Regulatory Analysis Form

(Completed by Promulgating Agency)

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INDEPENDENT REGULATORY REVIEW COMMISSION

(1) **Agency**

Department of Environmental Protection

(2) **Agency Number**: 7

Identification Number: 589

IRRC Number:

(3) **PA Code Cite**: 25 Pa. Code Chapter 109

(4) **Short Title**: Safe Drinking Water Revised Lead and Copper Rule Improvements

(5) **Agency Contacts (List Telephone Number and Email Address)**:

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(6) **Type of Rulemaking (check applicable box)**:

- ☒ Proposed Regulation
- ☐ Final Regulation
- ☐ Final Omitted Regulation
- ☐ Emergency Certification Regulation
- ☐ Certification by the Governor
- ☐ Certification by the Attorney General

(7) **Briefly explain the regulation in clear and nontechnical language. (100 words or less)**

The proposed rulemaking strengthens regulations to reduce lead and copper in drinking water provided by public water systems, including: requiring water systems to develop and complete a service line inventory to locate lead pipes in their distribution system and replace all lead service lines; lowering the lead action level; expanding corrosion control treatment (CCT) requirements; improving tap sampling; monitoring lead in the drinking water of schools and child care facilities; increasing public education; and adding requirements to reduce lead exposure.

In order to retain primary enforcement responsibility (primacy) for public water systems in Pennsylvania under the federal Safe Drinking Water Act (42 U.S.C. §§ 300f—300j-27), the Department of Environmental Protection (Department) must adopt all new and revised National Primary Drinking Water Regulations. This rulemaking would allow the Department to retain primacy by ensuring that Pennsylvania's regulations are at least as stringent as those promulgated by the United States Environmental Protection Agency (EPA) in the National Primary Drinking Water Regulations for Lead and Copper: Improvements, also known as the Lead and Copper Rule Improvements (2024 federal LCRI).

(8) **State the statutory authority for the regulation. Include specific statutory citation.**

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 Environmental Quality Board (EQB) 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 EQB to promulgate rules and regulations necessary for the performance of the work of the Department.

(9) **Is the regulation mandated by any federal or state law or court order, or federal regulation? Are there any relevant state or federal court decisions? If yes, cite the specific law, case or regulation as well as any deadlines for action.**

Yes, the proposed amendments are mandated by federal regulation. The National Primary Drinking Water Regulations are legally enforceable, federal primary standards and treatment techniques that apply to public water systems. Primary standards and treatment techniques protect public health by limiting the levels of contaminants that are allowed in finished drinking water delivered by public water systems to consumers. States that have been granted primacy from the EPA for public water systems under the federal Safe Drinking Water Act are responsible for enforcing these standards and must maintain regulations that are at least as stringent as federal regulations as a condition of retaining primacy. States with primacy are required to adopt requirements to oversee implementation of the updated federal regulations within 2 years of publication of the National Primary Drinking Water Regulations, unless an extension is approved by the EPA. Accordingly, this proposed rulemaking incorporates the 2024 federal LCRI, published at 89 FR 86418 (October 30, 2024), into Pennsylvania's safe drinking water regulations.

The 2024 federal LCRI strengthens public health protection and improves implementation of existing regulations in the following areas: development of an inventory to locate lead pipes in a distribution area; replacement of lead service lines within 10 years after the November 1, 2027, implementation date; expansion of CCT requirements; improved tap sampling; lowering of the lead action level; protection of children in schools and child care facilities; expansion of public education and outreach; and increased protections to reduce lead exposure all which will further protect public health.

(10) **State why the regulation is needed. Explain the compelling public interest that justifies the regulation. Describe who will benefit from the regulation. Quantify the benefits as completely as possible and approximate the number of people who will benefit.**

Safe drinking water is vital to maintaining healthy and sustainable communities and is a key foundation for economic growth. The proposed amendments would further protect the health of people in Pennsylvania who consume drinking water provided by public water systems by reducing their exposure to lead in drinking water.

These revisions strengthen public health protection and improve implementation of the lead and copper regulations in the following areas: development of an inventory to locate lead pipes in the distribution system; replacement of all lead service lines within 10 years after the implementation date of the 2024 federal LCRI; expanding CCT requirements; improve tap sampling; lower the lead action level; protection of children in schools and child care facilities; expansion of public education and outreach; and increased protections to reduce lead exposure.

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 pregnant people, infants and young 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. The most common sources of lead in drinking water are from corrosion of lead pipes, faucets and fixtures. When a home is served by a lead service line, the most significant source of lead is the service line itself. The EPA estimates that drinking water makes up at least 20% of a person's total exposure to lead.

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 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 intelligence quotient (IQ) in children from birth to 7 years of age, and reductions in incidents of low birth weight or attention-deficit/hyperactivity disorder (ADHD) in children, and adult cardiovascular disease premature mortality. The EPA estimates the quantifiable annual benefits of the 2024 federal LCRI nationwide range from $13.5 billion to $25.1 billion (in 2022 dollars at a 2% discount rate).

The 2024 federal LCRI regulations apply to approximately 66,947 community water systems (CWS) and nontransient noncommunity water systems (NTNCWS) nationwide. There are 2,911 CWSs and NTNCWSs in Pennsylvania that serve approximately 11 million people. These 2,911 water systems represent 4.35% of the CWSs and NTNCWSs nationally. Multiplying the EPA's expected nationwide benefits of $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.

There are additional nonquantified health benefits to children and adults that will be realized as a result of this proposed rulemaking. The nonquantifiable benefits include avoidance in reductions in IQs, cases of ADHD in children, lower birth weights, and cardiovascular disease in adults. The requirements to issue public education, and to make service line inventories and replacement plans publicly available will encourage the public to reduce their exposure to lead in drinking water. Increased use of CCT may also have a beneficial secondary effect of reducing copper levels and avoiding some negative health impacts of copper, such as acute gastrointestinal conditions and health effects associated with Wilson's disease. Other nonquantifiable benefits of increased use of CCT and improved tap sampling procedures include extending the use of plumbing parts and appliances, reduced plumbing maintenance costs, reduced treated water loss due to leaks in a distribution system, and reduced potential liability and damages from broken pipes. These health benefits were not quantified in the EPA's analysis of 2024 federal LCRI. As a result of these requirements, the nonquantifiable health benefits that the EPA evaluated include reduced incidence of renal effects, reproductive and developmental effects (apart from ADHD), immunological effects, neurological effects (apart from children's IQ), and cancer.

(11) **Are there any provisions that are more stringent than federal standards? If yes, identify the specific provisions and the compelling Pennsylvania interest that demands stronger regulations.**

Yes. The proposed provisions in this rulemaking are more stringent than federal standards in the following areas:

- To help identify areas with the greatest potential for lead contamination of drinking water and most in need of remediation, the National Primary Drinking Water Regulations: Lead and Copper Rule Revisions (2021 federal LCRR) published at 86 FR 4198 (January 15, 2021) (2021 federal LCRR) and 2024 federal LCRI require that all water systems complete and maintain a service line inventory that includes lead connectors. In this proposed rulemaking, the Department incorporated lead connectors into the definition of "GRR service line—galvanized requiring replacement service line" in § 109.1 (relating to definitions) by defining it 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, a lead connector, or is currently downstream of a lead status unknown service line. The EPA definition of a "GRR service line" states that the service line needs to be replaced if the line ever was or is currently downstream of any portion of a

lead service line but does not include a lead connector. The definition of "GRR service line" in this proposed rulemaking is more expansive, and therefore more stringent, than the definition of that term in the corresponding federal regulations. 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. Including lead connectors in the definition of a "GRR service line" provides greater public health protection.

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 ridged 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.)

- Section 109.1109 (relating to service line and connector inventory, service line replacement plan and sample site plan) 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. The Department created a service line inventory form to ensure all 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 additional language ensures that CWSs and NTNCWSs provide the Department with an inventory using the Department's form or in a manner that can be converted to the form, which enables the Department to efficiently report the required service line information to the EPA. This provision is consistent with other existing provisions where water systems are required to submit information in a format acceptable to the Department.

- The 2024 federal LCRI requires water system to identify a validation pool of all service lines categorized as "nonlead." The 2024 federal LCRI further requires water systems to evaluate a representative number of service lines in their validation pool to ensure nonlead service lines have been appropriately categorized. Some nonlead service lines may be excluded from this validation pool if the water system has 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 effective date of the Plumbing System Lead Ban and Notification Act (35 P.S. §§ 723.1—723.17) was January 6, 1991. Therefore, § 109.1109 uses January 6, 1991, as the date after which service lines categorized as nonlead may be excluded from the validation pool because water systems in Pennsylvania were allowed to continue installing lead service lines until January 6, 1991.

- Under the 2024 federal LCRI, water systems that are required to complete a feasibility study must do so and recommend the optimized or reoptimized CCT within 18 months after the end of the tap sampling period in which the system exceeded the lead or copper action level. The state must then approve/designate optimal CCT or reoptimized CCT within 6 months after the previous step, so

the water system must obtain state approval of CCT within 24 months. Large and medium water systems with lead service lines that exceed the lead action level must also complete a pipe rig loop study within 12 months after the end of the tap sampling period in which they exceeded the action level (prior to completing the CCT feasibility study). Therefore, under the 2024 federal LCRI, these systems have 30 months to submit the CCT feasibility study and 36 months after the end of the tap sampling period in which the system exceeded the lead action level to obtain state approval of CCT.

The Pennsylvania Safe Drinking Water Act (35 P.S. §§ 721.1—721.17) and Chapter 109 (relating to safe drinking water) include permitting requirements for modification of water system facilities. The pipe rig loop study and CCT feasibility study requirement of the 2024 federal LCRI is in addition to these existing permitting provisions. To accommodate the 2024 federal LCRI pipe rig loop and CCT studies alongside the Commonwealth's permitting requirements, § 109.1102 (relating to action levels and treatment technique requirements) requires the feasibility study to be submitted with the permit application within 16 months (or within 28 months for systems that must conduct pipe rig loop studies). The Department must still issue the construction permit within 24 (or 36) months, which is still consistent with the schedule in the 2024 federal LCRI. These interim deadlines in the proposed rulemaking allow the Department sufficient time to review the CCT feasibility study and construction permit application.

- Many water systems have achieved a reduced monitoring frequency under existing regulations in Chapter 109, Subchapter K (relating to lead and copper), which are based on 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). The 2024 federal LCRI allows water systems to remain on this reduced monitoring frequency after its implementation date of November 1, 2027, if the water system meets the required criteria and receives a written determination from the state. Systems that are not granted a reduced monitoring frequency must conduct standard 6-month monitoring starting with the January—June 2028 period. The Department's approval of reduced monitoring is based upon a review of monitoring, treatment, and other relevant information submitted by the system. However, the 2024 federal LCRI does not specify the deadline by which systems must request the reduced monitoring frequency. Therefore, § 109.1103 (relating to monitoring requirements) clarifies that water systems need to submit a request to the Department to remain on a reduced monitoring frequency by December 31, 2027, demonstrating they have met the criteria for reduced monitoring. This deadline 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 2024 federal LCRI mandates water quality parameter monitoring at the entry point and within the distribution system to verify CCT treatment is effectively operated and maintained. Although the National Primary Drinking Water Regulations require water quality parameter monitoring at the entry point at least every 2 weeks, § 109.1103 requires entry point monitoring each week. Weekly monitoring ensures the water quality parameters are maintained within specified ranges, that overfeeding or underfeeding of treatment chemicals is not occurring and that water quality is consistently maintained. The longer the period in between monitoring, the more likely a water quality parameter excursion may occur. These excursions increase the likelihood of elevated lead levels, so for CCT to be effective at reducing lead levels, it requires consistent proper operation and routine water quality parameter monitoring.

- The 1991 federal LCR included language that limited entry point sampling for water quality parameters at ground water systems with CCT to be at sites that are representative of water quality and treatment conditions throughout the system. This provision was not included in Chapter 109 when 1991 federal LCR provisions were incorporated, and it is not being included with this proposed rulemaking. CCT can be effective at reducing lead levels, but it requires consistent proper operation and water quality parameter monitoring to ensure it is effective at reducing lead levels. Water systems using groundwater may have multiple sources with different water chemistry that require different types of CCT to meet the 2024 federal LCRI treatment technique. Therefore, water quality parameter 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 only requires source water monitoring at the entry point for lead or copper the first time the 90th percentile value exceeds the action level. Section 109.1103 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. 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 water systems are responding appropriately, maintaining and properly operating existing treatment or taking steps to add treatment when necessary.

(12) **How does this regulation compare with those of the other states? How will this affect Pennsylvania's ability to compete with other states?**

All 56 states and territories with primacy for public water systems under the federal Safe Drinking Water Act will need to adopt regulations requiring public water systems to comply with the EPA's National Primary Drinking Water Regulations. Therefore, this proposed rulemaking is not expected to negatively affect Pennsylvania's ability to compete with other states.

(13) **Will the regulation affect any other regulations of the promulgating agency or other state agencies? If yes, explain and provide specific citations.**

No, this proposed rulemaking will not affect other regulations of the Department or other State agencies.

(14) **Describe the communications with and solicitation of input from the public, any advisory council/group, small businesses and groups representing small businesses in the development and drafting of the regulation. List the specific persons and/or groups who were involved. ("Small business" is defined in Section 3 of the Regulatory Review Act, Act 76 of 2012.)**

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 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 agreed with the recommendation and revised the definition of "connector" to include the recommended language.

- DEP 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 DEP has the authority under subparagraph (ii) to require water systems to reoptimize [optimal CCT] . DEP should also create written SOPs and training for staff to ensure consistent implementation in determining when systems should be required to reoptimize [optimal CCT].

  The Department agreed with the recommendation and deleted draft § 109.1102(b)(1.1)(iv) from 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 DEP 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, the language in 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 agreed with the recommendation and revised § 109.1103(b.1) 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.

(15) **Identify the types and number of persons, businesses, small businesses (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012) and organizations which will be affected by the regulation. How are they affected?**

A review of the federal Small Business Size Regulations at 13 CFR Part 121 provides a standard for determining what constitutes a small business for the North American Industry Classification System (NAICS) category relating to public water systems. A public water system falls within NAICS category 221310, Water Supply and Irrigation Systems, which comprises establishments primarily engaged in operating water treatment plants and/or operating water supply systems. The federal small size standard for this NAICS category is annual receipts of not more than $41 million.

The Pennsylvania Safe Drinking Water Act and Chapter 109 do not contain any requirements for the submission of financial records. As such, the Department has no way to estimate annual receipts of public water systems. The Department and the EPA have historically classified public water system size based on the number of persons served. For purposes of identifying small businesses affected by this proposed rulemaking, the Department used a population of 10,000 persons served as the threshold for determining the number of public water systems that could be considered a small business because that is a key population threshold for the 2024 federal LCRI provisions.

The 2024 federal LCRI provisions impact all 2,911 CWSs and NTNCWSs in Pennsylvania, which serve a population of approximately 11 million consumers. Of the 2,911 water systems to which this proposed rulemaking applies, 1,469 are privately owned or investor owned and can be considered a small business; 871 of these are CWSs and 598 are NTNCWSs.

Service Line Inventory

The 2024 federal LCRI builds upon the requirement in the 2021 federal LCRR for water systems to create an initial inventory, to annually update their inventory, and to identify the material of all service lines by the mandatory service line replacement deadline. 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 water systems are also required to make their service line inventory publicly available.

Lead Pipe Replacement Within 10 Years

Where present, lead service lines are the most significant source of lead in drinking water. Under the 2024 federal LCRI, all water systems with lead or galvanized requiring replacement (GRR) service lines must prepare a service line replacement plan which can facilitate the equitable replacement of these service lines by the replacement deadline. Water systems must replace all lead and GRR service lines under their control no later than 10 years after November 1, 2027, regardless of lead levels occurring in tap or other drinking water samples. 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. Replacing the lead and GRR service lines will significantly reduce the amount of lead in drinking water.

Expanding CCT Requirements

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. CCT refers to methods such as alkalinity/pH adjustment or addition of corrosion inhibitors that water systems can take to reduce the leaching of lead and copper into drinking water from drinking water service lines and premise plumbing. Water systems without CCT must evaluate and install CCT if a 90^{th} percentile lead or copper value exceeds the action level. Water systems with CCT are required to reoptimize CCT if a 90^{th} percentile lead value exceeds the action level. Water systems must also operate and maintain optimal CCT and reoptimized CCT. The 2024 federal LCRI also provides alternatives to CCT for small systems, such as point-of-use treatment and replacement of lead bearing plumbing materials, because maintaining optimal CCT can be especially challenging for very small systems.

Improving Tap Sampling

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, water systems are required to collect first-sample 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 LSL and premise plumbing, which will help water systems better understand the effectiveness of their CCT.

Lowering the Lead Action Level

The 2024 federal LCRI lowers the lead action level from 0.015 mg/L to 0.010 mg/L. When a water system exceeds the lead action level, it is required to inform the public, take actions associated with CCT, and employ public education measures to reduce lead exposure.

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. The 2024 federal LCRI requires all CWSs 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.

CWSs will be required to conduct drinking water sampling at each elementary school and child care facility they serve over a 5-year period, testing 20% of the facilities they serve each year, and the water system will be required to provide sampling results to the school or child care facility. This sampling serves as an initial sample set for lead risks within schools and child care facilities and, coupled with public education materials (such as information on steps the school or child care facility can take to reduce lead in the drinking water), are intended to encourage schools and child care facilities to take additional actions, including comprehensive sampling.

Strengthening Protections to Reduce Lead Exposure

Public education is one of the four components of the 1991 federal LCR. 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. Public education not associated with the action level can produce benefits by prompting consumers to take actions that reduce their exposure. In addition to the public education required whenever the lead 90th percentile compliance value exceeds the action level, the 2024 federal LCRI also requires water systems to conduct public education independent of lead levels such as: providing individual notices of tap sample results; providing notices to people served by known or potential lead and GRR service lines; outreach to encourage customer participation in full service line replacement; and notifications of service line disturbances. The 2024 federal LCRI also requires water systems with continually high lead levels to conduct additional outreach to consumers and provide pitcher filters or point-of-use devices certified to reduce lead in drinking water to all consumers. These additional actions can reduce consumer exposure to higher levels of lead in drinking water while the water system works to reduce systemwide lead levels through replacement of lead service lines and by installing or reoptimizing optimal CCT, which can take years to complete.

The estimated benefits of this proposed rulemaking are detailed in the response to question #10. The estimated costs of this proposed rulemaking are detailed in the response to question #17.

(16) **List the persons, groups or entities, including small businesses, that will be required to comply with the regulation. Approximate the number that will be required to comply.**

Please see the response to question #15.

(17) **Identify the financial, economic and social impact of the regulation on individuals, small businesses, businesses and labor communities and other public and private organizations. Evaluate the benefits expected as a result of the regulation.**

The estimated benefits expected as a result of the regulation are described in the response to question #10. The estimated costs are described below.

For the 2024 federal LCRI, the EPA estimates the nationwide total annual cost to CWSs and NTNCWSs to range from $1.45 billion to $1.95 billion (in 2022 dollars at a 2% discount rate). This EPA estimate accounts for rule implementation and administration, sampling, service line inventory, service line replacement, CCT, point-of-use program, and public outreach.

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 evaluated the nonquantifiable negative

environmental impacts the incremental phosphorus loadings to wastewater treatment plants and receiving waterbodies caused by the increased use of orthophosphate as a corrosion inhibitor.

There are approximately 66,947 CWSs and NTNCWSs nationwide; 2,911 (4.35%) of these water systems are located in Pennsylvania. Multiplying the EPA's national annual costs estimate range of $1.45 billion to $1.95 billion by 4.35% yields an annual cost estimate range for CWSs and NTNCWSs in Pennsylvania from $63.04 million to $85 million. This results in an estimated annual cost per public water system in Pennsylvania of $21,656 to $29,201.

Costs for water systems in Pennsylvania that do not have any 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 updated service line inventories that identify which systems will need to complete service line replacements and standard monitoring, which will identify which systems will need to install or reoptimize optimal CCT.

In addition to costs to water systems, the EPA estimated the annual costs to primacy agencies nationwide will range from $25.8 million to $27.7 million (in 2022 dollars at a 2% discount rate). There are 56 primacy agencies nationwide, so the annual cost for each primacy agency is estimated to range from $460,714 to $494,643. Primacy agency costs 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.

(18) **Explain how the benefits of the regulation outweigh any cost and adverse effects.**

The estimated benefits of the regulation are also described in question #10. The estimated costs of the regulation are also described in question #17.

As estimated by the EPA, the quantifiable annual net benefits (benefits minus costs) range from $12.025 billion to $23.118 billion (in 2022 dollars at a 2% discount rate) nationally. Multiplying those estimated nationwide net benefits by 4.35%, the estimated annual net benefits in this Commonwealth range from $523.09 million to $1 billion. The EPA determined that the quantifiable and nonquantifiable benefits of the 2024 federal LCRI justify the quantifiable and nonquantifiable costs.

(19) **Provide a specific estimate of the costs and/or savings to the *regulated community* associated with compliance, including any legal, accounting or consulting procedures which may be required. Explain how the dollar estimates were derived.**

The regulated community owns 2,596 CWSs and NTNCWSs that will be affected by this proposed rulemaking. As detailed in the response to question #17, the cost of complying with this proposed rulemaking is estimated to range from $21,656 to $29,201 annually per water system, resulting in a total estimated annual statewide cost for these 2,596 CWSs and NTNCWSs of $56.22 million to $75.81 million. Costs for water systems that do not have any lead or GRR service lines and that do not exceed an action level (and are therefore not required to install or reoptimize optimal CCT) should be lower, as detailed in the response to question #17.

(20) **Provide a specific estimate of the costs and/or savings to the *local governments* associated with compliance, including any legal, accounting or consulting procedures which may be required. Explain how the dollar estimates were derived.**

There are 285 CWSs and NTNCWSs owned by municipalities that will be affected by this proposed rulemaking. As detailed in the response to question #17, the cost of complying with this proposed rulemaking is estimated to range from $21,656 to $29,201 annually per water system, resulting in a total estimated annual statewide cost for all 285 municipally-owned CWSs and NTNCWSs of $6.17 million to $8.32 million. Costs for water systems that do not have any lead or GRR service lines and that do not exceed an action level (and are therefore not required to install or reoptimize optimal CCT) should be lower, as detailed in the response to question #17.

(21) **Provide a specific estimate of the costs and/or savings to the *state government* associated with the implementation of the regulation, including any legal, accounting, or consulting procedures which may be required. Explain how the dollar estimates were derived.**

Of the 2,911 CWSs and NTNCWSs, 30 systems are owned and/or operated by the state government. As detailed in the response to question #17, the cost per water system is estimated to range from $21,656 to $29,201 annually, resulting in a statewide total estimated annual cost to all 30 state-owned of $649,680 to $876,030. Costs for water systems that do not have any lead or GRR service lines and that do not exceed an action level (and are therefore not required to install or re-optimize optimal CCT) should be lower, as detailed in the response to question #17.

As detailed in the response to question #17, the state government will also incur costs associated with the Department's implementation and administration of the 2024 federal LCRI, estimated to be between $460,714 and $494,643 per year.

(22) **For each of the groups and entities identified in items (19)-(21) above, submit a statement of legal, accounting or consulting procedures and additional reporting, recordkeeping or other paperwork, including copies of forms or reports, which will be required for implementation of the regulation and an explanation of measures which have been taken to minimize these requirements.**

The reporting requirements are specified in the 2024 federal LCRI. All CWSs and NTNCWSs are required to report the same information to the Department, unless a specific provision does not apply. For example, if the water system does not have any lead service lines, the provisions and reporting requirements relating to lead service lines would not apply.

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.

(22a) **Are forms required for implementation of the regulation?**

Yes. 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:

- Service Line Inventory Form and Instructions (Document ID 3930-FM-BSDW0119)
  https://greenport.pa.gov/elibrary/GetFolder?FolderID=1663827
  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)
  https://greenport.pa.gov/elibrary/GetFolder?FolderID=1663640
  This is an existing form; revisions are not needed.
- Public Water Supply Permit Application (Document ID 3900-PM-BSDW0002)
  https://greenport.pa.gov/elibrary/GetFolder?FolderID=3935
  This is an existing form; revisions are not needed.
- Public Water Supply Application – Modules 1—15 (Document ID 3900-PM-BSDW0254)
  https://greenport.pa.gov/elibrary/GetFolder?FolderID=3929
  These are existing forms; revisions are not needed.
- Designation of Optimal Water Quality Parameters (WQPs) Request Form (Document ID 3940-FM-BSDW0003)
  https://greenport.pa.gov/elibrary/GetFolder?FolderID=1133937
  This is an existing form; revisions are not needed.
- Corrosion Control Treatment – Basic Feasibility Study (Document ID 394-3000-005
  https://greenport.pa.gov/elibrary/GetDocument?docId=9133089&DocName=ION%20CONTROL%20TREATMENT%20-%20BASIC%20FEASIBILITY%20STUDY.PDF%20394-3000-005%20%20
  This is an existing form that will be revised for implementation of this proposed rulemaking.
- The LCRI Alternative Compliance Option Request Form for eligible water systems (CWSs serving less than 3,300 persons and NTNCWSs) that exceed the lead action level only that elect to request an alternative compliance option. This is a new form that will be available for rule implementation.

(22b) **If forms are required for implementation of the regulation, attach copies of the forms here. If your agency uses electronic forms, provide links to each form or a detailed description of the information required to be reported. Failure to attach forms, provide links, or provide a detailed description of the information to be reported will constitute a faulty delivery of the regulation.**

Links are provided in the response to #22a. The new LCRI Alternative Compliance Option Request Form and the revised Corrosion Control Treatment – Basic Feasibility Study form are attached.

(23) **In the table below, provide an estimate of the fiscal savings and costs associated with implementation and compliance for the regulated community, local government, and state government for the current year and five subsequent years.**

Where cost estimates included a range, the higher estimate was used in the table below. The costs to state government include the costs to both the public water systems that are owned and/or operated by the state government and the costs to administer and implement the 2024 federal LCRI.

	Current FY 2025-26	FY +1 2026-27	FY +2 2027-28	FY +3 2028-29	FY +4 2029-30	FY +5 2030-31
SAVINGS:	**$**	**$**	**$**	**$**	**$**	**$**
Regulated Community	0	0	0	0	0	0
Local Government	0	0	0	0	0	0
State Government	0	0	0	0	0	0
Total Savings	0	0	0	0	0	0
COSTS:						
Regulated Community	$75,810,000	$75,810,000	$75,810,000	$75,810,000	$75,810,000	$75,810,000
Local Government	$8,320,000	$8,320,000	$8,320,000	$8,320,000	$8,320,000	$8,320,000
State Government	$1,370,673	$1,370,673	$1,370,673	$1,370,673	$1,370,673	$1,370,673
Total Costs	$85,500,673	$85,500,673	$85,500,673	$85,500,673	$85,500,673	$85,500,673
REVENUE LOSSES:	0	0	0	0	0	0
Regulated Community	0	0	0	0	0	0
Local Government	0	0	0	0	0	0
State Government	0	0	0	0	0	0
Total Revenue Losses	0	0	0	0	0	0

(23a) **Provide the past three-year expenditure history for programs affected by the regulation.**

Program	FY - 3 (2022-23)	FY - 2 (2023-24)	FY - 1 (2024-25)	Current FY (2025-26)
Environmental Program Management (161-10382)	$35,739,000	$39,714,000	$42,510,000	$45,486,000
Safe Drinking Water Account (092-60065)	$11,058,000	$12,339,000	$11,012,000	$11,778,000

(24) **For any regulation that may have an adverse impact on small businesses (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012), provide an economic impact statement that includes the following:**

(a) An identification and estimate of the number of small businesses subject to the regulation.

Small business impacts are detailed in the response to question #15.

(b) The projected reporting, recordkeeping and other administrative costs required for compliance with the proposed regulation, including the type of professional skills necessary for preparation of the report or record.

There are no new administrative requirements. Administrative costs for public water systems associated with this proposed rulemaking may increase minimally, if at all.

(c) A statement of probable effect on impacted small businesses.

Small business impacts are detailed in the response to question #15. The response to question #25 details steps taken by the EPA and the Department, and financial resources available, to minimize the compliance burden for the regulated community, including small businesses.

(d) A description of any less intrusive or less costly alternative methods of achieving the purpose of the proposed regulation.

No alternative regulatory schemes were considered because all customers of public water systems deserve equitable water quality and public health protection and access to information about drinking water provided by public water systems.

Under the 2024 federal LCRI, small water systems serving less than 3,300 persons are given the flexibility to select the least costly compliance option. If the lead compliance value exceeds the action level, these public water systems could choose to: install, maintain, and monitor point-of-use devices in each household and each building it serves; replace all lead-bearing plumbing; or install and maintain optimized CCT. Small water systems that qualify for this alternative compliance option will need to decide the most feasible option for addressing the lead exceedance. Public water systems that do not detect lead or copper above the relevant action level can request a reduced monitoring frequency to save costs.

(25) **List any special provisions which have been developed to meet the particular needs of affected groups or persons including, but not limited to, minorities, the elderly, small businesses, and farmers.**

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. However, many schools and child care facilities may not have tested their water for lead. Under the 2024 federal LCRI, CWSs will be required to provide schools and child care facilities with education on the risks of lead in their buildings so those facilities can consider taking voluntary actions in response. CWSs will also be required to conduct lead monitoring at schools and child care facilities they serve. The proposed rulemaking also includes clearer and more complete messaging about lead in drinking water, including updated lead health effects language, steps consumers can take to reduce exposure, and updated translation requirements for public education. These provisions strengthen the protection to reduce lead exposure for affected sensitive populations such as pregnant people and young children.

The Department's Safe Drinking Water Program has established a network of regional and Central Office training staff that are responsible for identifying training needs. The target audiences for training included regulated public water systems and the Department's Safe Drinking Water Program staff.

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 Program has been partnering with industry organizations by referring public water systems for service line inventory technical assistance.

(26) **Include a description of any alternative regulatory provisions which have been considered and rejected and a statement that the least burdensome acceptable alternative has been selected.**

No alternative regulatory schemes were considered. These amendments reflect federal rules that must be complied with or adopted by individual states to retain primary enforcement responsibility for public water systems under the federal Safe Drinking Water Act and to provide equitable water quality and public health protections to all public water system customers.

The proposed rulemaking contains the least burdensome acceptable option because it provides small CWSs serving less than 3,300 persons and NTNCWSs the flexibility to select the most cost-effective method to comply, as noted in the response to question #24(d).

(27) **In conducting a regulatory flexibility analysis, explain whether regulatory methods were considered that will minimize any adverse impact on small businesses (as defined in Section 3 of the Regulatory Review Act, Act 76 of 2012), including:**

a) The establishment of less stringent compliance or reporting requirements for small businesses;

For these provisions, no less stringent compliance or reporting requirements for small businesses were considered. The proposed 2024 federal LCRI provisions allow small CWSs serving less than 3,300 persons and NTNCWSs the flexibility to select the least costly and most feasible option for compliance. This is a benefit for these small CWSs serving less than 3,300 persons that provides the same level of public health protection as customers of medium and large water systems.

b) The establishment of less stringent schedules or deadlines for compliance or reporting requirements for small businesses;

For these provisions, no less stringent schedules or deadlines for small businesses were considered. The Department cannot consider less stringent schedules or deadlines to retain primary enforcement responsibility for public water systems in Pennsylvania under the federal Safe Drinking Water Act.

c) The consolidation or simplification of compliance or reporting requirements for small businesses;

The Department considered and elected to implement the small water system compliance flexibility option for small systems that exceed the lead action level. Small CWSs serving less than 3,300 persons and NTNCWSs are given the flexibility to select the least costly and most feasible treatment option to comply. These public water systems could elect to install, maintain,

and monitor point-of-use devices in each household and each building it serves, or those public water systems could elect to replace all lead-bearing plumbing instead of installing and maintaining optimized CCT. The Department developed the LCRI Alternative Compliance Option Request Form for small public systems to request, and certify compliance with, the chosen flexibility option to assist these water systems in fulfilling this requirement.

d) The establishment of performance standards for small businesses to replace design or operational standards required in the regulation; and

There are no design or operational standards required by the proposed regulation.

e) The exemption of small businesses from all or any part of the requirements contained in the regulation.

No exemptions for small businesses from all or any part of the requirements in the proposed rulemaking were considered.

(28) **If data is the basis for this regulation, please provide a description of the data, explain <u>in detail</u> how the data was obtained, and how it meets the acceptability standard for empirical, replicable and testable data that is supported by documentation, statistics, reports, studies or research. Please submit data or supporting materials with the regulatory package. If the material exceeds 50 pages, please provide it in a searchable electronic format or provide a list of citations and internet links that, where possible, can be accessed in a searchable format in lieu of the actual material. If other data was considered but not used, please explain why that data was determined not to be acceptable.**

Data was not used as the basis for this proposed rulemaking.

(29) **Include a schedule for review of the regulation including:**

A. The length of the public comment period:	60 days
B. The date or dates on which any public meetings or hearings will be held:	None scheduled
C. The expected date of delivery of the final-form regulation:	July 2027
D. The expected effective date of the final-form regulation:	Upon publication in the *Pennsylvania Bulletin*
E. The expected date by which compliance with the final-form regulation will be required:	Upon publication in the *Pennsylvania Bulletin*.
F. The expected date by which required permits, licenses or other approvals must be obtained:	Not applicable

(30) **Describe the plan developed for evaluating the continuing effectiveness of the regulations after its implementation.**

The Department will closely monitor these regulations for their effectiveness and recommend updates to the Board as necessary.