

# Sample Guidance for Developing Environmental Health Lead Policies

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## How to Use this Document

The purpose of this document is to assist members of the Maternal & Child Environmental Health Collaborative Improvement and Innovation Network (MCEH CoIIN) and their local health departments in formulating robust, evidence-based policies to guide program development and improvement. State policies can be used to provide guidance and direction to local health departments and to set out the goals and evidence behind programmatic development and improvement. This guidance document is organized in the following manner:

- I. Sample policy format
  - Sample Environmental Health Lead Policy
  
- II. Evidence base for:
  - Water as a Basic Human Right
  - Lead Service Line Replacement
  - Water Infrastructure
  - Lead and Housing
  - Child Care Centers and Schools
  - Environmental Assessment
  
- III. References and Supporting Evidence

I. Sample Policy Format

[Insert Organization Title]

<b>Name:</b> [Title of Policy] <b>Authorized By:</b> [Organization: Name and Title of Approver]	<b>Reviewed &amp; Revised:</b> _____
<b>Effective Date:</b> [ Insert Policy Effective Date]	<b>Page</b> <u>1</u> <b>of</b> <u>   </u>

**Purpose:** [Insert the purpose of policy statement and stakeholders involved]

**Persons Affected:** [Insert Affected Population]

**General Information:**

[In this section insert information on the general health issue being addressed in policy statement and the participating stakeholders goal for the policy.]

***EXAMPLE***

The Maternal and Child Environmental Health Collaborative Improvement and Innovation Network (MCEH CoIIN) is a platform designed to expedite improvements in priority areas through collaborative learning, quality improvement and innovation. The collaborative is funded by the Health Resources and Services Administration (HRSA) which give 10 states the ability to reduce children’s risk of lead exposure. The CoIIN aim by August 2020, participating state and stakeholders to decrease exposure to lead from major sources and/or increase access to systems of care so that they; decrease by 10% blood lead levels in children ages 1-5, increase, by 25% or more, the # of children ages 1-5 that receive a screening test for blood lead levels, increase, by 25%, the # of children ages 1-5 with confirmed elevated blood lead levels who receive coordinated care, Increase, by 25%, the # of providers who are following the CDC recommendations for treatment of children ages 1-5 with elevated blood lead levels. Additionally, participating partners will identify at least one source of lead exposure that leads to elevated blood lead levels in children and develop or update a state action plan to decrease children’s exposure to lead from major sources.

**A. [This section can discuss more specific issues within the general problem]**

**A. [Specific Problem 2]**

**B. [Specific Problem 3]**

**[Custom Policy Topic]**

Policy creators can insert a custom policy topic specific to the needs of the community they are working in. This will allow more flexibility and for the policy form to be a living document.

**A. [Topic Points/ Research Section]**

[In this section place specific points or research items that support the policy topic]

**[Custom Policy Topic 2]**

Policy topic specific to the needs on the community they are working in. This will allow more flexibility and for the policy form to be a living document.

**A. [Topic Points/ Research Section]**

[In this section place specific points or research items that support the policy topic]

**[Custom Policy Topic 3]**

**[Custom Policy Topic 4]**

**[Appendix]**

[This section is for supporting documents such as graphs, maps, or infographics]

**[Reference]**

[Area for cited supporting references]

# Sample Environmental Health Lead Policy

## National Environmental Health Association

<b>Name:</b> Environmental Health Maternal and Child Lead Policy <b>Authorized By:</b> Director of Programs and Partnership Development, Sandra Whitehead, PhD and Project Coordinator of Programs and Partnership, Christine Ortiz Gumina, MPH	<b>Reviewed &amp; Revised:</b>  _____
<b>Effective Date:</b> [ Insert Policy Effective Date]	<b>Page</b> <u>  1  </u> <b>of</b> <u>    </u>

**Purpose:** It is the policy of the National Environmental Health Association in partnership with the Maternal and Child Health CoIIN to prevent and reduce lead poisoning.

**Persons Affected:** All young children and pregnant/breast feeding mothers.

### General Information:

The Maternal and Child Environmental Health Collaborative Improvement and Innovation Network (MCEH CoIIN) is a platform designed to expedite improvements in priority areas through collaborative learning, quality improvement and innovation. The collaborative is funded by the Health Resources and Services Administration (HRSA) which provides assistance to 10 states to reduce children's risk of lead exposure. The CoIIN aim's is that, by August 2020, participating state and stakeholders will decrease exposure to lead from major sources and/or increase access to systems of care so that they; decrease by 10% blood lead levels in children ages 0-72 months, increase, by 25% or more, the # of children ages 0-72 months that receive a screening test for blood lead levels, increase, by 25%, the # of children ages 0-72 months with confirmed elevated blood lead levels who receive coordinated care, Increase, by 25%, the # of providers who are following the CDC recommendations for treatment of children ages 0-72 months with elevated blood lead levels.

Additionally, participating partners will identify at least one source of lead exposure that leads to elevated blood lead levels in children and develop or update a state action plan to decrease children's exposure to lead from major sources.

- A. In the United States, one of the leading pediatric environmental health issues is lead poisoning. Changes in the neurological and systemic functions of the brain have been seen at concentration of 10 to 25 µg/dL (*Sciarillo, Alexander, & Farrell, 1992*). Behavioral variations caused by lead are often difficult to diagnosis in young children as there are many behavioral disabilities with similar symptoms. Behaviors such as overactivity or anxiety may not even be detected until the child is in later elementary school (*Sciarillo, Alexander, & Farrell, 1992*).

- B. According to the Centers for Disease Control and Prevention (CDC), most children will blood lead levels  $\geq 10 \mu\text{g/dL}$  are those who have been exposed to hazardous lead paint in older homes, lead dust and soil (CDC, 2002). There have been various studies that have shown blood lead levels  $\geq 10\mu\text{g/dL}$  are linked to negative outcomes of intellectual function and behavior. The CDC and World Health Organization (WHO) have declared that blood lead levels at  $\geq 10 \mu\text{g/dL}$  are levels of concern, acknowledging that there is not enough research showing potential defects in levels lower than  $10\mu\text{g/dL}$  (Canfield et. al., 2003). The best way of preventing lead toxicity in children, therefore, is identification and elimination of the major sources. Research shows that for every \$1 invested to reduce lead hazards in housing units, society would benefit by an estimated \$221 to \$417. This cost benefit is comparable with the cost-benefit ratio for childhood vaccines (Lanphear, 2016).
- C. In the United States prior to the implementation of the Lead and Copper Rule, the Environmental Protection Agency estimated that 10-20% of general population lead exposure was came from drinking water. In children, particularly infants, the exposure may have been higher if they consumed formula that was mixed with tap water. Lead in water is typically not found at treatment end but lay with the infrastructure of old water pipe systems and plumbing materials (Brown, Raymond, Homa, Kennedy, & Sinks, 2011). Many homes that were built prior to the 1980s contain lead service lines or copper lines that were sealed with lead. In a study that was conducted in the District of Columbia from 2000 to 2004, chloramine without orthophosphate was used to disinfect the service lines (Brown, Raymond, Homa, Kennedy, & Sinks, 2011). During that time, it found that blood lead level that were  $\geq 5\mu\text{g/dL}$  had increased in individuals whose homes still had the lead service lines. A second study found that 859 children who reside within the District of Columbia have blood lead levels  $\geq 10\mu\text{g/dL}$  in 2002 and 2003 due to the lead leaching exposure (Brown et. al., 2011).

Another study of children in the District of Columbia (M.J. Brown et. al., 1998-2006) found that children under the age of six that were living in homes where the lead service line was only partially replaced (line from meter to home that the homeowner is responsible for was not replaced) after 2003 had blood lead levels of 5-9 or  $\geq 10\mu\text{g/dL}$  compared to children who were homes with no lead service line. The risk of having elevated blood lead level in children home resided in home with partial compared to intact did not differ (Brown et. al., 2011).

M.J. Brown et. al. additionally, saw an increased likelihood of elevated blood lead levels in children during the time when the DC Water and Sewer Authority (WASA) complied with the EPA 15 ppb action level. The correlation was even stronger amongst young children when chloramine was used as a disinfectant (Brown et. al., 2011).

## II. Policy Focus Issues

### **Water as a Basic Human Right**

- A. Local and State Government Action: Water must be viewed as a basic right to life, means of subsistence, and the right to sanitary drinking water, free of dangerous and life-

threatening contaminants such as lead.

*The Constitution of the World Health Organization (WHO) in 1946 declared the "enjoyment of the highest attainable standard of health" to be a "fundamental right" recognized by the international community.<sup>10</sup> In this respect, one common definition of health is a "state of complete physical, mental and social well-being and not merely the absence of disease or infirmity".<sup>11</sup> It has been argued, that applying these standards, the right not to suffer from cancer, liver damage, disorders of the nervous system, or birth defects as a result of drinking contaminated water, is a fundamental right.<sup>12</sup>*

Source: <http://center-hre.org/wp-content/uploads/2011/05/the-right-to-water-as-a-human-right.pdf>

- Governments must view water as a basic human right and make safe drinking water available to all members of the community, most especially those who are marginalized
- Equitable access to safe drinking water, pollution and quality control, infrastructure and investment, and wastewater treatment
- Economic Barriers
  - Access to adequate water and sanitation for basic human needs is based on the ability to pay for these services
  - The lack of aid programs for low-income, homeless and indigenous communities excludes these populations from access to clean and safe drinking water
  - Infrastructure deficits disproportionately impact groups who have historically suffered discrimination.
- Water Rights
  - Viewing water as a right should be the basis of any lead policy implementation. The United States does not recognize a “right to water” under international law, however it does acknowledge “water rights” in various contexts as a matter of its domestic law (<http://www2.ohchr.org/english/issues/water/contributions/UnitedStatesofAmerica.pdf>)

## **Lead Service Line Replacement**

### **A. Physical Structures**

- Lead pipes should be automatically replaced when lines are being serviced
- No acceptable concentration of lead allowed in public drinking and tap

### **B. Utility Company Stakeholder Responsibility**

- Water utilities should communicate lead exposure risks proactively: (1)

when lead service lines are repaired or replaced (2) Routine maintenance work which may disturb lead service lines

- Restricting the amount of pipe corrosion occurring.
- Establish a collaborative of stakeholders to include state/local/tribal/public health, water utility, environmental entities, labor, consumers, housing and governmental organizations
  - To encourage community partner and industry to invest in full lead service line replacement programs
  - Address potential barriers
    - Equity regardless of income, race, or ethnicity

## **Water Infrastructure**

### **A. Funding**

- Establishing Federal, State, and Local governments funding for water infrastructure improvements
- Expand Partnership to include, water utility stakeholders and private businesses

### **B. Water Infrastructure Outreach**

- Bring in local community leaders to disseminate information and provide policy improvement participation
- Appropriate programs that target at risk communities
- Outreach for refugees/immigrants
- Conduct advocacy training with residents
- Facilitate stakeholder referrals to lead screening
- Presentations at local schools

### **C. Funding Policy for Water Treatment and Remediation of lead in system**

- Lead Monitoring and Guidance for Public Water Systems
- Subsidies for low-income residential partial line replacement
- Large/ High Income business investments
  - Have major industry and companies in the area contribute to water infrastructure
    - Tax-exempt donations could encourage large corporations to contribute to lead and copper pipe remediation funds.
- Technology innovation investment in harmful toxins testing



- The United States revolving funds can assist in financing the construction and upgrade of wastewater treatment facilities, sewer systems, and other water infrastructure. These programs include the Drinking Water State Revolving Fund (DWSRF, established by the 1996 SDWA Amendments) and Clean Water State Revolving Fund (CWSRF, established under the Clean Water Act of 1987).  
(<http://www2.ohchr.org/english/issues/water/contributions/UnitedStatesofAmerica.pdf>)

**Lead and Housing**

- A. Lead Outreach: Informing the public on the dangers of lead exposure is vital in reducing the number of childhood lead poisoning cases and Title X mandates federal agencies to conduct public education efforts. Federal resources that currently exist are the bilingual Lead Hotline (1-800-424-LEAD); the National Lead Information Clearinghouse; and the FY 2000 EPA grant program for education and outreach in tribal regions.
- B. Lead paint Removal Remediation: To motivate landlords to comply with lead-based paint remediation and increased the number of homes and rental property that are inspected, states can incorporate an easily-understood certification process that shows units that are lead-safe and conversely, which are not. Rhode Island, Milwaukee, and a few other jurisdictions already provide such certificates (see Figure below for the certificate used in Milwaukee): source  
<https://www.cdc.gov/nceh/lead/about/fedstrategy2000.pdf>



- A lead housing certification approach may promote competition in markets where landlords have a limited pool of potential tenants, possibly increasing property value and marketability.
- In some regions, competitive housing market forces may not be enough to encourage substantial private funding of lead hazard controls, because landlords and low and middle-income homeowners are unlikely to be able to take on additional debt. In these circumstances, subsidies and/or tax incentives may need to be considered.
- All pre-1978 facilities where children under 6 lives, visit or attend regularly that are not owner occupied must use a certified lead safe renovator. In home child care providers are the exception to the owner occupied, they must also use a lead safe renovator.

C. Landlord lead paint removal: HUD's Lead-Based Paint regulations (commonly referred to as the Lead Safe Housing Rule (LSHR)) was implemented to reduce lead exposure in federally-owned and federally-assisted. The regulation located in title 24 of the Code of Federal Regulations (CFR) part 35, subparts B through R. The LSHR implements the Residential Lead-Based Paint Hazard Reduction Act of 1992, which is Title X of the Housing and Community Development Act of 1992 (Pub. L. 102-550, approved October 28, 1992), specifically, the LSHR implements sections 1012 and 1013 of Title X (42 U.S.C. 4822). LSHR warrants that federally-owned or federally-assisted housing that may have lead-based paint constructed prior to 1978 does not have lead-based paint hazards.

Source: <https://www.federalregister.gov/documents/2016/09/01/2016-20955/requirements-for-notification-evaluation-and-reduction-of-lead-based-paint-hazards-in-federally>

D. All property not owner occupied must use a certified lead safe renovator

E. Lead abatement program involving training and certification for lead-based activities

- Lead; Requirements for Lead-Based Paint Activities in Target Housing and Child-Occupied Facilities
- Lead; Requirements for Lead-Based Paint Activities in Target Housing and Child-Occupied Facilities; Final Rule (August 29, 1996) (PDF) (54 pp, 353K, About PDF)
  - This regulation ensures that individuals conducting lead-based

paint abatement, risk assessment, or inspection are properly trained and certified, that training programs are accredited, and that these activities are conducted according to reliable, effective and safe work practice standards

## Childcare Centers and Schools

A. Policy: Targeting early education programs such as Head Start, which educates nearly 800,000 low-income children 3-5 years of age across the country can be a potential opportunity to lower rates of lead poisoning in children. This tactic will target children who may have not had access to screening during year 1 and 2. The Administration for Children and Families (ACF) works with grantees to incorporate Head Start Performance Standards involving lead screening. Source: <https://www.cdc.gov/nceh/lead/about/fedstrategy2000.pdf>, page 18

- For Kindergarten all children must show evidence of at least one lead test prior to age 2 with a secondary screening conducted as entrance requirements for public school.
- Schools and child care facilities that have their own water supply and are considered non-transient, non-community water systems (NTNCWSs) are subject to the Lead and Copper Rule (LCR) requirements.
- Lead levels found can trigger requirements that include water quality parameter (WQP) monitoring, corrosion control treatment (CCT), source water monitoring/treatment, public education, and lead service line replacement.
- If you or your employees conduct renovation, repair, or painting activities in a pre-1978 child-occupied facility then you must become a Lead-Safe Certified firm and your employees who conduct renovation, repair, or painting activities must become trained and certified renovators.
- Department of Natural Resources has drinking water standards- municipalities, child care providers not on municipal water are required to test
- *In June 1991, the Report of the House Committee on Appropriations, which accompanied H.R. 2521 to the 1992 Department of Defense (DOD) Appropriations Bill, tasked DOD to organize a Lead Paint Task Force, to coordinate activities with other federal agencies, and to follow guidance established by CDC regarding lead paint activities and childhood lead poisoning prevention. Since that time, policies and guidance for lead hazard management and childhood lead poisoning prevention programs for military personnel have been coordinated by DOD, as well as within the individual services, on an ongoing basis. DOD has administered childhood blood lead screening programs since 1992. As required by DOD policy, military installations have proactive lead hazard management programs that include health risk assessments of facilities, health screening of children and workers, and lead hazard controls. The blood lead screening results, one measure of the effectiveness of these*

*programs, indicate that these programs are working. According to DOD Office of Health Affairs data from 1992 to the present, blood lead levels above 10 µg/dL of military dependents are consistently below 2%, well under the general population (4.4%). Source:*

<https://www.cdc.gov/nceh/lead/about/fedstrategy2000.pdf>, Page 19

## **Environmental Assessment**

- A. Access to educational materials on lead exposure to homeowners/occupants/schools who request it. Establish a local/state campaign to educate parents, landlords, renovation workers, housing inspectors, and public/environmental health professionals about lead poisoning and areas within the jurisdiction that sees the heaviest concentrations.
- Public/Environmental Health Outreach Programs that focus on hazard control activities should target at-risk families, especially those with pregnant women, young infants/children who live in homes with lead hazards.
  - Public/Environmental Health should link to current lead-safe housing programs and resources for hazard control. Source: <https://www.cdc.gov/nceh/lead/about/fedstrategy2000.pdf>
  - Families who are in the Women and Infant Care (WIC) and Healthy Start programs should be identified and receive education on lead poisoning prevention, be offered lead hazard assessments of their homes, and be assisted in obtaining appropriate services (such as HUD lead hazard control grants) to remediate identified lead hazards.
- B. All property that will house or school children shall be inspected for lead upon occupancy to attain certification of residential/rental occupancy. Monitor the completion of lead hazard reduction measures to verify the child's exposure has been stopped.
- Investigate the home to identify possible sources of lead prior to occupancy of new homeowner/rental occupant. Include both the interior and exterior environment, being attentive to painted surfaces and dust.
  - Educate the homeowner/landlord/property manager about identified and/or potential sources of lead and ways to reduce exposure.
  - Provide owner/landlord/property manager completed Health Department Property Investigation Report and maintain a copy on file for environmental health property file, if appropriate.
- C. Complaint Protocol
- *EPA's Human Exposure Database System (HEDS) is a web-enabled*

*data repository for human exposure studies, including several studies examining children's exposures to pollutants. The database provides data sets, documents, and metadata for human exposure studies that can be easily accessed and understood by a diverse set of users.*

<https://www.epa.gov/healthresearch/understanding-exposures-childrens-environments>

- Complaints involving an alleged lead health hazard will be responded to within 24 hours of receipt of the complaint, or as soon as possible.
- An investigation shall be completed to verify the alleged complaint. Lead samples and/or photographs may be taken to document the health hazard. The owner of the premises, if not the occupant, will be contacted as soon as possible after the investigation.
- All appropriate documentation shall be completed during and following the complaint investigation.
- Enforcement may include environmental orders directing the property owner to eliminate lead hazards identified during the investigation. Orders may include interim and/or abatement control activities.
- Any observed conditions, other than lead, that appear to violate federal, state or local regulations will be referred to the appropriate agency.

#### D. Training and Certification

- All personnel involved with lead hazard investigations and/or risk assessments shall be a certified lead risk assessor/investigator. If agency does not have a certified investigator, they will contact the regional office.

## References

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- International Human Rights Clinic, Berkeley Law, “United States Government Consultation on Environmental Issues Relating to the Universal Periodic Review: A Summary. October 7, 2014, UC Berkeley School of Law,” p. 8, available at [https://www.law.berkeley.edu/files/UPR\\_Enviro\\_Consultation\\_Outcome\\_Doc\\_141208.pdf](https://www.law.berkeley.edu/files/UPR_Enviro_Consultation_Outcome_Doc_141208.pdf). For example, studies show that “African Americans in the United States were more than twice as likely and Hispanics were more than three times as likely as non-Hispanic whites to live in homes with incomplete plumbing.” National Law Center on Homelessness and Poverty, “Simply Unacceptable”: Homelessness and the Human Right to Housing in the United States in 2011 (2011), pp. 48-49, available at [http://www.nlchp.org/documents/Simply\\_Unacceptable](http://www.nlchp.org/documents/Simply_Unacceptable).
- Lanphear, B.P. (2016). Boost Efforts to Reduce Lead Poisoning Before Children Are Exposed: AAP Policy. AAP News. Retrieved from: <http://www.aapublications.org/news/2016/06/20/Lead062016>
- Renovation, Repair and Painting Program: Operators Of Childcare Facilities <https://www.epa.gov/lead/renovation-repair-and-painting-program-operators-childcare-facilities>
- Renovation, Repair and Painting Program: Contractors <https://www.epa.gov/lead/renovation-repair-and-painting-program-contractors>
- Requirements for Notification, Evaluation and Reduction of Lead-Based Paint Hazards in Federally Owned Residential Property and Housing Receiving Federal Assistance; Response to Elevated Blood Lead Levels. (2016, September 01). Retrieved from <https://www.federalregister.gov/documents/2016/09/01/2016-20955/requirements-for-notification-evaluation-and-reduction-of-lead-based-paint-hazards-in-federally>
- UNITED STATES OF AMERICA Stakeholder Submission to the United Nations Universal Periodic Review: Human Rights Council - Rights of Non-citizens Human Rights Documents online: <http://center-hre.org/wp-content/uploads/2011/05/the-right-to-water-as-a-human-right.pdf>

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