Missouri Department of NATURAL RESOURCES
dnr.mo.gov
Michael L. Parson, Governor
Carol S. Comer, Director

February 12, 2020

Mr. David Ross
Assistant Administrator, Office of Water
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Mail code: 4101M
Washington DC 20460

RE: Proposed Lead and Copper Rule Revisions – EPA-HQ-OQ-2019-0300

Dear Assistant Administrator Ross:

The Missouri Department of Natural Resources recognizes the considerable effort the United States Environmental Protection Agency (EPA) has taken to develop the proposed rule, *National Primary Drinking Water Regulations: Proposed Lead and Copper Rule Revisions*. The proposal is a substantial revision to the existing rule and it will have a significant impact on public water systems, state primacy agencies, and public health. We recognize the importance of our shared responsibility to protect public health and appreciate the opportunity to provide comments on the proposal.

The Department greatly appreciates the extension that EPA provided on the comment period for this proposed rule to allow time for a more thorough review of these provisions. Please find the Department's comments and recommendations for improvement for the proposed rule outlined below.

General Comments

EPA should make the rule language in the final rule more concise and easier to understand to aid small systems with the implementation of the rule. The revisions to the rule are very complex and will be a challenge for many public water systems to implement, especially small and medium-sized systems.

The Department also believes the rule should clarify responsibilities based on true ownership between water systems and their customers. In most cases, water systems do not own service lines past the water meter or have control over internal plumbing or fixtures of their customers. The rule assumes water systems and primacy agencies have jurisdiction to perform service-line

replacements and sampling at schools and daycares, but this is not always the case. The Department does not believe this approach is appropriate.

EPA should seek additional funding from Congress to help offset the burden this rule will place on the states and public water systems. The cost of the rule for Missouri will be significant. Many of the additional requirements represent needed improvements, but some impose costs that will not provide commensurate increased protections. For the state, implementing this rule will require additional staff, equipment, laboratory capacity, and new tools for tracking and reporting all of the required elements included in the rule. Public water systems implementing the rule will have similar costs, as well as other costs associated with developing inventories, lead service-line (LSL) replacements, corrosion control studies, etc. EPA should seek additional funding through the Public Water System Supervision Performance Partnership Grant to help states with implementing this rule. EPA also should consider developing new grant programs for small systems to assist these systems with their inventory development and lead service-line replacement (LSLR) programs.

Proposed Revisions to 40 CFR Subpart I – Control of Lead and Copper

A. Lead Trigger Level

1. Small-System Issues with the Trigger Level

EPA should consider amending the rule to address challenges posed by the 10-µg/L trigger level. Specifically, the Department strongly recommends that EPA consider a confirmatory sampling step or an invalidation procedure to avoid incorrect conclusions that require unnecessary corrective measures. Small water systems that collect only five samples would have little margin for error before expensive requirements are triggered. One elevated sample could cause a small system to exceed the new proposed trigger level or the action level. When this situation occurs under the current rule, the Department places these systems on a six-month sampling schedule to allow these systems to demonstrate the sample result was an outlier. If the sampling indicates that the original result was not an outlier, the system must initiate a corrosion control study. Under the new trigger level requirement, confirmatory sampling would not be an option.

It also appears that changes in the rule would prevent these systems from collecting more than the five samples required for calculating the 90^{th} percentile. Under the current rule, systems are required to use all samples collected during the monitoring period to determine their 90^{th} percentile. This allowed systems to perform additional monitoring, provided it was representative, to help determine if the initial result was truly valid or a sampling error. The result will be that many systems each year will incur costs for corrosion control studies and corrective actions that will not greatly increase protections. Based on our experience with the current rule, the Department

strongly recommends that EPA consider a confirmatory sampling step or an invalidation procedure as described below to avoid incorrect conclusions that require expensive and unnecessary corrective measures.

a. Confirmatory Sampling

EPA should amend the proposed rule to include a confirmatory sampling process for small water systems to ensure an outlier sample does not cause these systems to spend limited resources on trying to address a problem that does not exist. This could include confirmation of elevated results suspected to be from excessive stagnation or requiring the system to collect a second round of five samples and basing the 90th-percentile calculation on the results of ten samples. Either of these suggestions would help address the sample-collection errors caused by customers collecting samples and help ensure that when primacy agencies require actions based on the trigger or action level it is justified.

b. Invalidation Process

EPA should include language in the proposed rule to expand the invalidation protocol to allow for a science-based invalidation process. This process could include the collection of confirmatory samples and the review of the stability of the water, the previous sample history, and the collection procedures utilized by any uncertified collectors.

The rule does not allow the primacy agency to invalidate sample results from samples collected incorrectly by the customer. Customers are not trained professionals and may not always collect a sample properly. Collecting water quality parameters (WQPs) and conducting a follow-up sample at a residence with a single high lead result, as suggested by the proposed "find-and-fix" provisions of the new rule, could be a mechanism to allow for this.

Reviewing previous inorganic data also could be a mechanism to reject or invalidate an obvious outlier. This review should be acceptable as the basis for a science-based invalidation procedure where resampling cannot confirm the high result and WQPs show the water is not corrosive.

2. Trigger Level for Systems with Source Water Lead

EPA should exempt water systems treating lead in source water from the 10-µg/L trigger level in instances where the primacy agency has approved treatment-in-place for source-water lead and the system remains in compliance with the 90th-percentile action level. Application of the proposed 10-µg/L trigger level to such systems would be counterproductive. Source-water lead, although rare, is an issue for 14 systems in

Missouri serving about 916 total connections. The majority of these systems use zeolite softening for removal. This process also removes calcium carbonate hardness from the water making the water more corrosive. Currently, these systems design the treatment process to remove enough elemental lead to bring the lead level below the action level but without making the water corrosive to the point it leaches refined lead from the premise plumbing. For these systems, removing lead below 10 µg/L would make the water corrosive enough to leach lead from pipes, fittings, and fixtures. The trigger level is most effective as a tool for identifying potential lead issues for appropriate follow-up. Systems that already treat their source water for lead pursuant to the approval of the primacy agency do not benefit from the application of the trigger level; these systems already are aware of potential lead issues and actively monitor their treatment systems to achieve compliance with the 90th-percentile action level.

3. Risk Communication

EPA should develop guidance for water systems and primacy agencies on how to communicate effectively the new 10-µg/L trigger level and the existing 15-µg/L action level. The trigger level will make risk communication to the public more difficult due to having two numbers that require action in this rule. This may confuse the public who will not understand that these levels are not health-based.

B. Corrosion Control Treatment

1. Corrosion Control Evaluation During Sanitary Surveys

EPA should revise the rule to provide flexibility to states on how to accomplish reviewing corrosion control and water-quality parameters at water systems. The proposed rule requires an evaluation of corrosion-control treatment (CCT) during sanitary surveys as well as an assessment of the WQPs for water systems that have installed CCT. This will require additional training for field staff who historically have not been involved in this type of work performed by our central-office engineering staff. EPA could provide flexibility in the rule by not linking the review directly to the sanitary survey and instead establish the review on a three-year frequency giving states the ability to perform the review as part of the sanitary survey or by having a special site visit to perform the review.

2. CCT Requirements Based on Lead 90th Percentile

EPA should consider revising the rule to remove the requirement that a small water system install CCT for an Action-Level Exceedance (ALE) based on a single sample result, particularly where there is the potential for sample-collection error by a customer, or when it is determined that the water is not corrosive. As previously

commented, this could include an invalidation procedure or a confirmatory sampling process in the rule.

3. Calcium Carbonate Stabilization

EPA should not eliminate calcium carbonate as an option for CCT nor the WQPs associated with the technique. Several large water systems in Missouri have successfully use calcium carbonate for their CCT for decades with no compliance issues in meeting the action level. It would seem more logical to allow systems to maintain their current treatment processes until such time as they exceed the action level or the newly proposed trigger level.

4. Orthophosphate

Rather than setting the orthophosphate level at 1 µg/L or 3µg/L, the rule should allow for determination on a facility-specific basis for the appropriate level needed to reduce corrosion with the least amount of impact to the discharge of the wastewater treatment plant. This level will be different for each water system. In addition, the use of orthophosphate for CCT will have huge impacts on wastewater-treatment plant limits and probable treatment for phosphorus removal before discharging. EPA should take a holistic look at this issue to ensure they are not creating unnecessary additional costs and burdens.

5. Applicability to Secondary Systems

EPA should clarify in the rule the expectation for consecutive systems that purchase all of their water from systems that have optimized corrosion control in place so there is clarity for these systems and primacy agencies. The proposed rule does not distinguish between a system that supplies all of its own water and one that purchases water from one or more other systems. The November 3, 2015, EPA memo from Peter C. Grevatt, entitled *Lead and Copper Rule Requirements for Optimal Corrosion Control Treatment for Large Drinking Water Systems,* established that all systems serving more than 50,000 persons, whether purchasing water or not, are required to complete a series of steps to either optimize CCT or be deemed to have optimal CCT. In many cases, these systems do not perform additional treatment and water parameters should not differ significantly from the primary system.

6. Source Water Changes

EPA should consider whether it is necessary to require water systems that add an additional source such as a well to perform increased tap sample monitoring if the entry point WQP data from the IOC scan is the same or similar to the other existing sources. States should have the flexibility to make this determination.

C. LSL Inventory

1. Public Availability

The Department supports the proposed requirement for water systems to perform a LSL inventory and make it publicly available.

2. Annual Update of Inventory and Sampling Pool

EPA should add a provision to the rule to allow systems such as mobile-home parks or new subdivisions to opt out of the requirement to update their inventory and sampling pool annually if they can verify there are no LSLs in the distribution system. In addition, the Department does not support the generalized requirement to update the inventory and sampling pool annually. This is a tracking issue for both water systems and the state agency. The Department believes public water systems should update the inventory on the same frequency that they currently monitor but no more frequently than annually. This would help reduce the burden on the state, as it would allow states to stagger the workload of reviewing these inventories.

D. LSL Replacement

1. LSLR Plan

The Department supports the requirement to prepare a LSLR plan within three years of rule promulgation, but notes concerns regarding the water system's ability to adequately map its system and conduct such a survey. The possibility of a designation of "unknown" for LSLs is high.

2. LSLR Associated with Trigger or ALE

The Department supports the proposal to implement a goal-based LSLR plan if the 90^{th} percentile is above the trigger level and mandatory full LSLR if the 90^{th} percentile is above the action level. Since LSLR goals are part of the special primacy requirements, EPA must provide training or guidance to states about how goals are to be determined in order to provide an acceptable method. Alternatively, EPA could establish a lesser goal by rule for a trigger-level exceedance than the current three percent required for an ALE with an option for the state to develop a different goal. This would allow states the flexibility to implement the level established by rule rather than develop their own special primacy provisions to implement the goal-based criteria. This special primacy requirement is an unnecessary burden to the state that could be avoided if EPA were to establish a level by rule.

3. Disturbance Criteria

The disturbance criteria outlined in the rule related to LSLR appears appropriate.

E. Compliance Alternatives for Lead ALE for Small Community Water Systems and Non-transient Non-community (NTNC) Water Systems

1. Selection of Alternatives

The proposed requirements for water systems to evaluate and recommend to the state the alternative it will implement if there is an exceedance of the action level within six months of the trigger level exceedance may increase the complexity of the rule beyond the current capacity of many smaller water systems. Including a confirmatory sampling process would not lessen protectiveness and would help to reduce some of the burdens associated with this rule provision.

2. Applicability to Small Systems

For this provision, EPA should keep the definition of a small system as one with a population of 3,300 or less.

3. NTNC Systems

The alternative for replacing all lead-bearing materials at a NTNC water system is a good idea, but the timeframe provided can be an issue for other small systems.. These systems need a longer period for replacement, possibly 18 to 24 months.

F. Public Education

1. Mandatory Health Language

The Department supports revising the mandatory health-effect language.

G. Monitoring Requirements for Lead and Copper in Tap-Water Sampling

1. Tiering of Tap Sample Collection Sites

The Department supports the tier categories listed in the proposed rule.

2. Number of Tap Samples and Frequency of Sampling

EPA should consider revisions to the proposed rule allowing water systems to collect more than the regulatory minimum number of routine samples. It is a significant additional burden to disallow all but the minimum number of routine samples to count toward compliance, in calculation of the 90^{th} percentile. The burden results

from the state having to confirm the reported results are correct and the other results collected are not valid or more appropriate. This also would add an additional burden to the water systems as under the current rule, they can send out additional sample bottles to customers listed on their site sampling plan to ensure they get the minimum amount of routine samples returned. The verification steps to determine the correct minimum amount of routine samples required would be an extra layer of verification without significant additional benefit.

3. Sample Collection Methods

a. Pre-stagnation Flushing

EPA should consider revisions to the rule to allow pre-stagnation flushing in certain situations such as at NTNC systems where taps on their sampling plans may be infrequently used. Disallowing pre-stagnation flushing is a biased sample procedure designed to capture a worst-case condition simulating a highly unusual consumption pattern, e.g., the same individual consuming only water from an unflushed tap daily until reaching the chronic risk threshold. Sampling should aim to mimic all reasonable exposure scenarios, but not the most highly unlikely.

b. Fifth Liter Sampling

Regarding EPA's request for comments on the alternative of requiring fifth-liter sampling, the Department recommends EPA maintain the existing first-draw sampling procedure in place in the current rule. The Department believes fifth-liter sampling will complicate the sampling protocol for customers, potentially leading to more sampling errors. Customers frequently have challenges collecting samples using the first-draw protocol, and often read instructions only after an elevated sample is obtained. Complicating the instructions for a fifth-liter sample will confuse the customer and cause more sampling errors. The unintended consequence may actually be lower lead levels in sampling.

H. Water Quality Parameter (WQP) Monitoring

1. Calcium-Carbonate Stabilization

See comment under B.3.

2. Review of WQPs During Sanitary Surveys

See comment under B.1.

3. Additional WQP Requirements

The rule should require systems to monitor pH, alkalinity, and orthophosphate (if used) at entry points to distribution system daily instead of no less frequently than every two weeks. A system is in violation if it operates outside of its optimal WQPs nine times during any six-month period. If the system only reports once every two weeks, it is more difficult to determine compliance.

I. Source Water Monitoring

The Department agrees with the proposal to reduce source-water monitoring as outlined in the rule. But Missouri has more than a dozen public water systems that treat for naturally occurring, elemental lead found in their source water and even more systems with low levels of lead that do not require treatment. We would note we found several incorrect references in EPA publications related to the rule regarding lead in source water. EPA's website incorrectly states that, "Lead is not naturally found in water." (See EPA's main page for lead and copper revisions in the "Background" section: https://www.epa.gov/ground-water-and-drinking-water/proposed-revisions-lead-and-copper-rule and in the "Understanding the Lead and Copper Rule" factsheet https://www.epa.gov/sites/production/files/201910/documents/lcr101_factsheet_10.9.19.final_.2.pdf.) EPA should revise these documents to reflect that lead does occur naturally in water in certain geologic settings.

J. Reporting

EPA needs to make substantial updates to the Safe Drinking Water Information System (SDWIS) to address the new reporting, recordkeeping, and data management requirements included in the proposed rule. Reporting, recordkeeping, and data management under the proposed rule will increase significantly for states and will require additional FTE to manage. Tracking may include ensuring the water system submits required information, review of the information for errors, corresponding with the system to correct errors, record keeping, and reporting to EPA.

The rule has new tracking requirements for LSL inventories, LSL replacements, sample-site plans, and trigger-level notifications. The rule also requires annual certification that 20% of schools and daycares were sampled, notifications were made at schools and daycares, or, if appropriate, annual certifications that there are no schools or daycares. The rule also requires primacy agencies to maintain records for source-water or treatment changes, find-and-fix activities implemented by public water systems, and compliance alternatives that small and NTNC water systems have chosen and the state has approved. Primacy agencies also are responsible for reporting optimal CCT status of all water systems and 90th percentiles for all water systems to EPA.

These reporting, recordkeeping, and data-management requirements are significant for primacy agencies. EPA needs to make substantial updates to the Safe Drinking Water

Information System (SDWIS) before implementation of the new rule begins so the system is capable of tracking the requirements. This would greatly reduce the burden to primacy agencies to implement many of these new tracking requirements.

K. Find-and-Fix

1. Sample Investigations

EPA should consider utilizing the find-and-fix provisions in the rule to assess the sampling-site and sample-collection protocol in order to determine if there is actually an issue with lead. In Missouri, the Department has observed that most of the ALEs result from failure to observe sampling protocols to account for excessive stagnation. Water that is not corrosive will still leach lead over longer periods. This is why EPA's 3T's for Removing Lead in Drinking Water in Schools and Child Care Facilities guidance has a maximum stagnation period of 18 hours. In instances of excessive stagnation, no corrective action other than instruction on flushing after periods of absence should be required. As suggested in the proposed rule, the system should collect an additional sample. If the result does not confirm an issue with lead, the rule should consider the find-and-fix complete.

2. WQPs

The Department agrees that systems that are capable of doing so (having appropriate equipment, experience, and expertise) should collect WQPs. This may be appropriate for larger water systems, but small water systems such as mobile-home parks, subdivisions, condominiums, and NTNCs most likely will not be able to comply with this provision of the rule.

Other Proposed Revisions to 40 CFR Part 141

A. Consumer Confidence Reports

The Department supports the revised mandatory health language.

B. Public Notification

EPA should consider revising the 24-hour notification requirements for ALEs included in the proposed rule to be consistent with Tier-2 public-notice requirements. Requiring 24-hour notice should be reserved for acute situations, such as a turbidity failure or an *E.coli* detect, where immediate end to the exposure is necessary to protect public health. ALEs are based on long-term exposure to contaminants with chronic effects; notice consistent with existing Tier-2 public-notice requirements is sufficiently protective of public health while allowing reasonable time for water systems to complete notice.

C. Definitions

There are several definitions and terms in the proposed rule that are inconsistently used or that conflict with other provisions of the rule. To aid in the implementation of the rule, EPA should evaluate the use of these definitions or terms to ensure the rule is as clear as possible.

1. Definition of Small, Medium, and Large Systems

EPA should consider specifying systems by population size rather than using the terms small, medium, or large in the rule. The definition of small systems in the federal safe drinking-water regulations is 3,300 or less in population. The proposed rule is confusing as it defines small systems as serving 10,000 people or less for actions such as trigger-level exceedances, but the definition of small systems remains a population of 3,300 or less when determining the number of samples required for distribution-system monitoring. Because there are different population thresholds used for small systems in the rule for different actions, EPA should specify systems by population size rather than using the terms small, medium, or large.

2. Use of the Terms Compliance Period, Monitoring Period, and Sampling Period

The proposed rule language uses the terms compliance period, monitoring period, and sampling period interchangeably. To avoid any confusion, EPA should evaluate the use of these terms in the rule to ensure they are appropriately applied and consistent with the use of these terms in other federal drinking-water regulations.

3. Definition of LSL

EPA should consider simplifying the definition of LSL to include all galvanized service lines. For most systems, it may be impossible to identify whether lead was upstream of the galvanized service line. If EPA does include galvanized service lines in the definition of LSL, their removal should count toward the LSLR percentages required in the rule.

Rule Implementation and Enforcement

A. Requirements for Primacy

The proposed rule requires the State to adopt comparable regulations within two years. The significance of this rule and the requirements of Missouri's rulemaking process will make it difficult for the Department to adopt its own regulations within the proposed time frame. EPA should consider extending this deadline or allow states to seek an extension.

Also noted in our comments previously, EPA must make improvements to the SDWIS system during this timeframe or many parts of the rule may not be implementable.

B. State Recordkeeping and Reporting

EPA should consider whether the new recordkeeping and reporting requirements for the proposed rule are of significant benefit. The proposed rule requires the Department to establish new internal processes for issuing formal notices of exceedances, delivering public-notice documentation to systems, and tracking lead ALEs in SDWIS. Developing new protocols and reporting and tracking mechanisms will place additional burdens on the Department.

The proposed rule has the potential to significantly increase the number of violations issued to public water systems. There are 15-20 new requirements and water systems may have difficulty with compliance. Because the violations carry ETT points, EPA likely will see an increase in high-priority violations as systems struggle to comply with these new provisions of the rule.

Moreover, these additional requirements could divert effort from more effective compliance-assistance efforts. Currently, the Department reaches out to all systems with a lead ALE, and works personally with each until compliance is achieved. In most cases, we do not see that intensive record-keeping and reporting requirements improve compliance assistance or hasten return to compliance. They may instead divert existing resources from other efforts.

C. Special Primacy Requirements

EPA should considering amending the rule to include many of the special primacy requirements in regulation, so states are clear on how to implement these provisions. EPA should also provide guidance on special primacy requirements such as the formula for determining goal-based LSLR and rate of replacement, the method for verifying LSL material, how verification of find-and-fix requirements will work, the requirements for testing at schools and daycares, and how the state will review source water or treatment changes. EPA's inclusion of these elements in the Federal Register as special primacy requirements, rather than integrating these requirements into the rule, puts the burden of rulemaking on the states without an opportunity to comment on how EPA will require primacy agencies to implement these provisions.

Economic Analysis

The EPA economic analysis does not reflect costs borne by many states that provide analytical services for all required safe drinking water compliance sampling. We encourage EPA to

consider this updated information in calculating the cost to state programs to implement the final rule.

Thank you for the opportunity to provide comments on this proposed rule. The Department looks forward to continuing to work with the EPA to improve the protection of public health. If you have any questions regarding these comments, please contact me at P.O. Box 176, Jefferson City, MO 65101, by email at david.lamb@dnr.mo.gov or by telephone at 573-751-0124.

Sincerely,

WATER PROTECTION PROGRAM

//s//

David J. Lamb
Public Drinking Water Branch Chief