January 17, 2020

Andrew Hardy
Maine Center for Disease Control

VIA ELECTRONIC MESSAGE

RE: Comments on Lead Testing In School Drinking Water Rule, 10-144 CMR Ch. 234

Dear Mr. Hardy:

The Environmental Health Strategy Center is pleased to present these comments on this critically needed rule to help protect children from brain-damaging lead in our schools. The Strategy Center works to create a world where all people are healthy and thriving, with equal access to safe food and drinking water, and products that are toxic-free and climate-friendly. We were involved in stakeholder discussions leading to the drafting of “An Act to Strengthen Testing for Lead in School Drinking Water” (Act) requiring this rule and have been involved in lead poisoning preventing and safe drinking water issues in Maine throughout our 18 year history.

While we appreciate the Maine CDC and the Department of Health and Human Services (Department) moving forward with proposing these rules and promptly implementing the requirements of the Act, and as we noted in oral comments at the public hearing for the rule on January 8, we have several concerns that the proposed rules do not adequately protect children’s health and meet the requirements of the Act as outlined in greater detail in the following sections.

Increasing Public Notification and Ensuring Rapid Communications
First and foremost, the rule must be modified to ensure that parents, as well as teachers, staff, and the public, have timely access to information on the test results in their school. Access to information on the toxics our children and ourselves are being exposed to should be a fundamental right, especially for test results paid for with public dollars. Other than requiring the department to provide a fillable form, there are no actual requirements in Section 6, “Public Notification.” The school “may” notify parents of extremely elevated results. The department “may” publish a notice four months later if the school doesn’t inform its stakeholders. There is no requirement to make available test results that fall below the state’s standard.
The rule must be revised to ensure that schools promptly make all test results available to parents, staff, prospective students, and all other stakeholders. It is worth noting that in the US Environmental Protection Agency’s (USEPA) recently proposed revisions to the Lead and Copper Rule (LCR) that governs lead testing of public water supplies, the agency has proposed requiring water systems to notify its customers within 24 hours of finding an elevated level. We find it unconscionable that an individual family would be required to be informed of elevated results in their home within a day, but the Department is allowing an entire classroom or school to continue to drink water with a demonstrated health risk without so much as an (optional) notification for four months. We strongly urge that the rule require schools to disclose to staff, families, and stakeholders elevated results within 24 hours, just as public water systems are likely to be required to do, and to share all test results within ten days.

If, in the Department’s view, there is inadequate authority in the statute to require that schools themselves disclose the results, the rule must require, not suggest, that the state promptly take action to publicize the findings. In the event of elevated results, we would recommend allowing the school a 24-hour window to make its own announcement, and if the school has not certified it has done so, the Department immediately issue a public statement with the findings and cause them to be published. In the event of results below the state level, we suggest the Department publish a notice within ten days if the school has not certified they have shared the results with stakeholders. Further, the rule should require the Department to maintain an easily accessible and searchable online repository of all test results collected from schools to ensure ease of access to parents as well as researchers and members of the public. Ensuring access to all data is especially critical if the Department does not set a more health protective standard, as discussed below, to provide the information families may use to insist on local action to increase the safety of their schools’ drinking water.

**Setting More Health Protective Standards**

The rule must be modified to lower the so called Maine Response Level (MRL) or standard set by the rule at which action is required, which, at 15 ppb, is far too high to be protective of children’s health. It is widely accepted by health scientists as well as Federal agencies including the U.S. Centers for Disease Control and Prevention as well as the USEPA, that there is no identifiable safe level of lead. While lead-based paint may be the most significant source of exposure for most children with very high blood lead levels, lead in drinking water is a substantial contributor to the total lead burden of the average child, with the USEPA estimating it as the source of about

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1 [84 FR 61689](https://www.federalregister.gov/documents/2019/08/09/2019-17471/revision-of-the-lead-and-copper-rule) – this would apply to both results of samples from individual customers AND to all customers if the 90th percentile level of a set of samples exceeds the action level.

2 “No safe blood lead level in children has been identified. Even low levels of lead in blood have been shown to affect IQ, the ability to pay attention, and academic achievement.” [https://www.cdc.gov/nceh/lead/prevention/default.htm](https://www.cdc.gov/nceh/lead/prevention/default.htm) Accessed 1/15/20

3 “No safe level of lead exposure has been identified.” [84 FR 61724](https://www.federalregister.gov/documents/2019/08/09/2019-17471/revision-of-the-lead-and-copper-rule)
20% of a person’s lead intake. Given the lack of a “safe” level and the fact that all children with lead exposure, not only those with “elevated” blood lead levels are being harmed, addressing the significant contribution of drinking water lead to the average child should be an important public health objective. It is therefore unsurprising that experts, including the American Academy of Pediatrics (AAP), have called for requirements to ensure school water does not exceed 1 ppb of lead. Other states have heard this call and taken action to ensure that their schools are providing drinking water with much lower lead levels. Last year, the Vermont legislature set that state’s action level for school drinking water at 4 ppb. In 2017, the Illinois legislature required comprehensive school testing with “prompt” notification to parents of all levels in excess of 5 ppb. In 2018, the District of Columbia also decided to use the level of 5 ppb for triggering action in their schools.

USEPA has always made clear that its lead in water standards are not sufficient to protect health, but are rather based on what it viewed as feasible for water systems to address. In the proposed revisions to the LCR, however, the agency is now acknowledging that there are feasible actions for water systems to take at levels under 15 ppb. The agency proposed the creation of a “trigger level” of 10 ppb at which water supplies must start to do more to monitor and control lead levels in their systems. It is especially noteworthy that the trigger level requirements are based on the fact that the agency believes there are systematic changes that may be done at the utility level to lower lead in water levels. In assessing the results from the schools, the Department will have water outlet specific data, providing it with a much more granular set of information than has been available to water systems. Additionally, schools have the ability to implement changes on a tap to tap basis. This makes it feasible to take targeted and cost effective action to reduce lead exposures to a much lower level. Therefore, in keeping with the fundamental concept that the goal is to reduce water concentrations of lead to the greatest extent feasible since there is no safe level, it is evident that the rule must require actions at a level substantially below the 15 ppb action level and 10 ppb trigger level. We strongly believe that the Department should use 1 ppb, in line with the AAP

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4 [84 FR 61690](https://www.federalregister.gov/a/61690) – For formula fed infants, USEPA estimates as much as 60% of lead intake is via water. While it is less likely that many school taps are being utilized for formula mixing, it’s also not without precedence.
8 [https://dcps.dc.gov/page/water-testing-lead](https://dcps.dc.gov/page/water-testing-lead) Accessed 1/16/20
9 “The EPA established the lead action level in the 1991 based [sic] on feasibility and not based on impact on public health. The proposed trigger level is also not a health based standard.” [84 FR 61691](https://www.federalregister.gov/a/61691)
10 [84 FR 61691](https://www.federalregister.gov/a/61691) – the specific actions in response to the trigger level vary based on the size of the system.
recommendation, as the trigger for exploring opportunities and evaluating feasibility of lowering lead levels from a particular tap.\footnote{Some have argued that having a “MRL” or school “trigger level” below the LCR’s regulatory action level (AL) will create confusion or conflict. Not only is fear of “creating confusion” a poor reason to avoid implementing health-protective policies, but it also misses the fact that the LCR AL of 15 was created, as discussed, as a point where EPA believed it became feasible to implement system wide changes (e.g. corrosion control) to reduce lead. It is inappropriate to apply the 15 ppb AL, as the Department seems to be doing, as a metric of where it is feasible to identify and implement controls for an identified school water outlet as no longer is systemic corrosion control the primary follow-up action. There are options as simple as just disconnecting or replacing a single fixture, or perhaps identifying a particular leaded connection or service line. Given the depth of data available from the school testing and the fact that the responsible entity is the school, with direct control over its facilities, rather than a utility with no authority to replace individual fixtures, it is very feasible and comparatively inexpensive to require much lower levels. Or, in other words, it shouldn’t be “confusing” because the AL and the “MRL” are actually different standards with different purposes.}

**Ensuring Sample Collection That Accurately Assesses Potential Hazards**

The rule must also be modified to ensure that it actually identifies potential sources of lead exposure and reflects the results of water as potentially consumed by children. The rule proscribes testing water that has sat in pipes for a maximum of 18 hours. This would strongly imply that schools are required to conduct what is known as pre-stagnation flushing, or running all the water the day before a test. This has the effect of “cleaning out” pipes and has been shown to reduce lead levels, even after a 6-8 hour stagnation period, thus minimizing the likelihood of finding elevated lead in water levels. For this reason, the USEPA specifically directed public water systems to NOT instruct samplers to perform a pre-stagnation flush for samples collected for LCR compliance in 2016.\footnote{https://www.epa.gov/sites/production/files/2016-02/documents/epa_lcr_sampling_memorandum_dated_february_29_2016_508.pdf Accessed 1/16/20.} The agency is further proposing to codify this requirement as part of its proposed changes to the LCR.\footnote{84 FR 61705 – Although we recognize that the agency did not extend a clear pre-stagnation flushing prohibition to the additional school testing in the proposed LCR amendments. This is a topic that will likely be a subject of much comment and we are hopefully the agency will make improvements before the rule is finalized.} Further, this methodology is not reflective of how water is actually consumed in schools: It would be a rare situation in reality where a school staff member goes around and runs water from all the taps in the school the evening before school resumes after a weekend, break, or even summer vacation.

**This is not a minor or theoretical concern.** The very real impact of pre-stagnation flushing on school lead sample results was clearly demonstrated in New York City. The city first tested its school water outlets in 2016, requiring a pre-stagnation flush before sampling. In response to criticism from experts\footnote{Taylor, Kate. “Lead Tests on New York City Schools’ Water May Have Masked Scope of Risk.” New York Times. 9/1/2016. https://www.nytimes.com/2016/09/01/nyregion/lead-tests-on-new-york-city-schools-water-may-have-masked-scope-of-risk.html} and pressure from parents, the city re-sampled the schools without a pre-stagnation flush. The second round
without the pre-stagnation flush found **nine times** as many water outlets with levels over 15 ppb.\(^{15}\)

In the same memo directing water systems to avoid instructing a pre-stagnation flush for LCR compliance, USEPA also directed systems to avoid two other techniques that have been shown to produce lower lead in water results: using narrow neck collection bottles and removing or cleaning aerators prior to sampling.\(^{16}\) Lead particles are more likely to be dislodged with high flow rates, and therefore samples should be collected with as high a flow rate as possible, which is facilitated by a wide neck bottle. Cleaning or removing aerators before sampling may remove lead particles that may have otherwise collected, potentially reducing the lead concentrations that would otherwise be present.

We believe the Department should approach the testing required by the rule as a screening test collected under the worst-case scenario, erring whenever possible on the side of risking a “false positive” over a “false negative.” Given the relative ease of taking action to pull any particular water outlet from service and resolve the source of lead contamination or re-test, there is no need to risk missing potential sources of lead exposure in our schools.\(^{17}\) Additionally, an unstated, but perhaps self-evident goal of the Act is to provide reassurance of the safety of school water to parents and the public at large. Even if the Department disagrees on the merits of the arguments, there is no question that pre-stagnation flushing has been widely criticized by some experts and highlighted as “masking” lead in the media. Allowing these techniques would be counter to the goal of reassurance, and (rightly in our view) only open the Department and our schools to further questions about the safety of school water that the Act was intended to put to rest. Therefore, we urge the Department to amend the rule to strike the “maximum” stagnation time, specifically prohibit pre-stagnation flushing, mandate the collection of samples at the highest flow rate practicable in wide-mouth containers, and prohibit the removal or pre-sample cleaning of aerators.

**The Need for Ongoing Testing**

The rule must also establish more specific criteria for ongoing testing, including at a minimum, routine re-testing on a periodic basis. As proposed, the rule is a single time effort, unless the state determines the need for additional tests based on either unspecified or vague criteria like “major” changes in source water. The rule should more specifically identify changes to source water chemistry as well as alterations to the service line or internal plumbing that could release lead and suggest the need

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\(^{17}\) This is especially critical should the Department decline to accept our advice as presented elsewhere in this comment to continue sampling in the future. Should this be the only comprehensive testing ever performed, the importance of erring towards false positives is even more obvious since there will not be another chance to discover a “false negative.”
for additional testing. Additionally, given that little is known about the changes in lead leaching over time as well as the need to capture changes to the plumbing system or source water chemistry that has not been reported, a routine testing program should be required to be implemented on a rolling basis every three to five years. It is noteworthy that the Act itself clearly envisions ongoing testing, not a once-and-done approach, as evident from the fact that it requires *annual* reports to the legislature.\(^{18}\) It is hard to fathom the legislature desiring an annual reminder of the activity the Department did a single time.

It also has been suggested that ongoing testing under this rule will not be necessary because the USEPA’s proposed LCR amendments add new requirements for water systems to conduct testing in schools. We strongly discourage the department from accepting this view. First and foremost, the proposed LCR changes are just that: proposed. USEPA may not follow through with the proposal, not follow through promptly, or decide to abandon the school testing requirements. The Department should not write regulations speculatively presuming eventual federal action. Further, Maine should set rules and procedures for the testing that meet the highest standards as previously discussed, rather than defer to what may be weaker standards of the USEPA. Finally, it is critical to note that there is little risk of duplication of regulation since the proposed revisions to the LCR allow states to waive the school testing requirements of the LCR if the state has a separate program that is at least as stringent, which these rules could or would be.\(^ {19}\)

### Additional Concerns

We would also like to highlight several additional areas for the Department to improve the proposed rule:

- The first draw 250ml samples specified are best suited for assessing lead contamination from the fixture and immediately adjacent pipes. Past studies have shown that when multiple samples are instead collected in series, there is a great deal of variation in when highest lead levels are found, likely depending on the specific plumbing of a structure. In residences it is accepted that in most cases, lead service lines are a larger contributor than fixtures, and impacts of a lead service line would be poorly and inconsistently captured in a first draw 250ml sample. We would recommend, on a per-school, rather than per-tap basis, adding a modest number of additional samples beyond the first draw to assess the potential for leaded pipes or connections “deeper” in the plumbing system, and, if the service line material cannot be readily determined, a larger non-first draw sample that would best capture stagnated water from the service line.

- Section 5 is lacking significant detail in what would constitute adequate “abatement or mitigation methods” as required the Act. While we appreciate the Department may wish to draw on its experts to address site specific findings, there is still value in providing more detailed standard approaches to help guide school administrators or consultants that may be hired by schools who have the resources to “outsource” some

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\(^ {18}\) 22 MRSA §2604-B(5)

\(^ {19}\) “If a State has in place a program that requires CWSs to sample at all schools and child care facilities, or a program requiring schools and child care facilities to collect samples themselves, that is at least as stringent as the proposed LCR requirements, the State may use that program in lieu of the proposed requirement.” 84 FR 61707
of the work in responding to identified problems. Most importantly, in order to be adequately health protective, the rule must have mechanisms to ensure that “mitigation” methods – those that do not actually “abate” the hazard by removing the source of lead – are actually adhered to over time. If the solution is to take an outlet out of service, it must be permanently disabled, such as through disconnection and capping of the pipe, not merely allowed to have a “do not drink” sign hung over it. Signs may be removed over time, especially when staff change and no one remembers why it was put there in the first place. Further, if a mitigation involves regular flushing or use of filters, there must be provisions for the creation and regular review of records that demonstrate the flushes were conducted and filters replaced.

- Section 7 should be modified to make clear that in addition to schools maintaining records, these records must be shared with the Department. Specifically, the Department should receive from schools: the documentation created for sections 2B and 2C (as it may be difficult or impossible to interpret lab results without the more detailed documentation of sample location, in addition to providing a mechanism for ensuring compliance with the identification of drinking water outlets); copies of all laboratory results; plans created under section 5A(2); ongoing documentation of compliance with mitigation efforts; and all notices under section 6C. The Department receiving these records is vital if the Department is going to be able to conduct meaningful oversight monitoring by allowing it to efficiently perform “desk audits” without visiting school locations. Additionally, having a single repository increases the ease of access to members of the public under public records law and allows the Department to have possession of the information to create an online portal as we have suggested.

- Sections 2B and 2C should provide more detailed instructions for how schools document and standardize across schools the recording of the locations and identities of water outlets. This may include marking and labeling locations on a diagram of the school, using room numbers, or using cardinal directions or other fixed references to identify locations. The reason a school decided an outlet is not for drinking or culinary purposes must be made clear. We fear that without more detailed instructions, the Department is at risk of getting sampling locations with labels such as “Mrs. Krabappel’s room, sink by bookshelf,” that will make it difficult to reference the location over time or for the Department to conduct meaningful reviews of completeness. Additionally, standardized location labels would facilitate public presentation of the data such as through an online portal.

- Section 3A notes the state will pay for sample bottles and analyses, but leaves open the question of covering the cost of shipping or delivering the samples to the laboratory, which may be a significant cost for a large batch of samples.

- The Department may wish to clarify the length of the “collection period” referenced in section 3B to better allow schools to plan their scheduling of the sampling project. The rules note that schools will have at least thirty days’ notice in 3B(8) but that they have to request assistance within 60 days of their sampling start date in 3B(6). That would imply the “collection period” must be at least 30 days (unless schools are expected to be clairvoyant) but could benefit from a clear range.

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20 Massachusetts, for example, has guidance that may provide a starting point at https://www.mass.gov/guides/sampling-for-lead-and-copper-at-schools-and-childcare-facilities#-how-to-label-taps-
We once again thank you for the Department’s work in rapidly moving these rules forward and appreciate your thoughtful consideration of these comments. If we can provide any additional clarity on our thoughts or addition information, please do not hesitate to contact Patrick MacRoy at 207-699-5796 or PMacRoy@PreventHarm.org

Sincerely,

Patrick MacRoy
Deputy Director