

**LEAD HAZARD CONTROL AND HEALTHY HOMES
LEAD HAZARD REDUCTION
2017 Summary Statement and Initiatives
(Dollars in Thousands)**

LEAD-BASED PAINT HAZARD REDUCTION PROGRAM	<u>Enacted/ Request</u>	<u>Carryover</u>	<u>Supplemental/ Rescission</u>	<u>Total Resources</u>	<u>Obligations</u>	<u>Outlays</u>
2015 Appropriation	\$110,000	\$1,947	...	\$111,947	\$108,284	\$111,951
2016 Appropriation	110,000	3,140	...	113,140	104,000	120,277
2017 Request	<u>110,000^a</u>	<u>9,000</u>	<u>...</u>	<u>119,000</u>	<u>110,000</u>	<u>84,272</u>
Program Improvements/offsets .....	...	+5,860	...	+5,860	+6,000	-36,005

a/ This number includes an estimated transfer of \$550 thousand to the Research and Technology account.

1. What is this request?

To help fulfill the mission of its Office of Lead Hazard Control and Healthy Homes to provide safe and healthy homes for at-risk families and children, the Department requests \$110 million for the Office's programs in fiscal year 2017, the same as the 2016 enacted level. This request will allow the Department to fund:

- Lead Hazard Control Program: \$83 million
- Healthy Homes Program: \$25 million
- Lead Technical Studies and Programmatic Support: \$2 million

Key outcomes of this program include:

- At least \$1.6 billion (and as much as \$20.5 billion) in reduced healthcare costs and increased income of children not lead-poisoned as a result of making 8,800 low-income privately-owned housing units lead safe;
- At least \$110 million (and as much as \$ 330 million) in reduced healthcare costs as a result of eliminating asthma-inducing and other health and injury exposures in 13,000 low-income privately owned housing units;
- New and enhanced methods for assessing and controlling lead and other housing-related health and safety hazards will be developed;
- More than 5,500 children under 6 will live in homes where lead hazards will be addressed using fiscal year 2017 funds;

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- More than 2,600 children under 18 will live in homes where asthma hazards will be addressed using fiscal year 2017 funds; and
- More than 5,500 people will live in homes where injury hazards will be addressed using fiscal year 2017 funds.

HUD is proposing two General Provisions in the 2017 budget, requesting:

- Subpoena authority for enforcement of the Lead Disclosure Statute (42 U.S.C. 4852d); and
- An increased threshold for lead abatement under the Lead Safe Housing statute (42 U.S.C. 4822(a)(1)) to reflect inflation since the enactment of that statute.

A full explanation of these proposals is in Section 5 "Proposals in the Budget." HUD will also submit a legislative proposal to update Healthy Homes program standards and definitions (within §§ 4851b and 4852).

2. What is this program?

The mission of the Office of Lead Hazard Control and Healthy Homes (OLHCHH) is to provide safe and healthy homes for at-risk families and children by promoting and funding housing repairs to address conditions that threaten the health of residents. As part of this mission, the OLHCHH is involved in coordinating disparate health and housing agendas, supporting key research, targeting enforcement efforts, and providing tools to build sustainable local programs that mitigate housing-related health hazards. The OLHCHH assists states and local governments in remedying unsafe housing conditions and addressing the acute shortage of decent and safe dwellings for low-income families.

OLHCHH Budget (in thousands)

	2015 Enacted	2016 Enacted	2017 Request
Lead Hazard Control	\$93,000	\$88,000	\$83,000
Healthy Homes	15,000	20,000	25,000
Technical Studies and Programmatic Support	2,000	2,000	2,000

Lead Hazard Control

Lead paint in housing presents one of the largest threats to the health, safety, and future productivity of America's children. The OLHCHH's Lead Hazard Control programs currently include both the Lead Based Paint Hazard Control (LBPHC) and Lead Hazard Reduction Demonstration (LHRD) grant programs. Although they are similar in their overall goal of producing lead-safe homes for

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low-income residents, the LHRD grant program is focused, in accordance with the annual HUD Appropriations Acts, on jurisdictions with higher numbers of pre-1940 rental housing and higher rates of childhood lead poisoning cases. Funding assists states, Native American Tribes, cities, counties/parishes, or other units of local government to identify and eliminate lead-based paint hazards in low- and very low-income private housing where children under 6 years of age reside or are likely to reside. These programs are authorized under Section 1011 of the Residential Lead-Based Paint Hazard Reduction Act of 1992 (Title X of the Housing and Community Development Act of 1992; Public Law 102-550; 42 U.S.C. 4852).

Healthy Homes

The Healthy Homes program goes beyond just addressing lead-based paint hazards and covers other serious threats to residents' health and safety. Grantees can use Lead Hazard Control funds to remove the lead paint in a residence, but these grants cannot clean up mold, install smoke detectors, or fix other obviously unsafe or unhealthy conditions present in those same houses. Healthy Homes funding supplements Lead Hazard Control grants to give communities a more holistic approach to creating safe homes. The OLHCHH's Healthy Homes program currently includes:

- Healthy Homes Supplemental funding for Lead Hazard Control Grants, which allows Lead Hazard Control grantees to conduct housing interventions to address multiple health hazards in addition to lead, including hazards that contribute to, trigger, or cause asthma, cancer, and unintentional injuries;
- Healthy Homes Technical Studies (research) grant programs, which provides funding for academic institutions, non-profit organizations, and governments to assess the efficacy and cost-effectiveness of methods for the evaluation and control of housing-related health and safety hazards; and
- Healthy homes contracts for training and public education programs that help state, local, and nongovernmental agencies, housing industry stakeholders, and the public to understand the health-and-housing relationship and identify and address housing-related health and safety hazards.

For fiscal year 2017, the OLHCHH will also award a Healthy Homes Production grant program, in which homes beyond those completed under the Lead Hazard Control grants will be treated for housing-related health and safety hazards. Healthy Homes funds fill a critical need by assisting cities, states, other units of local government, and not-for-profit organizations to make repairs that reduce or eliminate significant housing-related health and safety hazards. Unlike the lead hazard control programs, the Healthy Homes programs goes beyond just addressing lead-based paint hazards and covers other serious threats to residents' health and safety. Unlike housing rehabilitation programs, which focus on renovations without health and safety as a primary concern, the lead hazard control and healthy homes programs focus intentionally on making homes safer for children and families to live in using established assessment methods that are addressed with cost-effective interventions. As such, no other federal grant program directly and specifically identifies and addresses health and safety hazards in low-income privately owned homes.

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Technical Studies and Programmatic Support

For fiscal year 2017, the Department requests \$2 million for Lead Technical Studies and Programmatic Support. The requested funding will continue the significant progress we have made to further our understanding of housing conditions and their connections to resident health. This includes identifying effective interventions and preventive practices, and demonstrating health benefits of targeting interventions to reduce or eliminate health and safety hazards in homes. The OHHLHC's lead technical studies and programmatic support activities advance and support OLHCHH programs. These activities include contracts, grants and cooperative agreements, technical support and training, grant management and evaluation tools, and interagency collaborative projects.

The Department is constantly working to enhance the way that it controls lead and deals with household hazards. Through collaborating with HUD's Real Estate Assessment Center, we are working to standardize health and safety inspection protocols across HUD's programs. Also, through our new grants management software, we are gaining a better understanding of the hazards that grantees are identifying and the interventions that they are using. Over time, we will introduce new and enhanced methods based on an analysis of the grantees' data and outputs.

In order to determine if the process for enrolling families to have their homes treated under its lead hazard control grants can be streamlined; HUD is conducting a 3-year demonstration of processes for using low-income eligibility determinations made by other federal programs for determining eligibility for its lead hazard control grants. If successful, this approach collect a minimum amount of information from the family and rely on the other program's determination to avoid the time- and effort-consuming full duplicate eligibility determinations for the large fraction of families that have already been determined eligible for such low-income programs as HOME; the special supplemental nutrition program for women, infants and children; reduced or free price lunch programs; low-income home energy assistance program; weatherization assistance program; etc. If successful, the demonstration would yield cost and time savings, and would not expand the scope of eligibility, because the determinations for the lead hazard control grant programs would continue to be for programs with thresholds at or below 50 or 80 percent, as applicable, of the area median income as per the authority for the lead hazard control grant programs (42 U.S.C. 4852(a)(1)-(2)).

3. Why is this program necessary and what will we get for the funds?

The program identifies and addresses home-based health and safety hazards that contribute to a wide range of illnesses and injuries, including lead poisoning, asthma, home injuries, and lung cancer.

Researchers have found that more children than previously thought have too much lead in their blood. The CDC redefined the level at which children are considered to have too much lead in their blood in January 2012, from a "level of concern" (a blood lead level

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of 10 micrograms of lead per deciliter of blood ($\mu\text{g}/\text{dL}$) in a child under age 6) to a new “blood lead reference range value” based on the distribution of blood lead levels among U.S. children under age 6. This change in the threshold increased the number of children considered to have too much lead in their bodies from less than 100,000 to about 535,000. Because this program targets children with too much lead in their blood, 435,000 more children than previously thought are in the most urgent need of its services. Twenty three million U.S. homes have one or more lead based paint hazard, 1.1 million of which are low-income households with one or more children under age 6.¹ Because residential lead-based paint hazards are the primary source of lead intake for United States children,² continued investment and effort is needed to reduce lead hazards in older homes. This funding will be used to protect children against lead exposure by targeting the highest risk properties for priority action, to ensure that lead-safe practices are followed during renovation, repair and painting of pre-1978 homes, and to eliminate lead-based paint hazards in as many pre-1978 homes as feasible. This program has contributed to the significant decrease in childhood lead poisoning from the early 1990s to today.³

HUD has aligned its lead hazard control and research activities with the Department of Health and Human Services’ (HHS’) Healthy People 2020 Environmental Health objective 8.2, to, “Reduce the mean blood lead levels in children” aged 1 to 5 years from HHS’ baseline of 1.5 $\mu\text{g}/\text{dL}$ over the 2005–08 period, to HHS’ target for 2020 of 1.4 $\mu\text{g}/\text{dL}$.⁴ To maintain progress made and reduce remaining disparities, efforts must continue to test children at high risk for lead poisoning, and identify and control sources of lead. Coordinated prevention strategies at national, state, and local levels will help achieve the goal of eliminating lead poisoning in children. The OLHCHH’s lead hazard control grants and lead regulatory enforcement efforts will reduce the exposure by young children – particularly those most at risk – to lead-contaminated paint chips, dust, and soil. This will, therefore, reduce the blood lead level in these children, and, over time, contribute to moving the national distribution of children’s blood lead values downward. Unhealthy and unsafe housing conditions continue to affect the health of millions of people from all income levels and geographic areas in the United States; however, these hazards disproportionately affect children, the poor, minorities, people with medical conditions, people with disabilities, and older adults. In addition to lead hazards, discussed above, the following housing-related health hazards are of particular importance:

¹ Dewalt, G, Cox, D, O’Haver, R, et al. Prevalence of Lead Hazards and Soil Arsenic in U.S. Housing. *Journal of Environmental Health*. Vol. 78, no. 5, pp. 22-29, December 2015, <http://www.neha.org/node/6429>.

² Lanphear BP, Dietrich KN, Berger O. Prevention of lead toxicity in US children. *Ambul Pediatr*. 2003 Jan-Feb;3(1):27-36. <http://www.ncbi.nlm.nih.gov/pubmed/12540251>.

³ Centers for Disease Control and Prevention. Low Level Lead Exposure Harms Children: A Renewed Call for Primary Prevention. 2012. http://www.cdc.gov/nceh/lead/acclpp/final_document_030712.pdf.

⁴ <http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicId=12>.

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- According to the most recent data available, more than 6.8 million housing units have radon levels above the current EPA action level; radon exposure causes approximately 21,000 deaths per year from lung cancer attributable to this preventable hazard.⁵
- Approximately 24 million homes have elevated levels of 4 or more different types of allergens that have been associated with increased negative health outcomes among residents with asthma.⁶
- Falls are the leading cause of non-fatal injuries for all children ages 0 to 19 and for older adults (65 years of age or older).⁷ Each year, approximately 2.8 million children and 2.4 million older adults have an initial emergency department visit for injuries from a fall.⁸ Research suggests that the total direct and indirect costs for unintentional injuries (e.g., falls, poisonings, fires) in the home have averaged over \$200 billion annually, with falls alone responsible for almost half of those costs.⁹

HUD grantees will use their Healthy Homes grants and supplemental funding to perform simple radon tests, remediate mold, install allergen filtering, and provide basic safety upgrades, such as installing grab bars and hand rails, repairing tripping hazards, fixing stairs, and installing safety bars or child locks on windows, among other actions.

As noted above, the Healthy Homes Supplemental funding proposed for fiscal year 2017 will allow Lead Hazard Control grantees to conduct housing interventions to address multiple health hazards in addition to lead. Of the over 6,500 units made lead-safe by our Lead Hazard Control grantees in fiscal year 2015, grantees identified and addressed hazards that may cause or contribute to asthma and allergies in over 1,500 homes (24 percent of homes made lead-safe) and hazards that may cause or contribute to unintentional injuries in over 1,500 homes (23 percent). Grantees also addressed hazards that may cause or contribute to a wide range of other illnesses and injuries, including cancer. The most common healthy homes hazards addressed in addition to lead were dampness and mold (16 percent of homes made lead-safe), carbon monoxide (13 percent), fire hazards (11 percent), electrical hazards (9 percent),

⁵ U.S. Environmental Protection Agency. 2003. EPA Assessment of Risks from Radon in Homes. <http://www.epa.gov/sites/production/files/2015-05/documents/402-r-03-003.pdf>.

⁶ The number of homes was calculated by multiplying 18% (Salo PM, Arbes, Crockett PW, Thorne PS, Cohn RD, Zeldin DC. 2008. Exposure to multiple indoor allergens in US homes. *J Allergy Clin Immunol*. 2008 Mar; 121(3): 678–684.e2. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2376121/>) by 133 million (U.S. Department of Housing and Urban Development and U.S. Census Bureau. (HUD and Census). 2013. American Housing Survey <http://www.census.gov/programs-surveys/ahs/data/2013/national-summary-report-and-tables---ahs-2013.html>).

⁷ Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. Accessed August 15, 2013. <http://www.cdc.gov/injury/wisqars/>.

⁸ Centers for Disease Control and Prevention. 2008. CDC Childhood Injury Report: Patterns of Unintentional Injuries among 0-19 Year Olds in the United States, 2000-2006. <http://www.cdc.gov/safekid/images/CDC-ChildhoodInjury.pdf>; Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS) [online]. Accessed August 15, 2013. <http://www.cdc.gov/injury/wisqars/>.

⁹ Zaloshnja E, Miller TR, Lawrence BA, Romano E. 2005. The costs of unintentional home injuries. *Am J Prev Med* 28(1):88-94. <http://www.ncbi.nlm.nih.gov/pubmed/15626562>.

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fall hazards on stairs (9 percent), excess cold (insufficient insulation/energy efficiency) (8 percent), pests (7 percent). OLHCHH expects to see similar results from its fiscal year 2017 grantees.

The Cost Burden of Unhealthy Housing

Researchers estimate that the health effects of poor housing conditions could cost billions of dollars annually in healthcare for asthma, lead-based paint poisoning and injury, as well as lost productivity in the labor force.¹⁰ The Lead Hazard Reduction and Healthy Homes programs are investments that pay off. Research has proven time and again that providing safe, decent and sanitary homes for the most at-risk American families more than pays for itself in lower health care costs and increased productivity.

- A 2011 study of the total annual costs of pediatric disease in American children estimated that the total cost of lead poisoning in 2008 was \$5.9 million in medical care costs and \$50.9 billion in lost economic productivity.¹¹
- In addition to the physical toll an at-risk home can have on its inhabitants (e.g., unnecessary emergency room visits annually due to housing-related injuries and illness), some research suggests that the cumulative financial burden of unhealthy homes for the nation is considerable. For example, one study estimates the total (direct and indirect) cost for unintentional injuries in the home at over \$200 billion annually, with \$90 billion of that due to falls alone.¹² Researchers found that nearly 30 percent of residential injuries among children in a randomized controlled trial could have been prevented by interventions.¹³ If the same proportion of preventable injuries were found for adults, the annual cost of preventable injuries in the home would be about \$60 billion.
- One study finds that the costs for asthma due to one root cause in the home – dampness and mold – could be \$3.5 billion annually.¹⁴ Other modifiable childhood asthma risk factors within the home (e.g., pet dander, cockroach allergen, use of stove or oven for home heating) were estimated to cost nearly \$1 billion.¹⁵

¹⁰ Landrigan PJ, Schechter CB, Lipton JM, Fahs MC, Schwartz J. Environmental pollutants and disease in American children: estimates of morbidity, mortality, and costs for lead poisoning, asthma, cancer, and developmental disabilities. *Environ Health Perspect.* 2002 Jul;110(7):721-8.

<http://www.ncbi.nlm.nih.gov/pubmed/12117650>.

¹¹ Trasande L, Lui Y. 2011. Reducing The Staggering Costs of Environmental Disease in Children, Estimated at \$76.6 Billion In 2008. *Health Affairs.* 30 (5):863-870.

¹² Zaloshnja E, Miller TR, Lawrence BA, Romano E. 2005. The costs of unintentional home injuries. *Am J Prev Med* 28(1):88-94.

<http://www.ncbi.nlm.nih.gov/pubmed/15626562>.

¹³ Phelan KJ, Khoury J, Xu Y, Liddy S, Hornung R, Lanphear BP. A randomized controlled trial of home injury hazard reduction: the HOME injury study. *Arch Pediatr Adolesc Med.* 2011 Apr;165(4):339-45. <http://www.ncbi.nlm.nih.gov/pubmed/21464382>.

¹⁴ Mudarri D, Fisk WJ. 2007. Public health and economic impact of dampness and mold. *Indoor Air.* 17(3):226-35.

<http://onlinelibrary.wiley.com/doi/10.1111/j.1600-0668.2007.00474.x/full>.

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The high health-related costs of unsafe housing are matched by significant and enduring social costs. Researchers have found a clear relationship between elevated blood lead among children and their cognitive and behavioral impairment. “Even low levels of exposure appear to lower children’s IQ, which increases the need for enrollment in special education services, reduces the likelihood of high school and college graduation, lowers lifetime earnings (both through educational and IQ pathways), and greatly increases their propensity to engage in violent criminal activity.”¹⁶

4. How do we know this program works?

The work of the grantees funded through HUD’s Lead Hazard Reduction program has led to real results. The prevalence of elevated blood lead levels in children under age 6 that are at least 10 micrograms per deciliter (≥ 10 mg/dl) decreased from 8.6 percent in 1988-1991 to 0.75 percent in 2003-2010, a 91 percent decline, according to the on-going National Health and Nutrition Examination Survey (NHANES) conducted by the CDC.¹⁷ HUD’s lead hazard control grants have contributed to this decline in the more than 180,000 housing units treated under the program.

HUD’s Healthy Homes grants fund interventions that ensure positive, healthy outcomes for vulnerable populations, especially children:

- A randomized controlled trial in Cleveland, OH (Cuyahoga County and Case Western Reserve University) funded by HUD’s Healthy Homes Technical Studies program demonstrated significant improvement in asthma symptoms (including reduced acute care usage) among children following remediation focusing on mold and moisture problems in their homes. During the 12 months of follow-up, the control (non-intervention) group saw an almost 20 percent higher rate of emergency department visits or hospital in-patient visits than the intervention group. The difference between the two groups was 30 percent from 6 months post-randomization to the end of follow-up.¹⁸
- In Seattle, WA, a HUD Healthy Homes grant to nonprofit “Neighborhood House” and partners was used to upgrade 35 green-built public housing units (built through HUD’s HOPE VI Program) to “Breathe Easy Homes” with special features to improve

¹⁵ Lanphear BP, Aligne CA, Auinger P, Weitzman M, Byrd RS. Residential exposures associated with asthma in US children. *Pediatrics*. 2001 Mar;107(3):505-11. <http://www.ncbi.nlm.nih.gov/pubmed/11230590>.

¹⁶ Gould E. Childhood Lead Poisoning: Conservative Estimates of the Social and Economic Benefits of Lead Hazard Control. *Environ Health Perspect*. 2009 Jul; 117(7): 1162–1167. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2717145/>

¹⁷ www.cdc.gov/nchs/nhanes.htm; www.cdc.gov/mmwr/preview/mmwrhtml/00048339.htm; www.cdc.gov/mmwr/preview/mmwrhtml/mm6213a3.htm?s_cid=mm6213a3_e.

¹⁸ Kercsmar, CM, Dearborn, DG, Schlucter M, Xue, XL, Kirchner HL, Sobelewski, J, Greenberg, SJ, Vesper SJ, Allen, T 2006 Reduction in asthma morbidity in children as a result of home remediation aimed at moisture sources *Environ Health Perspect* 114: 1574-1580.

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indoor air quality and reduce indoor asthma triggers.¹⁹ Children with asthma, who were moved into these homes, experienced a mean of 12.4 asthma symptom-free days per 2 week period after 1 year, compared with 8.6 asthma symptom-free days in the control group. Urgent asthma-related clinical visits in the previous 3 months decreased from 62 percent to 21 percent and the caretakers' quality of life increased significantly. The study reported significant reductions in exposures to mold, rodents, and moisture in the Breathe Easy Homes.

- The NY State Healthy Neighborhoods Program that provided healthy homes services to over 36,000 residents in 13,120 dwellings in 12 counties across the state. A program evaluation found that, among the 22 percent of homes randomly reassessed at a follow-up visit, the analysis indicates significant improvements in tobacco control, fire safety, lead poisoning prevention, indoor air quality, and general environmental health and safety (e.g., pests, mold). For residents with asthma, there were significant improvements in the presence of environmental triggers, self-management, and short-term morbidity outcomes, including up to 3.5 fewer days with worsening asthma in a 3-month period.
- HUD-funded projects to the Boston Public Health Commission and the Harvard School of Public Health included Integrated Pest Management (IPM) interventions and related cleaning and educational efforts in private and public housing, as well as limited case management and community health support from trained advocates. In pre-post analyses, significant reductions in a 2-week recall respiratory symptom score were observed, dropping from 2.6 to 1.5 on an 8-point scale. Reductions in the frequency of wheeze/cough, slowing down or stopping play, and waking at night were also noted.²⁰

Costs and Benefits

The programs run by the HUD's Office of Lead Hazard Control and Healthy Homes offer high returns on investment. Study after study has proven that small investments ensuring that children grow up in healthy, lead-free homes provide a lifetime of benefits for both that child and society as a whole.

- Studies suggest that each dollar invested in interventions similar to those funded by HUD for:
 - Controlling lead paint hazards results in a return of \$17–\$221;²¹
 - Reducing household allergens, which contribute to or trigger asthma and allergies, results in a return of \$5.30–\$16.50;²² and

¹⁹ Takaro TK, Krieger J, Song L, Sharify D, Beaudet N. 2011. The breathe-easy home: The impact of asthma-friendly home construction on clinical outcomes and trigger exposure. *Am J Public Health*. 101:55-62.

²⁰ Levy JI, Brugge D, Peters JL, Clougherty JE, Saddler SS. 2006. A community-based participatory research study of multifaceted in-home environmental interventions for pediatric asthmatics in public housing. *Soc Sci Med*. 63(8):2191-203.

²¹ Gould E., Childhood Lead Poisoning: Conservative Estimates of the Social and Economic Benefits of Lead Hazard Control. *Environmental Health Perspectives*. 117(7):1162-7. <http://ehp.niehs.nih.gov/0800408/>

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- Installing battery-operated smoke alarms results in a return of \$18.²³
- Based on estimates of health benefits, as also noted above, the value of lead hazard control programs similar to those operated by HUD is conservatively estimated at \$30.6 billion based on the cost/benefit ratio of at least 17:1.²⁴
- A study of the costs of childhood asthma from man-made environmental sources, both indoors and outdoors, as estimated at \$7 billion in direct and indirect costs in 2008.²⁵ Outdoor sources are important to consider in the healthy homes context; poorly maintained and inadequately sealed homes will permit higher infiltration rates of outdoor air into the home. Exposure to dampness and mold in homes alone is projected by some researchers to contribute to approximately 21 percent of current asthma cases in the United States, at an annual cost of \$3.5 billion.²⁶ Another study suggests that for every \$1 spent on asthma reduction there is a \$5.30-\$16.50 return on investment.²⁷
- Minor to moderate remediation of housing hazards attributed to asthma, such as reducing interior moisture and improving indoor air quality, results in a substantial return for money invested. Following the guidelines in the National Asthma Education Prevention Program's (NAEPP) Expert Panel Report 3 (EPR3) concerning the need for environmental control measures for asthma, the Connecticut Department of Public Health conducted a study to explore the cost-effectiveness of housing interventions directed at mitigating conditions that exacerbated asthma. Net savings at 6 months follow-up were estimated at \$267 per participant due to decreases in unscheduled acute care visits for adults and children.²⁸
- Working smoke alarms cut the risk of dying in a home fire in half.²⁹ Our grant programs have identified and addressed fire hazards in 1,524 units over the past 3 years.

²² Nurmagambetov TA et al., 2011. Economic Value of Home-Based, Multi-Trigger, Multicomponent Interventions with an Environmental Focus for Reducing Asthma Morbidity: A Community Guide Systematic Review. *American Journal of Preventive Medicine*. 41(2S1):S33–S47. [www.ajpmonline.org/article/S0749-3797\(11\)00314-X/fulltext](http://www.ajpmonline.org/article/S0749-3797(11)00314-X/fulltext). (Also available at www.thecommunityguide.org/asthma/supportingmaterials/Asthma%20Econ.pdf.)

²³ Children's Safety Network/Pacific Institute for Research and Evaluation. Injury Prevention: What Works? A Summary of Cost-Outcome Analysis for Injury Prevention Programs (2012 Update). www.childrenssafetynetwork.org/sites/childrenssafetynetwork.org/files/InjuryPreventionWhatWorks2012.pdf

²⁴ Gould E., Childhood Lead Poisoning: Conservative Estimates of the Social and Economic Benefits of Lead Hazard Control. *Environmental Health Perspectives*. 117(7):1162-7. <http://ehp.niehs.nih.gov/0800408/>.

²⁵ Trasande L, Lui Y. 2011. Reducing The Staggering Costs of Environmental Disease in Children, Estimated at \$76.6 Billion In 2008. *Health Affairs*. 30 (5):863-870. <http://content.healthaffairs.org/content/30/5/863.full>

²⁶ Mudarri D, Fisk WJ. 2007. Public health and economic impact of dampness and mold. *Indoor Air*. 17(3):226-35. <http://onlinelibrary.wiley.com/doi/10.1111/j.1600-0668.2007.00474.x/full>.

²⁷ Nurmagambetov TA, Barnett SBL, Jacob V, Chattopadhyay SK, et al. 2011. Economic Value of Home-Based, Multi-Trigger, Multicomponent Interventions with an Environmental Focus for Reducing Asthma Morbidity. *American Journal of Preventive Medicine*. 41(2S1):S33–S47. www.ajpmonline.org/article/S0749-3797%2811%2900320-5/ppt.

²⁸ Nguyen KH, Boulay E, Peng J. 2010. Quality-of-Life and Cost–Benefit Analysis of a Home Environmental Assessment Program in Connecticut. *Journal of Asthma*. http://www.ct.gov/dph/lib/dph/hems/asthma/pdf/kims_final_published_airs_in_ct.pdf.

²⁹ Ahrens M. Smoke Alarms in US Home Fires. 2015. <http://www.nfpa.org/research/reports-and-statistics/fire-safety-equipment/smoke-alarms-in-us-home-fires>.

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- Approximately 21,000 radon-related lung cancer deaths annually are attributed to exposure to radon gas in the home, resulting in over \$2 billion per year.³⁰ Our grant program has tested for the presence of radon in 2,627 units over the past 3 years. Of these units tested, grantees found and remediated radon hazards in 181 units.

HUD Initiatives

HUD, through its Lead Hazard Control and Healthy Homes programs, continues to be a national leader in the effort to ensure that all children in America live in safe and healthy houses. HUD's goal, in conjunction with other federal, state, and local programs, is to eliminate lead poisoning in children nationwide as a major public health problem. It is working towards that goal in several different ways. Low-income residential units made lead-safe and healthy by HUD's grant programs are supplemented by units remediated by its regulatory enforcement actions, through our innovative public-private partnerships that promote cross-discipline housing and health interventions, and through collaborative efforts with other federal agencies.

HUD and its grantees are working on several initiatives to make its programs more effective.

- Some HUD grantees are working to combine Lead Hazard and Healthy Homes grant funds with weatherization grants from the Department of Energy so with one trip to a home can make it safe and efficient. In Cuyahoga County, OH (Cuyahoga County Board of Health) and Bellingham, WA (Opportunity Council) grantees partnered their Lead Hazard and Healthy with weatherization grants to provide an integrated approach to improve both energy efficiency and indoor environmental quality. These projects demonstrated the benefits of this integrated approach and the Department of Energy is now providing training and encouraging Weatherization Programs to adopt this "weatherization plus health" model.³¹
- As part of implementing the federal Hurricane Sandy Rebuilding Strategy, the OHLCHH convened and chaired the interagency Indoor Environmental Pollutants Working Group, which created resources for the public, workers, and employers on reducing, cleaning up or remediating asbestos, lead, mold, and radon after disasters.³² In addition to these resources, OHLCHH created a mobile application that helps homeowners and tenants learn about how to make homes safe and healthy after disasters.

³⁰ U.S. Environmental Protection Agency (EPA). 2003. EPA Assessment of Risks from Radon in Homes. <http://www.epa.gov/sites/production/files/2015-05/documents/402-r-03-003.pdf>; U.S. Environmental Protection Agency (EPA). 2013. Radon. www.epa.gov/radiation/radionuclides/radon.html; Oster, Colditz, & Kelley. 1984. National Cancer Institute statistics of 14,400 annual radon lung cancer deaths.

³¹ Finet, D. 2004. Restoring indoor health, one house at a time. Home Energy. Jan/Feb 2004. <http://homeenergy.org/index.php>; see also <http://www.nascsp.org/Healthy-Homes/776/Weatherization-Plus-Health.aspx?iHt=48>.

³² portal.hud.gov/hudportal/documents/huddoc?id=HSRebuildingStrategy.pdf.

Lead Hazard Reduction

- The OLHCHH is playing a leadership role in implementing the Coordinated Federal Action Plan to Reduce Asthma Disparities,³³ with a focus now on instituting and promoting policies and practices for housing interventions to control asthma triggers in both federally assisted and non-assisted low-income housing.
- The OLHCHH organized and managed the development of the overall federal healthy homes strategic plan, Advancing Healthy Housing – A Strategy for Action.³⁴ The Strategy for Action presents a vision for addressing the nation’s health and economic burdens caused by preventable hazards associated with the home, and outlines the pathway for federal agencies to take coordinated preemptive actions that will help reduce the number of American homes with health and safety hazards. The Strategy was developed by the federal Healthy Homes Work Group, chaired by HUD, and the Work Group is monitoring its implementation.
- The OLHCHH is currently working on a pilot that would harmonize the income eligibility criteria for its Lead Hazard Control grant programs with income eligibility criteria of other federal programs. Families that meet OLHCHH’s income eligibility criteria may already participate in a number of other federal programs, such as DOE’s Weatherization Assistance Program, the Supplemental Nutrition Assistance Program, Medicaid, or HUD’s Housing Choice Voucher program. The purpose of the pilot is to increase the efficiency and effectiveness of OLHCHH’s Lead Hazard Control grants’ recruitment process by reducing duplication of income eligibility determinations for families that have already been deemed eligible for another federal program. The pilot would provide an opportunity to evaluate how standardized income eligibility requirements across federal programs decreases delays in enrolling eligible families into the various programs and see how best to set up this program to prevent improper payments.

Program Improvements through Information Technology Investments

With the deployment of a new OLHCHH grants management cloud computing system, staff and grantees alike have access to tools for planning, reporting, and evaluation. The use of cloud services for the OLHCHH grants program has reduced the use of HUD servers and increased the stability of the system, has made it more accessible to grantees, and has reduced maintenance and operational costs. The system has allowed for in-depth analysis of program outputs, outcomes, and performance for our lead hazard control grants.

³³ www.epa.gov/childrenstaskforce/federal_asthma_disparities_action_plan.pdf.

³⁴ portal.hud.gov/hudportal/HUD?src=/program_offices/healthy_homes/advhh.

5. Proposals in the Budget

HUD is submitting the following legislative proposals as General Provisions to make the program more effective in protecting the health and safety of families, especially children:

- HUD is requesting an increase in the threshold for requiring lead abatement under the Lead Safe Housing statute (42 U.S.C. 4822(a)(1)) to reflect inflation since the October 28, 1992 enactment of that statute. The statute has a fixed threshold above which lead-based paint hazard abatement is required when substantial rehabilitation projects in “target housing” (generally, pre-1978 housing) receive more than \$25,000 per unit in federal funds. Costs of construction have increased significantly in the two decades since the enactment of the statute, causing many projects for which Congress had intended interim control measures to be used to require hazard abatement. This section would retain Congress’ original performance requirement of an abatement threshold while considering the effects of inflation, thereby increasing grantee flexibility. The increase in the threshold would give HUD housing assistance providers the flexibility to conduct interim controls instead of abatement when the amount of rehabilitation assistance is between the original level and the escalated level. Because the cost of interim controls is usually less than the cost of abatement, this amendment would result in more units being made lead-safe and thus more children being protected from lead-based paint hazards. HUD would issue a notice for comment on revising the abatement threshold, and, when further threshold increases are appropriate in subsequent years, issue a notice for comment for each such increase. (Sec. 266)
- HUD is requesting subpoena authority for the Lead Disclosure Statute (42 U.S.C. 4852d(a)), eliminating a statutory gap in order to allow HUD to obtain documents from rental housing owners suspected of violating this statute, which provides information to families renting or buying older (pre-1978) homes that may have lead-based paint. This relates to owners who have been recalcitrant in providing them in response to requests from the Department. While HUD and EPA have joint authority for enforcing the statute, only EPA has the authority to issue subpoenas, which it has under the Toxic Substances Control Act (15 U.S.C. § 2610(c)), an EPA authority unavailable to HUD. This legislative proposal would provide HUD with its own subpoena authority, which will allow HUD to conduct these investigations in a more timely and efficient manner than it can currently. (Section 231)

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**LEAD HAZARD CONTROL AND HEALTHY HOMES
LEAD HAZARD REDUCTION
Summary of Resources by Program
(Dollars in Thousands)**

<u>Budget Activity</u>	<u>2015 Budget Authority</u>	<u>2014 Carryover Into 2015</u>	<u>2015 Total Resources</u>	<u>2015 Obligations</u>	<u>2016 Budget Authority</u>	<u>2015 Carryover Into 2016</u>	<u>2016 Total Resources</u>	<u>2017 Request</u>
Lead Hazard Control								
Grants	\$48,000	\$687	\$48,687	\$48,481	\$43,000	\$140	\$43,140	\$83,000
Technical Studies	2,000	498	2,498	1,029	2,000	1,163	3,163	2,000
Healthy Homes	15,000	762	15,762	13,713	20,000	1,837	21,837	25,000
Lead Hazard Reduction								
Demonstration	45,000	...	45,000	45,000	45,000	...	45,000	...
Research and Technology (transfer) .....	...	...	...	...	...	...	...	[550]
Total	110,000	1,947	111,947	108,223	110,000	3,140	113,140	110,000

Lead Hazard Reduction

LEAD HAZARD CONTROL AND HEALTHY HOMES LEAD HAZARD REDUCTION Appropriations Language

The fiscal year 2017 President's Budget includes proposed changes in the appropriation language listed and explained below. New language is italicized and underlined, and language proposed for deletion is bracketed.

For the Lead Hazard Reduction Program, as authorized by section 1011 of the Residential Lead-Based Paint Hazard Reduction Act of 1992, \$110,000,000, to remain available until September 30, [2017]2018, of which [~~\$20,000,000~~]\$25,000,000 shall be for the Healthy Homes Initiative, pursuant to sections 501 and 502 of the Housing and Urban Development Act of 1970 that shall include research, studies, testing, and demonstration efforts, including education and outreach concerning lead-based paint poisoning and other housing-related diseases and hazards: Provided, That for purposes of environmental review, pursuant to the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) and other provisions of the law that further the purposes of such Act, a grant under the Healthy Homes Initiative, or the Lead Technical Studies program under this heading or under prior appropriations Acts for such purposes under this heading, shall be considered to be funds for a special project for purposes of section 305(c) of the Multifamily Housing Property Disposition Reform Act of 1994: [Provided further, That of the total amount made available under this heading, \$45,000,000 shall be made available on a competitive basis for areas with the highest lead paint abatement needs: Provided further, That each recipient of funds provided under the previous proviso shall contribute an amount not less than 25 percent of the total: Provided further, That each applicant shall certify adequate capacity that is acceptable to the Secretary to carry out the proposed use of funds pursuant to a notice of funding availability:] Provided further, That amounts made available under this heading in this or prior appropriations Acts, and that still remain available, may be used for any purpose under this heading notwithstanding the purpose for which such amounts were appropriated if a program competition is undersubscribed and there are other program competitions under this heading that are oversubscribed. (Department of Housing and Urban Development Appropriations Act, 2016.)