

Lead Poisoning  
Prevention Fund  
Evaluation Report

# 2010

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A report of findings from the evaluation period:  
January 2009 through June 2010

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# Table of Contents

<b>List of Tables</b> .....	ii
<b>List of Figures</b> .....	iii
<b>Executive Summary</b> .....	1
<b>Introduction</b> .....	15
<b>Background</b> .....	17
<b>Evaluation Results</b> .....	25
Community Partnerships.....	26
High Density Areas.....	29
Public Health Districts.....	42
Trainings.....	48
Lead Safe Housing Registry.....	54
Environmental Investigations.....	56
Multimedia Campaign.....	59
Targeted Mailings.....	68
Without Lead Dust Test Kit Offer.....	70
With Lead Dust Test Kit Offer.....	74
<b>Conclusion</b> .....	83
<b>Appendices</b>	
A: Charts of Evaluation Plan.....	85
B: Community-Based Partners in High Density Areas.....	92
C: Results from Lead Dust Testing.....	93
D: LPPF Funded DEP Trainings By Region.....	95

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## List of Tables

Table 1	LPPF funding categories for HMPs in Western Public Health District	27
Table 2	Number of HDA landlords trained in RRP classes supported by LPPF	34
Table 3	Titles and approximate number of participants for each webinar offered by LPPF for Community Partners	43
Table 4	Description of trainings and target audiences	48
Table 5	Types, titles and total number of materials distributed	61
Table 6	Number of requests for each tipsheet offered to parents through direct mailing without offer for free home lead dust test	71
Table 7	Number of requests for each tipsheet offered to parents through direct mailing with offer for free home lead dust test	76
Table 8	Geographic distribution by public health district and county of requests for and results from LDT kits	77
Table 9	Results from lead dust testing	93

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# List of Figures

Figure 1	LPPF Timeline	17
Figure 2	Lead Poisoning Prevention Fund, agencies, activities and audiences	19
Figure 3	How funds are allocated among LPPF activities by percentage	21
Figure 4	Number of newly identified children under 6 years of age with an elevated blood lead level, by year for the period 2003-2009	22
Figure 5	Percentage of children with a blood lead screening test by age group, 2003 to 2007	23
Figure 6	Activities, evaluation measures and outcomes for HDA landlord outreach	30
Figure 7	Number of rental units tested for lead dust (pass/fail) by high density area in FY2010	33
Figure 8	Map of lead dust testing and census blocks where lead poisonings have occurred in Lewiston/Auburn	37
Figure 9	Evaluation results and recommendations for HDA Landlord Outreach	38
Figure 10	Activities, evaluation measures and outcomes for HDA Tenant Outreach	39
Figure 11	Evaluation results and recommendations for HDA Tenant Outreach	41
Figure 12	Activities, evaluation measures and outcomes for PHDs	42
Figure 13	Evaluation results and recommendations for PHDs	47
Figure 14	Activities, evaluation measures and outcomes for Trainings	49
Figure 15	Number of units (<20) per trained landlord	50
Figure 16	Evaluation results and recommendations for Trainings	53
Figure 17	Activities, evaluation measures and outcomes for LSHR	54
Figure 18	Evaluation results and recommendations for LSHR	55
Figure 19	Activities, evaluation measures and outcomes for Environmental Investigations	57
Figure 20	Evaluation results and recommendations for Environmental Investigations	58
Figure 21	Activities, evaluation measures and outcomes for Statewide Multimedia Campaign	60
Figure 22	Hardware store poster showing placement of brochure display in lower left	63
Figure 23	Evaluation results and recommendations for Multimedia Campaign	67
Figure 24	Front covers of mailers. Left without test kit offer; mailer with offer on right	68
Figure 25	Activities, evaluation measures and outcomes for Targeted Mailing without offer for a free lead dust test kit	71
Figure 26	Reply card for targeted mailing without offer for free lead dust kit	72
Figure 27	Evaluation results and recommendations for Targeted Mailing without offer for free lead dust test kit	73
Figure 28	Activities, evaluation measures and outcomes for Targeted Mailing with free lead dust test	75
Figure 29	Follow-up blood lead tests in children living in homes where lead dust hazards were identified through the LPPF mailing	78
Figure 30	Return rate increases after reminder postcards	80
Figure 31	Blood lead test results of those children tested	81
Figure 32	Evaluation results and recommendations for Targeted Mailing with Free LDT	82
Figure 33	Lead dust test results, rental units, FY10	94
Figure 34	LPPF funded DEP trainings by Public Health Districts	95
Figure 35	Number of RRP training vouchers by public health district FY2010	96



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# Executive Summary

## Introduction

The following report presents evaluation findings from activities supported by the Lead Poisoning Prevention Fund (LPPF) during the 18-month period between January 1, 2009, and June 30, 2010.

The evaluation results are for the eight areas of activity supported by the LPPF and aimed at eliminating lead poisoning in Maine. Results presented in this report are for the initial phases of LPPF-supported activities. Long-term health and behavior outcomes will be addressed in future evaluation reports as the required data and analyses become available.

## Background

In 2005, the Maine Legislature established the Lead Poisoning Prevention Fund (22 MRSA c. 252 §1322-E) to provide resources to support educational, outreach and training programs to enable the public to identify lead hazards and take precautionary actions to prevent exposure to lead. Revenue for the LPPF is obtained from a \$0.25 per gallon fee imposed on manufacturers or wholesalers of paint sold in Maine. The LPPF is administered by the Healthy Homes and Lead Poisoning Prevention Program (HHLPPP) within the Maine Center for Disease Control and Prevention (CDC) of the

## There's a first time for everything...

The LPPF has created a fundamental shift in lead poisoning prevention in Maine. With the LPPF, we can act to identify and prevent potential lead hazards before any children are harmed through several new prevention initiatives. Following are some of the most significant "firsts" that occurred during the evaluation period covered in this report.

Because of the LPPF, for the first time in Maine:

- Communities throughout the state have resources for lead poisoning prevention activities.
- Prevention efforts are targeted in the areas with the highest burden of lead poisoning thanks to Maine's Environmental Public Health Tracking Network.
- Landlords are getting free lead dust testing for their rental units before any children are identified with lead poisoning.
- The state is conducting environmental lead investigations in other units in multi-family buildings where children have been identified with lead poisoning.
- All families with 1- and 2-year-olds receive lead poisoning prevention messages in their homes through direct mail.
- Partners and the public have a robust and centralized repository of educational material available online and through multiple distribution channels.

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Maine Department of Health and Human Services (DHHS).

In a sense, the legislation establishing the LPPF is a landmark, representing a major expansion to the way Maine addresses lead poisoning. Prior to the LPPF, the state had statutory authority and resources to address lead when a child was identified with lead poisoning and very few resources for preventing lead poisoning from happening in the first place.

The Maine Legislature created the LPPF to accelerate progress towards lead poisoning elimination by leveraging resources for community- and population-based primary prevention activities. With LPPF resources state agencies and local organizations have greatly expanded prevention efforts to identify and address lead hazards and risks *before* children are identified with lead poisoning. This expansion includes not only new and more targeted resources for parents of young children, but also significant, new opportunities and free services for landlords to test for lead in their units, obtain training on maintaining lead-safe housing and market their properties as lead-safe.

Approximately 40 percent of all cases of identified lead poisonings are found in just five Maine communities—Bangor, Greater Portland, Lewiston/Auburn, Sanford, and Biddeford/Saco. These communities are called High Density Areas and within them, upwards of 80 percent of lead poisoning cases occur in rental housing.

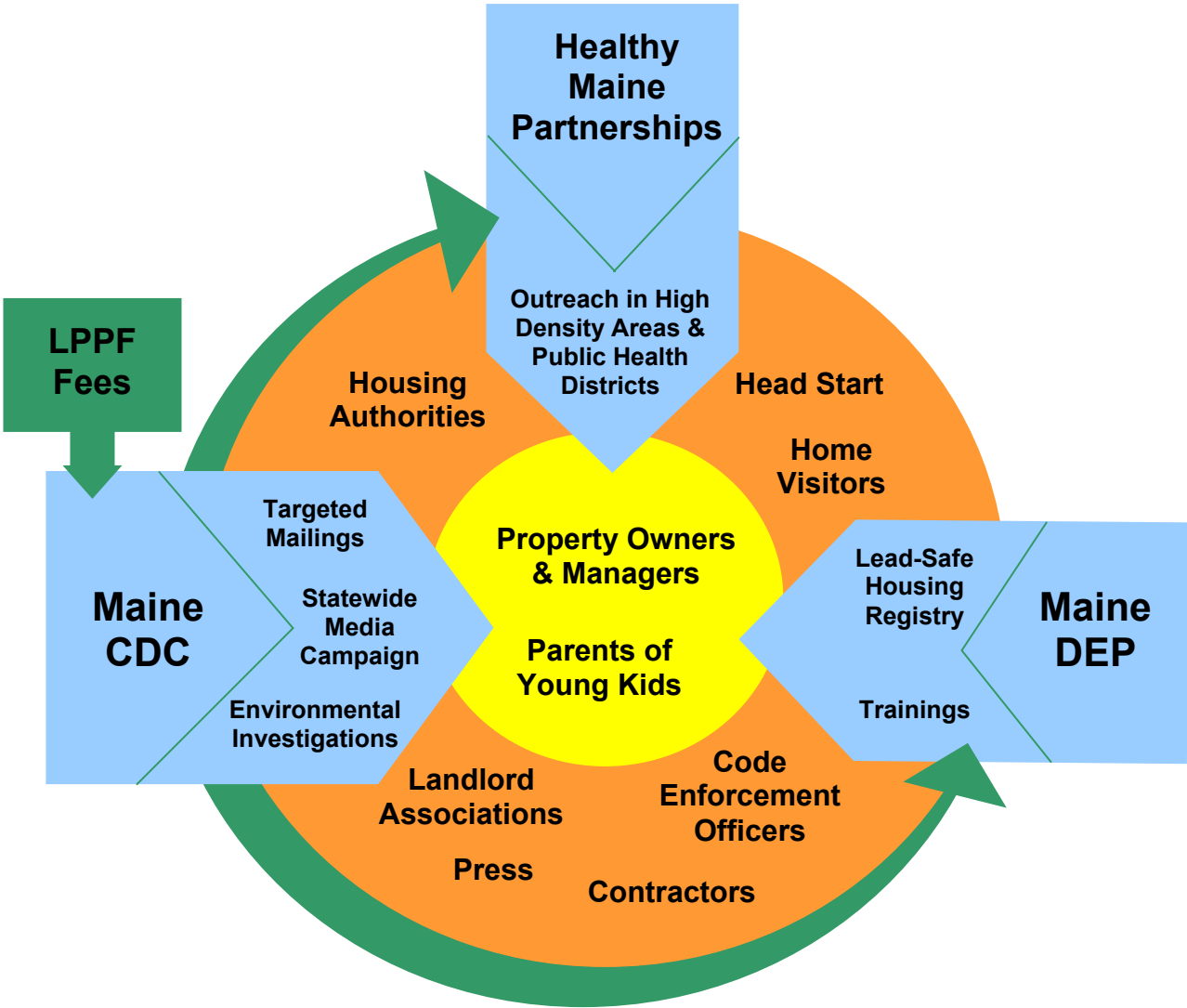
Based on these and other factors, more LPPF resources go to community-level activities in these five communities than to any other activity supported by the LPPF. In all, about half of LPPF resources support activities such as free lead dust testing in rental units and landlord and tenant outreach in the five High Density Areas and in communities in every part of the state. The other half of LPPF expenditures are used for statewide activities.

Both state agencies and community organizations receive LPPF funds to implement activities and develop partnerships designed to:

1. help parents of young children who live in homes likely to have lead hazards live safely with lead so that their children never become poisoned;
2. help property owners and managers of rental units likely to have lead hazards provide and maintain lead-safe housing so that child occupants never become poisoned; and,
3. help property owners of rental units likely to have lead hazards avoid the high costs associated with lead abatement.

Maine CDC and the Maine Department of Environmental Protection (DEP), as well as the community organizations (i.e., Healthy Maine Partnerships) that receive LPPF funds, strategically implement activities to reach parents of young children and property owners and managers. Activities complement and support each other and use multiple channels and consistent messages to reach primary target audiences and other audiences that may influence the primary audiences. The figure below illustrates this strategy and the relationship between agencies, activities and audiences.

### Lead Poisoning Prevention Fund Agencies, Activities, & Audiences



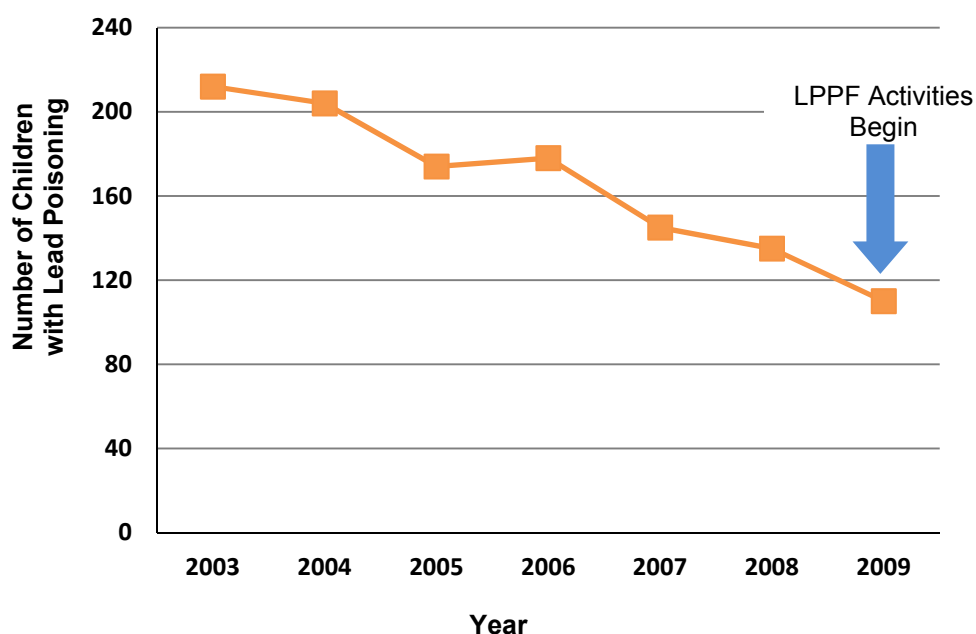
Legend					
	Flow of LPPF Funds		Organizations & Activities		Primary Target Audiences
					Secondary Target Audiences & Partners



## Measuring Success

An important component of the LPPF strategy is the evaluation of LPPF-supported activities and their outcomes. Findings from the evaluation determine improvements and modifications to activities, help prioritize the use of LPPF resources, and measure changes in the number of children with lead poisoning—the ultimate success of the LPPF will be the elimination of lead poisoning in Maine.

The figure below presents the number of children under 6 years of age newly identified with lead poisoning<sup>1</sup> in Maine, by year from 2003 through 2009, the time period prior to the implementation of most LPPF activities. The number of children identified with lead poisoning has been decreasing over time with just over 100 Maine children identified with lead poisoning in 2009.



Using these data as a baseline, we should be able to see the impact of the LPPF by examining the rate at which this trend continues. If activities are successful, we would expect that the number of children identified with lead poisoning will begin to decrease at a faster rate. Because there is a lag time of about one year between when activities occur and when lead poisoning data become available, we will be able to begin evaluating these time trends and impacts of the LPPF on the community level in future years.

In addition to measuring the ultimate success of the LPPF, the evaluation of LPPF activities includes measuring outcomes related to the behaviors of parents of young children and property owners. The Healthy Homes and Lead Poisoning Prevention

<sup>1</sup> Children with lead poisoning are defined as children under the age of 6 who have a blood lead level greater than or equal to 10 µg/dl.

Program is responsible for managing the evaluation of LPPF activities. To that end, HHLPPP contracted with the Center for Governmental Research Inc. to develop an evaluation plan<sup>2</sup> for LPPF-supported activities. For each activity, the evaluation plan covers the measures and data required to evaluate progress toward meeting activity objectives. Each objective, in turn, was established to direct activities toward the ultimate goal of the LPPF—the elimination of lead poisoning.

For the initial years of activity, the evaluation of LPPF activities focuses on intermediate outcomes, using process and impact measures. Results from the initial evaluations will be used to determine the best uses of LPPF resources and ways to adjust activities to maximize potential for meeting long-term outcomes. Looking beyond the first five years of LPPF-supported activities, the evaluation will measure progress toward meeting long-term health and behavior outcomes across the state and in the five High Density Areas.

The following table is an example of a logic model included in the evaluation plan, showing intermediate and long-term outcomes and their associated evaluation measures.

<b>High Density Areas - Landlord Outreach</b>			
<b>OBJECTIVES</b>			
<b>1. Targeted landlords are knowledgeable regarding lead hazards, landlord responsibilities, state responsibilities, and available resources;</b>			
<b>2. Targeted landlords are able to take advantage of available resources</b>			
<b>ACTIVITY</b>			
<b>Develop, Implement and Maintain Educational Outreach and Trainings for Landlords to Promote Lead Safe Housing.</b>			
<b>Intermediate Outcomes (1-5 yrs)</b>	<b>Evaluation Measure</b>	<b>Long-Term Outcomes (5+ years)</b>	<b>Evaluation Measure</b>
1. HDAs plan and implement ongoing outreach activities targeting landlords of pre-1978 units	1.1. Completed HDA outreach plan		
2. HDAs host at least 2 outreach events each year	2.1 Number of outreach events completed; 2.2. Number of landlords attending events	2.1.1. Targeted landlords are aware of their responsibilities for maintaining a lead safe property and are able to take advantage of the available resources to do so.	2.1.1.1 Pre and post event surveys
3. HDAs collaborate with other community groups to reach landlords	3.1. Number of community groups involved in working with landlords.		
4. Targeted landlords complete EMP / RRP courses	4.1. Number of trainings offered 4.2. Number of landlords trained	4.1.1. Trained landlords maintain lead-safe units	4.1.1.1. Number of units owned by trained landlords placed and re-registered on LSHR 4.1.1.2 Number of children with EBLLs living in units owned by trained landlords
5. Trained landlords perform EMP in at risk units at turnover as confirmed by lead dust testing.	5.1. Number and location of LDTs submitted for pre/post EMP testing 5.2 Number of trained landlords performing EMP at unit turnover	5.1.1. The number of lead-safe units in high density areas increases 5.1.2. The number and rate of children with EBLLs in high density areas decreases	5.1.1.1. Number of units owned by trained landlords placed and re-registered on LSHR 5.1.1.2 Number of children with EBLLs living in units owned by trained landlords
6. Trained landlords register units with LSHR	6.1. LSHR is operational 6.2. Number of units on LSHR	6.1.1. LSHR is populated with units that are lead-safe and affordable for tenants in high-risk areas	6.1.1.1. Number of units on LSHR 6.1.1.2. Number of affordable units on LSHR

<sup>2</sup> The evaluation plan is available online at: <http://www.maine.gov/dhhs/mecdc/environmental-health/cohp/lead/lppf.shtml>

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The evaluation results that follow in this executive summary present an overview of findings from process and outcome measures associated with following eight areas of primary prevention activity supported by the LPPF.

1. Funding Community Partners in high density areas (HDAs), where cases of elevated blood lead levels (EBLLs) are concentrated;
2. Funding Community Partners in eight Public Health Districts (PHDs) throughout the state;
3. Trainings for landlords, homeowners and contractors provided by the Department of Environmental Protection (DEP);
4. The DEP's Lead Safe Housing Registry (LSHR);
5. Environmental investigations in the homes of children with blood lead levels from 15 to 19  $\mu\text{g}/\text{dl}$ ;
6. A statewide multimedia campaign;
7. A targeted mailing to parents of 1- and 2-year-olds, with an offer of a free lead dust test kit; and,
8. A targeted mailing to parents of 1- and 2-year-olds, without an offer of a free lead dust test kit.

Complete results, discussions and recommendations are included in the full report.

The report is intended to inform agency staff, advisory board members and other stakeholders about the accomplishments, progress and limitations of the LPPF and provide recommendations for continuing, improving, changing or ceasing activities. The report should be used as a tool to strengthen efforts to prevent lead poisoning in Maine.

Moving forward, the Maine Healthy Homes and Lead Poisoning Prevention Program will conduct periodic updates to certain portions of this report. Updates may focus on a particular activity such as lead dust testing, community outreach in High Density Areas or the targeted mailings. HHLPPP will issue its next comprehensive evaluation report in 2016.

## Summary of Evaluation Results and Recommendations

### Community Partnerships

The LPPF legislation calls for contracts to support “community outreach programs to enable the public to identify lead hazards and take precautionary action to prevent exposure to lead.” Based on this directive the community organizations that make up Maine’s local public health infrastructure—Healthy Maine Partnerships (HMPs)—receive contracts from the Maine CDC to target resources and directly engage and empower communities in lead poisoning prevention.

These community partnerships are the first of their kind in Maine to be used for lead poisoning prevention. With LPPF resources, HMPs:

- greatly expand the ability to reach families and landlords most at risk;
- are successful at identifying lead dust hazards before children are poisoned;
- are building capacity and expertise at the district and community level related to lead poisoning prevention.

Evaluation results of community-based activities are divided between those that took place in High Density Areas (i.e., areas with the highest burden of lead poisoning) and those conducted in Maine’s eight Public Health Districts. Results from each are summarized below.

### High Density Areas

The five High Density Areas (HDAs) are: Bangor, Biddeford/Saco, Greater Portland, Lewiston/Auburn, and Sanford. Forty percent of all children identified with lead

### Top LPPF Accomplishments

The following represent the most significant achievements that occurred because of the LPPF during the evaluation period.

1. 50% of LPPF resources distributed to community organizations, establishing capacity and infrastructure for education and preventive lead dust testing in homes throughout the state and expanding prevention efforts to far more people than ever before possible.
2. More than 350 homes tested for lead dust—the most common cause of childhood lead poisoning in Maine. These tests help residents and landlords identify lead dust and protect children from getting lead poisoning. Prior to the LPPF homes were tested only if a child was poisoned there.
3. Increased number of lead investigations in rental units or owner-occupied homes from 25 in 2007 to 115 during the evaluation period.
4. 370 landlords completed lead training required by the U.S. Environmental Protection Agency. These landlords own at least 2,900 units, two-thirds of which were built before 1950. Pre-1950 buildings often have lead paint that can turn into poisonous lead dust.

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poisoning in Maine live in these five areas. Because upwards of 80 percent of children identified with lead poisoning in these areas live in rental housing, funding to these communities is used to promote lead hazard awareness among landlords and tenants, and identify lead dust problems in rental units.

The most significant finding to come out of the evaluation of the Community Partner activities in the High Density Areas was that 238 rental units were tested for lead dust before any children were identified with lead poisoning. One-third of the units tested had elevated levels of lead dust and landlords of those units were given education, training, or resources to address the lead dust found in their units. This is significant for two reasons. First, these landlords were provided with information and resources to take steps to protect children that live in their units. Second, by addressing lead problems proactively, these landlords could drastically reduce their chances of facing a mandatory and very costly (e.g., about \$10,000 per unit) lead abatement, ordered when a child is identified with lead poisoning in a rental unit.

While the goal for the evaluation period was to test a total of 500 units, testing in 238 units represents significant forward progress towards identifying and addressing lead dust problems before any children are harmed. HHLPPP staff worked with Community Partners to identify barriers to meeting testing goals and ways to increase enrollment in the program.

Additional results from the evaluation indicate that Community Partners in the High Density Areas were able to:

1. form and leverage partnerships with 48 different community organizations throughout the state to reach landlords and tenants;
2. hold at least 2 landlord and 2 tenant outreach events in each area;
3. provide U.S. EPA Renovation, Repair and Painting training to a total of 180 landlords in the High Density Areas;
4. identify barriers to reaching landlords and develop new strategies to overcome barriers.

Recommendations from the evaluation include:

1. continue to provide contracts to HMPs to conduct landlord and tenant outreach in High Density Areas;
2. continue to monitor locations of residences of children identified with lead poisoning to target community activities;
3. continue lead dust testing in rental units, using strategies identified to reduce barriers and increase enrollment.

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## **Public Health Districts**

Organizations in Maine's eight Public Health Districts (PHDs) address lead in communities that are outside of the five High Density Areas. Community Partners in the Public Health Districts develop, implement and maintain outreach to target audiences to promote lead-safe housing and work with local community groups. Specifically, LPPF funding is used by PHD Community Partners to develop a district-wide outreach plan, provide training and education to staff and hold outreach events.

Results from the evaluation indicate that Community Partners in the Public Health Districts were able to:

1. form and leverage partnerships with more than 50 different community organizations throughout the state;
2. hold a total of 21 outreach events;
3. distribute more than 26,600 pieces of educational material.

Recommendations from the evaluation include:

1. continue to provide capacity and knowledge building activities for HMPs in the Public Health Districts;
2. continue to provide materials to partners to distribute throughout the state to target audiences.

## **Trainings**

The Lead Poisoning Prevention Fund legislation calls for contracts to support “worker educational outreach programs and funding of educational programs and information for rental property owner.” The Maine Department of Environmental Protection (DEP) receives LPPF resources to offer lead training at no or reduced charge to Maine landlords, contractors and homeowners.

During the evaluation period covered by this report, a new rule from the U.S. Environmental Protection Agency took effect. This Renovation, Repair and Painting (RRP) rule requires that people working on homes or child-occupied facilities built before 1978 be certified and follow specific lead-safe work practices. The new rule applies to the estimated 350,000 Maine houses built prior to 1978, and more than 180,000 built prior to 1950 and therefore likely to have lead paint. In addition, the new rule applies to landlords of pre-1978 units if they do their own work on their units.

The buildup to the effective date of the RRP rule produced an enormous demand for training among landlords and contractors. With LPPF resources the DEP was able to help meet that demand, providing vouchers to landlords to reduce training fees. However, due to the overwhelming demand for RRP training, very few LPPF resources were available

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for other trainings, such as the Essential Maintenance Practices course, during the evaluation period.

Results from the evaluation show that:

1. LPPF funds supported 105 RRP classes;
2. 370 landlords were trained in RRP classes supported by the LPPF, representing at least 2,900 units, 74% of these were built before 1950;
3. 901 contractors trained using LPPF funds.

Recommendations from the evaluation include:

1. continue to encourage Community Partners to recruit landlords into LPPF supported trainings;
2. develop trainings that have more appeal and are more accessible for homeowners.

### **Lead Safe Housing Registry**

The LPPF legislation calls for the Maine Department of Environmental Protection (DEP) to create a Lead Safe Housing Registry (LSHR) to enable tenants to locate lead-safe housing. The DEP receives LPPF resources to develop the LSHR, an online searchable database which property owners can use to list their lead-safe rental properties, and potential tenants can use to locate lead-safe housing.

The LSHR is not complete but was in development during the evaluation period covered by this report. DEP expects the Lead Safe Housing Registry to be ready for enrollment in 2011.

### **Environmental Investigations**

State law requires the Maine Department of Health and Human Services to conduct environmental lead investigations in homes where children identified with lead poisoning reside. The law also speaks to preventively testing all units in a multi-unit dwelling if a child in any unit is identified with lead poisoning. These investigations help to identify sources of lead exposure and help landlords and homeowners understand areas in the home that need to be addressed.

Until the LPPF, these services were limited by available resources. Notably, the Maine CDC's Healthy Homes and Lead Poisoning Prevention Program (HHLPPP) only had resources to provide full environmental investigations to children with significantly elevated blood lead levels (i.e., above 20 µg/dL or persistently between 15 and 19 µg /dL over time). For families with children with lower levels, HHLPPP was only able to provide modest support to help them reduce exposures. HHLPPP did not have resources

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to investigate other units in the building if a child with lead poisoning lived in a multi-unit building.

LPPF funds have allowed HHLPPP to greatly expand its environmental investigations and come closer to meeting its statutory mandate. With LPPF support, HHLPPP now performs investigations for all children with confirmed blood lead levels above 15 µg /dL. In addition, LPPF funds have allowed HHLPPP to investigate other units in a building if an investigation has been ordered for one unit.

The evaluation results showed:

1. an increase in environmental investigations in units where children had elevated blood lead levels from 25 units in 2007 to 65 units during the evaluation period;
2. an additional 50 *preventive* investigations conducted in multi-unit buildings when the original unit was determined to have lead hazards;
3. of the 115 total units investigated, 90 were ordered to be abated and the rest were either determined to be free of lead hazards or were private homes with lead hazards where the owners were provided with technical assistance to address the lead hazards.

Based on these findings, the report recommends that HHLPPP continue to use LPPF funds to conduct environmental investigations.

### **Media Campaign**

The Healthy Homes and Lead Poisoning Prevention Program has been using LPPF funds to conduct a media campaign that includes: 1) development and distribution of a brochure, 2) development and maintenance of a website, 3) maintenance of a toll-free phone number, 4) development and distribution of tipsheets, 5) retail store posters, and 6) press release templates. While the true impact of a media campaign is often difficult to determine, the media campaign supports all prevention activities and has provided new opportunities to reach audiences with consistent and targeted messaging.

Further, the process measures used to evaluate the media campaign indicate that while some components of the campaign such as the toll-free phone number, are not heavily used, others such as materials distribution through HMPs and press outreach are working well.

For example, results from the evaluation indicate that:

1. Community Partners are well positioned to distribute lead poisoning prevention materials; Community Partners gave out more than 26,000 pieces of educational material throughout the state;



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2. HHLPPP and Community Partners are able to use the press to draw attention to lead poisoning prevention messages through press announcements and other outreach, with at least 75 media placements throughout the state during the evaluation period.

Recommendations from the evaluation include:

1. continue to distribute educational materials through Community Partners;
2. continue to issue press announcements to support other outreach activities.

### **Targeted Mailings**

The LPPF legislation also requires targeted educational mailings to families with children that occupy dwellings built prior to 1978. The Healthy Homes and Lead Poisoning Prevention Program developed a direct mail campaign for all parents of 1- and 2-year-olds living in Maine, bringing lead poisoning prevention information to all families with young children throughout the state for the first time.

There were two versions of the mailer; both offering the same lead poisoning prevention information, but only one offering a free lead dust test (LDT) kit. Lead dust test kits allow families to find out if they have poisonous lead dust in their homes. HHLPPP provides follow-up support, education and resources for families that do a lead dust kit, helping families with lead dust problems find solutions and keep their children safe.

Comparing results from the two mailers shows that the mailer with the offer for a free LDT kit elicited a far better response rate from the direct mailing and that the direct mailing was, by commercial marketing standards of 3 to 5 percent, an effective way to deliver lead poisoning information directly to households.

Specifically, results from the evaluation include the following.

1. A 3.5% response rate from the direct mailing to 25,358 households with the offer for a free LDT kit; compared to a 0.7% response rate from the mailing without the offer to 20,500 households.
2. Nearly 3,000 tipsheets requested through the direct mail campaigns: 2,354 through the mailing with the offer for a free LDT kit and 501 through the mailing without the offer.
3. 853 households requested a free lead dust test kit, of these 131 (15.4%) returned the kit for analysis; 34 households identified with high levels of lead dust.
4. One-third of the lead dust test kits were returned by tenants with 37% of them identifying elevated levels of lead dust. Among homeowners, only 14% found elevated levels of lead dust.
5. None of the children living in homes with elevated dust levels had elevated blood lead levels.

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Recommendations from the evaluation include:

1. discontinue targeted mailing without the offer for a free lead dust test kit;
2. continue the direct mailing with the offer for a free lead dust test kit at least one more year in order to measure effects on blood lead screening rates;
3. investigate ways to encourage appropriate families to request and return test kits for analysis.

## **Conclusion**

Taken as whole, the results from this first evaluation period reveal three principal conclusions. First, the evaluation results are helping to determine what activities are working well, what activities should be discontinued and how to modify activities to improve outcomes. And while many of the results from these early stages of activities reflect purely process measures, they are important building blocks that can help put the LPPF in the best possible position to reach health outcome objectives.

Second, because of the resources made available by the LPPF, Maine has established a strong model for community-based lead poisoning prevention through the Healthy Maine Partnerships. For example, the evaluation revealed that developing strong partnerships with HMPs expands the reach of lead poisoning prevention activities to far more people through outreach events, educational materials and community collaborations.

Finally, with the infusion of primary prevention resources from the LPPF, Maine is breaking new ground and finding success in getting into homes to identify and address lead dust concerns before any children are harmed. Through the dust testing in rental units and targeted mailings as well as the environmental investigations—all supported by LPPF resources—lead dust testing occurred in nearly 500 units throughout the state during the evaluation period. The testing in these units found more than 150 units with lead dust problems without first finding a child with lead poisoning.

From these conclusions, and as more lead poisoning data become available, the agencies that use LPPF resources will continue to adapt activities and prioritize resources to improve outcomes so that Maine moves closer and closer to the elimination of lead poisoning in the state.



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# Introduction

The activities mandated by the legislation establishing the Lead Poisoning Prevention Fund (LPPF) have been fully operationalized. In addition, the Maine Healthy Homes and Lead Poisoning Prevention Program of the Maine Center for Disease Control and Prevention has begun implementing an evaluation plan to measure each of these activities. The following report is a result of this first evaluation and presents findings from the 18-month period between January 1, 2009, and June 30, 2010.

This report follows the LPPF Evaluation Plan designed in partnership with the Center for Governmental Research Inc. (CGR). The plan includes intermediate and long-term outcomes to be measured. This report, however, contains only results related to intermediate outcomes as they are associated with initial phases of activity. Long-term outcomes will be addressed in future evaluation reports as the required data and analyses become available.

The evaluation results reported here assess process and outcome measures associated with following eight areas of primary prevention activity supported by the LPPF and aimed at eliminating lead poisoning in Maine.

1. Funding Community Partners in high density areas (HDAs), where cases of elevated blood lead levels (EBLLs) are concentrated;
2. Funding Community Partners in eight Public Health Districts (PHDs) throughout the state;
3. Trainings for landlords, homeowners and contractors provided by the Department of Environmental Protection (DEP);
4. The DEP's Lead Safe Housing Registry (LSHR);
5. Environmental investigations in the homes of children with blood lead levels from 15 to 19  $\mu\text{g}/\text{dl}$ ;
6. A statewide multimedia campaign;
7. A targeted mailing to parents of 1- and 2-year-olds, with an offer of a free lead dust test kit; and,
8. A targeted mailing to parents of 1- and 2-year-olds, without an offer of a free lead dust test kit.

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Results, discussion and recommendations related to each of these eight areas are detailed within this report.

The report is intended to inform agency staff, advisory board members and other stakeholders about the accomplishments, progress and limitations of the LPPF and provide recommendations for continuing, improving, changing or ceasing activities. The report should be used as a tool to strengthen efforts to prevent lead poisoning in Maine.

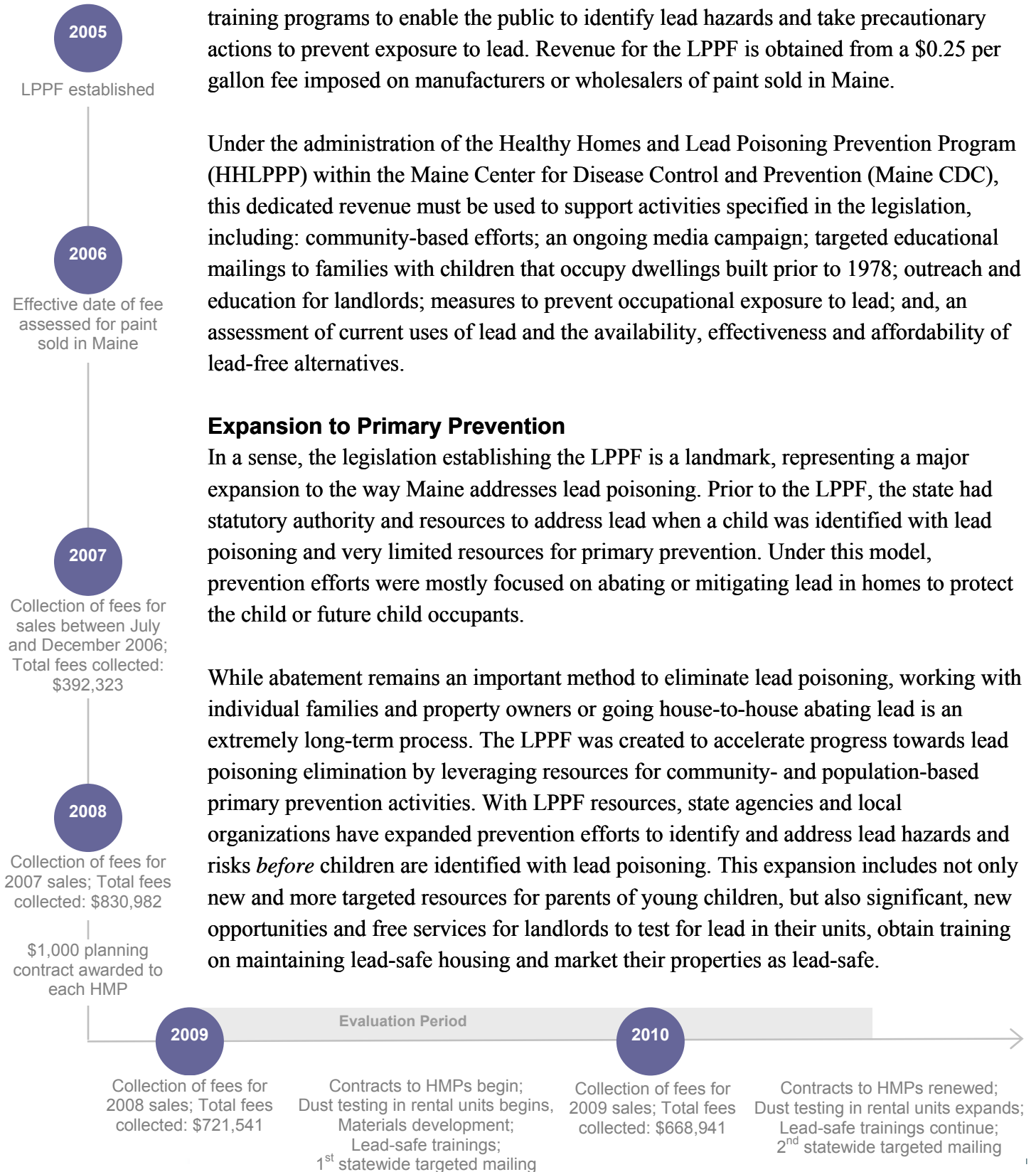
Moving forward, the Maine Healthy Homes and Lead Poisoning Prevention Program will conduct periodic updates to certain portions of this report. Updates may focus on a particular activity such as lead dust testing, community outreach in High Density Areas or the targeted mailings. HHLPPP will issue its next comprehensive evaluation report in 2016.

### **Acknowledgements**

This report would not be possible without the cooperation of several entities, including: Community Partners/Healthy Maine Partnerships, the Maine Healthy Homes and Lead Poisoning Prevention Program, the Maine Environmental & Occupational Health Program, the Department of Environmental Protection, and the State Health and Environmental Testing Laboratory. These entities submitted data to ensure the success of the evaluation.

# Background

Figure 1:  
LPPF TIMELINE



In 2005, the Maine Legislature established the Lead Poisoning Prevention Fund (22 MRSA c. 252 §1322-E) to provide resources to support educational, outreach and training programs to enable the public to identify lead hazards and take precautionary actions to prevent exposure to lead. Revenue for the LPPF is obtained from a \$0.25 per gallon fee imposed on manufacturers or wholesalers of paint sold in Maine.

Under the administration of the Healthy Homes and Lead Poisoning Prevention Program (HHLPPP) within the Maine Center for Disease Control and Prevention (Maine CDC), this dedicated revenue must be used to support activities specified in the legislation, including: community-based efforts; an ongoing media campaign; targeted educational mailings to families with children that occupy dwellings built prior to 1978; outreach and education for landlords; measures to prevent occupational exposure to lead; and, an assessment of current uses of lead and the availability, effectiveness and affordability of lead-free alternatives.

## Expansion to Primary Prevention

In a sense, the legislation establishing the LPPF is a landmark, representing a major expansion to the way Maine addresses lead poisoning. Prior to the LPPF, the state had statutory authority and resources to address lead when a child was identified with lead poisoning and very limited resources for primary prevention. Under this model, prevention efforts were mostly focused on abating or mitigating lead in homes to protect the child or future child occupants.

While abatement remains an important method to eliminate lead poisoning, working with individual families and property owners or going house-to-house abating lead is an extremely long-term process. The LPPF was created to accelerate progress towards lead poisoning elimination by leveraging resources for community- and population-based primary prevention activities. With LPPF resources, state agencies and local organizations have expanded prevention efforts to identify and address lead hazards and risks *before* children are identified with lead poisoning. This expansion includes not only new and more targeted resources for parents of young children, but also significant, new opportunities and free services for landlords to test for lead in their units, obtain training on maintaining lead-safe housing and market their properties as lead-safe.

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## Data-Driven Prevention

Data on lead poisoning rates, blood lead screening rates and age of housing stock from the Healthy Homes and Lead Poisoning Prevention and the Environmental Public Health Tracking Programs have been critical in the development and evaluation of activities funded by the LPPF. The data that identify groups or regions most at risk and reveal risk factors are essential for expanding efforts to community- and population-based primary prevention. Following are the key findings from the data and the scientific and professional literature that inform lead poisoning prevention activities.

- Children under the age of 6 are at the highest risk for lead poisoning because of biological and behavioral characteristics—it takes far less lead to adversely affect young children than older children and adults.
- Approximately 40 percent of all cases of identified lead poisonings are found in just five Maine communities: Bangor, Greater Portland, Lewiston/Auburn, Sanford, and Biddeford/Saco. Within these communities upwards of 80 percent of the cases occur in rental housing. Mapping suggests that even within these communities, cases tend to be concentrated in certain neighborhoods.
- While lead was banned from use in paint in 1978, paint manufacturers had begun reducing lead concentrations around 1950. Data show that homes built before 1950 pose the greatest risk for lead poisoning. Housing in poor condition, with chipping or peeling paint, is of particular concern. Even without chipping or peeling paint, friction surfaces such as doors and windows can produce significant lead dust to which children can be exposed.
- U.S. Census data indicate that there are nearly 30,000 Maine children under age 6 living in pre-1950 housing.
- Lead dust is by far the most common cause of childhood lead poisoning in Maine. In most cases, the source of the lead dust can be found in the child's home or a home where the child spends more than 10 hours each week. Lead paint in poor condition or on or near friction surfaces, such as floors, stairs and windows, is usually the source of the lead dust in the home.
- Lead dust can also come from renovation, repair or painting projects in homes with lead paint. There have also been several cases where children were poisoned by lead dust brought home by a parent who works in the renovation, repair or painting business or other employment with lead exposure.





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Specifically, monies received through the Lead Poisoning Prevention Fund are distributed to various agencies to implement activities and develop partnerships designed to:

1. help parents of young children who live in homes likely to have lead hazards live safely with lead so that their children never become poisoned;
2. help property owners and managers of rental units likely to have lead hazards provide and maintain lead-safe housing so that child occupants never become poisoned; and,
3. help property owners of rental units likely to have lead hazards avoid the high costs associated with lead abatement.

Channeling the funds through multiple agencies and organizations allows LPPF resources to be used by groups with the existing expertise, staff, access, trust or other assets needed as described below.

**Maine CDC**—LPPF funds are managed by the Maine CDC’s Healthy Homes and Lead Poisoning Prevention Program. As the state public health agency, the Maine CDC’s established relationships with community health organizations put the agency in a good position to initiate and administer contracts with local groups for lead poisoning prevention. In addition, the Maine CDC is an authoritative source for health information, bringing credibility to messages used in targeted mailings and the statewide media campaign.

**Maine DEP**—The Lead Hazard Prevention Program within the Maine Department of Environmental Protection is responsible for the lead safety trainings and the Lead Safe Housing Registry. In this way, the DEP leverages LPPF funds and its expertise and existing resources as the provider of lead safety training in the state.

**Healthy Maine Partnerships (HMPs)** — Spread throughout the state, these 28 individual organizations carry out local public health functions related to health promotion. Because of this, HMPs are well-positioned to incorporate lead poisoning prevention into their other community-level outreach efforts. With LPPF resources, HMPs leverage existing and seek out new local partnerships, build upon their work in other areas of health promotion, and use outreach channels and messages that resonate with the local population.

In implementing lead poisoning prevention activities, these agencies and organizations collaborate with secondary target audiences, such as landlord associations, code enforcement officers, the press, home visitors, head start coordinators, and others. In turn, these secondary target audiences open new channels to or directly influence the primary target audiences or other secondary target audiences.

This prevention strategy is designed to create synergy between activities, use resources efficiently and allocate funds based on need and potential impact. As a result, just over half of LPPF expenditures are for community-level activities such as lead dust testing in rental units and landlord and tenant outreach. Figure 3 shows the percentage of funding for each area of activity.

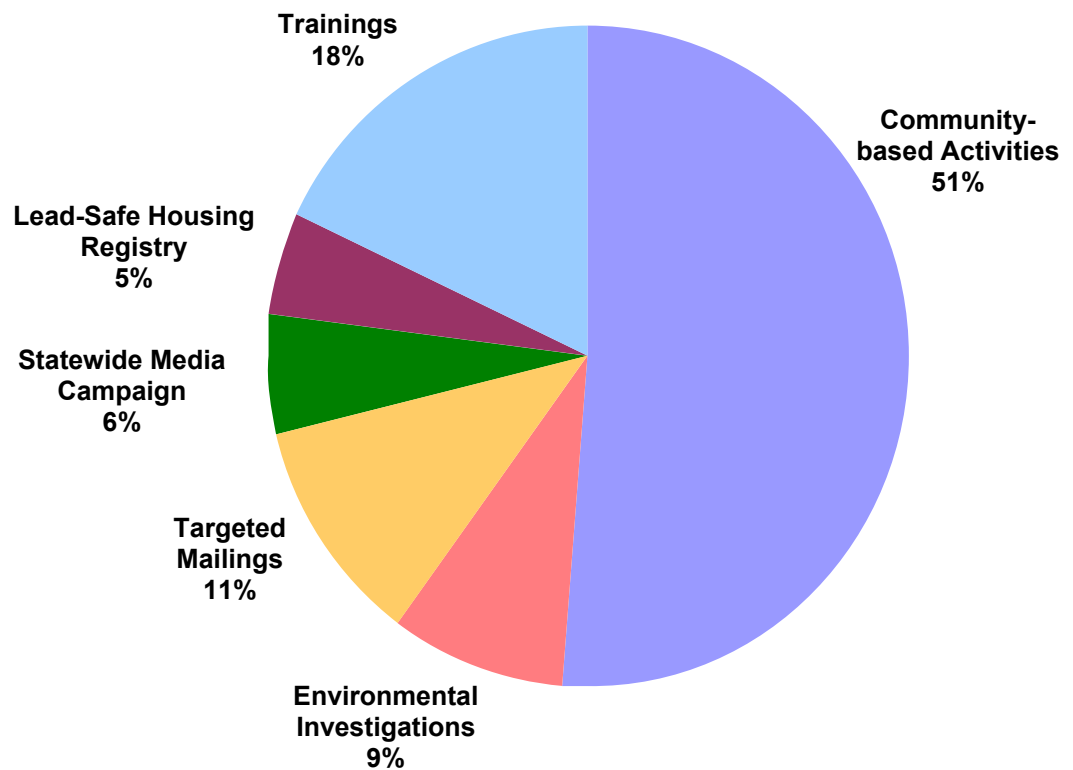


Figure 3: How funds are allocated among LPPF activities by percent

### Measuring Success

The Healthy Homes and Lead Poisoning Prevention Program is responsible for managing the evaluation of LPPF activities. To that end, HHLPPP contracted with the Center for Governmental Research Inc. to develop an evaluation plan for LPPF-supported activities.<sup>3</sup> For each activity, the evaluation plan covers the measures and data required to evaluate progress toward meeting activity objectives. Each objective, in turn, was

<sup>3</sup> The evaluation plan is available online:  
<http://www.maine.gov/dhhs/mecdc/environmental-health/eohp/lead/lppf.shtml>

established to direct activities toward the ultimate goal of the LPPF—the elimination of lead poisoning.

For the initial years of activity, the evaluation of LPPF activities focuses on intermediate outcomes, using process and impact measures. Results from the initial evaluations will be used to determine the best uses of LPPF resources and ways to adjust activities to maximize potential for meeting long-term health outcomes.

Looking beyond the first five years of LPPF-supported activities, the evaluation will measure progress toward meeting long-term health and behavior outcomes across the state and in the five High Density Areas. The ultimate success of the LPPF will be an accelerated decline in the number of children with lead poisoning in relation to the number of children screened for lead poisoning. That is, if LPPF activities have the desired impact, the number of children identified with lead poisoning should decrease while the number of children getting screened for lead poisoning should increase.

Figure 4 below presents lead poisoning data through 2009, the time period prior to the implementation of most LPPF activities.<sup>4</sup> The number of children identified with lead poisoning has been decreasing over time with just over 100 Maine children identified with lead poisoning in 2009.

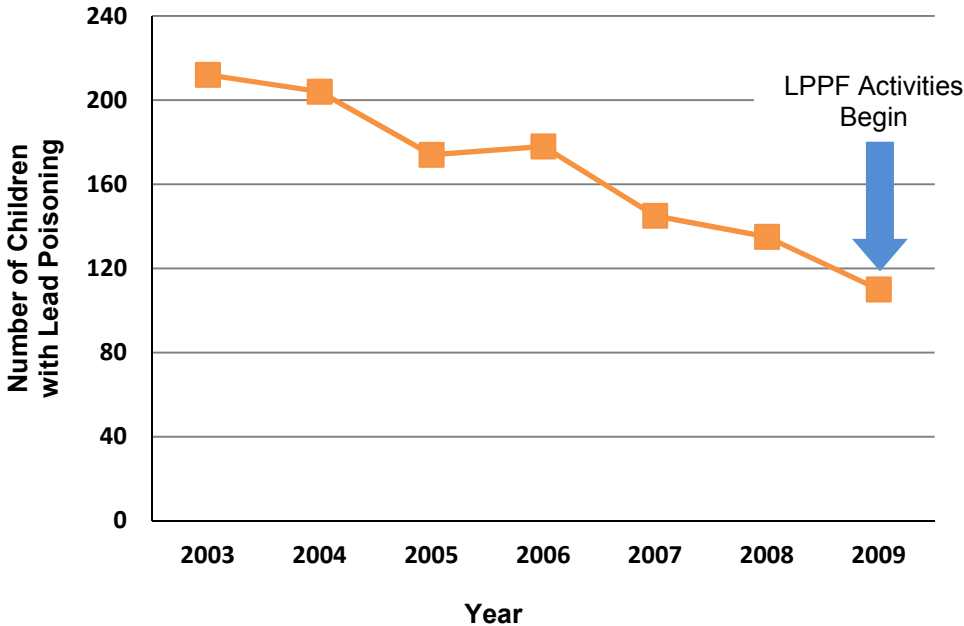


Figure 4: Number of newly identified children under 6 years of age with an elevated blood lead level, by year for the period 2003-2009

<sup>4</sup> Children with lead poisoning are defined as children under the age of 6 who have a blood lead level greater than or equal to 10 µg/dl.

Using these data as a baseline, we should be able to see the impact of the LPPF by examining the rate at which this trend continues. If activities are successful, we would expect that the number of children identified with lead poisoning will begin to decrease at a faster rate. It is possible, however, that there will be a temporary increase in children with lead poisoning if efforts to identify more high-risk children are working.

This is why it is important to look at the number of children with lead poisoning in relation to the number of children screened. For example, without knowing how many children were screened for lead poisoning, decreases in the number of children identified with lead poisoning could be attributed to a corresponding decrease in the number of children screened.

Screening for lead poisoning is defined as an initial blood test to identify the amount of lead in a child’s blood. Based on risk factors, there is no universal screening for lead poisoning. Ideally, health care providers determine which children to screen using a risk assessment questionnaire. HHLPPP receives all screening results and monitors trends over time. Figure 5 shows the percentages of Maine children younger than 3 years screened for lead poisoning. These percentages have been steady for several years, and will serve as a baseline for measuring the impact of the LPPF. The expectation is that screening rates will increase as a result of LPPF activities.

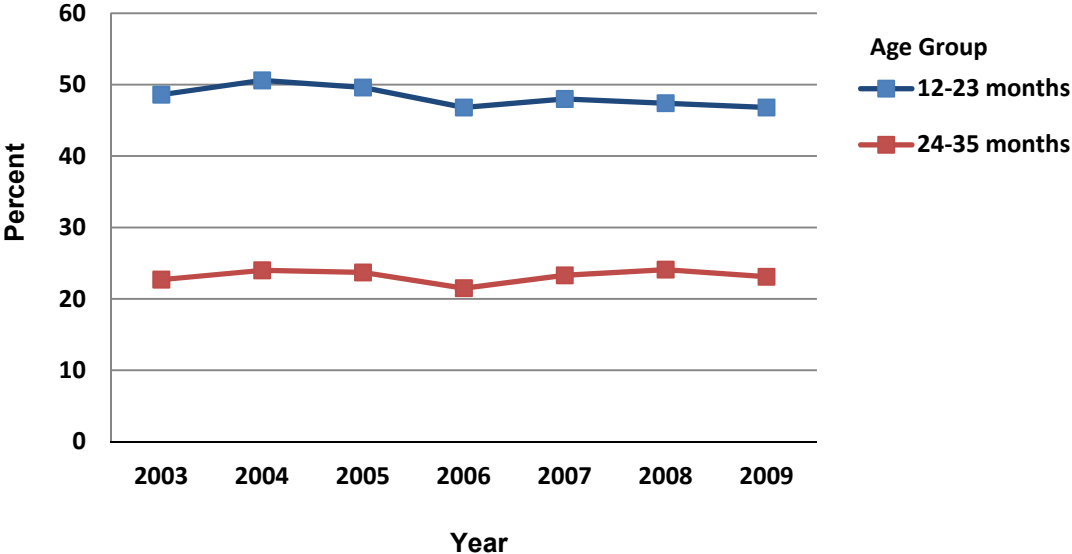


Figure 5: Percent of children with a blood lead screening test by age group, 2003-2009

At present, monitoring both numbers of children identified with lead poisoning and screening rates is our best chance at measuring the success of the LPPF. However, there

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are a few limitations to using this method. First, in terms of screening rates, we cannot know how many children are at risk and therefore how many children should be screened. It is unclear, therefore, whether the children not screened should have been screened or if they were correctly determined to be at no risk by their health care providers.

Next, there is a lag time of about one year between when activities occur and when lead poisoning and screening data become available. This makes it difficult at this point in time to draw conclusions about the long-term impact of the LPPF. Further, multiple years of lead poisoning and screening data will be required to provide large enough sample sizes to detect statistically significant changes, especially at the community level.

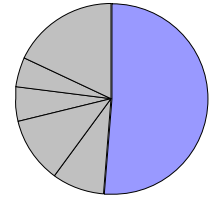
Until data become available to evaluate these time trends, evaluation efforts will focus on several process and impact measures for each area of activity. The evaluation results that follow, therefore, are focused on those measures that relate to intermediate outcomes.

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# Evaluation Results

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# Community Partnerships



## Background

The LPPF legislation calls for contracts to support “community outreach programs to enable the public to identify lead hazards and take precautionary action to prevent exposure to lead.” Based on this directive, the community organizations receive contracts from the Maine CDC to target resources and directly engage and empower communities in lead poisoning prevention.

To develop these community partnerships, the HLLPPP used data describing the geographic distribution of lead poisoning and Maine’s existing local public health infrastructure to identify partners and develop contract parameters. Beginning in 2009, community health organizations called Healthy Maine Partnerships (HMPs) began receiving LPPF funds. HMPs under contract are called LPPF Community Partners and are divided into the categories of Local Service Areas, Public Health Districts, High Density Areas or Second Tier Areas.

Funding to Community Partners is strategically tiered to build consistent lead poisoning prevention capacity throughout the state and direct the most resources to communities with the greatest burden of lead poisoning. While each HMP receives some LPPF funding, HMPs that are the coordinating agencies in the Public Health Districts or that operate in an area with a high amount of lead poisoning cases receive larger contracts. Following are descriptions of each funding tier.

### Local Service Areas

There are 28 HMPs in Maine and each receives \$2,000, the minimum level of funding, as a way to build local public health capacity and knowledge related to lead poisoning prevention. With this funding, Community Partners in the local service areas distribute information through their existing programs and networks.

### Public Health Districts

There are eight state-designated Public Health Districts in Maine. Using LPPF funds and guidelines, HMPs within each Public Health District work together to develop and implement a district-wide plan for lead poisoning prevention outreach. One Community Partner in each district receives an annual contract award of \$6,500 to serve as the coordinating organization in the district.

### High Density Areas

Areas that have a high density of lead poisoning are communities, cities or towns with the highest counts of lead poisoning among children that are screened. Data from 2003 through 2007 show that 40 percent of all newly identified childhood lead

poisonings occurred in just five communities: Bangor, Biddeford/Saco, Lewiston/Auburn, Greater Portland and Sanford. These same five communities also have higher percentages of children with elevated blood lead levels among those screened, when compared to the statewide average. One Community Partner in each of these five high density areas receives \$32,250 annually, the highest level of funding, to develop and implement targeted outreach strategies for landlords and tenants and provide free lead dust testing in rental units.

**Second Tier Areas**

Second Tier Areas (STAs) are those towns or communities that have rates of newly identified lead poisoning that are significant, but not considered high density. There are nine STAs: Augusta, Gardiner, Skowhegan, Waterville, Bath, Rockland, Livermore Falls, Rumford and Turner. In FY2010, one Community Partner in each STA received an \$8,000 planning contract. In FY2011, Community Partners in these areas received \$15,125 to increase lead hazard awareness and risk reduction outreach for landlords and tenants. Funds to partners in Second Tier Areas also support free lead dust testing in rental units.

Table 1 shows an example of how the tiered funding strategy in one Public Health District results in the distribution of resources throughout the district and contracts to some HMPs with multiple levels of funding.

HMP NAME	FY2010 LPPF FUNDING CATEGORIES				
	LSA	PHD	HDA	STA	TOTAL
Healthy Androscoggin	\$2,000		\$32,250		\$34,250
River Valley HCC	\$2,000	\$6,500		\$8,000	\$16,500
Healthy Oxford Hills	\$2,000				\$2,000
Healthy Community Coalition	\$2,000				\$2,000

Table 1: LPPF funding categories for HMPs in the Western Public Health District

While each category of Community Partner has different objectives and required activities, all are evaluated using process and outcomes measures to establish that they are meeting contract requirements and to assess the effects of their activities. In general, findings from the evaluation period covered by this report indicate that community partnerships:

- greatly expand the ability to reach families and landlords most at risk;
- are successful at identifying potential lead dust problems before children are poisoned;
- are building capacity and expertise at the district and community level related to lead poisoning prevention.



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Detailed results, discussion and recommendations from the evaluation of activities in High Density Areas and Public Health Districts follow. Results from the evaluation of activities in Local Service Areas are included in the evaluation of the Public Health District Community Partners. Further, because activities in Second Tier Areas did not begin until June 2010, they have not yet been evaluated and are not covered in this report.

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# High Density Areas

The five High Density Areas (HDAs) are: Bangor, Biddeford/Saco, Greater Portland, Lewiston/Auburn, and Sanford. Forty percent of all children identified with lead poisoning in Maine live in these five areas. Because upwards of 80 percent of children identified with lead poisoning in these areas live in rental housing, funding to these communities is used to promote lead hazard awareness among landlords and tenants, and identify lead dust hazards in rental units.

HDA activities are divided into landlord and tenant outreach. Outcomes for both activity categories are evaluated using process and outcome measures to establish that HDAs are completing requirements and to assess the effects of activities on property owners, tenants and the community.

## Landlord Outreach

The objectives of the HDA landlord outreach activities are:

1. Targeted landlords are knowledgeable regarding lead hazards, landlord responsibilities, state responsibilities and available resources
2. Targeted landlords are able to take advantage of available resources to prevent and address lead hazards.

To reach these objectives, four intermediate outcomes, to be accomplished in years 1-5, have been identified for HDA landlord outreach activities.

1. HDA Community Partners plan and implement ongoing outreach activities targeting landlords of pre-1978 units;
  - 1a. HDA Community Partners host at least 2 outreach events each year;
  - 1b. HDA Community Partners collaborate with other community groups to reach landlords.
2. Targeted landlords complete Essential Maintenance Practices (EMP)/ Renovation, Repair and Painting (RRP) courses.
3. Trained landlords perform essential maintenance practices in at-risk units at turnover as confirmed by lead dust testing.
4. Trained landlords register units with the Lead Safe Housing Registry<sup>5</sup>.

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<sup>5</sup> The Lead Safe Housing Registry will enable tenants to locate lead-safe housing using an online, searchable database.

Figure 6 depicts the activities, outcomes and evaluation measures associated with HDA landlord outreach. See the chart of the evaluation plan in Appendix A for more detail on the analyses used to measure these outcomes.

Objectives: 1. Targeted landlords are knowledgeable about lead hazards, landlord responsibilities, state responsibilities and available resources; 2. Targeted landlords are able to take advantage of available resources, and address lead hazards.

Activities	Outcomes	Evaluation Measures
Develop, implement and maintain educational outreach and trainings for landlords to promote lead-safe housing.	HDA-HMPs plan and implement ongoing outreach activities targeting landlords of pre-1978 units.	▶ Completed HDA plan
	HDA-HMPs hold at least two outreach events each year.	▶ Number of outreach events completed; number of landlords attending events.
	HMPs collaborate with other community groups to reach landlords.	▶ Number of community groups.
	▶ Targeted landlords complete EMP/RRP courses.	▶ Number of trainings offered; number of landlords trained.
	Trained landlords perform EMP in at-risk units at turnover as confirmed by lead dust testing.	▶ Number and location of LDTs submitted for pre/post EMP testing; number of trained landlords performing EMP at unit turnover.
	Landlords register units with LSHR.	▶ LSHR is operational; number of units on LSHR.

Figure 6: Activities, evaluation measures and outcomes for HDA landlord outreach

## Results

### **1. HDA Community Partners plan and implement ongoing outreach activities targeting landlords of pre-1978 units; 1a. HDA Community Partners host at least 2 outreach events each year; 1b. HDA Community Partners collaborate with other community groups to reach landlords.**

In the approximately 18 months that Community Partners have been under contract, all partners have completed and begun implementing an outreach plan and have hosted at least two outreach events. On average each HDA Community Partner has held three landlord outreach events for a total of 17. Partners determined what kinds of landlord education were needed in their communities and developed their events to meet those needs. As a result, events were different in each community.

For example, the Community Partner in Bangor focused on providing lead-safe training for landlords. In Sanford, the Community Partner directed outreach efforts to organizing a landlord association to bring property owners together to address lead issues. The Community Partner in Lewiston/Auburn also worked with the local landlord association

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providing lead-safe talks, information and incentives to enroll in the lead dust testing program. Partners in Portland and Saco/Biddeford offered educational opportunities in the form of presentations on lead hazard laws and current information concerning childhood lead poisoning in Maine. Most Partners hosted the events or held them in conjunction with landlord association meetings or other partner-hosted events.

The Community Partners were not required in the first year to track the number of people reached by outreach events but will in the years to come.

To develop credibility, identify target landlords and expand their reach among landlords, HDA Community Partners collaborated with a total of 48 groups. A list of these community organizations is included in Appendix B. Examples of activities stemming from these collaborations include:

- working with the housing authorities in Portland, Sanford and Saco/Biddeford to provide direct mailings and phone calls to targeted landlords and tenants;
- distributing lead information with building permits in Saco/Biddeford, Bangor, Lewiston/Auburn and Portland;
- partnering with city housing programs in Lewiston/Auburn to provide free lead dust testing in rental units as part of their Lead Hazard Control Program; and,
- working with the Bangor Code Enforcement Officer to identify landlords for outreach in local high-risk neighborhoods.

## **2. Targeted landlords complete EMP/RRP courses.**

During the evaluation period covered by this report, a new rule from the U.S. Environmental Protection Agency took effect. This Renovation, Repair and Painting (RRP) rule requires that people working on homes or child-occupied facilities built before 1978 be certified and follow specific lead-safe work practices. The new rule applies to the estimated 350,000 Maine houses built prior to 1978, and more than 180,000 built prior to 1950 and therefore likely to have high levels of lead paint. In addition, the new rule applies to landlords of pre-1978 units if they do their own work on their units. An 8-hour course provides the training needed for certification and compliance with lead-safe work practices.

In response to the need created by the rule, HDA Community Partners promoted RRP training and offered vouchers to landlords to reduce the training fee. Vouchers were funded by the LPPF and administered through the Maine DEP. In total, Community Partners distributed 274 vouchers statewide to landlords and property managers, with at least 180 HDA landlords participating in RRP trainings supported by the LPPF. Of those 180, 145 landlords redeemed vouchers to help reduce the cost of the training.

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Before the EPA announced the effective date of the new RRP rule, the Maine DEP used LPPF resources to provide half-day training courses for landlords on essential maintenance practices for housing with lead paint. This course provided landlords with the training needed to perform repairs and cleaning when their units are empty to create lead-safe housing for future tenants. Due to the overwhelming demand for RRP training, however, DEP was not able to offer any Essential Maintenance Practices classes for landlords during the evaluation period.

*See the section (page 35) in this report on DEP Trainings for complete results related to RRP and EMP trainings.*

### **3. Trained landlords perform essential maintenance practices in at-risk units at turnover as confirmed by lead dust testing.**

Community Partners in the HDAs receive additional funds to promote free lead dust testing for high risk rental units, with the goal of helping landlords identify and address lead dust hazards in units before any children are poisoned. While each Community Partner was required to test 100 units in their area, for a total of 500 units for all HDAs, a total of 238 rental units were tested for lead dust levels during the period covered by this report. Figure 7 shows the number of units tested in each HDA.

In looking at Figure 7, four out of five Community Partners did not meet the 100-unit goal. It should be noted that the fiscal year 2010 contract requirement for lead dust tests in each HDA was divided between two years (50 per year). This was due in part to the truncated fiscal year 2009 contracts that did not allow enough time for the programs to fully implement the project, let alone meet their annual mark.

In addition to the truncated contract year, Community Partners in the five High Density Areas had mixed results in recruiting landlords. Some landlords were concerned about the liability of confirming the presence of lead in their units. To counteract this perception, the EPA sponsored local events to explain the RRP and lead disclosure rules and the reasons for them.

*See additional details relating to the **Lead Dust Testing Program** in the Discussion & Supplemental Information section.*

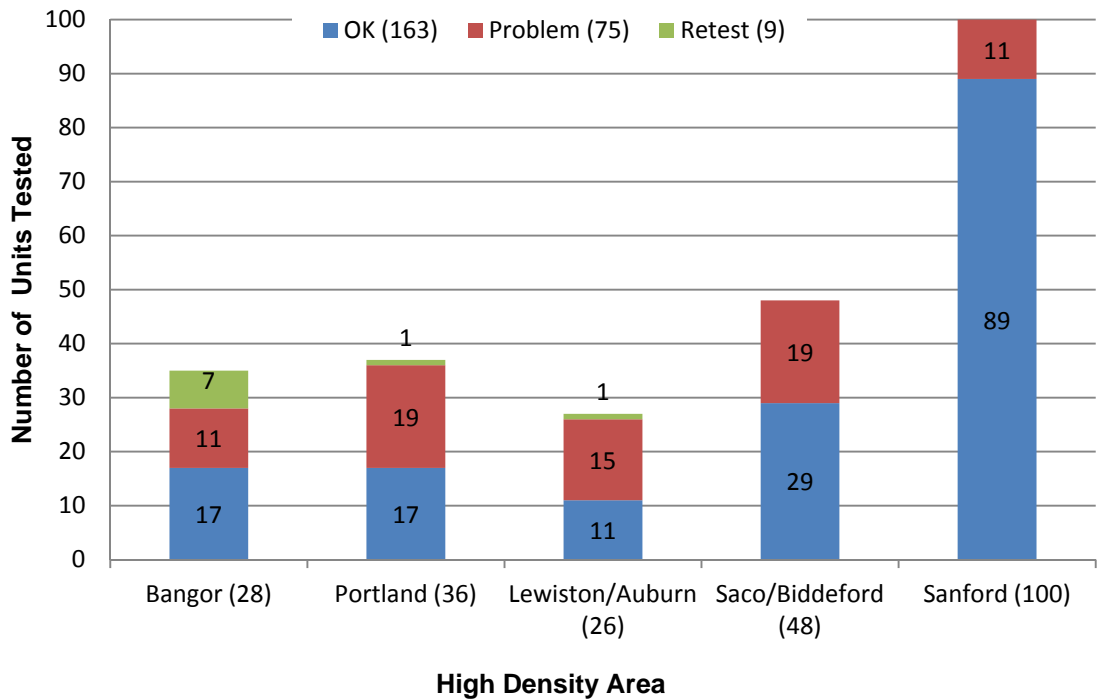


Figure 7: Number of rental units tested for lead dust (pass/fail) by High Density Area in FY 2010

Testing identified lead dust hazards in one-third of the rental units tested. (See Appendix C for a table of result levels.) Retests, or clearance testing, in these units are required to measure whether landlords are addressing lead dust through essential maintenance practices. During the evaluation period covered in this report, only nine units were retested, making it difficult to measure the effectiveness of the lead dust testing program at this time. However, no lead dust problems were found in the nine units retested during the evaluation period. *See additional details relating to **Retesting** in the Discussion & Supplemental Information section.*

A total of 127 landlords statewide participated in the lead dust testing program. Of those 127 landlords, 47 (37%) had taken the RRP training course by July 1, 2010. It is not known how many of the 127 landlords did work on their units built before 1978 and were therefore required to take the RRP course. It may be the case that some landlords took the RRP course because there were no other available training options, such as the Essential Maintenance Practice or Lead Safe Renovators courses. Further, it is not known how many landlords were unable to take the RRP course by July due to the high demand for a limited number of classes.

Overall, 180 landlords from the five HDAs were trained in RRP classes funded by the LPPF as shown in Table 2.

<u>High Density Area</u>	<u>Landlords Trained</u>
Lewiston/Auburn	38
Portland	66
Saco/Biddeford	15
Sanford	35
Bangor	26

Table 2: Number of HDA landlords trained in RRP classes supported by LPPF

#### **4. Trained landlords register units with the Lead Safe Housing Registry.**

The Lead Safe Housing Registry was in development during the evaluation period covered by this report. In anticipation of the launch of the registry, however, HDA Community Partners encouraged landlords to enroll in the Lead Safe Housing Registry when it comes online.

#### **Discussion & Supplemental Information**

In general, the results indicate that using Community Partners in High Density Areas greatly expands the ability to reach landlords in meaningful and engaging ways as shown by the number of events held and numbers of landlords and organizations engaged. The following discussion points and supplemental information add further understanding to landlord outreach activities.

#### **Landlord Outreach**

From the reports filed by Community Partners and other anecdotal feedback, recruiting landlords to participate in educational events and the lead dust testing program was challenging and for many partners represented a new target audience. One way partners were able to reach landlords was by leveraging relationships with other organizations or municipal offices to reach landlords. As mentioned above, some of these tactics included having lead information attached to building permits, helping to organize landlords where no association existed and having lead information attached to monthly Section 8 rent subsidies sent to property owners.

Further, HDA Community Partners took advantage of the RRP rule to establish themselves as a local resource for landlords. Providing vouchers turned out to be an effective way to reach otherwise reluctant landlords and provided Community Partners with an opportunity to enroll these landlords in the Lead Dust Testing Program or other educational events. As noted above, 180 landlords from the five HDAs were provided RRP training.

#### **Lead Dust Testing Program**

As for the Lead Dust Testing program in high-risk rental units, the HDA Community Partners enrolled 127 landlords in and tested 238 rental units. This marks significant forward progress towards identifying and addressing lead before any children are harmed.

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Still, to better understand this particular program and derive appropriate recommendations for moving forward, there are several additional points and pieces of supplemental information to consider.

### **Meeting Testing Goals**

Sanford was the only HDA to reach the 100-unit goal for lead dust testing. This was in part due to their good relationship with the local landlords and the expansion of their program to target Section 8 Housing. Specifically, the Housing Authority (HA) director worked with the Community Partner to help organize a local landlord association with support from the LPPF. In addition, the Sanford HA began incorporating lead dust testing into their Section 8 Housing Quality Standards (HQS) inspections. This model is one that is being evaluated and adapted by other HDAs and to make sure that Partners enroll landlords representing all types of target housing.

### **Unit Turnover**

Although the original intent of the program was to conduct the lead dust testing at unit turnover, most of the testing was done while the units were occupied. Feedback from Community Partners and participating landlords indicated that landlords willing to participate in the program were not willing to wait to have units tested until they were unoccupied. In consultation with HHLPPP staff, Community Partners began recruiting landlords into the testing program regardless of the occupancy status of their units. All educational materials and follow-up with participating landlords continued to emphasize the need to do maintenance at unit turnover as a best practice. This change in approach has let Community Partners overcome one barrier to landlord enrollment.

### **Retesting**

Retesting in units where elevated levels of lead dust were identified was low during this evaluation period. HHLPPP met with HAD Partners in the summer of 2010 to address low retest rates. There were three outcomes from this meeting. First, participants learned that in Biddeford/Saco and Lewiston/Auburn the Community Partners were able to get landlords with lead dust problems enrolled into the local Lead Hazard Control program. For these units, the clearance or retest will not take place until the unit is fully abated, probably sometime in 2011. Second, the Community Partners in Sanford and Bangor formulated plans to begin retesting in the fall of 2010. Finally, the meeting revealed that in Portland, some of the property owners have been reluctant to allow a retest. HHLPPP is working with the Community Partner to encourage retesting by calling the property owners and sending follow-up letters until a retest has been scheduled.



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### **Essential Maintenance Training for Landlords**

During the planning phase for the lead dust testing program, HHLPPP was interested in knowing if landlords that had units tested participated in some sort of lead safety training, such as the Lead Safe Renovators course, RRP training or Essential Maintenance Practices (EMP) course. As mentioned above, with the concerted push to get appropriate landlords trained in RRP, the DEP focused its lead-safe training efforts on this principal group of landlords. By the beginning of FY2012 there will be a redesigned EMP course available for those landlords who are not required to be RRP trained.

### **Testing Locations**

The location of units tested and levels of lead dust results were very useful measures that helped determine if testing was occurring in locations of high risk and if this type of testing program is an effective method of identifying elevated levels of lead dust. Data from the testing program show that of the samples identifying a lead dust problem, more than two-thirds of them identified a high lead dust level. A high level was defined as results of floor samples above 80  $\mu\text{g}/\text{ft}^2$  or windowsill samples above 400  $\mu\text{g}/\text{ft}^2$ . These levels indicate a serious potential hazard to children. See Appendix C for a figure illustrating the frequency of result levels.

In looking at the lead dust levels from the samples taken in the rental units, it is clear that testing is taking place in appropriate buildings. This is further confirmed when comparing Census Block maps that show where rental units were tested to maps that show where children have been found with elevated blood lead levels (EBLLs) as well as those maps that show the proportion of housing built prior to 1950. Figure 8 shows Lewiston/Auburn only, but analysis in the other HDAs shows the same.

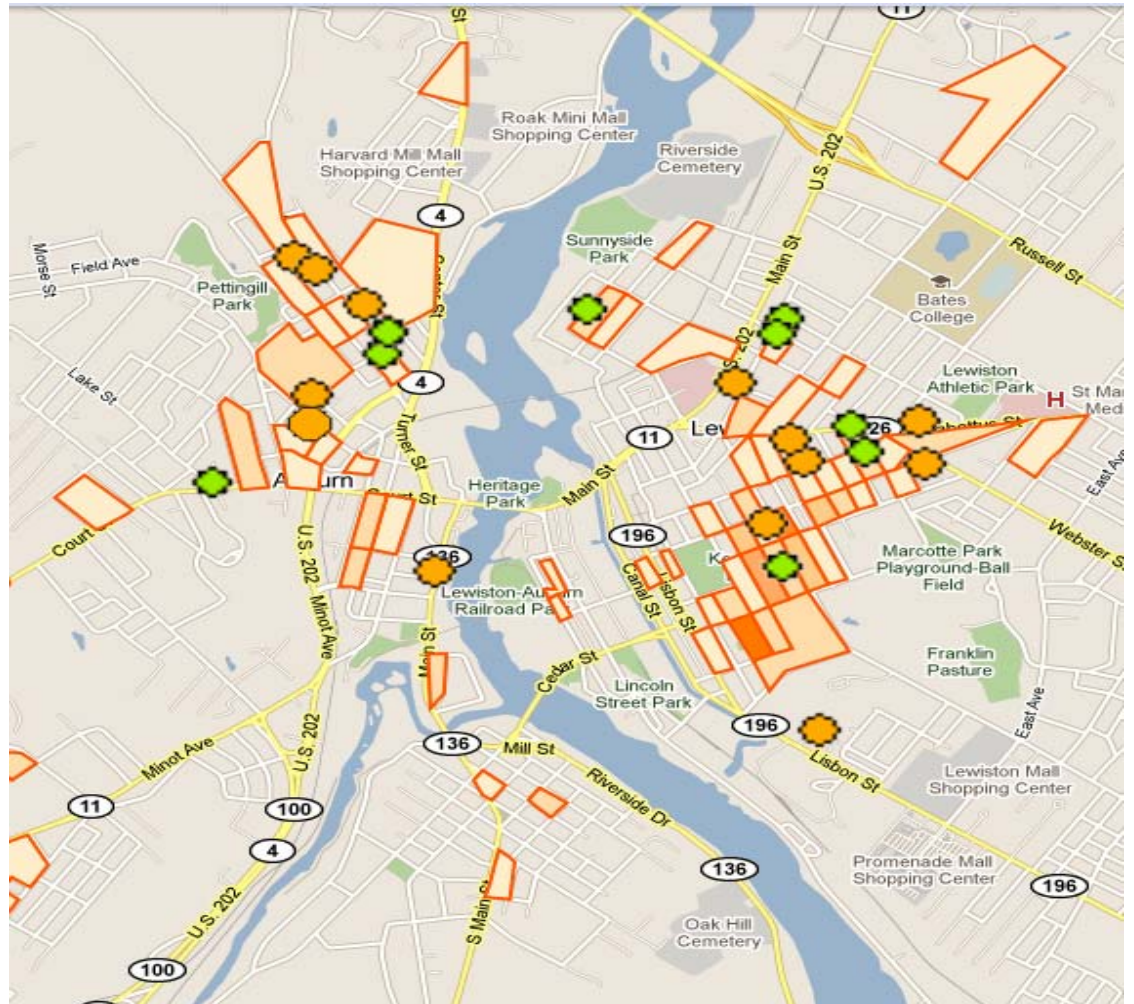


Figure 8: Map of lead dust testing and census blocks where lead poisonings have occurred in Lewiston/Auburn. Shaded blocks indicate census blocks where children have been identified with lead poisoning. Orange circles indicate locations of lead dust testing in rental units where elevated lead dust levels were found. Green circles indicate locations of lead dust testing in rental units where no lead dust problem was found.

## Summary of Results & Recommendations

Figure 9 below summarizes the results from the evaluation of the landlord outreach program and lists the recommendations that have emerged from the evaluation.

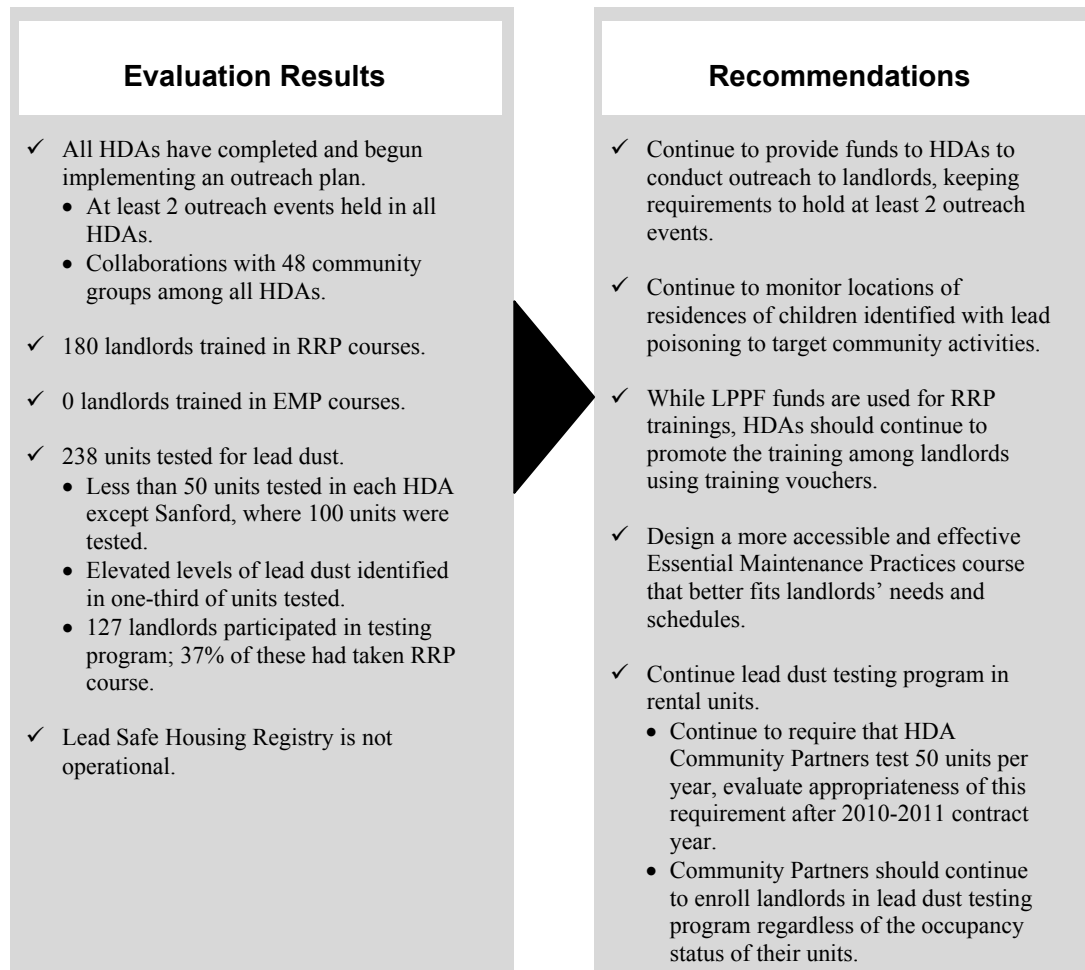


Figure 9: Evaluation results and recommendations for HDA landlord outreach

## Tenant Outreach

The objectives of the HDA tenant outreach activities are:

1. Targeted tenants are knowledgeable about lead hazards, their options, rights and available resources.
2. Tenants are able to make use of available resources to prevent and address lead hazards.

To reach these objectives, four intermediate outcomes, to be accomplished in years 1-5, have been identified for HDA tenant outreach activities.

1. HDA Community Partners complete and implement an outreach plan.
  - 1a. HDA Community Partners host at least 2 events.
  - 1b. HDA Community Partners collaborate with community groups.
2. Tenants perform lead dust testing (via targeted mailing and brochures distributed by hand).
3. Tenants implement practices to reduce lead hazards, e.g. cleaning, encouraging landlord to follow up.
4. Tenants have their children screened for blood lead.

Figure 10 depicts the activities, outcomes and evaluation measures associated with HDA tenant outreach. See the chart of the evaluation plan in Appendix A for more detail on the analyses used to measure these outcomes.

Objectives: 1. Targeted tenants are knowledgeable about lead hazards, their options, rights, and available resources; 2. Tenants are able to make use of available resources to prevent and address lead hazards.		
Activities	Outcomes	Evaluation Measures
Develop, implement and maintain outreach to tenants to promote lead-safe housing.  Work with local community groups.	HDA-HMPs complete and implement an outreach plan.	▶ Completed HDA plan
	HDA-HMPs hold at least two outreach events each year.	▶ Number of outreach events completed; number of tenants reached.
	HMPs collaborate with other community groups.	▶ Number of community groups.
	Tenants perform lead dust testing.	▶ Number of lead dust tests requested from return postcards; number of LDTs submitted by tenants; proportion of tenants that identify lead dust hazards through testing.
	Tenants implement practices to reduce lead hazards, e.g., cleaning, encouraging landlord to follow up.	▶ Results of pre/post lead dust tests of those classified tier 2 & 3.
	Tenants have their children screened for blood lead.	▶ Number of children screened in High Density Areas; counts and rates of EBLLs associated with identified units.

Figure 10: Activities, evaluation measures and outcomes for HDA tenant outreach

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## **Results**

### **1. HDA Community Partners complete and implement an outreach plan; 1a. HDA Community Partners host at least 2 events; 1b. HDA Community Partners collaborate with community groups.**

All HDA Community Partners have created and begun implementing an outreach plan and held two outreach events. Examples of events include: presentations to tenant groups and community associations, classes on living safely with lead and special events for families. Combined, HDA Community Partners have held 15 tenant outreach events. The Community Partners were not required in the first year to track the number of people reached by outreach events but will in subsequent years.

To support and further expand the reach of the HDA outreach activities, HDA Community Partners engaged a total of 48 community-based organizations with direct ties to people who live in rental housing or segments within this population, such as New Mainers (i.e., recent immigrants and refugees). The list of organizations includes: Advocates for Children, Head Start, Housing Authorities, Catholic Charities, Public Health Nursing, United Somali Women of Maine, Healthy Families, Joyful Harvest Neighborhood Center, Women, Infants & Children, and Safe-Schools Healthy Students. A full list of these community organizations is included in Appendix B. Collaborations between these organizations and the HDA Community Partners often resulted in new audiences or channels for outreach events or activities such as direct mailings, newsletter articles and linked websites.

Using Community Partners in High Density Areas greatly expands the ability to reach tenants in meaningful and engaging ways as shown by the number of events held and numbers of tenants and organizations engaged. Contracts with Community Partners provide resources to organizations that know their communities best and that can dovetail lead poisoning prevention outreach with other health promotion efforts. Further, Community Partners have relationships with other organizations to create innovative and productive collaborations.

### **2. Tenants perform lead dust testing (via targeted mailing and brochures distributed by hand).**

Tenant lead dust testing is largely accomplished through the statewide targeted mailing of brochures. Complete results from the evaluation of the targeted mailing are reported in that section. HDA Community Partners supplement the targeted mailing by distributing brochures offering free lead dust test kits to targeted families. Results show that in most of the HDAs, except Lewiston/Auburn, the percentage of tenants conducting lead dust testing is greater than the percentage of tenants doing so statewide.

These results are not surprising, but may be the result of multiple factors. First, it is possible that efforts by HDA Community Partners have helped to get the brochures offering free lead dust test kits directly into the hands of tenants living in high-risk housing. It is also likely that in these HDAs there is a greater proportion of rental housing than in the rest of the state and therefore more tenants in these populations.

*See additional details relating to the Targeted Mailings in the section later in this report.*

### **3. Tenants implement practices to reduce lead hazards, e.g. cleaning, encouraging landlord to follow up.**

Sufficient data are not available at this time to determine if tenants are changing behaviors to implement practices to reduce lead hazards. When data become available we will be looking at trends over time.

### **4. Tenants have their children screened for blood lead.**

While LPPF monitors screening data collected by the Maine Healthy Homes and Lead Poisoning Prevention Program, it is too early to analyze those data for the time periods during and after the home dust testing. Initial data analysis will likely be available in 2011.

## **Summary of Results & Recommendations**

Figure 11 below summarizes the results from the evaluation of the tenant outreach program and lists the recommendations that have emerged from the evaluation.

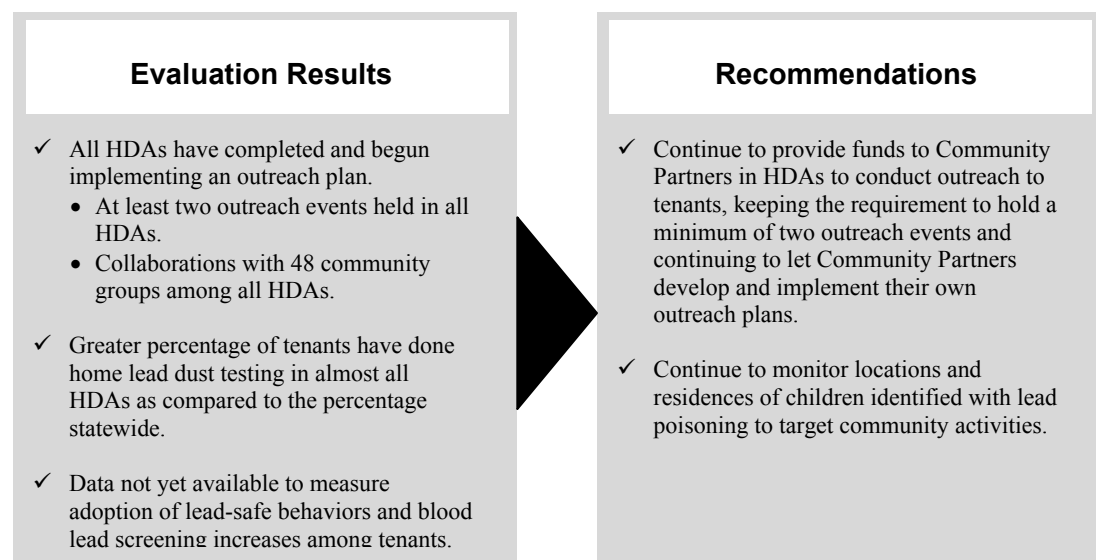


Figure 11: Evaluation results and recommendations for HDA tenant outreach

# Public Health Districts

Organizations in the eight Maine Public Health Districts address lead in communities that are outside of the five high density areas. Community Partners in the Public Health Districts (PHDs) develop, implement and maintain outreach to target audiences to promote lead-safe housing and work with local community groups. Specifically, LPPF funding is used by PHD Community Partners to develop a district-wide outreach plan, provide training and education to staff and hold outreach events.

Outcomes for PHD activities are evaluated using process measures to establish that PHDs are completing the required activities.

The objective of activities in Public Health Districts is to build infrastructure to develop district-level lead expertise.

To reach this objective, two intermediate outcomes, to be accomplished in years 1-5, have been identified.

1. PHDs have local capacity to develop awareness of community needs.
2. Knowledge increases and behaviors change regarding lead hazards, what targeted audience can do, their rights under state law and available resources

Figure 12 depicts the activities, outcomes and evaluation measures associated with Public Health Districts. See the chart of the evaluation plan in Appendix A for more detail on the analyses used to measure these outcomes.

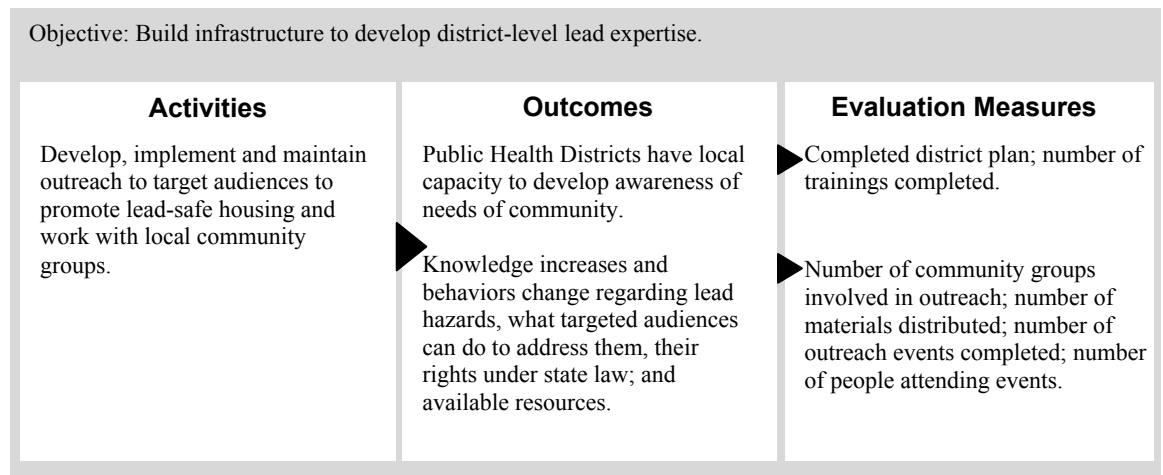


Figure 12: Activities, evaluation measures and outcomes for PHDs

## Results

### 1. PHDs have local capacity to develop awareness of community needs.

A review of the work plans for each district showed that all PHD Community Partners met all contract requirements. These contract requirements were designed to build the Partners' capacity to address the lead poisoning prevention needs in their districts.

Specifically, all PHD Community Partners:

- identified an agency and process to coordinate planning and provide services across the district;
- convened partners to discuss lead poisoning prevention;
- developed an outreach plan;
- had staff attend at least three LPPF-sponsored trainings;
- held at least one outreach event; and,
- implemented and evaluated at least one method of targeted risk communication.

In addition to monitoring PHD Community Partner plans, HHLPPP tracked the number of trainings attended by PHD Community Partner representatives. Trainings were offered in the form of educational webinars on various aspects of lead poisoning prevention, but all tailored to the specific interests of Community Partners. Over the initial 18 months of the community contracts, HHLPPP held eight webinars with an average of 30 participants from PHD and HDA Community Partners.

*See additional details relating to **Webinars** in the Discussion & Supplemental Information section.*

<b>Webinar Title</b>	<b>Approx. # of Participants</b>
Lead 101	45
Lead 102: Lead Hazards in the Home	30
Lead Risk Communication Materials	30
Data Tracking Portal and Lead Website Update	30
Lead Safe Training Courses	18
Lead Poisoning Prevention and the Healthy Homes Model	30
LPPF Evaluation Plan: Data Sources & Reporting Needs	25
Thinking About Lead During a Home Visit	30

Table 3: Titles and approximate number of participants for each webinar offered for Community Partners



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## **2. Knowledge increases and behaviors change regarding lead hazards, what targeted audience can do, their rights under state law and available resources.**

To spread knowledge to communities throughout each district, PHD Community Partners collaborated with over 50 community organizations. Collaborations between these organizations and the PHD Community Partners often resulted in new audiences or channels for outreach events or activities. For example, one Community Partner began providing lead poisoning prevention information and resources to women participating in “*Navigating the Waters of Reentry – Connecting Women Offenders to Economic Security*” Program, and to the Knox County Probation Officer and Program Director of Knox County Jail. Participants in this program represent a hard-to-reach segment of the target audience of parents of young children, as they are typically low income, live in rental housing and have primary custody of their children.

A major focus of the PHD Community Partners’ outreach efforts was the distribution of materials to increase local knowledge about lead poisoning and encourage prevention behaviors. More lead poisoning prevention educational materials are distributed through Community Partners than through any other distribution channel used by LPPF-funded agencies. In the last year over 26,600 pieces of educational material have been distributed by Community Partners. They were disseminated through collaborations with partnering programs (e.g., Head Start, WIC, Housing Authorities, Code Enforcement Officers, Local Health Officers, etc.), targeted mailings, forums, workshops, health fairs and healthy homes classes to name a few. More information about educational materials and their distribution is provided in the section on the Multimedia Campaign.

*See additional details relating to **Educational Materials** in the Discussion & Supplemental Information section.*

In addition to the collaborations with community organizations and materials distribution, PHD Community Partners were required to hold at least one outreach event. In the evaluation period covered by this report, all Partners fulfilled or exceeded this requirement, holding a total of 21 outreach events. The Community Partners were not required in the first year to track the number of people reached by outreach events. Examples of outreach events held by PHD Community Partners include landlord forums on lead-safe housing, Eco-Healthy Home training for childcare providers and parents, presentation to Child Resource Development Centers as well as Head Start parents and staff.

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## **Discussion & Supplemental Information**

### **Community Partner Agreements**

When the Community Partnership agreements were initiated, there was little or no funding for local communities to address lead. Because of this, Community Partners did not have the capacity or local expertise to implement any kind of lead poisoning prevention program. The results of this evaluation show that the LPPF has changed the landscape by providing funding to Community Partners in Maine's Public Health Districts. Now in every part of the state, there is an emerging infrastructure of organizational capacity and expertise on lead poisoning prevention. This greatly expands the ability to reach parents and landlords in targeted ways.

### **Webinars**

A cornerstone of growing capacity and expertise is providing training to local staff. While specific knowledge gain among PHD Community Partner staff was not measured, participation level for each training offered averaged 30 people and proved to be an effective means to provide training on a variety of topics to participants spread throughout the state.

Results from a feedback survey confirm this assessment of webinars. In September 2010, the HHLPPP conducted a survey of Community Partners to assess their satisfaction with the various aspects of the Community Contracts program. The response rate for the survey was 93 percent. Respondents were asked about their satisfaction with the webinars and whether the webinars were a good use of resources. Survey results show a satisfaction rate of at least 86 percent for webinar topics, scheduling, use of technology, and relevance of information. Further, all respondents felt that the webinars were a good use of time and resources, with 79 percent responding that the webinars were a very good use of time and resources.

### **Sharing Summits**

To further build capacity on the local level, HHLPPP instituted bi-annual sharing summits. Although participation in these summits is not required in their contracts, Community Partners from both the Public Health Districts and the High Density Areas gathered to talk about their lead poisoning prevention experiences. The first summit, held in October 2009, drew 18 participants. The second in March 2010, had 28 attendees. The main event of each summit is a roundtable discussion, during which each Community Partner discusses its strategies for achieving program objectives, challenges to success, and inventive tactics developed to complement required contract activities.

Sharing summits have proven to be an invaluable exercise for all agencies and Community Partners funded by the LPPF, as each program and the group as a whole, discuss the design, planning and implementation of lead poisoning prevention programs.

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It is extremely helpful to brainstorm collectively about and compare the inventive approaches taken by each Community Partner. Summits maximize the opportunity for partners to share resources and ideas and avoid duplication of effort.

Results from the Community Partners satisfaction survey illustrate how valuable the summits have been. Respondents were asked to rate their satisfaction with several aspects of the sharing summits, including the format of the event, content covered and learning from others. At least 79 percent of respondents indicated that they were very satisfied with all aspects of the summits.

### **Educational Materials**

In terms of PHD Community Partners increasing knowledge in their communities, it has been greatly impacted by the ability of Partners to distribute educational materials, build collaborations and hold outreach events. Providing materials for Community Partners has been a wise use of resources for several reasons. First, the contracts with Community Partners do not provide enough resources to develop a full portfolio of educational materials. Because HHLPPP provides the materials, Partners do not have to choose between materials production and other outreach activities. Second, by creating and managing the materials for all partners, HHLPPP ensures message and brand consistency throughout the state and prevents duplication of effort. Third, by monitoring the distribution of materials to community partners, HHLPPP is able to evaluate the scope of their dissemination.

The Community Partners feedback survey again indicates a high level of satisfaction with the materials. Respondents were asked to rank their satisfaction with the overall quality of, communication about, and availability of materials. At least 86 percent of respondents were very satisfied on these three measures. Partners indicated slightly lower levels of satisfaction with the availability of materials to meet local needs. Specifically, respondents indicated a need for materials in Spanish and Somali languages.

### **Summary of Results and Recommendations**

Figure 13 below summarizes the results from the evaluation of the Public Health District Community Contracts and lists the recommendations that have emerged from the evaluation.

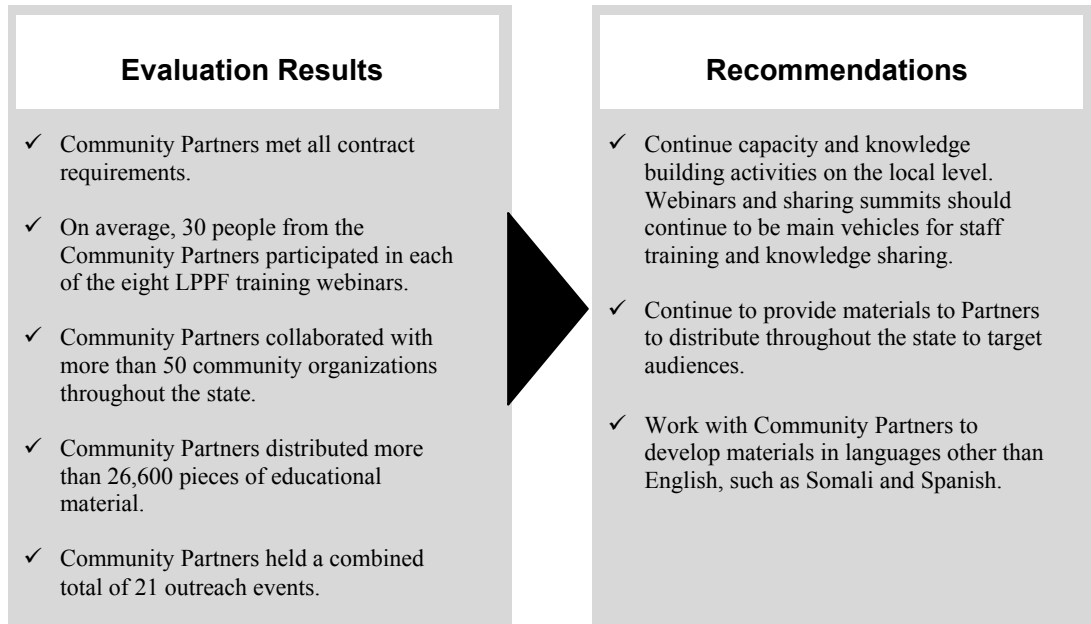
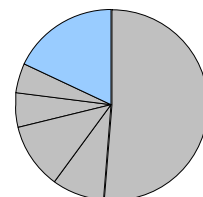


Figure 13: Evaluation results and recommendations for PHDs

# Trainings



## Background

The Lead Poisoning Prevention Fund legislation calls for contracts to support “worker educational outreach programs and funding of educational programs and information for rental property owner.” The Maine Department of Environmental Protection (DEP) receives LPPF funding to offer lead training at no, or reduced charge to Maine residents. The DEP is authorized under U.S. Environmental Protection Agency rules to certify and audit trainers. HHLPPP and DEP are working closely to determine the types of training and delivery locations of courses to best support reaching high-risk properties and community members.

The goal of the training program is to ensure Maine has a workforce that can identify and remediate lead hazards, and make lead safety the standard of care in all properties. HHLPPP and DEP have focused on levels of training that can be most broadly applied and provide service at every level of the housing market.

DEP holds contracts with certified trainers to conduct trainings for landlords, contractors, and homeowners on Lead Smart Renovation (LSR), Renovation, Repair and Painting (RRP), and Essential Maintenance Practices (EMP), as well as Lead Dust Sampling Technician (LDST) and Lead Inspector (LI) training. Table 4 below provides a description of each training and the target audience.

<b>Trainings</b>	<b>Description</b>	<b>Target Audience</b>
<b>Renovation, Repair and Painting</b>	A 1-day course, required for those doing renovation, repair and painting work in pre-1978 housing and child-occupied facilities	Landlords and Property Managers who do their own repairs and renovations on rental units. This course is also offered to contractors.
<b>Essential Maintenance Practices</b>	A ½-day course that teaches landlords how to maintain their pre-1978 residential properties as lead-safe	Landlords who want to learn how to perform routine maintenance to prevent lead hazards
<b>Lead Dust Sampling Technician</b>	A 1-day course that teaches students how to take dust wipe samples to detect lead dust	Individuals who would collaborate with Community Partners as 3rd party testers of lead dust
<b>Lead Inspector</b>	A 4-day course on how to conduct a lead inspection and identify lead hazards, including sampling of paint, dust, soil and water	Professionals seeking to offer Lead Inspection services
<b>Lead Smart Renovation (Replaced by RRP)</b>	A 1-day course on lead-safe work practices	Landlords, contractors and homeowners

Table 4: Description of trainings and targeted audiences

Outcomes for trainings were evaluated largely by tracking data collected about trainings by the DEP. While HHLPPP monitors lead poisoning screening data, it is too early to analyze those data for the time periods during and after the lead-safe trainings. Sufficient data analysis will likely be available in 2011.

In general, findings from the evaluation period covered by this report indicate that lead-safe trainings:

- reached targeted landlords of pre-1950 rental units;
- assisted contractors in receiving their required RRP training; and,
- increased capacity for lead dust testing by third party testers.

The objective for all trainings is: ensure that landlords, contractors and homeowners are able to recognize lead hazards, work safely in environments with lead hazards, and maintain lead safe environments.

To reach this objective, four intermediate outcomes, to be accomplished in years 1-5, have been identified for lead-safe training activities.

1. Landlords participate in trainings.
2. Contractors participate in RRP trainings.
3. Homeowners participate in trainings.
4. Increase in number of trained Lead Dust Technicians and Lead Inspectors.

Figure 14 depicts the activities, outcomes and evaluation measures associated with Trainings. See the chart of the evaluation plan in Appendix A for more detail on the analyses used to measure these outcomes.

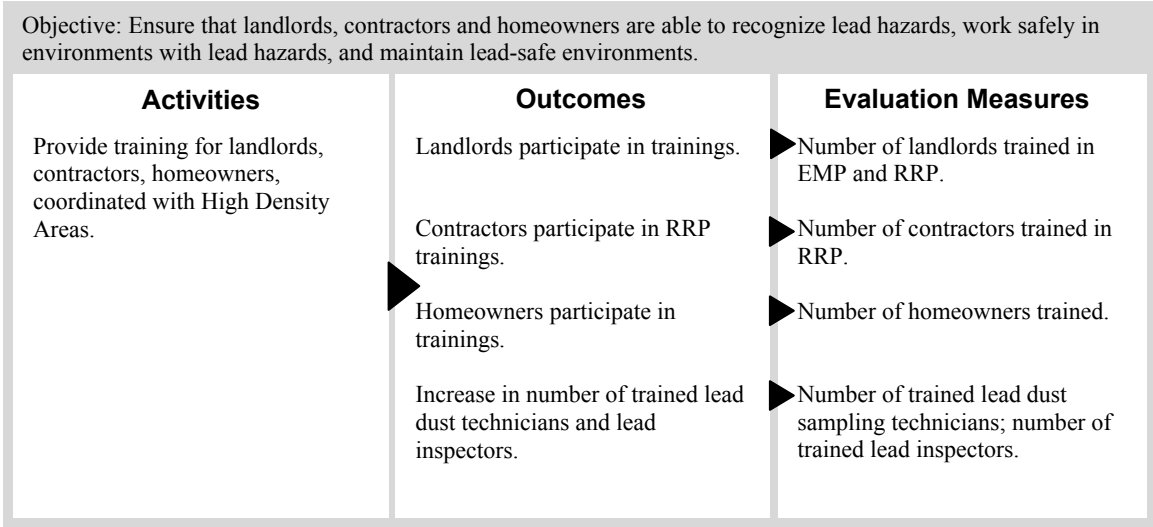


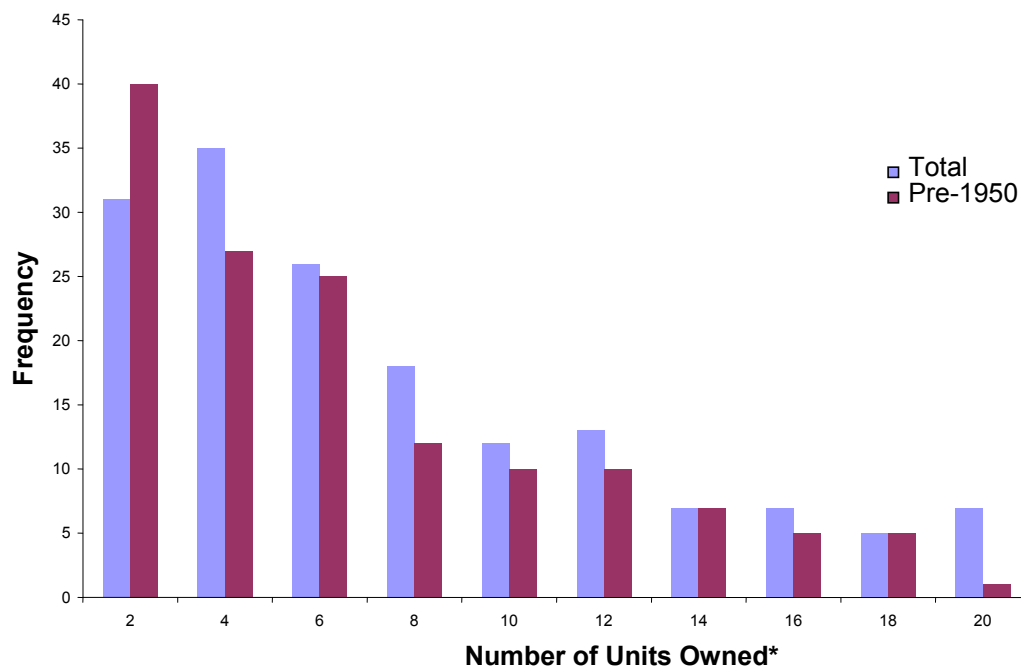
Figure 14: Activities, evaluation measures and outcomes for trainings

## Results

### 1. Landlords participate in trainings.

A total of 105 LPPF-supported RRP classes were given in Maine between October 2009 and July 2010. A total of 370 landlords participated in these trainings. Figure 35 in Appendix D shows the number trained in each Public Health District.

The total number of units managed by attendees was over 2,900; however, the number is most likely higher, as some landlords indicated “100+ units.” Of these 2,900 units, more than 2,150 (74 percent) were pre-1950 units. The attendees managed an average of 15 units each; the median number of units per landlord was 7.5. Of pre-1950 units, the average number of units managed was 11.4 per landlord; the median was 5 units per landlord. Figure 15 suggests that, in general, the landlords participating in the trainings owned buildings with small numbers of units.



\*The numbers of units pre-1950 can be larger than the total per bin because some landlords have multiple buildings (some pre-1950) and the newer units are captured in higher bins

Figure 15: Number of units (<20) per trained landlord

Due to the demand for RRP trainings as well as the low enrollment into the Essential Maintenance Practices course (EMP), the DEP decided to suspend, review and revamp the EMP course. Thus the course was not available during the evaluation period. The new EMP course will be launched in 2011. Part of the development process for the new course will include figuring out the right mix of content, promotion and media to increase the appeal and participation in the course.

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## **2. Contractors participate in RRP trainings.**

LPPF funds supported RRP trainings for 901 contractors. Figure 35 in Appendix D shows how many people were trained by Public Health District.

The RRP course replaced the Lead Safe Renovator (LSR) training in 2010. In addition to the 901 contractors who participated in RRP trainings, 101 contractors participated in LSR classes supported by LPPF funding.

*See additional details relating to **EPA Lead Talks** in the Discussion & Supplemental Information section.*

## **3. Homeowners participate in trainings.**

The training most appropriate for homeowners is the Essential Maintenance Practices course. As is mentioned above, the demand for RRP trainings and low enrollment in EMP courses, caused the DEP to suspend, review and ultimately revamp the EMP course. The course was not available during the evaluation period and no homeowners were trained. The new EMP course will be launched in 2011.

## **4. Increase in number of trained Lead Dust Technicians and Lead Inspectors.**

To increase capacity for lead dust testing by third-party testers, DEP receives LPPF funding to offer free Lead Dust Sampling Technician training courses (LDST). The HDAs have identified a variety of partners from housing authority staff, to town code officers and community-based organizations that can be trained and available to offer the third-party dust testing. These certified technicians can help to support the HDA, as well as the Second Tier Areas, lead dust testing efforts. In the past year, there have been three LDST courses given and a total of 28 people trained. Five more courses will be offered in the coming year.

In addition to the LDST course, DEP receives LPPF funding to offer free Lead Inspectors (LI) training. Licensed LI's help support the HDAs and Second Tier Areas with their lead dust testing program. In the past year there was one refresher LI course given and a total of nine people trained.

## **Discussion & Supplemental Information**

### **Lead Safe Trainings**

The Environmental Protection Agency (EPA) was slow to implement the training of Renovation, Repair and Painting (RRP) instructors. This delayed RRP training statewide



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and caused a backlog of training opportunities. With LPPF funding, DEP contracted with two firms to provide LSR, RRP, EMP, LDST & LI trainings in Maine for fiscal year 2010.

### **RRP Promotion/Vouchers**

All Community Partners have taken advantage of the EPA Renovation, Repair and Painting rule as an opportunity to educate property owners on how to do low-cost, effective maintenance that reduces lead hazards. The Community Partners have been promoting the RRP training as well as offering vouchers that reduce the training fee.

Due to limited funds and DEP can only subsidize through vouchers approximately 600 landlords each year who want to take the RRP training course. Community Partners distributed 274 vouchers to landlords and property managers in fiscal year 2010 (see Figure 35 in Appendix D). All 274 vouchers were redeemed and an additional 96 landlords received free training through LPPF-funded courses (370 in total). Some Community Partners used the vouchers as an incentive to sign up landlords for free lead dust testing or a lead-safe educational event.

### **EPA Lead Talks**

Community Partners in HDAs as well as two of the Second Tier Areas hosted EPA-sponsored RRP events. Rick Reibstein, a former EPA enforcement attorney, made six visits to Maine organized by Community Partners. He explained the RRP and Lead Disclosure rules and the reasons for them. Full compliance with the rules provides substantial liability protection for the landlords and is a significant aspect of lead law. Reibstein explained this in detail, and other reasons why the rules deserve attention and respect. Lead poisoning prevention materials were distributed at all of the events and several were used as recruitment opportunities by the HDAs to enroll landlords into their lead dust testing programs. Representatives of the HHLPPP and the Maine DEP made presentations at most of the events.

### **Occupational Disease Reporting Systems**

In September, the HHLPPP, in collaboration with the Maine CDC Occupational Disease Reporting System (ODRS) and the Maine Department of Labor, sent a promotional postcard to contractors certified under the new RRP rule. With the listing of RRP certified firms on the EPA website, for the first time the ODRS staff had access to a list of companies that would likely need to comply with the requirements of the Occupational Safety and Health Administration (OSHA) Lead in Construction Standard. The OSHA standard regulates the health and safety of employees exposed to lead on their jobs. While there are some worker safety provisions in the RRP rule, the protection requirements of the OSHA standard are more extensive.

With this in mind, the objectives of the postcard were to:

1. educate companies about the employee protection requirements of the OSHA standard;
2. clarify the definition of an employee; and,
3. encourage managers and owners to contact SafetyWorks, a free, confidential OSHA compliance assistance program offered to Maine companies by the Department of Labor.

Postcards were mailed to approximately 593 firms—all those listed on the EPA website as of mid-September. No results from the mailing are available as of yet, but SafetyWorks is tracking contacts and will provide results.

### Summary of Results and Recommendations

Figure 16 below summarizes the results from the evaluation of the trainings and lists the recommendations that have emerged from the evaluation.

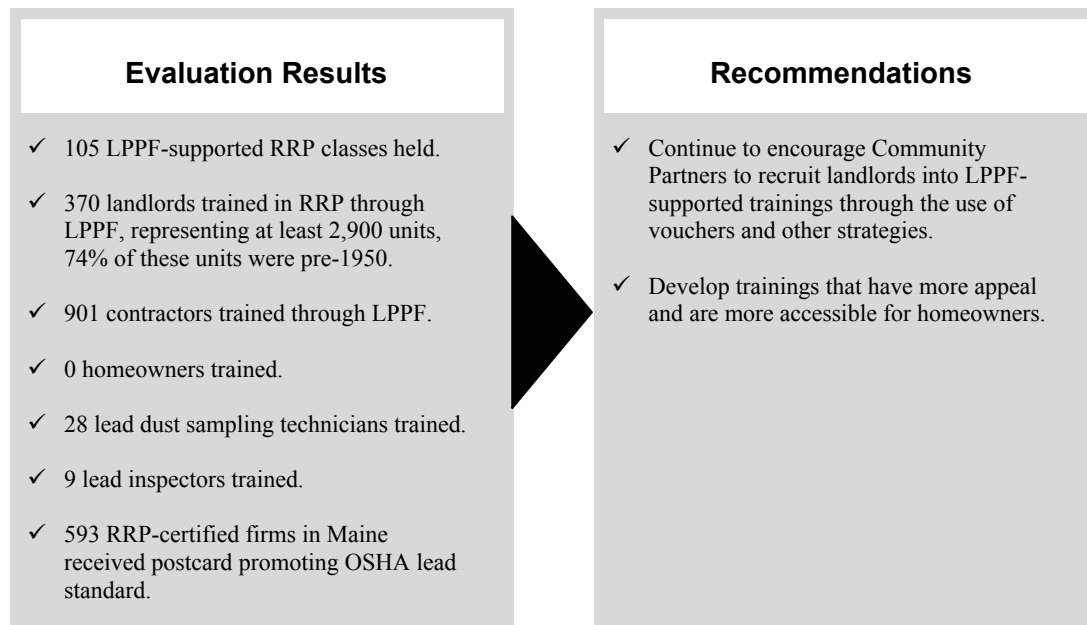
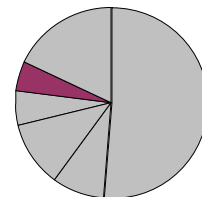


Figure 16: Evaluation results and recommendations for trainings



# Lead Safe Housing Registry

The LPPF legislation calls for the Maine Department of Environmental Protection (DEP) to create a Lead Safe Housing Registry (LSHR) to enable tenants to locate lead-safe housing. DEP receives LPPF funds to develop the LSHR, an online searchable database which property owners can use to list their lead-safe rental properties, and potential tenants can use to locate lead-safe housing.

Outcomes related to the LSHR will be evaluated using process measures that rely on data from the DEP.

The objective of the Lead Safe Housing Registry is to build and populate the LSHR to provide incentives for landlords to engage in lead-safe practices and to enable tenants to identify lead-safe rental units.

To reach this objective, four intermediate outcomes, to be accomplished in years 1-5, have been identified for the LSHR.

1. LSHR is completed.
2. Landlords are aware of and see the value of LSHR.
3. LSHR is populated.
4. LSHR is used by the public to identify lead-safe housing.

Figure 17 depicts the activities, outcomes and evaluation measures associated with the LSHR. See the chart of the evaluation plan in Appendix A for more detail on the analyses used to measure these outcomes.

Objective: Build and populate LSHR to provide incentive for landlords to engage in lead-safe practices and enable tenants to identify lead-safe rental units.		
Activities	Outcomes	Evaluation Measures
Promote landlord registration on Lead-Safe Housing Registry.	LSHR is completed.	▶ LSHR is available for use.
	Landlords are aware of and see the value of the LSHR.	▶ Reports from communities and landlord associations regarding landlord attitudes towards the registry.
	▶ LSHR is populated.	▶ Number and types of homes on LSHR.

Figure 17: Activities, evaluation measures and outcomes for LSHR

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## Results

### 1. LSHR is completed.

The LSHR is not complete but was in development during the evaluation period covered by this report. To date DEP has worked with a web developer who is doing final touches to the site. The next step will be to collaborate with the DEP webmaster to work out the process of launching the website. DEP expects the Lead Safe Housing Registry to be ready for enrollment in 2011.

### 2. Landlords are aware of and see the value of LSHR.

Data are not available at this time to determine if landlords are aware of or see the value of the LSHR. In anticipation of the launch of the registry, however, DEP, HHLPPP and Community Partners encouraged landlords to enroll in the Lead Safe Housing Registry when it comes online.

### 3. LSHR is populated.

Due to the fact that the LSHR is not completed, landlords have not had the opportunity to enroll in the registry.

### 4. LSHR is used by the public to identify lead-safe housing.

Due to the fact that the LSHR is not completed and operational, it is not yet possible to determine if the public uses the registry to identify lead safe housing.

## Summary of Results and Recommendations

Figure 18 below summarizes the results from the evaluation of the trainings and lists the recommendations that have emerged from the evaluation.

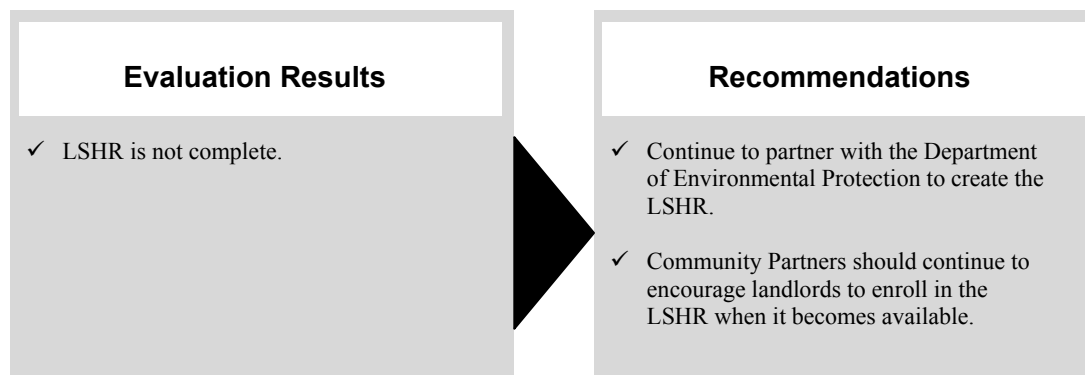
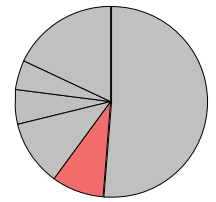


Figure 18: Evaluation results and recommendations for LSHR

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# Environmental Investigations



## Background

The Maine Healthy Homes and Lead Poisoning Prevention Program (formerly called the Maine Childhood Lead Poisoning Prevention Program), funded by the U.S. Centers for Disease Control and Prevention (CDC), has existed within the Maine CDC since 1992. The ultimate goal of the program is the elimination of childhood lead poisoning by preventing lead exposures among young children.

The ongoing mission of HHLPPP is to decrease the morbidity associated with childhood lead poisoning through early identification of lead poisoned children in Maine, and assurance of adequate medical and environmental case management.

## Lead Poisoning Control Act

Maine state law, the “Lead Poisoning Control Act” (Title 22 MRSA, Chapter 252) requires the Maine Department of Health and Human Services (DHHS) to conduct environmental lead investigations in homes where children identified with elevated blood lead levels reside. The law also speaks to preventively testing all units in a multi-unit dwelling if a child in any unit is identified with lead poisoning. These investigations help to identify sources of lead exposure and help landlords and homeowners understand areas in the home that need to be addressed.

## LPPF and Environmental Inspections

A blood lead level equal to or greater than 10 µg/dL is considered elevated; children with elevated blood lead levels are eligible for case management and environmental services. Until the LPPF, these services were limited by available resources. Notably, HHLPPP only had resources to provide full environmental investigations to children with significantly elevated blood lead levels (i.e., above 20 µg/dL or persistently between 15 and 19 µg/dL). For families with children with lower levels, HHLPPP was only able to provide modest support to help them reduce exposures. HHLPPP did not have resources to investigate other units in the building if a child with lead poisoning lived in a multi-unit building.

LPPF funds have allowed HHLPPP to greatly expand its environmental investigations and come closer to meeting its statutory mandate. HHLPPP used LPPF funds to perform investigations for all children with identified blood lead levels between 15 and 19 µg/dL. In addition, LPPF funds have allowed HHLPPP to investigate other units in a building if an investigation has been ordered for one unit.

The objectives of the Environmental Investigations are:

1. Identify lead hazards contributing to the lead poisoning of children.
2. Increase the number of lead safe housing units.

To reach these objectives, two intermediate outcomes, to be accomplished in years 1-5, have been identified for environmental investigation activities.

1. Increase environmental investigation services.
2. Identify, inspect and make lead-safe additional appropriate units located within the same building where the lead poisoning occurred.

Figure 19 depicts the activities, outcomes and evaluation measures associated with environmental investigations.

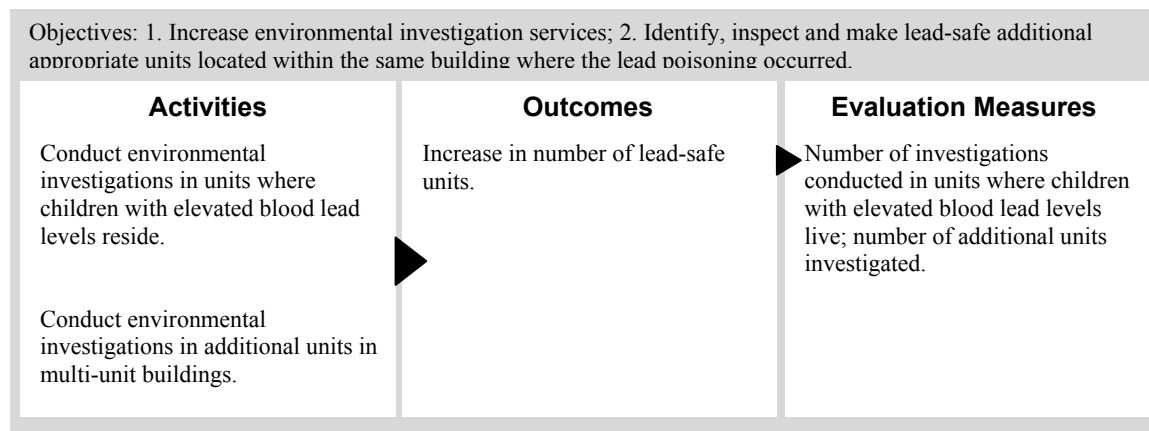


Figure 19: Activities, evaluation measures and outcomes for environmental investigations

## Results

### 1. Increase environmental investigation services.

In 2007, the year prior to receiving LPPF funds, HHLPPP conducted 25 environmental lead investigations. With the infusion of LPPF funding, during the evaluation period, HHLPPP conducted 65 investigations.

### 2. Identify, inspect and make lead safe additional appropriate units located within the same building where the lead poisoning occurred.

In addition to increasing its investigation services, with LPPF funding, HHLPPP expanded its lead investigations in multi-unit buildings when the original unit was determined to have lead hazards. As a result, HHLPPP investigated 50 additional units within 18 buildings. In total, HHLPPP investigated 115 units during the evaluation period.

Based on the investigations of these 115 units, HHLPPP issued orders for abatement for 90 units. Of the remaining 25 units, 18 were privately owned with lead hazards, and seven had no lead hazards. The families who owned their homes received technical assistance and referrals to the local Lead Hazard Control Programs to make their homes safer. In the end, 108 units were identified with hazards and either ordered to be abated in the case of rental units or provided with information and resources in the case of private owners to make those units lead-safe.

### **Discussion & Supplemental Information**

With LPPF resources, HHLPPP was able to identify and provide services to a greater number of families with lead poisoned children. In addition, HHLPPP was able to expand its investigations to other units in a multi-unit building when the original unit was determined to have lead hazards. This has vastly increased the number of lead-safe units through inspection and follow up abatement action.

### **Summary of Results & Recommendations**

Figure 20 below summarizes the results from the evaluation of the Environmental Investigation activities and lists the recommendations that have emerged from the evaluation.

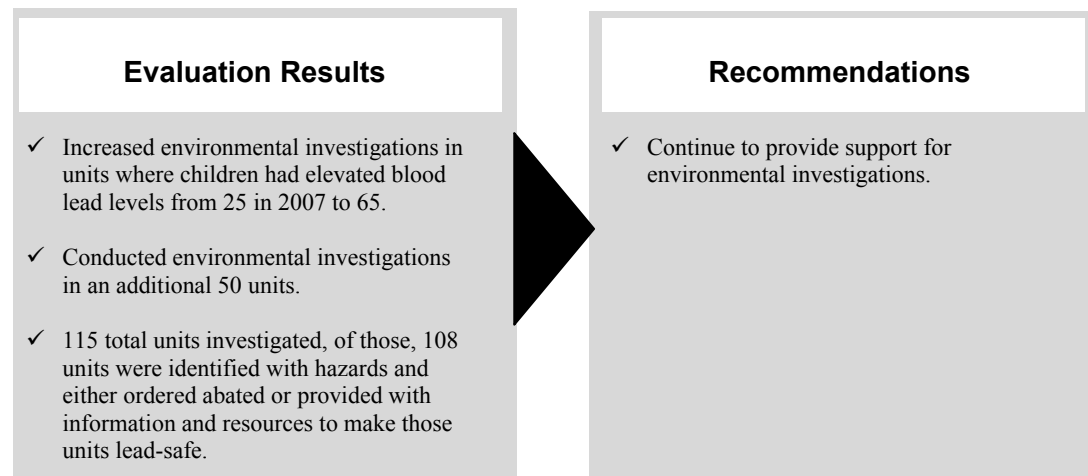
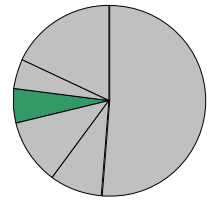


Figure 20: Evaluation results and recommendations for environmental investigations

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# Multimedia Campaign



The Maine Healthy Homes and Lead Poisoning Prevention Program has been conducting a statewide multimedia campaign that includes: 1) brochure distribution, 2) maintenance of a website, 3) maintenance of a toll-free phone number, 4) development and distribution of tipsheets, 5) retail store posters, and 6) press release templates. HHLPPP develops and refines its communication activities through formative research, audience testing and evaluation.

The multimedia campaign is evaluated using only process measures to assess whether information sources are being established by stakeholders, including Community Partners, tenants and landlords. In general findings from the evaluation indicate:

- HHLPPP has established a very good mechanism for distributing educational materials; and,
- HHLPPP has positioned itself as an expert for the media.

The objective of the multimedia campaign is to increase awareness of lead-related issues among multiple audiences and provide resources and access to information.

To reach this objective, six intermediate outcomes, to be accomplished in years 1-5, have been identified for multimedia campaign activities.

1. Website is accessed.
2. Materials, including tipsheets, are accessed and distributed.
3. Development and distribution of hardware store poster.
4. Development and use of press release templates.
5. Public calls State to request additional information.
6. Development and implementation of communication plan.

Figure 21 depicts the activities, outcomes and evaluation measures associated with the statewide multimedia campaign. See the chart of the evaluation plan in Appendix A for more detail on the analyses used to measure these outcomes.



Objective: Increase awareness of lead-related issues among multiple audiences and provide resources and access to information.

Activities	Outcomes	Evaluation Measures
<p>Implement a statewide multi-media campaign, including: a) brochure distribution, b) website, c) toll-free phone number, d) tipsheets, e) retail store posters, and, f) press release templates.</p>	<p>Website is accessed.</p>	<p>▶ Number of hits and page views.</p>
<p>Develop and refine communication plan through formative research, audience testing and evaluation.</p>	<p>Materials (including tipsheets) are accessed and distributed.</p>	<p>▶ Number of downloads; number and types of materials distributed, including distribution routes.</p>
	<p>Development and distribution of hardware store poster.</p>	<p>▶ Number of poster downloads and requests.</p>
	<p>Development and use of press release templates.</p>	<p>▶ Number of news articles</p>
	<p>Public calls for more information.</p>	<p>▶ Number of calls to the toll-free number.</p>
	<p>Development and implementation of plan.</p>	<p>▶ Media evaluation measures; change in nature and scope of media campaign; completed plan.</p>

Figure 21: Activities, evaluation measures and outcomes for statewide multimedia campaign

## Results

### 1. Website is accessed.

HHLPPP launched a new childhood lead poisoning prevention website, [maine.gov/healthyhomes](http://maine.gov/healthyhomes), in August 2009. The new website was designed to be audience-oriented, allowing visitors to quickly identify material relevant to them as parents, providers, homeowners, or landlords, for examples. Content included on the website was created using the principles of plain language and includes comprehensive information and resources on all aspects of lead poisoning for various audience groups.

The HHLPPP has been monitoring the number of hits, page views, and downloads, to measure overall access and to potentially link specific activities to spikes in traffic. While we suspect that the number of people using the website has increased since its launch, we do not have data to support this conclusion. Due to personnel changes in late 2009 at the Maine Office of Information Technology (OIT), no one was maintaining the application that allows state programs to monitor traffic to their websites. The result was an accumulation of unreliable data. The problem has been resolved and we expect to be able to provide an accurate picture of web access moving forward.

*See additional details relating to **Website Tracking** in the Discussion & Supplemental Information section*

## 2. Materials, including tipsheets, are accessed and distributed.

The HHLPPP has developed educational information in the form of tipsheets designed to be easily downloaded from websites or handed out by community groups. The tipsheets cover a range of topics, are tailored to specific audiences, such as parents, landlords, and lead-exposed workers, and are designed so that the audience can quickly and easily take action to prevent lead poisoning. These tipsheets can be viewed and downloaded from the website.

The majority of materials distributed, including tipsheets, are disseminated by Community Partners. In the last year over 26,600 pieces of educational material have been distributed by Community Partners. The targeted mail campaign is another major vehicle for the distribution of prevention materials. Other distribution channels include web downloads, enclosures with lead dust test results, and special events such as health fairs, meetings, community forums and requests by other service agencies. Table 5 below shows the total distribution for each type of material.

	<b>Title</b>	<b>Distribution</b>
<b>Tipsheets</b>	Keeping your Child Away from Lead	4,465
	Lead Poisoning: Sources of Lead	3,064
	Testing your child for lead	3,042
	Cleaning up lead dust	2,944
	Testing my Home for Lead	2,743
	Lead Poisoning Prevention (Brochure w/o offer for free lead dust test)	2,690
	Lead Poisoning Prevention (Brochure with offer for free lead dust test)	1,152
	Keep your child safe from lead	2,210
	Don't take lead home from your work	1,656
	Looking for lead	1,075*
	Get smart about lead paint	244*
	Get the Lead out: Take advantage of unit turnover (for landlords)	41
	Working with lead paint: Laws & Classes	39
	Hire RRP Certified Contractors	0*
	<b>DVDs</b>	Kids Run Better Unleaded (produced in English, Somali & Spanish)
Don't Spread Lead		55
<b>Booklets</b>	Fight Lead Poisoning with a Healthy Diet	120
	Renovate Right	72
	Lead Paint Safety: a Field Guide for Painting	55
	Essential Maintenance for a Lead Safe home	37
	Don't Spread Lead	23

Table 5: Types, titles and total number of materials distributed. \*These tipsheets were not created until June 2010.

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### **3. Development and distribution of hardware store poster.**

Maine's Lead Poisoning Control Act requires that all stores that sell paint or paint removal supplies display a poster that warns customers about the dangers of lead paint that can result from do-it-yourself home projects. The HHLPPP is required to supply the stores with the poster and brochure. To develop this poster campaign, the HHLPPP chose to target parents of young children who live in pre-1978 housing and who are about to undertake a home painting or repair project. The objectives of the campaign are to get these parents to believe that doing home renovation projects in their older homes can put their children at risk for lead poisoning and to get them to conduct home projects using lead-safe work methods.

HHLPPP staff tested the poster and brochure informally to gather qualitative information about the suitability of messages, images and format. The testing phase also included a pilot run of the campaign in 10 Augusta stores. Findings from the pilot campaign provided information to:

- determine the best methods for distributing the posters and brochures;
- develop best practices for dealing with individual stores and corporate personnel;
- and, determine quantities of materials needed to ensure ample supply for all stores.

In addition, the pilot made it clear that the evaluation method planned to measure the campaign's effectiveness would not be feasible. HHLPPP had planned to conduct customer surveys to determine whether the poster and brochure were reaching the target audience and meeting objectives. Among the obstacles to evaluation was lack of staff resources to conduct enough surveys to be able to draw meaningful conclusions, and the unwillingness on the part of the stores to allow HHLPPP staff to survey their customers. Instead, the HHLPPP will rely on activity tracking and store personnel feedback to evaluate how the campaign was run. This type of evaluation is very useful for assessing process methods, however, it is very difficult to measure the campaign's true effectiveness.

The LPPF began the statewide poster campaign in October 2010 and relied heavily on Community Partners to distribute the materials, conduct quality checks and collect feedback among the approximately 375 stores identified as required outlets.

**CAUTION!**  
*If you paint or fix up your house,  
 protect your family from*  
**LEAD PAINT DUST**

**CAUTION!**  
*If you paint or fix up your house,  
 protect your toddler from*  
**LEAD PAINT DUST**

*Will your project put your child at risk?  
 See inside for easy steps to  
 prevent a lead dust problem.*

*Will your project put your child at risk?  
 Take this brochure for easy steps  
 to prevent a lead dust problem.*

[www.maine.gov/healthyhomes](http://www.maine.gov/healthyhomes) • 1-866-292-3474

Maine Center for Disease Control and Prevention  
 an office of the  
 Department of Health and Human Services  
John E. Boudreau, Governor    Patrick W. Morley, Commissioner

Figure 22: Hardware store poster showing placement of brochure display in lower left

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#### 4. Development and use of press release templates.

While LPPF-supported activities had been underway for some time, until August 2010, there had been no major announcement of the efforts to end childhood lead poisoning through primary prevention. On August 24, 2010, the HHLPPP issued a press announcement, using the start of the new Community Partners' contract year as the news focus.

In tandem with the statewide press announcement, Community Partners issued their own announcements about their recent contract awards and the work they have been doing in their local communities to prevent lead poisoning. The objectives of the launch were to call attention to the LPPF, its partners, and its full complement of prevention activities as way to reinforce messages.

In the three weeks following the press announcement, news outlets all over the state printed or broadcast the announcement. Stories appeared in the print and/or online editions of the *Sanford News*, *Bangor Daily News*, *Capital Weekly*, *Villagesoup* and *Sun Journal*. TV stations airing stories included WABI 5, WLBZ 2 and the local Caribou station. Several organizations included the story on their websites and in their newsletters. Through media monitoring, HHLPPP staff recorded 20 unique stories resulting from the announcement.

In addition to the August press announcement, HHLPPP worked with press outlets in conjunction with the April 22, 2011, effective date of the RRP rule. Leading up to the effective date, press outlets all over Maine were running stories about the impact of and reasoning behind the RRP rule. Specifically, two community forums in Bangor and Portland at which Eric Frohberg of the HHLPPP spoke, resulted in stories on MPBN, WCSH 6, WABI 5 and in the *Bangor Daily News* and the *Kennebunk Post*.

As part of its effort to support its Community Partners' outreach efforts and maintain consistency and accuracy of messages, the HHLPPP developed three draft template articles. Community Partners completed these stories with quotes and information specific to their local community and organization and placed them in newsletters, on websites, and in other local media outlets. The three topics developed this year were: 1) testing homes for lead, 2) testing children for lead and 3) maintenance practices for landlords.

Tracking where these stories are used is not always possible, because they are not always placed in indexed media outlets that show up through media monitoring tools. Also many media markets cross state-designated HDAs and PHDs. However, a survey of Community Partners indicated:

- 30% used the article on testing kids;
- 46% used the article on testing homes;
- 53% used the article for landlords;
- And 25% did not use any of the articles.

This survey also showed that the Community Partners overwhelmingly think that the template articles are a high quality and useful resource. HHLPPP will continue to develop new articles and modify existing ones for use by Community Partners.

Below is the number of events (i.e., articles, PSAs, interviews, slide-shows, etc.) in various media (i.e., newspapers, radio, public access cable, online news, movie theaters, etc.) generated and reported by Community Partners within each Public Health District.

**PHD Number of Events**

Midcoast	17
Aroostook	13
Penquis	9
Western	4
York	4
Central	3
Cumberland	3
Downeast	1

*See additional details relating to **Community Partners Media Outreach** in the Discussion & Supplemental Information section.*

**5. Public calls state to request additional information.**

The number of calls placed to toll-free phone lines hosted by HHLPPP and DEP generated from any of the media events, mailings or announcements was less than 10. It is not clear why there have been so few calls, but possible explanations include:

- an overall decrease in use of conventional telephone lines and increased use of the internet as methods for information seeking;
- messages and topics lack saliency for the target audience, despite findings from audience testing;
- materials and announcements provided sufficient information and direction for action so that follow-up phone calls were unnecessary.

Despite the small number of calls, HHLPPP and DEP will continue to use toll-free phone lines that are hosted by each agency. LPPF funds are not used to support the costs of

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these toll-free lines (which are heavily used by other programs in each agency), and they represent good will to target audience members.

## **6. Development and implementation of communication plan.**

HHLPPP is in the process of developing a communication plan that will include formative research on current primary prevention activities and target audiences. Based on this formative research, the outreach plan will also provide measurable objectives and strategies for reaching target audiences through appropriate and effective channels and plans for evaluating specific activities. The plan is expected to be completed in the winter of 2010-2011 and will serve as a guiding document for the LPPF-funded agencies and Community Partners.

## **Discussion & Supplemental Information**

### **Website Tracking**

It was unfortunate that website tracking data were unreliable during most of the evaluation period. Much of the material that has been developed is designed to drive individuals to the website for information, and currently it is impossible to evaluate the effectiveness of that strategy. We will be monitoring this moving forward.

### **Community Partner Media Outreach**

It is clear that Community Partners are an effective channel for the distribution of lead poisoning prevention materials. Community Partners also contribute to the multimedia campaign in ways that extend beyond distribution of tipsheets and other collateral materials. A few notable examples of these multi-media initiatives include:

- Community Partners in the Biddeford/Saco and Greater Portland areas designed and produced lead poisoning prevention advertisements for the Cinemagic Theatres in Saco and Westbrook. The ads ran for 13 weeks, playing at least once before every movie, for a total of over 600 ads per week, per theatre.
- The Community Partner in the Aroostook Public Health District developed a radio public service announcement (PSA), promoting the RRP rule and lead-safe trainings. Lead poisoning prevention PSAs were also aired in York, Penquis, Midcoast and Central Districts.

### **RRP and the Media**

The RRP provided a unique opportunity to maximize press coverage of the lead poisoning issue and position HHLPPP as the go-to source for information on childhood lead poisoning. HHLPPP managed to take advantage of the press surrounding the issue to

emphasize lead poisoning prevention and promote the lead dust testing initiatives of the High Density Areas.

### Summary of Results and Recommendations

Figure 23 below summarizes the results from the evaluation of the multimedia campaign and lists the recommendations that have emerged from the evaluation.

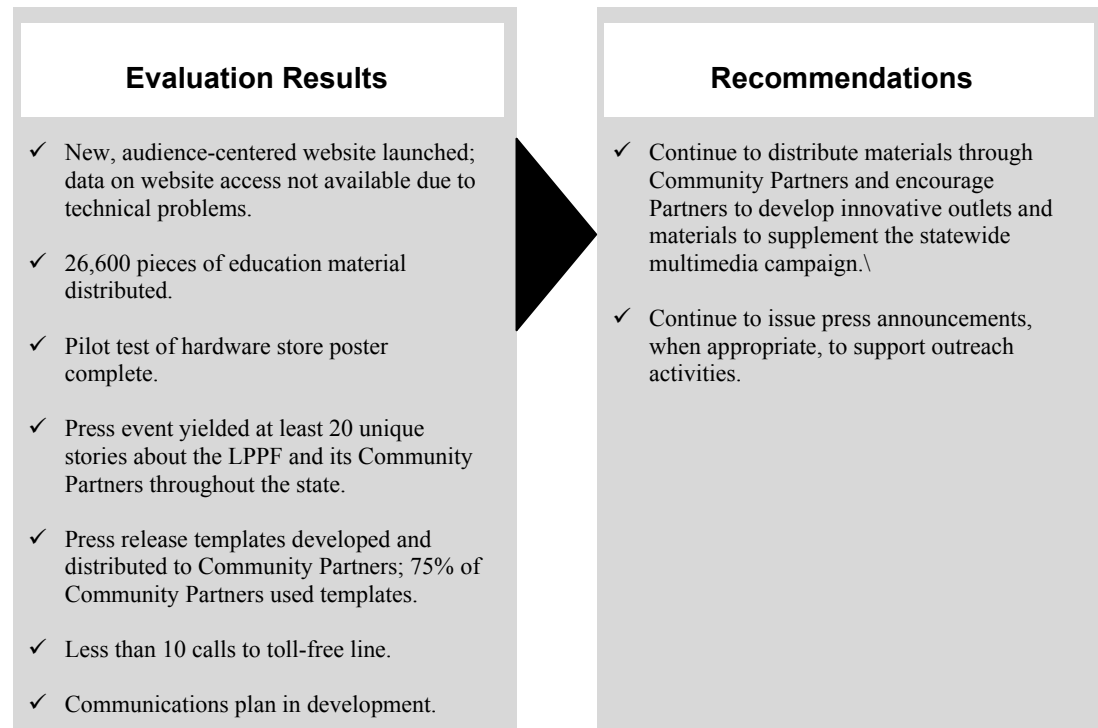
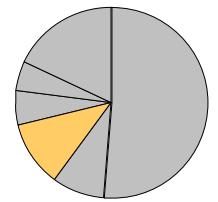


Figure 23: Evaluation results and recommendations for the multimedia campaign





# Targeted Mailings

## Background

The LPPF legislation also requires that targeted educational mailings be sent to families with children that occupy dwellings built prior to 1978 with culturally appropriate information on the health hazards of lead, the identification of lead sources, actions to take to prevent lead exposure and the importance of screening children for lead poisoning. Armed with this mandate, the HHLPPP developed a direct mail campaign that began arriving in mailboxes in fiscal year 2010, bringing lead poisoning prevention information to more families throughout the state than ever before.

To maximize the effect of the direct mail campaign, HHLPPP staff with the help of communications experts further defined the target audience for the mailing as parents of 1- and 2-year-olds living in Maine. Messages were then created and tested with groups and individual members of the target audience. From this formative research, HHLPPP developed a mailer to meet the objectives of: creating parental awareness of the risks of household lead exposure; increasing environmental health knowledge and proactive behaviors; and increasing screening and detection of household lead exposure.

There were two versions of the mailer; both offering the same lead poisoning prevention information, but only one offering a free lead dust test (LDT) kit. The two versions were used in different ways to reach the same objectives and therefore have been evaluated separately in order to parse results between them. Each was evaluated using process and outcomes measures to determine effects on the preventive behaviors.



Figure 24: Front covers of mailers; left with test kit offer, right without offer

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Detailed results, discussion and recommendations from the evaluation of the targeted mailings with and without a lead dust test kit offer follow. In general, findings from the evaluation period covered by this report indicate that the LPPF targeted mailings:

- are more successful when they include an offer for a free lead dust test kit;
- should be continued with modifications aimed at increasing the number of home lead dust test kits returned for analysis and evaluated further when screening data become available.

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# Targeted Mailing

## Without Lead Dust Test Kit Offer

In the fall of 2009, HHLPPP began the direct mail campaign by sending the mailer without the offer for a free lead dust test kit to more than 20,000 families in all areas of the state except the five high density areas. In addition to the direct mailings, HHLPPP gave a total of 5,500 mailers to Community Partners in the public health districts to distribute through various channels and nearly 7,000 more copies to obstetrics practices throughout the state.

The mailer contains compelling, yet limited, information on lead poisoning prevention and a reply card that parents can use to request more information on topics such as blood lead testing, lead-safe renovation or repair, other sources of lead, take-home lead, and testing for lead in the home. To evaluate the mailing, HHLPPP tracks several process measures related to the distribution of and response to the mailing, as well as outcome measures using analysis of rates of blood lead screening.

The objectives of the mailing are:

1. Create parental awareness of the risks of household lead exposure;
2. Increase environmental health knowledge and proactive behaviors;
3. Increase screening and detection of household lead exposure in Maine.

To reach these objectives, three intermediate outcomes, to be accomplished in years 1-5, have been identified for the mailing.

1. Parents obtain lead safety information.
2. Screening rates increase.
3. Interest in home testing increases.

Figure 25 depicts the activities, outcomes and evaluation measures associated with the targeted mailing without the offer for a free lead dust test kit. See the chart of the evaluation plan in Appendix A for more detail on the analyses used to measure these outcomes.

Objectives: 1. Create parental awareness of the risks of household lead exposure; 2. Increase environmental health knowledge and proactive behaviors; 3. Increase screening and detection of household lead exposure in Maine.

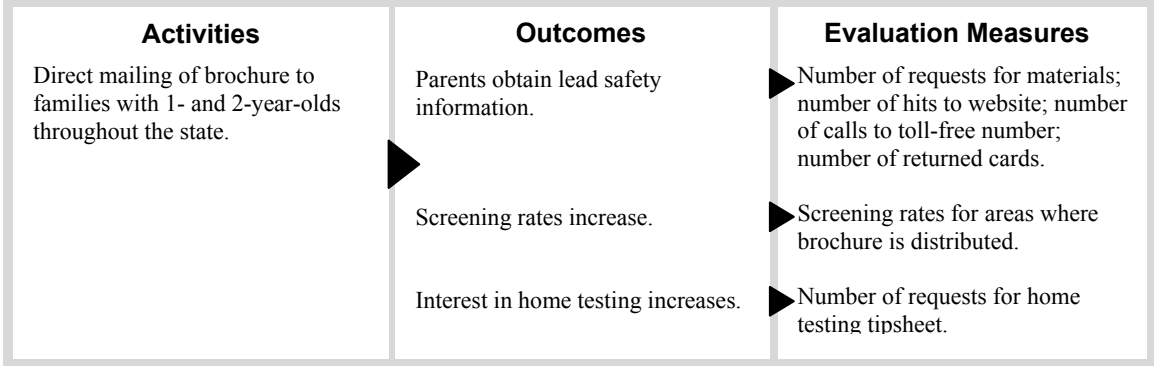


Figure 25: Activities, evaluation measures and outcomes for targeted mailing without free LDT

## Results

### 1. Parents obtain lead safety information.

To measure whether or not parents obtained lead safety information, HHLPPP tracked the response rate of the mailing, number of requests for each type of material offered in the mailing, website hits and phone calls for more information. The mailer was sent directly to 20,500 households in October 2009. By the end of February, 2010, 140 families had returned the reply card for a response rate attributable to the direct mailing of 0.7 percent. Beginning in February, HHLPPP began distributing the additional 5,500 mailers to Community Partners and 6,800 to obstetrician offices. An additional 18 cards were returned between March and September 2010 for a total of 158 returned cards.

Through the reply cards, parents requested 501 tipsheets with the breakdown as shown in Table 6.

Tipsheet	Number Requested
Having My Home Inspected for Lead	123
Other Sources of Lead	118
Don't Spread Lead (Lead-Safe Renovation)	103
Testing My Child for Lead	101
Don't Take Lead Home	56

Table 6: Number of requests for each tipsheet offered to parents through direct mailing without offer for free home lead dust test

Data on website traffic, hits, page views and downloads that may have come from the brochure are not available due to the problems within the Maine Office of Information Technology previously discussed in this report, and only three people called the toll-free number in response to receiving the brochure.



Figure 26: Reply card for targeted mailing without offer of free lead dust test kit

## 2. Screening rates increase.

While HHLPPP monitors childhood blood lead screening data, it is too early to analyze those data for the time periods during and after the targeted mailings. Sufficient data analysis will likely be available in 2011.

## 3. Interest in home testing increases.

To gauge interest in testing homes for lead, HHLPPP tracks requests for the tipsheet on this topic. Table 6 shows that 123 households out of the 158 that returned the reply card requested the tipsheet on testing in the home. Because this was the initial mailing, HHLPPP does not have a baseline to determine if this number of requests represents an increase in interest on this topic. Further, the number of requests is too small to warrant an analysis of the location of the households requesting the information.

## Discussion & Supplemental Information

### Response Rates

While the mailer was tested and tailored very specifically to the target audience, the response rate of 0.7 percent was disappointing and well below industry benchmarks for

successful direct mail campaigns of 3 to 5 percent. HHLPPP does not have a clear understanding of why the response rate was so low, nor does it have the resources to conduct the research needed to determine why the mailing did not elicit a higher response rate. However, results in the following section of this report from the targeted mailing with the offer for a free lead dust test kit show that the direct mail campaign can succeed and that the low response rate was likely due to a lack of offer of an incentive.

### **OB/GYN Offices**

The mailer without the offer for a free lead dust test kit was not continued as a direct mail campaign beyond the initial mailing to 20,500 households. The mailer is still used as an informational brochure by Community Partners and obstetrician offices. HHLPPP also distributes the mailer through displays in DHHS service offices. The mailer without the offer for a free lead dust test kit seems to be appropriate for use in these and other instances where the audience is less well defined and general information is needed.

### **Summary of Results and Recommendations**

Figure 27 below summarizes the results from the evaluation of the targeted mailing without the offer for a free lead dust test kit and lists the recommendations that have emerged from the evaluation.

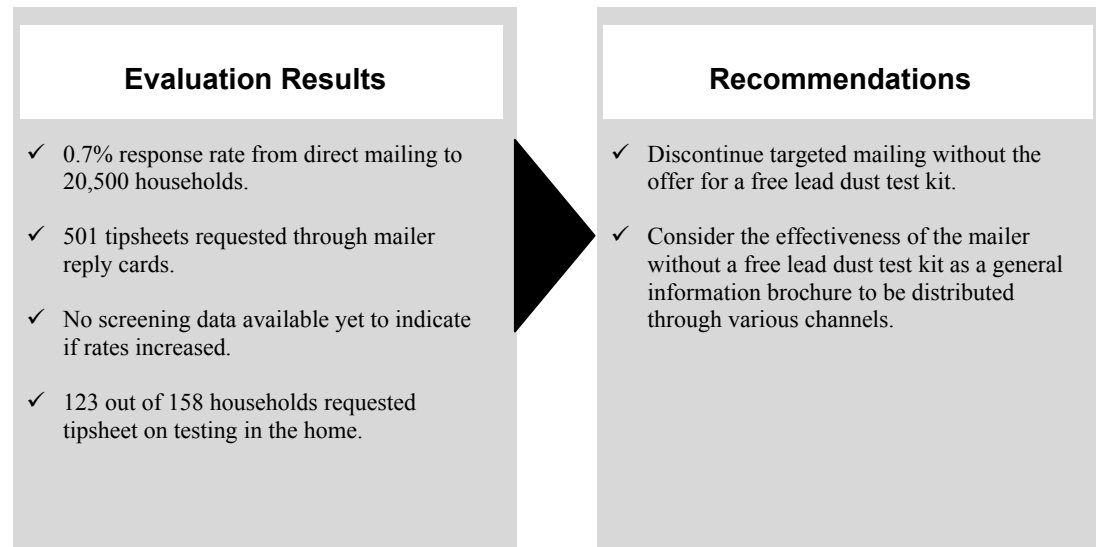


Figure 27: Evaluation results and recommendations for targeted mailing without offer for a free lead dust test kit

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# Targeted Mailing

## With Lead Dust Test Kit Offer

In November 2009, HHLPPP mailed nearly 4,000 brochures with an offer of a free lead dust test kit to parents in the Greater Portland, Sanford and Biddeford/Saco areas to test the effectiveness of such a mailing. The response rate for this test mailing was just over 4 percent, far surpassing the response rate of the larger targeted mailing without the offer for a free lead dust test kit. Based on this successful test, HHLPPP staff decided to initiate another statewide direct mailing, this time with the offer for a free lead dust test kit and including families in the five high density areas.

The mailer with the offer for a free lead dust test kit is nearly identical to the mailer without the offer. The difference is that recipients may use the reply card to request a free lead dust test kit in addition to requesting the information offered in both mailers on topics such as blood lead testing, lead-safe renovation or repair, other sources of lead, take-home lead and testing for lead in the home.

The evaluation results reported below refer primarily to the statewide mailing with the offer for the free lead dust test kit. When appropriate, data from the November 2009 test mailing are included. To evaluate the mailing, HHLPPP tracked several process measures related to the distribution of and response to the mailing, as well as the outcome measures using analysis of results of home testing and rates of blood lead screening.

The objectives of the mailing are:

1. Create parental awareness of the risks of household lead exposure;
2. Increase environmental health knowledge and proactive behaviors;
3. Increase screening and detection of household lead exposure in Maine.

To reach these objectives, five intermediate outcomes, to be accomplished in years 1-5, have been identified for the mailing.

1. Parents obtain lead safety information.
2. Screening rates increase.
3. Interest in home testing increases.
4. High levels of lead dust are identified.
5. Parents implement practices to reduce lead dust, e.g., cleaning and encouraging landlord follow-up.

Figure 28 depicts the activities, outcomes and evaluation measures associated with the targeted mailing with the offer for a free lead dust test kit. See the chart of the evaluation plan in Appendix A for more detail on the analyses used to measure these outcomes.

Objectives: 1. Create parental awareness of the risks of household lead exposure; 2. Increase environmental health knowledge and proactive behaviors; 3. Increase screening and detection of household lead exposure in Maine.

Activities	Outcomes	Evaluation Measures
Direct mailing of brochure to families with 1- and 2-year-olds throughout the state.	Parents obtain lead safety information.	▶ Number of requests for materials; number of hits to website; number of calls to toll-free number; number of returned cards.
Direct distribution of brochure through community contracts.	Screening rates increase.	▶ Screening rates for areas where brochure is distributed.
	▶ Parents perform lead dust testing.	▶ Number of lead dust tests requested from return postcards; number of LDTs submitted by tenants.
	Lead dust hazards are identified.	▶ Proportion of tenants that identify lead dust hazards through testing; results of returned lead dust tests.
	Parents implement practices to reduce lead hazards, e.g., cleaning, encouraging landlord to follow up.	▶ Results of pre- and post-lead dust tests of those classified tier 2 and 3.

Figure 28: Activities, evaluation measures and outcomes for targeted mailing with an offer for a free lead dust test kit

## Results

### 1. Parents obtain lead safety information.

To measure whether or not parents obtained lead safety information, HHLPPP tracked the response rate of the mailing, number of requests for each type of material offered in the mailing, website hits and phone calls for more information.

Beginning in May and ending in late June, HHLPPP sent out mailers with the offer of the free LDT to 25,338 parents of 1- and 2-year-olds. As of August 31, 2010, 892 households had returned the reply card, for a 3.5 percent response rate. In July, Community Partners received copies, for a total of 5,500 additional brochures, to disseminate through their local contacts. *See additional details relating to **Response Rates** in the Discussion & Supplemental Information section.*



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Through the reply cards, parents requested 2,354 tipsheets with the breakdown as shown in Table 7.

<b>Tipsheet</b>	<b>Number Requested</b>
Other Sources of Lead	665
Testing My Child for Lead	513
Don't Spread Lead (Lead-Safe Renovation)	477
Having My Home Inspected for Lead	462
Don't Take Lead Home	232

Table 7: Number of requests for each tipsheet offered to parents through direct mailing with offer for free home lead dust test

Data on website traffic, hits, page views, and downloads that may have come from the mailer are not available due to the problems within the Maine Office of Information Technology previously discussed in this report, and less than 10 people called the toll-free number in response to receiving the brochure.

## **2. Screening rates increase.**

While HHLPPP monitors childhood blood lead screening data, it is too early to analyze those data for the time periods during and after the targeted mailings. Sufficient data analysis will likely be available in 2011.

## **3. Parents perform lead dust testing.**

As of August 31, 2010, of the 892 households that returned the reply card, 853 requested a lead dust test kit. Of those requesting a test kit, 131 (15.4 percent) returned the kit for analysis.

HHLPPP was also interested in tracking the number of test kits completed by tenants and found that more than one-third of kits were returned by parents identifying themselves as tenants. Among tenants conducting home lead dust testing, 37 percent identified high levels of lead dust. In comparison, among homeowners conducting home lead dust testing, only 14 percent identified high levels of lead dust. A high level of lead dust was defined as a lead concentration greater than 29  $\mu\text{g}/\text{ft}^2$  for samples taken on floors or greater than 224  $\mu\text{g}/\text{ft}^2$  for samples taken on window sills. *See additional details relating to **Request for LDT Kits** in the Discussion & Supplemental Information section.*

Table 8 shows the variation of response rates across counties and public health districts of those households requesting kits and those returning kits for analysis.

District/County	# Kit Requests	# Kits Returned	Return Rate	# With High Dust	% With High Dust
Aroostook					
Aroostook	50	6	12%	0	0
Central					
Kennebec	139	30	22%	1	3%
Somerset	31	4	13%	1	25%
Cumberland					
Cumberland	318	83	26%	14	17%
Downeast					
Hancock	45	14	31%	7	50%
Washington	19	3	16%	1	33%
Midcoast					
Knox	35	3	9%	2	66%
Lincoln	21	1	5%	0	0
Sagadahoc	30	4	13%	2	50%
Waldo	28	5	18%	2	40%
Penquis					
Penobscot	110	16	15%	5	31%
Piscataquis	10	1	10%	0	0
Western					
Androscoggin	114	23	20%	6	26%
Franklin	17	5	29%	2	40%
Oxford	44	10	23%	2	20%
York					
York	142	25	18%	6	24%

Table 8: Geographic distribution by public health district and county of requests for and results from LDT kits. Data used in this table represents kits analyzed through November 1, 2010.

The geographic analysis of the requests for test kits and completion of test kits shows where to apply additional resources to encourage higher return rates, although the variation of results across regions may be due to the small number of results available.

Results showing that more tenants in HDAs have done home lead dust testing are not surprising. It is possible that efforts by HDA Community Partners have helped to get the brochures offering free lead dust test kits directly into the hands of tenants living in high-risk housing. It is also likely that in these HDAs there is a greater proportion of rental housing than in the rest of the state therefore there would be more tenants in these populations.

There is a considerable gap between the number of LDT kits ordered and those analyzed. Though industry direct mail response rate benchmarks for success are usually between 3 and 5 percent, HHLPPP staff would like to increase the number of kits returned for

analysis as a measure of how many families are taking an actionable step towards preventing lead poisoning. Until screening data become available, testing results are the only indicator of behavior change related to lead poisoning prevention available to the HHLPPP.

#### 4. High levels of lead dust are identified.

Through both the fall test and spring targeted mailings, 34 households were identified as having high levels of lead dust, as of August 31, 2010.

These families were instructed in how to mitigate the risk and live lead-safe in their home. And while it is still too early to fully analyze screening data from the periods before and after the targeted mailings, HHLPPP was able to track how many children had blood lead tests from the households that identified lead dust.

Of the 34 homes with high levels of lead dust, phone contact was made with 30 families. Those 30 families included a total of 46 children. Of those children, 14 had follow-up blood lead testing, as shown in Figure 29. Parents of the 32 children who did not have their blood tested reported good reasons (e.g., their children were 4 months old and not yet walking).

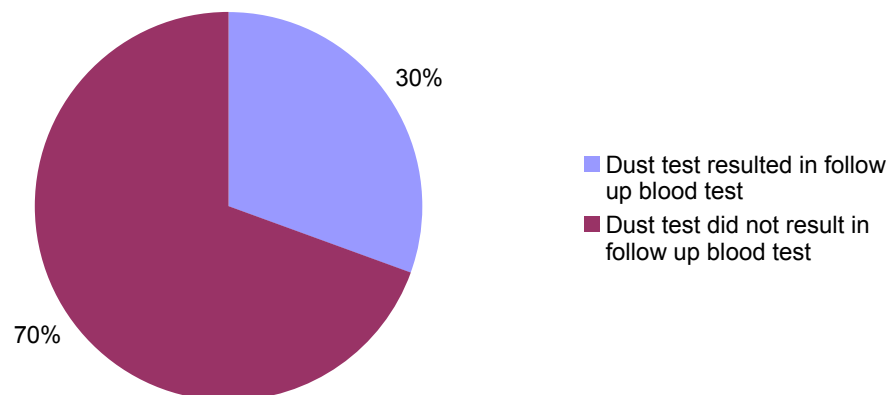


Figure 29: Follow-up blood lead tests in children living in homes where high levels of lead dust were identified through the targeted mailings

Of those children who were tested, all blood lead tests were below the action level of 10  $\mu\text{g}/\text{dL}$  and most of those children were below the detection limit of 5  $\mu\text{g}/\text{dL}$ . *See additional details relating to **Blood Lead Testing** in the Discussion & Supplemental Information section.*

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## **5. Parents implement practices to reduce lead dust, e.g. cleaning, encouraging landlord to follow up.**

HHLPPP categorizes lead dust identified from this lead dust testing program as either moderate or high. Results are called moderate if either floor sample is between 30 and 80  $\mu\text{g}/\text{ft}^2$ , or if the window sill sample is between 225 and 400  $\mu\text{g}/\text{ft}^2$ . High results are those with floor samples above 80  $\mu\text{g}/\text{ft}^2$  or window samples above 400  $\mu\text{g}/\text{ft}^2$ . Of the 34 households identified as having too much lead dust, 11 were moderate and 23 were high.

All households identified with too much lead dust through the LPPF targeted mailing are sent tailored information on addressing lead dust in the home and a recommendation to check the blood lead levels of the children in that home. LPPF calls households with high results to help families determine the source of lead dust, talk through ways to address problems, and determine if an environmental investigation is needed. LPPF was able to make contact with 30 families, referring only one for environmental investigation. Results of the environmental investigation and follow-up testing are not available yet.

## **Discussion & Supplemental Information**

### **Response Rates**

The brochure with the offer of a LDT created more response than the one without the free offer. For the same audience the response rate was 3.5 percent for brochures with kits and less than 1 percent for those without kits. The beneficial byproduct was not just the number of LDT kits ordered but the large number of tipsheet requests that were generated by those that responded to the LDT offer (2,352 vs. 501). As a vehicle for educational material distribution, the offer of the fee LDT has proven to be far superior to the information-only mailer.

### **Phone Survey**

To understand why so few households that had requested lead dust test kits had not returned their kits for analysis, HHLPPP staff conducted a very small telephone survey. Survey responses indicated that finding the time and remembering to do the test after receiving the kit in the mail were the biggest barriers to returning the kit.

Based on this survey and prior experience with direct mail campaigns, in March HHLPPP sent reminder postcards to 131 families who had received a kit as part of the fall test mailing but had not yet returned it for analysis. In May, LPPF sent a second mailing of 124 reminder postcards. After being prompted by the two follow-up postcards, approximately 16 additional kits were submitted for analysis; a near doubling of the number of kits returned from 17 to 33. Based on these results, HHLPPP incorporated reminder postcards into the implementation plan of the targeted mailing that began in the

spring. Figure 30 below shows the effect of the postcards on the number of test kits returned for analysis.

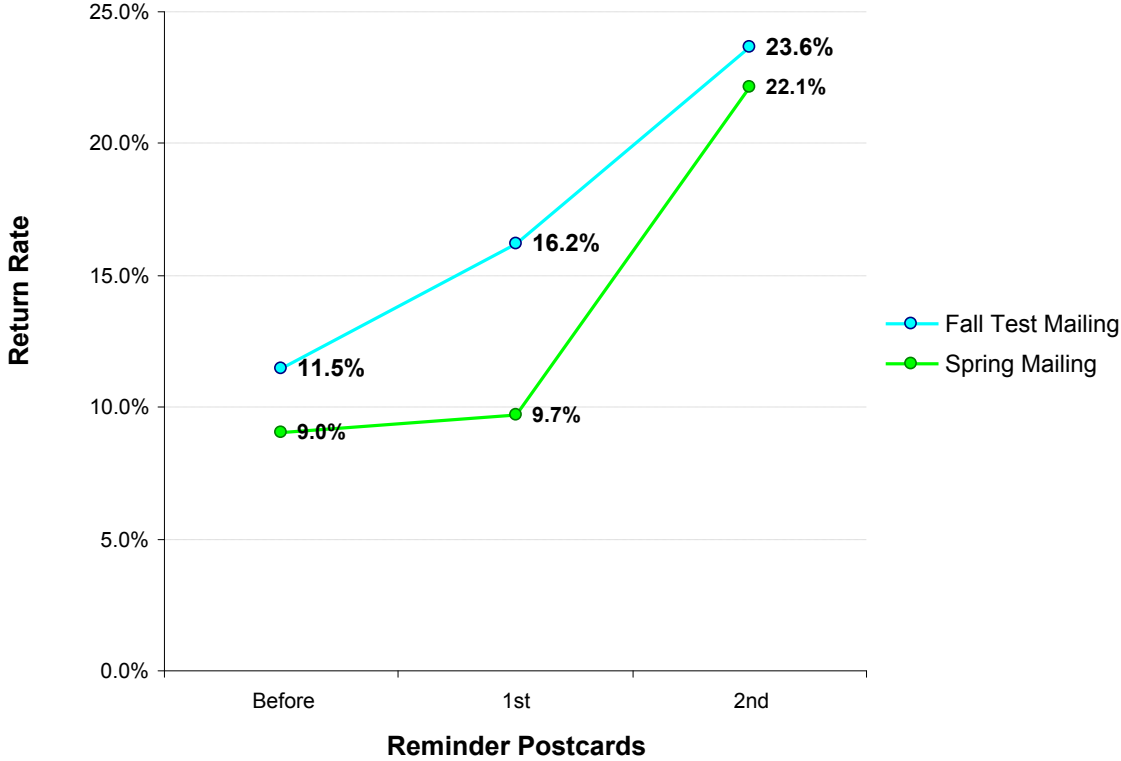


Figure 30: Return rate increases after reminder postcards; the spring return rates represented in this figure show only those households that had received both reminder postcards as of August 31, 2010, and not the total return rate.

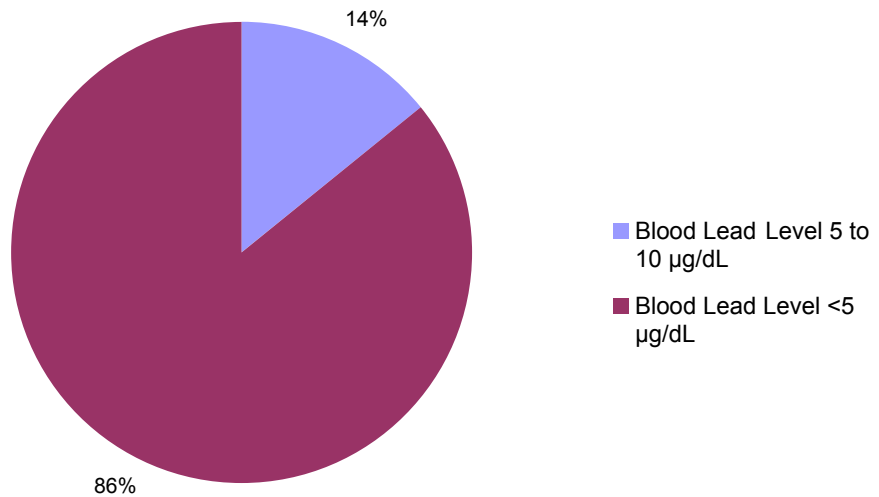


Figure 31: Blood lead test results of those children tested

### **Blood Lead Testing**

Of the 34 elevated lead dust test results, three were in response to a child being identified as having an elevated blood lead result (i.e., the child had a blood test before the home lead dust test was performed). Finally, there was one location where a child was identified through normal screening with an elevated blood lead level, yet the lead dust test kit indicated low levels of lead dust in those locations tested.

### **Lead Dust Testing Program**

Drawing conclusions about the results of the home lead dust testing is difficult because of two concerns:

1. Families are provided with instructions on how to perform dust wipe testing, but are given no training. Therefore sampling could be done incorrectly that would affect the analysis of results.
2. HHLPPP has no way to distinguish between reply cards that were returned from families that received the brochure through the mail and those that were given the brochure by a Community Partner. Further, HHLPPP has no way of knowing how many brochures Community Partners actually distribute directly to a member of the targeted audience. For this reason, HHLPPP uses only the total number of brochures mailed to households to determine response rates. The actual number of brochures distributed could be up to 5,500 more.

As the program moves forward there is great potential to help many more families alleviate their lead dust hazards. The home lead dust testing program represents a shift from addressing lead dust problems after a child is identified with lead poisoning to a true primary prevention model of mitigating potential dust problems before a child is identified and helping families prevent lead dust hazards from occurring in the first place.

### Summary of Results and Recommendations

Figure 32 below summarizes the results from the evaluation of the targeted mailing with the offer for a free lead dust test kit and lists the recommendations that have emerged from the evaluation.

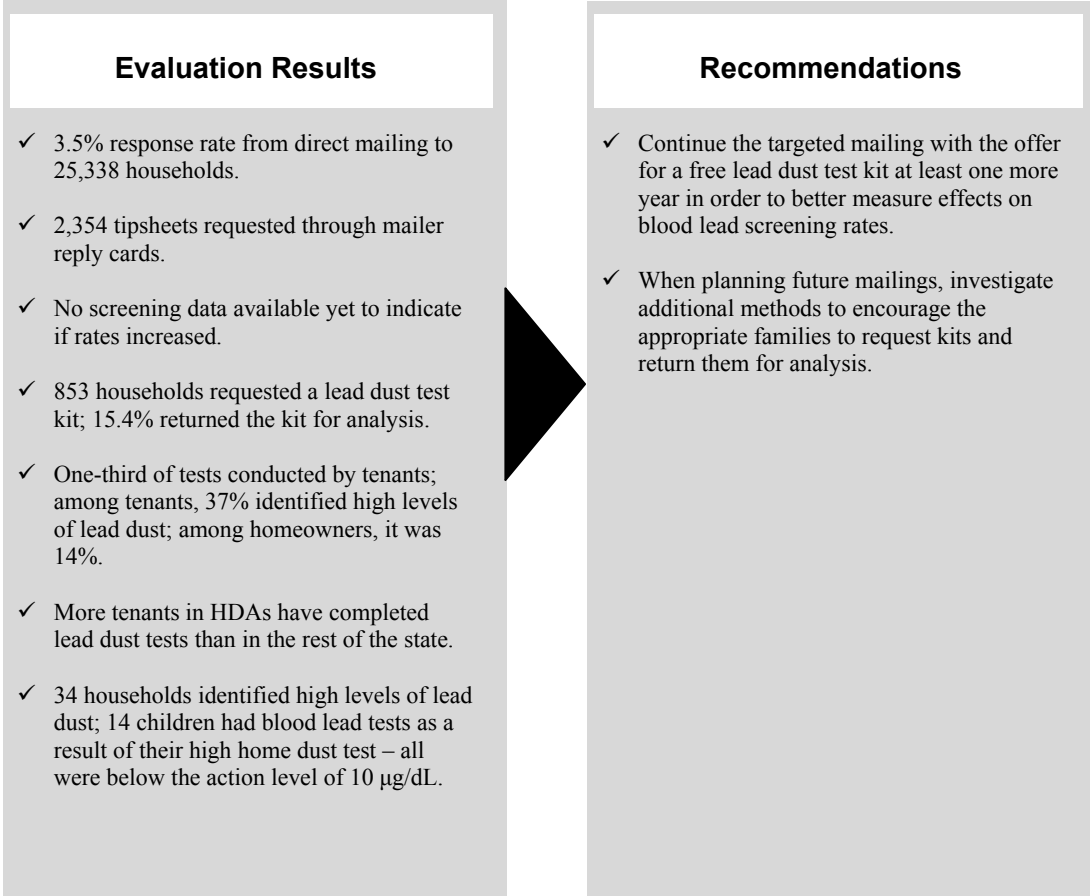


Figure 32: Evaluation results and recommendations for targeted mailing with the offer for a free lead dust test kit

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## Conclusion

Taken as whole, the results from this first evaluation period reveal three principal conclusions. First, the evaluation results are helping to determine what activities are working well, what activities should be discontinued and how to modify activities to improve outcomes. And while many of the results from these early stages of activities reflect purely process measures, they are important building blocks that can help put the LPPF in the best possible position to reach health outcome objectives.

Second, because of the resources made available by the LPPF, Maine has established a strong model for community-based lead poisoning prevention through the Healthy Maine Partnerships. For example, the evaluation revealed that developing strong partnerships with HMPs expands the reach of lead poisoning prevention activities to far more people through outreach events, educational materials and community collaborations.

Finally, with the infusion of primary prevention resources from the LPPF, Maine is breaking new ground and finding success in getting into homes to identify and address lead dust concerns before any children are harmed. Through the dust testing in rental units and targeted mailings as well as the environmental investigations—all supported by LPPF resources—lead dust testing occurred in nearly 500 units throughout the state during the evaluation period. The testing in these units found more than 150 units with lead dust problems without first finding a child with lead poisoning.

From these conclusions, and as more lead poisoning data become available, the agencies that use LPPF resources will continue to adapt activities and prioritize resources to improve outcomes so that Maine moves closer and closer to the elimination of lead poisoning in the state.





# Appendix A: Charts of Evaluation Plan

HIGH DENSITY AREAS - LANDLORD OUTREACH					
OBJECTIVES					
1. Targeted landlords are knowledgeable regarding lead hazards, landlord responsibilities, state responsibilities, and available resources; 2. Targeted landlords are able to take advantage of available resources					
ACTIVITY					
Develop, Implement and Maintain Educational Outreach and Trainings for Landlords to Promote Lead Safe Housing					
OUTCOME	DATA	DATA PROVIDER	FREQUENCY AND TRANSMITTAL OF DATA	EVALUATION ANALYSIS	RESPONSIBLE ENTITY
INTERMEDIATE OUTCOMES					
1. HDA-HMPs plan and implement ongoing outreach activities targeting landlords of pre-1978 units	Completed HDA Plan	HDA Lead Agency	HDA Quarterly Reports	Review of plan: 1) Are requirements of contract met? 2) Is follow-up discussion with partner needed?	LPPF
2. HDA-HMPs host at least 2 outreach events each year	Number of outreach events completed	HDA Lead Agency	HDA Quarterly Reports	Compile number of outreach events, a) quarterly and b) cumulative for fiscal year	LPPF
	Number of landlords attending events	HDA Lead Agency	HDA Quarterly Reports	Compile number of landlords attending, a) quarterly and b) cumulative for fiscal year	LPPF
3. HMPs collaborate with other community groups to reach landlords	Number of community groups involved in working with landlords	HDA Lead Agency	HDA Quarterly Reports	Compile number of community groups: name, description of type, description of collaboration	LPPF
4. Targeted landlords complete EMP / RRP courses	Number of trainings offered	DEP Training	Quarterly DEP Training Report to LPPF	1) Compile number and type of trainings offered a) quarterly and b) cumulative for fiscal year 2) Compile number and type of trainings by HDA 1) quarterly and b) cumulative for fiscal year	LPPF
	Number of landlords trained	DEP Training	Quarterly DEP Training Report to LPPF	1) Compile number of landlords attending training, a) quarterly and b) cumulative for fiscal year 2) Zip code for units owned by trained landlords 3) Match landlord zip code to census tracts/HDA 4) Compile number of trained landlords by HDA a) quarterly and b) cumulative for fiscal year	LPPF/ (Mapping)
5. Trained landlords perform EMP in at risk units at turnover as confirmed by lead dust testing	Number and location of LDTs submitted for pre/post EMP testing	HDA Lead Agency	HDA Quarterly Reports	1) Compile results of pre- and post-unit turnover LDT tests 2) Determine whether landlords participating in testing at unit turnover completed training 3) Match LDT results to training status 4) Compare results of LDT tests for trained landlords vs. untrained landlords	LPPF

5. (continued)	Number of trained landlords performing EMP at unit turnover	HDA Lead Agency	HDA Quarterly Reports	1) Compile results of pre- and post-unit turnover LDT tests 2) Determine whether landlords participating in testing at unit turnover completed training 3) Match LDT results to training status 4) Compare results of LDT tests for trained landlords vs. untrained landlords	LPPF
6. Landlords register units with LSHR	LSHR is operational	DEP LSHR	One time measure	1) Document date that LSHR is active	LPPF
	Number of units on LSHR	DEP LSHR	Quarterly DEP Report to LPPF	Compile number of units on LSHR a) quarterly, b) cumulative for fiscal year and c) current total	LPPF
<b>HIGH DENSITY AREAS - TENANT OUTREACH</b>					
<b>OBJECTIVES</b>					
1. Targeted tenants are knowledgeable about lead hazards, their options, rights and available resources					
2. Tenants are able to make use of available resources to prevent and address lead hazards					
<b>ACTIVITY</b>					
<b>Develop, Implement and Maintain Outreach to Tenants To promote Lead Safe Housing; Work with Local Community Groups</b>					
<b>OUTCOME</b>	<b>DATA</b>	<b>DATA PROVIDER</b>	<b>FREQUENCY AND TRANSMITTAL OF DATA</b>	<b>EVALUATION ANALYSIS</b>	<b>RESPONSIBLE ENTITY</b>
<b>INTERMEDIATE OUTCOMES</b>					
1. HDA-HMPs complete and implement an outreach plan	Completed HMP outreach plan	HDA Lead Agency	HDA Quarterly Reports	Review of plan: 1) Are requirements of contract met? 2) Is follow-up discussion with partner needed?	LPPF
2. HDA-HMPs host at least 2 events	Number of outreach events completed	HDA Lead Agency	HDA Quarterly Reports	1) Compile number of outreach events completed, a) quarterly and b) cumulative for fiscal year 2) Describe events	LPPF
	Number of tenants reached	HDA Lead Agency	HDA Quarterly Reports	Compile number of tenants attending, a) quarterly and b) cumulative for fiscal year	LPPF
	Number of materials distributed	HDA Lead Agency	HDA Quarterly Reports	1) Number and type of materials distributed a) quarterly and b) cumulative for fiscal year 2) Distribution mechanism	LPPF
3. HDA-HMPs collaborate with community groups	Number of community groups involved in working with tenants	HDA Lead Agency	HDA Quarterly Reports	Compile number of community groups: name, description of type, description of collaboration	LPPF
4. Tenants Perform Lead Dust Testing	Number of lead dust tests requested from return postcards	LPPF Database	Monthly Download from LPPF Database	1) Number of LDT kit requests via returned postcard, by region	LPPF
5. Tenants implement practices to reduce lead hazards, e.g. cleaning, encouraging landlord to follow up	Number of LDTs submitted by tenants	HETL Lead Dust Test Data	Weekly HETL Data	1) Number of unduplicated tests submitted, by region, a) weekly and b) cumulative for quarter and fiscal year	LPPF
	Proportion of tenants that identify lead dust hazards through testing	HETL Lead Dust Test Data	Weekly HETL Data	1) Lead dust test results, by region	LPPF

	Results of pre and post lead dust tests of those classified tier 2 & 3	HETL Lead Dust Test Data	Annual HETL Data	1) Number of tier 2 and 3 units identified 2) Results of Environmental Investigation 3) Results of post-investigation LDTs	LPPF
6. Tenants have their children screened for blood lead	Number of children screened in High Density Areas	CLPPP-CLPPP Surveillance Data	Annual Report Submitted to LPPF	Number of children screened statewide and by region annually	LPPF
	Counts and rates of EBLLs associated with identified units	CLPPP	Download from Surveillance Database	Crosscheck EBLLs by positive units	LPPF

PUBLIC HEALTH DISTRICTS					
OBJECTIVE					
Build Infrastructure to Develop District-Level Lead Expertise					
ACTIVITY					
Develop, Implement and Maintain Outreach to Target Audiences to Promote Lead Safe Housing and Work With Local Community Groups					
OUTCOME	DATA	DATA PROVIDER	FREQUENCY AND TRANSMITTAL OF DATA	EVALUATION ANALYSIS	RESPONSIBLE ENTITY
INTERMEDIATE OUTCOMES					
1. PHDs have local capacity to develop awareness of needs of community	Completed District plan	District Lead Agency	District Quarterly Reports	Review of plan: 1) Are requirements of contract met? 2) Is follow-up discussion with partner needed?	LPPF
	Number of trainings completed	District Lead Agency	District Quarterly Reports	1) Number and type of trainings attended by District representatives, a) quarterly and b) cumulative for fiscal year	LPPF
2. Knowledge increases and behaviors change regarding lead hazards, what targeted audience can do to address them, their rights under state law, and available resources	Number of community groups involved in outreach	District Lead Agency	District Quarterly Reports	Compile number of community groups: name, description of type, description of collaboration	LPPF
	Number of materials distributed	District Lead Agency	District Quarterly Reports	1) Number and type of materials distributed a) quarterly and b) cumulative for fiscal year 2) Distribution mechanism	LPPF
	Number of outreach events completed	District Lead Agency	District Quarterly Reports	Compile number of outreach events, a) quarterly and b) cumulative for fiscal year	LPPF
	Number of people attending events	District Lead Agency	District Quarterly Reports	Compile number of people attending, a) quarterly and b) cumulative for fiscal year	LPPF

TRAININGS OFFERED THROUGH THE DEPARTMENT OF ENVIRONMENTAL PROTECTION					
<b>OBJECTIVE</b> Ensure that landlords, contractors and homeowners are able to recognize lead hazards, work safely in environments with lead hazards, and maintain lead safe environments <b>ACTIVITY</b> Provide Training for Landlords, Contractors, Homeowners (Homeowner Lead-Smart Renovation, RRP, Essential Maintenance Practices, Lead Dust Sampling Technician & Lead Inspector) - Coordinated with High Density Activities					
OUTCOME	DATA	DATA PROVIDER	FREQUENCY AND TRANSMITTAL OF DATA	EVALUATION ANALYSIS	RESPONSIBLE ENTITY
<b>INTERMEDIATE OUTCOMES</b>					
1. Landlords participate in trainings	Number of landlords trained in EMP Number of landlords trained in RRP	DEP Training	Quarterly DEP Training Report to LPPF	1) Compile number of landlords attending training, a) quarterly and b) cumulative for fiscal year	LPPF
2. Contractors participate in RRP trainings	Number of contractors trained in RRP	DEP Training	Quarterly DEP Training Report to LPPF	1) Number of contractors trained a) quarterly and b) cumulative by fiscal year	LPPF
3. Homeowners participate in trainings.	Number of homeowners trained	DEP Training	Quarterly DEP Training Report to LPPF	1) Number of homeowners trained a) quarterly and b) cumulative by fiscal year	LPPF
4. Increase in number of trained Lead Dust Technicians and Lead Inspectors	Number of trained LDSTs	DEP Training	Quarterly DEP Training Report to LPPF	1) Compile number of individuals completing training, a) quarterly and b) cumulative for fiscal year	LPPF
	Number of trained LI	DEP Training	Quarterly DEP Training Report to LPPF	1) Compile number of individuals completing training, a) quarterly and b) cumulative for fiscal year	LPPF
<b>LEAD SAFE HOUSING REGISTRY</b>					
<b>OBJECTIVE</b> Build and Populate LSHR to Provide Incentive for Landlords to Engage in Lead Safe Practices and Enable Tenants to Identify Lead Safe Rental Units <b>ACTIVITY</b> Promote landlord registration on Lead Safe Housing Registry (LSHR)					
OUTCOME	DATA	DATA PROVIDER	FREQUENCY AND TRANSMITTAL OF DATA	EVALUATION ANALYSIS	RESPONSIBLE ENTITY
<b>INTERMEDIATE OUTCOMES</b>					
1. LSHR is completed	LSHR is available for use	DEP LSHR	One time measure	1) Document date that LSHR is active	LPPF
2. Landlords are aware of and see the value of LSHR	Reports from communities and Landlord Association regarding landlord attitudes towards the registry	HDA/District Lead Agency	HDA Quarterly Reports/District Quarterly Reports	Evaluate narrative regarding landlord attitudes	LPPF
3. LSHR is populated	Number and types of homes on LSHR	DEP LSHR	Annual DEP LSHR Report to LPPF	1) Number of units registered 2) Type of units registered	DEP
4. LSHR is used by the public to identify lead-safe housing	Hits to LSHR	DEP LSHR	Annual DEP LSHR Report to LPPF	Number of hits a) quarterly and b) cumulative for fiscal year	DEP

STATEWIDE MEDIA CAMPAIGN					
<b>OBJECTIVE</b> Increase awareness of lead-related issues among multiple audiences and provide resources and access to information <b>ACTIVITIES</b> 1. Implement a statewide multimedia campaign, including a) brochure distribution, b) website, c) toll-free phone number, d) tipsheets, e) retail store posters, and f) press release templates 2. Develop and refine communication plan through formative research, audience testing and evaluation					
OUTCOME	DATA	DATA PROVIDER	FREQUENCY AND TRANSMITTAL OF DATA	EVALUATION ANALYSIS	RESPONSIBLE ENTITY
INTERMEDIATE OUTCOMES					
1. Website is accessed	Number of hits and page views	CLPPP-CLPPP Tracking - Web	Quarterly	Compile number of hits and downloads, a) monthly and b) cumulative for fiscal year	CLPPP
	Number of downloads	CLPPP-CLPPP Tracking - Web	Quarterly	Compile number of hits and downloads, a) monthly and b) cumulative for fiscal year	CLPPP
2. Materials (including tipsheets) are accessed and distributed	Number and types of materials distributed, including distribution routes - downloads, requests, partners	CLPPP-CLPPP Tracking - Calls	Quarterly-Environmental Coordinator's Database	Compile number of materials requested, total and by region, a) quarterly and b) cumulative for fiscal year	CLPPP
3. Development and distribution of hardware store poster	Number of poster downloads and requests	CLPPP-CLPPP Tracking - Web	Quarterly	Compile number of posters and downloads, total and by region, a) quarterly and b) cumulative for fiscal year	CLPPP
4. Development and use of press release templates	Number of news articles	HDA/District Lead Agency	HDA Quarterly Reports/District Quarterly Reports	Compile number of press releases by District and HDA used a) quarterly and b) cumulative for fiscal year	CLPPP
5. Public calls for more info	Number of calls to toll-free number	CLPPP-CLPPP Tracking - Calls	Quarterly-Environmental Coordinator's Database	Compile number of calls, a) quarterly and b) cumulative for fiscal year	CLPPP
6. Development and implementation of plan	Media evaluation measures	LPPF Media Team	Review every 3 years	Updated every 3 years	CLPPP/LPPF
	Change in nature and scope of media campaign	LPPF Media Team	Review every 3 years	Evaluation and documentation of changes in plan	CLPPP/LPPF
	Completed plan	LPPF Media Team	Review every 3 years	Updated every 3 years	CLPPP/LPPF

**TARGETED MAILING - NO LEAD DUST TESTS**

**OBJECTIVES**

- 1. Create parental awareness of the risks of household lead exposure**
- 2. Increase environmental health knowledge and proactive behaviors**
- 3. Increase screening and detection of household lead exposure in Maine**

**ACTIVITY**

**Direct Mailing of Brochure to Families of 1 and 2 Year Olds Throughout State**

<b>OUTCOME</b>	<b>DATA</b>	<b>DATA PROVIDER</b>	<b>FREQUENCY AND TRANSMITTAL OF DATA</b>	<b>EVALUATION ANALYSIS</b>	<b>RESPONSIBLE ENTITY</b>
<b>INTERMEDIATE OUTCOMES</b>					
1. Parents obtain lead safety information	Number of requests for materials	CLPPP-CLPPP Tracking - Tip Sheets	Quarterly	Compile number of materials requested, total and by region, a) quarterly and b) cumulative for fiscal year	LPPF
	Number of hits to website	CLPPP-CLPPP Tracking - Web	Monthly	Compile number of hits and downloads, a) monthly and b) cumulative for fiscal year	LPPF
	Number of calls to toll-free number	CLPPP-CLPPP Tracking - Calls	Quarterly-Environmental Coordinator's Database	Compile number of calls, a) quarterly and b) cumulative for fiscal year	LPPF
	Number of returned cards	LPPF Database	Quarterly Download from LPPF Database	Compile number of returned cards, total and by region, a) quarterly and b) cumulative for fiscal year	LPPF
2. Screening rates increase	Screening rates for areas where brochure is distributed	CLPPP-CLPPP Surveillance Data	Annual Report Submitted to LPPF	Number of children screened statewide and by region annually, divided by total number of children residing in State/region; match regions to those where brochure has been distributed	LPPF
3. Interest in home testing increases	Number of requests for home testing tipsheet	CLPPP-CLPPP Tracking - Tip Sheets	Quarterly	1) Compile number of tipsheets requested a) quarterly and b) cumulative for fiscal year 2) Match number to region where brochure is distributed	LPPF

**TARGETED MAILING - WITH LEAD DUST TESTS KIT OFFER**

**OBJECTIVES**

1. Create parental awareness of the risks of household lead exposure
2. Increase environmental health knowledge and proactive behaviors
3. Increase screening and detection of household lead exposure in Maine

**ACTIVITIES**

1. Direct Mailing of Brochure to Families of 1 and 2 Year Olds Throughout State
2. Direct Distribution of Brochure Through Community Contracts

<b>OUTCOME</b>	<b>DATA</b>	<b>DATA PROVIDER</b>	<b>FREQUENCY AND TRANSMITTAL OF DATA</b>	<b>EVALUATION ANALYSIS</b>	<b>RESPONSIBLE ENTITY</b>
<b>INTERMEDIATE OUTCOMES</b>					
1. Parents obtain lead safety information	Number of requests for materials	CLPPP-CLPPP Tracking - Tip Sheets	Quarterly	Compile number of materials requested, total and by region, a) quarterly and b) cumulative for fiscal year	LPPF
	Number of hits to website	CLPPP-CLPPP Tracking - Web	Monthly	Compile number of hits and downloads, a) monthly and b) cumulative for fiscal year	LPPF
	Number of calls to toll-free number	CLPPP-CLPPP Tracking - Calls	Quarterly-Environmental Coordinator's Database	Compile number of calls, a) quarterly and b) cumulative for fiscal year	LPPF
	Number of returned cards	LPPF Database	Quarterly Download from LPPF Database	Compile number of returned cards, total and by region, a) quarterly and b) cumulative for fiscal year	LPPF
2. Increased screening rates	Screening rates for areas where brochure is distributed	CLPPP-CLPPP Surveillance Data	Annual Report Submitted to LPPF	Number of children screened statewide and by region annually, divided by total number of children residing in State/region; match regions to those where brochure has been distributed	LPPF
3. Parents Perform Lead Dust Testing	Number of lead dust tests requested from return postcards	LPPF Database	Monthly Download from LPPF Database	1) Number of LDT kit requests via returned postcard, by region	LPPF
	Number of LDTs submitted by tenants	HETL Lead Dust Test Data	Weekly HETL Data	1) Number of unduplicated tests submitted, by region, a) weekly and b) cumulative for quarter and fiscal year	LPPF
	Proportion of tenants that identify lead dust hazards through testing	HETL Lead Dust Test Data	Weekly HETL Data	1) Lead dust test results, by region	LPPF
4. Lead dust hazards are identified	Results of returned lead dust tests	HETL Lead Dust Test Data	Weekly HETL Data	Compile number of positive lead dust tests a) quarterly and b) cumulative for fiscal year	LPPF
5. Parents implement practices to reduce lead hazards, e.g. cleaning, encouraging landlord to follow up	Results of pre and post lead dust tests of those classified tier 2 & 3	HETL Lead Dust Test Data	Annual HETL Data	1) Number of tier 2 and 3 units identified 2) Results of Environmental Investigation 3) Results of post-investigation LDTs	LPPF



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## Appendix B: Community-Based Partners In High Density Areas

### **PORTLAND HIGH DENSITY AREA**

East Bayside Neighborhood Organization  
Minority Health Program  
Parkside Neighborhood Organization  
Maternal Child Health Program  
Head Start  
People Regional Opportunity Program (PROP)  
Healthy Maine Partnerships in Cumberland County  
Public Health Nursing  
Catholic Charities Maine

### **LEWISTON/AUBURN HIGH DENSITY AREA**

Lewiston Auburn Landlord Association  
University of Maine Cooperative Extension  
Catholic Charities Maine  
United Somali Women of Maine  
City of Lewiston  
City of Auburn  
Lewiston Housing Authority  
Auburn Housing Authority  
Advocates for Children  
St. Mary's Nutrition Center/Lots to Gardens  
Community Concepts Inc  
Lewiston Housing Authority (Section 8)  
Auburn Housing Authority (Section 8)

### **SANFORD HIGH DENSITY AREA**

Sanford/Springvale Landlord Coalition  
Sanford Housing Authority  
Town of Sanford  
Strategies for a Stronger Sanford  
Head Start  
WIC  
Safe-Schools Healthy Students  
Sanford Adult Ed/Families READ Program  
Healthy Families

### **SACO/BIDDEFORD HIGH DENSITY AREA**

Women, Infants & Children (WIC)  
Head Start  
Community Concepts  
Code Enforcement (Saco & Biddeford)  
Private lead inspector  
Biddeford Housing Authority  
Avesta Housing (Saco Section-8 housing)  
Joyful Harvest Neighborhood Center  
Public Health Nursing

### **BANGOR HIGH DENSITY AREA**

Greater Bangor Apartment Owners and Managers Association (GBAOMA)  
Code Enforcement  
Bangor Healthy Maine Partnership  
Penquis Lead Technician  
Faith-based Organization (Local Church Group)

## Appendix C:

### Results from Lead Dust Testing

Number of Failed Units and Failed Wipes Per Unit FY10								
HDA	# of Total Units Tested	# of Failed Units	% of Failed Units	One Failed Wipe	Two Failed Wipes	Three Failed Wipes	Four Failed Wipes	Five Failed Wipes
Bangor	28	11	39.29%	10	1			
Portland	36	19	52.78%	7	4	3	4	1
Lewiston/Auburn	26	15	57.69%	7	8			
Saco/Biddeford	48	19	39.58%	9	3	3	1	3
Sanford	100	11	11.00%	10	1			
<b>TOTAL</b>	<b>238</b>	<b>75</b>	<b>31.51%</b>	<b>43</b>	<b>17</b>	<b>6</b>	<b>5</b>	<b>4</b>

Rental Units Lead Dust Test Results FY10							
HDA	# of Total Wipes	# of Failed Wipes	% of Failed Wipes	Floor		Window Sills	
				ug/ft2 (% of Total Wipes)		ug/ft2 (% of Total Wipes)	
				Low-Med 40-79	HIGH ≥80	Low-Med 250-399	HIGH ≥400
Bangor	140	12	8.57%	2 (1.4%)	3 (2.1%)	0 (0%)	7 (5.0%)
Portland	180	41	22.78%	7 (3.9%)	10 (5.6%)	7 (3.9%)	17 (9.4%)
Lewiston/Auburn	130	23	17.69%	5 (3.9%)	4 (3.1%)	7 (5.4%)	7 (5.4%)
Saco/Biddeford	234	43	18.38%	4 (1.7%)	19 (8.1%)	4 (1.7%)	16 (6.8%)
Sanford	500	12	2.40%	3 (0.5%)	0 (0%)	4 (1.0%)	5 (1.3%)
<b>TOTAL</b>	<b>1,184</b>	<b>131</b>	<b>11.06%</b>	<b>21 (1.8%)</b>	<b>36 (3.3%)</b>	<b>22 (2.1%)</b>	<b>52 (4.7%)</b>
				35%	65%	30%	70%
Total Percent of Medium vs. High							

Table 9: Results from lead dust testing

This table shows the number and percentage of floor and window sill samples by result level for the lead dust testing in high-risk rental units. Results are shown for each High Density Area. It also presents the number and percent of failed wipes that fall into the moderate and high lead dust ranges. Failed is any result with 40 micrograms per square foot or higher ( $\geq 40 \mu\text{g}/\text{ft}^2$ ) found on a floor surface, or  $\geq 250 \mu\text{g}/\text{ft}^2$  on a window sill. High is defined as  $\geq 80 \mu\text{g}/\text{ft}^2$  on a floor and  $\geq 400 \mu\text{g}/\text{ft}^2$  on a window sill. In both sampling areas more than two-thirds of the failed wipes identified a high lead dust level.

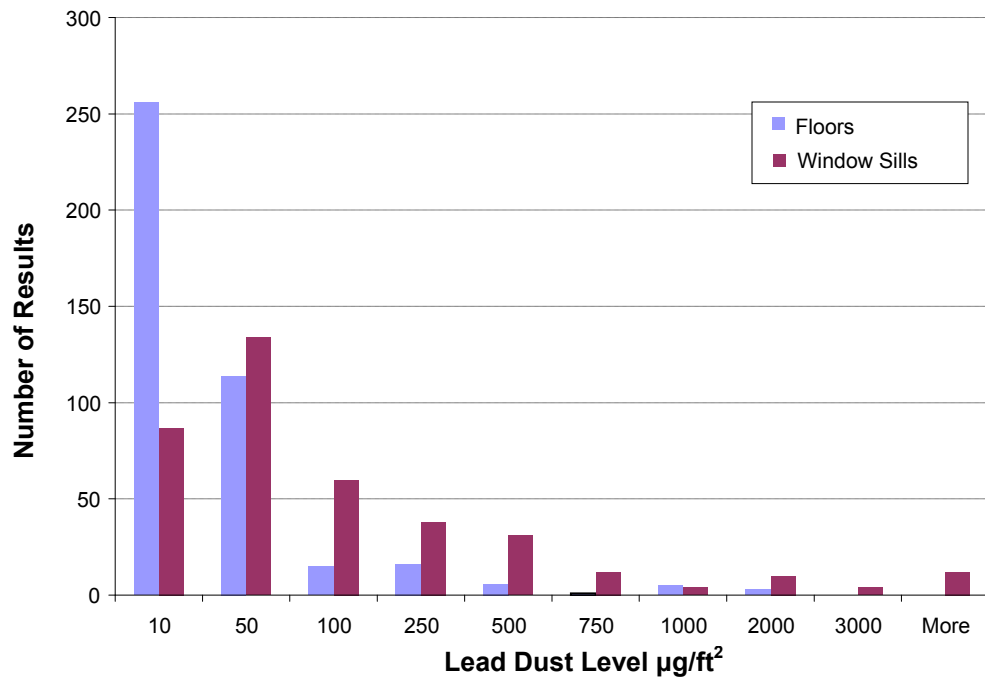


Figure 33: Lead dust test results, rental units, FY10

# Appendix D:

## LPPF Funded DEP Trainings by Region

This figure shows the number of individuals who participated in LPPF funded trainings by type of training and public health district.

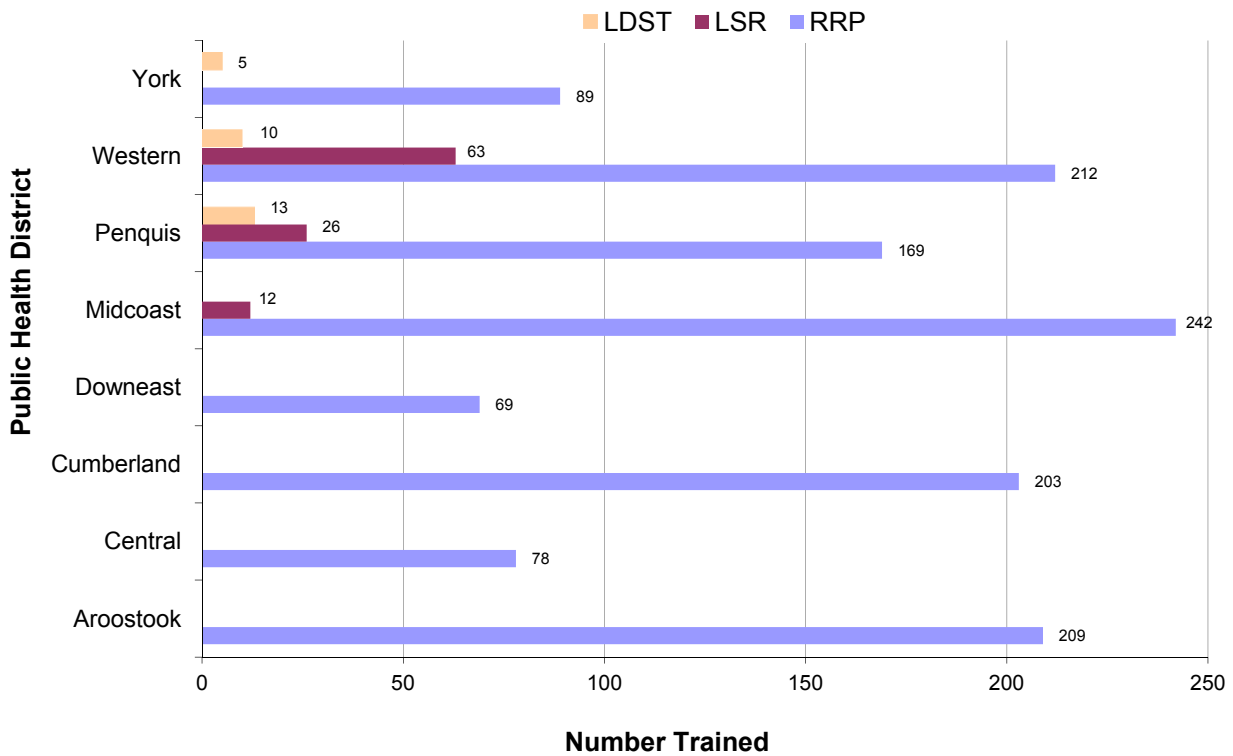


Figure 34: LPPF-funded DEP trainings by Public Health District

This figure shows the number of training vouchers distributed by LPPF Community Partners in each public health district.

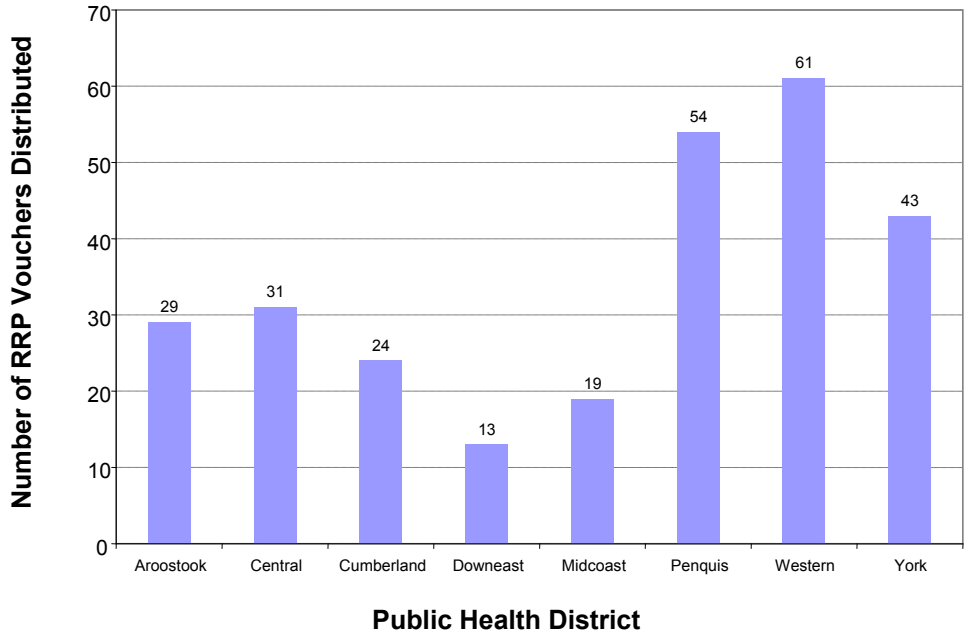


Figure 35: Number of RRP training vouchers by Public Health District, FY10