UA).

AMERICAN WATER WORKS ASSOCIATION
ORAL COMMENT
at
NATIONAL DRINKING WATER ADVISORY COUNCIL
on the
NATIONAL PRIMARY DRINKING WATER REGULATIONS FOR LEAD AND COPPER: IMPROVEMENTS
PROPOSED RULE
January 31, 2024

Good morning. Thank you for the opportunity to speak to the Council. My name is Steve Via. I would like to offer the following comments on behalf of the American Water Works Association (AWWA).

AWWA's members have a continuing interest in the provision of safe drinking water and in building on our success to-date reducing exposure to lead through drinking water. AWWA shares EPA's commitment to both effective use of corrosion control and reducing the remaining sources of lead in contact with drinking water. AWWA supports the continued regulation of lead in drinking water through a treatment technique and supports the proactive replacement of lead service lines as an element of the treatment technique.

AWWA is preparing comments on the proposed rule reflecting the experience of our members, including those with lead service line replacement programs that operate without substantial federal subsidies. AWWA would like to draw several recommendations from our review to the Council's attention as it prepares its own recommendations to EPA:

1. Service Line Inventory and Replacement – EPA should better focus rule requirements to realize risk reduction and simplify implementation by
    - Not penalizing water systems when property owners do not collaborate in service line replacement
    - Eliminating the proposed annual replacement rate as unnecessary and unnecessarily complicated to implement
    - Prioritizing replacement rather than overemphasizing potential misclassification of service line materials and administrative oversight
2. Public Education – EPA should revise customer / occupant notifications to reflect practical implementation considerations by
    - Allowing use of modern electronic communication tools in lieu of written notification when possible
    - Clarifying and focusing notification requirements so that target audiences are reached and expectations for timely notification are feasible
3. Compliance Monitoring – EPA should phase in the transition to new lead and copper compliance monitoring requirements by system size

- Assuring states will be able to adequately administer compliance requires reducing the number of systems that will have to immediately transition to the new tap sample monitoring requirements. Implementation can be crafted to assure a smooth transition to a revised monitoring framework

4. Reassess Feasibility – EPA should review the available data and consider more carefully the feasibility and risk reduction advantage sought through proposed rule requirements including the pace of service line replacement, lowering the action level, and provision of filters in the wake of any recurring lead action level exceedance
5. Involve Other Federal Offices – Engage other federal offices to assure that determinants of success for the proposed requirements are in place
    - Internal Revenue Service – Clarify that publicly funded service line replacements are not taxable income for individual households
    - White House – Determine the feasibility of obtaining funding support necessary to alleviate the financial pressure associated with full lead service line replacement on individual households and community water systems. EPA cannot assume current drinking water revolving loan funds are more than an initial start on the federal funding required for the cost of service line replacement envisioned in the proposed rule.

Thank you for your attention and consideration.

Who is AWWA

The American Water Works Association (AWWA) is an international, nonprofit, scientific and educational society dedicated to providing total water solutions assuring the effective management of water. Founded in 1881, the Association is the largest organization of water supply professionals in the world. Our membership includes more than 4,000 utilities that supply roughly 80 percent of the nation's drinking water and treat almost half of the nation's wastewater. Our 50,000-plus total membership represents the full spectrum of the water community: public water and wastewater systems, environmental advocates, scientists, academicians, and others who hold a genuine interest in water, our most important resource. AWWA unites the diverse water community to advance public health, safety, the economy, and the environment.

City of Columbus Department of Public Utilities
Oral Comments to NDWAC RE: LRCI
January 31, 2024

I am Sarah Bloom Anderson from the City of Columbus, Department of Public Utilities. We provide safe drinking water throughout 220 square miles in Central Ohio. Through our optimized corrosion control plan, we have maintained an exceptionally low level of lead, well below the PQL, for over two decades.

Columbus agrees that all lead service lines should be replaced. We also share the goal of replacing 100% as quickly as feasible. But EPA's determination of what is feasible needs another look. To protect public health and ensure that even the most vulnerable among us can afford clean drinking water, we need to strategically allocate resources across the country to those with the most risk, first.

To have every public water system replace their service lines simultaneously in 10 years is not feasible. It will result in an artificially high demand for resources—locally, regionally, and nationally. EPA acknowledges the demand but does not adequately account for how it will affect cost, supplies, and labor overall; and thus feasibility. Here, we will have to add staff and increase our budget by hundreds of millions of dollars—without providing additional health benefit—because lead is already so well controlled. In some regions, there are simply not enough contractors, plumbers, and engineers. Add to that the nationwide-demand-for-supplies, and the result is skyrocketing costs. With insufficient grant funding, those extra costs created by this artificial demand will be borne by our community.

As a nonprofit governmental entity, municipal utilities do not make a profit and we are funded only by the amount our residents pay in their water bills.

Our utility is bracing for a large rate increase to meet the requirements of LCRI as drafted. When all is said and done, the across-the-board 10-year requirement will burden the people that we are trying hardest to protect: the families already struggling to afford their water bills.

EPA recognized that some systems will need additional time based solely on the quantity or proportion of lead service lines in a water system. EPA should expand the ability for an extension, based on the risk of harm, to decrease the demand on limited resources, reduce the resulting inflation of costs, and protect affordability; aligning feasibility with long term affordability while protecting public health.

In systems where lead is well controlled, the risk of lead exposure through drinking water is minimal. Allowing those systems to roll out the replacements over an extended period, allows costs to be more readily absorbed by currently budgeted capital and maintenance projects, thereby reducing the amount that rates will raise. Also, competition will be lower for labor, supplies, and funding, so the nation can focus the bulk of resources on communities that have the most risk.

This means that people facing the biggest threat of lead exposure in their drinking water get the protection they need immediately, while still ensuring that those with the least risk will continue to have access to safe water throughout the longer replacement timeline.

In conclusion, extension of the deadline gets us closer to what is truly feasible and, if it is based on risk of harm, will be protective of public and environmental health. Thank you.

Comments from the Association of State Drinking Water Administrators for the 1/31/24 NDWAC Meeting on LCRI

Good afternoon, thank you for the opportunity to provide input on this rulemaking. My name is Ashley Voskuhl, and I am a Senior Policy Analyst at the Association of State Drinking Water Administrators, otherwise known as ASDWA. ASDWA is the national association for the heads of the 57 state and territorial drinking water agencies, who co-regulate the safe drinking water act with EPA. The agencies' collective workforce of about 3,600 regulators works tirelessly every day to ensure that the 150,000 water systems nationwide provide safe drinking water and protect public health.

ASDWA's members most pressing concern with the proposed LCRI is the increased state workload, compounded by the upcoming PFAS regulation and ongoing IIJA implementation. These important new tasks will be in addition to our current everyday activities, such as hands-on technical assistance, ensuring compliance with over 90 standards, system inspections, engineering reviews, operator certification, etc. The proposed rule requires 38 new reviews by states, 8 new templates to be developed, and 5 new state-to-system consultations across various LCRI components. Our estimate of the increased burden is over 5 million additional hours **each** year for state implementation of LCRI.

States are encouraged that EPA incorporated so many of ASDWA's recommendations into the proposed LCRI, but EPA must prioritize feasible implementation. The final rule should balance health, feasibility and cost and should:

- Retain the 10 ppb action level.
- Stagger the compliance deadline based on system size, similar to the approach taken for Stage 2 DBPR.
- Provide flexibility in CCT implementation, allowing states discretion in determining if pipe-loop studies are needed and

allowing systems to make incremental changes once CCT is installed, as opposed to waiting years for pipe-loop studies for systems with LSLs.
- Maintain the existing 30 day consumer notice requirement.
- Ensures existing school and childcare testing programs that meet the proposed sampling criteria and implemented after 2014 will be honored, rather than limiting programs implemented after 2021.
- Prioritize development and implementation of a data system that will be able to handle all the new regulatory tracking requirements in this rule and others.

Finally, ASDWA's Members urge EPA to recognize and to assist in communicating with the public as implementation moves forward and the public begins to receive increased communication about lead, including:

- Notifications to all property owners with unknown service line materials;
- LSLR disturbances on private property – "who is going to replace my landscaping?"
- Property owners that refuse to participate in LSLR
- Community disruption with LSLR, i.e., roadways being torn up
- Filter distribution
- The additional ALEs with revised compliance sampling plans and sampling both the first and fifth liters

This is only a summary of our issues – ASDWA also recommends the NDWAC thoroughly review ASDWA's detailed comments that will be submitted to the LCRI Docket.

NEOFIT®+PLUS
Expandable Pressure Pipe

Date: Feb. 2nd, 2024

To: National Drinking Water Advisory Council

Re: NDWAC online meeting oral Statement by Jeff Tanner Jan. 31st, 2024

First of all, I want to thank the National Drinking Water Advisory Council for letting me speak again about this very important crisis that's affecting our children's health and welfare. My name is Jeff Tanner, I'm chief technical officer for Flow-Liner Systems located in Zanesville, Ohio. Exposing our children and families to lead contaminated water for any amount of time, let alone for another decade, is negligence, especially when there is a technology available to help with this crisis.

This technology is not a liner or a coating, it is an innovative expandable pressure pipe, or EPP technology, called Neofit+Plus. This product is manufactured as pipe tubing, then inserted, and expanded inside the lead pipe, forming an impregnable barrier between the drinking water and lead pipe, which in turn, removes the lead hazard from the drinking water. This product has been installed in **thousands of service lines throughout the world**. We now manufacture this advanced pipe technology here in the USA.

EPA is aware of this time efficient and cost saving technology. For the past several years we have submitted technical data and answered all questions asked by EPA. One question asked by the EPA had to do with the longevity of the product. To answer that question, this product's structural material has been scientifically evaluated for longevity of 100+ years. The last question from Eric Burneson from EPA was "can your product prove it can stop lead from leaching into the drinking water?" To answer Eric's question, we installed EPP inside a section of lead service piping and then utilized AWWA's Field Guide Procedure for Hydrostatic Testing of water service lines. We then tested the water inside of the EPP and the test results showed zero % lead in the water. This advanced pipe technology can also withstand burst pressures over 400 PSI.

This technology needs to be allowed as an option for replacement, or at least utilized in replacement programs if the lead hazard cannot be removed from the drinking water in a time efficient manner, **TEN YEARS FROM NOW IS NOT TIME EFFICIENT**.

The Neofit+Plus technology can **save up to 85%** of the cost compared to dig and replace, and takes a fraction of the time to install, **only 2-3 hours for installation**. For the welfare of our families and children, I'm asking water authorities and the EPA to utilize this NSF-61 certified, non-invasive, cost efficient technology.

Please visit **EPPleadfree.com** for more information.

Thank you,

Jeff Tanner / jefftanner@flow-liner.com

President / CTO

Flow-Liner Systems, Ltd.

O'DONOGHUE & O'DONOGHUE LLP
EST. 1935

5301 Wisconsin Avenue, NW,
Suite 800
Washington, DC 20015
202-362-0041
www.odonoghuelaw.com

January 24, 2024

Office of Ground Water and Drinking Water
U.S. Environmental Protection Agency (Mail Code 4601)
1200 Pennsylvania Avenue NW, Washington, DC 20460

Submitted to: NDWAC@epa.gov

Re: *EPA Notice re Meeting of the National Drinking Water Advisory Council FRL–11622–01–OW*

Dear Sir or Madam:

The following comments are submitted in the above-referenced matter on behalf of the 373,000 members of the United Association of Journeymen and Apprentices of the Plumbing and Pipe Fitting Industry of the United States and Canada, AFL-CIO (United Association or UA). These comments are offered for consideration of the National Drinking Water Advisory Council's (Council) for its January 31, 2024 meeting on the proposed Lead and Copper Rule (Rule).

I. POLICY CONTEXT & OVERVIEW

Given the dramatic rise to water quality threats in both our nation's water infrastructure and indoor premise piping systems, the Environmental Protection Agency's (EPA) recently proposed Lead and Copper Rule (Rule) is a matter of critical importance to public health and safety. We, therefore, appreciate this opportunity to share our comments with the Council on these issues as it prepares to provide advice and recommendations to the EPAs' Office of Ground Water and Drinking Water.

At the outset, we would like to stress that the United Association is the leading trade union representing workers performing construction, remediation and maintenance on premise piping systems and one of the leading trades representing workers on water infrastructure systems, especially water and wastewater treatment plants. Our comments on the proposed rule on the following core recommendations that we submit are essential to developing more effective federal water policy in these areas:

- ✓ Ensure Complete Replacement of Lead Service Lines
- ✓ Make Lead-Free Schools a National Priority
- ✓ Promote Interim Treatment Pending Full Remediation
- ✓ Requiring Good Skill Standards on EPA-Assisted Projects
  Promote Quality Control AND Positive Community Impact

II. Ensure Complete Replacement of Lead Service Lines

In recent years it has been discovered that one of the greatest sources of lead contamination in drinking water comes from the lead service lines (LSLs), which are the pipelines that connect water mains in water supply systems to homes and buildings. Because there is no safe level of lead in drinking water, addressing the threat from LSLs should be a top priority. President Biden and Vice President Harris share this concern and have vowed to ensure that their administration will take action to ensure that every lead service line in the nation is replaced within the next decade.

Fortunately, Congress and President Biden have taken major steps to make this commitment a reality. The 2021 Bipartisan Infrastructure Investment and Jobs Act authorized $50 billion in EPA funding to strengthen the nation's drinking water and wastewater systems, $15 billion of which has been allocated to the LSL Replacement Program.[1]

We appreciate that while quite substantial, this funding may not be sufficient to fund all the work needed to replace all LSLs across the country. Therefore, we encourage the EPA to continue to promote its multi-faceted strategy to complete this mission, including its efforts to encouraging states and municipalities to raise additional funding for these projects.[2]

It would also be helpful for the EPA to track, identify and disseminate best practice information on state and local funding, as well as the use of new fees, special assessments and other funding streams to meet these crucial funding needs. We also applaud and strong support the EPAs efforts to prioritize disadvantaged communities when awarding grants for LSL programs as populations in these areas do not have the resources to address this urgent public health threat.

This initiative should continue to be promoted, along with assistance from state and municipal government as an ongoing commitment under the administration Environmental Justice policy. As discussed below, when these efforts are combined with the appropriate craft labor contracting policies, investments in LSL replacement programs could provide valuable training and employment opportunities for affected communities.

III. Make Lead-Free Schools a National Priority

The EPA is well versed on the fact that children face the greatest risk from lead exposure, underscoring the need for making lead-free schools another key priority. Lead is an extremely toxic, especially for young children as even low levels of exposure can result in lower IQs, learning disabilities and impaired hearing of children. Further, lead poisoning in children create as long-term health effects and irreversible learning disabilities and pose major challenges for educators.

---

[1] Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, 135 Stat. 429 (2021).

[2] EPA, *Strategies to Achieve Full Lead Service Line Replacement*, October 2019 EPA 810-R-19-00, pp. 25-27; see also pp. 29-30, strategies_to_achieve_full_lead_service_line_replacement_10_09_19.pdf (epa.gov) (last visited Jan. 24, 2024).

It is, therefore, highly disturbing that—even though it has been almost *ten years since the water crisis in Flint, MI* which put a spotlight on water quality—and yet we are still seeing one new research report highlighting dangerous persistent lead levels in America's schools.[3] This is a sad reality for one of the most prosperous nations on earth. For these reasons, the new and copper lead rule should ensure improved water quality monitoring and testing in schools and daycare centers, mandate adequate prevention and remediation efforts, and impose a stricter action levels for these facilities per the recommendations of the American Academy of Pediatrics.[4]

We recognize that the Administration and the EPA are making determined efforts to address these challenges, critically by securing substantial funding under the Bipartisan Infrastructure Law to address the threats in schools particularly.[5] We also strongly support the agency's 3Ts Toolkit: *Training, Testing and Taking Action for Reducing Lead* and submit this initiative should be substantially expanded and funded with additional resources to *reach all school districts across the nations*, prioritizing economically disadvantaged communities that lack the resources to correct these unacceptable conditions.[6]

IV. Promote Interim Treatment Pending Full Remediation

Insofar as full abatement of lead threats throughout the country, including all service lines and school systems, will take considerable time, we recommend that the new rule facilitate plans to ensure that appropriate water filters are installed in taps used for cooking or drinking water. These devices are relatively quick and inexpensive to install and offer vital interim assistance in preventing lead contamination. The EPA should also establish a preference under the BIL grant programs for school districts committed to installing filters.

V. Requiring Good Skill Standards on EPA-Assisted Projects Promote Quality Control AND Positive Community Impact

We also applaud the Administration's commitment to create high-road, family-sustaining jobs through its lead service line initiative and other water infrastructure programs. This policy is well founded as it will help protect federal investments in these projects, promote successful project delivery and ensure substantial community benefits in affected local communities.

---

[3] *See e.g.*, Tolly Taylor, WBLA TV, I-*Team exclusive: Data shows many school districts haven't fixed elevated levels of lead in water* (May 11, 2023)(testing for school districts across Maryland showing continuously showing dangerous lead levels in water systems in violation of legal EPA standards), Exclusive: Schools still have elevated levels of lead in water (wbaltv.com) (last visited Nov. 8, 2023).

[4] *Prevention of Childhood Lead Toxicity*, American Academy of Pediatrics, Council on Environmental Health, Pediatrics, Vol. 138, (July 2016), Issue 1, Prevention of Childhood Lead Toxicity | Pediatrics | American Academy of Pediatrics (aap.org) (last visited Nov. 8, 2023).

[5] EPA, *Biden-Harris Administration Announces $58 million to Reduce Lead in Schools and Childcare Facilities Through Investing in America Agenda* (July 24 2023), Biden-Harris Administration Announces $58 million to Reduce Lead in Schools and Childcare Facilities Through Investing in America Agenda | US EPA (last visited Nov. 8, 2023).

[6] *See*, Lead Service Line Replacement Collaborative, *Child Care Facilities and Schools* (last visited Nov. 8, 2023) *citing 3Ts for Reducing Lead in Drinking Water* 3Ts for Reducing Lead in Drinking Water | US EPA.

In this regard, it should be recognized that incorporating the contracting and labor policies in EPA water quality grant programs pay substantial dividends in several ways. First, the work in question for these programs will often involve highly skilled, complex work, which means have qualified contractors and craft persons on these jobs is essential. The failure to do effectively jeopardizes the whole mission. Clearly, this is ***not*** an area where projects should be blindly awarded to the low bidder with little or no regard for qualifications, could lead to defective and substandard work and unsafe water systems.

Second, the failure to ensure proper qualification will create very real risks of the crucial investments being made by the EPA will be wasted. As noted above, the nation is fiercely struggling to secure adequate funding for the vast amount of work that is needed in the water policy arena. Thus, we need to make every effort to ensure the success of these projects to continue to maintain public support for these programs because even with massive funding assistance recently provided by Congress, addition funding is needed to fully rebuild infrastructure, make schools safe and assist property owners in gaining water quality assurance.

Third, it is an interesting and compelling fact that when the right contracting and labor policy tools are used—maximum community benefits are achieved because they produce the most valuable training and employment opportunities available—in addition to ensuring proper qualifications and protecting taxpayer investments.

For these reasons, we submit the new rule should require that all contractors and subcontractors used to perform EPA-assisted construction work should be required to verify: (a) strict compliance with Davis-Bacon prevailing wage rates; and (b) participate in bona fide registered apprenticeship programs for all crafts or trades they employ.

In addition, a policy should also be established that allows both of these requirements, as well as related reporting obligations, to be waived for any projects that are fully covered by Project Labor Agreements (PLAs). Such a waiver makes perfect sense as it is well recognized that PLAs effecticley secure prevailing wage and apprenticeship benefits for construction projects, while also providing many other substantial benefits. including those relating to safety.

In evaluating these recommendations, the EPA should recognize that prevailing wage standards, apprenticeship requirements and PLAs have all been fully embraced by the Biden-Harris Administration in federal procurement and grant programs. This is due to the fact that they are highly effective due to their ability to promote safe, timely, cost-effective construction ***and*** create valuable employment and training opportunities in local communities, which is precisely why that are being utilized by several other federal agencies, including the Departments of Energy, Commerce and Treasury for various types of capital facility programs.

The community benefits, which the EPA should also promote are also highly significant. Indeed, a study by the UA and Environmental Entrepreneurs shows that replacing all the lead pipes in the country will create 56,080 jobs annually for 10 years, which includes 26,900 direct jobs in construction, plus, another 13,600 jobs from the materials and equipment supply chain.[7]

[7] Environmental Entrepreneurs and United Association of Union Plumbers and Pipefitters, *Getting the Lead Out:*

With the right approach, the agency can ensure that these are good jobs with good training and other valuable benefits, including healthcare and pensions. All of these policies will compliment and help ensure the success of EPA mission on ensure our nation's water quality and levering major investments to help local communities.

VI. Conclusion

We're sure that the EPA agrees: every American has a right to safe drinking water. No one should have to worry that the simple act of taking a drink of water from their kitchen faucet or school fountain will create a serious risk to their health. The new Lead and Copper Rule EPA is essential for addressing existing threats and ensuring America maintains safe water quality. We hope the recommendations set forth above assist the agency's efforts in this initiative.

Respectfully,

/s/

Gerard. M. Waites, Esq.

Employment & Economic Impacts of Lead Service Line Replacement (August 3, 2021), https://e2.org/reports/economic-impacts-of-lead-service-line-replacement/ (last visited Nov. 8, 2023).

Attachment 2

Lead and Copper Rule Improvements (LCRI) Presentation to the NDWAC

January 31, 2024

Proposed Lead and Copper Rule Improvements (LCRI) NDWAC Consultation Meeting

January 31, 2024

United States Environmental Protection Agency

Office of Water

1

Purpose

- To provide the National Drinking Water Advisory Council (NDWAC) with information on the proposed Lead and Copper Rule Improvements (LCRI) National Primary Drinking Water Regulation (NPDWR)
- To consult with the NDWAC prior to promulgating the final LCRI NPDWR

United States Environmental Protection Agency

Office of Water

2

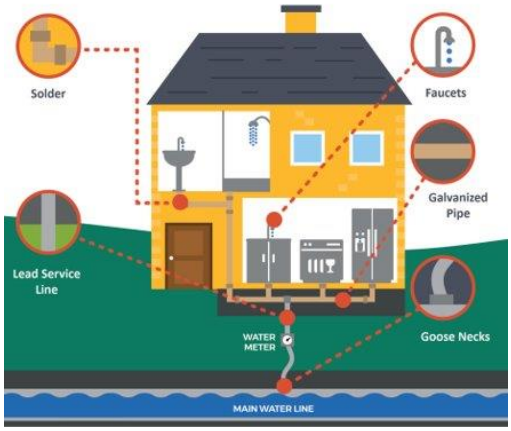
Overview

- Background on lead in drinking water and the Lead and Copper Rule
- Overview of the proposed LCRI
- Topics from the pre-proposal NDWAC consultation
- Key requests for comment for the NDWAC consultation

Background on lead in drinking water and the Lead and Copper Rule

Lead in drinking water

- Lead in pipes, solder, and faucets can dissolve in water or break off as particles.
- When present, lead service lines are the most significant source of lead in drinking water.
- In children, exposure to lead can cause serious health effects like lower IQ, learning and behavioral problems.
- In adults, health effects can include higher risk of heart disease, high blood pressure, and kidney or nervous system problems.



Lead and Copper Rule

- The Safe Drinking Water Act (SDWA) authorizes EPA to establish regulations for public water systems.
- EPA first established the Lead and Copper Rule in 1991 to reduce exposure to lead and copper in drinking water.
- The rule requires some water systems to treat drinking water to keep lead (or copper) from leaching into water when lead (or copper) levels in water require action. This is called corrosion control treatment.
- When corrosion control is not enough to reduce lead levels, the Lead and Copper Rule requires water systems to take additional actions, including lead service line replacement and public education.

Lead and Copper Rule

- Maximum Contaminant Level Goal (MCLG): lead = 0 µg/L; copper = 1.3 mg/L
  - The MCLG for lead is zero because there is no level of exposure to lead that is without risk.
- Action Level: lead = 15 µg/L; copper = 1.3 mg/L
  - The Action Level was set in 1991 based on a level that is generally representative of what water systems achieved with corrosion control treatment at that time.
- The Lead and Copper Rule requires water systems to test water at the tap in certain homes that have lead in the plumbing.
- If more than 10 percent of the lead samples from a system are greater than the Action Level, the system needs to take actions to reduce lead exposure.

The Lead and Copper Rule Revisions (LCRR)

- The LCRR was published on January 15, 2021.
- Subsequently, the Agency reviewed the 2021 LCRR in accordance with Executive Order 13990 and concluded that there are significant opportunities to improve the LCRR including:
  - Proactive and equitable lead service line replacement,
  - Strengthening compliance tap sampling to better identify communities most at risk of lead in drinking water and to compel lead reduction actions, and
  - Reducing the complexity of the regulation by improving the action and trigger level construct.

Proposed Lead and Copper Rule Improvements (LCRI)

United States Environmental Protection Agency

Office of Water

9

Public Comment Period

- The proposed LCRI was published in the Federal Register on December 6, 2023.
- EPA invites the public to review the proposed LCRI and supporting information and provide written input to EPA through the public docket.
- The public docket can be accessed at http://www.regulations.gov under Docket ID No. **EPA-HQ-OW-2022-0801.**
- Written comments must be received on or before February 5, 2024.
- EPA held a virtual public hearing on the proposed LCRI on January 16, 2024.

United States Environmental Protection Agency

Office of Water

10

Key Provisions in the Proposed LCRI

- Achieving 100% Lead Pipe Replacement within 10 years
- Locating Legacy Lead Pipes
- Improving Tap Sampling
- Lowering the Lead Action Level
- Strengthening Protections to Reduce Exposure

Achieving 100% Lead Pipe Replacement

- The proposed LCRI would require all water systems to replace lead services lines under their control, with the vast majority completing replacement within 10 years.
- While corrosion control can be effective at reducing lead exposure, removing lead pipes provides even greater public health protection by eliminating the key source of lead.
- Water systems would be required to replace all lead pipes regardless of whether they exceed the lead action level.

Locating Legacy Lead Pipes

- Knowing where lead pipes are is critical to replacing them efficiently and equitably.
- Water systems are currently required, under the 2021 LCRR, to provide an initial inventory of their lead service lines by October 16, 2024.
- Under the proposed LCRI, all water systems would be required to regularly update their inventories, validate inventories, create a service line replacement plan, and identify the materials of all service lines of unknown material.

Improving Tap Sampling and Lowering the Lead Action Level

- Water systems would be required to collect first liter and fifth liter samples at sites with lead service lines and use the higher of the two values calculating the system's 90th percentile lead level.
- EPA is proposing to lower the lead action level from 15 µg/L to 10 µg/L and eliminate the trigger level to reduce complexity.
- When a water system's lead sampling exceeds the action level, the system would be required to inform the public and take action to reduce lead exposure.
  - For example, the system would be required to install or adjust corrosion control treatment to reduce lead that leaches into drinking water.

Strengthening Protections to Reduce Exposure and Improving Transparency and Trust

- Water systems with multiple lead action level exceedances would be required to conduct additional outreach to consumers and make filters available to all consumers. The filters must be certified to reduce lead.
- The proposed rule would require water systems to communicate more frequently and proactively about lead service lines and the system's plans for replacing these lines.
- The proposed rule would revise the Consumer Confidence Report language to increase clarity about the health effects of lead, the water system's efforts to sample for lead in schools and child care facilities, and how consumers can access the water system's lead service line replacement plan.
- Systems would be required to notify the public within 24 hours if systemwide lead levels exceed the proposed lower action level, and EPA would continue to require systems to collect follow-up samples at sites with higher levels of lead.

Compliance Date

- EPA is proposing a compliance date of three years after the promulgation of the final LCRI and for systems to continue to comply with the LCR until that date, with the following exceptions:
  - EPA is proposing to retain the 2021 LCRR's October 16, 2024 compliance date for the initial LSL inventory, notification of service line material, associated reporting requirements, and Tier 1 public notification of a lead action level exceedance.
- With these limited exceptions, EPA is proposing that water systems would directly transition from the LCR to the LCRI for all rule provisions.
- Under the proposal, water systems would not be required to comply with the other requirements of the 2021 LCRR between October 16, 2024 and the LCRI compliance date.
- EPA intends to promulgate a final LCRI by October 16, 2024

Available Funding Sources

- The Bipartisan Infrastructure Law (BIL) provides for significant investments in safe drinking water infrastructure and drinking water programs.
- EPA is working to ensure the funds are available to drinking water systems, especially those within disadvantaged communities.
- Specific funds to potentially support implementation of the LCRI drinking water regulation:
  - $11.7 billion: Funding to supplement the Drinking Water State Revolving Loan Fund (DWSRF)
  - $15 billion: Funding for lead service line replacement projects and associated activities directly connected to the identification of and planning for the replacement of lead service lines.
- The WIIN Voluntary School and Child Care Lead Testing and Reduction Grant Program provides funding to States for lead testing and remediation in schools and child care facilities. This funding is for States, not water systems.

How EPA's Proposal Addresses Topics Discussed in the Prior NDWAC Consultation

Defining "Under the Control" of the Water System

- The proposed LCRI would require water systems to replace lead and GRR service lines, and any lead connectors encountered, that are "under the control" of the water system.
- EPA is proposing to treat a service line and lead connector as under the system's control wherever a water system has adequate access (e.g., legal access, physical access) to conduct full service line replacement or replacement of the lead connector.
- EPA is not proposing to delineate the prerequisites or elements of "access" that a system would need to conduct full service line replacement because of the wide variation of relevant State and local laws and water tariff agreements as well as the potential for these to change over time. Instead, EPA emphasizes the many requirements proposed in the LCRI, in addition to funding and non-regulatory actions, that can increase a system's likelihood of obtaining any necessary access to conduct a full service line replacement, such as providing transparency in the service line replacement plan. For example, EPA is proposing to require the water system to identify in its service line replacement plan any State or local laws or water tariff agreement requirements pertaining to its ability to gain adequate access.

Defining "Under the Control" of the Water System (cont.)

- EPA is proposing that, where customer consent is required by State or local law or water tariff agreement, the system would be required to make a reasonable effort to obtain property owner consent.
- EPA is proposing that a reasonable effort includes a minimum of at least four attempts to engage the customer using at least two different methods. If the water system is unable to obtain customer consent when required, the water system would not be required to conduct full service line replacement because, under those circumstances, the full service line would not be "under the control" of the operator of the system. The proposal also includes requirements and flexibilities to increase access and expedite full service line replacement.

Deferred Service Line Replacements

- EPA is proposing two pathways for water systems to defer their service line replacement deadline past 10 years.
- The first is proposed for systems with a high proportion of lead and GRR service lines in their distribution system relative to their total number of households served. EPA has proposed 0.039 replacements per household per year as a deferral threshold (equivalent to 39 service line replacements per 1,000 households per year). Systems with a higher per-household replacement rate would be eligible for a deferred replacement deadline.
- The second proposed pathway is for systems that would otherwise be required to replace greater than 10,000 service lines per year under the proposed 10-year replacement requirement.

Action Level Exceedance

- In the proposed LCRI, water systems that exceed the lead action level of 10 ppb would be required to take actions including CCT and public education. Under the LCRR, water systems that exceed the current lead action level of 15 ppb are required to conduct 24-hour (Tier 1) public notification to persons served by the water system within 24 hours of learning of the exceedance.
- If the LCRI is finalized as proposed, water systems would be required to conduct Tier 1 public notification for an exceedance of the lowered action level of 10 ppb following the compliance date of the LCRI (i.e., 3 years after the final LCRI is published). Water systems would be required to optimize or re-optimize OCCT and conduct public education. Small systems serving 3,300 people or fewer and NTNCWSs would be able to choose an alternative compliance option in lieu of the CCT requirements.

Multiple AL Exceedances

- EPA is proposing that systems with three lead action level exceedances in five years must:
  - Make filters certified for lead reduction available to all consumers served by the system.
  - Conduct at least one additional system-wide public education outreach activity, such as conducting a townhall meeting or participating in a community event, to raise additional awareness of the health effects of lead in drinking water, identify steps consumers can take to reduce their exposure, and provide information about how the water system is addressing the issue.
  - Repeat the public education activity every six months until the system no longer meets the multiple lead action level exceedance criteria.

The Small System Flexibilities Under the Proposed LCRI

- The proposed LCRI reduces the eligibility threshold for CWSs to those serving 3,300 people or fewer, from 10,000 people or fewer under the 2021 LCRR.
- EPA is proposing to eliminate service line replacement as a standalone compliance option because all systems would be required to conduct mandatory full-service line replacement of lead and GRR service lines, regardless of their 90th percentile lead level.
- Under the proposed LCRI, NTNCWSs and CWSs serving 3,300 or fewer people that exceed the lead action level of 10 ppb may choose implementation of POU devices or full replacement of lead-bearing plumbing materials in lieu of CCT with State approval.

Selected Requests for Comment from the Proposed LCRI

Achieving 100% Lead Pipe Replacement

- EPA is seeking feedback on topics including:
  - Whether it is feasible for systems across the nation to complete service line replacement in a shorter timeframe than ten years, such as in six, seven, or eight years.
  - Whether the proposed LCRI appropriately interprets “control” for the purposes of the mandatory replacement provision (i.e., require systems to conduct full service line replacement in situations where the system has access to conduct the full replacement).
  - The overall approach and basis to offer deferred service line replacement.

Locating Legacy Lead Pipes

- EPA is seeking feedback on topics including:
  - In the LCRI, EPA is proposing a requirement for systems to validate the accuracy of non-lead service lines in their inventory that were categorized using methods other than records review or visual inspection of at least two points along the line.
  - EPA is requesting comment on the number of validations required, the proposed 95 percent confidence level approach used to develop the number of validations required, the criteria for which methods used to categorize non-lead service lines should be included in the validation pool (including whether non-lead lines categorized based on records should be subject to validation), and the seven-year timeline for systems on a 10-year replacement deadline to complete the validation requirements.

Improving Tap Sampling

- EPA is seeking feedback on topics including:
  - Whether sites served by galvanized service lines or containing galvanized premise plumbing that are identified as ever being downstream of an LSL or lead connector should be included in the same tier as other sites with a current lead connector (*e.g.,* copper service line downstream of a lead connector).
  - The applicability of alternate sampling protocols, such as random daytime sampling, to assess CCT performance, increase customer participation, and other relevant factors.

Lowering the Lead Action Level

- EPA is seeking feedback on topics including:
  - The proposed lead action level of 0.010 mg/L, as well as comment and supporting data on alternative action levels, such as 0.005 mg/L, with regards to generally effective corrosion control treatment and identifying systems most at risk of elevated levels of lead in drinking water.
  - The use of the action level to determine when additional public education is required, and the use of the same action level for public education as for the CCT provisions.

Strengthening Protections to Reduce Exposure

- EPA is seeking feedback on topics including:
  - Whether water systems should be required to take additional actions when the system exceeds the lead action level multiple times and if so, what actions are appropriate and feasible.
  - Whether the Agency should allow systems serving up to 10,000 persons (or another threshold) to be eligible to use the small system compliance flexibility provision.
  - Whether EPA should require CWSs to make school and child care facility sampling results publicly available, and if so, how frequently and in what manner.


EPA's LCRI Website:
https://www.epa.gov/ground-water-and-drinking-water/lead-and-copper-rule-improvements
EPA United States Environmental Protection Agency
Office of Water

31

NDWAC Meeting Participants
January 31, 2024

National Drinking Water Advisory Council Members

Lisa D. Daniels, NDWAC Chair
Yolanda Barney
Elin Warn Betanzo
Shellie R. Chard
D. Scott Borman
Steven B. Elmore
Eagle Jones
Jana Littlewood
Alex Rodriguez
Jeffrey W. Szabo

Centers for Disease Control Liaison

Arthur Chang, Chief Medical Officer for the Division of Environmental Health Science and Practice, National Center for Environmental Health

U.S. Environmental Protection Agency Meeting Participants

Elizabeth Corr, Designated Federal Officer, National Drinking Water Advisory Council, Office of Ground Water and Drinking Water
Eric Burneson, Director, Standards and Risk Management Division, Office of Ground Water and Drinking Water
Hannah Holsinger, Supervisor of the Regulatory Assessment and Development Branch, Standards and Risk Management Division, Office of Ground Water and Drinking Water
Michael Goldberg, Lead and Copper Rule Improvements Team Lead in the Regulatory Assessment and Development Branch of EPA's Standards and Risk Management Division, Office of Ground Water and Drinking Water