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MEMORANDUM

To: Monica Bharel, MD, MPH, Commissioner
Members of the Public Health Council

From: Jana Ferguson, Director
Bureau of Environmental Health

Date: September 13, 2017

RE: Request for Final Promulgation of Amendments to 105 CMR 460.000: *Lead Poisoning Prevention and Control*

INTRODUCTION

The purpose of this memorandum is to provide an overview of comments received on proposed amendments to Department of Public Health (“Department”) regulations 105 CMR 460.000: *Lead Poisoning Prevention and Control*. This regulation establishes a statewide program for the prevention and control of childhood lead poisoning.

The proposed amendments lower the threshold Blood Lead Level (BLL) defining lead poisoning, expanding enforcement of the Massachusetts Lead Law. In addition, the amendments would establish a Blood Lead Level of Concern for children with BLLs below the new threshold definition of lead poisoning but at levels referenced by the U.S. Centers for Disease Control (CDC) as among the highest 2.5% of lead exposures in children. The amendments propose requiring venous blood lead testing to confirm initial capillary test levels of 5 micrograms of lead per deciliter of blood or greater ($\geq 5 \mu\text{g/dL}$). The proposed amendments would remove the deleading standard for a small number of surfaces, specifically some surfaces currently considered “accessible/mouthable”, which could substantially reduce deleading costs.

BACKGROUND

Despite substantial gains made over 45 years of public health intervention, lead exposure remains a significant health risk for children in Massachusetts. Recent evidence suggests that for children there is no safe level of exposure to lead and that exposure to relatively low levels can result in irreversible health effects. While impacts worsen incrementally with higher exposures, research suggests that the largest portion of intellectual impairment in a child occurs at low levels of lead exposure.¹ Numerous studies have documented correlations between childhood lead poisoning and future school performance, unemployment, crime, violence, and incarceration.² Additionally, while lead continues to affect children in all communities across Massachusetts, data collected by the DPH show that lead exposure disproportionately impacts gateway and lower income communities with higher minority populations, making lead exposure a critical health equity issue.

Massachusetts has the fourth oldest housing stock in the country, with approximately 71% of housing built before 1978 – the year lead was banned in residential paint. Children are most often exposed to lead through ingestion of dust or soil contaminated by loose or deteriorated lead paint, often on windows and exteriors, or disturbed by unsafe renovation work. Exposure can also occur from lead in water, toys, and other items, such as jewelry. While the BLLs of children in Massachusetts have historically declined, most recent statewide trends have plateaued. This data is underscored by data demonstrating that only ~10% of those Massachusetts homes built prior to 1978 have been reported as inspected and delead. With the potential of ~90% of pre-1978 housing still not considered lead safe, children will likely continue to be exposed to high levels of lead in their homes.

The Massachusetts Lead Law or “Lead Law” (see MGL c. 111, §§ 189A-199B) is one of the nation’s most comprehensive state laws for lead poisoning prevention. Enacted in 1971, the Lead Law requires any dwelling unit where a child under six years of age resides to be delead, regardless of a child’s blood lead level or whether the property is owner-occupied. While Massachusetts’ approach to preventing childhood lead poisoning has historically been viewed as a national model, DPH regulations have not been fully reviewed and updated since 2000, with minor technical amendments made in 2003 to align with federal standards.

PROPOSED REGULATORY AMENDMENTS

¹ Advisory Committee on Childhood Lead Poisoning Prevention for the Centers for Disease Control and Prevention. Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention. January 2012: http://www.cdc.gov/nceh/lead/acclpp/final_document_030712.pdf

² See, e.g., Brown, MJ. “Costs and Benefits of Enforcing Housing Policies to Prevent Childhood Lead Poisoning.” Medical Decision Making, 2002, 22:482-492; Gould, E. “Childhood Lead Poisoning: Conservative Estimates of the Social and Economic Benefits of Lead Hazard Control.” Environmental Health Perspectives, 117(7):1162-1167; Reyes, Jessica, “Environmental Policy as Social Policy? The Impact of Childhood Lead Exposure on Crime.” National Bureau of Economic Research, May 2007. Available at <http://www.nber.org/papers/w13097>.

Significant proposed changes presented at the initial presentation to the Public Health Council include:

- **460.020: Meaning of Terms.**
 - Lead Poisoning. Consistent with the recommendations of the Medical Review Panel and the Governor’s Advisory Committee, DPH recommends redefining lead poisoning from a disease present in children with a venous BLL of 25µg/dL or greater to a BLL of 10µg/dL or greater.
 - Blood Lead Level of Concern. DPH recommends establishing a definition for “Blood Lead Level of Concern” as a BLL of 5-9 µg/dL and extend lead exposure educational prevention services to all families with a child having a BLL of 5 µg/dL or greater.
 - Accessible, Mouthable Surfaces. DPH proposes to redefine these surfaces to include only window sills, doors, door jambs, stair and handrails, treads and risers. Other types of surfaces that were previously included in this definition, for example, wall corners, have been removed.
- **460.050: Mandatory Lead Poisoning Screening and Follow-up Schedule.** Part B of this provision has been amended to require that if a child’s initial capillary blood screening shows a concentration of 5µg/dL or higher, a confirmatory venous blood sample will be required.

COMMENTS AND RESPONSES TO PROPOSED REGULATORY AMENDMENTS

Public hearings were held on September 8 and 13, 2016, and the public comment period closed September 16, 2016. Based on a careful review of the comments and with input from the statutorily established, governor-appointed Advisory Committee for the CLPPP, at a meeting on June 12, 2017, CLPPP has made revisions to the draft regulations, which were incorporated into a revised draft of the final regulations. A copy of the final proposed amendments is shown in Appendix A. A summary of all the comments and the Department’s responses are shown in Appendix B. A summary of further changes to the regulation is provided in the bulleted list below.

- **105 CMR 460.020:** Local health departments and environmental groups recommended adding a definition for Friction Surfaces and including Friction Surfaces under the definition of Lead Hazard. These definitions were revised. Friction Surface includes doors, door jambs, and stair treads. The definition of Accessible, Mouthable Surfaces was revised to remove these surfaces and include only window sills under 5 feet from the floor, handrails, and railing caps. Friction Surfaces was added to the definition of a Lead Hazard and language was added to clarify the distinction between Lead Hazard and Lead Violation. The rationale for these changes is to clarify definitions and more closely align the regulations with federal HUD standards.

- **105 CMR 460.020:** Commenters suggested that the definition for Dangerous Level of Lead be revised to read 90 ppm of lead (as opposed to the current standard of 600 ppm of lead) as specified in the federal Consumer Product Safety Commission definitions. The CLPPP currently uses the 90 ppm standard and references this standard in guidance. Changing the regulation codifies existing practice and conforms to federal standards.
- **105 CMR 460.020:** The definition for Encapsulant was revised to be consistent with federal standards.
- **105 CMR 460.050, 460.060, 460.120, 460.130, 460.170, 460.200-240, 460.700, and 460.730:** Numerous commenters, including the U.S. EPA, requested that detailed provisions, which were deleted as part of the initial draft amendments because they duplicated a statute or were very prescriptive and procedural (e.g., Procedures for Initial Inspection), be restored to ensure that regulatory requirements are clear and to maintain authority to enforce compliance with regulatory requirements. Based on these comments, text previously proposed for deletion has been restored in all of these sections. While the CLPPP originally intended to move many of these requirements to sub-regulatory guidance, the program agrees with commenters that maintaining these requirements in the regulations will enhance regulatory compliance and lead to better protection of children from lead poisoning.

CONCLUSION

The proposed amendments present a comprehensive revision to 105 CMR 460.000 to improve organization, clarify regulatory requirements, and implement a standard for lead poisoning and a blood lead level of concern that reflects a more current understanding of the lifelong impacts of lead exposure in children.

DPH requests that the Public Health Council approve amendments to 105 CMR 460.000 – *Lead Poisoning Prevention and Control* for final promulgation.