

**PROPOSED RULEMAKING
ENVIRONMENTAL QUALITY BOARD
[25 PA. CODE CH. 109]
Safe Drinking Water Revised Lead and Copper Rule Improvements**

The Environmental Quality Board (Board) proposes to amend Chapter 109 (relating to safe drinking water) to read as set forth in Annex A. The proposed amendments ensure that the Commonwealth's safe drinking water regulations in Chapter 109 remain at least as stringent as 40 CFR Part 141 (relating to National Primary Drinking Water Regulations) promulgated by the United States Environmental Protection Agency (EPA), which is a condition of the Department of Environmental Protection (Department) retaining primary enforcement responsibility for public water systems in this Commonwealth under the Federal Safe Drinking Water Act (42 U.S.C. §§ 300f—300j-27). The proposed amendments to Chapter 109 focus primarily on Subchapter K (relating to lead and copper).

The Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper, also known as the Lead and Copper Rule (1991 Federal LCR), published by the EPA at 56 FR 26460 (June 7, 1991), was the first National Primary Drinking Water Regulation that required actions by public water systems to reduce levels of lead and copper in drinking water. To further reduce lead and copper in drinking water provided by public water systems, the EPA published the National Primary Drinking Water Regulations: Lead and Copper Rule Revisions (2021 Federal LCRR) at 86 FR 4198 (January 15, 2021), and the final National Primary Drinking Water Regulations for Lead and Copper: Improvements, also known as the Lead and Copper Rule Improvements (2024 Federal LCRI), at 89 FR 86418 (October 30, 2024).

The proposed amendments will improve public health protection by reducing exposure to lead in drinking water for consumers of water provided by public water systems and educating them on the dangers of lead exposure. The proposed amendments include provisions that: require public water systems to complete and submit a baseline service line inventory to identify, locate and replace lead service lines; strengthen the compliance steps for optimal corrosion control treatment (CCT); update the tap sampling requirements for lead and copper to improve the reliability of results; lower the lead action level and update the calculation for the 90th percentile compliance value; require sampling in schools and child care facilities; and require additional actions for public water systems with multiple lead action level exceedances.

This proposed rulemaking was adopted by the Board at its meeting of **DATE**.

A. Effective Date

This proposed rulemaking will be effective upon final-form publication in the *Pennsylvania Bulletin*.

B. Contact Persons

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9633; or Leda J. Lacomba, Assistant Counsel, Bureau of Regulatory Counsel, P.O. Box 8464, Rachel Carson State Office Building, Harrisburg, PA 17105-8464, (717) 787-7060. Persons with a disability may use the Pennsylvania Hamilton Relay Service at (800) 654-5984 (TDD users) or (800) 654-5988 (voice users). This proposed rulemaking is available on the Department's website at www.pa.gov/agencies/dep.html (select "Public Participation," then "Environmental Quality Board," then navigate to the Board meeting of **DATE**).

C. Statutory Authority

This proposed rulemaking is being made under the authority of section 4 of the Pennsylvania Safe Drinking Water Act (35 P.S. § 721.4), which grants the Board the authority to adopt rules and regulations governing the provision of drinking water to the public, and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20), which authorizes the Board to promulgate rules and regulations necessary for the performance of the work of the Department.

D. Background and Purpose

Sources and health effects of lead in drinking water

Lead can be found in drinking water when plumbing materials containing lead corrode. Lead corrosion of plumbing materials and fixtures is more prevalent when the drinking water is highly acidic or has a low mineral content. The most common sources of lead in drinking water are lead service lines, lead pipes, faucets and fixtures. When a home is served by a lead service line, the most significant source of lead in drinking water is the lead service line. When the home is not served by a lead service line, the most significant source of lead in drinking water is from brass or chrome-plated brass faucets and plumbing with lead solder. See 89 FR 86418, 86429. The EPA estimates that drinking water makes up at least 20% of a person's total exposure to lead. See 56 FR 26460, 26548.

There is no known safe level of exposure to lead. Exposure to lead can cause harmful health effects for people of any age including neurodevelopmental problems in children and heart disease in adults. Infants, young children and pregnant people are especially vulnerable to the physical, cognitive and behavioral effects of lead due to their sensitive developmental stages. See 89 FR 86418, 86429.

Copper is an element required for several metabolic processes; however, an excess of copper intake is toxic and can be linked to various health effects. The most common health effect is acute gastrointestinal conditions which occur among adults and children. Chronic exposure to copper is a concern for people with Wilson's disease, an autosomal recessive genetic disorder that affects 1 in 30,000 individuals. These individuals are prone to copper accumulation in body tissue, which can lead to liver damage, and neurological or psychiatric symptoms, or both. See 89 FR 86418, 86430.

Federal regulatory background

The goal of the 1991 Federal LCR was to improve health by reducing lead and copper levels at consumer taps. This rule established a maximum contaminant level goal for lead of zero. The maximum contaminant level goal is set at the level at which no known or anticipated adverse effects on the health of persons would occur, allowing for a margin of safety. The key provision of this rule was treatment technique requirements that include lead service line replacement, CCT, source water treatment and public education. It also established requirements for community water systems and nontransient noncommunity water systems to conduct monitoring at consumer taps. This rule established action levels of 0.015 milligrams per liter (mg/L) for lead and 1.3 mg/L for copper. The EPA published minor and short-term revisions to the 1991 Federal LCR between 2000 and 2007.

The EPA published the 2021 Federal LCRR with the goal of addressing long-term issues on key areas of regulation. These areas included identification of significant sources of lead in drinking water, enhancing CCT requirements, adding a new small system flexibility option for treatment, closing gaps in lead service line replacement requirements, increasing sampling reliability, improving risk communication, new consumer notifications, and new lead monitoring in schools and child care facilities. This rule also addressed prioritization of sampling sites more likely to contain lead.

The 2024 Federal LCRI builds upon and revises the 1991 Federal LCR and the 2021 Federal LCRR to strengthen public health protection and improve implementation in the following areas: development of a service line inventory to locate lead pipes in the distribution system; replacement of lead service lines within 10 years after the November 1, 2027, implementation date of the 2024 LCRI; strengthening the compliance steps for optimal CCT; updating the tap sampling requirements for lead and copper to improve the reliability of results; lowering of the lead action level and updating the calculation for the 90th percentile compliance value; protecting children in schools and child care facilities; and requiring additional actions for public water systems with multiple lead action level exceedances.

Service line inventory

Knowing where lead pipes are located is critical to replacing them efficiently and equitably, as well as for informing consumers so they can take actions to reduce their exposure to lead. To help identify areas with the greatest potential for lead contamination of drinking water and most in need of remediation, the 2021 Federal LCRR and 2024 Federal LCRI require that all public water systems complete and maintain a service line inventory. The 2024 Federal LCRI also requires public water systems to annually update the inventory and to identify the material of all service lines by the mandatory service line replacement deadline. Public water systems are required to include lead connectors in their inventories and must implement a validation process to ensure the service line inventory is accurate. Under the 2024 Federal LCRI, all public water systems are also required to make their service line inventory publicly available.

The EPA definition of “lead service line” in 40 CFR 141.2 (relating to definitions) is “a service line that is made of lead or where a portion of the service line is made of lead.” The EPA

recognizes the public health concern associated with lead connectors because the 2024 Federal LCRI requires public water systems to identify lead connectors in the service line inventory and replace them when they are encountered. The EPA definition of a galvanized requiring replacement (GRR) service line in 40 CFR 141.2 specifies that a galvanized service line needs to be replaced if the line is currently or ever was downstream of any portion of a lead or lead status unknown service line. Research has shown that galvanized lines absorb lead from upstream sources. (McFadden, M. et al. (2011). “Contributions to drinking water lead from galvanized iron corrosion scales.” *Journal—American Water Works Association*, 103, 76—89. <https://doi.org/10.1002/j.1551-8833.2011.tb11437.x>.) Research has also shown that most lead goosenecks, pigtails and connectors are connected to a galvanized service line because galvanized lines are more rigid than other service line materials (such as lead, copper and plastic). (HDR, Engineering Inc. (2009). “An analysis of the correlation between lead released from galvanized iron piping and the contents of lead in drinking water.” archive.epa.gov/region03/dclead/web/pdf/galvanized%20project%20report.pdf.) (Clark, B. N., et al. (2015). “Lead release to drinking water from galvanized steel pipe coatings.” *Environmental Engineering Science*, 32(8), 713—721, doi:10.1089/ees.2015.0073.)

This proposed rulemaking incorporates a lead connector into the definition of “GRR service line” in § 109.1 (relating to definitions). This rulemaking proposes to define a GRR service line as a “service line that is iron or steel piping that has been dipped in zinc to prevent corrosion and rusting and is currently, or ever was, downstream of any portion of a lead service line or a lead connector, or is currently downstream of a lead status unknown service line. In this definition, downstream means in the direction of flow through the service line.” The Federal definition of “GRR service line” does not include lead connectors, so the definition of that term in this proposed rulemaking is more expansive, and therefore more stringent, than the Federal definition. However, the EPA recognizes the public health concern associated with lead connectors because the 2024 Federal LCRI requires systems to identify lead connectors in their distribution system and replace them when they are encountered. The Department believes it is important to include lead connectors in the definition of this term for the previously-stated reasons to protect public health.

The 2024 Federal LCRI requires public water systems to identify a validation pool consisting of all service lines categorized as “non-lead.” This validation pool excludes nonlead service lines identified by records showing the service line was installed after June 19, 1988, or after the compliance date of a state or local law prohibiting the use of service lines that do not meet the 1986 definition of “lead free” in accordance with section 1417 of the Federal Safe Drinking Water Act (42 U.S.C. § 300g-6), as amended in 1986 (Public Law 99-339, 100 Stat. 651), whichever is earlier. The proposed rulemaking excludes nonlead service lines from the validation pool that are identified by records showing the service line was installed after January 6, 1991, the effective date of the Plumbing System Lead Ban and Notification Act (35 P.S. §§ 723.1—723.17). January 6, 1991, is identified as the installation date for a service line to be considered lead free because public water systems in this Commonwealth were legally allowed to continue using plumbing materials containing lead until the effective date of section 5 of the Plumbing System Lead Ban and Notification Act (35 P.S. § 723.5). This date is later than required by the 2024 Federal LCRI, so this proposed provision is more stringent than the 2024 Federal LCRI. The Department believes this additional stringency is necessary to protect public health because

public water systems in this Commonwealth were legally allowed to continue using plumbing materials containing lead until the later date of January 6, 1991.

The proposed rulemaking also specifies that the service line and connector inventory be submitted in a format that is acceptable to the Department, which is not a requirement in the corresponding Federal regulations, so this proposed provision is more stringent than required by the 2024 Federal LCRI. The Department created a service line inventory form to ensure that public water systems provide the required information in a consistent format that can be efficiently incorporated into the Department's existing data system and then reported to the EPA. This provision is consistent with other existing provisions when public water systems are required to submit information in a format acceptable to the Department.

The definitions, service line inventory and validation pool requirements in this proposed rulemaking are consistent with the 2024 Federal LCRI.

Lead pipe replacement within 10 years

Based on more than 30 years of implementing the 1991 Federal LCR, the EPA determined that requiring lead service line replacements based on tap sampling and 90th percentile lead levels alone is insufficient to protect public health. When present, lead service lines are the most significant source of lead in drinking water. Even when public water systems with lead and GRR service lines have implemented optimal CCT, lead can still be released from these service lines. See 89 FR 86418, 86445. Lead service line replacement is a highly effective treatment technique for reducing lead levels in drinking water. It has been part of the EPA's National Primary Drinking Water Regulations since the 1991 Federal LCR.

All public water systems with lead or GRR service lines must prepare a service line replacement plan which facilitates the equitable replacement of all lead or GRR service lines by the replacement deadline. This service line replacement plan must be publicly available and must be updated annually to include new or updated information. Replacement of lead and GRR service lines will significantly reduce the amount of lead in drinking water. See 89 FR 86418, 86421.

Under the 2024 Federal LCRI, public water systems are required to replace lead connectors and all lead and GRR service lines under their control no later than 10 years after the November 1, 2027, implementation date, regardless of lead levels occurring in tap or other drinking water samples. Public water systems must identify all service lines of unknown composition (lead status unknown) to ensure all lead and GRR service lines are replaced by the replacement deadline. The 2024 Federal LCRI stipulates replacement of the entire service line so that no portion of a lead or GRR service line remains. When property owner consent is required for a system to access the service line, systems must make a reasonable effort to engage property owners about full service line replacement. Public water systems with a high proportion of lead service lines may be eligible for a deferred deadline to complete full service line replacements, if specific criteria are met and the extension is approved by the Department. Replacement of lead and GRR service lines will result in greater public health protection by eliminating a significant source of lead exposure. See 89 FR 86418, 86419.

However, the EPA also recognizes that partial lead or GRR service line replacements do not prevent known or anticipated adverse health effects and may cause adverse health effects. See 89 FR 86418, 86431, 86450, 86454 ,86455. Accordingly, the 2024 Federal LCRI prohibits public water systems from conducting a partial lead or GRR service line replacement except in limited circumstances, such as part of an emergency repair or to facilitate the completion of planned infrastructure work. Public water systems that conduct partial service line replacement are required to comply with notification requirements and other measures to mitigate the potential increased levels of lead as a result of the partial replacement.

The lead service line replacement plan and replacement requirements for lead service lines and lead connectors in this proposed rulemaking are consistent with the 2024 Federal LCRI.

Expanding CCT requirements and compliance options for small water systems

The EPA recognizes that replacing lead service lines may not eliminate all lead exposure from tap water because premise plumbing from homes and buildings may also contain lead components. See 89 FR 86418, 86551. CCT refers to methods (for example, alkalinity/pH adjustment and addition of corrosion inhibitors) that public water systems can take to reduce the leaching of lead and copper into drinking water from service lines and premise plumbing. CCT has been part of the treatment technique since the 1991 Federal LCR. The 2024 Federal LCRI defines optimal CCT as “the corrosion control treatment that minimizes the lead and copper concentrations at users’ taps while ensuring that the treatment does not cause the water system to violate any National Primary Drinking Water Regulations.” Optimal CCT can be effective at reducing lead levels, but it requires consistent proper operation, water quality parameter (WQP) monitoring, and tap sampling to ensure it is effective at reducing lead levels. See 89 FR 86418, 86498.

Public water systems without CCT must evaluate and install CCT if a 90th percentile lead or copper value exceeds the action level. Public water systems with CCT are required to reoptimize CCT if a 90th percentile lead or copper result exceeds the action level. Depending on the population served, public water systems must either conduct treatment studies or consult with the Department to determine the most appropriate treatment steps. Public water systems must also operate and maintain optimal CCT and reoptimized optimal CCT. The 2024 Federal LCRI also requires large and medium water systems with lead service lines that must optimize or reoptimize optimal CCT to conduct a pipe rig loop study and install or reoptimize CCT if they are unable to replace a minimum of 20% of the lead or GRR service lines in their distribution system annually or are unable to replace 100% of their lead and GRR service lines within 5 years. Public water systems need to understand how changes in their CCT affect the existing pipe scale of lead service lines. A pipe rig loop study using harvested lead pipe from the distribution systems effectively demonstrates how that scale will interact with the CCT options and will provide vital information to determine the optimal CCT option. See 89 FR 86418, 86504, 86505. The 2024 Federal LCRI also includes a requirement for public water systems without lead and GRR service lines to reoptimize CCT again if they exceed the lead action level after completing their service line replacement program.

Flexibility is important for small water systems so they can protect public health by taking the treatment actions that make sense for their consumers. Because maintaining optimal CCT is an ongoing process and finding and retaining skilled operators can be especially challenging for small systems, the 2024 Federal LCRI provides two alternatives to CCT for small systems that exceed the lead action level: point-of-use treatment; or replacement of all lead-bearing plumbing materials. The 2024 Federal LCRI allows small community water systems (serving 3,300 or fewer persons) and nontransient noncommunity water systems up to 1 year to install a point-of-use device on taps that are used for cooking or drinking or to replace all lead-bearing plumbing. However, the 2024 Federal LCRI also requires water systems that do not fulfill the requirements of the alternate compliance option to meet the CCT steps and deadlines, which means these water systems are required to obtain state approval of CCT within the same 24-month period.

These alternate compliance flexibility options will benefit small community water systems (serving less than 3,300 people) such as assisted living facilities and nontransient noncommunity water systems such as schools. Therefore, this proposed rulemaking includes the point-of-use and replacement of lead-bearing plumbing compliance alternatives for small systems. For these flexibility options to be implementable, this proposed rulemaking clarifies that the public water system must have control over and access to all plumbing in buildings served by the system. This proposed rulemaking also clarifies the process by which these small water systems who are denied approval for the first compliance alternative may request approval for the other compliance alternative or revert to the compliance steps to install CCT, instead of allowing the state to mandate the other compliance option. Interim deadlines are included to ensure these small water systems comply with the deadlines for installing optimal CCT if both flexibility options are denied or if the small water system fails to meet the compliance requirements. For example, a small water system choosing a compliance flexibility option is required to submit a recommendation to the Department within 3 months of the end of the tap sampling period in which the lead action level exceedance occurred. If the recommendation is not approved, the small water system may submit a recommendation for the other compliance option within 3 months after receiving the disapproval from the Department. These interim deadlines are more stringent than the deadlines in the 2024 Federal LCRI. The Department believes these interim deadlines are needed to ensure the small water system has enough time to implement the approved compliance option. These deadlines also allow time for the small water system to complete any required CCT steps by the specified CCT deadline if the small water system fails to fully implement and comply with the approved flexibility option.

The CCT requirements and small water system compliance flexibility options in this proposed rulemaking are consistent with the 2024 Federal LCRI.

Improving tap sampling and monitoring requirements

The 2024 Federal LCRI changes the criteria for selecting homes at which to collect tap samples and the way in which those samples are collected. Public water systems are required to focus tap sample site selection on sites with lead service lines, where present, and follow new procedures to collect tap samples at these sites. Under the 2024 Federal LCRI, public water systems are required to collect first-liter and fifth-liter tap samples at sites with lead service lines and use the higher of the two values when determining compliance. This method will better represent water

that has been stagnant both within the lead service line and the premise plumbing, which will help public water systems better understand the effectiveness of their CCT. See 89 FR 86418, 86419. Public water systems must collect all samples from available lead service line sites, where present, and sample sites from the highest tier available (Tier 1 is the highest and Tier 5 is the lowest) up to the minimum number of required samples. Additionally, public water systems must sample from the same sites in subsequent tap monitoring periods or, when unable to do so, must select replacement sites that meet the same tiering criteria.

The 2024 Federal LCRI requires public water systems to return to a standard 6-month monitoring frequency if the public water system has identified lead or GRR service lines in their inventory or has a 90th percentile lead level above the action level from the most recent monitoring period. However, public water systems with lead or GRR service lines may remain on reduced monitoring if the system has conducted compliance monitoring that meets the new priority sample site tiering, collects samples in accordance with the new sample collection requirements, and the system collects first-liter or first-liter and fifth-liter paired samples.

Although the National Primary Drinking Water Regulations require public water systems to receive a written determination from the state approving the reduced monitoring frequency, it does not clarify what information is necessary to demonstrate these criteria have been met. The state's approval is to be based on a review of monitoring, treatment and other relevant information submitted by the public water system. Therefore, the proposed rulemaking includes a provision that requires public water systems to provide documentation to the Department by December 31, 2027, that demonstrates the system has conducted compliance monitoring that meets the new priority sample site tiering, collects samples in accordance with the new sample collection requirements, and the system collects first-liter or first-liter and fifth-liter paired samples. This deadline is more stringent than required by the 2024 Federal LCRI and allows time for the Department's review and determination and provides sufficient time for those water systems that are not granted reduced monitoring to complete the required standard monitoring by June 30, 2028.

The National Primary Drinking Water Regulations mandate WQP monitoring at the entry point and within the distribution system to verify optimal CCT treatment is effectively operated and maintained. Although the National Primary Drinking Water Regulations require WQP monitoring at the entry point at least every 2 weeks, this proposed rulemaking is more stringent by requiring entry point monitoring each week. Weekly monitoring ensures the WQPs are maintained within specified ranges, that overfeeding or underfeeding of treatment chemicals is not occurring, and that water quality is consistently maintained because the longer the period in between monitoring, the more likely a WQP excursion may occur. WQP excursions increase the likelihood of elevated lead levels, so for optimal CCT to be effective at reducing lead levels, it requires consistent proper operation and routine WQP monitoring. The WQP monitoring provisions in this proposed rulemaking are also more stringent than the 2024 Federal LCRI by requiring groundwater systems to monitor WQPs at all entry points, rather than allowing for more limited entry point sampling as provided by 40 CFR 141.87(b)(3)(ii) (relating to monitoring requirements for water quality parameters). Since groundwater systems may have multiple sources with different water chemistry that require different types of CCT, WQP

monitoring at all entry points is necessary to ensure all treatment processes are effectively treating the sources to achieve acceptable finished water quality.

The 1991 Federal LCR required source water monitoring be conducted at the entry point for lead or copper each time a 90th percentile value exceeds the action level because source water quality can change over time. However, the 2024 Federal LCRI requires source water monitoring at the entry point for lead or copper only the first time the 90th percentile value exceeds the action level. This proposed rulemaking retains the requirement for source water monitoring at the entry point for lead or copper each time a 90th percentile value exceeds the action level, which is more stringent than the 2024 Federal LCRI. High levels of lead or copper in source water could require modifications to existing treatment processes or installation of new treatment to remove lead or copper from the source water. Therefore, source water monitoring after each action level exceedance is necessary to ensure public water systems are responding appropriately, maintaining and properly operating existing treatment or taking steps to add treatment when necessary.

The lead and copper tap sampling requirements and WQP and source water monitoring requirements in this proposed rulemaking are consistent with the 2024 Federal LCRI.

Lowering the lead action level and updating the 90th percentile calculation

The 2024 Federal LCRI lowers the lead action level from 0.015 mg/L to 0.010 mg/L, which will result in more public water systems installing or reoptimizing CCT, and providing public education to reduce drinking water lead exposure. Systems must prioritize sampling at sites based on the presence of service lines and plumbing materials most likely to contribute lead to drinking water and use this data to calculate the 90th percentile. The 1991 Federal LCR and the 2024 Federal LCRI use tiering to prioritize sites selected for tap sampling according to the likelihood of having elevated lead levels, which in turn indicates the need to assess the effectiveness of CCT to maximize reducing exposure of lead in drinking water and inform next steps to control lead releases. See 89 FR 86418, 86494.

According to the EPA, Tier 1 and Tier 2 represent the highest risk of lead in drinking water. Public water systems with a sufficient number of Tier 1 and Tier 2 sites must use results from only these sites to calculate the 90th percentile compliance value. Additional data, such as results from customer-requested samples, that meet the tiering and sampling protocol requirements should also be included in the 90th percentile calculation because this data can provide better system-wide assessment of CCT performance at those sites. See 89 FR 86418, 86495.

The 2024 Federal LCRI also updates the requirements for systems with insufficient Tier 1 and Tier 2 sites to meet their minimum required number of samples. Public water systems with insufficient Tier 1 and Tier 2 sites must use the highest sample results from Tier 1, Tier 2 and the next highest available tier to calculate the 90th percentile. Public water systems must include samples from each tier at which the system conducted compliance sampling; the highest results from among those samples equal to the minimum number of samples are then used to calculate the 90th percentile. The number of samples used for the 90th percentile calculation is only limited if a public water system does not have enough Tier 1 and 2 sites to meet the required

minimum number of samples to lessen the dilution of the 90th percentile calculation when a system has a mix of samples from lead service line sites and lower-tiered sites.

If a public water system collects all compliance samples at sites in Tiers 3—5, the number of samples used for the 90th percentile calculation is not limited, but public water systems must still prioritize compliance sampling at the highest tier available.

The lead and copper action levels, sample site tiering, sample site selection and 90th percentile calculations in this proposed rulemaking are consistent with the 2024 Federal LCRI.

Protection of children in schools and child care facilities

Children are especially vulnerable to lead exposure and can spend a significant amount of time in schools and child care facilities where the premise plumbing may contain lead, yet many schools or child care facilities do not have experience testing for lead in drinking water so these facilities may not have been tested. See 89 FR 86418, 86536. While it is within the control of public water systems to conduct public education activities and sampling, public water systems are typically not in control of premise plumbing in schools and child care facilities. Schools and child care facilities are responsible for addressing premise plumbing and remediation actions within their buildings, including installing filters or bottle-filling stations, or both. See 89 FR 86418, 83537, 86538.

Therefore, the 2024 Federal LCRI requires all community water systems to: develop a list of all elementary and secondary schools and child care facilities they serve; conduct public education about the health risks of lead in drinking water to all elementary schools, secondary schools and child care facilities on their list at least annually; and conduct sampling in the elementary schools and child care facilities that they serve.

This public education and sampling is intended to educate schools and child care facilities and their users about the risks from lead in premise plumbing and the importance of sampling for lead in drinking water, to provide them with some experience testing for lead in drinking water and to help inform their decisions to mitigate lead risks, including by establishing their own sampling programs. See 89 FR 86418, 86536, 86537.

The 2024 Federal LCRI requires community water systems to conduct sampling in 20% of the elementary schools and 20% of the child care facilities they serve per year for the first 5 years after November 1, 2027. Community water systems must collect at least five samples per school and two samples per child care facility when sampling for lead. Additionally, community water systems must notify all secondary schools annually that they may request lead sampling from the system. Community water systems are required to submit any sampling results to the Department, the Department of Health and local health departments, and are required to include a statement in the Consumer Confidence Report about school and child care facility lead sampling and to direct members of the public to their local school or child care facility for information.

As previously noted, the purpose of this sampling is for public education. Tap sampling is one way, but not the only way, to provide information to schools and child care facilities about lead in their buildings. This sampling by community water systems serves as an initial sample set for lead risks within schools and child care facilities and, coupled with the public education materials, are intended to encourage schools and child care facilities to take additional actions, including comprehensive sampling. See 89 FR 86418, 86540.

The public education and sampling in schools and child care facilities requirements in this proposed rulemaking are consistent with the 2024 Federal LCRI.

Strengthening protections to reduce lead exposure

Public education is one of the components of the 1991 Federal LCR. Public education was not intended to substitute for the other components of the 1991 Federal LCR, but rather to supplement and support them. Public education, particularly when combined with other actions and policies to reduce public health hazards, is an effective way to improve public health by influencing people's knowledge, beliefs and behaviors. See 89 FR 86418, 86519, 86520. The 2024 Federal LCRI builds on the public education requirements of the 1991 Federal LCR by updating public education content and strengthening the delivery requirements.

Similar to existing provisions for public notice and Consumer Confidence Reports, the 2024 Federal LCRI requires all public education materials to either include information in the appropriate languages regarding the importance of the materials along with information where persons served by the public water system may obtain a translated copy of the materials or may request assistance in the appropriate languages, or the materials must be translated into the appropriate languages.

In addition to the public education required whenever the lead 90th percentile compliance value exceeds the action level, the 2024 Federal LCRI also requires public water systems to conduct public education independent of lead levels in a variety of contexts (for example, individual notices of tap sample results, notifications to people served by known or potential lead service lines, outreach to encourage customer participation in full service line replacement and notifications of service line disturbances) because public education not associated with the action level can produce benefits by prompting consumers to take actions that reduce their exposure. See 89 FR 86418, 86520, 86521.

Under the 1991 Federal LCR, public water systems must provide information regarding tap monitoring results to consumers within 30 days of learning of the results. The 2024 Federal LCRI requires public water systems to provide notification to consumers of their individual lead or copper tap sampling results within 3 business days of learning of the results; this includes providing notification of results to consumers who requested their tap be sampled for lead. If copper samples are collected at the same time as lead, systems can combine the lead and copper results and required information into a single notice. The notice must include: the results of the lead or copper monitoring, or both, for the tap that was sampled; an explanation of the health effects of lead or copper, or both; a list of steps consumers can take to reduce exposure to lead or copper, or both, in drinking water; and contact information for the public water system.

The 2024 Federal LCRI requires public water systems to notify customers and consumers if they are served by a lead, GRR or lead status unknown service line. These notices must include information about accessing the service line replacement plan and steps consumers can take to reduce exposure to lead in drinking water. Public water systems must also offer to sample the tap water of any consumer served by a lead, GRR or lead status unknown service line who requests it.

A public water system that causes a disturbance to a lead or GRR service line, including actions that result in a shut off or bypass of water to an individual service line or a group of service lines, is required to provide notice to the affected customers. This notification may also include other actions that cause a disturbance to a service line or group of service lines, such as undergoing physical action or vibration that could result in pipe scale dislodging and associated release of particulate lead (for example, disturbances following inventorying efforts). For these disturbances, public water systems are required to provide persons at the service connection with public education materials and instructions for a flushing procedure to remove particulate lead. For some disturbances (replacement of an inline water meter, water meter setter, or connector or replacement of a water main whereby the service line pipe is physically cut), public water systems are required to provide persons at the service connection with public education materials and pitcher filters or point-of-use devices certified by an American National Standards Institute (ANSI) accredited certifier to reduce lead, along with filter instructions and filter replacement cartridges.

Because actions such as installing or reoptimizing optimal CCT and lead service line replacement may take years to implement, public water systems may continue to exceed the lead action level during that time. Therefore, the 2024 Federal LCRI includes requirements for public water systems with recurring lead action level exceedances (defined as three action level exceedances within a rolling 5-year period) to conduct additional outreach to consumers and provide pitcher filters or point-of-use devices certified by an ANSI-accredited certifier to reduce lead in drinking water with instructions and replacement filters to all consumers. These additional actions can reduce consumer exposure to higher levels of lead in drinking water while the public water system works to reduce systemwide lead levels through replacement of lead service lines and installing or reoptimizing optimal CCT, which can take years to complete. See 89 FR 86418, 86533.

In addition to public education, outreach and mitigation provisions, the 2024 Federal LCRI has another protection to reduce lead exposure—the Distribution System and Site Assessment. The Distribution System and Site Assessment is intended to potentially identify the cause of, and actions to address, localized elevated lead levels in drinking water. Public water systems may not exceed the lead action level but can still have up to 10% of tap samples above the lead action level, so it is important to understand whether the elevated lead level is a localized problem or is due to water quality issues in the distribution system. Identifying sources of lead in drinking water is a critical component to mitigating lead and improving public health protection. See 89 FR 86418, 86516, 86517. The Distribution System and Site Assessment includes WQP sampling and lead tap sampling at or near the location that exceeded the lead action level. The public water system must evaluate the results of this sampling to identify the cause of the elevated sample

result (if known), determine if either localized or centralized adjustment of the optimal CCT is needed, or determine whether other distribution system actions, such as flushing to reduce water age, are necessary to reduce lead levels. Public water systems must also submit information to the state recommending actions or adjustments of optimal CCT after evaluating the Distribution System and Site Assessment results.

The public education, outreach, mitigation and Distribution System and Site Assessment requirements in this proposed rulemaking are consistent with the 2024 Federal LCRI.

Advisory committee review

The draft proposed rulemaking was presented to the Public Water System Technical Assistance Center (PWS-TAC) Board on February 12, 2026. The PWS-TAC Board includes representatives from a broad array of drinking water professional associations, the Office of Consumer Advocate and stakeholder organizations, including public interest and environmental organizations, and building and land development interests.

The PWS-TAC Board recommended the following based on their review of the draft proposed annex:

- “The definition of Connector should be edited to add the following text as the 2nd sentence: ‘The connector may be made from a variety of materials.’ The revised definition would be ‘Connector—Also referred to as a gooseneck or pigtail, is a short segment of piping, not exceeding 3 feet, which can be bent and used for connections between service piping. The connector may be made from a variety of materials. Lead connectors exceeding 3 feet are considered to be part of a lead service line. Lead connectors may result in a galvanized service line needing replacement if the lead connector is upstream of the galvanized line.’”

The Department agrees with the recommendation and revised the definition of “connector” to include the recommended language.

- “[The Department] should work with EPA to ensure clarity and strong language in technical guidance on how the 90th percentile value is to be calculated when more than the minimum number of samples are received from sample sites of lower Tiers, and are analyzed and reported. The guidance should include examples of what sample results are to be ranked and included in the calculation, especially when results from Tier 3, 4 or 5 sites that are not included in the calculation are higher than results from Tier 1 or 2 sites.”

The Department agrees with the recommendations for additional guidance, including examples for the 90th percentile calculation and will develop this guidance based on the guidance that is being developed by the EPA.

- “Subparagraph (iv) in § 109.1102(b)(1.1), which reads ‘Large water systems with CCT that exceed the lead PQL but do not exceed the lead or copper action level may be required by the Department to complete the reoptimized [optimal CCT] steps in

paragraph (2.1).’ should be deleted because [the Department] has the authority under subparagraph (ii) to require water systems to reoptimize [optimal CCT]. [The Department] should also create written [standard operating procedures] and training for staff to ensure consistent implementation in determining when systems should be required to reoptimize [optimal CCT].”

The Department agrees with the recommendation and deleted draft § 109.1102(b)(1.1)(iv) (relating to action levels and treatment technique requirements) in the proposed rulemaking. The Department also agrees with the recommendation for additional guidance.

- “In the schedule for [optimal CCT] outlined in paragraphs § 109.1102(b)(2.1) and § 109.1102(b)(2.2), DEP should combine Step 2—Complete a CCT feasibility study for reoptimization with Step 3—Obtain a permit for construction or modification of [optimal CCT]to show [the Department] is consistent with the federal timeline of 36 months.”

The Department added language to § 109.1102(b)(2.1) and (2.2) to show it is consistent with the Federal timelines of 24 or 36 months, as applicable.

Although the optimal CCT Steps 2 and 3 are not combined, Step 3 was revised to state the deadline by which a water system needs to obtain a construction permit for optimal CCT, which is either 24 months or 36 months from the end of the monitoring period in which the action level was exceeded. Water systems that do not need to conduct a pipe rig loop study must obtain a construction permit for optimal CCT within 24 months. Water systems that need to conduct a pipe rig loop study must obtain a construction permit for optimal CCT within 36 months. These deadlines match the 2024 Federal LCRI. The Department agrees with the PWS-TAC Board’s recommendations for additional guidance from the EPA, including examples for the 90th percentile calculation and written standard operating procedures for staff.

- “The [water quality parameter] monitoring language in § 109.1103(b.1) that states ‘from taps used to provide water for human consumption’ should be changed to match the federal language.”

The Department agrees with the recommendation and revised § 109.1103(b.1) (relating to monitoring requirements) as suggested.

- “[The Department] and EPA should work with their respective Departments of Education and Human Services in creating a marketing/communications and notification plan that includes templates (in English and Spanish) for sampling in schools and child care facilities to assist [public water systems] in meeting the LCRI requirements for notification and sampling in schools and child care facilities.”

The Department will discuss this recommendation with EPA Region 3 and may follow up with the Department of Education and the Department of Human Services, as appropriate.

E. Summary of Proposed Rulemaking

§ 109.1. Definitions

The definitions in this section are consistent with the Federal definitions in 40 CFR 141.2.

The definition of “90th percentile” is proposed to be added. This calculated value is compared to the lead and copper action levels to determine if an action level was exceeded.

The definition of “Administrator” is proposed to be amended for clarity.

Acronyms for “CCT—corrosion control treatment” and “WQP—water quality parameter” are proposed to be added for clarity.

Definitions of “child care facility” and “school” are proposed to be added to identify which schools and child care facilities are subject to monitoring requirements.

The definition of “connector” is proposed to be added because the 2024 Federal LCRI requires connectors to be included in the baseline service line inventory and the service line replacement plan.

The definition of “Distribution System and Site Assessment” is proposed to be added because the 2024 Federal LCRI added this protection to reduce lead exposure by requiring tap sampling at a site that yields a lead result that exceeds 0.010 mg/L, the lead action level.

Definitions of “first-liter sample” and “fifth-liter sample” are proposed to be added to distinguish between first-liter and fifth-liter tap samples collected for lead as required in the tap sampling protocol. The proposed definition of “first-liter sample” would replace the existing definition of “first-draw sample” for the lead and copper tap sampling protocol. The term “first-draw sample” is described in proposed § 109.1103(l)(5)(i)(F) and is only used in reference to sampling in schools and child-care facilities.

Several definitions relating to service lines are proposed to be added or amended for consistency with Federal definitions in 40 CFR 141.2. The definition of “service line” is proposed to be added to distinguish the difference between a service line and connector and to meet the Federal requirements for the baseline inventory plus the service line replacement plan. The definition of “lead service line” is proposed to be amended and definitions of “lead status unknown service line” and “nonlead service line” are proposed to be added for consistency with Federal definitions in 40 CFR 141.2. As previously explained, the proposed definition of “GRR service line—galvanized requiring replacement service line” is more stringent than the Federal definition. These definitions identify each category of service line and distinguish how the material composition of the service line determines the categorization of the service line.

The definition of “OCCT—optimal corrosion control treatment” is proposed to be added. The term is used to distinguish between systems who maintain treatment that do not exceed the action

level or quantitation limit and systems who exceed the action level or quantitation limit and need to adjust their treatment.

The definition of “OWQP—optimal water quality parameters” is proposed to be added because the values for each WQP are used to ensure treatment is operating properly after optimal CCT is installed.

Nonsubstantive edits are proposed for the definitions of “POE device—point-of-entry device” and “Performance Evaluation Sample.”

The definition of “POU device—point of use device” is proposed to be added because these devices can be used as treatment options to reduce or remove contaminants in drinking water.

The definition of “PQL—practical quantitation limit” is proposed to be added because practical quantitation limits are used for determining monitoring frequencies and compliance with treatment technique requirements.

The definition of “partial service line replacement” is proposed to be added to clarify between partial and full service line replacement. There are different timing requirements for public outreach and mitigation measures for partial service line replacements.

The definition of “pitcher filter” is proposed to be added because it is a device used to reduce lead in drinking water after service line disturbances or replacements.

The definition of “system with CCT” is proposed to be added to identify a public water system that has or purchases all of its water from a system that has lead and copper treatment installed and approved by the Department.

The definition of “tap monitoring period” is proposed to be added to identify the time period during which each system must complete tap sampling for lead and copper analysis.

The definition of “tap sampling period” is proposed to be added to identify the time period within the monitoring period that each system must collect tap samples for lead and copper analysis.

The definition of “tap sampling protocol” is proposed to be added. This protocol identifies the tap sampling procedure for collecting lead and copper samples for analysis as specified in § 109.1103(a)(4).

§ 109.410. Tier 3 public notice—categories, timing and delivery of notice

Subsection (a)(2) is proposed to be amended to clarify that violations of the 2024 Federal LCRI reporting requirements are Tier 3 violations.

§ 109.602. Acceptable design

Subsection (e) is proposed to be amended to allow point-of-use devices as an acceptable design for the alternate compliance flexibility option under Subchapter K.

§ 109.718. Comprehensive monitoring plan

Subsection (b) is proposed to be amended to clarify that the disinfection sample site plan is part of the comprehensive monitoring plan and to update the cross-reference for the lead and copper sample site plan.

§ 109.1101. Scope

Subsection (a) is proposed to be amended to summarize the requirements in Subchapter K. The amendment also clarifies that failure to meet these requirements is a violation of the National Primary Drinking Water Regulations consistent with 40 CFR 141.80(b) (relating to general requirements and action level).

Subsection (b) is proposed to be amended to update the population served for medium and small water systems as reflected in 40 CFR 141.2.

Subsection (c) is proposed to be amended to clarify that a community water system or nontransient noncommunity water system that is a consecutive water system receiving finished water from interconnection with another public water system is considered source water and is subject to all of the requirements in Subchapter K.

§ 109.1102. Action levels and treatment technique requirements

The heading of this section is proposed to be amended to “lead and copper action levels, 90th percentile calculation and treatment technique requirements.”

The proposed amendments to subsection (a) are consistent with 40 CFR 141.80, unless otherwise noted. The proposed amendments to subsection (b) are consistent with 40 CFR 141.81 (relating to applicability of corrosion control treatment steps to small, medium, and large water systems), unless otherwise noted.

Subsection (a) is proposed to be amended to describe the lead and copper action levels, an exceedance of an action level, the lead and copper practical quantitation limit and an exceedance of a practical quantitation limit.

Proposed subsection (a.1) describes the 90th percentile calculation, what samples are included in the calculation and how the 90th percentile is calculated using each of the tap sampling tiers.

Subsection (b) is proposed to be amended to include the updated treatment technique requirements and describe when a system must complete the CCT or optimal CCT steps.

Paragraphs (1), (2) and (3) are proposed to be reserved and replaced with updated CCT compliance steps in proposed paragraphs (1.1), (1.2), (1.3), (2.1), (2.2) and (3.1).

Proposed subsection (b)(1.1) establishes the applicability of CCT steps to large, medium and small water systems.

Proposed subsection (b)(1.2) identifies water systems that are eligible to be deemed to have optimal CCT.

Proposed subsection (b)(1.3) describes the requirements to be deemed to have optimal CCT.

Proposed subsection (b)(2.1) establishes the CCT steps and deadlines for water systems reoptimizing optimal CCT. As previously explained, this paragraph includes interim deadlines which are more stringent than the 2024 Federal LCRI. Otherwise, these amendments reflect 40 CFR 141.81(d) and 40 CFR 141.82(b) (relating to description of corrosion control treatment requirements).

Proposed subsection (b)(2.2) establishes the CCT steps and deadlines for water systems without CCT or that are optimizing CCT. As previously explained, this paragraph includes interim deadlines which are more stringent than the 2024 Federal LCRI. Otherwise, these amendments reflect 40 CFR 141.81(e) and 141.82(b).

Proposed subsection (b)(3.1) describes the CCT steps. This amendment reflects 40 CFR 141.82(a).

Subsection (b)(4) is proposed to be amended to outline the steps required if a water system needs to install source water treatment. This amendment reflects 40 CFR 141.83 (relating to source water treatment requirements).

Subsection (b)(5) is proposed to be reserved because the updated requirements for designation of WQPs are incorporated in proposed subsection (b)(1.1), (1.2), (2.1), (2.2) and (3.1).

Proposed subsection (b)(5.1) establishes the CCT steps for small and medium water systems without CCT.

Proposed subsection (c) establishes Department notification and approval requirements for water systems with upcoming long-term changes in treatment or source. This amendment reflects 40 CFR 141.81(h) and 40 CFR 141.90(a)(4) (relating to reporting requirements).

Proposed subsection (d) establishes small water system compliance flexibility options. Small community water systems serving 3,300 or fewer persons that exceed the lead action level, but do not exceed the copper action level and that have control over and access to all plumbing and service connections served by the system, and all nontransient noncommunity water systems that exceed the lead action level, but do not exceed the copper action level and that have control and access to all plumbing in buildings served by the system may recommend one of the compliance alternatives in this subsection. If one of the compliance alternatives is denied by the Department,

the system may recommend the other compliance alternative. Systems not recommending one of these options must comply with subsection (b). These amendments reflect 40 CFR 141.93 (relating to small water system compliance flexibility).

Proposed subsection (d)(1) establishes the time frames in which small community water systems and nontransient noncommunity water systems electing to use one of the alternative compliance options must submit a recommendation to the Department. This paragraph also clarifies that these water systems must submit the recommendation on forms provided by the Department, collect WQPs and, if applicable, maintain CCT until the Department determines in writing that CCT is no longer necessary. This amendment reflects 40 CFR 141.93(a).

Proposed subsection (d)(2) establishes that if the Department does not approve an alternative compliance option, the system shall comply with the applicable CCT requirements in subsection (b)(2.1) for systems with corrosion control or subsection (b)(2.2) for systems without corrosion control. This amendment reflects 40 CFR 141.93(b).

Proposed subsection (d)(3) establishes that if the system fails to implement the approved alternative compliance option, or the Department revokes the approval, the system must follow the requirements for small community water systems and nontransient noncommunity water systems in subsection (b)(2.1) for systems with corrosion control or in subsection (b)(2.2) for systems without corrosion control. This amendment reflects 40 CFR 141.93(b).

Proposed subsection (d)(4) establishes the criteria for the point-of-use devices alternative compliance option. This amendment reflects 40 CFR 141.93(c).

Proposed subsection (d)(5) establishes the criteria for replacement of lead-bearing plumbing alternative compliance option. This amendment reflects 40 CFR 141.93(c).

Proposed subsection (e) establishes the criteria and steps for a Distribution System and Site Assessment. A water system must conduct a Distribution System and Site Assessment when an individual tap sample exceeds the lead action level and the site is included in the site sample plan. A Distribution System and Site Assessment includes additional WQP monitoring, a follow-up tap sample and a distribution system recommendation. The Department will respond to the recommendation and the water system must implement the approved recommendation. If the approved recommendation includes modifications to optimal CCT, the water system must complete the CCT steps 5—7 in subsection (b)(2.1) or (2.2). These amendments reflect 40 CFR 141.82.

§ 109.1103. Monitoring requirements

Subsection (a) is proposed to be amended to add cross-references for the lead and copper action levels and practical quantitation limits, and to clarify that the monitoring requirements for lead and copper should be at taps used for human consumption and at sites selected in the sample site plan. The proposed amendments are consistent with 40 CFR 141.86 (relating to monitoring requirements for lead and copper in tap water).

Subsection (a)(1) is proposed to be reserved because initial monitoring has been replaced by standard monitoring in proposed subsection (a)(1.1).

Proposed subsection (a)(1.1) explains the standard monitoring requirements. Standard monitoring is conducted every 6 months at a specific number of sites based on the population served. As previously explained, subsection (a)(1.1)(i)(A)(iv) includes a deadline for documentation of compliance monitoring that is more stringent than 2024 Federal LCRI.

Subsection (a)(2) is proposed to be reserved because WQP monitoring is described in proposed subsection (b.1).

Proposed subsection (a)(2.1) establishes reduced monitoring, including the criteria to qualify for reduced monitoring, the tap sampling periods for reduced monitoring, the monitoring required for the reduced annual and reduced triennial frequencies, and that the Department must approve a reduced monitoring frequency.

Subsection (a)(3) is proposed to be reserved because source water monitoring is in proposed subsection (f.1).

Proposed subsection (a)(4) explains the tap sampling protocol, including applicability and procedures for sampling sites with lead service lines and nonlead service lines.

Subsection (b) is proposed to be reserved because special lead and copper tap monitoring requirements are proposed to be updated and added to § 109.1102(b)(5.1).

Proposed subsection (b.1) establishes the monitoring requirements for WQPs, including the number of sites, site selection criteria, reduced monitoring requirements and sample collection protocol. As previously explained, this proposed subsection is more stringent than the 2024 Federal LCRI by requiring groundwater systems to monitor WQPs at all entry points, rather than allowing for more limited entry point sampling as provided by 40 CFR 141.87(b)(3)(ii). The proposed amendments in this subsection are otherwise consistent with 40 CFR 141.87.

Subsections (c), (d) and (e) are proposed to be reserved because these monitoring requirements are proposed to be updated and added to subsections within this section.

Subsection (f) is proposed to be amended to add additional monitoring requirements. These amendments are consistent with 40 CFR 141.86 and 141.87.

Proposed subsection (f)(1) addresses lead and copper tap monitoring beyond tap sampling conducted for standard or reduced monitoring and whether and how these results may be included in the 90th percentile calculation.

Proposed subsection (f)(2) addresses additional WQP monitoring.

Proposed subsection (f)(3) addresses monitoring conducted as part of a Distribution System and Site Assessment.

Proposed subsection (f.1) establishes the requirements for lead and copper entry point monitoring, including the monitoring required for source water treatment and reduced monitoring. As previously explained, this subsection is more stringent than the 2024 Federal LCRI by requiring weekly entry point monitoring and by requiring source water monitoring after each action level exceedance.

Subsection (g) is proposed to be reserved because sample site plans are detailed in proposed § 109.1109 (relating to service line and connector inventory, service line replacement plan and sample site plan).

Subsection (h) is proposed to be reserved because sample collection methods are proposed to be updated and added to subsections within this section.

Subsection (i) is proposed to be amended to clarify analysis requirements. This amendment reflects 40 CFR 141.89(a) (relating to analytical methods).

Subsection (j) is proposed to be amended to correct a cross-reference, update and clarify the requirements for the Department to invalidate a sample result and update the requirements for replacement samples. Water systems are to report the results of all samples to the Department and submit all supporting documentation for samples the system believes should be invalidated. This amendment reflects 40 CFR 141.86.

Subsection (k) is proposed to be amended to clarify the materials and monitoring criteria to qualify for a monitoring waiver, the required monitoring if a waiver is approved, the criteria required for continued eligibility to maintain an existing waiver and the conditions that would result in a waiver being revoked. This proposed amendment reflects 40 CFR 141.86.

Proposed subsection (l) establishes the requirements for outreach and monitoring for lead in schools and child care facilities served by a community water system. Each community water system that serves schools or child care facilities is required to compile a list of all schools and child care facilities served by the system, with some limited exceptions. Each community water system is required to provide information about lead in drinking water to each school and child care facility served by the system and to conduct sampling at elementary schools and child care facilities served by the system within 5 years (at a rate of sampling 20% of these facilities each year). Sampling must be conducted at a minimum number of sites using specific sample collection methods. The community water system must also retain documentation for those schools and child care facilities that do not respond or that decline to be sampled. The community water system must also provide the sample results to each school and child care facility with additional information about remediation options consistent with current EPA guidance. These sample results must also be provided to the Department, the Department of Health and local health departments. This subsection also identifies criteria for which a waiver may be granted to a community water system exempting the water system from the sampling requirements. These proposed amendments reflect 40 CFR 141.92 (relating to monitoring for lead in schools and child care facilities).

§ 109.1104. Public education and notification

The heading of this section is proposed to be amended to “public education and notification, supplemental monitoring and mitigation requirements.”

The proposed amendments to this section are consistent with 40 CFR 141.85 (relating to public education and supplemental monitoring and mitigation requirements), unless otherwise noted.

Subsection (a) is proposed to be amended to clarify that the public education program is specifically for lead, and that it applies to any water system that exceeds the lead action level.

Subsection (a)(1) is proposed to be amended for clarity and consistency with Federal requirements specifically for inclusion of information for non-English-speaking populations in written public education materials. In addition, this paragraph clarifies the process and deadlines that water systems must follow when obtaining Department approval of the written public education materials content prior to delivery.

Subsection (a)(2)(i) is proposed to be amended to clarify the public education materials delivery requirements for community water systems. Subsection (a)(2)(ii) is proposed to be amended to clarify the public education materials delivery requirements for nontransient noncommunity water systems. The proposed amendments detail who must receive the written public education materials, the frequency at which the public education must be delivered, a list of educational outreach activities water systems must complete, and the deadline for when water systems must deliver or post the public education materials and complete the outreach activities.

Subsection (a)(2)(iii) is proposed to be amended to clarify when and how systems may request extensions to complete the public education delivery requirements, that extensions may be granted on a case-by-case basis and the deadline by which systems must complete the public education delivery requirements.

Subsection (a)(3) is proposed to be amended for clarity.

Subsection (a)(4) is proposed to be reserved. This paragraph requires systems with action level exceedances to provide information about laboratories certified by the Department to analyze lead and copper in drinking water to any customer who requested that information. This existing provision is no longer needed with the customer-requested sampling and result notification provisions in proposed subsection (a)(4.1).

Proposed subsection (a)(4.1) explains when systems are required to collect customer-requested samples and provide notification to those customers for results of the samples. This is consistent with 40 CFR 141.85(c) and 141.86(b).

Subsection (b)(1) is proposed to be amended to clarify that water systems are required to include copper tap monitoring results, the health effects language for copper, the steps to reduce exposure to copper, and the maximum contaminant level goal and the action level for copper in

the consumer tap notices. Proposed amendments to this subsection also require systems to add information to the consumer tap notices on the possible sources of lead in drinking water.

Subsection (b)(2) is proposed to be amended to reduce the time frame allowed for water systems to provide consumer tap notices from 30 days to as soon as practicable but no later than 3 business days of the system learning of the results.

Subsection (b)(3) is proposed to be amended to allow additional delivery methods for consumer tap notices and allow the notices of lead and copper results to be combined into one notice. The proposed amendments also require nontransient noncommunity water systems that serve persons 17 years of age or under to provide consumer tap notices directly to the parent or guardian of each of those persons.

Proposed subsection (b)(4) describes requirements for reporting to the Department relative to delivery of consumer tap notices, including timing and what is required to be submitted to the Department. These proposed amendments are consistent with 40 CFR 141.90(f)(3).

Subsection (c) is proposed to be amended to add the requirement for water systems to provide public notification in accordance with Subchapter D (relating to public notification) when the water system exceeds the action level for lead, or when the water system fails to comply with the reporting requirements in § 109.1107 (relating to system management responsibilities).

Proposed subsection (d) explains the requirements for water systems to notify persons served by a service line known to contain lead or potentially containing lead. This includes the timing, content and delivery requirements of the notifications. This subsection also provides the requirements for reporting to the Department related to these notifications.

Proposed subsection (e) explains the notification, mitigation and reporting requirements water systems must follow when there is a disturbance to a service line known to contain lead or potentially containing lead. The reporting requirements are consistent with 40 CFR 141.90(f).

Proposed subsection (f) explains the requirement that water systems must utilize to encourage customer participation in full lead service line replacement. This includes when a system is required to complete an outreach activity, the frequency at which the activity must occur, the list of activities systems may select and the reporting requirement to demonstrate to the Department that the system conducted outreach activities in accordance with this subsection. The reporting requirement is consistent with 40 CFR 141.90(f).

Proposed subsection (g) requires community water systems to provide public education materials and information regarding Distribution System and Site Assessments to the Department of Health and local health departments, and to certify to the Department that these requirements have been met. The certification requirement is consistent with 40 CFR 141.90(f).

Proposed subsection (h) establishes additional requirements for water systems that exceed the lead action level more than once in a rolling 5-year period. These requirements include developing and implementing a plan to provide pitcher filters or point-of-use devices and 6

months of replacement cartridges to consumers, and conducting community outreach on the steps the water system is taking to address the multiple lead action level exceedances and measures consumers can take to reduce their risk. This subsection also includes reporting and certification requirements to the Department for these activities and specifies the criteria under which a water system may discontinue these activities. The reporting requirements are consistent with 40 CFR 141.90(f).

§ 109.1105. Permit requirements

Subsection (a) is proposed to be amended to add the acronym for CCT.

Subsection (b) is proposed to be amended to update the requirements for a construction permit that includes a CCT feasibility study, recommendation for WQPs for optimal CCT and any other information needed to enable the Department to consider the construction permit application.

Subsection (b)(1)—(3) is proposed to be reserved.

Subsection (c) is proposed to be amended to delete the exception for nontransient noncommunity water systems to obtain an operation permit or amended operation permit prior to operation of CCT facilities. The subsection is also proposed to be amended to require the applicable systems to request designation of WQPs and that the Department will issue an amended operation permit designating the WQPs.

§ 109.1106. Design standards

The opening paragraph is proposed to be amended to add the acronym for CCT.

Paragraph (2) is proposed to be amended to delete the exemption of systems under § 109.1105(b)(1) or (2) (relating to permit requirements).

Proposed paragraph (3) establishes the orthophosphate concentrations that water systems must use when installing or reoptimizing optimal CCT.

§ 109.1107. System management responsibilities

The proposed amendments to subsection (a) are consistent with 40 CFR 141.90.

Subsection (a) is proposed to be amended to clarify the general reporting and recordkeeping requirements in this subchapter. The service line inventory and service line replacement reporting requirements are described in § 109.1109 and § 109.1110 (relating to service line and lead connector replacement requirements).

Subsection (a)(1) is proposed to be reserved because the sample site plan reporting is described in proposed § 109.1109(c).

Subsection (a)(2) is proposed to be amended to include the reporting requirements for results of monitoring conducted in each applicable monitoring period under § 109.1103.

Proposed subsection (a)(2.1) requires the system to provide documentation for any lead and copper tap samples that the water system requests to invalidate.

Proposed subsection (a)(2.2)(i) and (ii) specifies the Department will calculate the 90th percentile values in accordance with proposed § 109.1102(a.1) and what steps the water system must take if the system does not report lead and copper tap samples as required for the Department to calculate the 90th percentile value.

Proposed subsection (a)(2.3) specifies that additional monitoring beyond the minimum required monitoring shall also be reported to the Department.

Proposed subsection (a)(2.4)(i) and (ii) specifies the reporting requirements for follow-up and WQP samples collected for the Distribution System and Site Assessment and the certification requirements related to the number of customer refusals and nonresponses the system received for follow-up samples.

Subsection (a)(3) is proposed to be reserved. The corrosion control reporting requirements are detailed in § 109.1102(b).

Subsection (a)(4) is proposed to be reserved. The public education reporting requirements are detailed in § 109.1104 (relating to public education and notification).

Proposed subsection (a)(4.1) requires a water system serving 3,300 or fewer persons applying for a monitoring waiver to provide documentation that the system meets the waiver requirement prior to the start of the applicable tap monitoring periods. When applicable, the system must provide documentation that the system is no longer free of lead-containing or copper-containing material by the specified deadlines.

Subsection (a)(5) is proposed to be reserved. The consumer tap notice reporting requirements are detailed in § 109.1104(b).

Proposed subsection (a)(5.1) describes the reporting requirements for community water systems related to sampling in schools and child care facilities. This includes reporting a list of schools and child care facilities to the Department or certifying that there are no schools or child care facilities served by November 1, 2027. Community water systems are also required to provide a certification report to the Department by January 30 for the previous calendar year's activities related to sampling in schools and child care facilities.

Subsection (a)(6) is proposed to be reserved because reporting requirements for lead service line replacements are described in § 109.1110(f).

Proposed subsection (a)(6.1) outlines the reporting and certification requirements for systems using the small water system compliance flexibility option.

Proposed subsection (a)(6.2) requires water systems to comply with the reporting requirements for service line inventories and service line or connector replacement specified in proposed §§ 109.1109 and 109.1110.

Subsection (a)(7) is proposed to be amended to clarify the recordkeeping requirements consistent with 40 CFR 141.91 (relating to recordkeeping requirements). The proposed amendments also specify the recordkeeping requirements for service line inventories, lead replacement plans and any other reports, surveys, letters, evaluations, schedules and Department determinations not otherwise specified.

Subsections (b) and (c) are proposed to be amended to add the acronym for CCT.

Subsection (d) is proposed to be reserved because lead service line replacement requirements are in proposed § 109.1110.

§ 109.1108. Fees

This section is proposed to be amended to update the cross-reference for treatment technique requirements and update the acronym for optimal CCT.

§ 109.1109. Service line and connector inventory, service line replacement plan and sample site plan

This proposed section requires systems to complete a service line and connector inventory, service line replacement plan and sample site plan, consistent with 40 CFR 141.84 (relating to service line inventory and replacement requirements) and 40 CFR 141.86(a)(1). Subsections (a) and (b) are consistent with 40 CFR 141.84 and subsection (c) is consistent with 40 CFR 141.86(a), unless otherwise noted.

Proposed subsection (a) requires water systems to complete an inventory that identifies all materials and location of each service line and all connectors within the distribution system by November 1, 2027.

Proposed subsection (a)(1) specifies the inventory must be submitted on a form acceptable to the Department. As previously explained, this paragraph is more stringent than the 2024 Federal LCRI.

Proposed subsection (a)(2) specifies the requirement to include all service lines and connectors regardless of ownership in the inventory. This paragraph clarifies what shared ownership means.

Proposed subsection (a)(3) specifies what information and documentation water systems shall use to identify service lines and connectors when completing the inventory, such as construction and plumbing codes, permits or any existing documentation that specifies materials of service lines and connectors.

Proposed subsection (a)(4) requires systems to include all identified connectors in the inventory and categorize all connectors as lead, nonlead, unknown or no connector present. When identifying nonlead connectors, systems shall use nonlead for connectors installed after January 6, 1991, or the compliance date of a local law prohibiting the use of lead, whichever is earlier. As previously explained, this paragraph is more stringent than the 2024 Federal LCRI.

Proposed subsection (a)(5) requires systems to identify service line materials and properly categorize the entire service line, including all segments, as lead, GRR, nonlead or lead status unknown in the inventory. The table in this paragraph depicts possible combinations of service line segment material types and overall service line categories.

Proposed subsection (a)(6) requires systems to include street addresses or a unique identifier for each service line and connector.

Proposed subsection (a)(7) requires systems to track all service line and connector materials and addresses as they are encountered during normal operations.

Proposed subsection (a)(8) describes the requirements systems must follow to make an inventory publicly accessible. A system that has all nonlead service lines and connectors in its inventory may use a written statement for its publicly accessible information, instead of the inventory, with the written statement describing the information the system used to determine that all service lines and connectors in the inventory are nonlead.

Proposed subsection (a)(9) describes the annual requirements systems must follow to update the inventory, including publicly accessible versions, and lists the deadline to submit these updates to the Department. This paragraph also clarifies requirements and deadlines for those systems who identified all nonlead lines that later find lead service lines in their system.

Proposed subsection (a)(10) specifies what a system shall do when a consumer or customer notifies them of an incorrect categorization of their service line and the deadlines to respond.

Proposed subsection (a)(11) requires systems to create a validation pool and complete the specified number of validations of service lines that are categorized as nonlead. These validations are inspections of randomly selected service lines to ensure the accuracy of the service line and connector inventory. The table in subparagraph (ii)(C) shows the number of validations required based on the size of the validation pool. This proposed paragraph details required validation methods, inspection procedures, deadlines and steps water systems must follow when they are unable to gain physical access to complete a validation. This proposed paragraph also includes requirements for systems who wish to request a waiver of the inventory validation pool process and inventory information systems must submit to the Department related to service line validation.

Proposed subsection (b) lists the requirement to develop a service line replacement plan by November 1, 2027, for public water systems who identified lead, GRR or lead status unknown service lines in their inventory, including requirements for plan contents, public accessibility and

updates. This proposed subsection clarifies what is required of systems who wish to use a deferred deadline for service line replacement.

Proposed subsection (c) specifies the requirements of the sample site plan for lead and copper monitoring, WQP monitoring, tap sampling protocol and the deadlines for submitting the plan to the Department.

Proposed subsection (c)(1) requires systems to use the information from the service line and connector inventory to identify a pool of lead and copper tap sampling sites based on sample tiering. This paragraph describes the tiering categories (Tier 1—5) for lead and copper tap sample locations. It requires systems to choose sampling locations from the highest priority tier site available according to their inventory and specifies that systems must exhaust all Tier 1 or 2 sites before using the next highest tier locations for monitoring. It explains when systems can consider tap monitoring locations unavailable and requires systems to submit documentation of customer refusals to the Department. This paragraph specifies what systems with fewer than five sites need to do to meet the required minimum number of samples and what systems that cannot meet the minimum stagnation period for their sample locations must do to meet the requirements consistent with 40 CFR 141.86(b)(3). This paragraph explains that any sampling location with a point-of-entry or point-of-use device is to be excluded from the sample site plan unless it is at a system using permitted point-of-entry or point-of-use devices to meet other primary and secondary drinking water standards at all service connections such as a system approved for a small system compliance alternative.

Proposed subsection (c)(2) specifies sampling locations for WQP monitoring in the distribution system and WQP monitoring at entry points. This is consistent with 40 CFR 141.87(a)(1) and (b)(1).

Proposed subsection (c)(3) requires systems to include a copy of the tap sampling protocol with the sample site plan and to submit updates to the tap sampling protocol to the Department for review.

Proposed subsection (c)(4) requires systems to submit an updated site sample plan to the Department anytime the system updates the tap sampling protocol, tap sampling locations or WQP monitoring locations. It requires systems that do not have enough Tier 1 or 2 sampling sites to provide documentation to the Department prior to the next tap sampling period and update their plans as necessary. This paragraph is consistent with 40 CFR 141.90(a)(1)(i) and (4).

§ 109.1110. Service line and lead connector replacement requirements

This proposed section explains the requirements for replacing service lines and lead connectors. It is consistent with 40 CFR 141.84, unless otherwise noted.

Proposed subsection (a) requires systems to replace all lead and GRR service lines under the control of the water system.

Proposed subsection (a)(1) describes a program year for the purposes of determining compliance with service line replacement progress.

Proposed subsection (a)(2) explains that this section does not establish the criteria for determining whether a system has access to conduct full service line replacements.

Proposed subsection (a)(3) explains that when a system has access to conduct a full service line replacement, the line is considered under the system's control and the system shall replace the service line.

Proposed subsection (a)(4) explains that when a system does not have access to conduct full service line replacement, the system is not required to replace the line but is required to submit documentation to the Department stating the reasons the system does not have access. This proposed paragraph provides the deadlines when documentation must be submitted.

Proposed subsection (a)(5) explains that if property owner consent is needed for a system to have legal access to conduct a full service line replacement, the system shall make reasonable effort to obtain property owner consent. If the property owner consent cannot be obtained after a reasonable effort is conducted, the system is not required to conduct the full service line replacement. This proposed paragraph explains what is considered reasonable effort and provides examples of acceptable methods of communication that demonstrate reasonable effort. The system must document the reasonable effort and provide it to the Department by the specified deadlines. This proposed paragraph also clarifies that water systems must offer full service line replacements and make a reasonable effort to obtain property owner consent when there is a change of ownership and provides the deadlines for these requirements.

Proposed subsection (a)(6) requires systems to begin a mandatory service line replacement program no later than November 1, 2027.

Proposed subsection (a)(7) explains to systems how to calculate the initial service line replacement pool and how to update the replacement pool based on the counts of recategorized services lines in the inventory.

Proposed subsection (a)(8) explains how systems should calculate the number of lead and GRR service lines required to be replaced in a program year.

Proposed subsection (a)(9) requires systems to meet a minimum cumulative average annual replacement rate for completing service line replacements.

Proposed subsection (a)(9)(i) requires systems to replace lead and GRR service lines at an average annual replacement rate of at least 10%, unless the Department approves a shortened or deferred replacement deadline. This subparagraph explains how systems approved for a shortened service line replacement deadline or systems with a deferred deadline must calculate the minimum cumulative average replacement rate.

Proposed subsection (a)(9)(ii) describes how systems must calculate the cumulative percentage of service lines replaced at the end of each service line replacement program year. This proposed subparagraph explains that systems may include only full service line replacements of lead or GRR service lines when counting the number of service lines replaced for the cumulative average replacement rate calculation. It explains that the entire service line is counted only once in the calculation. This subparagraph also clarifies what is counted and not counted as a full service line replacement.

Proposed subsection (a)(9)(iii) requires the annual replacement rate to be assessed annually as a cumulative average except for the first cumulative average replacement rate which is to be assessed at the end of the third program year. It explains how systems calculate the cumulative average replacement rate and that the cumulative average replacement rate must be greater than or equal to the annual replacement rate. This proposed subparagraph clarifies that a water system is not required to meet the cumulative average replacement rate if all the specified conditions are met. This subparagraph specifies for systems with a shortened replacement deadline, the first cumulative average replacement rate must be assessed at the end of the program year.

Proposed subsection (a)(10) specifies when systems may complete mandatory service line replacement under a shortened or deferred deadline.

Proposed subsection (a)(10)(i) requires a system to complete service line replacements on a shortened deadline and by a faster rate when the Department determines it is feasible based on the number of lead and GRR service lines in the system's inventory. The system will be notified by the Department of this determination in writing. This proposed subparagraph explains that the Department may determine a feasible shortened deadline at any time throughout a system's replacement program.

Proposed subsection (a)(10)(ii) clarifies that water systems that can complete all lead or GRR service line replacements in 5 years or less can defer installing or reoptimizing optimal CCT. If a system who fulfills the service line replacement requirements in this subparagraph exceeds the lead action level or lead practical quantitation limit, the system will be required to complete the steps in § 109.1102(b)(2.1) or (2.2). These requirements are consistent with 40 CFR 141.81(f).

Proposed subsection (a)(10)(iii) clarifies that a water system may defer service line replacements past the mandatory deadline to replace all lead and GRR service lines under their control no later than December 31, 2037, if the system completes replacement of all lead and GRR service lines by a deadline that corresponds to the system conducting 39 annual replacements per 1,000 connections at a cumulative average replacement rate. By the end of the second replacement program year, the Department is required to determine if the deferred deadline and associated cumulative average replacement rate the system documented in the service line replacement plan are the fastest feasible deadline and rate and either approve or set a new deadline and replacement rate for the system. In the first 2 years, the system is required to comply with the annual replacement rate identified in its initial service line replacement plan.

Proposed subsection (a)(11) specifies that if a lead or GRR service line is discovered when the system's inventory is comprised of only nonlead service lines, a water system needs to update

their replacement pool and conduct a full service line replacement of the lead or GRR service line as soon as practicable but no later than 180 days after the date the service line is discovered. If a system determines it is not practicable to conduct a full service line replacement within 180 days, the system can request from the Department an extension of the replacement deadline. The request must be within 90 days of the discovery of the affected service line.

Proposed subsection (b) requires systems to replace a lead connector under the control of the system when encountered during infrastructure work. Systems must comply with any laws, regulations or water tariff agreements, or combination thereof, that require additional connectors be replaced. Systems must follow risk mitigation measures following the replacement of a connector attached to a lead or GRR service line. Systems must update the connector material and location in their inventory after the replacement.

Proposed subsection (c) provides requirements for customer-initiated service line replacements, which are allowed if there are no laws, regulations or water tariff agreements, or combination thereof, that prevent customers from conducting partial lead or GRR service line replacements.

Proposed subsection (c)(1) requires water systems that are notified of a customer-initiated service line replacement to replace the remaining portion of the lead or GRR service line, provide notification and risk mitigation measures before the affected service line is returned to service, and notify the Department if the system cannot meet the specified deadlines to complete the replacement of the system's portion of the service line.

Proposed subsection (c)(2) requires water systems that are notified or learn of customer-initiated replacements that occurred within the previous 6 months and left in place the system-owned portion of a lead or GRR service line to replace any remaining portion of the affected service line within the required deadlines, provide notification and risk mitigation measures, and notify the Department if the system cannot meet the replacement deadlines.

Proposed subsection (c)(3) clarifies that any customer-initiated lead or GRR service line replacement that occurred more than 6 months from when the water system is notified or learns of the replacement does not require the system to complete the service line replacement of the system-owned portion in accordance with subsection (c), but that the lead or GRR service line must be identified in the inventory in accordance with § 109.1109(a) and replaced in accordance with subsection (a).

Proposed subsection (d) explains that partial service line replacements are prohibited unless the replacement is conducted as part of an emergency repair or in coordination with planned infrastructure work that impacts service lines. This proposed subsection describes the notification and mitigation requirements plus the steps water systems must take to prevent galvanic corrosion.

Proposed subsection (e) establishes the notification and mitigation requirements when systems complete full and partial service line replacements.

Proposed subsection (e)(1) requires water systems to provide written notification that informs consumers they may experience a temporary increase of lead levels in their drinking water due to the replacement, meet the content requirements of 40 CFR 141.85(a)(1)(ii)—(iv), which is incorporated by reference, and include contact information for the water system. For multifamily dwellings, the system may post the notification at a common location instead of providing individual notices.

Proposed subsection (e)(2) requires water systems to provide a written procedure for consumers to flush service lines and premise plumbing of particulate lead following the replacement of a lead or GRR service line.

Proposed subsection (e)(3) requires water systems to provide the consumer with a pitcher filter or point-of-use device that is ANSI certified to reduce lead, 6 months of replacement cartridges and instructions for use. This proposed subsection clarifies that if the affected service line serves more than one residential or nonresidential unit, the system must follow the requirements for every residential unit or nonresidential unit in the building.

Proposed subsection (e)(4) requires that, after completion of any full or partial replacement of a lead or GRR service line, water systems offer to collect follow-up tap samples for lead according to the tap sample collection protocol. The water system is also required to provide the sample results to the consumer.

Proposed subsection (e)(5) requires water systems to comply with specific time frames for providing notification and mitigation protocols for full and partial lead or GRR service line replacements.

Proposed subsection (e)(5)(i) addresses the notification and mitigation requirements and associated deadlines for water systems that perform a full replacement of a lead or GRR service line.

Proposed subsection (e)(5)(ii) requires that water systems planning to complete a partial lead or GRR service line replacement in coordination with planned infrastructure work must meet notification and mitigation requirements in accordance with specific time frames and requires water systems to make a reasonable effort to obtain property owner consent to replace the remaining portion of the service line.

Proposed subsection (e)(5)(iii) addresses the notification and mitigation requirements for water systems that perform partial replacement of a lead or GRR service line due to an emergency repair.

Proposed subsection (f) addresses reporting requirements for water systems to demonstrate compliance to the Department related to service line replacements, notification and mitigation requirements. This information is required to be provided in writing by January 30, 2029, and annually by January 30 thereafter unless an alternate time frame is specified. This is consistent with 40 CFR 141.84(i) and 141.90(e)(8).

F. Benefits, Costs and Compliance

Benefits

The EPA evaluated quantifiable and nonquantifiable benefits and costs associated with the 2024 Federal LCRI as part of its Health Risk Reduction and Cost Analysis. This evaluation is required under the Federal Safe Drinking Water Act for the EPA to determine whether the benefits of any proposed maximum contaminant level or treatment technique justify the costs of implementation. Estimated benefits, in terms of health risk reduction from the 2024 Federal LCRI, result from the activities performed by water systems, which are expected to reduce risk to the public from exposure to lead and copper in drinking water at the tap. See 89 FR 86418, 86591.

The EPA's health risk reduction and benefits assessment of the 2024 Federal LCRI requirements focuses on quantification and monetization of the estimated impact of reductions in lead exposure on four health endpoints: intelligence quotient (IQ) values and cases of attention-deficit/hyperactivity disorder in children, lower birth weights in children of women of childbearing age, and cases of cardiovascular disease premature mortality in adults. See 89 FR 86418, 86584.

The EPA quantifies and monetizes health risk reduction from lead exposure by estimating the decrease in lead exposures accruing to both children and adults from the installation and reoptimization of optimal CCT, lead service line replacement, the implementation of point-of-use filter devices and the provision of pitcher filters. Benefits are quantified by estimating and monetizing the resulting increases in IQ in children from birth through 7 years of age, reductions in incidents of low birth weight or attention-deficit/hyperactivity disorder in children and adult cardiovascular disease premature mortality. See 89 FR 86418, 86591.

The EPA estimates the quantifiable annualized benefits of the 2024 Federal LCRI Nationwide range from \$13.5 billion to \$25.1 billion (in 2022 dollars, at a 2% discount rate). See 89 FR 86418, 86592. When compared to the costs, the quantifiable annual net benefits range from \$12.025 billion to \$23.118 billion (in 2022 dollars at a 2% discount rate). See 89 FR 86418, 86594.

There are additional nonquantified lead health impacts to both children and adults that will be realized as a result of this proposed rulemaking. Nonquantified benefits are health outcomes that cannot be quantified and include avoidance of reductions in IQs, cases of attention-deficit/hyperactivity disorder in children, lower birth weights in children and cardiovascular disease cases in adults as a result of CCT and reoptimization, replacement of lead or GRR service lines, installation of point-of-use devices for small systems, and temporary use of point-of-use devices and water filters. The requirements to issue public education and to make the service line inventory and the service line replacement plan publicly available will encourage the public to reduce their exposure to lead in drinking water. See 89 FR 86418, 86420.

Additionally, persons served by systems required to install or reoptimize CCT and persons living in homes with premise plumbing containing lead will receive health benefits from reduced lead exposure that were not quantified in the EPA's analysis of the 2024 Federal LCRI. Increased use

of CCT resulting from the lower lead action level and improved tap sampling may have a beneficial secondary effect of reducing copper levels and avoiding certain negative health impacts of copper, such as acute gastrointestinal conditions and health effects associated with Wilson's disease. Other nonquantifiable benefits associated with the increased use of corrosion inhibitors resulting from the lower lead action level and improved tap sampling include extending the useful life of plumbing components and appliances (for example, water heaters), reduced plumbing maintenance costs, reduced treated water loss from the distribution system due to leaks, and reduced potential liability and damages from broken pipes in buildings. See 89 FR 86418, 86420.

The proposed amendments will affect all 2,911 community water systems and nontransient noncommunity water systems in this Commonwealth, which is 4.35% of the 66,947 of community water system and nontransient noncommunity water system across the United States. These 2,911 water systems serve approximately 11 million Pennsylvanians. Multiplying the EPA's Nationwide monetized expected benefits (\$13.5 billion to \$25.1 billion annually) by 4.35%, the annual benefits in this Commonwealth range from \$587.25 million to \$1.09 billion. As previously noted, this estimate does not account for the additional nonquantifiable benefits that are expected, so the quantified benefits of this proposed rulemaking likely underestimate the true social benefits. See 89 FR 86418, 86584.

The EPA Administrator confirms that the quantifiable and nonquantifiable benefits of the 2024 Federal LCRI justify the quantifiable and nonquantifiable costs. See 89 FR 86418, 86594.

Compliance costs

The EPA estimates that Nationally the total 2024 Federal LCRI annualized costs range from \$1.48 billion to \$1.98 billion (in 2022 dollars, at a 2% discount rate). This estimate includes costs to water systems and primacy agencies. The total costs for water systems range from \$1.45 billion to \$1.95 billion (in 2022 dollars, at a 2% discount rate). These costs account for rule implementation and administration, sampling, service line inventory, service line replacement, CCT, point-of-use program and public outreach. See 89 FR 86418, 86577, 86578. The EPA estimates that annual costs to primacy agencies range from \$25.8 million to \$27.7 million (in 2022 dollars, at a 2% discount rate). See 89 FR 86418, 86583. Costs to primacy agencies include work towards updating compliance programs for tracking 2024 Federal LCRI compliance and reporting, training staff and water systems, taking enforcement actions and reporting to the EPA. See 89 FR 86418, 86580.

The EPA also evaluated nonquantified costs, which include temporary costs associated with service line replacement including traffic congestion, increased probability of vehicular and pedestrian accidents, fire damage and negative sanitation impacts resulting from the necessity to shut off water service to buildings and residences during service line replacement. The EPA further considered nonquantifiable negative environmental impacts from the incremental phosphorus loadings to wastewater treatment plants and receiving waterbodies caused by the increased use of orthophosphate as a corrosion inhibitor. See 89 FR 86418, 86594.

There are 2,911 community water systems and nontransient noncommunity water systems in this Commonwealth, accounting for 4.35% of these systems Nationwide. Multiplying the EPA's estimated monetized expected annual cost range for water systems of \$1.45 billion to \$1.95 billion Nationwide by 4.35%, the estimated annual costs for community water systems and nontransient noncommunity water systems in this Commonwealth range from \$63.04 million to \$85 million. This results in an estimated annual cost per public water system in this Commonwealth of \$21,656 to \$29,201.

Costs for water systems in this Commonwealth that do not have lead or GRR service lines and that do not exceed an action level, and are therefore not required to install or reoptimize optimal CCT, are estimated to range from \$3,482 to \$3,973 annually. These costs include rule implementation and administration, monitoring, and public education and outreach. It is not possible to estimate how many systems may have these lower costs until after November 1, 2027, when water systems submit the updated service line inventory that identifies which systems will need to complete service line replacements and complete standard monitoring which will identify which systems will need to install or reoptimize optimal CCT.

The Commonwealth is one of 56 primacy agencies. The estimated annual costs for implementation and administration of this proposed rulemaking range from \$460,714 to \$494,643, calculated by dividing the EPA's cost estimate for primacy agencies Nationwide of \$25.8 million to \$27.7 million by 56.

In summary, annual costs to water systems in this Commonwealth are estimated to range from \$63.04 million to \$85 million, with annual benefits estimated to range from \$587.25 million to \$1.09 billion, resulting in estimated net benefits for this Commonwealth of \$523.09 million to \$1 billion. The EPA weighed the costs and benefits of the 2024 Federal LCRI, considering the monetized costs and benefits, the potential impacts of the nonquantifiable uncertainties, the nonquantifiable costs and benefits and public comments received, and determined that the quantified and nonquantifiable benefits of the 2024 Federal LCRI justify its quantified and nonquantifiable costs. See 89 FR 86418, 86594.

Compliance assistance plan

The Pennsylvania Infrastructure Investment Authority (PENNVEST) administers a number of programs offering financial assistance to eligible public water systems, including the Drinking Water State Revolving Fund (DWSRF), which is jointly administered by PENNVEST and the Department. PENNVEST financial assistance is most often in the form of low-interest loans, with some augmenting grant funds for hardship cases. Eligibility is based upon factors such as public health impact, compliance necessity and project/operational affordability. In 2025, PENNVEST awarded approximately \$524 million in DWSRF funding for drinking water projects.

In addition to the base DWSRF funding, PENNVEST also administers funding opportunities from the Bipartisan Infrastructure Law. The Bipartisan Infrastructure Law included funding specifically appropriated for lead service line replacement projects and associated activities directly connected to the identification and replacement of lead service lines for public water

systems needing financial assistance. In 2025, PENNVEST awarded approximately \$142 million in Bipartisan Infrastructure Law DWSRF funding for lead service line replacement projects.

The Department's Safe Drinking Water Program has established a network of regional and Central Office training staff that are responsible for identifying and addressing training needs. The target audience for training includes owners and operators of regulated public water systems, consultants, accredited laboratories and the Department's Safe Drinking Water Program staff. Training is generally accomplished through classroom and virtual sessions, as well as self-paced modules available from the Department's Earthwise Academy. The Department began training on the service line inventory requirements in 2023, and to date has conducted 33 training sessions across this Commonwealth. For the last 24 months, Department staff have also provided one-on-one compliance assistance through phone conversations or virtual meetings to approximately 200 individual water systems to ensure they complete and submit a service line inventory. Additional training is planned for the updated service line inventory requirements, the service line replacement plan and overall implementation of the 2024 Federal LCRI.

In addition to this network of training staff, the Department's Bureau of Safe Drinking Water has staff dedicated to providing training and technical outreach support services to public water system owners and operators. The Department's website also provides timely and useful information for drinking water and wastewater treatment system operators. Furthermore, the Department's Bureau of Safe Drinking Water has been partnering with industry organizations by referring public water systems for service line inventory technical assistance.

The Department also creates and maintains templates and instructions as compliance assistance tools that water systems may use to fulfill many of the reporting requirements of the 2024 Federal LCRI. These templates are intended to assist water systems with public notifications, consumer tap notices, lead public education, service line consumer notices, risk mitigation measures and sample site locations. These templates are not mandatory and are provided as a service to water systems on the Department's eLibrary at <https://greenport.pa.gov/eLibrary>. Water systems that opt to use the Department templates are assured that all required content elements for the reporting element are included.

Paperwork requirements

There are paperwork requirements for which water systems must report information on forms provided by, or acceptable to, the Department. Water systems must utilize the following forms, which are available through the Department's eLibrary at <https://greenport.pa.gov/eLibrary>:

- Service Line Inventory Form and Instructions (Document ID 3930-FM-BSDW0119). This is an existing form; revisions are not needed.
- Service Line Inventory Forms and Instructions for Water Systems with No More Than Five (5) Service Connections (Document ID 3930-FM-BSDW0042). This is an existing form; revisions are not needed.

- Public Water Supply Permit Application (Document ID 3900-PM-BSDW0002). This is an existing form; revisions are not needed.
- Public Water Supply Application—Modules 1—15 (Document ID 3900-PM-BSDW0254). These are existing forms; revisions are not needed.
- Designation of Optimal Water Quality Parameters (WQPs) Request Form (Document ID 3940-FM-BSDW0003). This is an existing form; revisions are not needed.
- Corrosion Control Treatment—Basic Feasibility Study (Document ID 394-3000-005). This is an existing form that will be revised to include the updated 2024 Federal LCRI requirements.
- The LCRI Alternative Compliance Option Request Form for eligible water systems (community water systems serving less than 3,300 persons and nontransient noncommunity water systems) that exceed the lead action level only that elect to request an alternative compliance option. This is a new form that will be required for implementation of this proposed rulemaking.

G. Pollution Prevention

The Pollution Prevention Act of 1990 (42 U.S.C. §§ 13101—13109) established a National policy that promotes pollution prevention as the preferred means for achieving state environmental protection goals. The Department encourages pollution prevention, which is the reduction or elimination of pollution at its source, through the substitution of environmentally-friendly materials, more efficient use of raw materials and the incorporation of energy efficiency strategies. Pollution prevention practices can provide greater environmental protection with greater efficiency because they can result in significant cost savings to facilities that permanently achieve or move beyond compliance.

H. Sunset Review

The Board is not establishing a sunset date for this proposed rulemaking, because it is needed for the Department to carry out its statutory authority. The Department will continue to closely monitor these regulations for their effectiveness and recommend updates to the Board as necessary.

I. Regulatory Review

Under section 5(a) of the Regulatory Review Act (71 P.S. § 745.5(a)), on **DATE**, the Board submitted a copy of this proposed rulemaking and a copy of a Regulatory Analysis Form to the Independent Regulatory Review Commission (IRRC), and to the chairpersons of the Environmental and Natural Resource Protection Committee of the House of Representatives and the chairpersons of the Environmental Resources and Energy Committee of the Senate. A copy of this material is available to the public upon request.

Under section 5(g) of the Regulatory Review Act, IRRC may convey any comments, recommendations or objections to the proposed rulemaking within 30 days of the close of the public comment period. The comments, recommendations or objections must specify the regulatory review criteria in section 5.2 of the Regulatory Review Act (71 P.S. § 745.5b) which have not been met. The Regulatory Review Act specifies detailed procedures for review, prior to final publication of the rulemaking, by the Department, the General Assembly and the Governor.

J. Public Comments

Interested persons are invited to submit to the Board written comments, suggestions, support or objections regarding the proposed rulemaking. Comments, suggestions, support or objections must be received by the Board by **DATE**.

Comments may be submitted to the Board online, by e-mail, by mail or express mail as follows. Comments submitted by facsimile will not be accepted.

Comments may be submitted to the Board by accessing eComment at <http://www.ahs.dep.pa.gov/eComment>.

Comments may be submitted to the Board by e-mail at RegComments@pa.gov. A subject heading of the proposed rulemaking and a return name and address must be included in each transmission.

If an acknowledgement of comments submitted online or by e-mail is not received by the sender within 2 working days, the comments should be retransmitted to the Board to ensure receipt.

Comments may also be submitted to the Board by mail or express mail. Written comments should be mailed to the Environmental Quality Board, P.O. Box 8477, Harrisburg, PA 17105-8477. Express mail should be sent to the Environmental Quality Board, Rachel Carson State Office Building, 16th Floor, 400 Market Street, Harrisburg, PA 17101-2301.

JESSICA SHIRLEY,
Chairperson